

An aerial photograph of a residential neighborhood. A large, rectangular, vacant lot is the central focus, surrounded by a grid of streets and numerous houses with various roof colors. The lot appears to be a mix of dirt and sparse vegetation. In the top right corner, there is a large, curved, green area that looks like a park or a sports field.

THE LEAGUES

231 GURWOOD STREET

Urban Design Report

FEBRUARY 2021

HATCH | RobertsDay

CLIENT	CHRIS NASH
DATE	02/02/2021
REVISION	M
STATUS	FINAL
PREPARED	DJ
APPROVED	AK

DISCLAIMER & COPYRIGHT

Hatch | RobertsDay acts in all professional matters as a faithful advisor to its clients and exercises all reasonable skill and care in the provision of its professional services. The information presented herein has been compiled from a number of sources using a variety of methods. Hatch | RobertsDay does not attempt to verify the accuracy, validity or comprehensiveness of any information supplied to Hatch | RobertsDay by third parties. Hatch | RobertsDay makes no warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, validity or comprehensiveness of this document, or the misapplication or misinterpretation by third parties of its contents. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favouring by Hatch | RobertsDay. This document cannot be copied or reproduced in whole or part for any purpose without the prior written consent of Hatch | RobertsDay.

Hatch | RobertsDay
Level Four, 17 Randle Street Surry Hills NSW 2010
T: +612 8202 8000
Roberts Day Pty Ltd, 2018
ABN 53 667 373 703, ACN 008 892 135
www.robertsday.com.au

TABLE

OF

CONTENTS

Executive Summary	3	Changes to DCP	50
Context	8	Innovation	51
Regional Context	9	Houses fronting Open Space	53
Surrounding Context	11	Lot Size	55
Local Context	13	Maximum Lot Size & Site Coverage	56
Local Demographic	15	Fencing Controls	57
Vision	18	Setbacks	58
Vision	19	Local Streets	59
Urban Design Principles	22	Laneways	61
Urban Design Principles	23	Secondary Dwelling - 'Fonzie flat'	63
Key Design Response	25	Manor House	65
Master Plan	30	ADG Compliance & Solar Study	68
The Master Plan Response	31	Apartment Design Guide	69
Landscape Vision	35	Solar Amenity Study - Site	71
Landscape Details	37	Solar Amenity Study - Apartment	73
Housing Typologies & Controls	40	Appendix 1 Site Specific DCP Controls	76
Character based setbacks	41	Section 1 - General Development Controls	77
Housing Typologies	43	Section 2 - Subdivision & Precinct Layout	79
Typology locations & Yields	45	Section 3 - Residential Dwellings	81
Building Heights	46		
Staging Plan	47		

01

EXECUTIVE SUMMARY

231 GURWOOD STREET, WAGGA WAGGA

THE OPPORTUNITY

231 Gurwood Street to be known as the 'The Leagues' is prime example of an ideal brownfield development site. It is located within walking distance of both the Central Business District and the future Health & Knowledge Precinct.

The large single ownership site is relatively flat with site access from all four sides. It has been cleared of the previous Leagues Club building and is waiting for redevelopment.

URBAN DESIGN PRINCIPLES

The design of the precinct is guided by eight Urban Design Principles. These principles provide for a robust framework in which the development can work.

The principles will allow the new precinct to integrate into its surrounding environment.

HOUSING TYPOLOGIES

A diverse range of housing typologies are provided for on site to allow people to live in the area during different phases of their life.

There are a mix of:

- Apartments
- Terraces
- Semi-detached houses
- Detached houses
- Secondary Dwelling 'Fonzie Flats' above garages

CHANGES TO DCP

A series of changes are proposed to the Wagga Wagga DCP (2010) to create a unique character. These changes cover:

- Houses fronting open space
- Block Size
- Maximum Lot Size
- Fencing Controls
- Setbacks
- Local Streets
- Laneways

a place response



HIGHLY WALKABLE

5 mins walk to Health Precinct

10 mins walk to CBD



CREATING HOMES

160 **X** new dwellings



A DIVERSE MIX

79 **X** apartments

45 **X** detached houses

36 **X** terraces houses



PLACE IDENTITY

promoting and enhancing Wagga Wagga identity through urban + architectural design



SHARED AMENITY

comfort
+ delight



encourages recreation + community
connections via public park

PLACE TAKEAWAY:

Wagga Wagga is highly walkable, The Leagues is located within 400m of the Health and Knowledge Precinct, and 1.7km & the town centre. This reflects the sites strategic location & provides public benefit for both the residents & the community.

PLACE TAKEAWAY:

Wagga Wagga has been identified by the NSW Department of Planning to increase to 100,000 residents. With the high growth in the future, The Leagues will contribute 160 new dwellings, in a diverse range of typologies.

PLACE TAKEAWAY:

The Leagues encourages diversity in place by providing a range of housing types for people at different stages of their life, including terraces, detached dwellings, and apartments.

PLACE TAKEAWAY:

Providing Wagga Wagga with high quality public open spaces, community led programming & fine grain architecturally designed, built form.

PLACE TAKEAWAY:

The Leagues harnesses green amenity through the provision of public open space and linear green spaces that provide for pedestrian/ cycle links through the region.



Context

REGIONAL CONTEXT

UNDERSTANDING THE REGION

The subject site is ideally suited for urban infill development as it is located:

- Within 5 minute walk of the proposed Health & Knowledge Precinct
- 1.7kms from the CBD
- Along the Kapooka Active Travel path on Kincaid Street
- Near multiple open space facilities

Olympic Highway

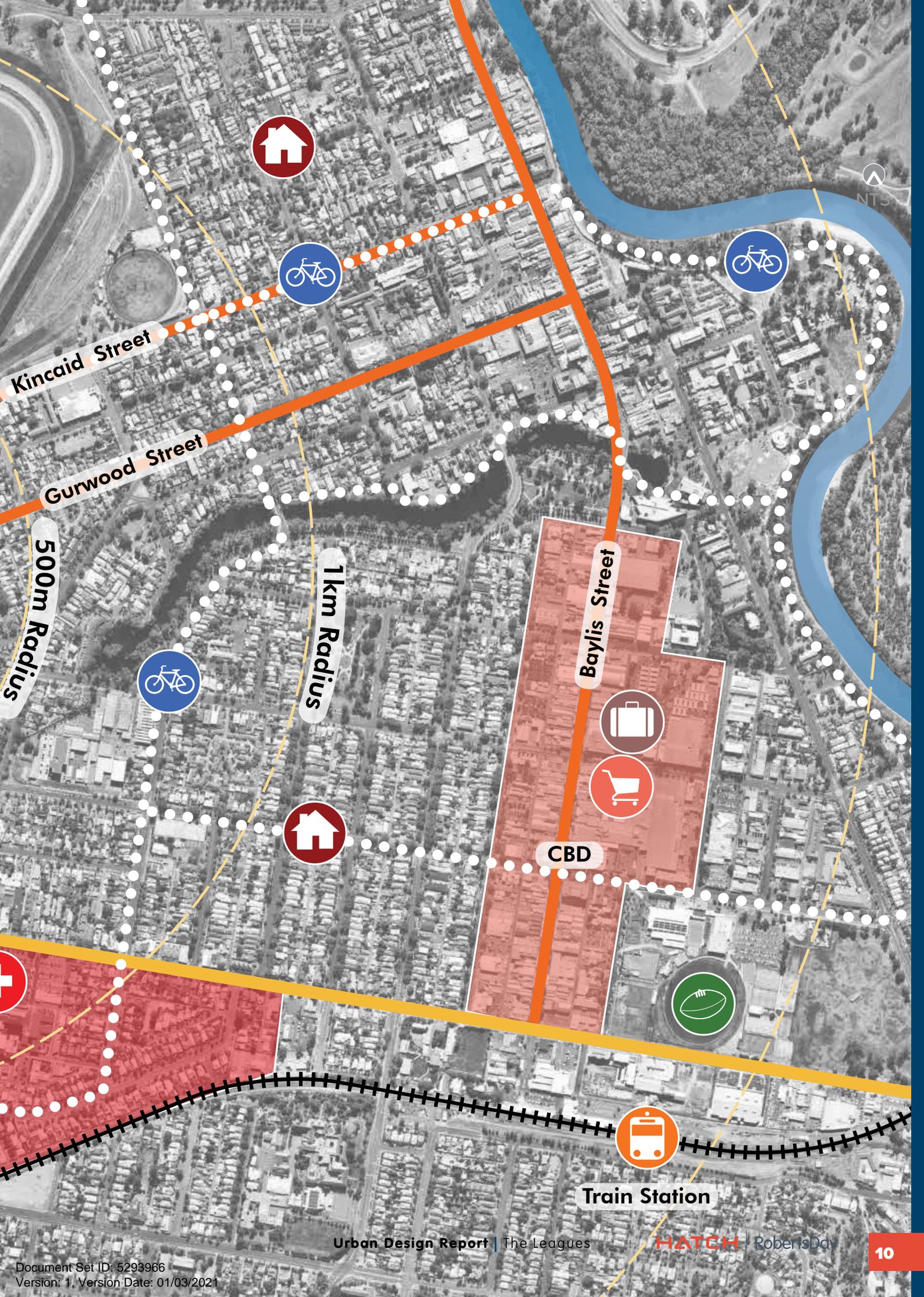
SUBJECT SITE

Shaw Street

Sturt Highway

PLACE TAKEAWAY:

The sites proximity to the proposed Health & Knowledge precinct provides the opportunity for key worker housing within an easy walk/ cycle to work.



Kincaid Street

Gurwood Street

Baylis Street

CBD

Train Station

1km Radius

500m Radius

02

SURROUNDING CONTEXT

UNDERSTANDING THE LOCAL CONTEXT

The subject site currently an empty site having previously been an established Leagues Club site with large club building and playing fields.

It is surrounded by a mixture of low scale detached residential, terraces, retirement homes, and industrial/employment within a short distance.

Cox Park is an under-utilised open space within a 5 minute walk of the site that will be of great advantage to the new residents of The Leagues.

Kincaid Street is a proposed Active Travel link that will allow residents to use alternative methods of travel to access the CBD, and rely less on their personal vehicles.

Shaw Street provides direct access to the proposed Health & Knowledge Precinct, providing the opportunity for key worker housing on site.

PLACE TAKEAWAY:

The subject site is a large hole in an established area which needs to integrate seamlessly to its surrounds and stitch the area together.





02

LOCAL CONTEXT

UNDERSTANDING THE LOCAL CONTEXT

GURWOOD STREET

A wide local street that connects into the CBD and terminates in a cul-de-sac. Predominantly single storey detached houses at this end, with the PCYC opposite the site likely to be redeveloped in the future. It has large established trees all along the street.



KINCAID STREET

A wide arterial road that connects the Olympic Highway to the Wagga Wagga CBD. It is lined with detached houses and double storey terraces, with sparsely located established trees.



SHAW STREET

This collector street connects Kincaid Street to the Sturt Highway and the Health & Knowledge Precinct. It is predominantly single storey detached houses, with wide verges and trees.



THOMAS STREET

A narrow local street with single storey detached houses and large established trees. A retirement community is located opposite the site.



PLACE TAKEAWAY:

The site is surrounded by wide streets and a mixture of housing types. It's highly connected and ideally located to the CBD and the future Health & Knowledge Precinct.

02

LOCAL DEMOGRAPHIC

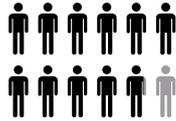
UNDERSTANDING THE PEOPLE

COMMUNITY

Wagga Wagga's population is forecast to increase by 54% by 2036.

The largest demographic increases are in the 60+ age groups.

64,800



FORECAST TO GROW

54%
35,200



LARGEST AGE GROUP

20-24
YEARS

STUDENTS



INDIGENOUS
POPULATION



MOST GROWTH WILL BE...

65-69

33% BY 2036



LIVE

Almost a third of households in Wagga are families. Family households will grow the most, although there will also be growth in single person households.

DOMINANT HOUSEHOLD

COUPLES WITH
CHILDREN

28%
WILL
GROW
23% BY
2036



MAJORITY OF
DWELLINGS ARE

DETACHED
LOW DENSITY



Low
83%

Medium
15%

High
0.7%

WORK

Wagga Wagga is a proudly blue collar town, reflected in its dominant occupations and industries.

MOST COMMON
INDUSTRIES

HEALTHCARE
& SOCIAL
ASSISTANCE



16%



11%

RETAIL TRADE

MOST COMMON
OCCUPATIONS

TECHNICIANS
& TRADE
WORKERS



15%



12%
CLERICAL
& ADMIN
WORKERS

\$1,334

AVERAGE WEEKLY
INCOME OF
HOUSEHOLDS



Source: Profile .id, Wagga Wagga (2016)

DESIGN TAKEAWAY:

Increased population will put pressure on existing housing stock and social infrastructure. The The Leagues has the potential to respond to these needs. In particular, there is a requirement to provide more medium density housing close to the Health & Knowledge Precinct to provide housing for key workers within a close walk.





Vision

03

VISION

The Leagues will be an exemplar for healthy, attractive, diverse urban communities in Wagga Wagga. It will respect Wagga's rich context by seamlessly stitching back into the community whilst welcoming and accommodating the needs and aspirations of the emerging health and knowledge sector.



