

# NORTH DENNINGTON

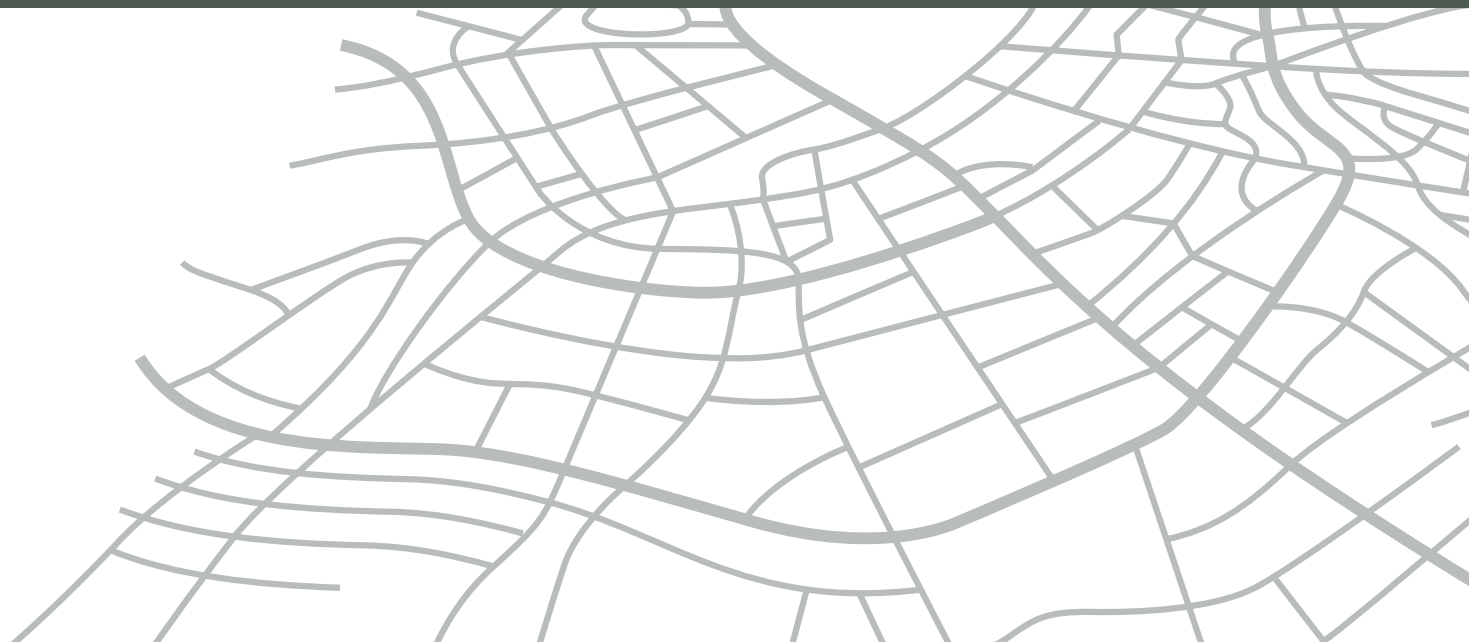
## Development Plan



Prepared for  
WARRNAMBOOL CITY COUNCIL

By  
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## 1.1

### Development Plan Overview

The North Dennington Development Plan (NDDP) provides a framework for the development of over 150 hectares of land identified within the North Dennington Growth Area (as part of the North Dennington Structure Plan (NDSP)), identified in Figure 1.

The structure plan provides a clear land use planning and development framework to be utilised by Council and the community.

## 1.2

### Purpose of the Development Plan

The NDDP has been prepared in order to implement the overall vision outlined in the NDSP, which seeks to guide the development of a residential community in Dennington.

Key principles carrying through from the NDSP into the NDDP include:

- Provision for a diverse range of residential densities and lifestyle opportunities which meet the changing demographic needs of the area;
- Providing buffers between existing industries and new residential development;
- Building upon the existing movement network and providing efficient use of existing road reserves, a vehicular interface to the proposed Merri River open space, and high levels of pedestrian and cycle connectivity;
- Enhancing the Merri River floodplain environs as a safe and accessible open space node, accommodating a range of active and passive recreational pursuits within the greater North Dennington area, and incorporating water sensitive urban design (WSUD) outcomes throughout the development;

## 1.3

### Structure of the Development Plan

The NDDP is structured in a format that demonstrates that the plan is responsive to the existing site features, particularly topography, and will provide an integrated and functional urban development as part of the wider growth area framework.

In order to achieve the desired outcomes for the site, the Development Plan is underpinned by the vision of the NDSP. This vision is expressed in themes, which are addressed throughout the Development Plan, and structured as follows:

- Encouraging high standards of urban design, providing high quality pedestrian linkages, gateways, roads and open spaces, and incorporating the existing local character;
- Provide cost effective infrastructure that address the ongoing needs of the community;
- Provide additional plan based guidance with regard to achievement of the higher order objectives contained in the Structure Plan;
- Guidance as a local street level to enable preparation of co-ordinated subdivision layouts;
- Provide specific direction regarding the information required for planning permit; and;
- Provide guidance about servicing and Developer Contributions Plan (DCP) infrastructure provision requirements (including appropriate works-in-kind).

In this context it should be noted that the NDDP has been commissioned by Council and prepared to facilitate development that is in accordance with the NDSP. The NDDP recognises and seeks to overcome local fragmentation as a key influence on the ability to achieve orderly and co-ordinated development outcomes.

- Regional analysis;
- Site analysis;
- Design response;
- Infrastructure requirements; and,
- Requirements for planning permit.



Figure 1 North Dennington Structure Plan



## 2.1

### Introduction

This chapter provides a brief overview of the more relevant aspects of the Warrnambool Planning Scheme, which apply to the Development Plan area as shown in Figure 2.

This DP has been prepared in accordance with Warrnambool Planning Scheme, and the North Dennington Structure Plan, with specific attention placed on the requirements of Schedule 8 to the Development Plan Overlay.

## 2.2

### State Planning Policies

The State Planning Policy Framework (SPPF) aims to balance the various competing objectives of the planning scheme in order to facilitate sustainable development.

State policy seeks to ensure that future development is responsive to site, community, and local context, while also affording efficient and sustainable provision of utilities and infrastructure. The following clauses of the SPPF are relevant to the Development Plan:

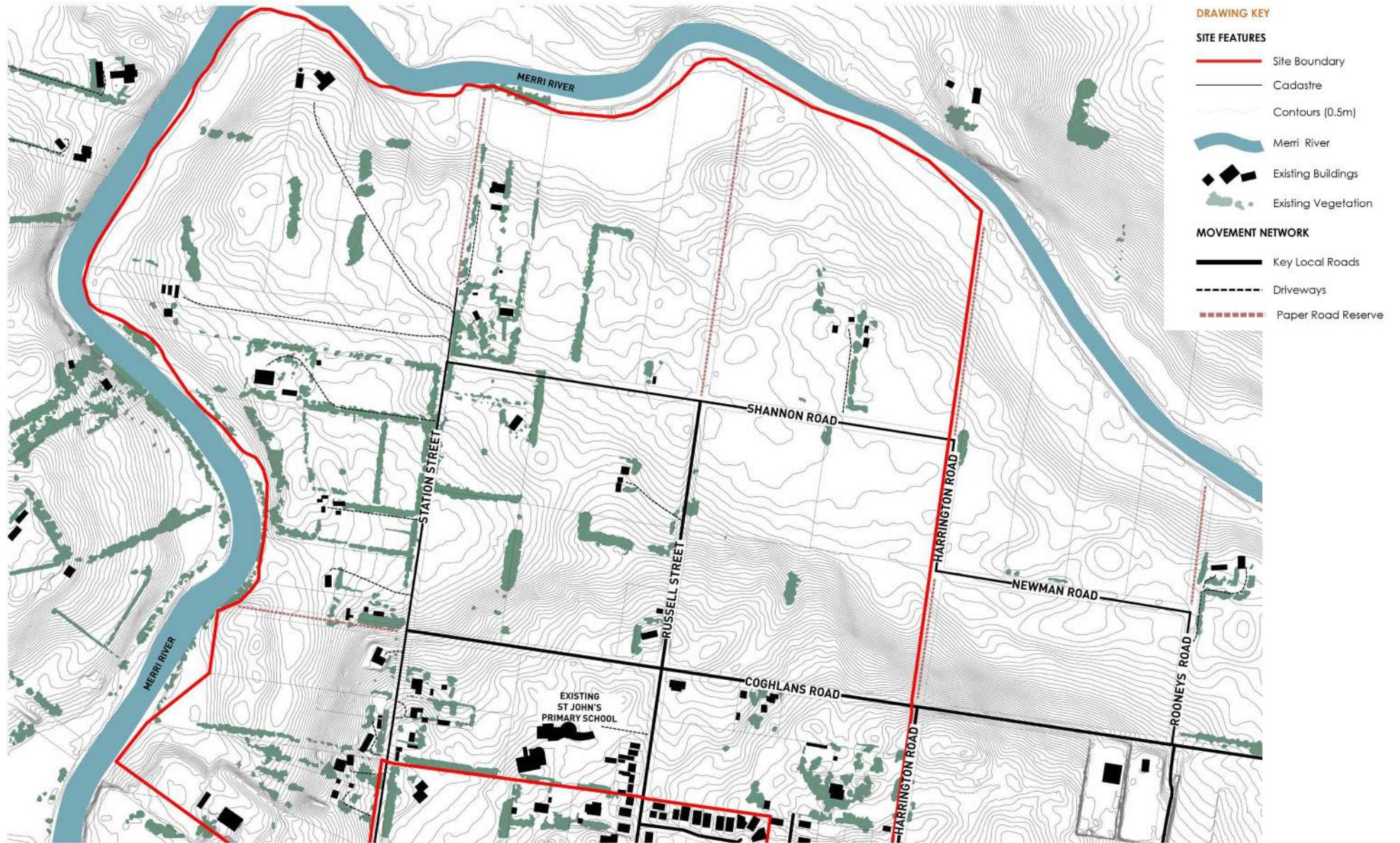
- Clause 11 Settlement
- Clause 12 Environmental and Landscape Values
- Clause 15 Built Environment and Heritage
- Clause 16 Housing
- Clause 17 Economic Development
- Clause 18 Transport
- Clause 19 Infrastructure

The *Great South Coast Regional Growth Plan* (Regional Growth Plan) provides a regional approach to land use planning in the Great South Coast region. It covers the municipalities of Corangamite, Glenelg, Moyne, Southern Grampians and Warrnambool (Regional Growth Plan, May 2014, pg i).

This growth area is also referred to in the *Regional Victoria Settlement Framework* plan.



Figure 2 North Dennington Development Plan Area



## 2.3

### Local Planning Policy and Strategies

The Local Planning Policy Framework (LPPF) seeks to ensure that future urban growth is appropriate to the role and character of the area in terms of land use, density and scale of built form, environmental and landscape significance, and the provision of infrastructure and services. Council's adopted strategies also influence the outcome of future developments by providing up to date direction for housing type, environmental management and open space provision.

#### Local Policies

Key local policies of the Warrnambool Planning Scheme which are considered relevant to the NDDP include:

- Clause 22.01 Housing
- Clause 22.02 Environment
- Clause 22.04 Infrastructure

### Local Strategies

#### Warrnambool Open Space Strategy (2014)

The purpose of this strategy is to provide an overarching framework to direct open space planning and management in Warrnambool through to the year 2026 (refer to Figure 3). The North Dennington growth area was identified in the open space strategy as being able to service the growth of the population with active open space through the upgrading of facilities in the existing Dennington Recreation Reserve south of the DP area.

The Open Space Strategy also identifies a lack of connectivity along the Merri River, which has been addressed in the NDSP, and in this Development Plan.

#### Warrnambool Land Use Strategy (2004)

This document reviews the current land use in greater Warrnambool, and offers direction on the future of specific areas of land for further development. North Dennington is identified as being able to be serviced by infrastructure and utilities, and can provide enhancement through development of the Merri River interface, while providing highly liveable and sustainable development options, with detached housing as the dominant housing type.

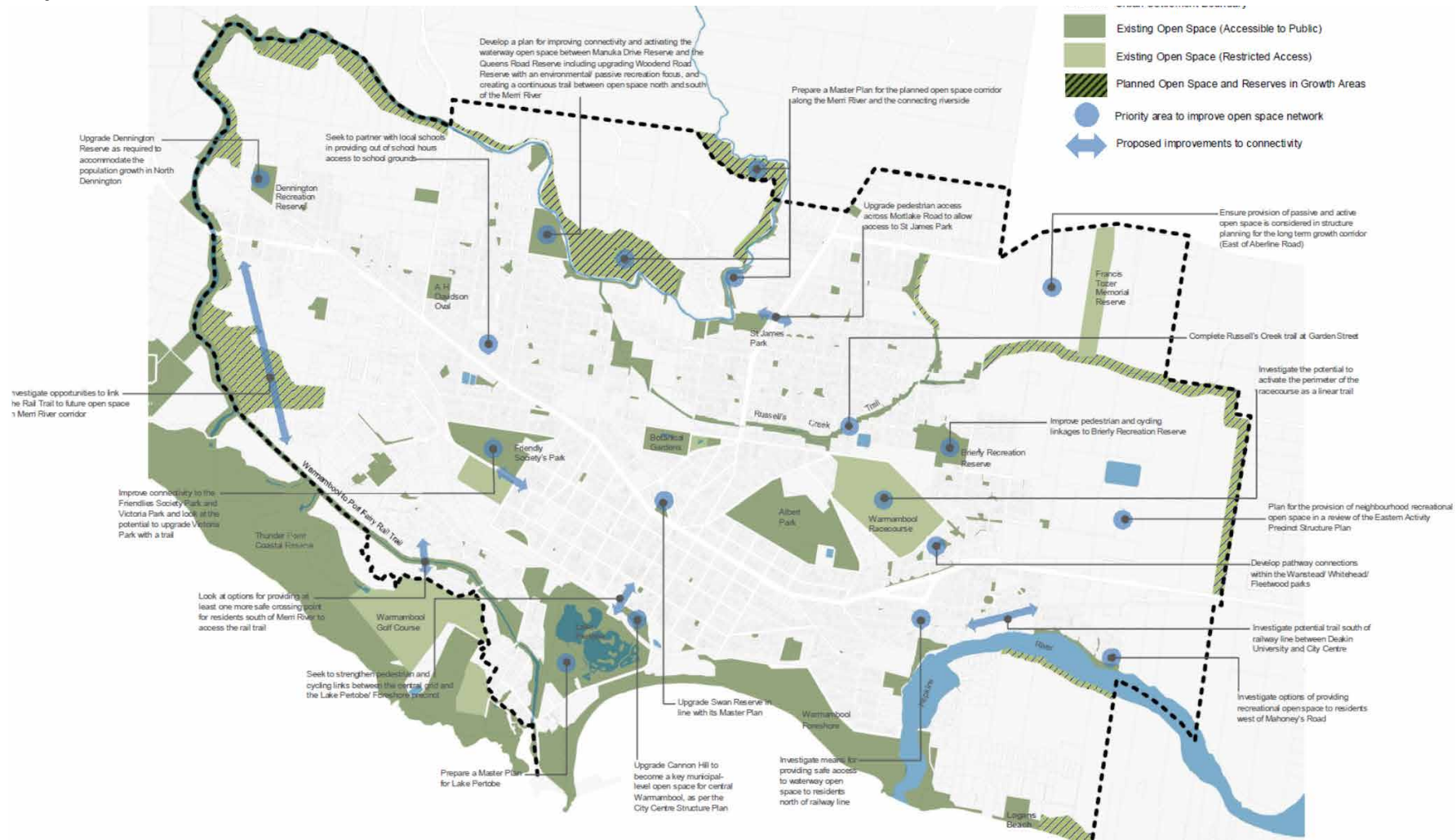
#### Warrnambool City-Wide Housing Strategy (2013)

The Warrnambool City-Wide Housing Strategy identifies housing and land supply in Warrnambool, with particular advice on housing densities and dwelling types. The North Dennington growth area should accommodate development of approximately twelve dwellings per hectare, with increased density around the future transport corridor of Coghlan's Road and community facilities.

