

Laffing Waters Master Plan

REPORT

Prepared by Tract Consultants on behalf of Bathurst Regional Council, 24 April 2019

Quality Assurance

Laffing Waters Master Plan Report
Prepared by Tract for Bathurst Regional Council

NOTES AND ASSUMPTIONS

This plan was prepared for discussion purposes only. It is subject to further planning approval, engineering, drainage, aboriginal heritage and arborists advice.

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Executive Summary

As a key urban release and growth area for the City of Bathurst, Laffing Waters Master Plan is an exciting project which has been developed by the consultant team, led by Tract, in collaboration with Council.

The aim of this document is to outline a framework and Master Plan for the future development, summarising the work done to date. Upon approval, this document aims to ensure that development of Laffing Waters will proceed with an integrated ‘whole-of-community’ approach that will reinforce the vision for the region and achieve the principles outlined.

Laffing Waters has been identified for residential growth for some time. The area is identified as Urban Release in the Bathurst Regional LEP 2014 and is zoned General Residential. The aim of this Master Plan is to facilitate an important opportunity to create a sustainable, liveable community over 360 hectares. The Master Plan outlines development of approximately 2270 dwellings, as well as associated commercial, retail and community facilities that will set the benchmark for future growth in the region.

The Master Plan calls on best practice urban design principles, responding to the context of the site and the unique spirit of the place. The residential density proposed has been carefully considered to meet identified demands. It’s proposed to provide a distinctive, liveable community for approximately 5200 residents, who are supported by a vibrant Neighbourhood Activity Centre and high quality open space. The planned usable open space is in line with the Bathurst 2040 Open Space Strategy and carefully integrated water sensitive urban design, with green links and pedestrian connections proposed between key areas.

The development of the Master Plan has been undertaken in four key stages:

1. Site investigation and identification of key directions

Site investigation was undertaken to inform the key directions for design, including the analysis of the strategic framework of the wider area, as well as the physical opportunities and constraints of the existing site.

2. Vision and Structure Plan

Prepared in consultation with key stakeholders, the project vision has been formulated to guide the evolution of the master plan through a series of desired urban design outcomes.

3. Draft Master Plan

The overall master plan sets up the layout for the whole development area with design focus on the core area owned by council. The Master Plan is supported by further details provided for key areas, such as the neighbourhood activity centre and local park.

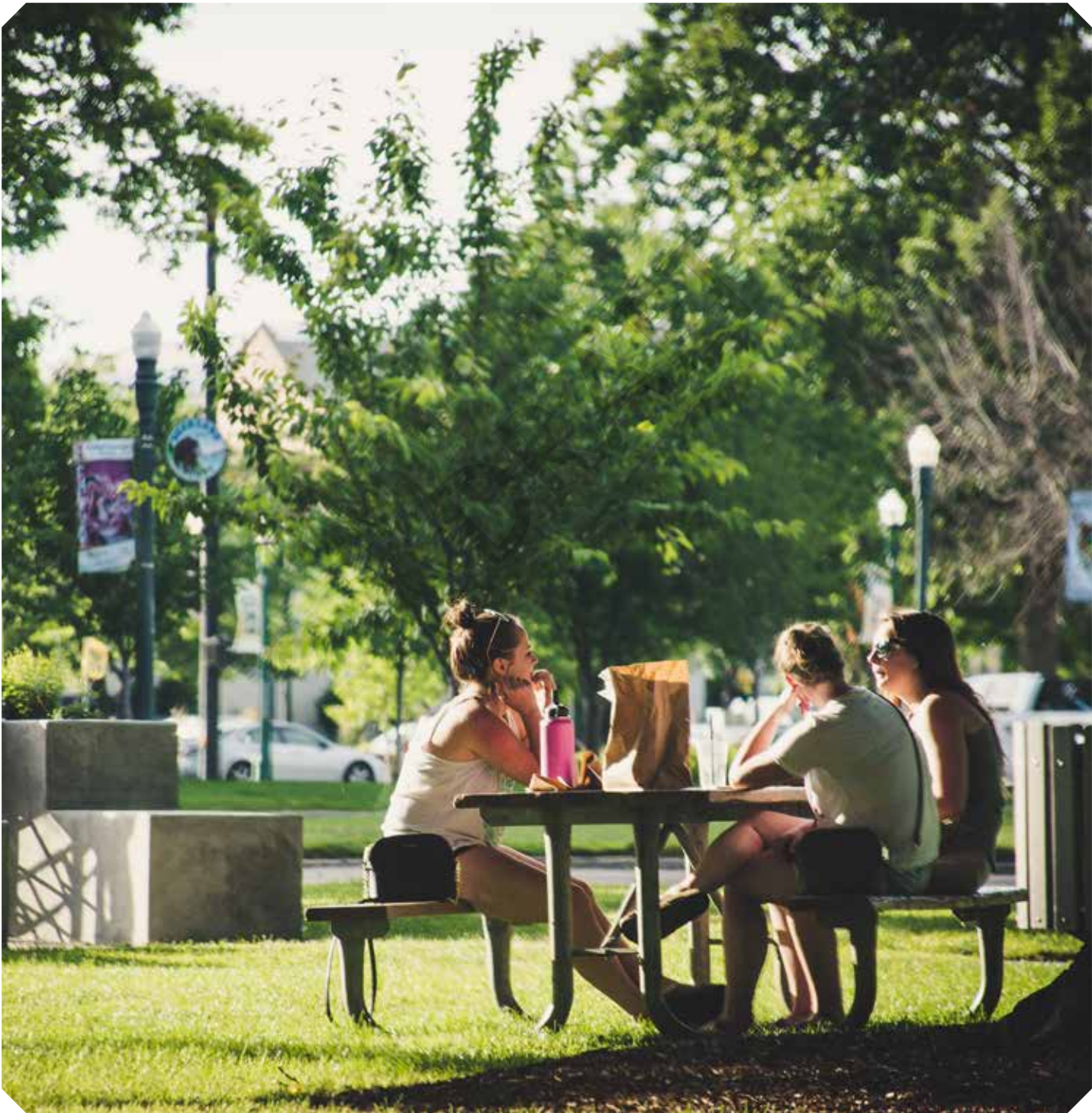
The Master Plan aims to preserve and improve the site’s ecological performance and foster community health with easily accessible open space. Pedestrian and cycle movements within and around the development area are fostered and enhanced. Street typologies are outlined in sufficient detail to illustrate the desired approach. The Master Plan also seeks to create a series of connected neighbourhoods, which are clearly defined and identifiable, providing diverse housing choice and lifestyles for residents.

Consideration has been made for future connections to rural land to the north and east of the development site. Alternative street typologies are proposed to create a rural ‘buffer’ around the subdivision, providing a green edge.

4. Implementation

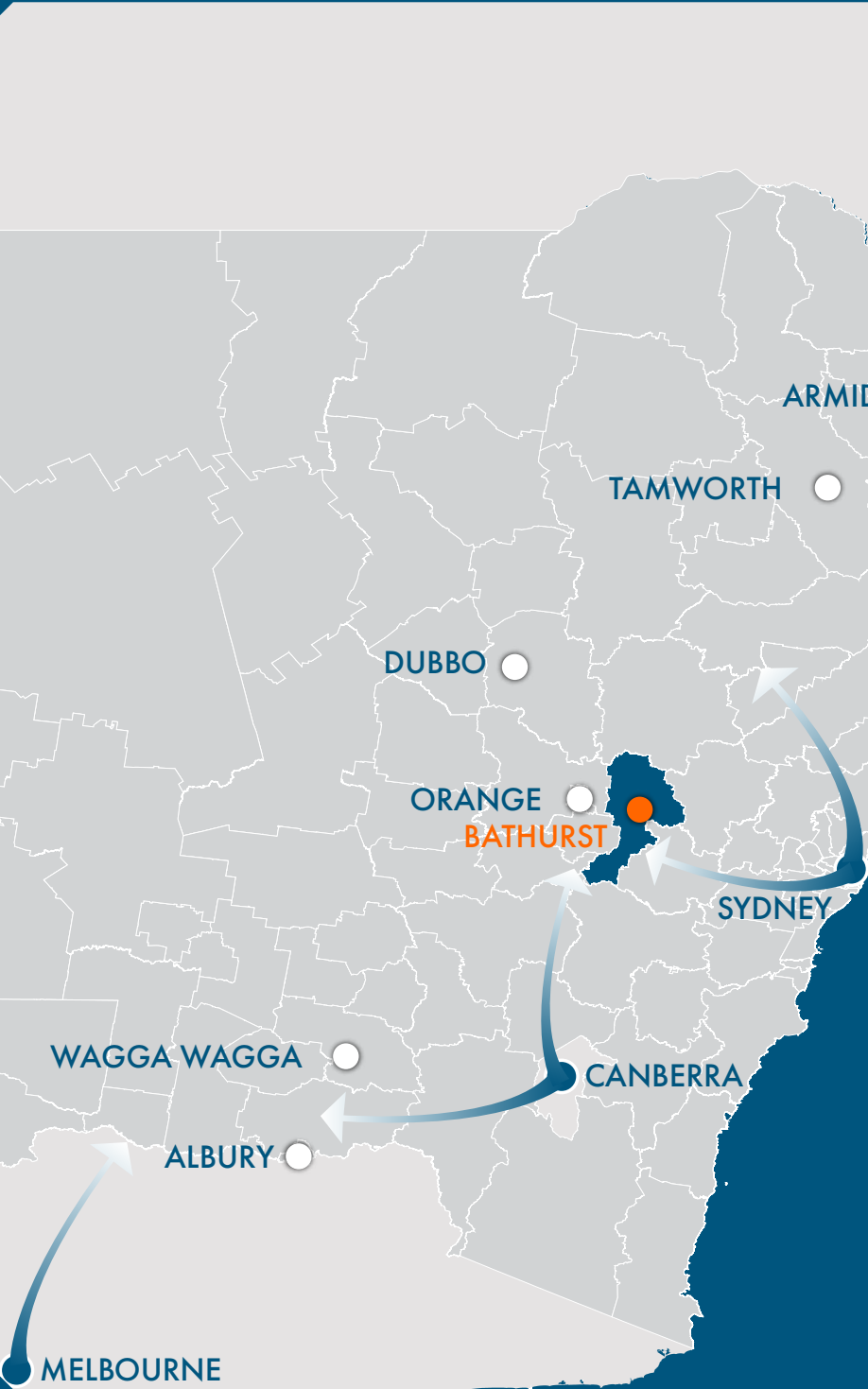
Staging of future development has taken into consideration feasible serviceability and market considerations.

Whilst the initial stages aim to deliver housing products consistent with the current market conditions, medium density stock is proposed in the future and will be focused around the Neighbourhood Activity Centre. The opportunity to improve housing choice with increased density around amenities supports the direction of Bathurst’s Housing Strategy. Council is committed to achieving high quality, sustainable growth that seeks to reduce sprawl.



1. Introduction

1.1 Understanding Laffing Waters



NSW Context Plan

1.1.1 Laffing Waters in Context

Laffing Waters is located approximately 4km north east of the historic city of Bathurst in the Central Tablelands of New South Wales. Bathurst is a historic town, established in 1813 and Australia’s oldest inland European settlement. It is now one of seven ‘Evocities’, experiencing and encouraging migration from metropolitan areas.

Bathurst lies approximately 100km, or two hours’ drive, west of the Western Parkland City, as devised by the Metropolis of Three Cities (Greater Sydney Commission). Separated by the Blue Mountains, Bathurst sits on the western edge of the Great Dividing Range in the Macquarie River plain. The historic grid of the city sits in the Bathurst Basin, with Mount Panorama’s famous racecourse rising up to the west and Laffing Waters sitting on the eastern side of the riparian valley.