EAST PERTH



Urban Design Principles

04

URBAN DESIGN PRINCIPLES

CREATING IDENTITY THROUGH DESIGN

- 1. Provide a robust development framework that gives confidence in quality outcomes but facilitates creativity, innovation and organic growth.**
- 2. Stitch into the existing community fabric in a fine grain manner.**
- 3. Connect to the Health & Knowledge Precinct in a physical and value-based manner.**
- 4. Optimise public spaces through multi -functional design and built form interface.**
- 5. Facilitate a life- long community model.**
- 6. Promote green and active travel, reducing reliance on the private vehicle.**
- 7. Provide attractive and logical built form transitions.**
- 8. Enable flexibility to respond to Wagga Wagga's needs.**

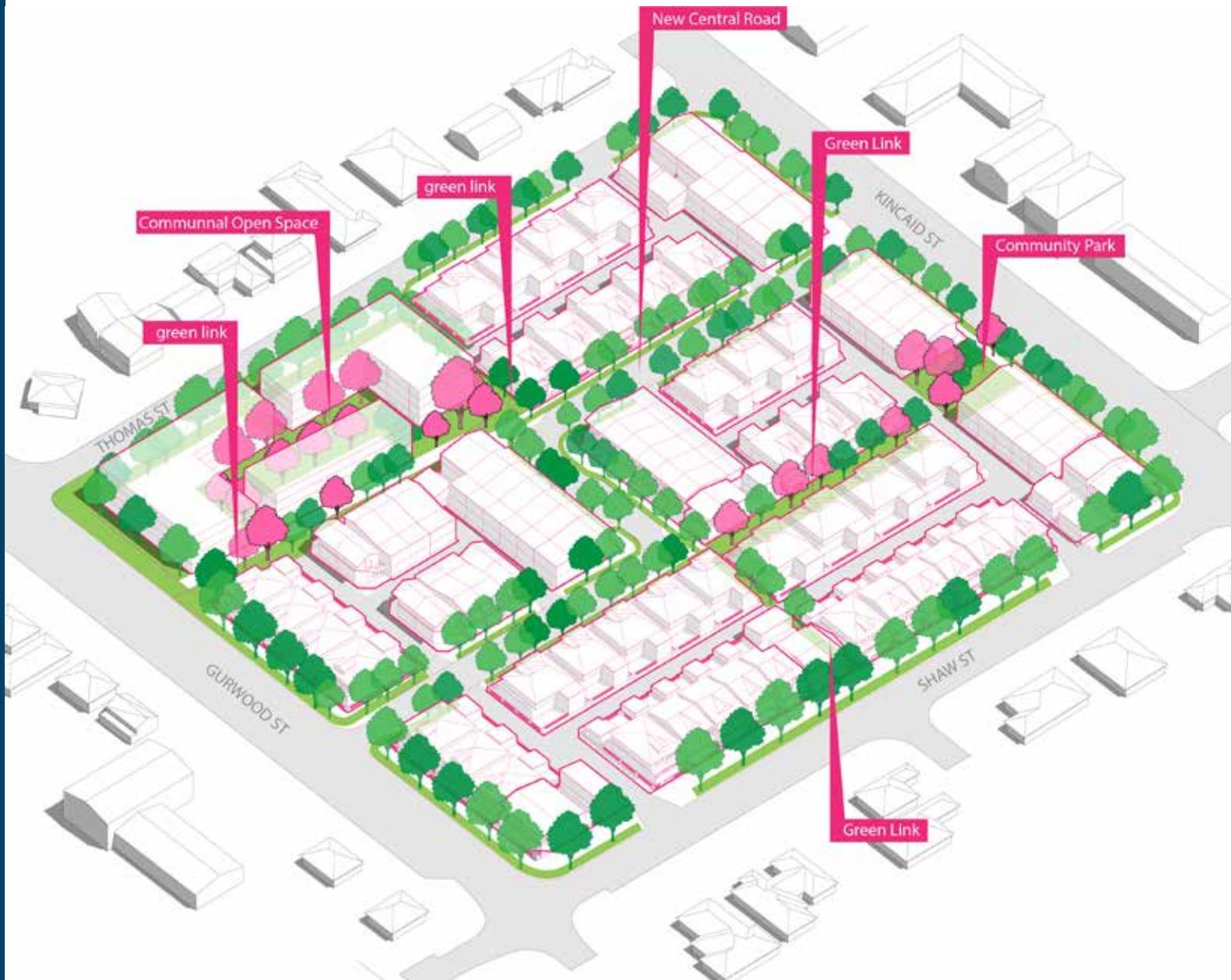


04

KEY DESIGN RESPONSE

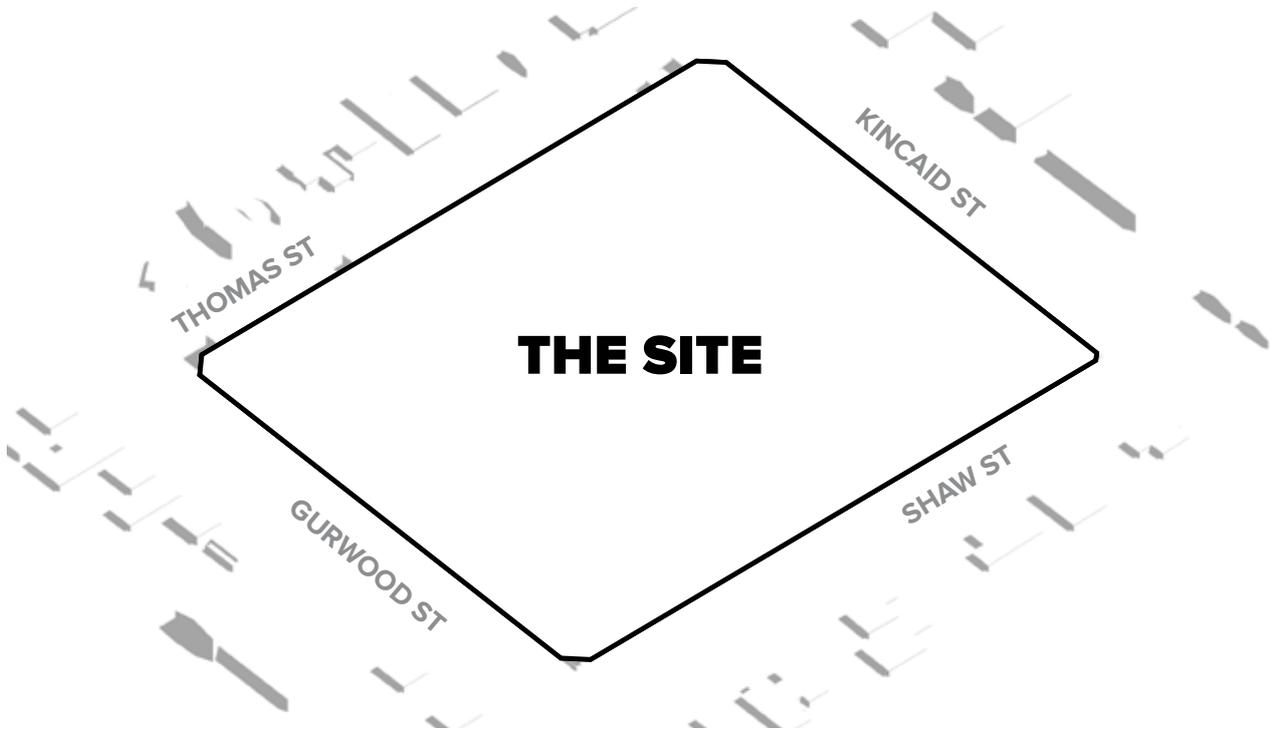
DELIVERING THE DESIGN BRIEF

THE FOLLOWING KEY DESIGN RESPONSES CREATE A ROBUST FRAMEWORK FOR THE STREET MASTER PLAN.



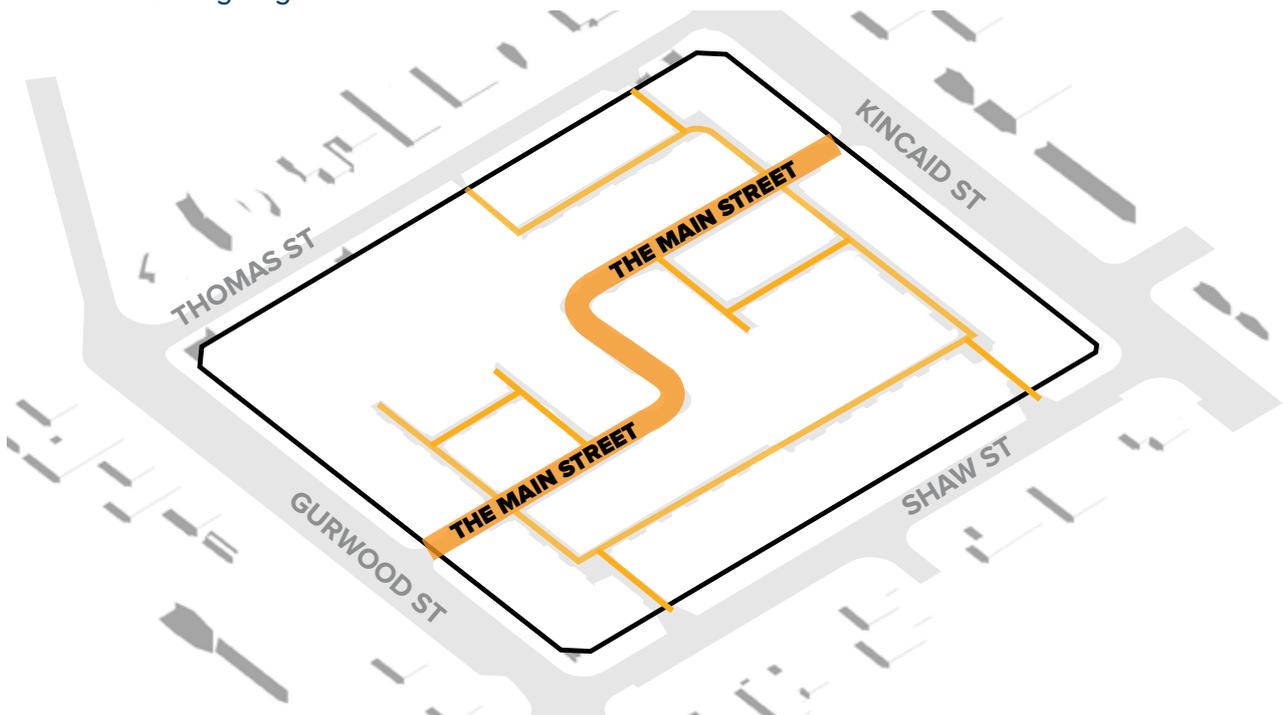
THE EXISTING SITE

The Leagues is a large relatively flat rectangular site of almost 3.5ha. It was previously used as the Wagga Leagues Club with a club house on Gurwood Street



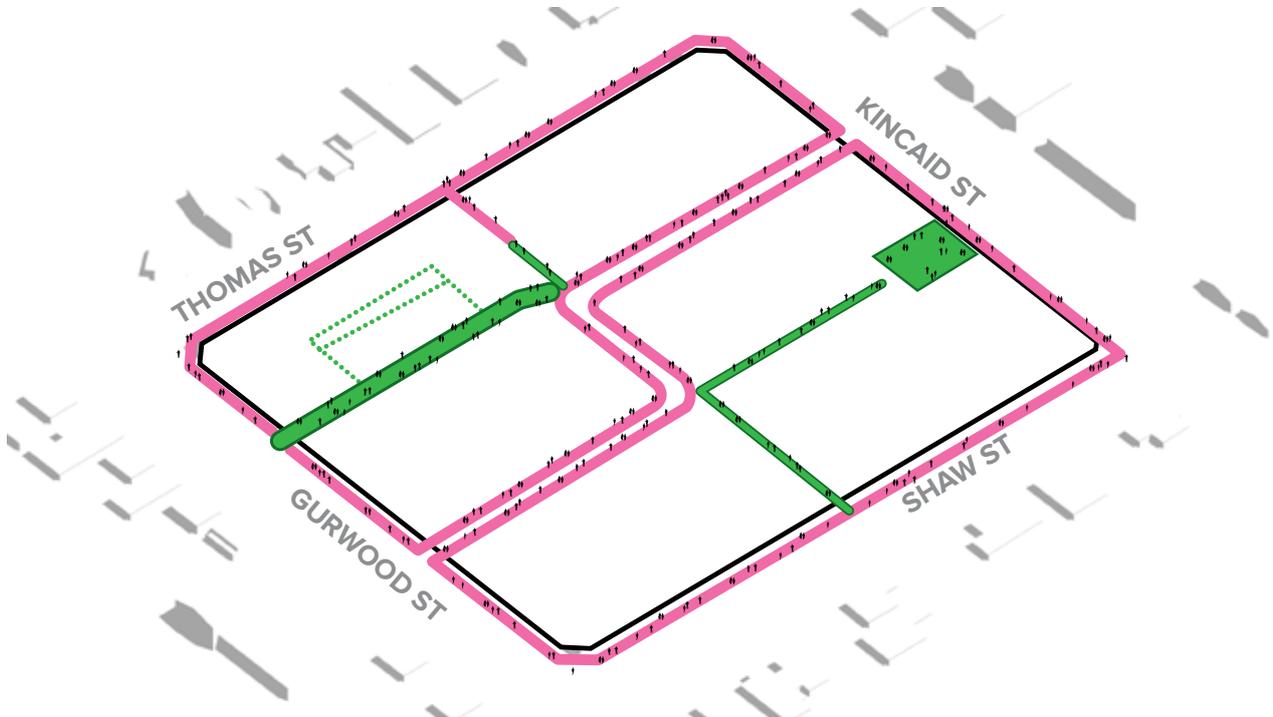
ROAD NETWORK

A central street connects Gurwood and Kincaid Streets via an 'S' shape, with each length of new street terminating in a green pedestrian link to provide pedestrian permeability. Laneways provide garage access to allow for all perimeter street and the new street to have a highly landscaped residential character free of garages.