The North Dennington area is recognised as a growth area with the ability to deliver more affordable land supply.



Figure 3 Warrnambool Open Space Strategy (2014)



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## Zoning

Zoning is used as a way to control what land uses can occur in a certain area of land, and the relationships to surrounding uses. The zoning plan for NDDP area can be seen at Figure 4.

### Public Conservation and Resource Zone (PCRZ)

The PCRZ applies directly to the land in public ownership adjacent the Merri River, recognising the importance to protect and conserve the natural environment and natural processes for their historic, scientific, landscape, habitat or cultural values. This zoning can also provide facilities which assist in public education and interpretation of the natural environment with minimal degradation of the natural environment or natural processes.

Under this zone a permit is required to construct or carry out works, however this does not apply to pathways, trails, seating, and playground equipment. A permit is also required to subdivide land. The PCRZ in this instance is recognised as land that is encumbered by the Merri Rivers 1 in 100 year flood line.

### Farming Zone (FZ)

Land within the buffer to the waste water treatment plant associated with the Fonterra Milk Processing Facility will remain in the Farming Zone. The retention of this land in the Farming Zone is subject to review, and some subdivision outcome may be able to be generated.

### General Residential Zone – Schedule 1 (GRZ)

The General Residential Zone Schedule 1 currently applies to the NDDP area, as implemented as part of the NDSP. It supersedes the area formerly zoned Farming Zone.

The GRZ seeks to encourage development that respects the existing neighbourhood character, and/or implement neighbourhood character policies and neighbourhood character guidelines. The zone aims to provide a diversity of housing types, and offer access to services and transport. Development must occur in accordance with the requirements of Clause 56 (Residential Subdivision) of the Victoria Planning Provisions, which has been considered throughout the preparation of the Development Plan.

Pursuant to this zone, a permit will be required for any residential subdivision, and for development of a dwelling on a lot less than 300m<sup>2</sup> within the DP area.

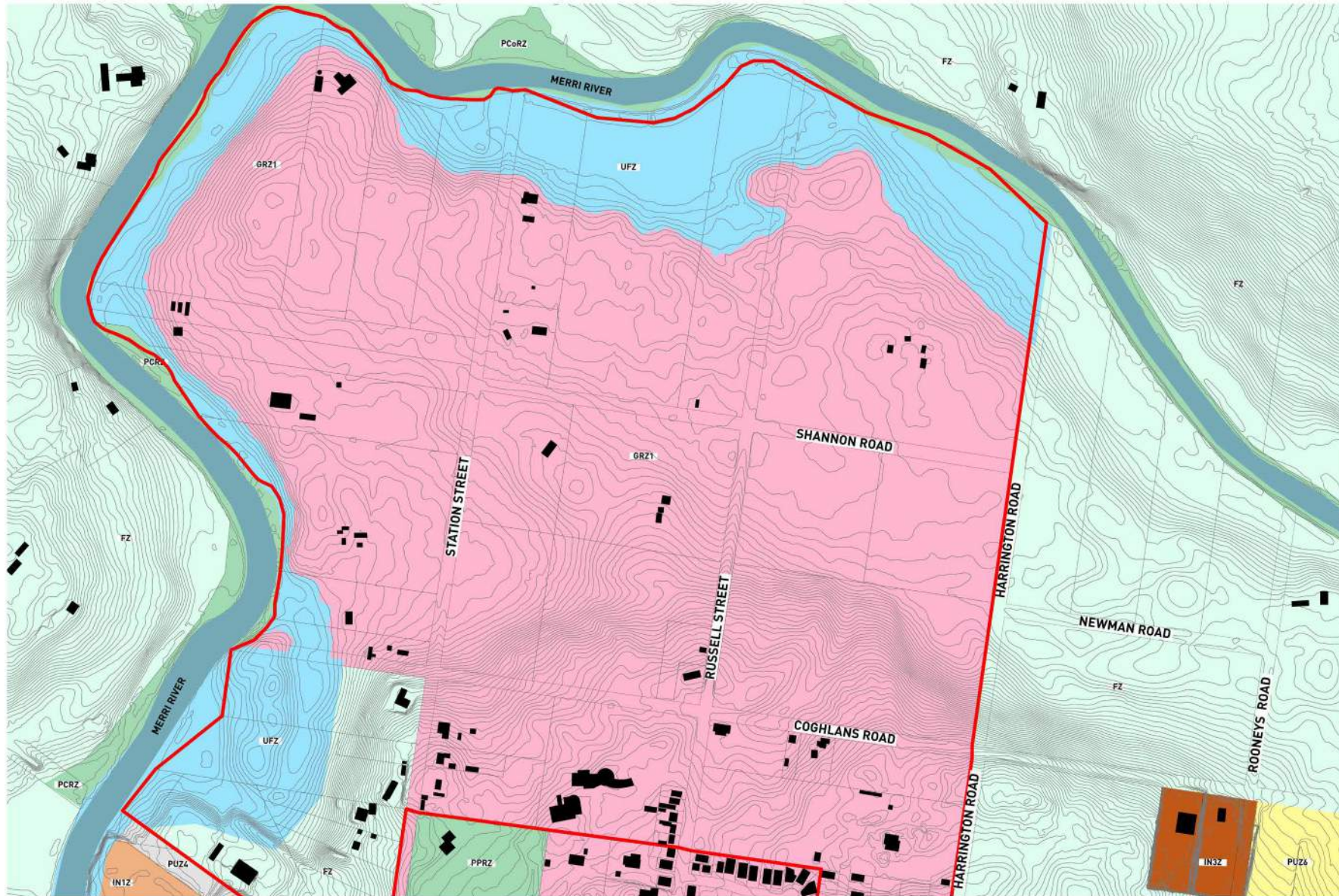
### Urban Floodway Zone (UFZ)

This zone identifies waterways and major flood paths within urban areas that are at the greatest risk and frequency of being affected by flooding. The UFZ aims to ensure that development maintains the free passage and temporary storage of water while minimising potential flood damage.

A permit is required to construct or carry out works including fences (excluding post and wire, and wot and rail fencing), roadworks, pathways and trails, swimming pools, verandas, and decks. This however does not apply to flood mitigation works carried out by the Responsible Authority. The Structure Plan anticipates that this land will be progressively transferred into public ownership as a municipal drainage reserve as development occurs, and will likely be rezoned to Public Conservation and Resource Zone in the future.



Figure 4 North Dennington Zoning Plan





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## Overlays

Overlays are used as an additional level of control to zones, where local and site specific requirements can be made as necessary. The overlays plan for the NDDP area can be seen in Figure 5-8.

### Development Plan Overlay – Schedule 8 (DPO8)

The DPO triggers the requirement for the preparation of a Development Plan in order to facilitate co-ordinated development. This generally occurs prior to any application for planning permits for subdivision. Schedule 8 to the Development Plan Overlay directs any application for subdivision, use or development to complete a series of reports including a Traffic Study, Servicing Report, Cultural Heritage Management Plan and others, to the satisfaction of the Responsible Authority, in support of their proposal.

A Development Plan must address the following objectives and generally be in accordance with the NDSP:

- Land use and Density
- Movement and Access
- Open Space and Natural Environment
- Built Environment and Heritage

The Development Plan must also deliver a site analysis plan, site response plan, written report, development sequencing plan, and a proposed infrastructure delivery plan, to the satisfaction of the Responsible Authority. This document responds to the requirements set out in DPO Schedule 8.

### Development Contributions Plan Overlay – Schedule 2 (DCPO2)

The DCPO triggers a level of further co-ordination for development through the preparation of a development contributions plan which distributes the cost of works, services and facilities before any development can commence.

A DCP has been incorporated into the planning scheme.

### Floodway Overlay (FO)

This overlay protects the natural watercourses of the Merri River, and ensures that the function of the river is maintained. It ensures that development does not impede the flow of water, and that it can temporarily store water, minimise flood hazards, and maintain or improves the health of the waterway.

### Environment Significance

### Overlay – Schedule 2 (ES0)

The City of Warrnambool's natural waterways are a significant asset and environmental resource to the community, and are to be protected from inappropriate development through the application of the ES0. The Merri River in this instance is to be retained as a natural drainage corridor with vegetated buffers wherever possible in order to perform their long-term functions. Issues such as erosion and polluted surface run off from adjacent and proposed land used should be minimised.

A permit application must be accompanied by a site analysis plan which addresses a set criteria within the overlay.

Figure 5 North Dennington Floodway Overlay



Figure 6 North Dennington Environmental Significance Overlay - Schedule 2



Figure 7 North Dennington Development Contributions Plan Overlay - Schedule 2



Figure 8 North Dennington Development Plan Overlay - Schedule 8



## 3.1

### Regional Context

North Dennington is located approximately 230 kilometres south-west of Melbourne, and is situated on the edge of the Princes Highway, providing easy access to Geelong and Melbourne to the east, while also easily accessing other centres to the west. North Dennington is located five kilometres west of the Warrnambool CBD via the Princess Highway.

The population of Dennington is approximately 1,600 persons as of the ABS statistics in 2011. The City of Warrnambool has an estimated resident population of 33,500 as per the ABS ERP 2014.

North Dennington is one of five identified growth areas to be developed as a residential community located on the

outskirts of the established Warrnambool area (Figure 9). The majority of the current and future residents of the Dennington and North Dennington areas are predicted to travel to Warrnambool for employment and services.

North Dennington has been identified in the North Dennington Structure Plan as appropriate for residential development at an average density of twelve dwellings per hectare. This is in recognition of the land form, the character, and the density of adjacent/nearby development.



Figure 9 Regional Context - Warrnambool Growth Areas



## 3.2

### Overview Site Analysis

The site provides both opportunities and constraints with regard to the distinct site features and environmental features, which allows for creative outcomes within the design process.

The plan shown in Figure 10 provides an overview of the notable site features that will influence the outcomes of the design process. The following sections of this report outline in more detail the site features and opportunities of the existing conditions.

The key site features include:

- Topographic features that emphasise key view lines to the Merri River and surrounding landscape views;
- Merri River Floodplain;
- Proximity to the existing St. John's Primary School and North Dennington Recreation Reserve;
- A network of existing road reserves and rural roads;
- Large, consolidated parcels of land in single ownership that enables development to occur in a strategic and cohesive manner; and
- A strong connection with the existing Dennington growth area.

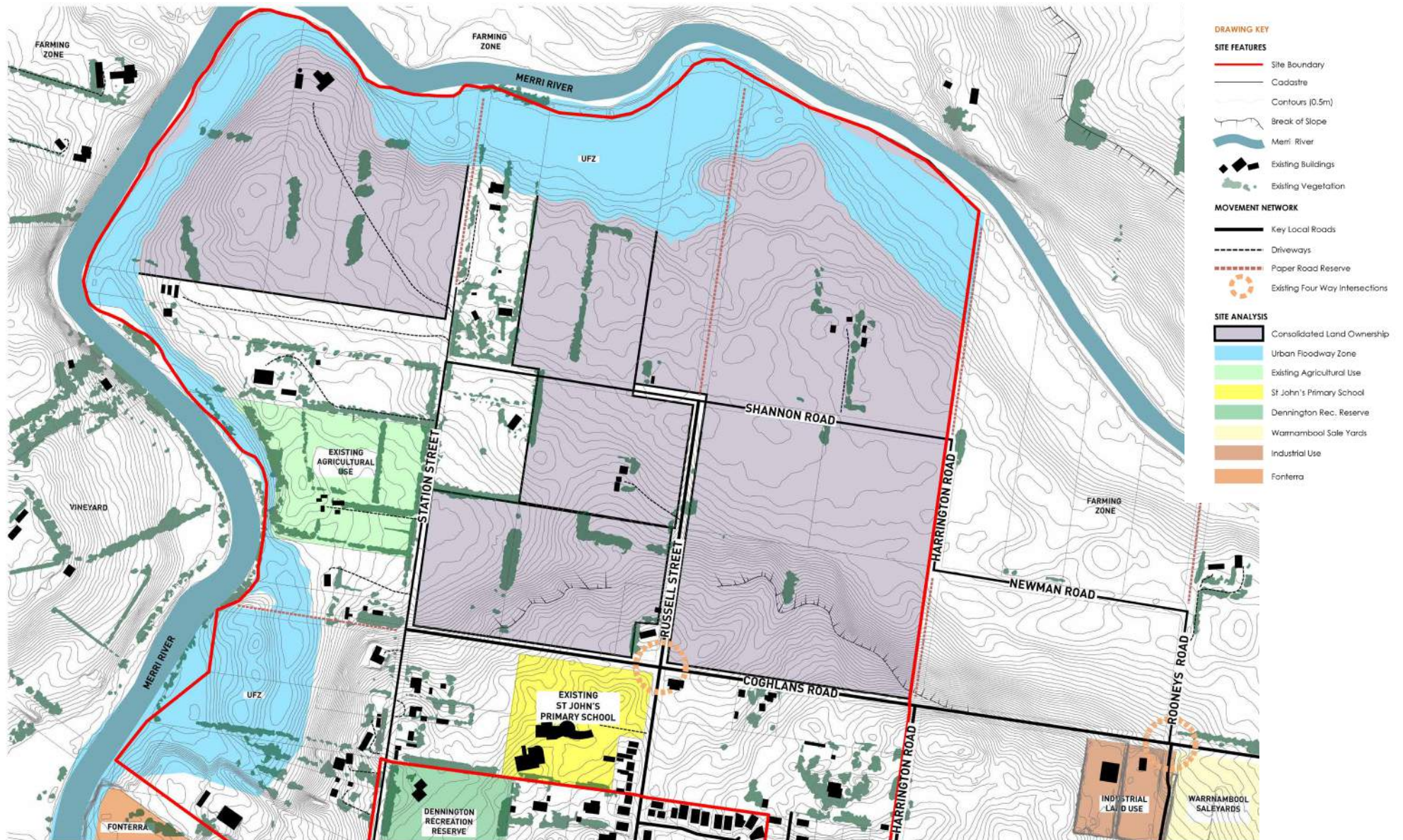
The site features contribute to the character of the area, which are incorporated into the design response, with certain elements accentuated through the proposed residential development.