Bathurst Context Plan

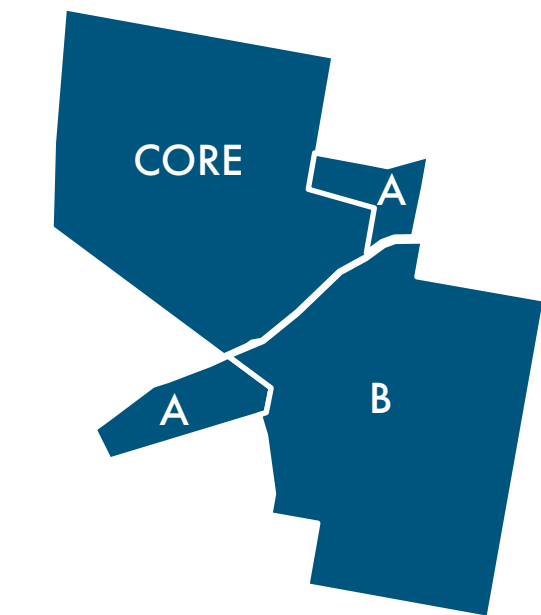


Laffing Water Context Plan

1.1 Understanding Laffing Waters

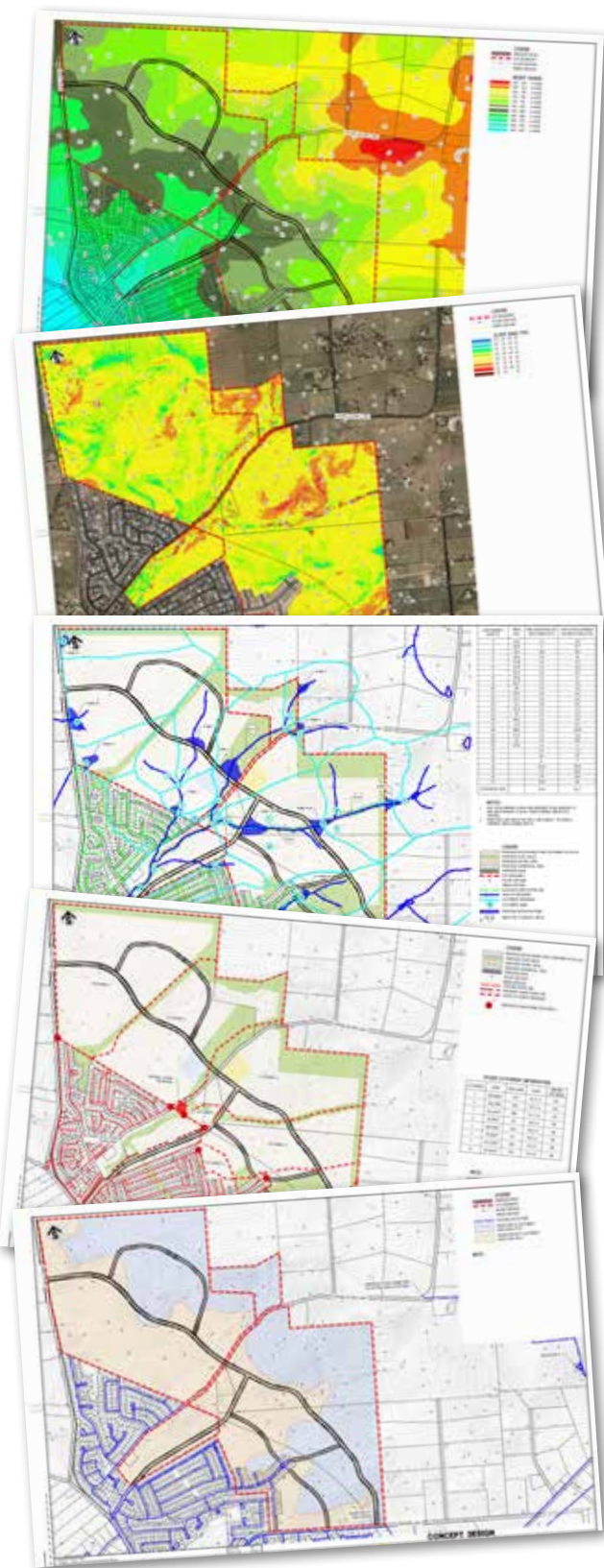
1.1.2 Issues and Opportunities

Laffing Waters comprises approximately 360 hectares, divided into three areas. The core study area comprises 158 hectares of Council-owned 'Core' land, whilst Sites A and B are adjacent privately owned land parcels. At project commencement, site analysis and specialist research was undertaken to inform the design team on site conditions, issues and opportunities.



Physical Characteristics

The adjacent maps identify the key physical characteristics of the existing terrain. The majority of the site is characterised by a 5-10% slope, with some pockets of 10-15% slope, falling from the north east to south west. Storm water therefore reaches a pinch-point in the south west of the site, and the analysis of existing catchments and watercourses informs indicative water detention ponds. Existing services locations are also considered, with land above 730m not serviceable by current reservoir supplies.

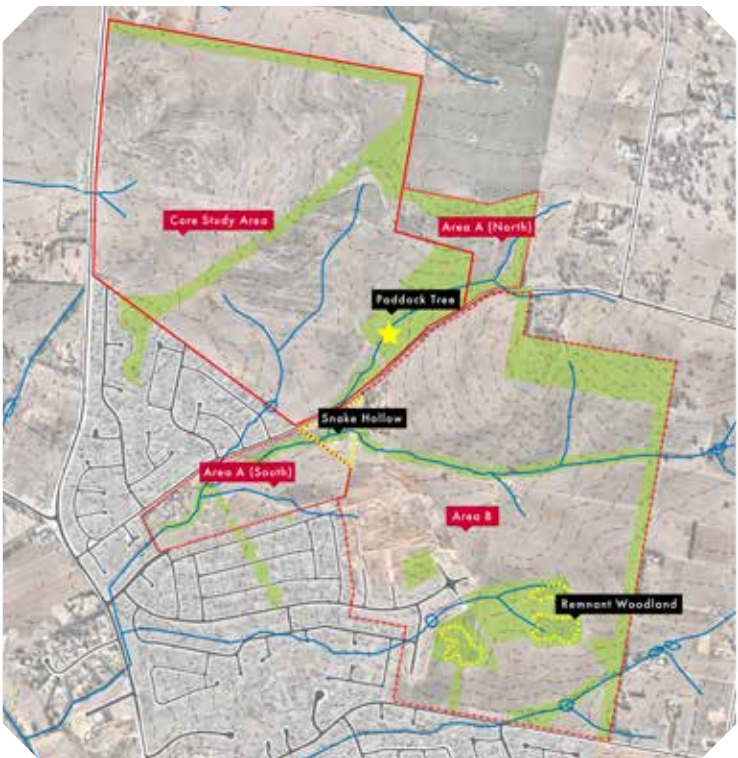


Topography, Slope, Storm water, Services & Water

Ecological Features

The subject sites consist of mostly cleared open grassland; a modified landscape dominated by exotic flora species. Desktop research and fieldwork on the Core Study Area did not identify any threatened species of flora or fauna, although patches of vegetation in Area B were not reviewed on site. 'Snake Hollow' was identified as a mainly exotic habitat fed by storm water discharge, with limited opportunity for enhancement.

Whilst there are limited high-quality, native habitats on site, development must be carefully considered to also take into account topography and hydrology. Whilst the existing site is highly disturbed, there is an opportunity to introduce flora species that reflect the native landscape in streetscapes, parks and open space.



Summary of key ecological features established

Demographic & Residential Market

Demographic analysis focused on the nearest immediate settlement of Kelso, which contains:

- predominantly families
- primarily owner occupied 4 bed homes
- majority Australian-born
- net migration from adjacent areas & Western Sydney

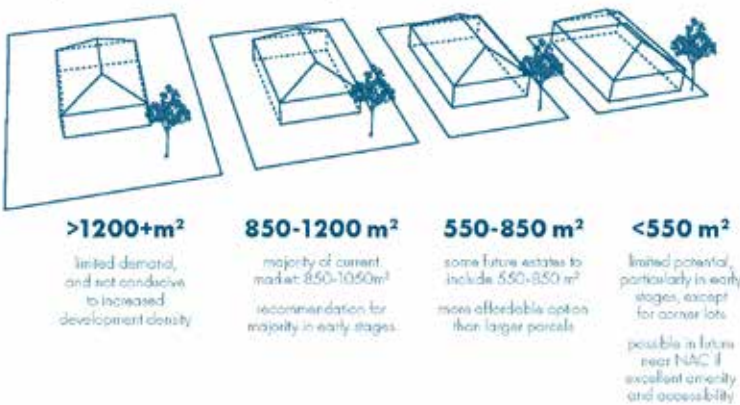


It was noted that current low density developments in the region lack:

- generous open space
- retail services & community facilities
- public transport



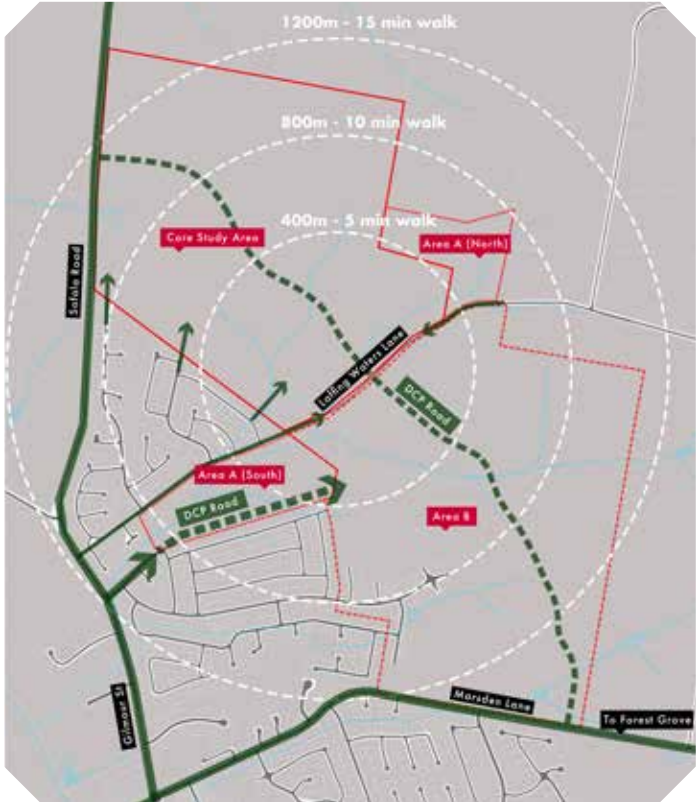
Lot density considerations were outlined based on the existing market, however it is noted that the master plan aims to achieve greater amenity for medium density dwellings where appropriate.



Existing Connectivity

Access to the Core Site is via Sofala Road to the west, and Laffing Waters Lane to the south east. These roads are currently rural in nature, bordered by grass verges. Consideration should be made to connectivity with the residential development to the south, as well as linking to existing connections to the east.

The existing DCP identifies the opportunity to create a central primary road link through the site from Sofala Road, through to Marsden Lane in the south.

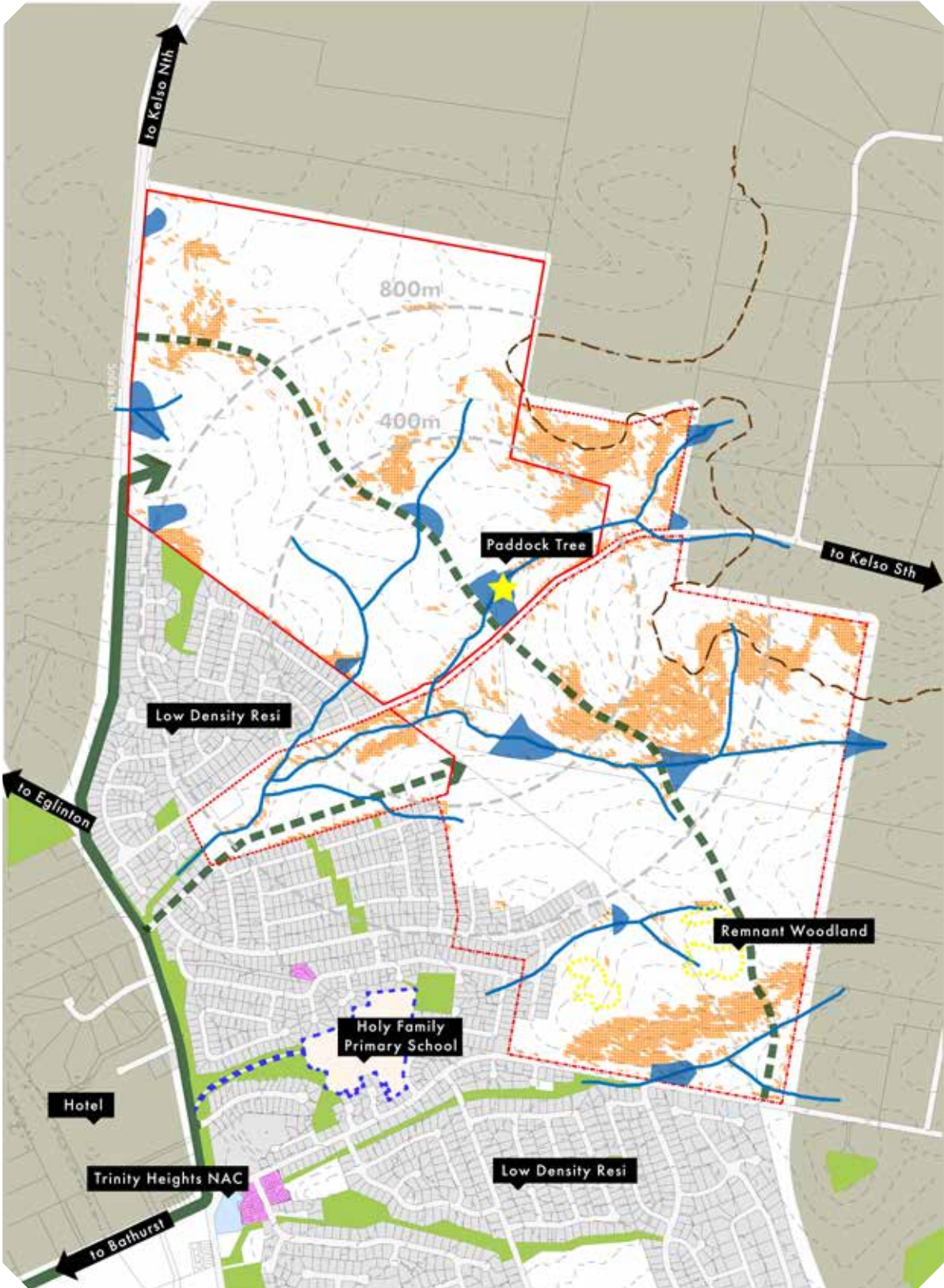


Site Connectivity

Key Opportunities & Constraints

The key existing considerations can be summarised as:

- Existing topography and natural features
- Storm water management, taking into account existing flow paths
- Connectivity to local and future residential development
- Transition to surrounding residential development and rural land
- Access to active and passive open spaces within walk-able catchment, linking to existing surrounding green spaces
- Central location for neighbourhood activity centre and school, maximising walk-able catchment
- Connections to existing utilities, taking into account water supply constraint above 730 AHD



Key Opportunities & Constraints

1.2 Envisioning Laffing Waters

1.2.1 Vision and Objectives

LIVING CLOSE TO NATURE



We are committed to imagining a **safe, sustainable** and **community focused** environment, where people can choose from a range of **uncompromising living options** to suit their lifestyle.

All within **highly livable neighbourhoods** with unique **local characteristics**.

It is a place where **family and community well-being** is a priority and residents enjoy a **positive lifestyle**.



Living in Laffing Waters is living in a **beautiful natural setting, with green streetscapes and sustainable parklands**, as well as enjoying open vistas across the region to Bathurst.

High quality neighbourhood parks will form the centre of each distinctive neighbourhood, and these will be linked by well-lit **walking & bike paths**, as well as **green links** through the development.



A **vibrant Neighbourhood Activity Centre** will provide local convenience and a meeting place at the **heart of the community**.

An integrated **destination for residents and the wider community** to come together and meet friends, hold events or enjoy a meal. It will also offer a range of amenity including a **supermarket, and specialty shops** in a pedestrian-priority environment.



Laffing Waters is envisaged as a **healthy and thriving** community, with active transport encouraged through green links and convenient **bicycle-friendly shared paths**.

Generous verges will allow for **mature street trees** to provide shade and to incorporate **water sensitive urban design**.

LAFFING WATERS MASTER PLAN AIMS TO ...



1.2 Envisioning Laffing Waters

1.2.2 Design Principles & Big Ideas

Laffing Waters Master Plan aspires to incorporate best practice urban design principles, for a holistically sustainable development.

The natural setting forms the anchoring basis, around which development is organised. Therefore, hydrology and green space are the first drivers of the layout, and clear green-blue links allow for connected natural systems.

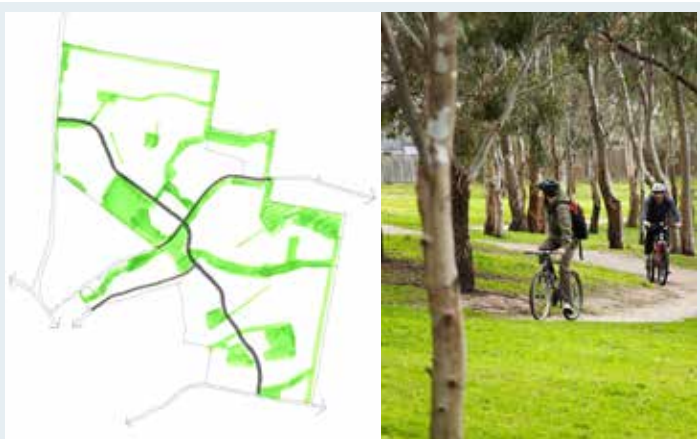
The surrounding development prioritises people’s movement and access to the natural environment, with distinctive urban neighbourhoods clustered around local parks, connected by streets which prioritise pedestrians and cyclists.

Laffing Waters will be a well considered growing community with appropriate development densities clustered around the Neighbourhood Activity Centre. Public transport access and walkability will allow for a diverse variety of housing typologies close to amenity.



Water

The natural pathways of water across the landscape and underlying topography is determinant of landscape character and urban form.



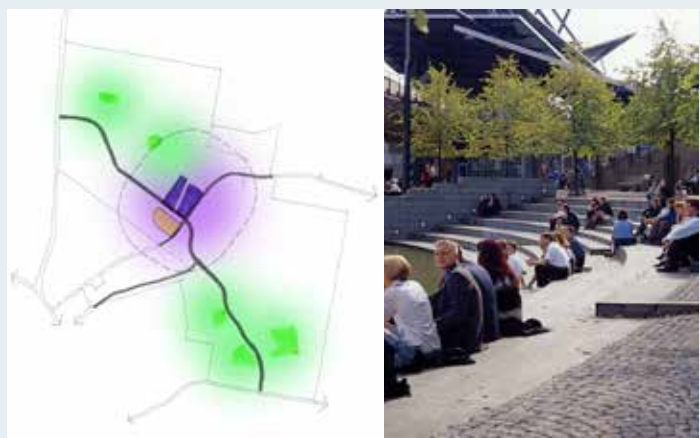
Open Spaces

Open spaces are conceived as a ‘first move’ around which development is designed. The pattern of open spaces defines neighbourhoods, underpins walkability and ensures ecological values are celebrated, as well as the rural character of Bathurst.



People Movement

A movement network that prioritises people improves the quality of daily life, stimulates social interactions and the local economy, and promotes healthy communities.



Places for People

Intimate, ‘walkable’ places provide opportunities for people to interact within their local environment. High-quality, well located places become the heart of the neighbourhood.



Distinctive Neighbourhoods

Good urban residential environments have either evolved or been organised into close-knit clusters that are clearly defined and identifiable. Those that dwell within a neighbourhood feel a sense of inclusion, which benefits the resilience of a community.



Densities

Medium densities benefit from being located adjacent to services, providing public amenities including open space, public transport, retail and community facilities. Increasing densities provide vibrance and reduces urban sprawl.

1.2.3 Key Stakeholders Consultation

We engaged with key stakeholders in November 2018, in order to gain an understanding of the essence of the place and their aspirations for the Master Plan. We used an initial session to refine the underpinning Vision and develop the Design Principles with the group.

In the first half of this session, the Tract design team presented to the stakeholders group with existing site findings and benchmarking project examples for discussion. A draft vision and design principles were also shared, which was endorsed by the group.

The second half of the session was more interactive with small group level discussion. Groups combined the knowledge and expertise of various Council departments, private land owners and technical experts to jointly resolve project challenges and explore options.

Our preliminary ideas in the form of a 'Concept Structure Plan' were tabled and discussed, including the natural features, desired movement access, locations for key elements of the master plan and the desired densities.

In the resulting discussions, we noted the following:

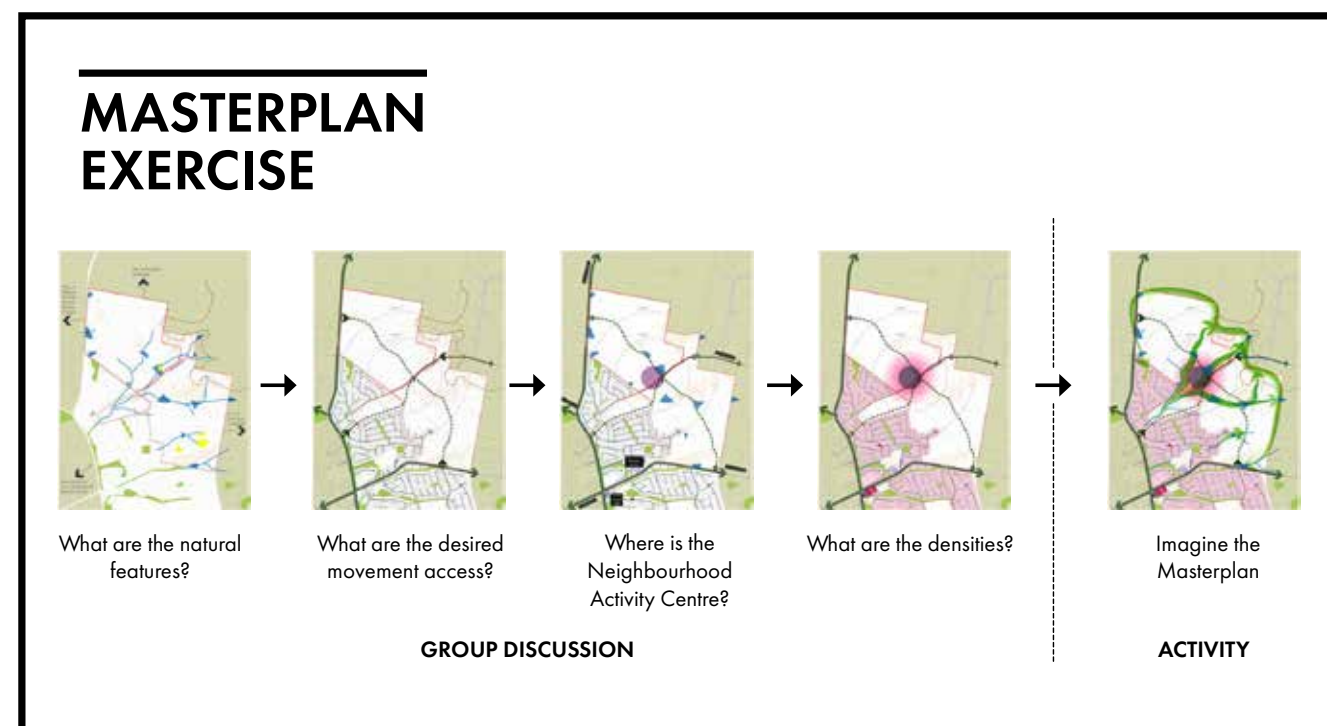
- Opportunity to enhance natural site features with additional planting
- Biodiversity Strategy proposed, e.g. to create bio-links, passive recreational corridors and a higher amenity using swales, integrated water detention ponds and green corridors for storm water management
- 9ha District Level Park for active recreation purpose is to be located close to school & Neighbourhood Activity Centre (NAC)

- Interim positions are to be explored when road and service access are required via private land
- NAC to be located on Council land, and should be open and welcoming, convenient and family focused
- There is a desire to intensify housing around the proposed NAC (e.g. terraces and town houses) with subdivisions from 250m² lot to 1000m², radiating out from the NAC

Also at this stage, the outlining work done to date was presented to Bathurst's Councillors, to gain feedback prior to preparation of the Plan

Feedback included:

- Laffing Waters should be tangible, authentic and pedestrian-friendly
- Road widths should be carefully considered to avoid congestion and parking issues
- However streets should prioritise pedestrians and cyclists
- Residents at the periphery of the site should have good accessibility to amenities and facilities
- A diverse mix of housing typologies and lot sizes is encouraged