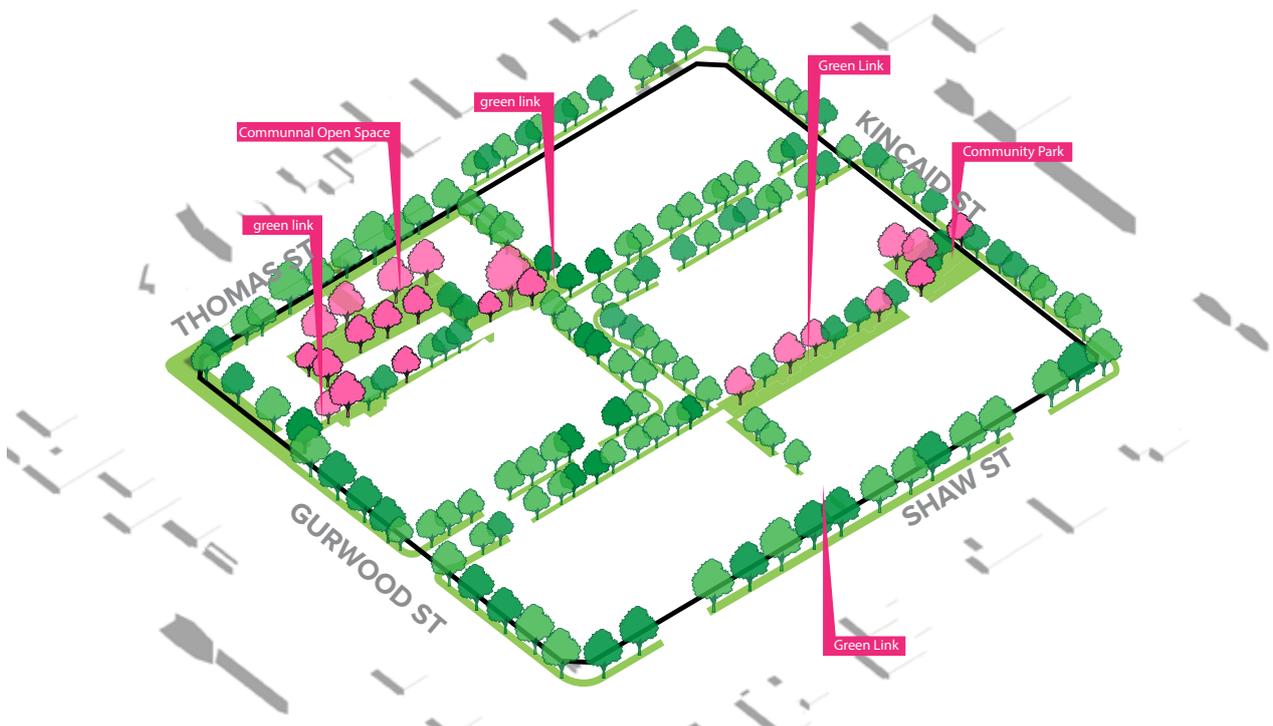
PEDESTRIAN ACCESS NETWORKS

Pedestrian permeability is encouraged through the use of green links in both north-south and east-west directions. The internal streets terminated on the green links to allow straightforward connects through the site while walking/cycling, whilst slowing down vehicular traffic. The east-west pedestrian links into Rhoda Avenue and Cox Park further east.



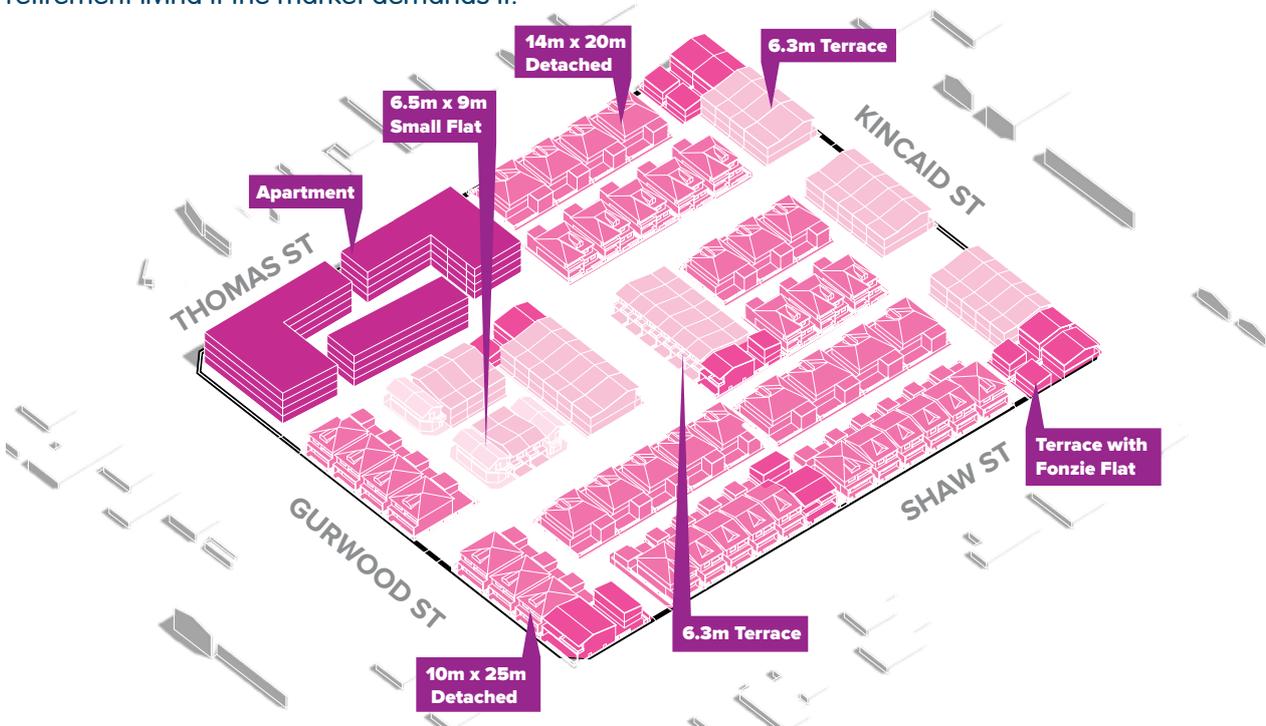
GREEN NETWORKS

A pocket park is provided on Kincaid Street as a welcoming feature into the site. It is located on the Kapooka Active Travel network, and connects into the pedestrian links through the site.



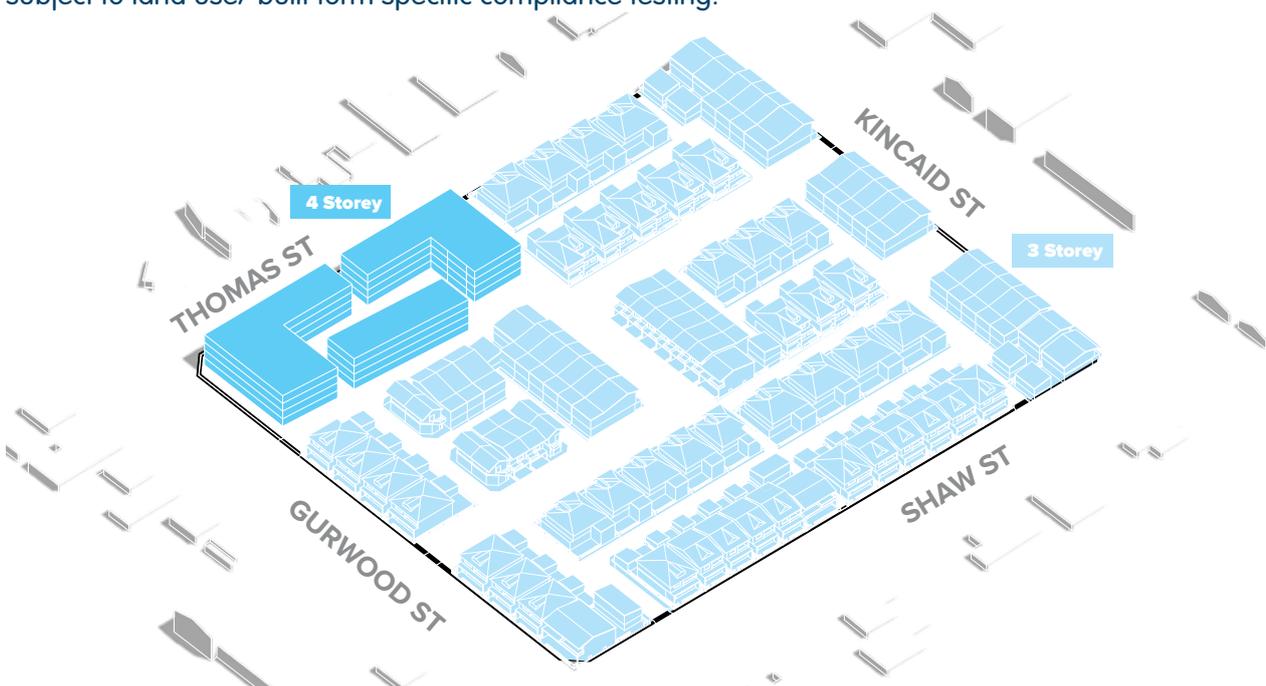
PROPOSED HOUSING TYPOLOGIES

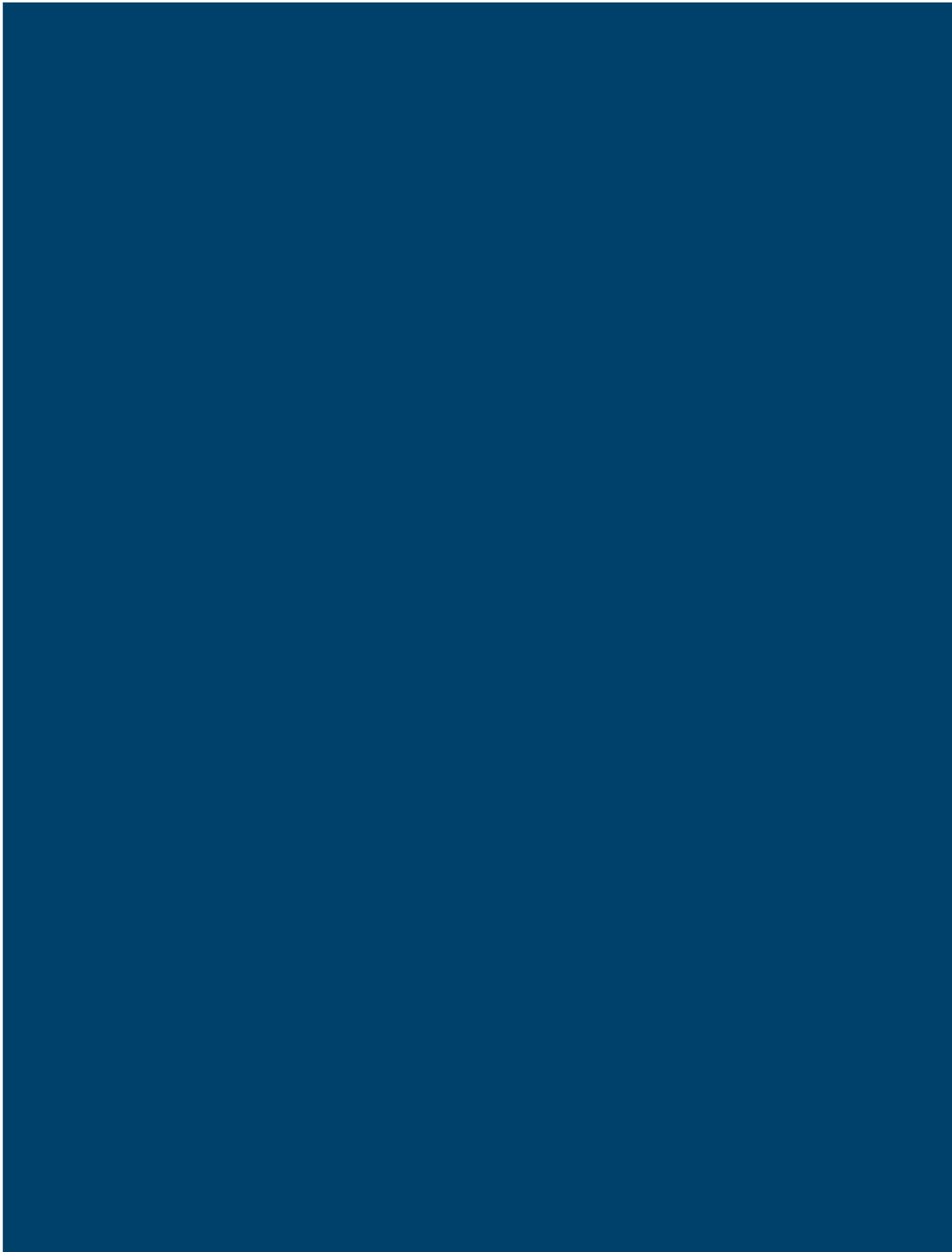
The site proposes a diverse range of houses, including; terraces, semi-detached houses, detached houses, apartments, and Secondary Dwellings ('Fonzie' flats) over garages to provide surveillance. There is the opportunity in future that the western side of the site could be used for residential aged care / retirement living if the market demands it.



BUILDING HEIGHTS

Building heights are proposed predominantly to be up to 3 storeys in height for the detached houses and terraces, with a site identified as capable of accommodating up to 4 storeys without overshadowing neighbouring properties and/ or open space. This site is flexibly configured for apartments, multi-unit, aged care or detached houses and terraces subject to market demand. Additional height is possible and subject to land use/ built form specific compliance testing.