Further detail regarding the site features are explored in the following sections of the report:

- Property Ownership and Surrounding Land Uses;
- Waterways and Drainage;
- Topography;
- Movement Network;
- Native Vegetation and Cultural Heritage; and
- Infrastructure.



Figure 10 North Dennington Site Analysis Plan



# 3.3

## Property Ownership and Surrounding Use Land

### Property Ownership

The Development Plan area comprises a total of 53 individual land holdings, of varying sizes, from 700m<sup>2</sup> through to over nine hectares.

While the land holdings are quite fragmented, there are a number of larger parcels which are consolidated into single ownership, as shown in Figure 11. This represents approximately 37 hectares of land in single ownership in the north-eastern areas of the site, nearly 20 hectares in the north-western portion of the site, and an additional 9 hectares in single ownership in the central northern part of the site.

These consolidated parcels of land provide a key advantage for development, in that they can deliver significant infrastructure independently of other landholdings. This allows for a cohesive and holistic design response to be achieved more broadly across the development area.

There are fragmented land holdings dispersed across the balance Development Plan area, of various sizes. Land use consists of rural living and farming practices.

Existing dwellings and outbuildings are located throughout the Development Plan area, however some dwellings pose a design constraint which affect the overall layout and configuration of the Development Plan area. These need to be taken into account through the Development Plan process. Where river frontage is available, many dwellings are oriented toward the Merri River (with regard to higher land being available near the river and the 1 in 100 year floodline). Existing dwellings should be retained where possible, while outbuildings are seen as having less retention value upon the full development of the North Dennington DP area.

Table 01 and Figure 12 (overleaf) provide a detailed breakdown of parcel size, to be read in association with figure 11, of all land holdings within the Development Plan area.

In addition to the privately owned properties, the Development Plan area also encompasses:

#### St. John's Primary School

– Located on the corner of Coghlans Road and Russell Street, providing the only primary school level education in the immediate area.

**Merri River** – The River is largely inaccessible in the North Dennington area as it is generally bordered by private land. The Merri River 1 in 100 year flood line comprises a large portion of land on the northern and western edges of the Development Plan area. The floodplain widens as an open flat floodplain, while narrowing in various sections of steeper topography.

#### Surrounding Land Uses

The Development Plan area is located in close proximity to the following land uses:

#### Dennington Recreation Reserve

– The reserve located on the southern border of the Development Plan area provides sporting facilities for football, cricket and netball for both senior and junior codes.

#### Fonterra Waste Water Treatment Facility

– The Fonterra site is a milk processing plant, incorporating some waste water treatment as part of its operations. Both milk processing and waste water treatment can have offsite amenity impacts (such as odour) and as such, an appropriate separation distance is required between the plant and further intensification of residential development (it is noted that there are currently a number of existing houses within the separation distance). As such, the plant, and surrounding land within the 'separation distance' of the plant are located outside the Development Plan boundary. Any further residential development within the separation distance is subject to further detailed assessment and planning processes.

#### Warrnambool Livestock Exchange

– The Warrnambool Livestock Exchange is located to the east of the Development Plan area. In order to manage any potential unpleasant odours from the existing use, there is an approximate 500m buffer in which future development should not encroach upon (up to Harrington Road).

### Key Design Opportunities:

- Provide public access to the Merri River corridor;
- Provide pedestrian and cycle connectivity to St. John's Primary School and the Dennington Recreation Reserve;
- Provide a holistic design response to the consolidated parcels of land;
- Seeks to retain existing dwellings where appropriate;
- Enable individual landholders to develop independently of each other where possible, without compromising the integrity of the Development Plan.



Figure 11 Property Ownership and Surrounding Land Uses

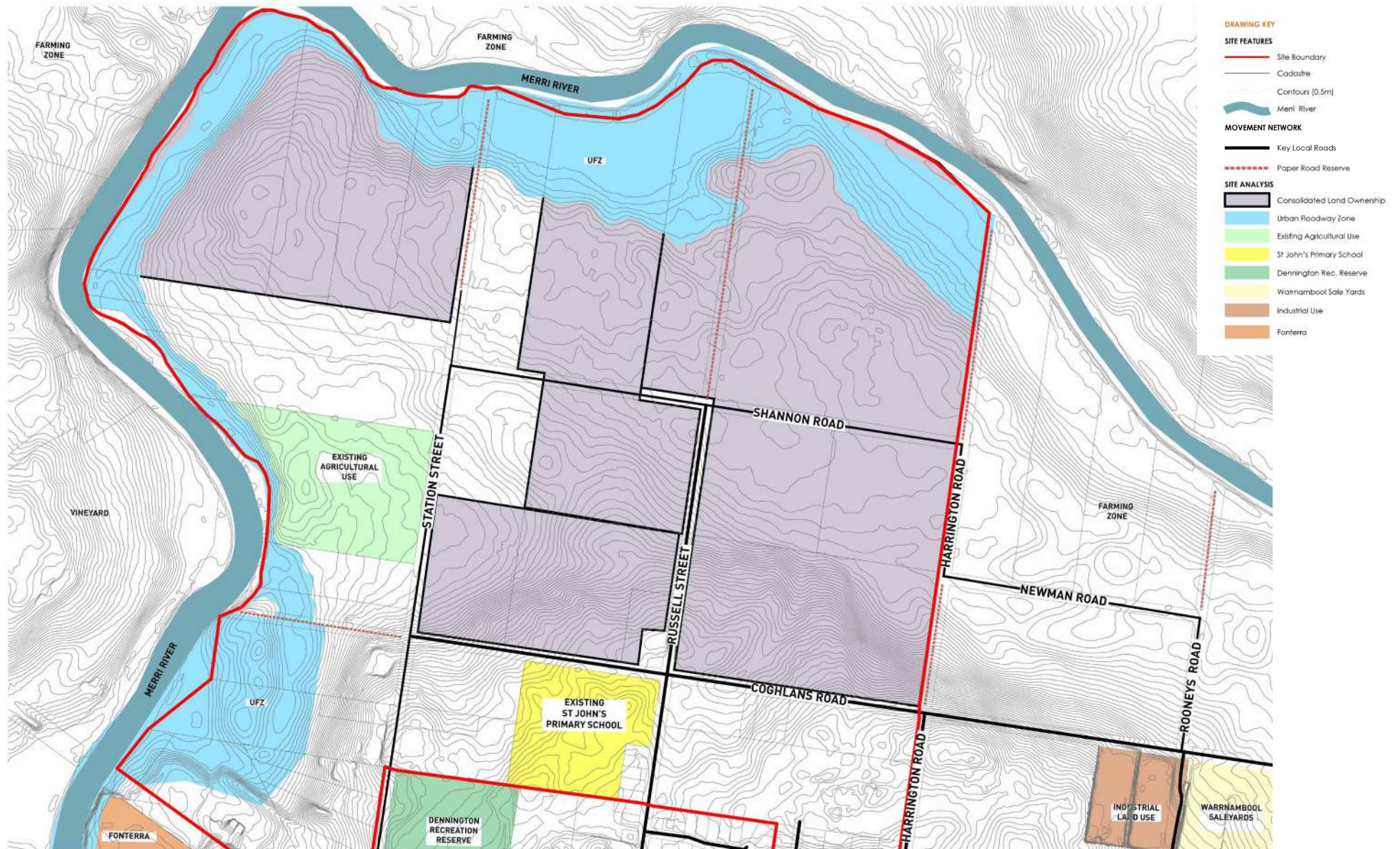


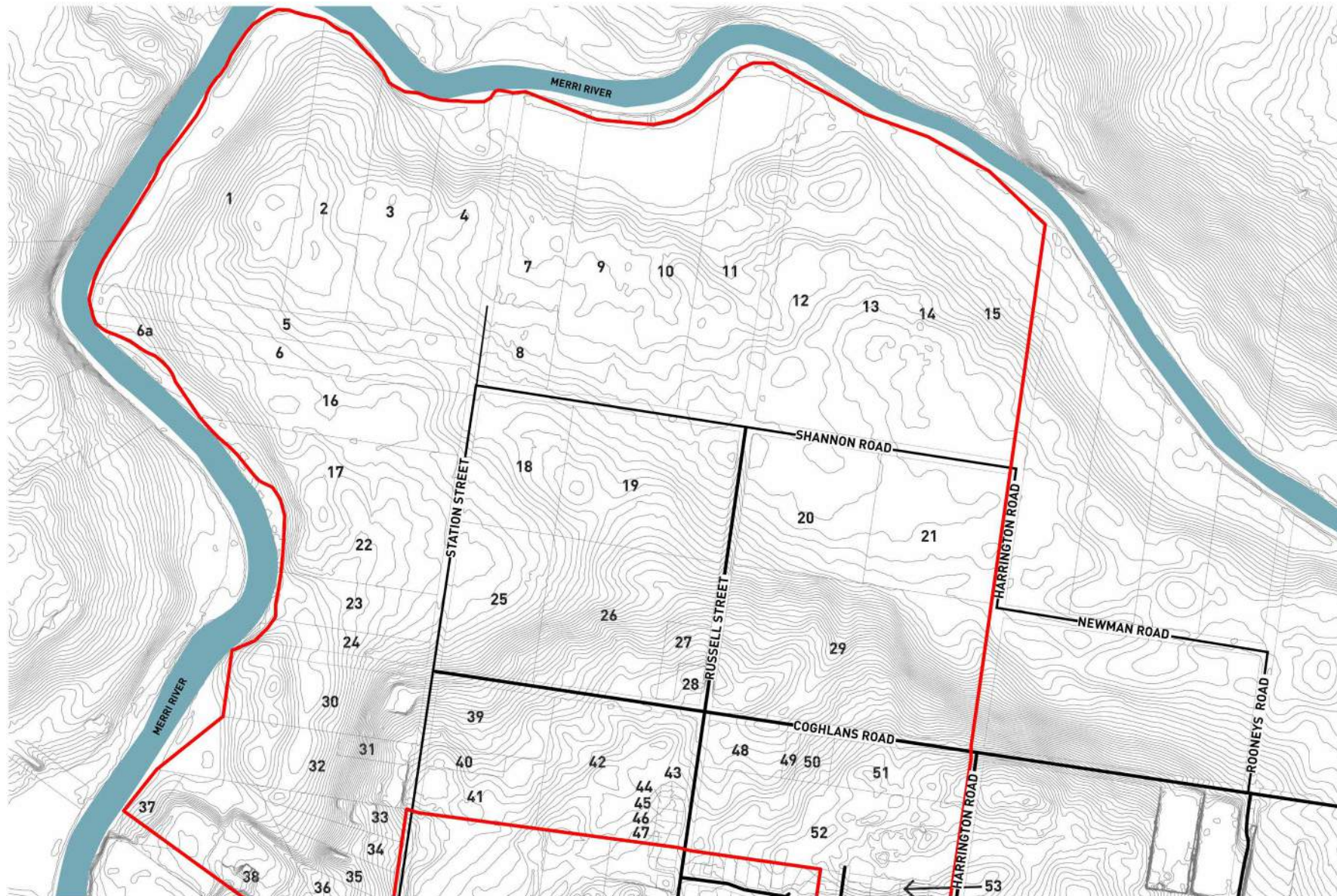
Table 01. Landholdings

Property Number	Total Area (Hectares)
1	9.01
2	4.27
3	3.50
4	3.24
5	2.50
6	2.28
6a	0.10
7	3.12
8	1.20
9	4.26
10	4.60
11	5.36
12	5.07
13	4.83
14	4.54
15	3.90
16	4.26
17	3.52
18	2.88
19	5.24
20	4.04
21	4.01
22	2.74
23	1.80
24	0.93
25	3.25
26	4.99
27	0.61
28	0.20
29	8.88
30	3.07
31	0.40
32	2.99
33	0.80
34	0.80

35	0.80
36	0.80
37	0.36
38	3.55
39	1.79
40	0.40
41	1.49
42	4.09
43	0.07
44	0.07
45	0.07
46	0.07
47	0.07
48	0.87
49	0.14
50	0.38
51	1.52
52	5.24
53	12.06



Figure 12 Property Details



# 3.4

## Waterways and Drainage

The primary waterway in the North Dennington DP area is the Merri River, which is an integral part of the drainage corridor in the greater Warrnambool area. The Merri River is also an area of high amenity, and of high value to flora and fauna within the riparian corridor. A flood study undertaken by the Glenelg Hopkins Catchment Management Authority has identified a 1 in 100 year flood line, which affects landholdings within the North Dennington DP area, rendering some land unsuitable for urban development.

The encumbered land is suitable for drainage and passive river parkland purposes, and can contain wetland and retarding functions within the flood limit.

A report conducted by Cardno investigated the drainage requirements associated with development in three of the Warrnambool growth areas. In consultation with Council they created a high order drainage response which was to service the North Dennington area.

Figure 13 shows the four catchment areas within the North Dennington DP area, of which catchment 'd' is not considered in this analysis, as it is contained within the existing drainage network south of the DP area.

Catchment Area 'a' is managed via a pipe and swale system, before entering a wetland system adjacent to the Merri River.

Catchment Area 'b' is managed via a swale system before draining into a wetland adjacent to the Merri River.

Catchment Area 'c' is managed via a pipe and swale system before draining to a wetland adjacent to the Merri River.

The Structure plan provides key guidelines for the provision of a loop (or edge) road along the length of the Merri River where it interfaces with residential uses.

The edge road creates a distinct edge to the open space and the residential land, providing a clear delineation between the public and private realms between developable land and the floodplain.

The edge road is to provide the interface to the Merri River parkland, where nodes of parking are to be provided in key areas of landscape and public amenity, which are identified in this report. The Merri River Parkland is to provide passive recreation, with public walking trails located within the 1 in 100 floodline, and drainage retarding featuring as areas of amenity.