Stakeholders Consultation Workshops - November 2018

2. The Master Plan



Laffing Waters master plan looking south west

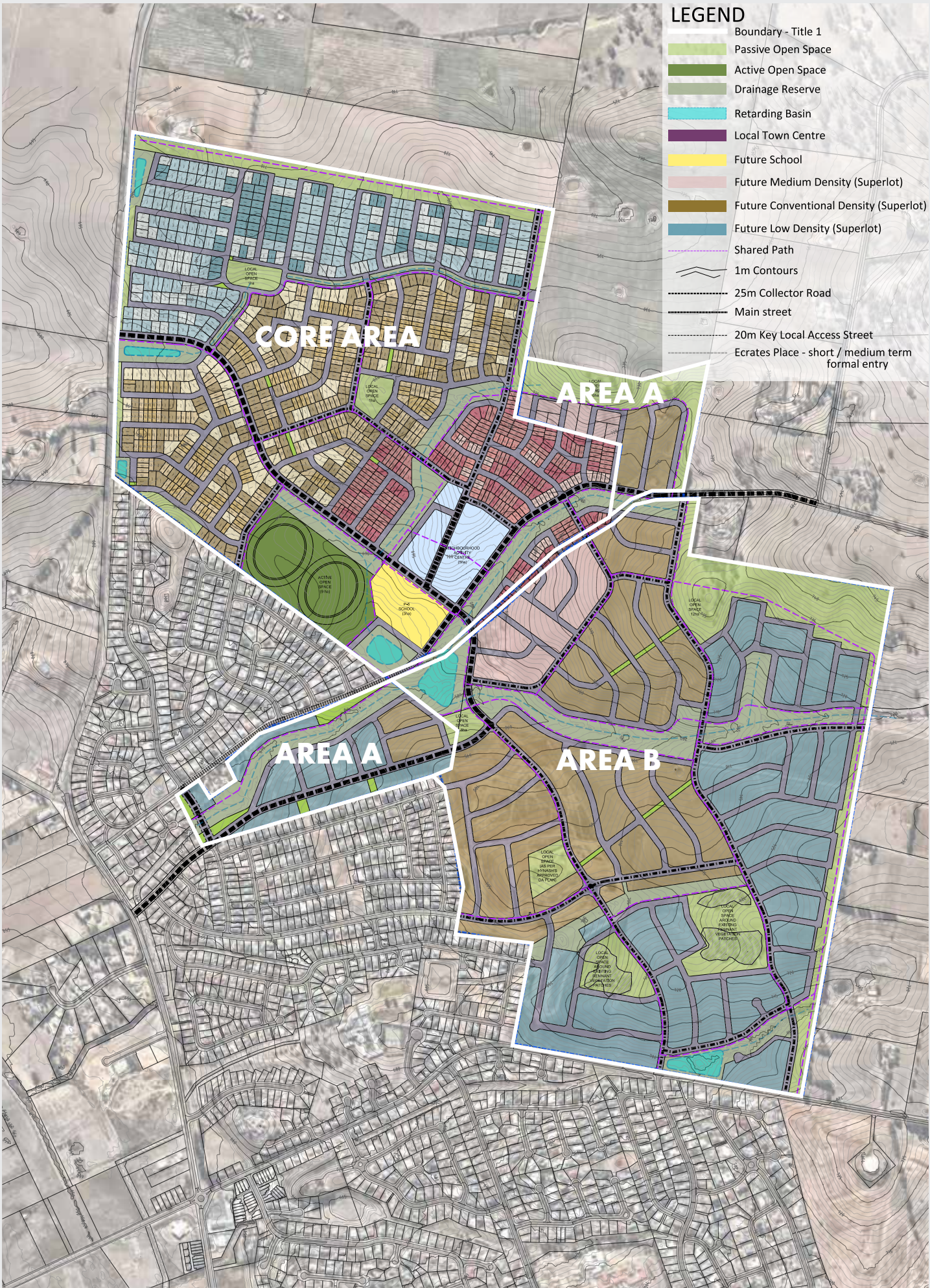
2.1 Master Plan Overview

This Master Plan proposes a future for the approximately 360 hectares of Laffing Waters, drawing together a mix of residential, commercial and community uses. An exemplar, high quality built environment is proposed, which is integrated with the natural environment, transport links, services and community infrastructure.

The Master Plan proposes 5 hectares of Neighbourhood Activity Centre, at the heart of the development, which is envisaged as a bustling and vibrant retail and community centre. Adjacent to the Main Street, 3 hectares is dedicated to a future school site to serve the new residents.

Integrated throughout the residential Master Plan, 52 hectares of active and passive open space serve the future community, in a series of green links, local parks and district parks.

The proposed residential growth is circa 2272 dwellings over the whole development area, which aligns with Bathurst Regional Council’s planning ambition for this strategic urban release area.



3. Key Places



Distinctive Key Places

The public places and spaces of Laffing Waters play an essential role in facilitating the cultural, economic, social and environmental well-being of it’s residents.

This Master Plan outlines a vision for distinctive s which centre around a local park, and a centrally located Neighbourhood Activity Centre, forming a vibrant heart. It is important that future residents feel connected and involved with these spaces, and can take ownership over their future success as celebrated social places.

This chapter outlines our intent for the Neighbourhood Activity Centre within the overall master plan, as well as one local park as an example of the type of high-quality landscape treatment proposed for the centre of the neighbourhood.

Ensuring that these spaces are well connected and located to maximise their potential for enlivenment has been an important consideration. The intricacies of their distinctive treatment and future growth will be an ongoing process with the eventual residents.



3.1 Neighbourhood Activity Centre



Vibrant Heart

Located along the Main Street at the heart of the Laffing Waters development, the 5 hectare Neighbourhood Activity Centre (NAC) will become the vibrant heart of the community, where people come to meet, gather and engage. Centrally located within the development, the NAC will provide local employment and key services.

A pedestrian-priority retail street is intersected by a pedestrian plaza connecting key green links, encouraging active transport to the surrounding neighbourhoods. The plaza is envisaged as a welcoming and inclusive space, accessible to a variety of users day and night.

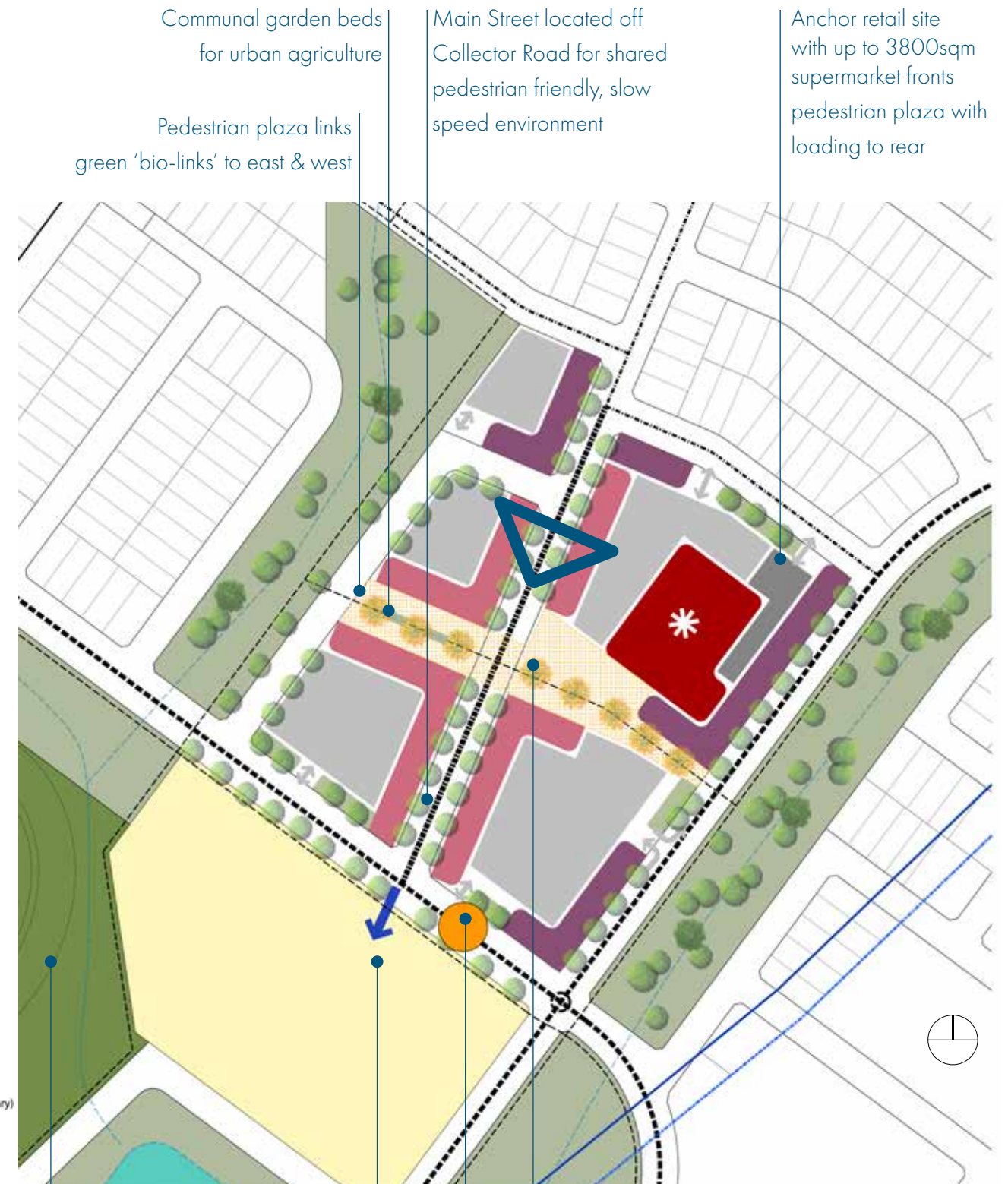
Community markets and events can be held in this space, as well as facilities such as communal garden beds and seating areas or small play spaces.

The Activity Centre is co-located with the school, at the terminus of the Main Street. This provides for a concentration of community meeting points, and allows for the school facilities to be potentially opened up to community use out-of-hours.



LEGEND

- Land Boundary
- Anchor Retail - Supermarket
- Carpark Access
- Car Parking
- NAC Landscaping
- Loading Dock
- Mixed Use
- Speciality Retail
- School Site
- Plaza - Pedestrian/Cycle Access
- Active Open Space
- Passive Open Space
- Drainage Reserve
- Floodway
- 3m Shared Path
- Main Street - Slow Zone
- 20m Key Local Access Street (Secondary)
- 25m Collector Road (Primary)
- Transport Hub



Communal garden beds
for urban agriculture

Pedestrian plaza links
green 'bio-links' to east & west

Main Street located off
Collector Road for shared
pedestrian friendly, slow
speed environment

Anchor retail site
with up to 3800sqm
supermarket fronts
pedestrian plaza with
loading to rear

NAC - Indicative Concept Plan

Main Street terminates at
3 hectare school site

9 hectare district sports park
adjacent to school

Pedestrian plaza east - west positioned to
maximums the northern sun throughout the year
Deciduous planting helps control the
shading during the summer months

Transport hub with bus connections
& bike storage/end of trip facilities

3.2 Local Park



Concept Design for a Local Park in Laffing Waters

Centre of Neighbourhood

The local park plays an important role as the centre of each distinctive neighbourhood within the Laffing Waters development. This concept design demonstrates the intended treatment and function of the local 1 hectare parks, with a series of formal and informal spaces that celebrate the unique topography and hydrology of the land.

The local park is centrally located, and captures views along many of the surrounding neighbourhood's local streets. The parks are well connected with green corridors and shared paths, and are designed to be passed-by on daily journeys, to become places of community interaction. The green-blue street which adjoins the park contains a storm water swale, and this is incorporated through the park in a dry creek landscape setting.

Feature planting highlights the social hub of the park, with playground equipment and BBQ & picnic areas, adjacent to a larger area of flexible open space for gatherings and local events, or just an evening kick-about.



4. An Integrated System

Underlying the Laffing Waters Master Plan are a number of key driving principles, that when combined create an integrated network of natural and urban elements.

These can be grouped under five key design themes: Ecology, Access, Place, Health and Economy. The diagrams opposite illustrate the major systems across the Master Plan area, whilst the following pages provide greater detail on how these principles underpin the project.