5

Master Plan

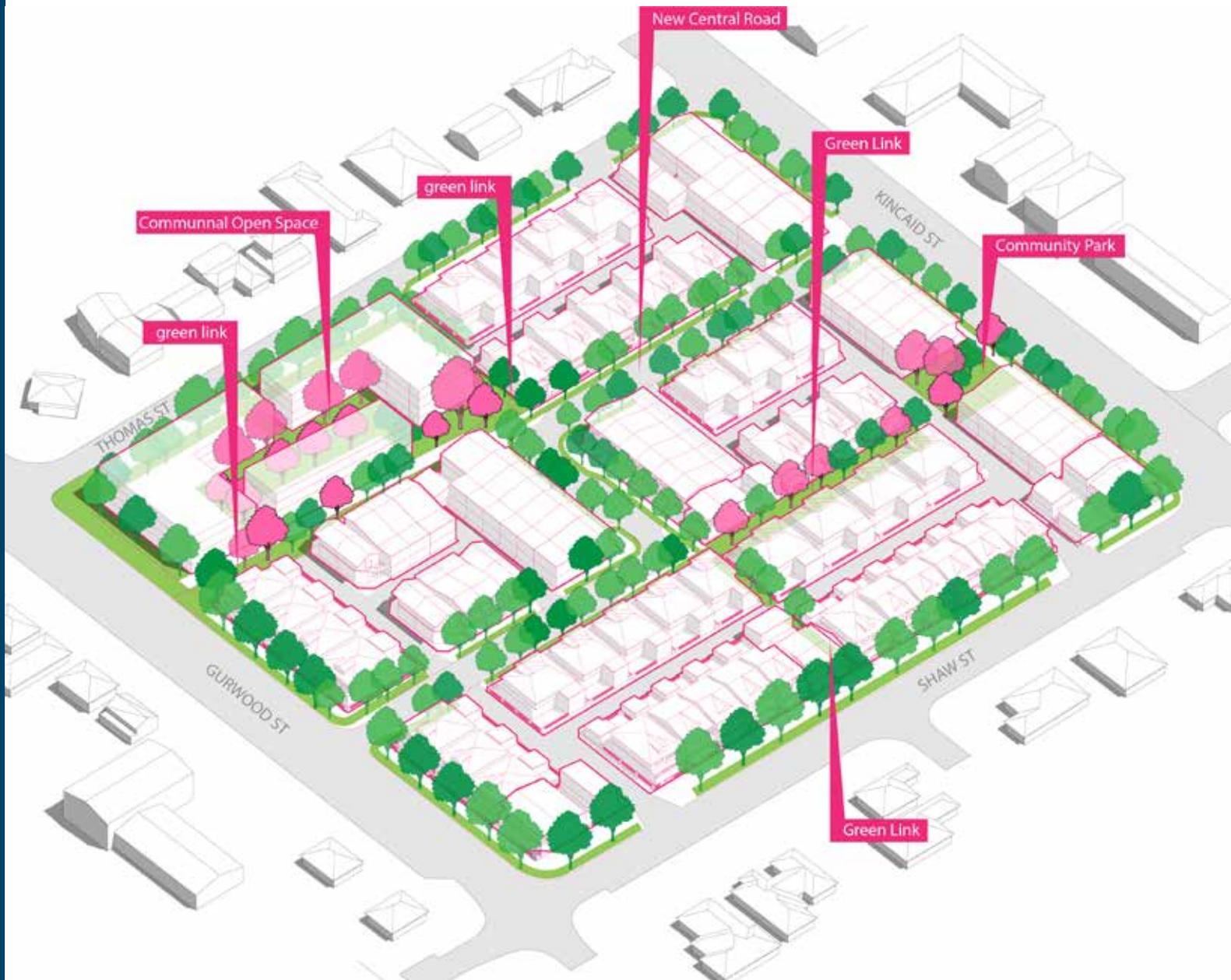
05

THE MASTER PLAN RESPONSE

SHAPING THE VISION FOR THE LEAGUES

The proposed development will deliver apartments, terraces, and detached houses to accommodate approximately an additional 398 people (@ 2.49 people/dwelling - current Wagga Wagga average) within 500m of the Health & Knowledge Precinct. A new pocket park of approximately 420m² will support the growing community and deliver much needed publicly accessible open space.

In future stages there is a potential for the apartment site and surrounding blocks to be used as residential aged care. This would be reviewed at a future date as the market requires. The design of the layout has allowed for this flexibility.



How could the pocket park be programmed as an attractive local amenity?



PLACE TAKEAWAY:

Layered experiences create attraction and attachment - Cities succeed or fail at the human scale (the place scale) and this scale is often overlooked. 10+ things to do at a local scale at The Leagues will form a layered program which encourages people to stay and enjoy Wagga Wagga.

How could green links contribute to an attractive local amenity?



Active
- to -
Passive



Comfortable
- and -
Playful



Legible
- and -
Accessible



PLACE TAKEAWAY:

In key areas green links have been provided for pedestrian / cycle connections through the site with dwellings that front directly onto them, facilitated by rear lane vehicular access. This will give an additional sense of activation to these areas as residents will frequently interact with the edges of the park/open space.

How could the streets and laneways contribute to a sense of legibility and safety?



Active
- to -
Passive



Legible
- and -
Accessible

PLACE TAKEAWAY:

The streets and laneways have been designed to be consistent with the Vision for The Leagues to be a healthy, walkable urban community. The combination of narrower laneways, tree and parking friction will naturally calm traffic, prioritise the safety and comfort of the pedestrian without unduly impacting on traffic operations.

05

LANDSCAPE VISION

A COMMUNITY LED LANDSCAPE PLAN

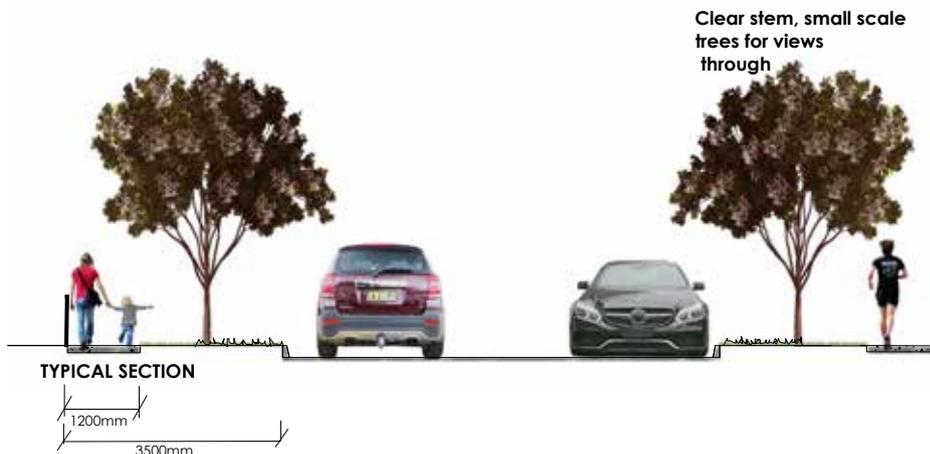
LEGEND

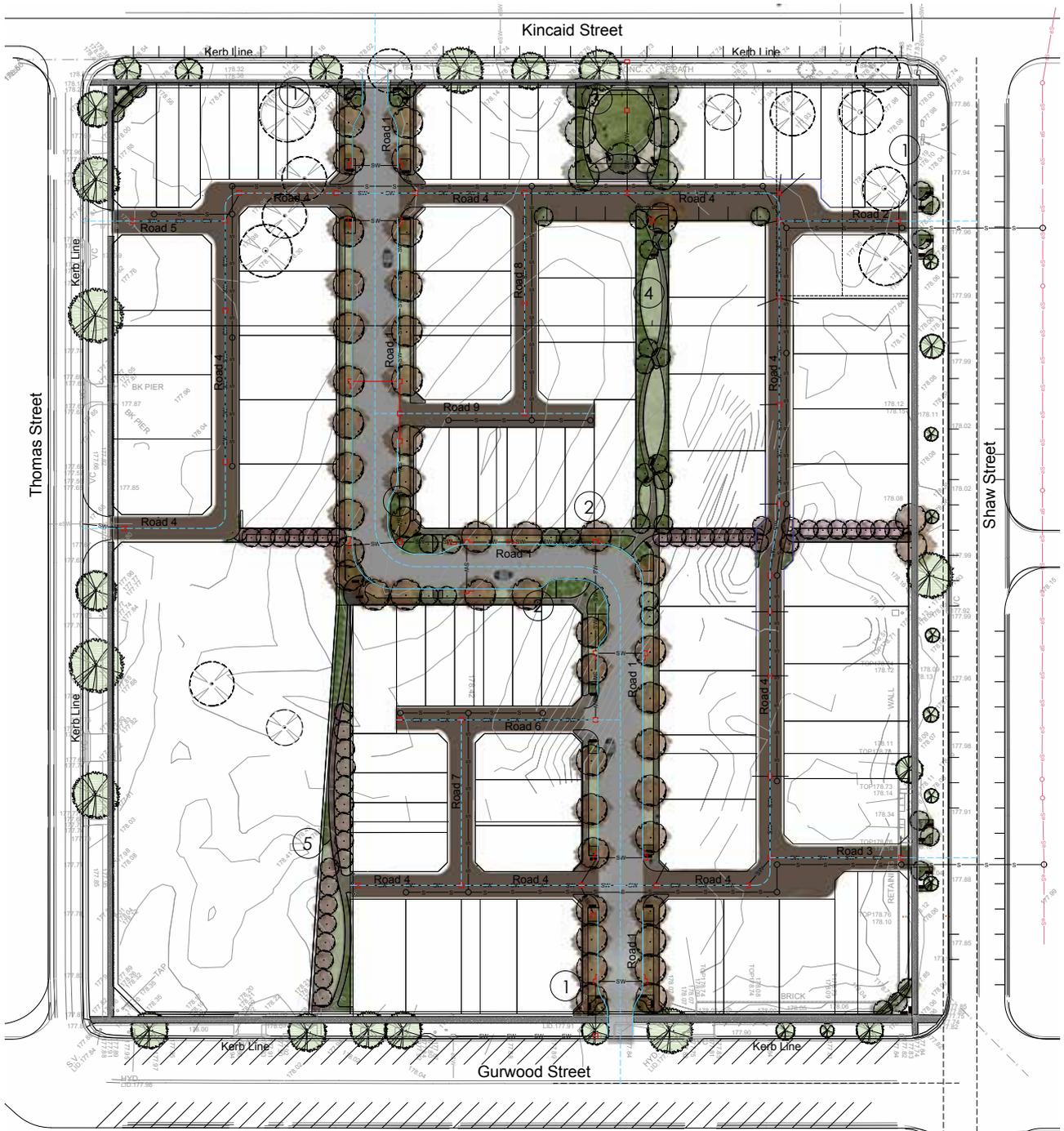
-  **Existing trees to be retained**
All street trees by WWCC
-  **Existing trees to be removed**
-  **Proposed trees**
-  **Proposed Street trees (verge 3.5m wide)**
Parrotia persica (Persian Ironwood) 7m x 5m
Pyrus calleryana 'Capital' (Capital Pear) 8m x 3m
-  **Pedestrian connections (limited width)**
Prunus cerasifera 'Nigra' (Purple-leaved Plum) 5m x 4m
Crataegus laevigata Pauls Scarlet (Hawthorn) 5m x 4m
-  **Shade trees for amenity (open space)**
Fraxinus pennsylvanica Urbanite (Ash) 10m x 8m
-  **Screen planting**
Against fences, low water use
Ceanothus roweanus (Californian Lilac)
Nandina 'Blush' (Sacred Bamboo)
Teucrium fruticans (Bush Germander)
Westringia 'Blue Gem' (Dwarf Westringia)
-  **Low level planting**
To maintain open site lines/ low water use
Trachelospermum asiaticum (Japanese Star Jasmine)
Westringia 'Mundi' (Native Rosemary)
Lomandra 'Tanika' (Mat Rush)
-  **Open space lawn area**
Kikuyu oversown with Rye grass (irrigated)
-  **HARD LANDSCAPE**
Existing concrete paths
Provide pram ramp crossings at new road openings.
-  **Internal pedestrian network**
Concrete footpaths 1200mm wide
As per WWCC standard details
Pram ramps at all street crossings
-  **Open space areas and connection to streetscape**
Concrete with colour/ texture variation to footpaths
-  **Urban details including**
Seating/ benches
Lighting to park and walkways to the relevant Australian Standard
Bollards to restrict pedestrian access as required
Bin (to park)

Notes

1. Activation zones including shade trees, seating and lighting.
2. Low planting to corners to maintain open site lines.
3. Pocket park. Large shade trees, irrigated turf area, seating, picnic tables and planting.
4. Lineal park. Small shade trees, linking pedestrian path, planting and seating.
5. Lineal park. Small shade trees, linking pedestrian path and planting.

Street trees for 3.5m wide verge



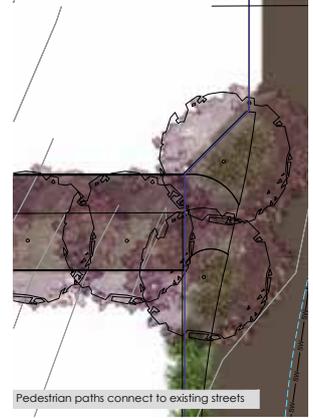
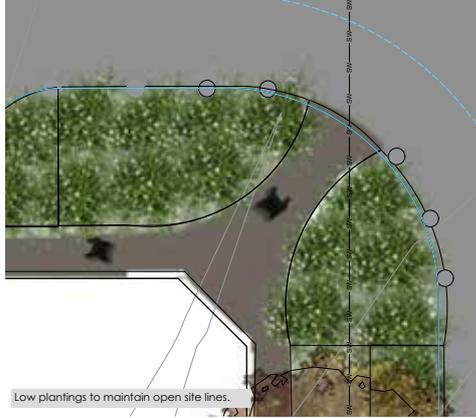
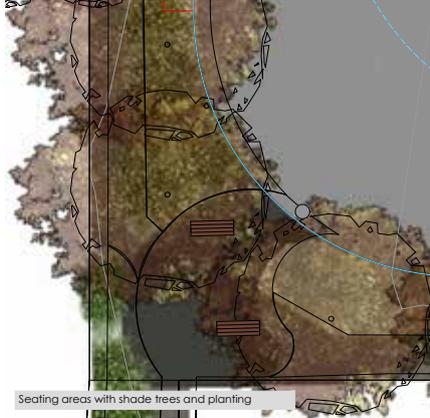


CONCEPT LANDSCAPE MASTER PLAN (SOURCE: SOMEWHERE LANDSCAPE ARCHITECTS)

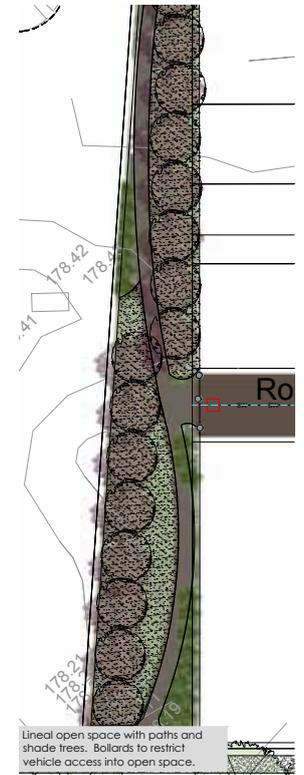
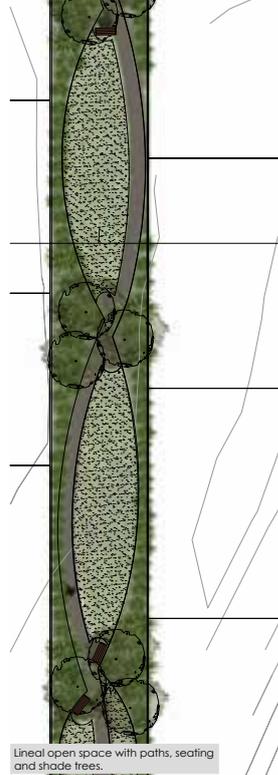
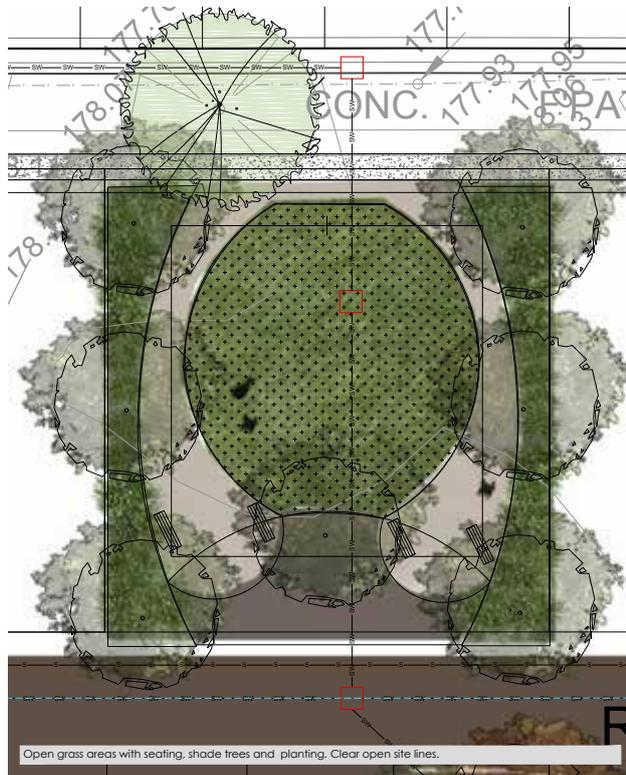
05