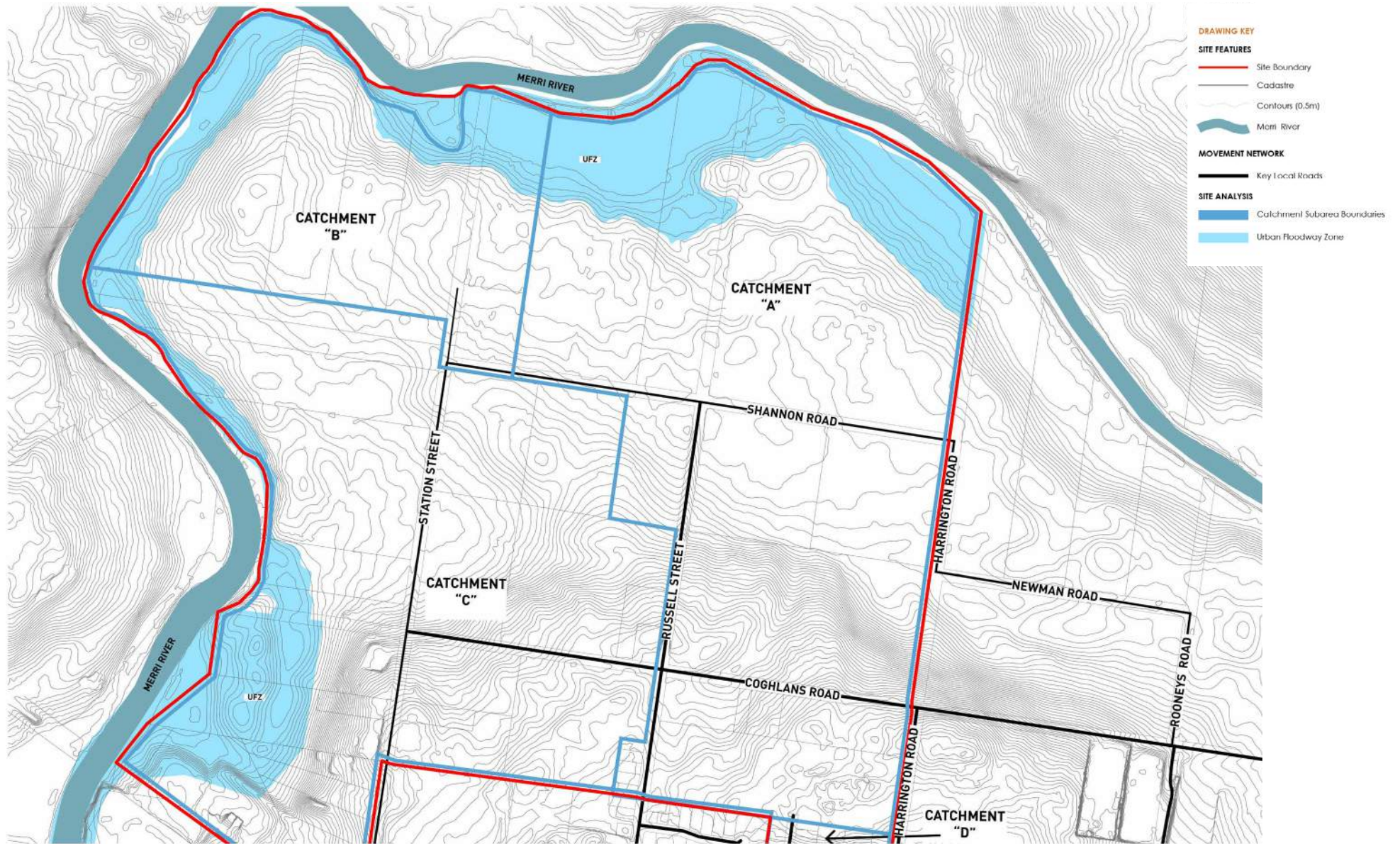
In some limited circumstances where existing dwellings hinder the delivery of an edge road, the edge road will be interrupted, by navigating around a limited number of existing dwellings. In these instances, a continuous pedestrian and cycle path will be required to be provided in between the retained dwellings and the floodplain. These will sit in a reserve, which will also house services, which will have the potential to be constructed as an edge road in the situation where the retained dwellings are removed.

### Key Design Opportunities:

- Provide access and visibility to the Merri River parkland through the provision of an edge road and associated paths;
- Align local roads and pedestrian links to the river to allow for overland flows along drainage lines;
- Protect and enhance the Merri River open space area, in particular the inhabited riparian zones; Work with topography for drainage purposes, by including landscape drainage links for overland flow purposes;



Figure 13 Drainage Catchments and Waterways



# 3.5

## Topography

The landform in the North Dennington DP area is characterised by sections of steep slope, relatively large flat swathes of land, and steep escarpments leading into the Merri River (as identified in Figure 14). The most notable section of slope which will affect residential development occurs immediately north of Coghlan's Road, running from Station Street through to Rooneys Road. This is the beginning of a noticeable ridgeline that runs from Coghlan's Road through to the north western property.

Steeper sections of slope are also evident along the western edges of the Development Plan, leading into the floodplain area. These sections can be managed through the provision of deeper residential lot depths, and also through the inclusion of pedestrian links and roads at key locations.

While also providing internal connectivity to the DP, pedestrian links and roads can also manage water run-off and allow some unmanageable areas of slope to become valued assets.

The landform of the area provides for some highly valued view lines, which should be retained within the development. Notably, the areas of the steepest slope provide for the greatest opportunity to obtain the most valued views. This allows for a diversity housing type (split level, multi-storey), built product, and lot type to be produced which responds to the varying slope of the land.

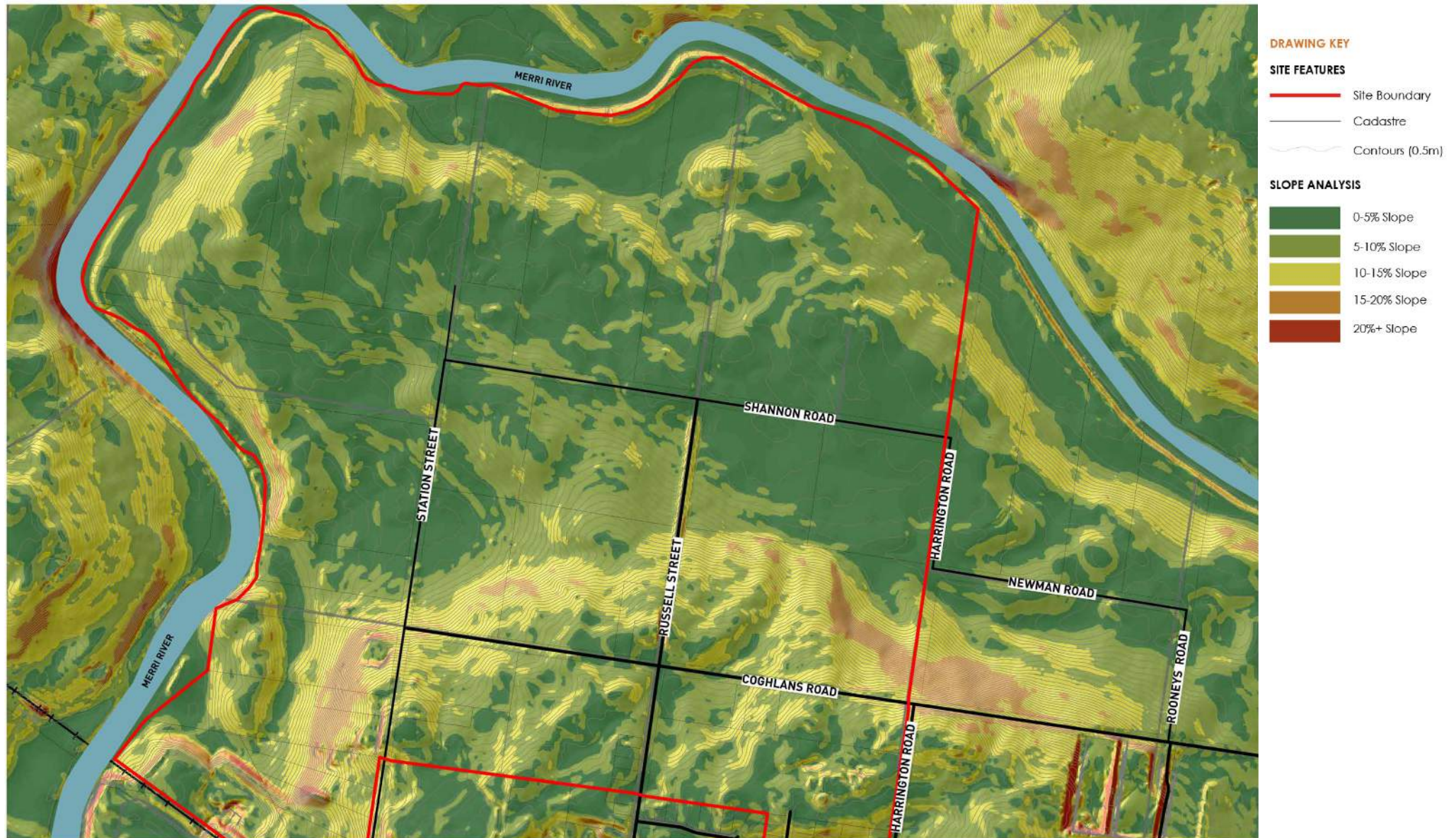
In addition, the topography also provides some constraints on the land, such as the ability to access the steepest areas of land from Harrington Road and Russell Street, and locations of driveway access for houses. The residential layout for these areas need to respond to the slope, and be configured in a way that allows proper vehicular movement to occur within the DP area.

### Key Design Opportunities:

- Capitalise on the elevated land for development in order to capture key views to, and across the Merri River;
- Design with the topography, to increase diversity of housing, built product, and lot type;
- Provide deeper lots in key locations in order to respond to steeper topographic conditions;
- Understand restrictions due to slope, and align roads where plausible to do so;



Figure 14 Slope Analysis





## 3.6

### **Movement Network: Structure Plan Level**

Dennington North is oriented around a grid based system of roads, provided by Coghlan's Road, Station Street, Shannon Road, Harrington Road, and Russell Street. These roads provide the framework for the existing North Dennington area.

As the Merri River restricts any potential traffic connections on the northern and western edges of the DP area, broader connectivity is only available to the south and east. Proximity to the Princes Highway enables the NDDP area to remain connected to the greater Warrnambool area to the east, while also providing connections to destinations further afield in both directions, as seen in Figure 15.

Figure 15 Movement Network - Structure Plan Level



## Movement Network: Development Plan Level

The NDDP road network enables growth to occur in a logical manner, with the existing roads acting as the framework for future growth, as shown in Figure 16.

The existing road network forms a loop, providing frontage to nearly all of the properties within the DP area. This loop offers a road reserve of 20m and provides for the principal transport network through the Structure Plan. The Structure Plan also identifies the need for a future 'edge road' to the Merri River providing access and frontage to the public landscape amenity, which will need to be constructed as part of the subdivision process.

Coghlan Road connects into the existing residential network of the western Warrnambool area (to the east). It provides the backbone of the DP area, and fronts onto the school, along with picturesque views to the north of the Merri River. Portions of Coghlan Road have been upgraded by the Council through Federal Government grant funding.

Harrington Road provides connectivity adjacent to the existing Dennington Rise estate, and continues through to provide left turn only access onto the Princes Highway to the south, linking into Shannon Road to the north (can extend through an existing road reserve). Harrington Road will require some access restrictions along its length due to the steep slope (between Newman Road and Coghlan Road) on the road shoulder. Any development will have to respond appropriately to the road cutting.

Shannon Road is a small length of road which links into the other three north-south connecting roads in the DP area.

Station Street provides access to the western portion of the DP area, and has a road reserve at its northern most end where it can be extended.

Russell Street provides north south connection along the existing St. John's Primary School, linking into Coghlan and Shannon Roads to the north, while extending down to Drummond Street and providing options for access onto the Princes Highway. Russell Street, similar to Harrington Road, also has some constraints due to the road cutting into the existing topography, and access will have to be managed.

Existing road reserves are to be utilised as an extension of the existing road network, and will provide the structure for the proposed local street network.

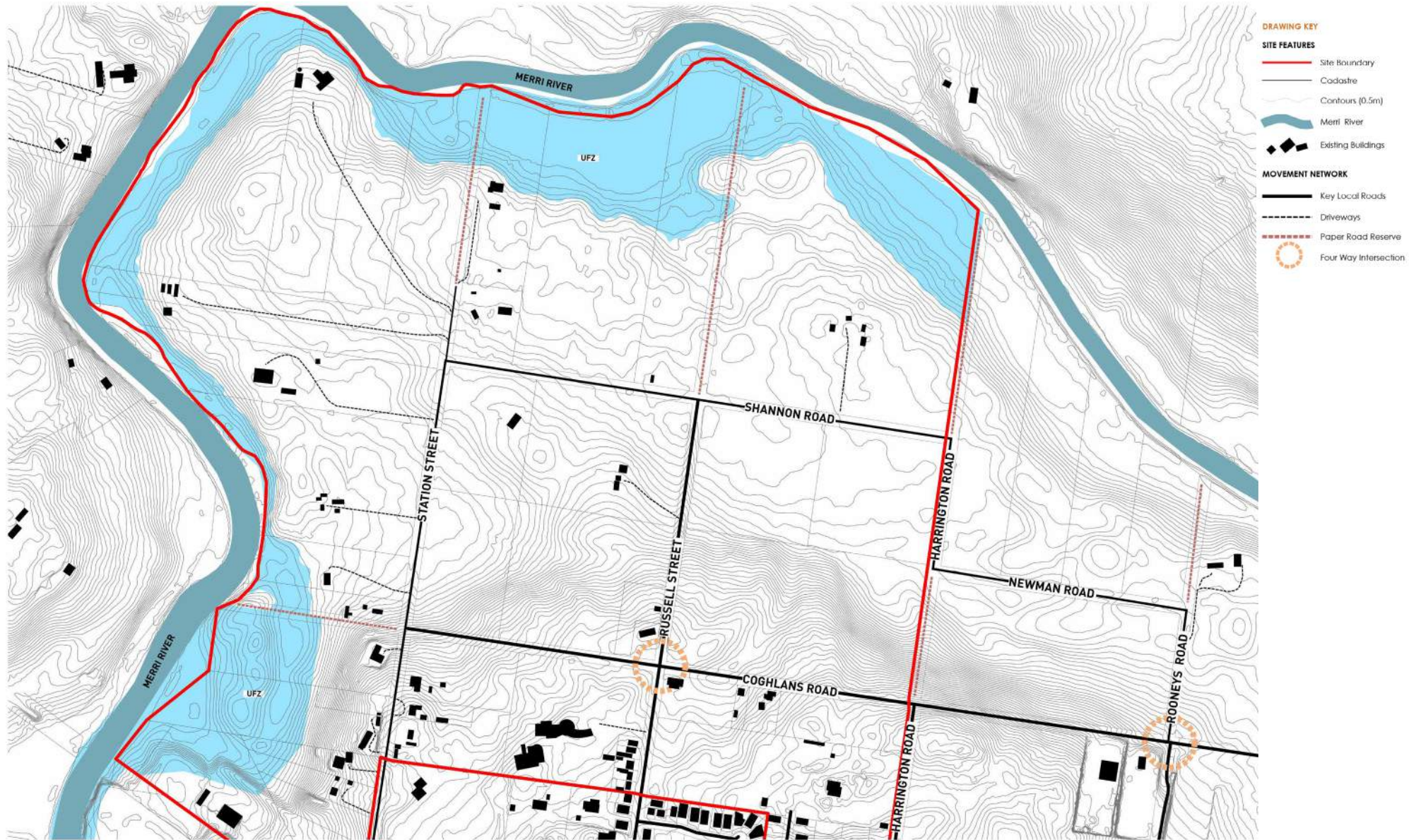
The edge road to the Merri River functions as a connection between the open space corridor and the private residential realm. While continuous vehicular access to the river parkland is preferred, it is not possible in all instances due to slope constraints and the locations of existing dwellings. This serves to further localise the traffic function of the edge road, while still providing continuous pedestrian connectivity along the length of the Merri River frontage.