Access - Connected Community



Access - Street Hierarchy



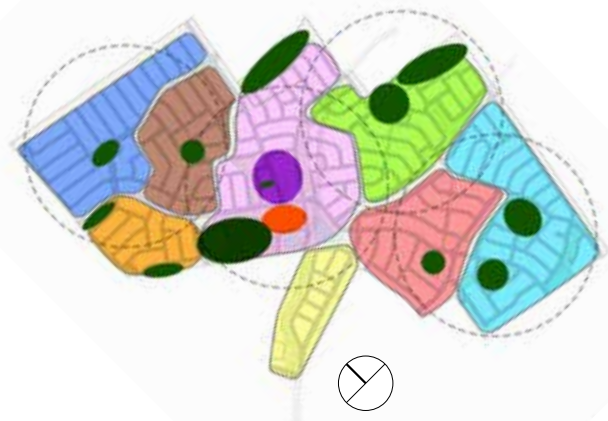
Ecology - Vegetation Conservation & Water Sensitive Urban Design



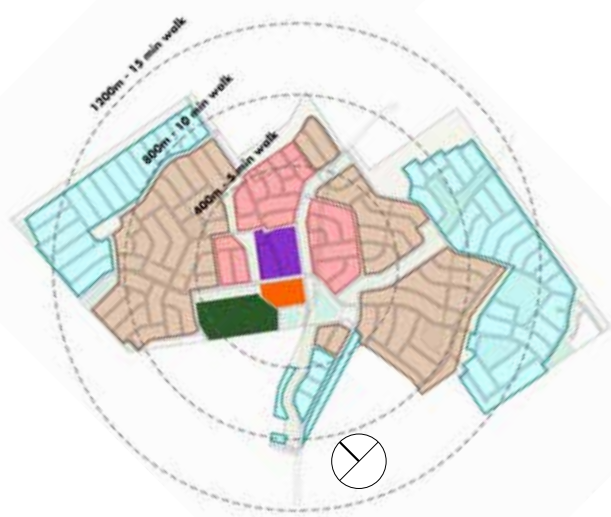
Health - Accessible Open Space



Place - Inclusive Centre & Distinctive Neighbourhoods



Economy - Intensified Density & Housing Variety



4.1 Ecology

Vegetation Conservation & Water Sensitive Urban Design

Laffing Waters aims to preserve and improve the site's ecological performance through the following interconnected strategies.

Biodiversity Strategy

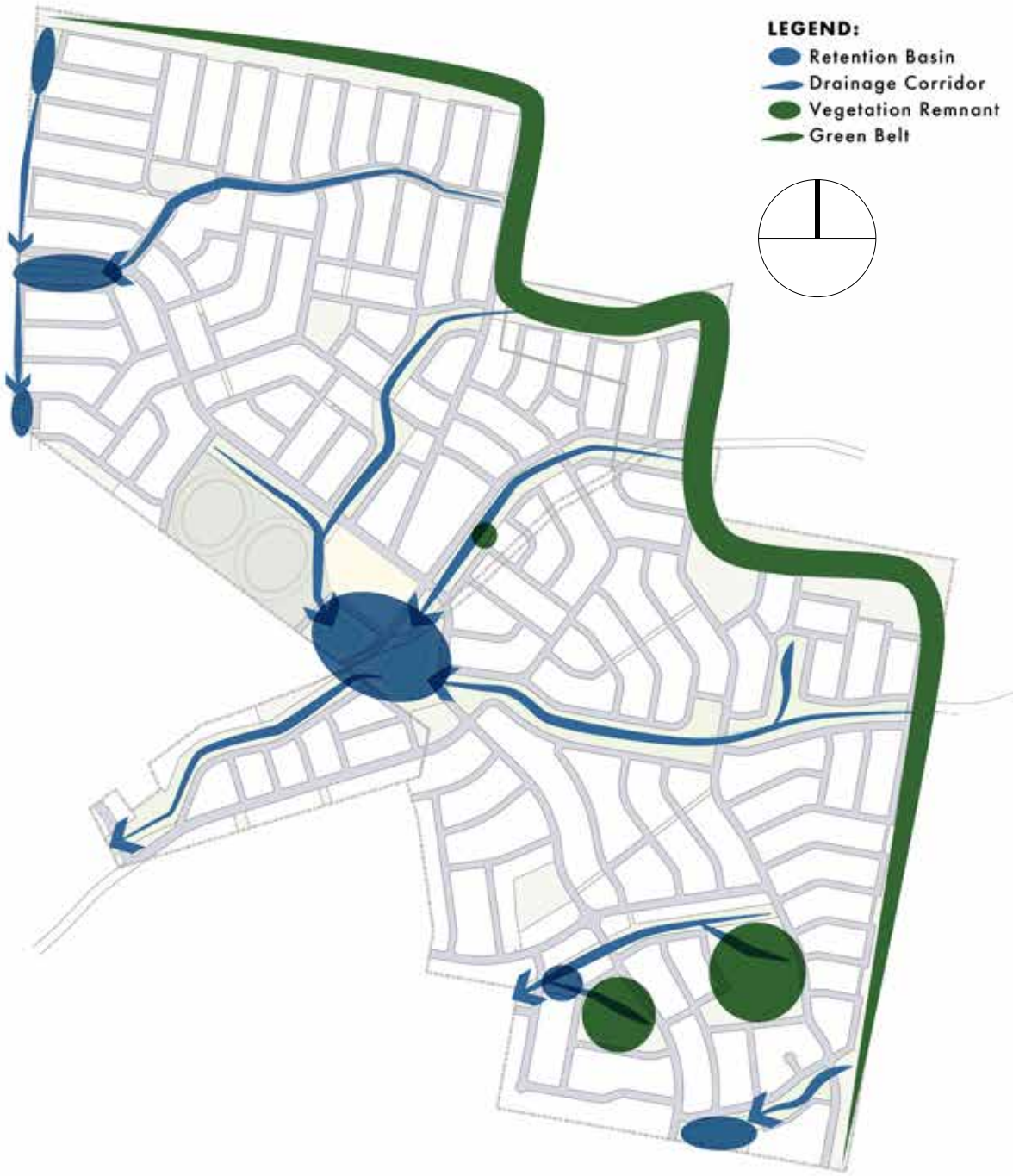
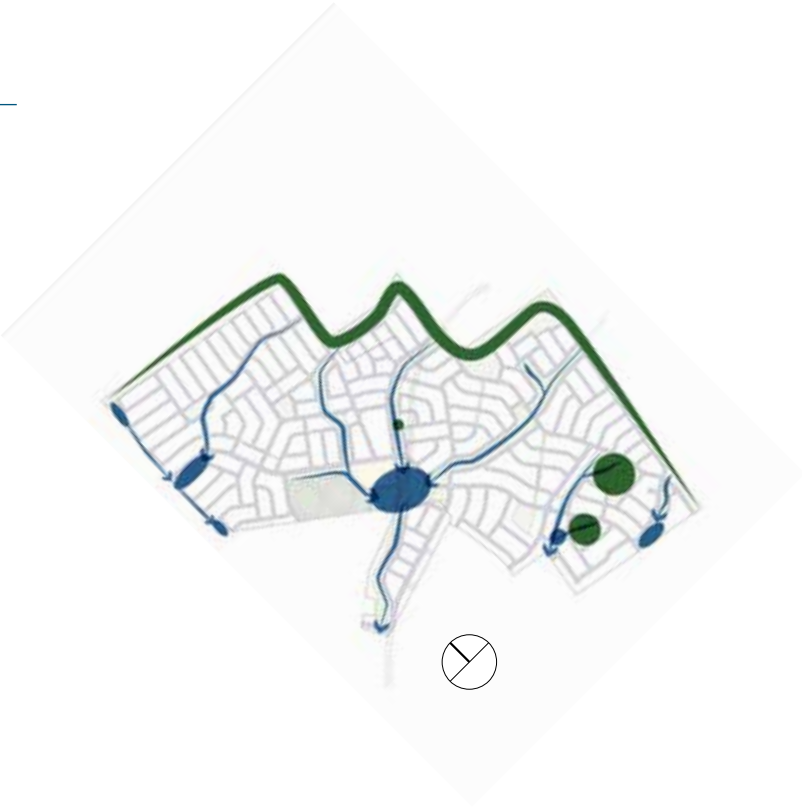
The ecological field survey identified some existing vegetation remnants on site. These are preserved and connected through the proposed open space, providing an opportunity to protect and re-introduce native flora, and retain wildlife habitat connectivity.

Significant mature tree planting is proposed along streetscapes, within neighbourhood parks and along passive recreation corridors. Street trees provide shade, additional habitat for fauna and improve air quality as well as contributing to street character and amenity.

A green buffer is proposed at the interface between the new urban development and surrounding rural land to provide a transition zone, and a 'green edge' for passive recreation.

Water Sensitive Urban Design

Responding to the site's topography and natural hydrology, a series of interconnected bioswale links are proposed. These passive recreational corridors link to detention basins and wetlands to capture, retain and in part re-use storm water runoff. This system aims to ensure that the proposed development will not have an adverse impact on downstream environments.



4.2 Health

Accessible Open Space & Urban Agriculture

Laffing Waters Master Plan aims to foster community health by designing for active transport and easily accessible open space.

The Master Plan places residents and community members within a five minute walk of accessible and quality public open space. Pedestrian and cycle shared routes are well connected, linking public open spaces.

Well-designed local parks provide opportunities for recreational physical activities, and other health and well-being benefits such as improved community cohesion and restorative landscapes for mental health. Public open spaces should be accessible to people of all ages, genders and cultures, including those with disabilities and limited mobility.

The proposed public open space include:

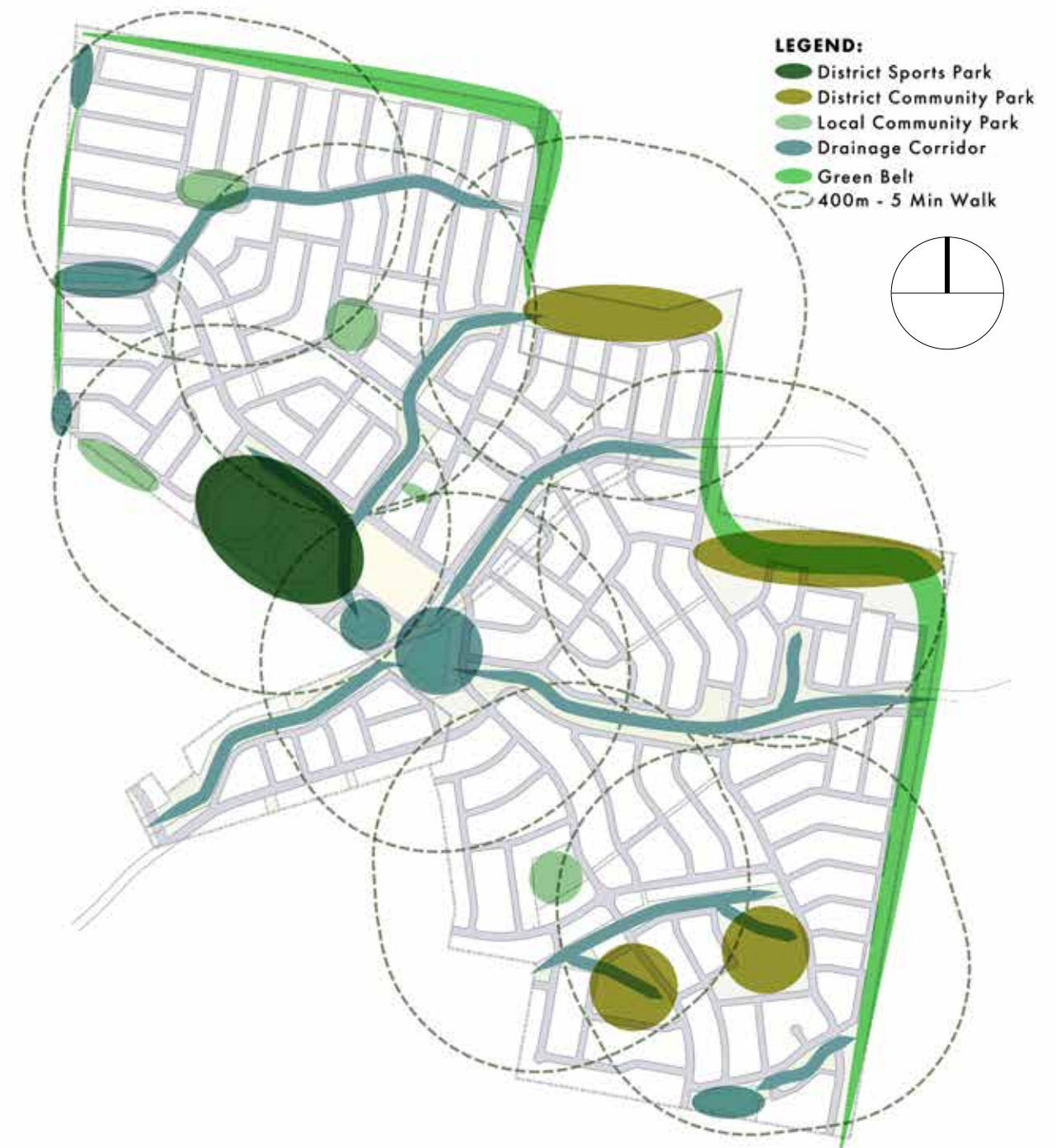
- one 9ha district sports park, which is co-located with the future school site and close to the NAC
- two district community parks of 6ha and 12ha, on hilltop above 730 AHD, near the northern boundaries
- two district community parks of 2.5ha and 5ha, accommodating existing vegetation remnants
- three local community parks of approx. 1ha



Urban Agriculture

Laffing Waters Master Plan also aims to integrate urban agriculture at different scales of the project:

- communal vegetable gardens centrally located within the Neighbourhood Activity Centre
- neighbourhood specific community gardens integrated into local parks
- privately owned yard vegetable gardens



4.3 Access

Connected, Walkable Community

The existing streets in Bathurst’s suburbs are designed for vehicles, with minimal focus on pedestrian and cyclist movement. This context results in a car dominant neighbourhood environment.