LANDSCAPE DETAILS

STREETSCAPE



OPEN SPACE



PLANTING



Parrotia persica



Crataegus laevigata Pauls Scarlet



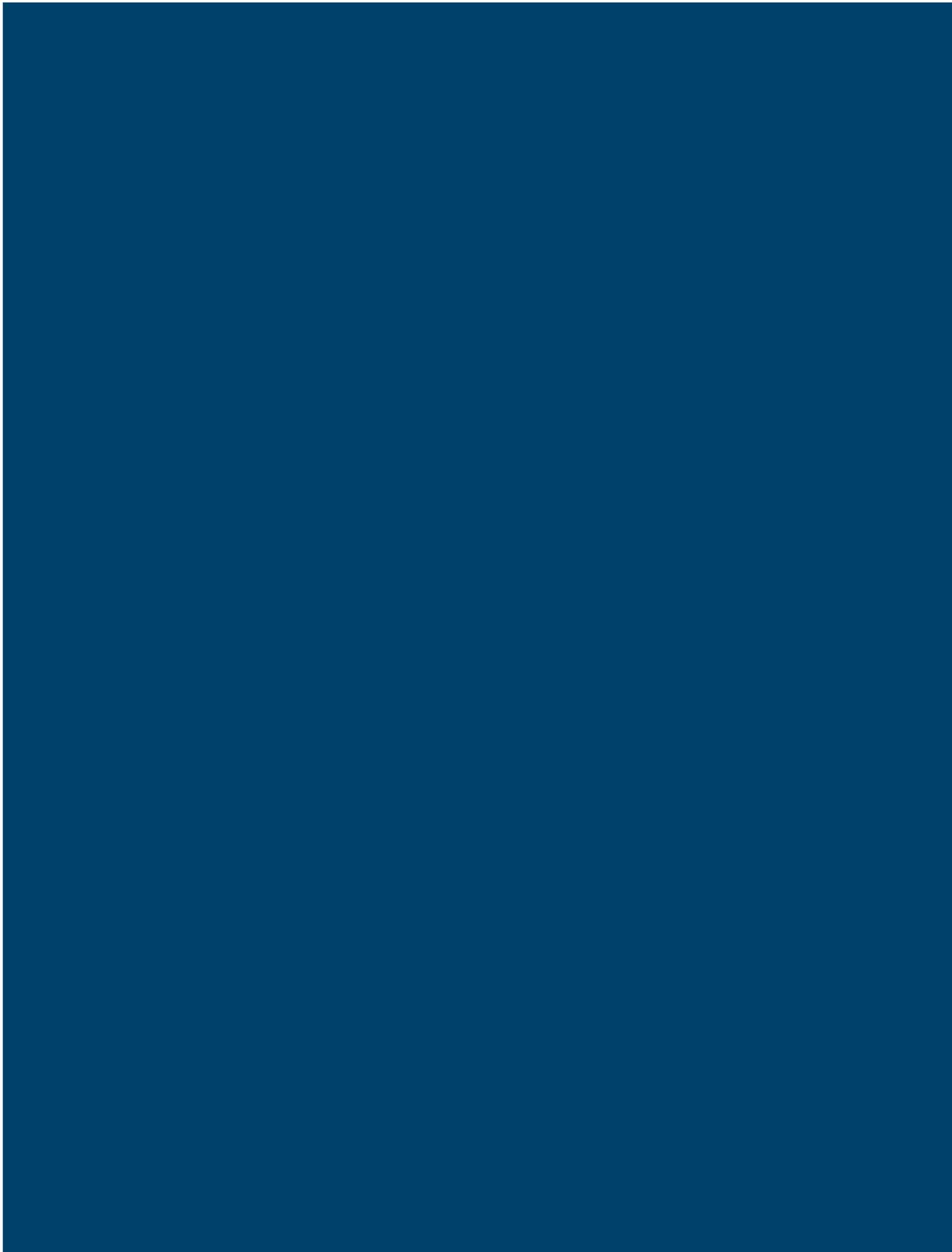
Pyrus calleryana 'Capital'



Fraxinus pennsylvanica Urbanite



Prunus Cerasetera nigra



Housing Typologies & Controls

CHARACTER BASED SETBACKS

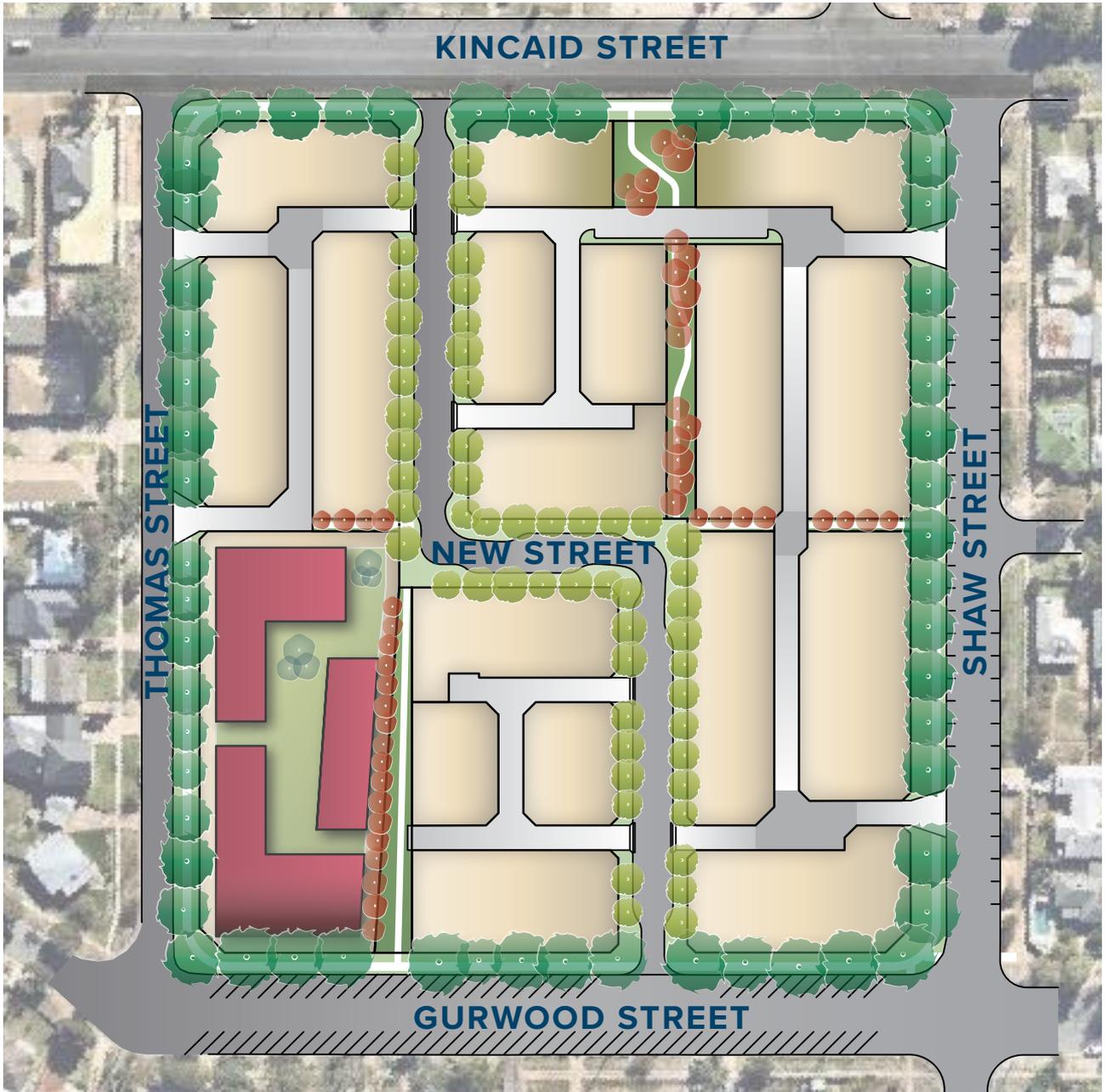
ACHIEVING BEST PRACTICE DESIGN

PUBLIC / PRIVATE INTERFACE				
FEATURES	FRONT SETBACK	ARTICULATION ZONE	PERMISSIBLE ARTICULATION ELEMENTS	INTERFACE
GREEN LINK	2.0m	2.0m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 1.2m high courtyard wall with 50% permeability
NEW INTERNAL STREET	2.5m to 3.5m	1.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 2.5m setback & 1.2m fence with 50% permeability OR 3.5m setback & 1.5m high fence with 50% permeability if Private Open Space faces north
KINCAID STREET	3.5m	2.0m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 1.2m high courtyard wall OR 1.5m high fence with 50% permeability if Private Open Space in front
GURWOOD STREET	2.5	1.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 1.2m fence with 50% permeability OR 1.5m high fence with 50% permeability if Private Open Space in front
MIXED-USE ON GURWOOD STREET & POCKET PARK	3.5m	3.5m	Awnings over shopfronts	<ul style="list-style-type: none"> Provide an awning over shop fronts to boundary line
SHAW STREET	2.5m	1.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 1.2m fence with 50% permeability OR 1.5m high fence with 50% permeability if Private Open Space in front
THOMAS STREET	2.5m	1.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 1.2m fence with 50% permeability OR 1.5m high fence with 50% permeability if Private Open Space in front
PEDESTRIAN LINKS (SECONDARY FRONTAGE)	1.5m side setback	0.5m	Minimal articulation to limit blank façades to pedestrian links	<ul style="list-style-type: none"> 1.5m high fence with 50% permeability Fence to property boundary
COMPACT LANEWAY FRONTING	2.5m	2.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 1.2m high courtyard wall with 50% permeability

As per the Wagga Wagga DCP Section 9.1.5.7 Building Articulation in Staunton:

BUILDING ARTICULATION

- To ensure building façades are articulated to complement and enhance the streetscape and neighbourhood character.
- To encourage contemporary and innovative design to establish a preferred neighbourhood character in new and transitional residential areas.
- Use articulation to avoid excessively long blank walls, particularly to end terraces.
- Each dwelling must have a front door and a window to a habitable room in the building wall that faces a primary street.
- Houses on corner lots are to ensure an acceptable address to both frontages. Continue materials around the corner to the secondary road so that the building “turns the corner”.
- The maximum total area of building elements in the articulation zone must not be more than 35 percent of the area of the articulation zone.