### Key Design Opportunities:

- Upgrade and maintain existing roads as the framework for residential growth;
- Utilise existing grid as a connector road with public transport access;
- Manage road cuttings (particularly along Harrington Road and Russell Street) and access restrictions;
- Maintain prominence of Coghlan Road and Russell Street as the higher order connector roads in the DP area.



Figure 16 Movement Network - Development Plan Level



## 3.7

### Native Vegetation and Cultural Heritage

Vegetation located within the DP area is consistent with that of a modified farming landscape, which is a reflection of the farming practices across the site.

Existing vegetation in the form of a variety of planted native roadside trees, and cypress windrows don't immediately lend themselves to retention. However, some roadside planting that occurs along key roads can be retained in order to help in managing the transition from rural to developed.

Areas of potentially retained flora and fauna would be located within the Merri River riparian corridor, where remnant vegetation is most likely to occur.

Due to the Merri River's significance to local indigenous culture, any development or works must comply with the Aboriginal Heritage Act 2006, where a developer may be required to prepare a Cultural Heritage Management Plan [CHMP]. Generally, any development within 200m of a waterway requires investigation, as shown on Figure 17.

#### Key Design Opportunities:

- Retention of roadside vegetation along key landscape roads where they contribute to character;
- Capitalise on the amenity of vegetation and river corridor through orientation of development;
- Subject to a Cultural Heritage Management Plan, retain and protect areas of Aboriginal cultural significance.

## 3.8

### Infrastructure and Services

Infrastructure provision in the North Dennington area is restricted based on topography and the location of existing sewer and water mains.

#### Water

There are existing water supply mains installed along Station Street, Russell Street, Coghlan's Road and Harrington Road to service the higher elevation land but there are no water mains supplied from the Harrington Road squat tank (low level mains) in the growth area. The closest low level main is located in Harrington Road adjacent to the tank site's front gate.

In regards to servicing the land, anything below the 22 m contour can be, and is required to be, serviced from the low level system while land above the 22m contour needs to be supplied from the high level system. Wannon Water endeavours to service the maximum number of properties from the lower level system to minimise the pumping cost of providing these services. Also, the high level system does not have the capacity to service all the land below the 22m contour.

Figure 17 shows the 22 m contour level, and the parcels that are logically serviced from the high level system (identified on the plan) and the low level system (everything else). The Figure also shows the route for the low level system to be extended into the northern growth area. It is sized to meet the requirements of this growth area when fully developed.

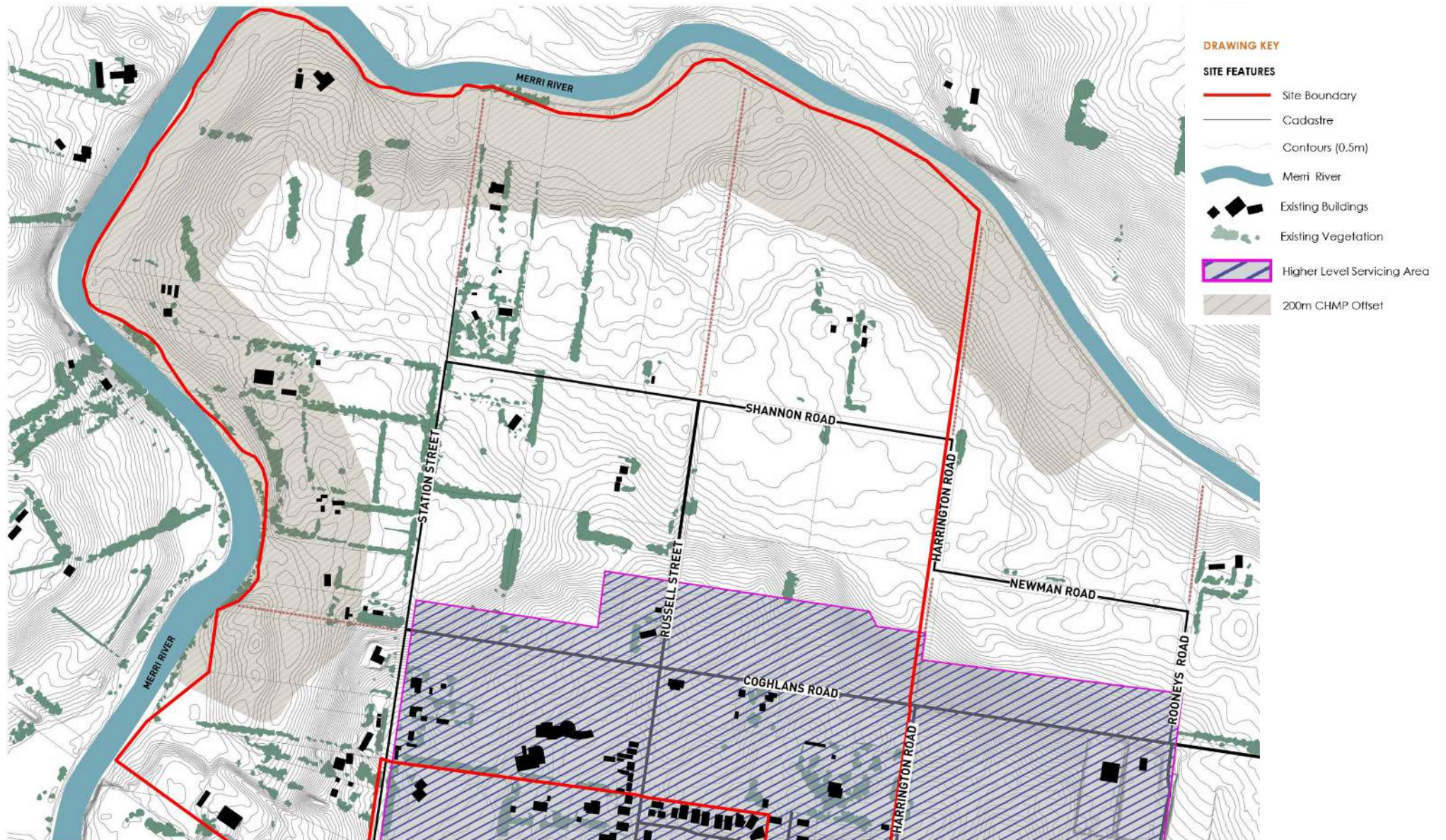
It is fortunate that there is an existing high level water main along Coghlan's Road, which will service lots fronting Coghlan's Road, potentially coinciding with an early stage of land development on the corner of Coghlan's Road and Station Street. It is worth highlighting at this point that co-ordination between landholders is necessary in order to allow for the adequate service provision strategy for the area, as sewer and water connections are located at opposite ends of the DP area.

#### Key Design Opportunities:

- Align first stages of development along the existing trunk water and sewer lines to allow immediate development without major infrastructure extensions and works;
- Allow progressive development to align with the extension of the trunk water and sewer mains in order to provide logical staging of development.



Figure 17 Native Vegetation and Cultural Heritage



## 4.1

### Introduction

The Design Response section sets out the vision for the Development Plan area, addressing the key design objectives of the site analysis. The vision sets out the design rationale for the DP, while the later sections provide information regarding specific elements of the plan which provides clear guidance for future subdivision applications.

The headings below comprise the design response:

- Land Use and Density;
- Movement Network;
- Open Space and Natural Environment;
- Built Environment and Heritage; and
- Services and Staging.

## 4.2

### Development Plan Vision

The North Dennington Development Plan provides a cohesive design which responds to the Key Design Opportunities in the Site Analysis section, and enhances the natural qualities of the existing North Dennington area, as shown in Figure 18.

The primary intent of the Development Plan is to respond to fragmented landholdings, and allow each parcel of land to be developed appropriately without jeopardising the development potential of, or being overly reliant upon, neighbouring parcels. In addition to this, responding to all existing residential dwellings within the development fabric was a primary goal in the creation of the DP, to allow all landowners the option of retaining their current dwellings within the development of their land.

A logical sequence of development was identified to facilitate growth in a way that allows for projects to be delivered independently, while also maximising the linkages between different landholders across the DP area.

Roads straddling boundaries were avoided where possible in order to ensure developers can provide infrastructure directly to their parcel of land, however there are some instances where this could not be avoided.

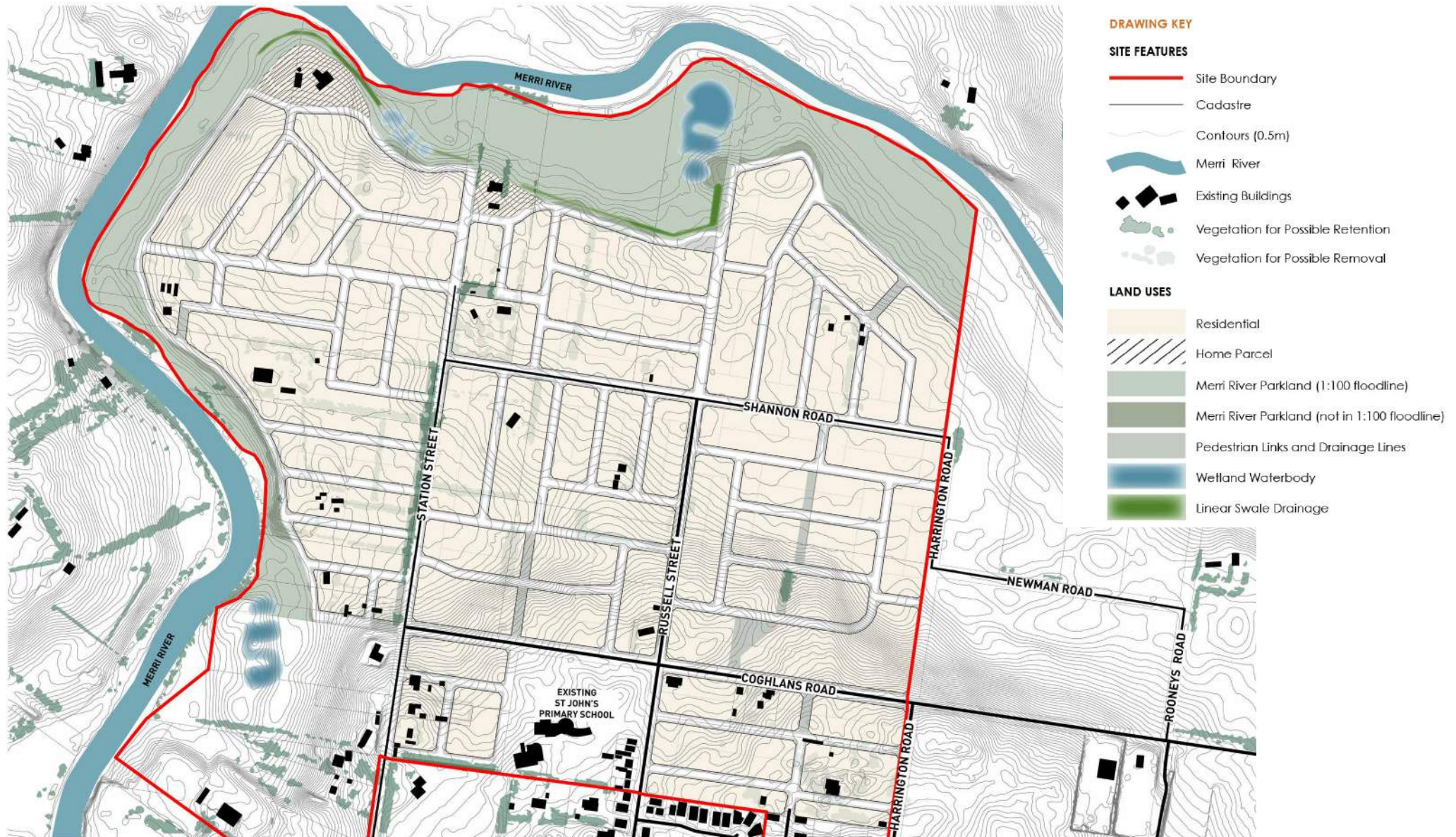
Some areas of the DP feature a number of titles that have consolidated ownership, enabling greater control and influence over the construction and infrastructure delivery time frames. Other titles are constrained by topography, width of title, encumbered land, and retained vegetation which have influenced the overall design and residential yield.

The street level layout was designed in response to individual land parcels, where lot depths and street orientation were partially determined by the overall dimensions of individual parcels, while ensuring that one development won't compromise the integrity of the DP area as a whole. A concerted effort was also made to avoid four way intersections in order to minimise infrastructure delivery costs. This has been achieved where possible, with pedestrian links used to avoid the potential intersection problems, and the staggering and offsetting of local roads (which also increases lot frontage and diversity).

The next aspect of the vision was to consider and enhance the existing natural qualities of the DP area. These included retaining long views through road ways to the Merri River and surrounding hills, utilising existing topographic features to allow for long views to the Merri River from future residential areas, retain existing native vegetation along Station Street, running the edge road along all frontages to the Merri River (where available), and using the encumbered land within the 1 in 100 year flood line for passive open space and drainage purposes.



Figure 18 Development Plan



## 4.3

### Land Use and Density

Existing land uses (which will be retained) include St. John's Primary School located on Coghlan's Road, and the Dennington Recreation Reserve location on Station Street. A Community Hub is proposed at the St John's School Site. Other than this, the dominant land use in the NDDP area is residential, with a large area of encumbered open space provided along the Merri River.

The overall density in the North Dennington growth area is approximately 12 dwellings per hectare, as shown in Figure 19 as per the North Dennington Structure Plan.

The proposed residential areas adjacent to the existing St. John's Primary School are able to support a higher density (as per the structure plan) in order to provide a larger number of dwellings within close proximity to an education facility, integrating the development around this and the existing Dennington Reserve - however this higher density area needs to address the slope issues.

The structure plan also shows a section of Coghlan's Road supporting 'mixed density residential'. This can be achieved through the use of smaller and larger lots, however due to topographical constraints on that portion of land, it would be difficult to deliver smaller lots along the entire length of Coghlan's Road, and deeper lots would be easier to successfully implement. The mixed density residential is better to be delivered on the eastern side of Russell Street (adjacent to St. John's Primary School) and on the flat areas of land at the intersection of Coghlan's Road and Russell Street.

The proposed built form and lot depths must respond to the natural topography of the area. In the steeper areas of land, larger lots may be required to respond to the slope condition (which also accentuates key views), and in the flatter areas, more regular lot sizes can be achieved.

#### Guidelines for Planning Permits:

- Provide a subdivision layout which is generally in accordance with the local street layout as shown in Figure 15;
- Achieve the target density of twelve dwellings per hectare;
- Provide lot depths that respond to the site's topographic conditions (ie deeper blocks on steeper slopes);
- Provide smaller lots within walking distance to the community hub and primary school where slope permits;
- Provide diverse lot depths/ frontages/type along Coghlan's Road;
- Avoid double fronted lots;
- Court bowls are to be avoided, and not encouraged.



Figure 19 Land Use and Density as per the Structure Plan



# 4.4

## Movement Network

The proposed road network is oriented around the existing grid of Coghlan's Road, Station Street, Shannon Road, Harrington Road, and Russell Street, as seen in Figure 20. The DP recognises Coghlan's Road as the key connector spine, which requires a 5m road widening to the north in order to facilitate its ultimate cross section. Road upgrade and construction is already beginning on Coghlan's Road (new bitumen seal) and along Station Street respectively.