The Laffing Waters Master Plan seeks to establish a connected and walk-able community. Safe and convenient travel is facilitated within neighbourhoods through accessible and connected walking, cycling and public transport routes.

Pedestrian and Cycle Network

Shared pedestrian and cycle paths are proposed throughout the development precinct. The proposed pedestrian and cycle network is:

- safe and well-lit
- separated from vehicular traffic
- connected to local destinations.

Public Transport

Key bus routes are proposed along the connector streets, which are centrally located throughout the development precinct and link to the surrounding suburbs of Bathurst. The majority of residents will be within five-minute walk of bus stops.



4.4 Access

Street Hierarchy

The Laffing Waters Master Plan has a clear defining street hierarchy; the subsequent street typologies define the character and capacity of each type.

Different streets have different conditions, and require differing design considerations. The overall road reserve varies, along with the positioning of street trees, green verges and water sensitive urban design features. Whilst pedestrian and cyclist movements are considered as a priority throughout the Master Plan, particular streets will provide greater prominence to these movements where appropriate.

The street typologies proposed include:

- Main Street
- Connector Street
- Key Local Street
- Local Access Street
- Blue-Green Spine
- Green Mews
- Green Link



4.5 Place

Inclusive Centre & Distinctive Neighbourhoods

The Laffing Waters Master Plan proposes a 5 hectare Neighbourhood Activity Centre (NAC), which is co-located with a 3 hectare future school site and a 9 hectare district sports park. Together, they provide an inclusive local centre, which becomes a defining anchor point.

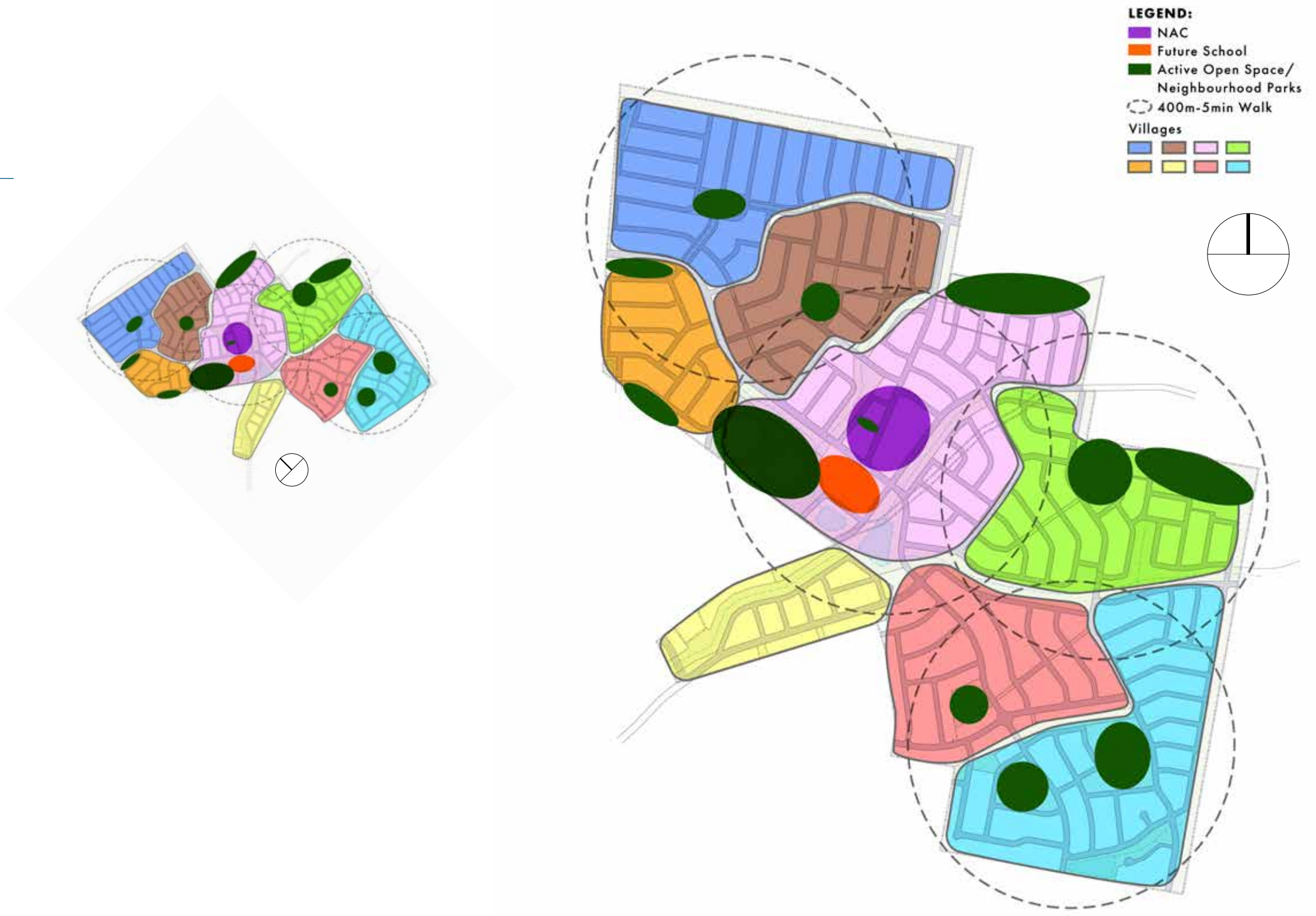
The Main Street is an intimate and walk-able place providing a diverse mix of goods and services. It is a place for people to meet and interact, facilitating social connection. It is also the centre-stage of local events and experiences.

Distinctive Neighbourhoods

The proposed Laffing Waters residential environments are organised into close-knit small neighbourhoods. These neighbourhoods are clearly defined and identifiable. They resonate at a cognitive level with the people who live in them.

Laffing Waters will consist of eight neighbourhoods underpinned by the following place attributes:

- contextual response to topography, water basins, drainage corridors and vegetation remnants
- diverse housing types for a range of residents
- a defined centre and edge, by proposed Neighbourhood Activity Centre, neighbourhood parks, roads and drainage corridors



4.6 Economy

Intensified Density & Housing Varieties

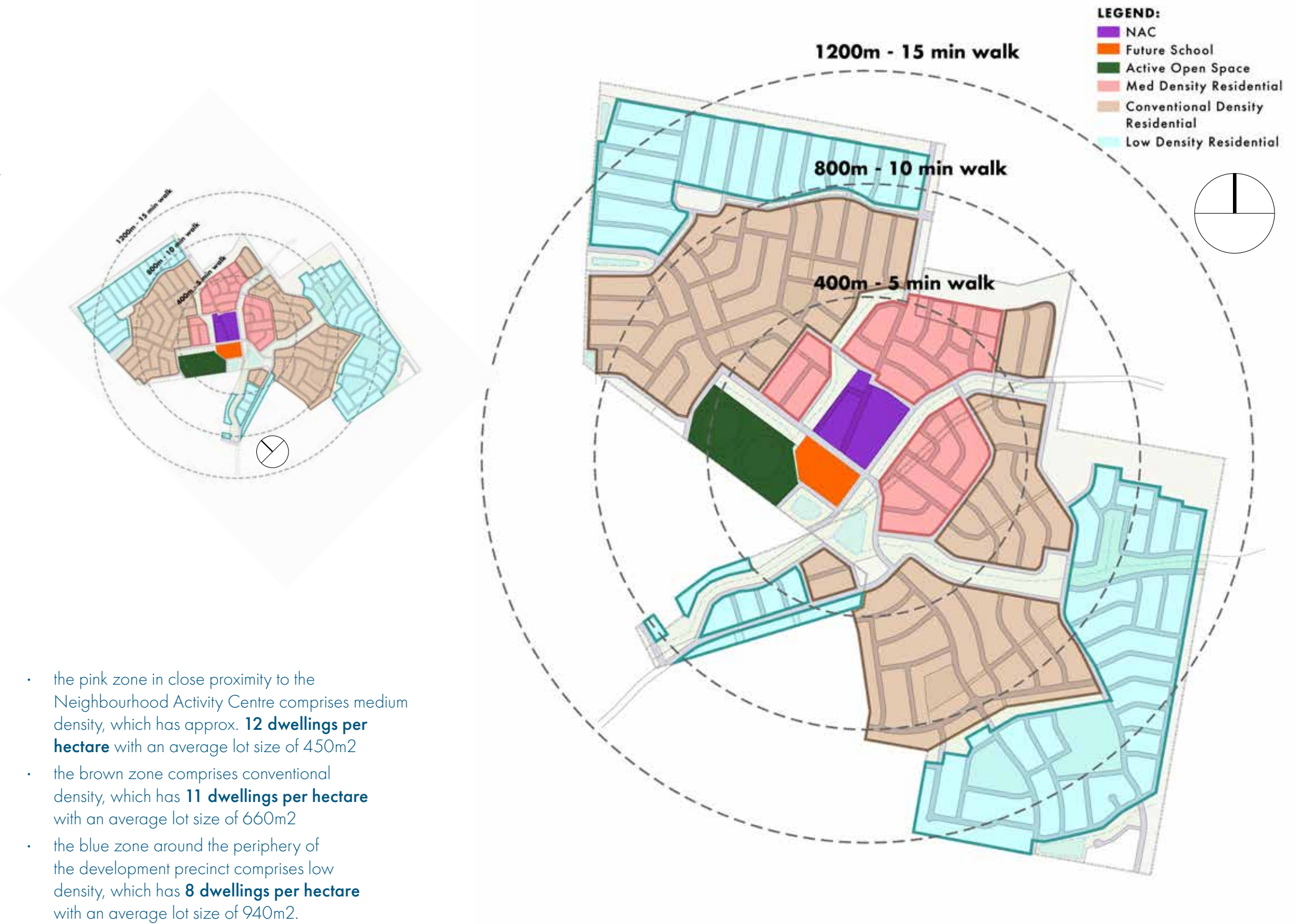
Fully established, Laffing Waters will have a population of around 5,200 people. An appropriate mix of retail, commercial and community services will be required to serve the increased population, as well as a diverse range of housing options.

A wide choice of housing and lifestyles attracts a diverse range of people to a location. Smaller lots and the mixing of housing types within the local centre creates higher densities, which are supported by the destinations and services within walking and cycling distance.

Benefits of intensified density and housing variety include:

- higher residential density close to centre supports the local economy
- higher residential density near the centre and public open space encourages passive surveillance
- public transport hub at Neighbourhood Activity Centre links areas of higher residential density and forms a network of conveniently accessible destinations.