1:1000

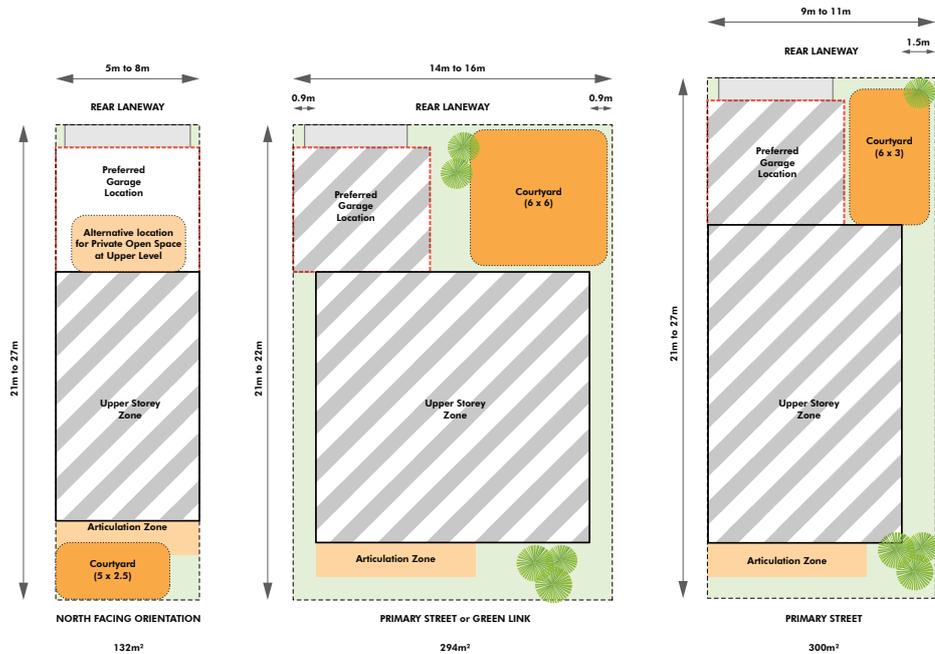


ILLUSTRATIVE MASTER PLAN -
REFER TO ENGINEERING PLANS FOR SPECIFIC DETAILS

06

HOUSING TYPOLOGIES

IMPLEMENTING THE VISION: DESIGN CONTROLS GUIDANCE



TYOLOGY

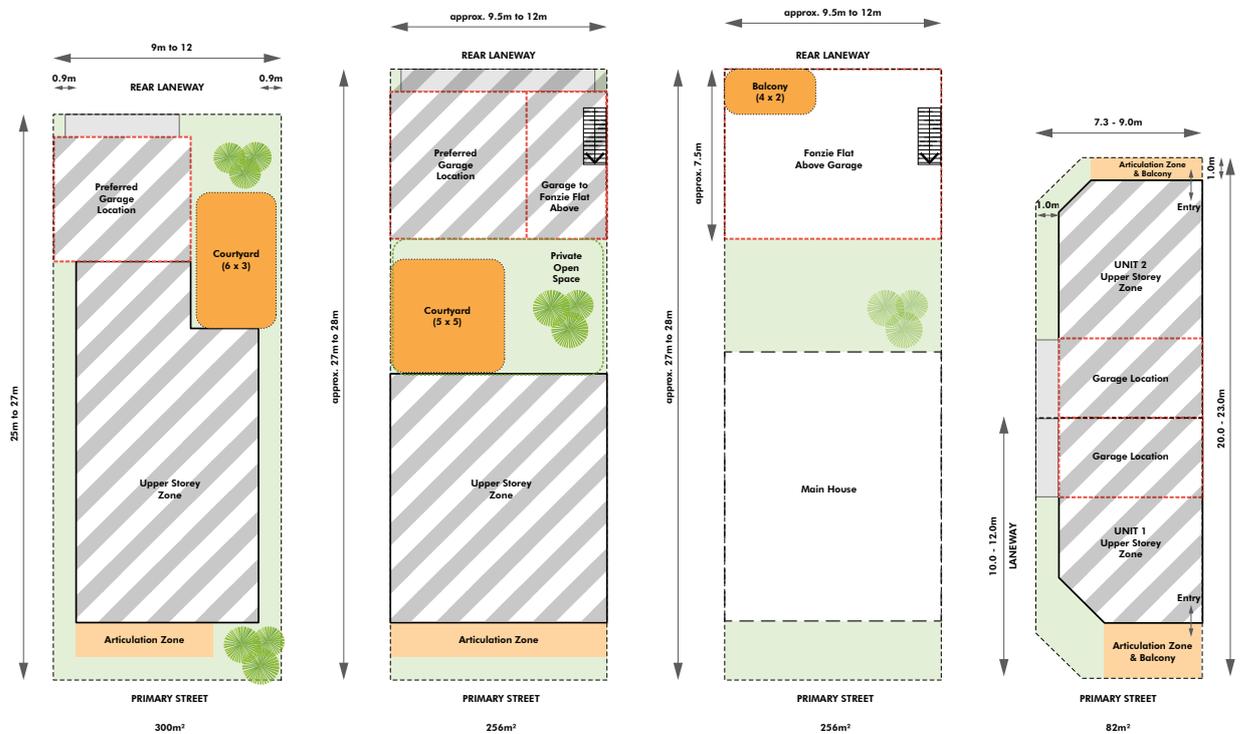
A

B

C

	5-8m X 21/22m Terrace	14-16m X 21-22m Detached	10m X 21-23m Semi-Detached
Principle Front Setback, Encroachments and Private Frontage	Refer to Character based Setbacks Table	Refer to Character based Setbacks Table	Refer to Character based Setbacks Table
Garage Front Setback	1.0m from rear boundary	1.0m from rear boundary	1.0m from rear boundary
Principle Side Setback	0m	0.9m	0.0m to 1.5m
Principal Private Open Space	Min 12.5m ² area with min 2.5m dimension located adjoining habitable room facing north orientation. Additional open space via balconies potentially over garage to achieve solar access	Min 36m ² area with min 6m dimension courtyard located adjoining habitable room	Min 18m ² area with min 3m dimension located adjoining habitable room facing north orientation

Note: Location of elements are indicative only and subject to site specific detailed design.



D

E

F

G

	10m X 25-27m Detached	9.5-10m X 27-28m Terrace	Secondary Dwelling 'Fonzie Flat'	7.3-9.0 X 10-12m Compact Semi-Detached
Principle Front Setback, Encroachments and Private Frontage	Refer to Character based Setbacks Table	Refer to Character based Setbacks Table	Refer to Character based Setbacks Table	Refer to Character based Setbacks Table
Garage Front Setback	1.0m from rear boundary	1.0m from rear boundary	1.0m from rear boundary for garage 0.0m for Apartment at upper level	1.0m from Side Boundary
Principle Side Setback	0.9m	0.0m	0.0m	0.0m
Principal Private Open Space	Min 18m ² area with min 3m dimension courtyard located adjoining habitable room	Min 25m ² area with min 5m dimension courtyard located adjoining habitable room	Balcony min 8m ² with min 2m dimension	Balcony min 8m ² with min 2m dimension

TYOLOGY LOCATIONS & YIELDS



1:1000



The above plan identifies which typologies from the previous pages are suitable for each block.

Each block can accommodate a variety of housing typologies.



The minimum to maximum yield per block is based on the typologies excluding secondary dwellings.

BUILDING HEIGHTS



1:1000



The majority of the site will have a maximum of 3 storeys in height.

STAGING PLAN



1:1000



The above plan identifies the Staging of Master Plan development. Staging of development may vary from the numbering shown above, and occur non-sequentially. Staging will be driven mainly by sewer and storm water engineering.





Changes to DCP

07

INNOVATION

ALTERNATIVES TO THE DCP

OVERVIEW

The Leagues Vision focuses on creating a unique and sustainable place for people. The following four design pillars have been identified to promote innovation and support the realisation of the project Vision:

1. Deliver Authentic Character Areas
2. Walkable Street/ Path Network
3. Embed Place Making
4. Promote Diversity and Affordable Living

In order to deliver these four pillars and achieve best practice urban outcomes, a range of innovative design solutions have been developed.

A comparison between a conventional DCP design approach and the proposed alternative design approach and the benefits of the alternative approach are outlined within this section. The planning report will address detailed variations and provide a comprehensive comparison. We have highlighted main innovation variances and the urban design philosophy and rationale.

DCP

New Precinct Controls provided in this document will replace the relevant controls in the Wagga Wagga DCP (2010).

Appendix 1 - Site Specific DCP Controls outlines all controls relevant to this site.

SECTION 1.10 NOTIFICATION OF A DEVELOPMENT APPLICATION

DEVELOPMENT NOT REQUIRING NOTIFICATION

Some forms of residential development are of natures which do not warrant notification by virtue of their low environmental impact, that may be associated with such forms of development and demonstrated compliance with Council's LEP and DCP related provisions.

Development that will not be notified is:

1. Single storey residential dwellings (excluding transportable) and alterations and additions to dwellings on residentially zoned land that complies with the controls of the LEP and DCP.

NEW PRECINCT CONTROL

OBJECTIVE

Future development applications that are consistent with the provisions of the approved Urban Design Report and supporting Master Plan shall not be subject to the public consultation requirements of Section 1.10 - except the site identified for apartments or residential aged care.

CONTROL

Development that will not be notified is:

- Consistent with the Controls in this report and the remaining DCP Controls and demonstrates compliance with Councils LEP & DCP related provisions.

Development that will be notified is:

- Inconsistent with the objectives or intent of this report; and/ or
- Development applications relating to the site identified as 'apartment site' or Residential Aged Care.

CONVENTIONAL DCP DESIGN APPROACH

PROPOSED ALTERNATIVE DESIGN SOLUTION

<p>LOT SIZE CONTROLS</p>	<p>LOCATIONAL AND FORM- BASED CONTROLS</p>	<p>DELIVER AUTHENTIC CHARACTER AREAS</p>	<p>DELIVER AUTHENTIC CHARACTER AREAS</p>	<p>EMBED PLACEMAKING</p>	<p>PROMOTE DIVERSITY AND AFFORDABLE LIVING</p>
<p>Conventional development layouts are driven by subdivision/ lot size and orientation compliance rather than form- based, locational and market needed responses.</p>					
<p>HOUSE AND DRIVEWAYS FRONTING STREETS</p>	<p>A VARIETY OF FRONTAGE/ ADDRESS CONDITIONS</p>				
<p>The introduction of rear lanes gives the community the freedom to provide a variety of activation, address and amenity conditions that can also provide WSUD and active travel solutions.</p>					
<p>REAR LANES FOR MOVEMENT AND ACCESS</p>	<p>REAR LANES AS SAFE PLACES</p>				
<p>Designed as consistent road reserve widths lacking legibility and with little to no opportunity for variety, visual interest and/ or place clusters or fonzie flats.</p>					
<p>STREETS FOR VEHICLE SPEED/ CONVENIENCE</p>	<p>STREETS FOR PEOPLE AND EQUITY</p>				
<p>The provision of rear lanes for service and vehicular access enables the primary streets to be naturally calmed and in some cases replaced with green parks and paths.</p>					
<p>LOT SIZE DRIVEN SETBACKS</p>	<p>STREETSCAPE CHARACTER</p>				
<p>Walkability is promoted through an attractive, comfortable and tailored streetscape response. Irrespective of lot size or house type; setbacks and frontage controls are driven by the location/ interface condition. This results in a consistent character.</p>					
<p>SLIP- LANES/ FOUR PACKS</p>	<p>CLOSE/ CUL- DE- SAC AND REAR LANE</p>				
<p>The conventional approach would have resulted in long sections running parallel to the Central Boulevard. The blocks would have either been front accessed via a slip lane and/ or rear accessed via a battle- axe (four pack) configuration or use a long/ continuous rear lane.</p>					

HOUSES FRONTING OPEN SPACE

DIRECTLY INTERFACING WITH OPEN SPACE

SECTION 2.7 DEVELOPMENT ADJOINING OPEN SPACE (DCP 2010)

OBJECTIVE

1. Ensure that developments adjoining open space contain impacts within their boundaries and don't impinge on, or rely on the open space area as a buffer
2. Encourage positive visual and physical relationships between private developments and public areas and reserves

CONTROLS

- C1. Private developments are not to gain access across public open space.

NEW PRECINCT CONTROL

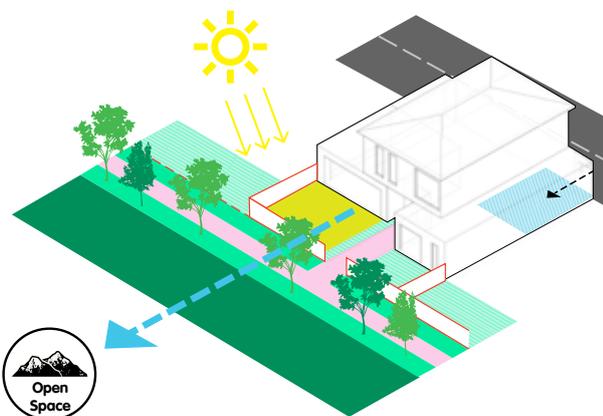
In key areas green links have been provided for pedestrian / cycle connections through the site with dwellings that front directly onto them, facilitated by rear lane vehicular access. These dwellings will achieve the objectives outlined in the DCP by encouraging a positive relationship with the open space.

Either rear or side loaded, these properties will have reduced setbacks and their primary habitable spaces face the green space to provide passive surveillance and engagement. Additionally, they will include low fences to their front boundary, with mail-boxes incorporated into these fences/ courtyard walls where appropriate. This will give an additional sense of activation to these areas as residents will frequently interact with the edges of the park/open space.

CONTROLS

The three defining elements for park frontage housing are:

- **Front block boundary treatment** - mandatory fencing with gate access encouraged to contribute to the traditional 'garden suburb' character. Include daytime habitable rooms to park frontage for passive surveillance.
- **A reduced front setback as per the controls in this document**
- **On-site parking** - typically a two car garage at the rear or side

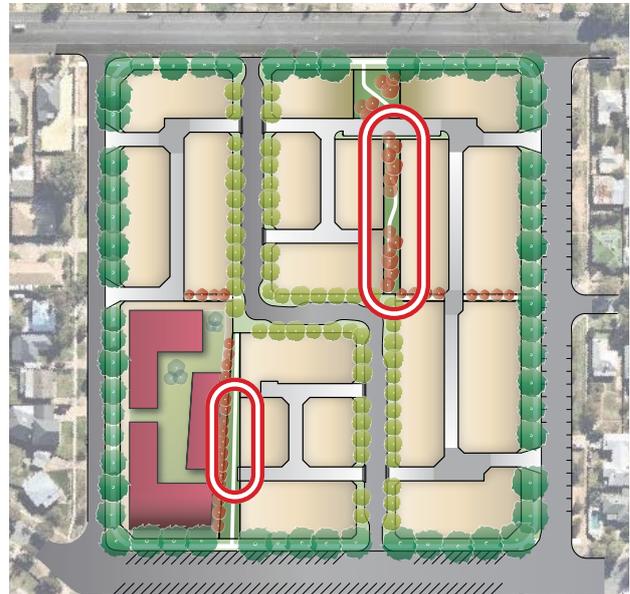


BUILT FORM FRONTING OPEN SPACE WITH REAR LANE GARAGE ACCESS

MAILBOXES TO PARK FRONTAGE

The defining elements for park frontage mailboxes are:

- **Activation** - mailboxes require the postal service and residents to use the footpaths along the edge of fences on a regular basis. This allows for chance encounters with neighbours who are using the public open space.
- **Passive Surveillance** - With residents accessing their front open space to check the mailbox, it provides passive surveillance to the open space. This helps with providing a safe environment to the public open space.
- It is preferred that these linear parks/ paths are given 'street names' that an address can be attributed to. However, it is also possible to have the address related to the laneway for emergency services purposes and an address plate identified at the front and rear. However, it is highly recommended that the postbox be located at the front of the dwelling.



LOCATION OF DWELLINGS WITH MAILBOXES TO PARK FRONTAGE



MAILBOXES TO PARK FRONTAGE - BONNER



MAILBOXES TO PARK FRONTAGE - HARRISON

07

LOT SIZE

BUILT FORM OUTCOME

SECTION 7.2.3 SIZE & SHAPE OF LOTS (DCP 2010)

OBJECTIVES

01. Encourage development that delivers good outcomes for orientation and solar efficiency.
02. Ensure that lots are appropriate for development considering the scale, character and form of existing housing in the locality and environmental conditions and constraints including topography.
03. Ensure residential subdivisions allow sufficient area for private open space, landscaping and amenity for future residents.