The DP also utilises the existing road reservations of Shannon Road, Harrington Road, Russell Street and Station Street to anchor the modified grid network of streets. In doing this, the larger 20m road reservations have the capacity to support a significant landscape presence, pedestrian connections, and to differentiate these streets from the proposed local road network. Along these larger reservations the proposed public transport (bus) loop will operate, along Coghlan's Road, Station Street, and Shannon and Harrington Roads. This provides for a clear and legible movement network, while including a diverse range of streetscapes which respond appropriately to topography, vegetation and view lines, whilst also planning for a range of cross sections.

Four way intersections have been avoided where possible in the development plan. However, an existing four-way intersection between Shannon Road and Russell Street, which is unfunded by the DCP, can allow for a negotiated outcome with Council, as they are willing to consider alternative options for a 4 way intersection (no roundabout) with priority to Shannon Road.

The next level of movement is provided via the local roads which regularly provide long views to the Merri River, and the surrounding undulating topography. Of these, two key links to the western edge of the DP area are to be wider, 20m road reserves, which will be characterised by highly vegetated verges in order to identify these as links to the Merri River open space.

An edge road will front onto majority of the 1 in 100 year flood line of the Merri River, defining its extent and signifying the delineation between public and private realms. The edge road, which will be of a local access level, provides for passive surveillance to occur from the private realm into the public space, while also providing for nodes of functional open space to occur between Station Street

and Harrington Road. Due to the siting of two existing dwellings, there are discreet locations where the edge road will not front the Merri River Parkland. In these instances a road reserve will be required in between the dwelling and the parkland to accommodate the services and shared footpath.

An existing road from the south, in Learmonth Close, is connected into the DP area in order to increase road linkages to the school while also promoting vehicular and pedestrian linkages within the wider Dennington area.

Pedestrian connectivity is increased via the addition of a number of pedestrian and drainage links between residential blocks, and along the encumbered open space adjacent to the Merri River. Shared paths along Coghlan's Road also increase the connectivity of the area, in particular creating connecting residents to the existing St. John's Primary School.

Detailed cross sections of the proposed road network (Figures 22-27) can be found on the following pages as identified in the Road Hierarchy Plan at Figure 21.

### Guidelines for Planning Permits:

- Provide a road network generally in accordance with Figure 20. Any alterations must be supported by appropriate justification, including a proposed plan for how the changes will influence the design of adjoining parcels;
- A traffic impact assessment must be submitted which includes an assessment of proposed vehicle volumes and intersection treatments;
- An edge road to the Merri River Parkland must be provided as per the plan;
- Provide streets generally in accordance with cross sections provided in Figures 22-27 (however, streetscape diversity (such as widened verges, localised narrowing and deviations are encouraged);
- Court bowls and cul-de-sac style development is generally not supported;
- Accommodate buses along bus route. Bus stop locations to be identified in consultation with PTV and Council;
- Landscaping plan demonstrating a significant landscape treatment along Station Street (showing retention of existing vegetation) is required;
- Provide for an agreeable intersection treatment Shannon Road and Russell Street.