The residential density is measured by the number of dwellings in the net residential area (NRA). NRA only includes the area of roads and residential lots. The opposite diagram indicates the proposed distribution of the residential densities:



Diverse Housing Options

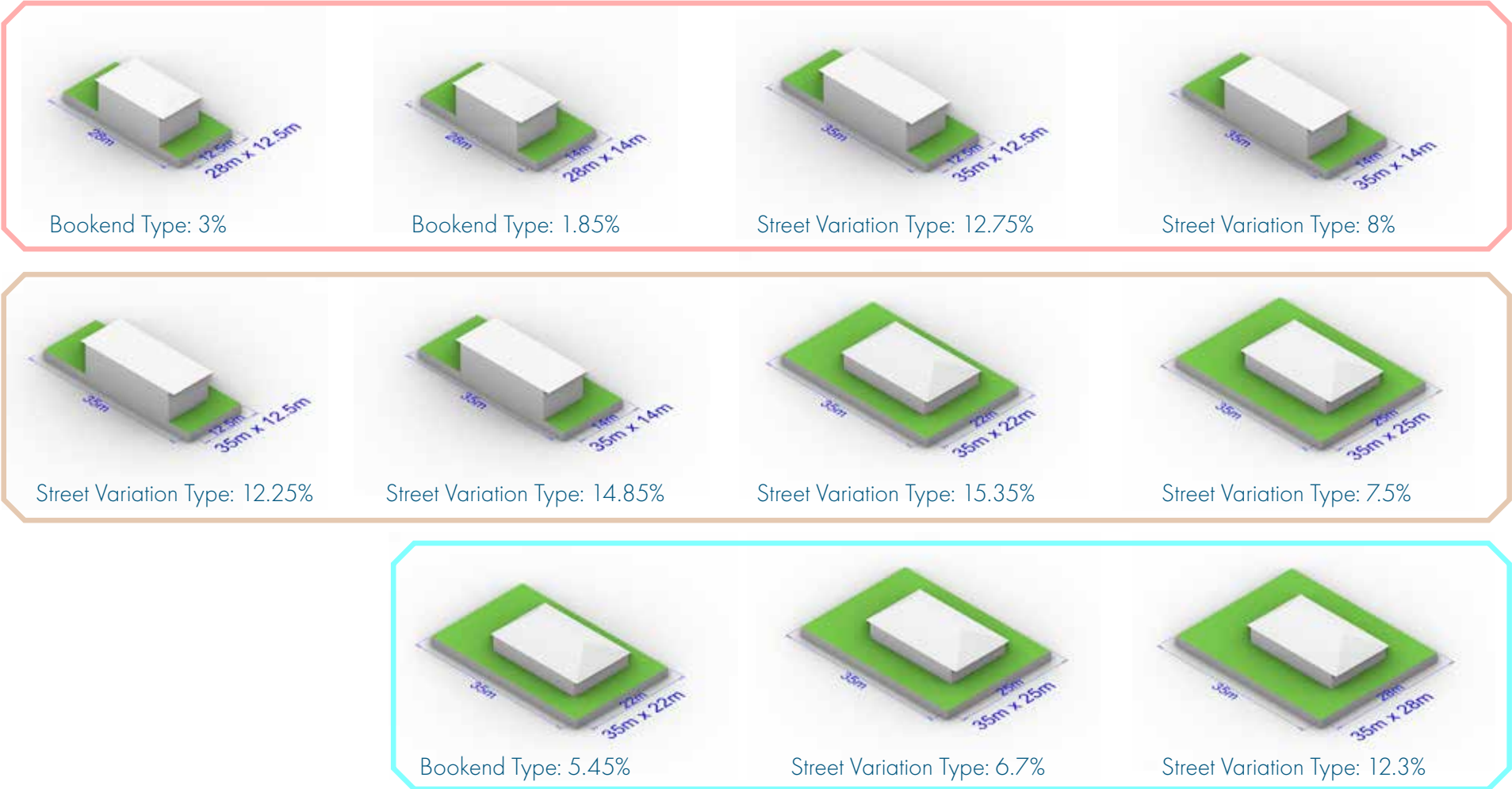
By providing greater housing choice, Laffing Waters Master Plan aims to meet the housing needs of diverse residents and household types, including young families, professionals, students, retirees and sole occupants, across all life stages.

Diverse neighbourhoods are proposed, with various different lot sizes and dwelling types to create different character zones within the neighbourhoods, and to accommodate a range of lifestyle choices for life-long communities.

There are a total of seven lot types proposed for the Core Area of Laffing Waters, including:

- two bookend types for medium density, i.e. 12.5m x 28m and 14m x 28m
- one bookend type for low density, i.e. 22m x 35m, and
- four typical lots for street variation across different densities, i.e. 12.5m x 35m, 14m x 35m, 25m x 35m and 28m x 35m.

The opposite table indicates the lot mix as percentages of all housing lots.



5. Implementation

Once approved and implemented the Laffing Waters Master Plan will result in a unique site specific example of best practice approaches in many disciplines including urban design, subdivision, water sensitive urban design, open space and recreation provisions as well as social focused neighbourhood activity centres.

Laffing Waters will be a “whole-of-community” development project that will achieve the principles outlined in this Master Plan, reinforce the vision for the Bathurst region as well as reflect State government policies such as the NSW’s Government Architect’s ‘*Better Placed*’ Policy. Flexibility and longevity is incorporated into the staging of the Master Plan to adapt to future local real estate market, State wide economic conditions and social trends in housing and lifestyle choices.

5.1 Indicative Staging

Laffing Waters Master Plan accommodates approximately 2270 dwellings and a population of 5,200 people, at the household size of 2.3 people per dwelling, on completion.

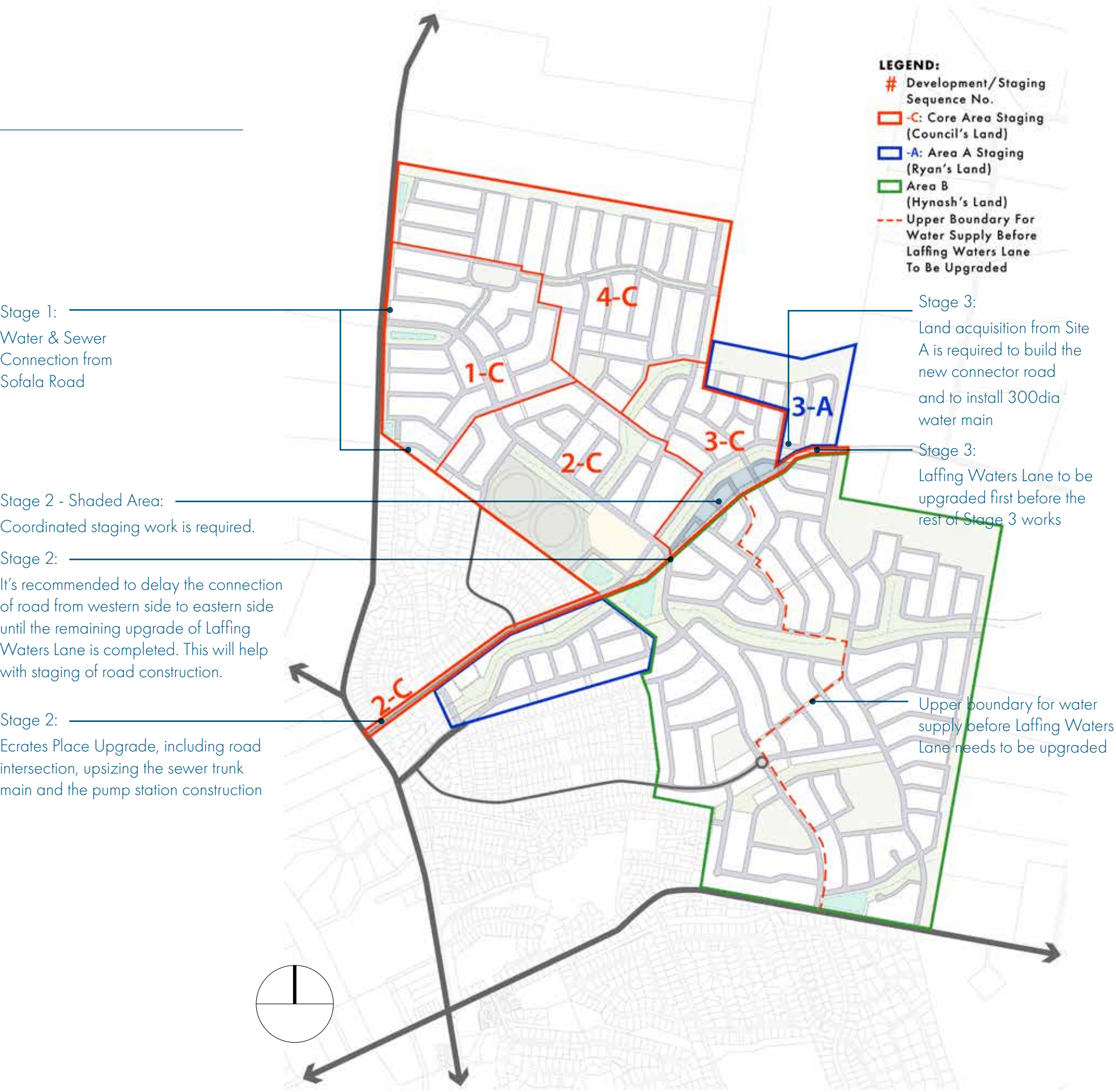
The staged development of land for residential purposes will be accompanied by the commensurate provision of infrastructure, community facilities and local employment in response to the needs of the future population.

Factors influencing development staging include the services and road connections, land ownership and market demands for both current and future conditions.

The first stages of development will occur near both north and south ends of the precinct, adjacent to existing development and infrastructure.

The diagram provides an indicative guide to the progressive release and development of the land at the Laffing Waters precinct, focusing on the Core Area. Area B is privately owned and will be developed in separate stages. Coordinated staging work will be required near the site boundary between the Core Area and Area B.

Each stage can be further sub-staged. The first few stages will contain approximately 300 lots. Depending on the market conditions, between 100 to 150 lots could be released annually.

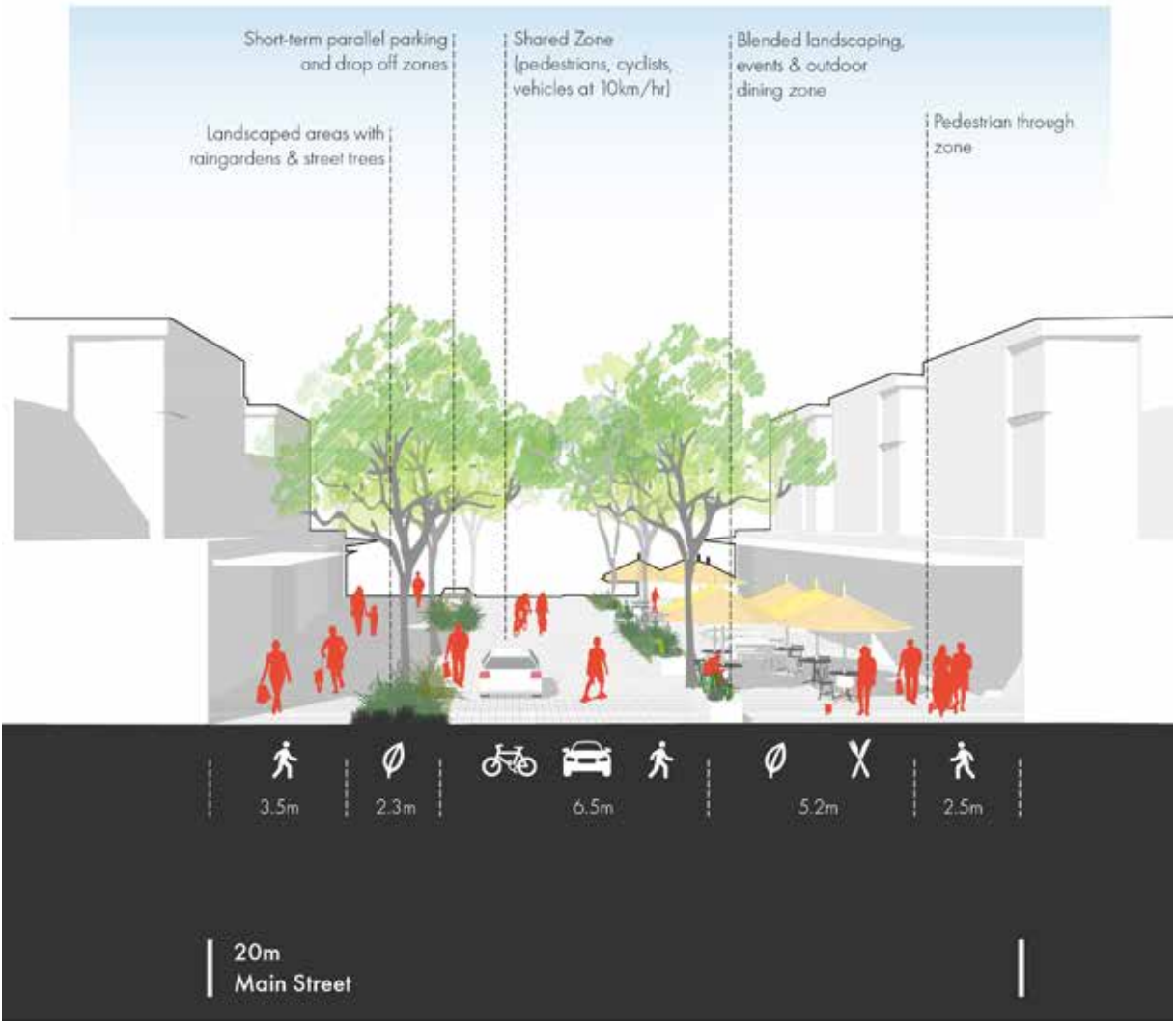


6. Appendices

Appendix A	Indicative Street Sections	23
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Main Street