CONTROLS

- C1. In any subdivision at least 70 percent of the total number of lots should have their long axis oriented within 45 degrees of north so that the long axis of each dwelling is generally oriented east-west.
- C2. Lots on roads running east-west should be deeper and have narrower frontages than lots on roads running north-south where the lots should be wider and can be shorter.
- C3. Rectangular shaped lots are preferred. Hatchet shaped lots will be considered where it can be demonstrated that site conditions and context limit the ability to achieve a regular shaped lot.
- C4. The proposed lots must be capable of meeting the development standards set out in Section 9 of the DCP including minimum development area, site cover, landscaped area and private open space.
- C5. Potential outdoor living areas and areas of potential building footprint are to be shown for lots that are intended for dwellings, dual occupancy or multi-unit housing developments. The future outdoor living area should be north facing and to the rear of the site where a courtyard or private open space area would ideally be located for the future dwelling

NEW PRECINCT CONTROL

The Leagues is designed to optimise solar access balanced with providing a high quality, safe, active urban environment. The majority of lots have the long axis oriented east- west.

Lots with a north or south facing frontage are intentionally located to contribute to an attractive and engaging streetscape promoting walking, cycling and community interaction. This configuration leverages off the investment made into rear laneways which enables continuous footpaths and pedestrian priority. North facing lots shall have a private open space located to the north. Setbacks and fencing/ courtyard wall specifications will ensure that this space is private, useable and has adequate amenity whilst contributing to an attractive streetscape.

There are a variety of lot depths through the site from 21m to 31m. These lots have been tested and based on floorplans and built form solutions to ensure residential amenity, functionality, privacy and solar access can be achieved. The diversity in lot size provides alternative lifestyle and affordable living options to Wagga Wagga.

CONTROLS

- Terraces fronting onto roads running east-west with lot depths typically 21 to 22m deep. To achieve the objectives of the DCP, Private Open Space should be provided fronting north, whether in the rear yard or the front yard.
- Alternative Private Open Space can be provided as balconies to achieve solar access. These can be provided over garages in circumstances of the compact terraces.

MAXIMUM LOT SIZE & SITE COVERAGE

DIVERSITY OF HOUSING TYPE

SECTION 9.3.1 SITE AREA (DCP 2010)

OBJECTIVES

- O1. Ensure adequate area to provide separation between buildings, landscaping and private open space.
- O2. Maintain development patterns that are compatible with the established character of established residential areas.
- O3. Encourage maximum utilisation of land in the R3 Zone.

CONTROLS

- C2. The maximum site of any land in an R3 Zone on which development is carried out is to be in accordance with Table 9.3.1a.
- C2. On larger sites the site area per dwelling may be distributed to provide a range of lot sizes, and to respond to site conditions and context.

Maximum lot size for R3 Zone is 300m²

NEW PRECINCT CONTROL

The developable area excluding the residential flat building, open space, and roads is approximately 19,988m² divided by 83 detached dwellings and terraces provides an average lot size of 240m².

There is a diverse range of block sizes that include some lots over 300m², but the proposal is consistent with Control C2 with a distributed lot size less than the maximum.

SECTION 9.3.2 SITE COVER (DCP 2010)

OBJECTIVES

- O1. Ensure adequate areas for access, parking, landscaping, useable garden and outdoor areas and natural runoff.

CONTROLS

- C1. Maximum site cover is 65% of the lot area including outbuildings.

NEW PRECINCT CONTROL

The terrace typology (6.3m x 21m - 132m² lot size) has a site coverage of approximately 79%, however it achieves the objectives of useable parking, landscaping and outdoors areas. This typology includes a double garage, and Private Open Space of between 15m² to 22m² with additional open space at an upper level.

CONTROLS

- 80% site coverage for lots below 150m² where Private Open Space achieves solar access.
- 65% site coverage for lots over 150m²

07

FENCING CONTROLS

IMPROVED INTERFACES

SECTION 9.2.3 CORNER LOTS AND SECONDARY FACADES (DCP 2010)

OBJECTIVES

1. Encourage development on corner sites to respond to all street frontages

CONTROLS

- C3. A fence on the secondary frontage is permitted to have a height not exceeding 1,800mm except in the following circumstances where its height is not to exceed 1,200mm:
- Where it enters and is within the building line of the primary road - within the building line a fence will be permitted to taper down from 1,800mm maximum permitted height to the 1,200mm maximum permitted height at the primary road boundary"
 - Where a dwelling "addresses" the secondary road

NEW PRECINCT CONTROL

The proposed fencing controls are to allow for passive surveillance of open space links, and create a consistent streetscape character.

CONTROLS

FRONT FENCES:

- Mandatory front fence on Kincaid Street and facing open space
- Maximum height = 1,200- 1,500mm
- Where a block fronts onto open space a 1,500mm fence is allowed along the front boundary, setback 0.6m for ground cover for adequate privacy balanced with appropriate public address
- Fence height is to be consistent forward of the building line, with no tapering.

BLOCKS WITH A SECONDARY FRONTAGE TO PEDESTRIAN LINKS :

- Maximum height = 1,500mm
- Maximum fence height is the cumulative height of fence and retaining walls
- Provide both solid and semi-transparent elements to allow for passive surveillance of the pedestrian links

SETBACKS

CREATING A STREET CHARACTER

SECTION 9.3.6 FRONT SETBACKS WAGGA WAGGA DCP (2010)

CONTROL C1:

Minimum Front Setbacks for residential development:

Primary Frontage to a main road (Kincaid Street)	9m
Primary Street Frontage (other roads)	6m
Secondary Frontage (corner site)	3m

For residential accommodation in R3 Zones a minimum setback of 3m may be considered.

NEW PRECINCT CONTROL

The reduced setbacks proposed in the table below reflect the proposed character for the site. As every dwelling will have rear garage access the streetscapes are freed of driveways and parking spaces.

- Residential front setbacks are generally minimal contributing to a sense of enclosure and urbanity appropriate for a medium density neighbourhood.
- Reduced front planting setbacks are offset by additional deciduous tree planting every 3 on-street parking spaces, and within the Green Links.
- Daytime uses (rooms that face onto the public domain) are required for all houses overlooking open space / parks, enhancing security and passive surveillance.

NEW PRECINCT CONTROLS

PUBLIC / PRIVATE INTERFACE				
FEATURES	FRONT SETBACK	ARTICULATION ZONE	PERMISSIBLE ARTICULATION ELEMENTS	INTERFACE
GREEN LINK	2.0m	2.0m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 1.2m high courtyard wall with 50% permeability
NEW INTERNAL STREET	2.5m to 3.5m	3.0m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 2.5m setback & 1.2m fence with 50% permeability OR 3.5m setback & 1.5m high fence with 50% permeability if Private Open Space faces north
KINCAID STREET	3.5m	2.0m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 1.2m high courtyard wall OR 1.5m high fence with 50% permeability if Private Open Space in front
GURWOOD STREET	2.5m	1.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 1.2m fence with 50% permeability OR 1.5m high fence with 50% permeability if Private Open Space in front
MIXED-USE ON GURWOOD STREET & POCKET PARK	3.5m	3.5m	Awnings over shopfronts	<ul style="list-style-type: none"> Provide an awning over shop fronts to boundary line
SHAW STREET	2.5m	1.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 1.2m fence with 50% permeability OR 1.5m high fence with 50% permeability if Private Open Space in front
THOMAS STREET	2.5m	1.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 1.2m fence with 50% permeability OR 1.5m high fence with 50% permeability if Private Open Space in front
PEDESTRIAN LINKS (SECONDARY FRONTAGE)	1.5m side setback	0.5m	Minimal articulation to limit blank facades to pedestrian links	<ul style="list-style-type: none"> 1.5m high fence with 50% permeability Fence to property boundary
COMPACT LANEWAY FRONTAGE	2.5m	2.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> 1.2m high fence with 50% permeability

07

LOCAL STREETS

ACHIEVING BEST PRACTICE DESIGN

WAGGA WAGGA DCP STANDARDS

Carriageway	9.0m
Parking	Included in Carriageway
Verge	5.5m (both sides)

TOTAL RESERVE 20.0m

Wide streets with wide verges are more in suburban character compared with the Medium Density character the project will deliver.

Including parking within the carriageway width reduces the available traffic lane.

PROPOSED ROAD RESERVE

Carriageway	5.5m
Parking	2.1m (both sides)
Verge	3.5m (both sides)

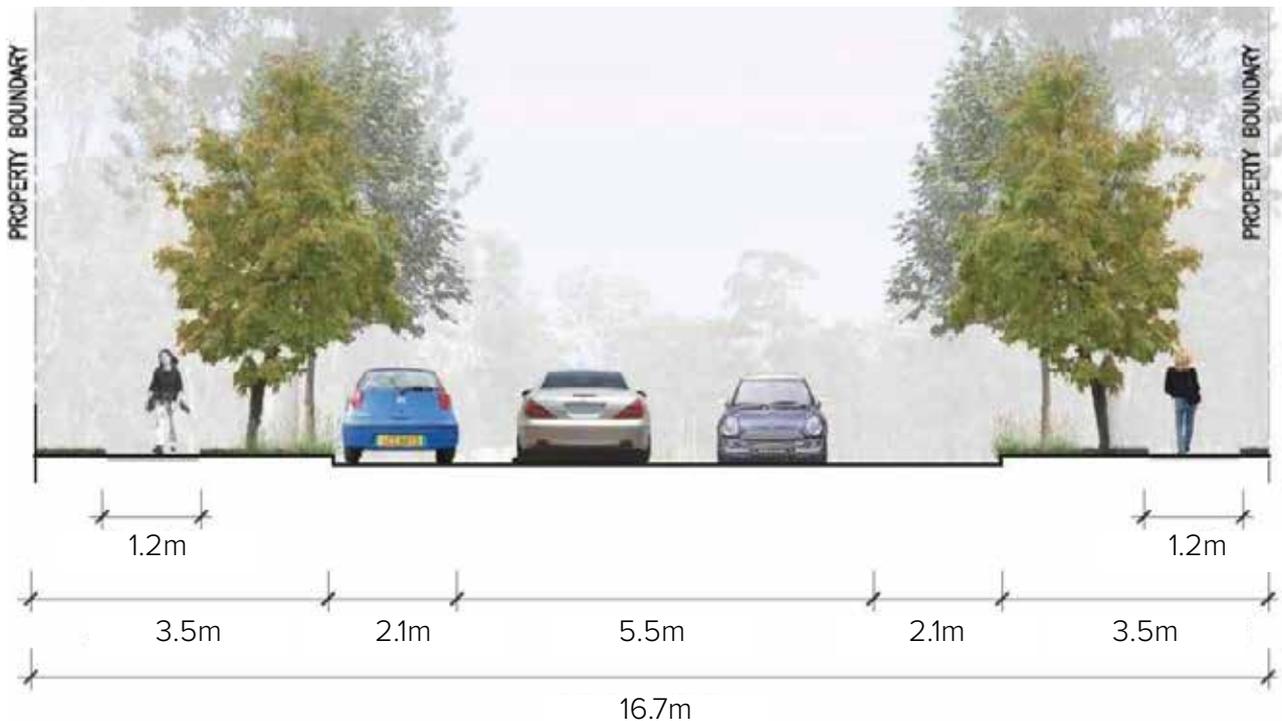
TOTAL RESERVE 16.7m

The streets and laneways have been designed to be consistent with the Vision for The Leagues to be a healthy, walkable urban community. The combination of narrower laneways, tree and parking friction and increased canopy will naturally calm traffic, prioritise the safety and comfort of the pedestrian without unduly impacting on traffic operations.

Indented parking provides for clearer traffic lanes, and opportunities for additional street trees between vehicle bays. This allows the verges to be reduced in width, decreasing the overall width of the road reserve.

Intersections are to be narrowed to the 5.5m carriageway width with parking restricted to provide a minimal width for pedestrian/cycle crossing.

Footpaths on both sides of the street are recommended to encourage walkable neighbourhoods.



PROPOSED 16.7m ROAD RESERVE WITH INDENTED ON-STREET PARKING



16.7M ROAD RESERVE WITH INDENTED ON-STREET PARKING (ORAN PARK, NSW)



INTERSECTIONS OF WIDE CARRIAGEWAYS ARE TO BE NARROWED TO ALLOW EASY PEDESTRIAN CROSSING (ORAN PARK, NSW)

07

LANEWAYS

PROVIDING A UNIQUE WAY TO SERVICE HOUSES

Laneways form a valuable and a functional component of the built environment by:

- Avoiding streetscapes dominated by garages and car ports in narrow subdivision
- Alleviating the need for driveways at the front of properties to allow uninterrupted pedestrian pathways
- Allowing reduced front setbacks
- Providing the opportunity for increased street planting and on street parking at the front of properties
- Providing the opportunity for unique residential and commercial (mixed use) development with reduced front setbacks.
- Providing opportunities to remove service traffic from streets. Engineering swept paths show that garbage trucks can move through the laneways. Lots that can't be serviced via the laneway can be serviced via the streets.
- Allowing attractive street frontage where volumes of traffic inhibit driveway access (e.g. Kincaid Street & Shaw Street)
- Facilitating studio and compact housing to provide surveillance within laneways. Entry doors to be setback from carriageway to provide safe egress from houses.

Laneways that are 'cranked' with terminating views are to be developed with the following applied principles :

- Residential laneways to be short in length (generally < 65 metres).
- Laneways will be controlled with an end or 'cranked' to confine views and provide an attractive interface from the street.
- Corner fencing for allotments siding on to laneways to be semi permeable and low (1.2m high).
- Landscape features and elements will be located in key locations, to screen and improve visual appeal from the street.
- Lighting will be provided by the developer in key locations for surveillance and security.
- Studio units and compact dwellings will be encouraged in key locations to provide passive surveillance at laneway and street interfaces.
- Laneway materials to be controlled via design guidelines.



'CRANKED' LANEWAY WITH VIEW TERMINATING ON BUILT FORM



'CRANKED' LANEWAY WITH VIEW TERMINATING ON BUILT FORM

WAGGA WAGGA DCP STANDARDS

Carriageway	7.5m
Verge	3.5m (both sides)

TOTAL RESERVE 14.5m

The standard DCP Laneway Road Reserve is almost as wide as a standard Local Street which diminishes its role as a service lane. The 3.5m wide verges on both side of the carriageway are unnecessary as they provide an ambiguous space within the lane that generally isn't maintained well.