Figure 20 Key Structural Roads

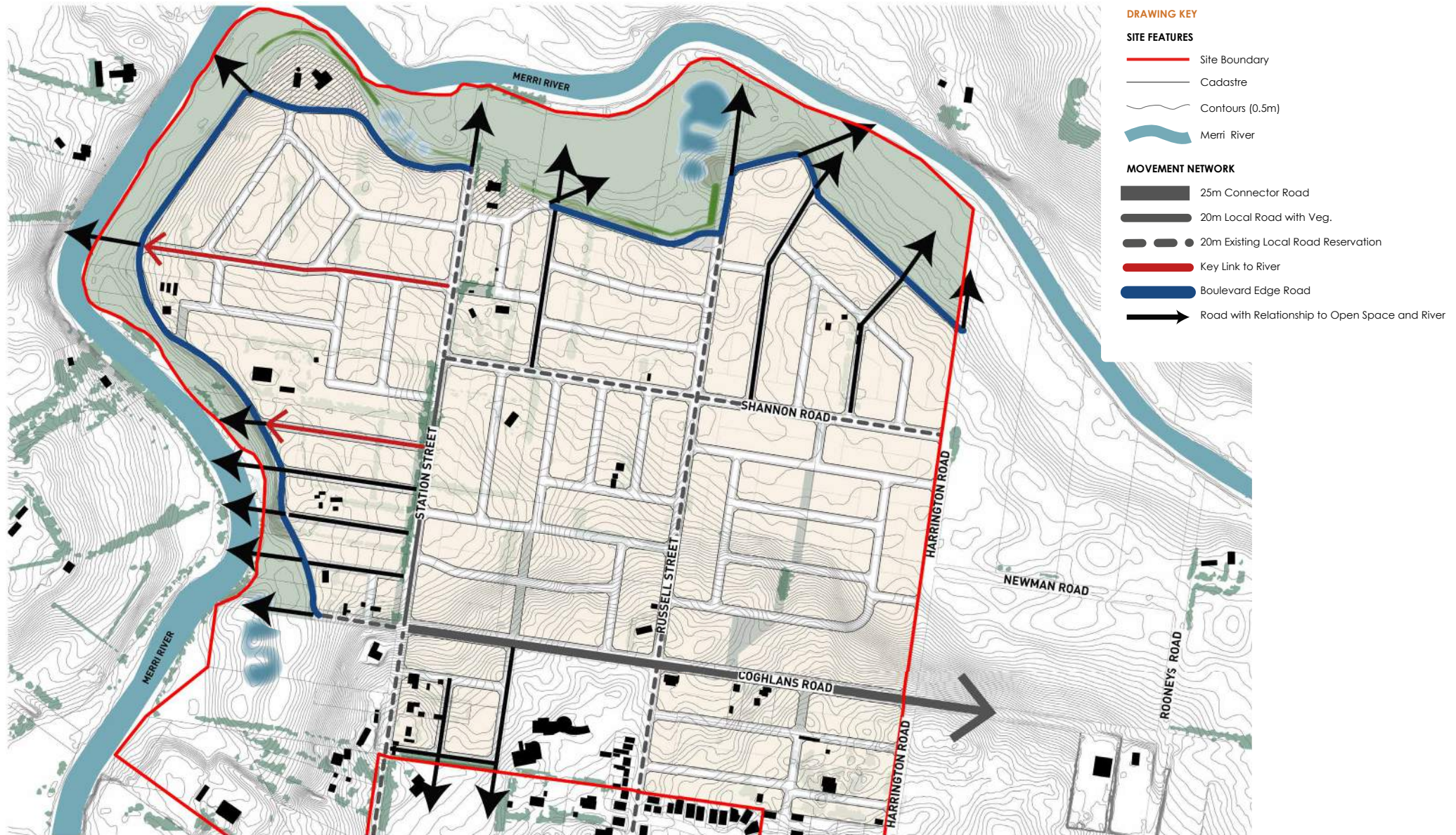




Figure 21 Road Hierarchy Plan

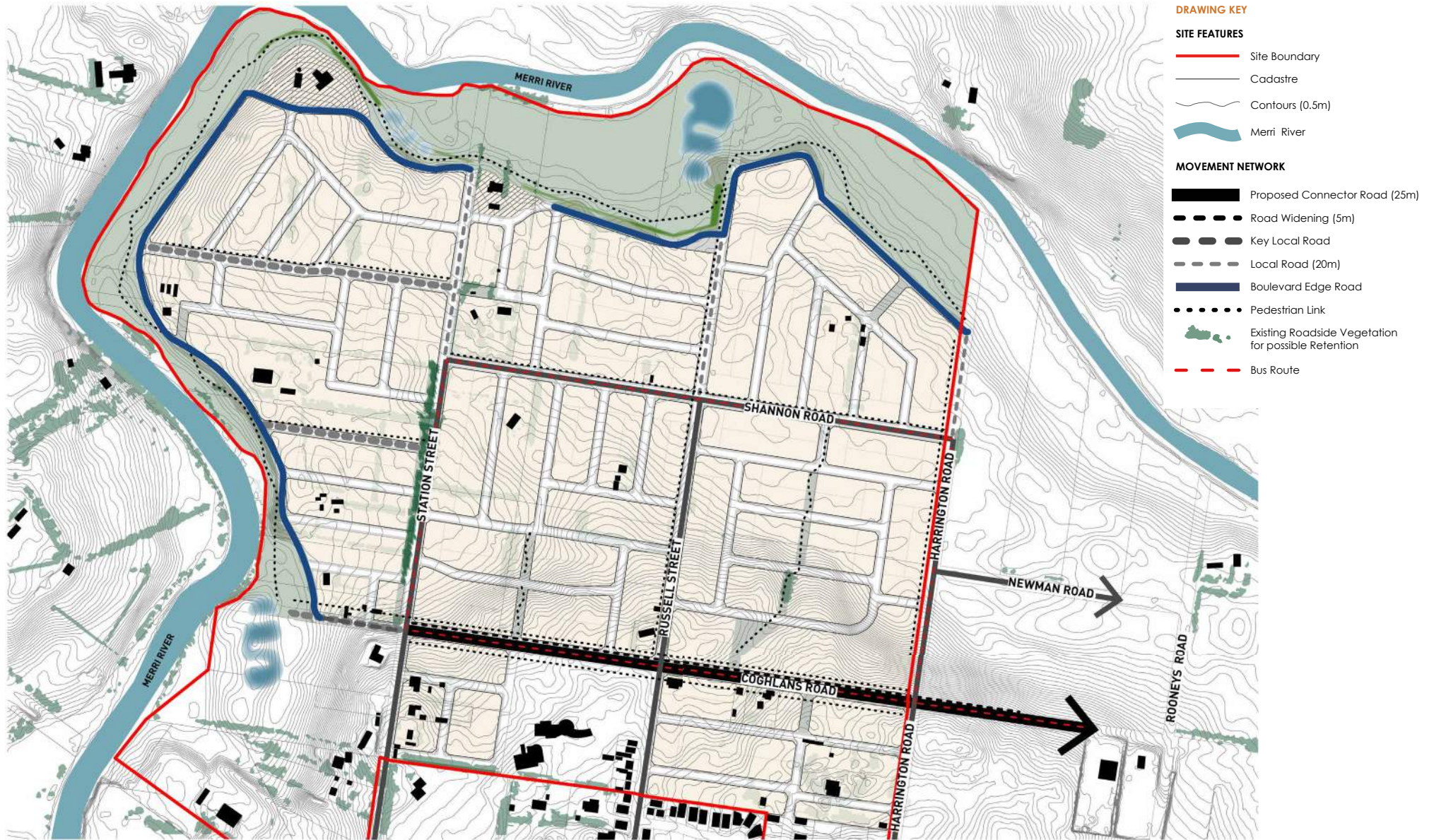




Figure 22  
Coghlans Road Cross Section

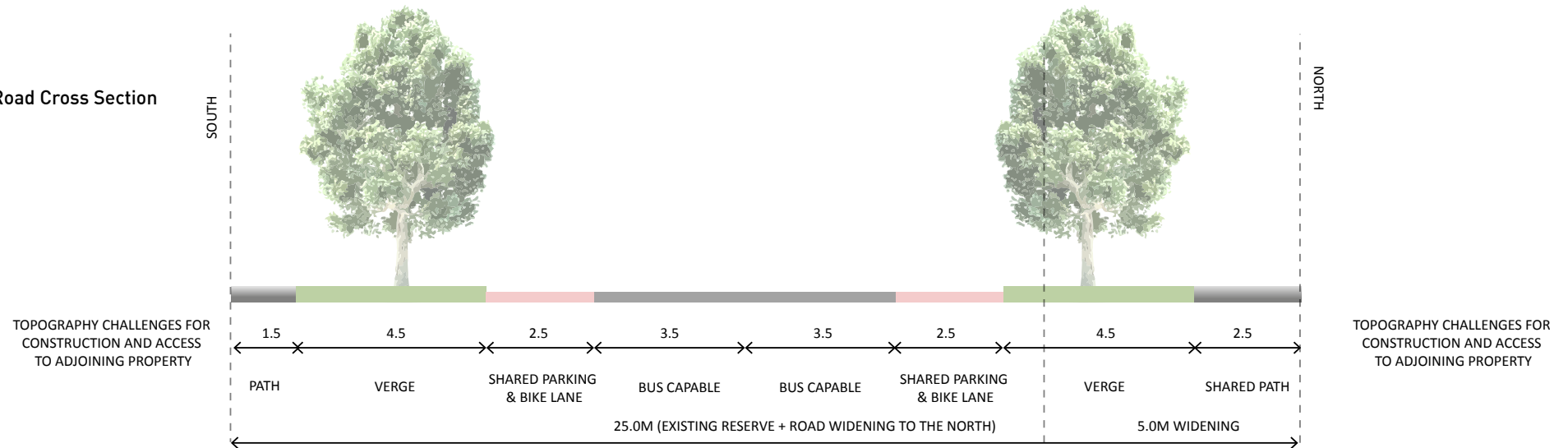


Figure 23  
Connector Road Cross Section

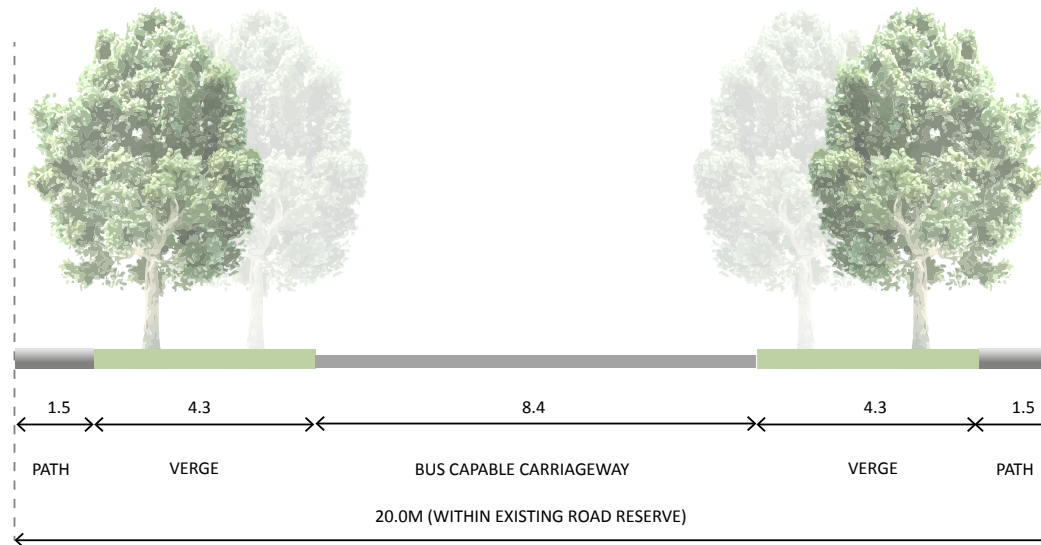


Figure 24  
12m Edge Road Cross Section

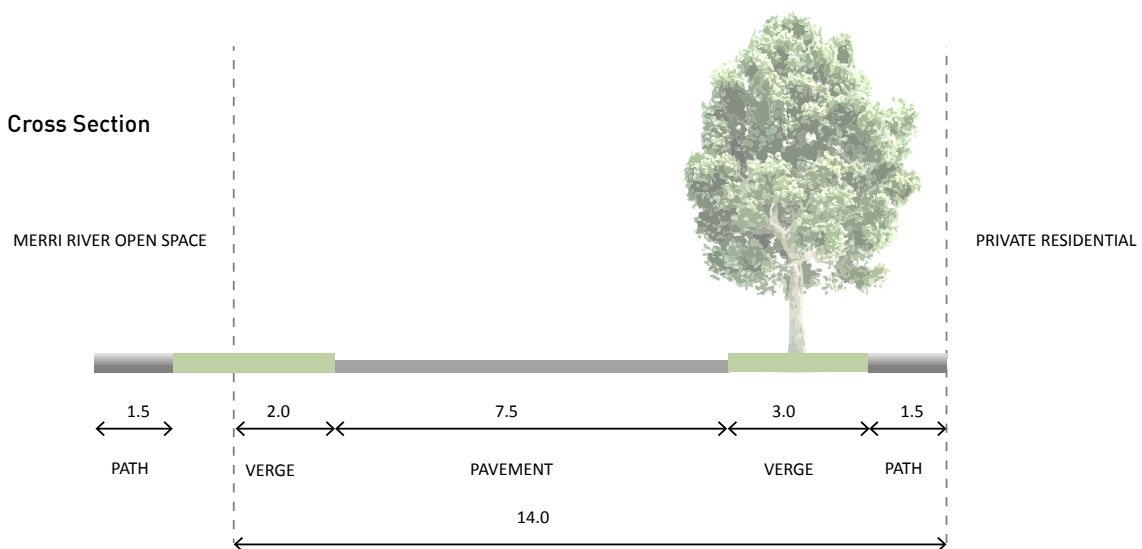


Figure 25  
14m Edge Road Cross Section

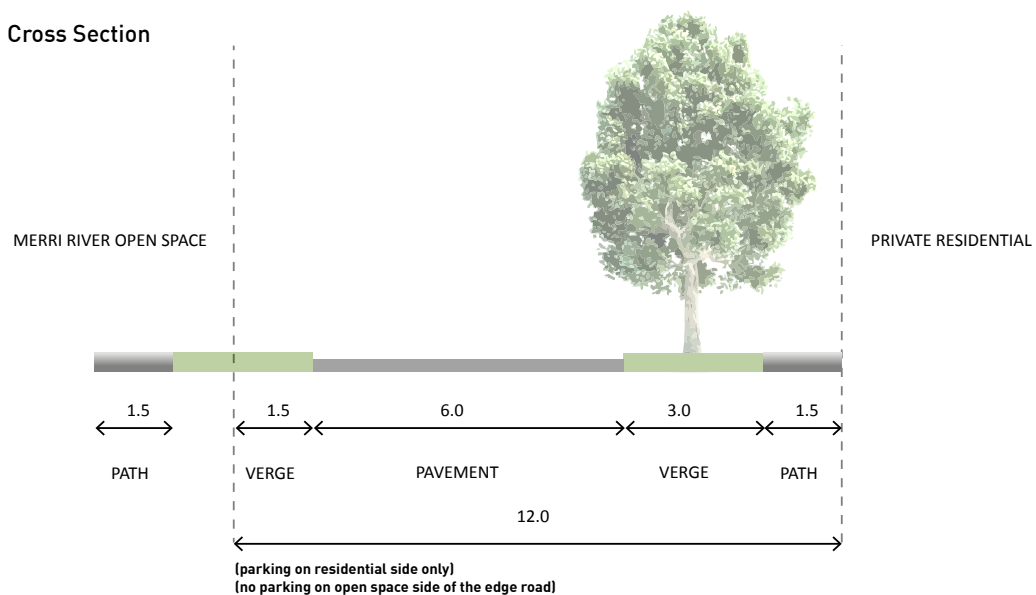




Figure 26  
Feature Landscape Cross Section

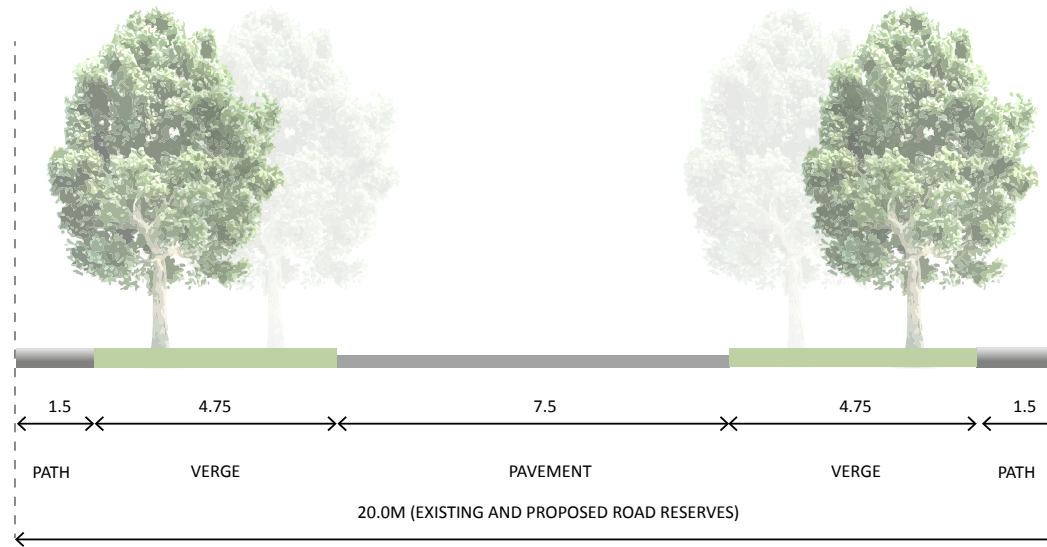
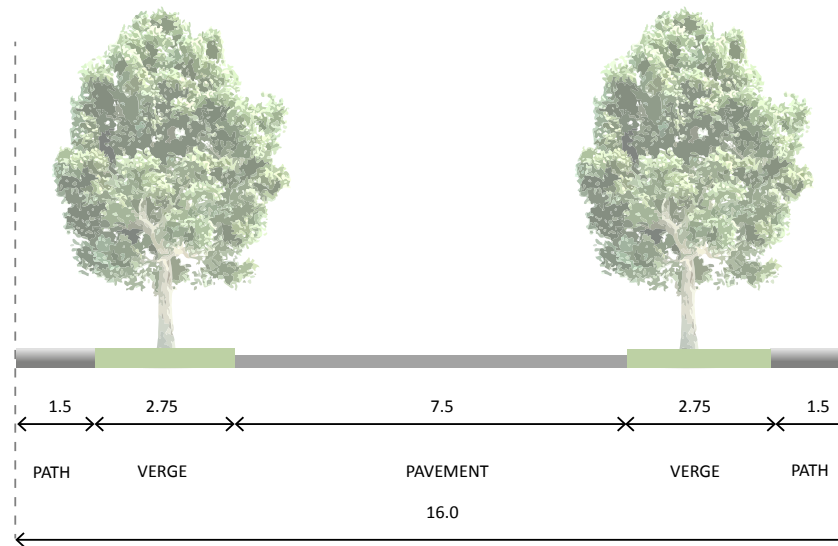


Figure 27  
Local Road Cross Section



## 4.5

### Open Space and Natural Environment

Where possible the built form and road network has responded to the existing undulating topography, which emphasises the natural landform, as shown in Figure 28. Also responding to the natural landform are the drainage lines, which allow for the overland flow of water. These links provide additional pedestrian access through a vegetated open space link, connecting through to the Merri River open space corridor, as can be seen in Figure 28.

In addition to open space, existing vegetation of a high quality is to be retained along Station Street where indicated on the Development Plan, to ensure that the retention of the existing landscape values of North Dennington are retained, while also framing key views through to the Merri River, and further along to the significant topography in the distance.

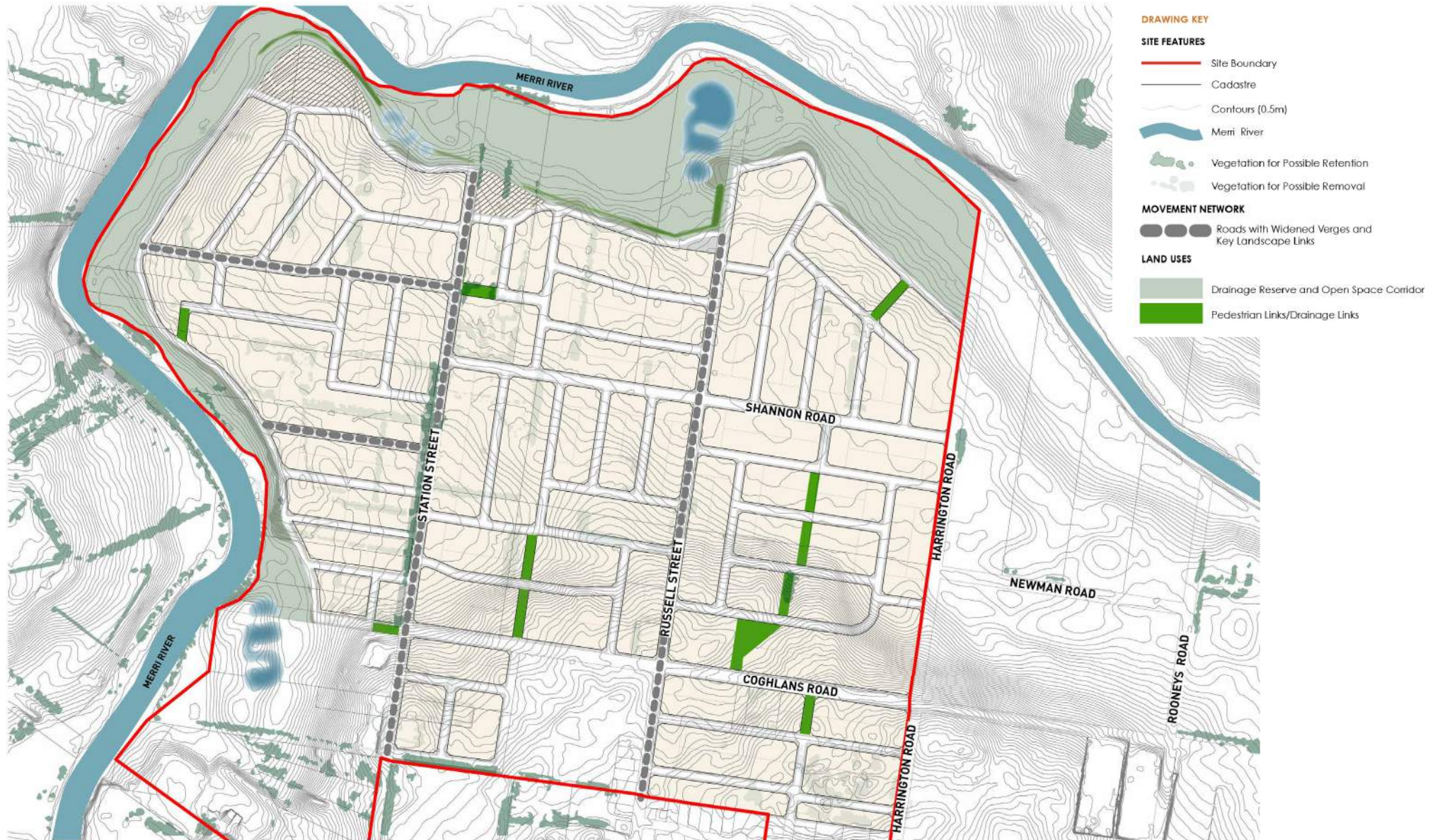
The relationship to the Merri River is also emphasised via the edge road treatment which occurs along majority of the Merri River frontage. In addition to the edge road, long views along roads oriented towards to the river also capture moments of open space. Private allotments fronting onto the edge road with views of the river allow for the most direct connection to the Merri River open space corridor in the DP.

#### Guidelines for Planning Permits:

- Provide a landscaping plan to show enhanced landscape treatment along Station Street;
- Retain trees in road reserves where appropriate;
- Provide Pedestrian links where indicated, and where appropriate to improve pedestrian connectivity;
- Orient dwellings to front open space wherever possible;
- Identify trees to be removed and retained.



Figure 28 Open Space and Natural Environment



## 4.6

### Built Environment and Heritage

The existing built environment consists largely of dwellings, outbuildings and sheds, along with agricultural buildings and facilities.

Heritage and cultural heritage management does not comprise part of this Development Plan, and as such each development may be required to prepare a Cultural Heritage Management Plan for any development occurring within an area of cultural heritage sensitivity. If required, a cultural heritage management plan must be completed in consultation with the relevant Registered Aboriginal Parties for the area in question in order to provide protection and conservation of pre and post-contact Aboriginal cultural heritage places.

No properties within the DP will have direct frontage to the Merri River Parkland. A key design objective of the plan is to maintain public accessibility along the entire frontage of the Merri River Parkland, clearly separating this public reserve from private residential areas.