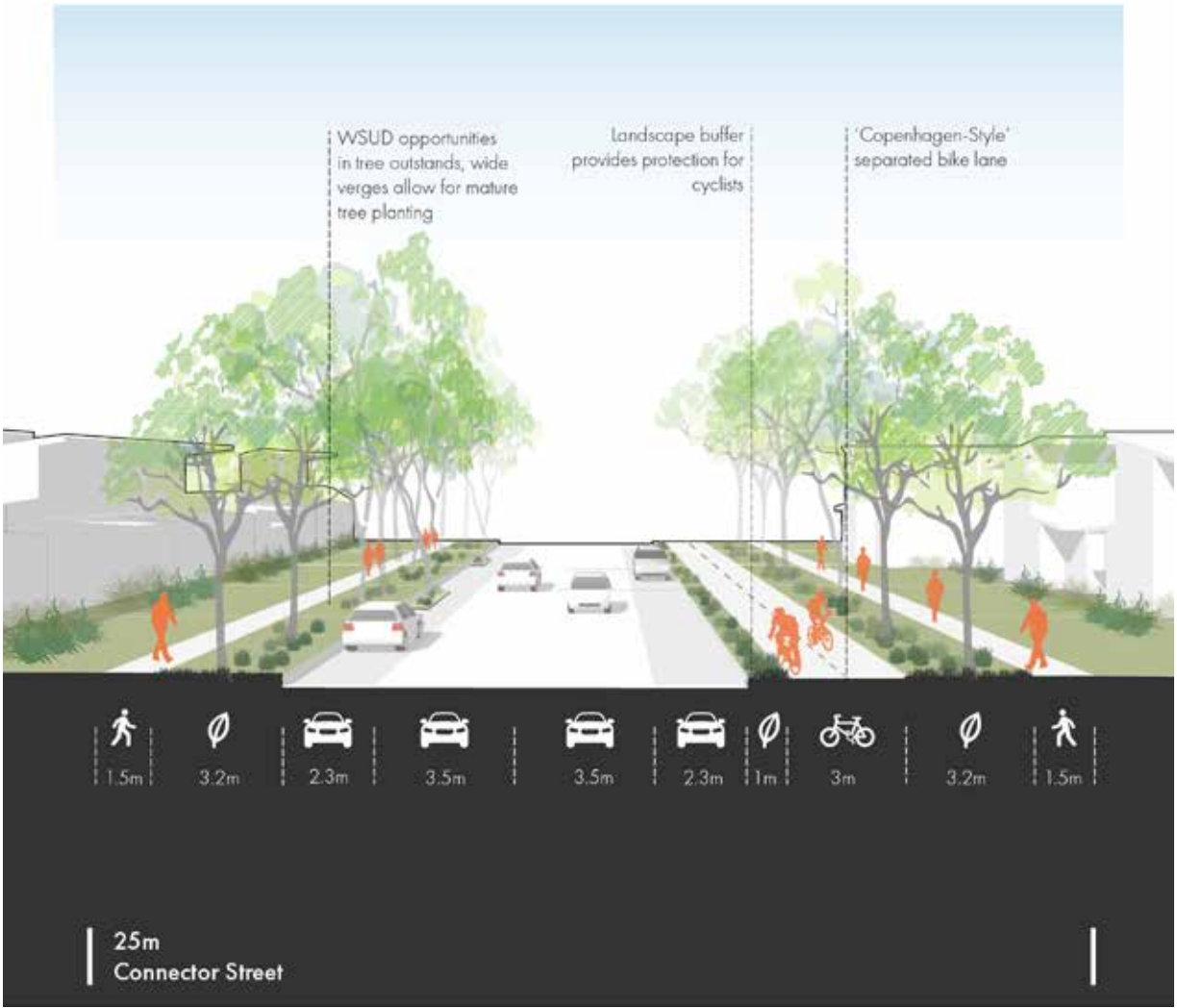
- 20m wide road reserve
- Centrally located within Neighbourhood Activity Centre
- Flush shared zone: pedestrians and cyclists prioritized, vehicles at low speed of 10km/hr
- Full of street frontage activities, e.g. shops, cafe dining



Indicative Cross Section: 20m Main Street

Connector Street

- 25m wide road reserve
- The primary thoroughfare connecting the Laffing Waters development site to surrounding suburbs
- Capacity of accommodating public transport, i.e. Bus route
- Dedicated two-way bicycle lane
- Street tree lined
- WSUD opportunities in the wide landscape verges and tree pits



Indicative Cross Section: 25m Connector Street

Key Local Street

- 20m wide road reserve
- The secondary main street within the Laffing Waters development precinct connecting to both the existing and proposed connector streets
- 3m wide shared path along one side of the key local street forming shared path network
- Street tree lined
- WSUD opportunities in tree pits



Indicative Cross Section: 20m Key Local Access Street

Local Access Street

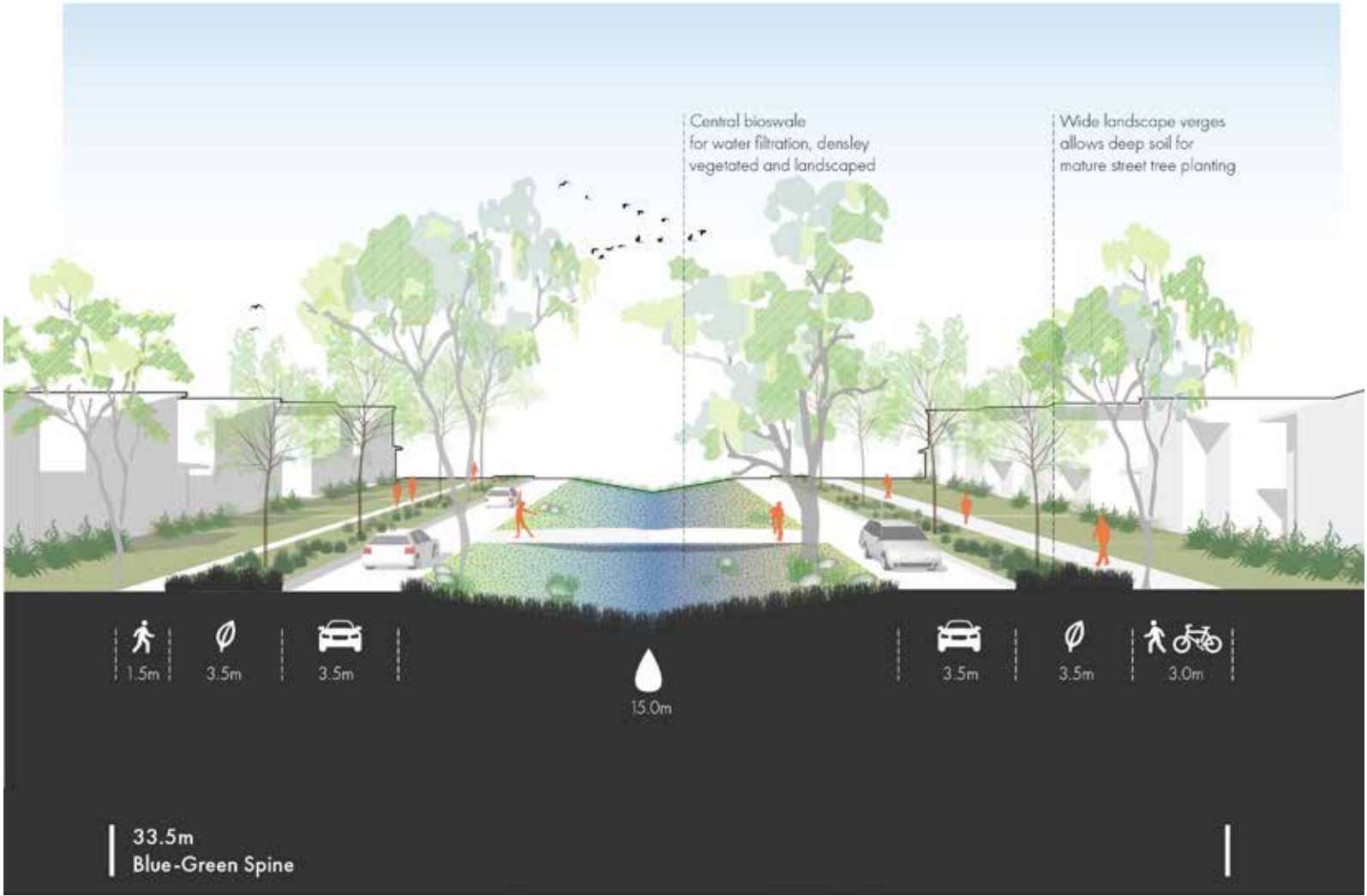
- 17m wide road reserve
- Typical local street within residential neighbourhoods
- Street tree lined
- WSUD opportunities in the wide landscape verges and tree pits
- Wide carriage way to allow for bicycle riding



Indicative Cross Section: 17m Local Access Street

Blue-Green Spine

- 33.5m wide road reserve
- 15m wide central bio-swale for water filtration as part of WSUD system, densely vegetated and landscaped
- 3m wide shared path along one side of the Blue-Green Spine forming shared path network
- Wide landscape verges allowing for mature street tree planting



Indicative Cross Section: 33.5m Blue-Green Spine

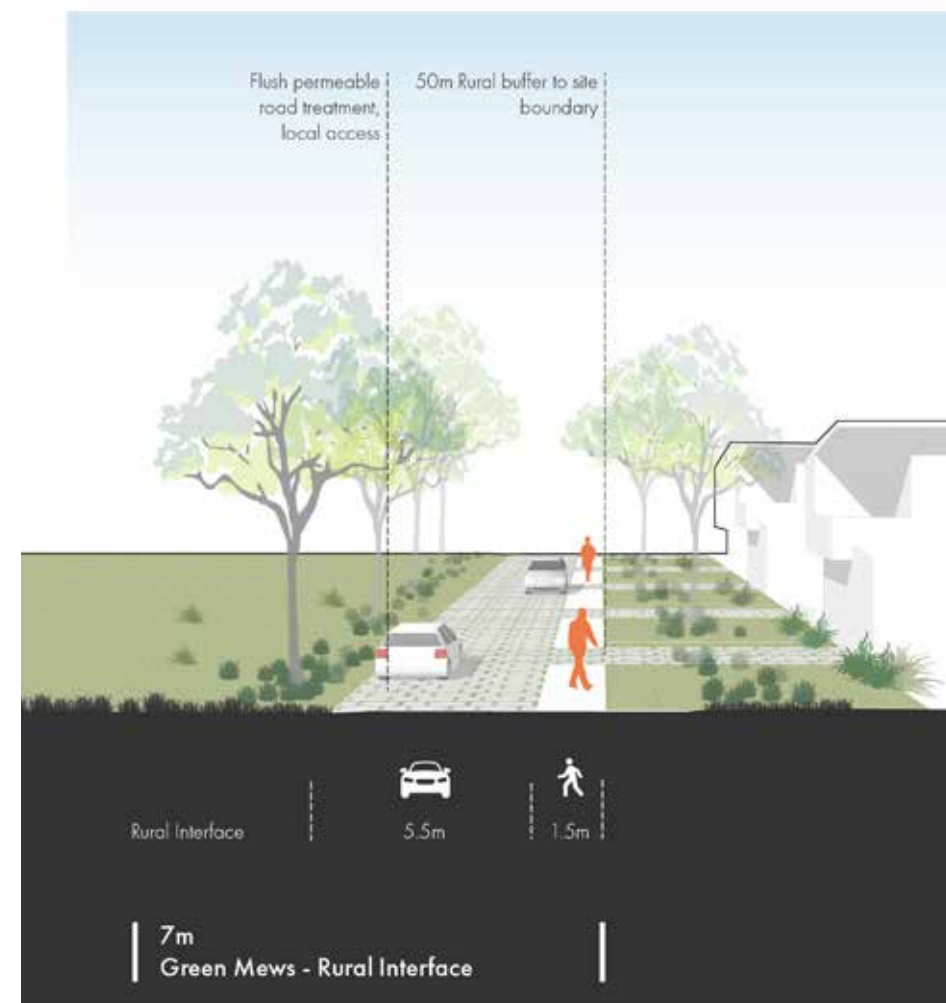
Green Mews

- 7m wide road reserve
- Located within 50m Green Belt (rural buffer zone) adjacent to residential lot boundary
- 1.5m wide pedestrian walk path
- 5.5m drive lane for local access, with flush permeable road treatment



Green Link

- 12m wide green link reserve
- Informal pedestrian connectivity provided between the residential lots
- WSUD opportunities integrated with the landscape



Indicative Cross Section: 7m Green Mews



Indicative Cross Section: 12m Green Link