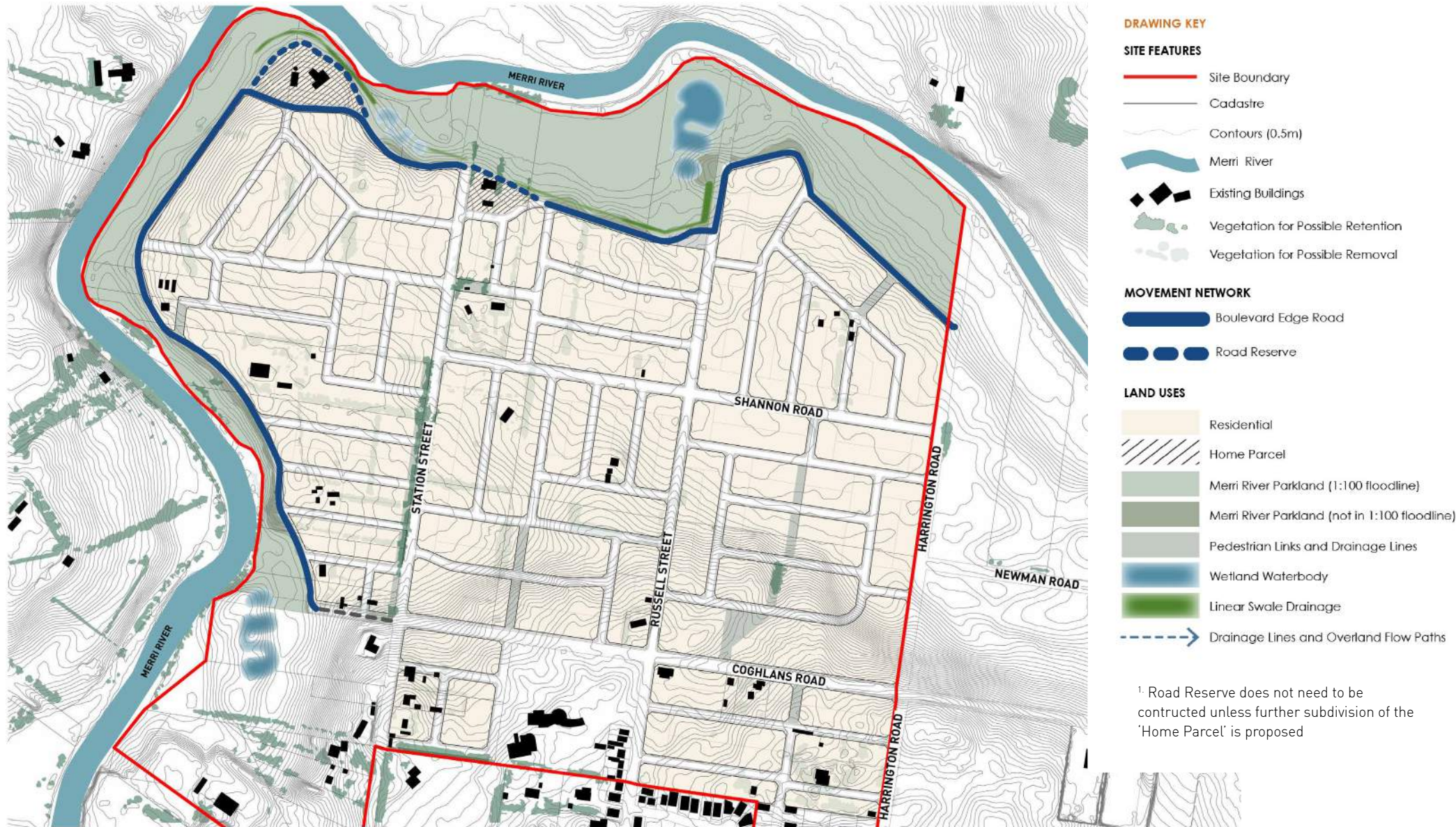
This interface is to be achieved via a constructed road, or a road reserve in the locations where specified in Figure 29. Any potential road reserves will house services/utilities and a footpath, and potentially be constructed into a road if required at a later date.

#### Guidelines for Planning Permits:

- Confirmation of whether a Cultural Heritage Management Plan (CHMP) is required. If required, a CHMP must be approved by the Registered Aboriginal Party (RAP) prior to issue of permit;
- Identify which existing dwellings and other structures are to be retained and/or removed on the site;
- No lots fronting the Merri River Parkland will have direct frontage to the reserve, they will all front a constructed road or road reserve (incorporating services and a footpath, and if required at a later date, a road).



Figure 29 Edge Road Location



## Services and Staging

The logical staging of the Development Plan area will revolve around the incremental roll out of the services as required. Areas located on the higher land along Coghlan's Road will be the first landholdings that are likely to be developed as they have access to existing services.

### Roads

The pavement of Coghlan's Road has been upgraded to an urban standard, funded jointly by Council and a federal grant, in order to facilitate delivery of affordable housing. This upgraded road infrastructure combined with the location of services, establishes parcels fronting Coghlan's Road as the logical initial development front within the DP area. As such, this area has been nominated as the most likely stage 1 area. Upgrades will be required to the balance of the Coghlan's Road cross-section, and key intersections (subject to a detailed traffic assessment).

### Water

The land in the area north of the highway bounded by Caramut Road and the Merri River is supplied from an 'on ground' storage and an elevated water storage to achieve the required pressure in urban areas. The higher elevation land is serviced from the elevated water tank and the lower land serviced from the larger squat tank on Harrington Road (as shown in Figure 30).

There are options for land that is in the low level main catchment, to be temporarily serviced by a high level main extension, through negotiations and agreement with the Responsible Authorities.

As with other developer obligations outlined in the S173 agreement, the developer is responsible for undertaking the investigations, detailed design and constructing the works to the satisfaction of Wannon Water. Wannon Water will fund its share of the works when the works reach practical completion.

### Drainage

As previously mentioned in this report, Cardno undertook a study into the details of the ultimate drainage configuration for the North Dennington DP area utilising pipes, overland flows through road reserves and drainage/pedestrian links, and water quality treatment measures such as swales and wetlands. Low points, or nodes, were located on each parcel of land, with the proposed drainage network connecting the nodes through to the ultimate wetland for water quality treatment.

The network proposes piped drainage through the majority of the DP area which will carry the 1 in 10 year flows, before discharging into swales located along contours on the edge of the LSIO (Land Subject to Inundation Overlay) which will also convey the 1 in 100 year ARI flow.

Where possible, all drainage components are located within road reserves, public open spaces or land covered by the LSIO.

The components have been designed to meet the water quality objectives stated in the Warrnambool City Council WSUD Infrastructure Design Guidelines, with the system as a whole designed to provide detention for the 1 in 100 year rainfall event.

The drainage network (as per Figure 30) shows the proposed stormwater drain network, with overland flows defined by contours and road/pedestrian link locations, swale locations, and wetland locations and required land-take. Any design deviations from the current from the development plan layout may impact on the drainage configuration, and ultimate system as a whole.

The drainage report provides details for the overall drainage concept, however it has been written in a way that a suitably qualified engineer will be able to undertake a functional design for the proposed works where required through the planning stages of development.

It is to be noted that the development plan incorporates an ultimate drainage configuration solution as per the structure plan. However, due to the fragmented land ownership it is likely that the drainage infrastructure will be staged. Beyond recognising this as a 'reality', applicants will be required to:

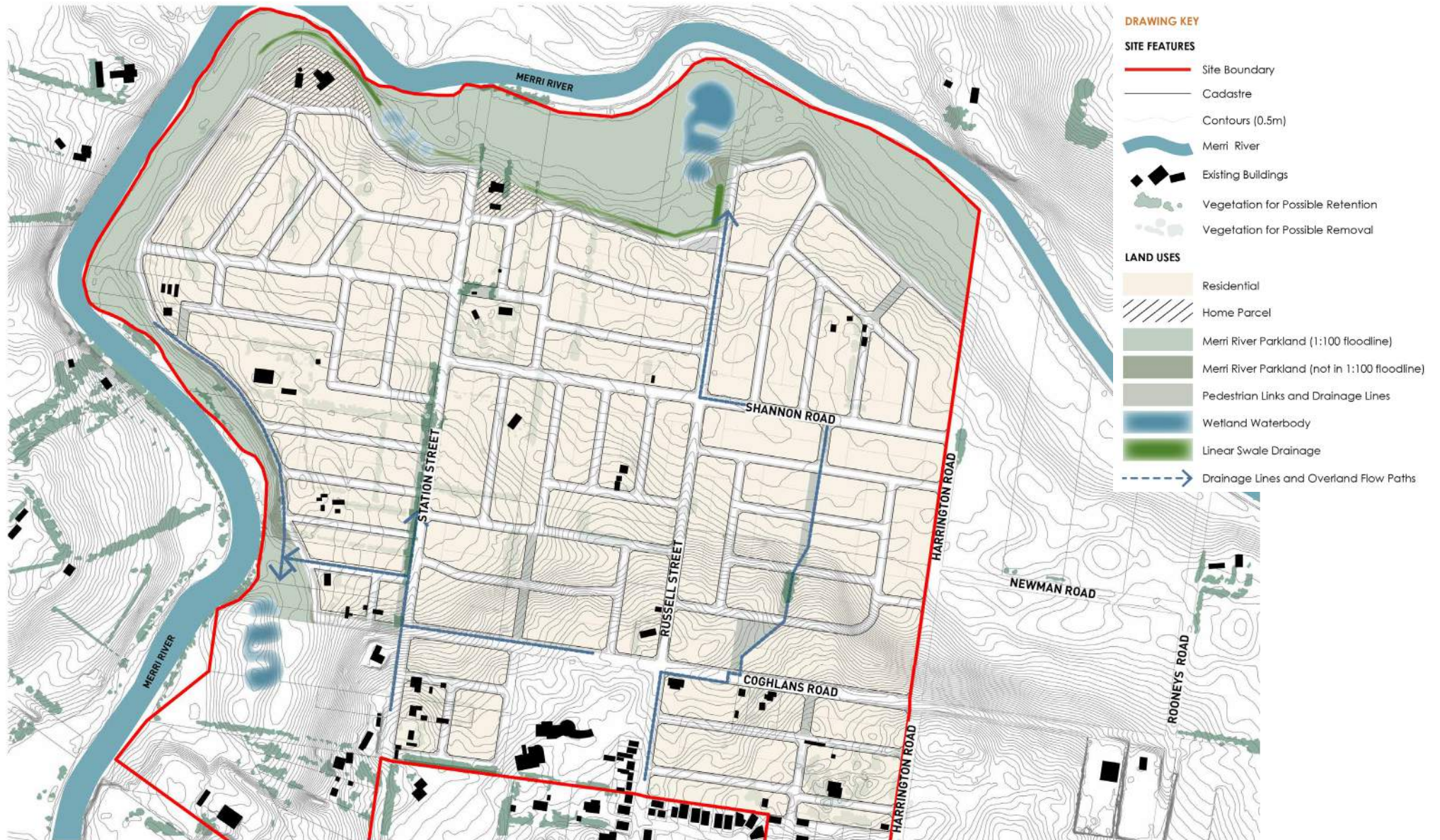
- Contact landowners regarding access potential to deliver ultimate infrastructure;
- Failing a successful resolution, is to propose interim treatment wetland and location; and,
- Submit a proposal for management/restoration of the land that is used for the temporary drainage purposes.

### Guidelines for Planning Permits:

- Servicing report must be submitted, including likely staging and infrastructure delivery plan;
- Drainage report including detail of proposed interim and ultimate drainage infrastructure must be submitted;
- Details of any proposed DCP Works In Kind projects that are to be completed;
- Temporary wetlands requirements.



Figure 30 Drainage Plan as per the Cardno Report



## 5.1

### Introduction

The land within the Development Plan is subject to a Development Contributions Plan Overlay, which along with the approved North Dennington Development Contributions Plan identifies a range of infrastructure items, and their associated costings, which are required to be delivered as development progressively occurs.

The total Development Plan area will contribute a sum of \$15,904,871 to local infrastructure, at a net developable hectare rate of \$144,666 per hectare (subject to indexation). Council encourages delivery of key infrastructure items required to service development (such as roads, intersections and drainage) as Works in Kind.

Development contributions will be implemented through a Section 173 Agreement (under the Planning and Environment Act 1987) with each developer to enter into an agreement prior to issue of first planning permit;.

The Section 173 Agreement should identify the specific items of infrastructure proposed to be delivered and cost attributable to each development site.

If no DCP infrastructure is required to be delivered a works-in-kind, then cash contributions will be required on a stage by stage basis.

## 5.2

### Shared Infrastructure Principles and Approach

DCP items can be provided by the developer as 'Works in Kind' (WIK) instead of cash payment. These are usually typical things such as roads and intersections, drainage, and paths.

Where these works are provided in kind, a credit will be provided against the developer's DCP liability at the rate specified in the DCP project sheet, irrespective of the actual cost of the works.

The benefits of this approach include:

- Incentive for developers to review the project sheets for cost accuracy;
- Incentive for developers to undertake works at the cheapest possible price to the standard specified in the project sheets;
- Council not required to be involved in tendering process;
- Council does not pay out for any cost over-runs.

## 5.3

### Shared Infrastructure Projects

There are a number of infrastructure projects that can be contributed to by different developers as they sequentially need to be upgraded or built to enable development to occur.

Given the DP area is currently serviced primarily by rural roads, key projects that will be prioritised for delivery by developers as works in kind are road projects. There is an expectation that the existing roads providing frontage to development are upgraded to a full urban standard by developers as development occurs. This is the minimum extent of upgrade required, however, subject to a detailed assessment and having regard to the extent of road infrastructure built at the time of assessment, additional length of urban road construction may be required to be delivered by developers as a condition of development.

It is noted that parts of Coghlan's Road have been partially upgraded to an urban standard as a result of a federal funding grant. This grant provides a substantial advantage to the entire DP area, and provides access to land nominated as the likely Stage 1 areas. Developers with Coghlan's Road frontage will be required to finalise the upgrade of this road frontage, including construction of additional pavement, kerb and channel, naturestrips and pedestrian/shared paths.

Some of the WIK projects for early delivery of the initial stages of development (presumably anchored along Coghlan's Road), include:

- Portions of Coghlan's Road upgrade (R002 & R001);
- Portions of Station Street upgrade (R003);
- Drainage Works Ultimate Configuration (note that only ultimate configuration will be credited, not interim works);
- Russell Street and Coghlan's Road intersection (R009);
- Harrington Road and Coghlan's Road intersection (R008);



Throughout the later stages of the North Dennington development, the projects will focus on the other existing road upgrades and intersections, and the open space to be contributed along the Merri River (subject to an agreement with Council).

Provision of initial water and sewer infrastructure also represents a significant upfront cost to developers (primarily early developers). In order to facilitate development in the area, and to provide an equitable approach to bringing forward this essential infrastructure, Council has sought to facilitate an arrangement with Wannon Water, whereby the bring forward costs of water and sewer infrastructure are shared amongst the developers.

This cost sharing arrangement is subject to further negotiation and agreement between developers and Wannon Water. Council recommends that developers seeking to submit planning permit applications for subdivision discuss a potential agreement with Wannon Water as early as possible. Any agreement reached will sit as a separate, stand alone cost sharing arrangement between developers and Wannon Water, and will not relate to the Dennington North DCP administered by Council. Should negotiations between developers and Wannon

Water prove problematic, the usual approach to funding of bring forward costs of sewer and water infrastructure will apply.

## 6.1

### Planning Permit Requirements

Planning permits within the NDDP are required to demonstrate compliance with the Development Plan and the higher order North Dennington Structure Plan, along with the Warrnambool City Council Planning Scheme. Applications that are not generally in accordance with, or supported, will be refused.

Each subdivision application must include as part of the application package the following standard requirements:

- A Cultural Heritage Management

## 6.2

Plan (CHMP) must be approved by the relevant Registered Aboriginal Party in accordance with the Aboriginal Heritage Act 2006 or it must be demonstrated, to the satisfaction of the responsible authority, that a Cultural Heritage Management Plan is not required pursuant to the requirements of the Aboriginal Heritage Act 2006;

- Site Analysis and Design Response in accordance with clause 54;
- A graphical and written assessment showing compliance, or otherwise, with the Development Plan. The generally in accordance principal applies to the NDDP, and as such, large consolidated portions of land allow for more flexibility with internal road configuration - however care must be taken in regards to external connections through to smaller parcels which have less flexibility;
- A detailed layout and staging plan, showing the sequence of development, and detailed land budgets;
- A proposed servicing plan;
- Proposed schedule of works to be undertaken, which includes DCP projects to be provided as works in kind;
- Site assessment reports where applicable, such as flora and fauna, aboriginal cultural heritage, land contamination, and transportation. Where existing reports are current, they can be submitted as part of the application.



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