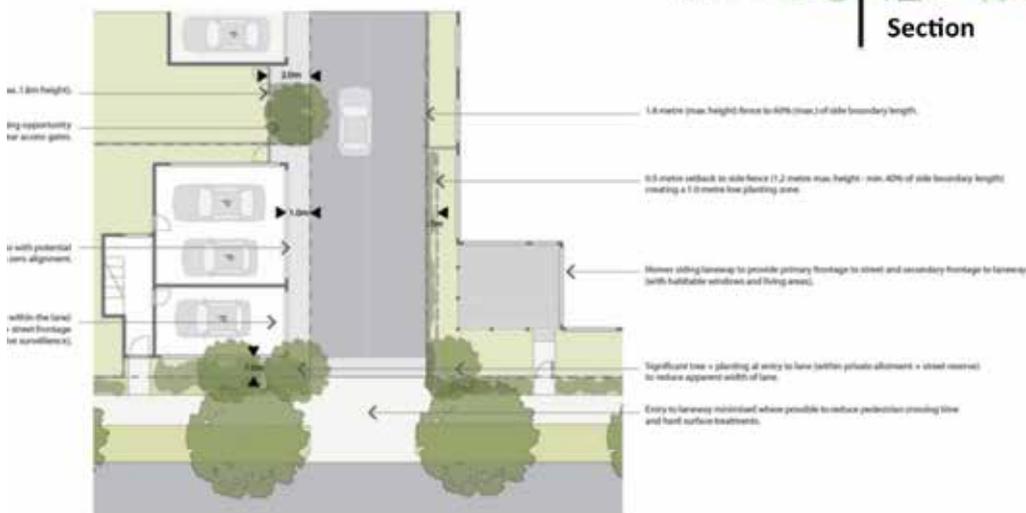
PROPOSED ROAD RESERVE

Carriageway	5.5m
Verge	0.5m (one side)

TOTAL RESERVE 6.0m

Legibility is critical in walkable communities to ensure safety, promote reduced vehicle reliance and general comfort and well being. Laneways shall be easily perceived as secondary and predominantly for vehicle access.

The reduced width of the laneway road reserve reinforces its role as a service space. The width of the carriageway is sufficient for service vehicles, and a 1m setback for garage built form allows for vehicle turning circles.



19

EXAMPLE OF NARROW 'CRANKED' LANEWAY ROAD RESERVE

07

SECONDARY DWELLING - 'FONZIE FLAT'

PROVIDING SURVEILLANCE AND SAFETY TO LANEWAYS

The Secondary Dwelling ('Fonzie' Style Flats) are to be provided along laneways where there is a kink in the road. The kink is to provide deeper (up to 27m deep) and wider blocks.

The additional width is to provide a double garage to the main house and a single garage to the apartment above the garage.

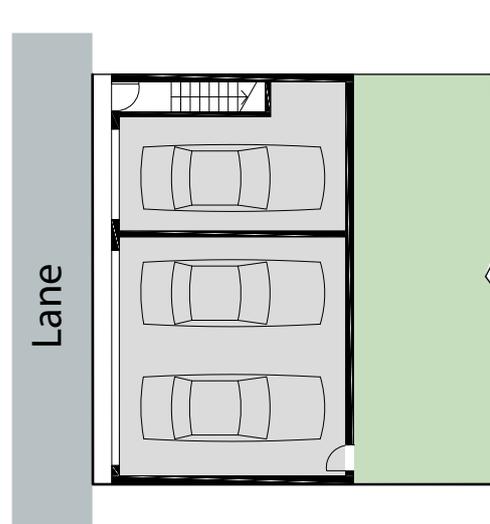
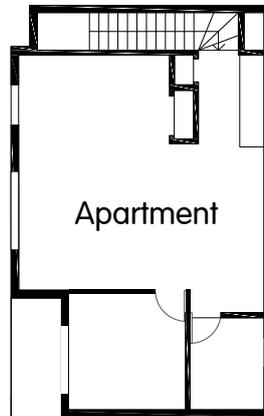
The apartment has its access off the laneway, with all habitable windows and balcony overlooking the laneway to provide surveillance. Windows to non-habitable space (like bathrooms) can be provided looking into the open space of the terrace, providing they are at a high level and opaque.

CONTROLS

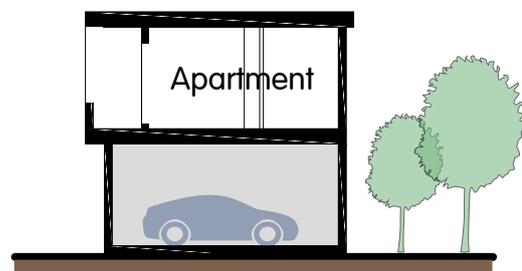
To allow for liveable internal spaces the building height must allow for a minimum 2.7m internal ceiling. The eaves for these buildings should be set at a maximum 5.5m above ground level, which will allow for 2.5m garage ceiling + 0.3m structure + 2.7m apartment ceiling.

There are a number of titling arrangement including strata, stratum, community title and separate title that should be allowed for the flats.

Area to be a maximum of 70m² excluding parking and balcony.



INDICATIVE LOCATION OF SECONDARY DWELLINGS



Studio

2 parking for Terrace
1 parking for Apartment



'FONZI' FLAT IN LANEWAY - GREATER ASCOT, QLD

07

MANOR HOUSE

ALTERNATIVE TO AN 'ADG' COMPLIANT APARTMENT

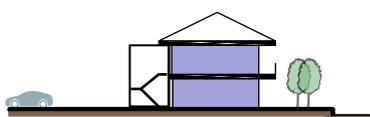
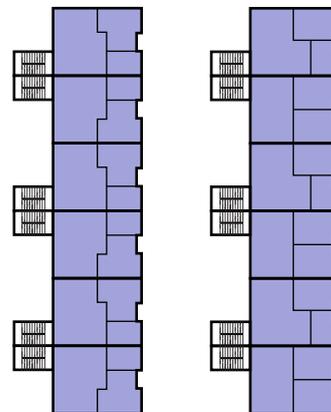
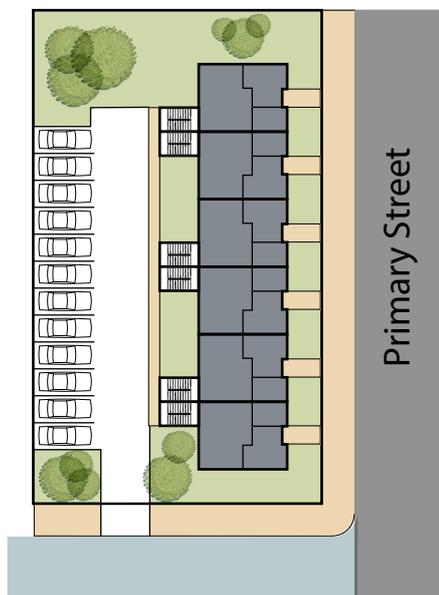
The location designated for apartments will be need to be designed to SEPP 65 Apartment Design Guide (ADG). ADG Compliance 'applies to buildings that are three or more storeys and that have four or more dwellings'. This is the preferred option for the site.

However, if the future developers for that site desire to build smaller apartment buildings that don't trigger ADG compliance, the typology of building located here should be of the 'Manor House' type below.

These two storey walk up buildings read as large manors from the street, with at grade parking located behind the apartments. The building is made up of a series of four apartments accessed by a common staircase.

In future stages there is a potential for the apartment site and surrounding blocks to be used as residential aged care. This would be reviewed at a future date as the market requires. The design of the layout has allowed for this flexibility.

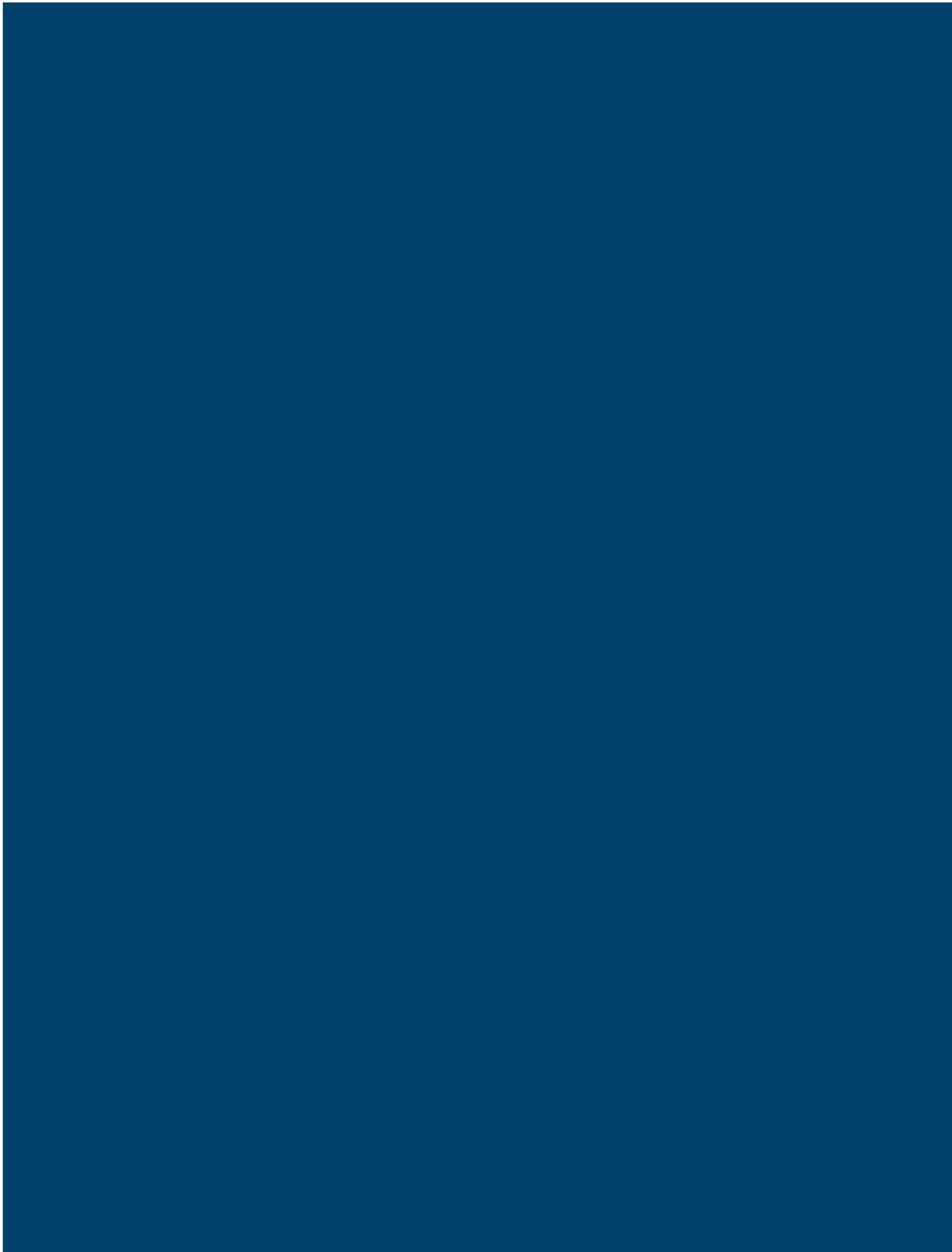
The residential aged care buildings would need to be compliant to the Seniors Housing SEPP.



2 Storey Walk-up (Mansion Apartment)



MANOR HOUSE COMPLEX



ADG Compliance & Solar Study

08

APARTMENT DESIGN GUIDE

ACHIEVING BEST PRACTICE DESIGN

At this early stage of the process a preliminary assessment of the design has been undertaken against SEPP 65 to demonstrate compliance along with the Apartment Design Guide 'Rule of Thumb' Assessment.

Criteria	Requirement	Response
<i>Developing the Controls</i>		
2A Primary Controls	Demonstrate context responsiveness	COMPLIANT – The proposal is within a 5 minute walk of the proposed 'Health and Knowledge Precinct'. It is along the path of the Kapooka Cycling Trail that connects into the CBD.
2B Building Envelopes	Carefully test primary controls	COMPLIANT – The submitted concept optimises the contribution to the local context, with built form of an appropriate scale.
2C Building Height	Site specific building envelopes	COMPLIANT – The proposed heights synthesise solar amenity & envelope, adjoining streetscape character, facade transition and built form, and desire to create a quality pedestrian experience and human scale. Additional height is possible and subject to land use / built form specific compliance testing, and demonstrating consistence with existing and future context.
2D Floor Space Ratio	Floor space ratio aligns with desired density and provides opportunity for articulation	COMPLIANT – The proposed FSR is a by-product of a context responsive design process providing the desired density and significant opportunity for building articulation within close proximity to the station.
2E Building Depth	10 – 18m for adequate daylight and natural ventilation. Greater building depths with increased building articulation, perimeter wall depth and where higher ceilings provided.	COMPLIANT – Proposed buildings have apartment building depths between 14m to 18m.
2G Street Setbacks	Determine street setback controls relevant to desired streetscape character, including increased setbacks where street or footpath widening is desired.	COMPLIANT – The proposed design provides 4m setback to Thomas and Gurwood Street for the first 4 levels.
2H Side and rear setbacks	NA	COMPLIANT – The setbacks on all sides of the site are 4m as the proposal is surrounded by either streets or open space links.

Criteria	Requirement	Response
<i>Sitting the Development</i>		
3A Site analysis	Site analysis demonstrates decisions have been based on local opportunities and surrounding context	COMPLIANT – The design sequence diagrams in the Urban Design Report demonstrate decisions have been based on local opportunities unique to this site.
3B Orientation	Buildings respond to streetscape and solar amenity.	COMPLIANT – Buildings envelopes and corner building statements/activation address both street frontages and entrances to the pedestrian/cycle link. The built form is located to not impact on existing or proposed dwellings.
3C Public Domain Interface	Transition between private and public domain is achieved without compromising safety and security.	COMPLIANT – The proposal significantly improves the transition between the private and public realm particularly within the pedestrian/cycle link. The embellishment of the laneway is the focus of the project to create a better place for people.
3D Communal Open Space	Communal open space has a minimum area of 25% of the site area achieving a minimum of 50% sunlight for 2hrs between 9am and 3pm on 21 June.	COMPLIANT – With a developable land area of 4,681m ² the proposal requires 1,170m ² of communal open space. The proposal provides a total of 1,170m ² of communal open space in a central courtyard. The communal open space receives adequate sunlight.
3F Visual Privacy	Minimum separation between windows and balconies is 1-4 storeys: 3m – 6m 5-8 storeys: 4.5m to 9m 9 storeys plus: 6m to 12m	COMPLIANT – The proposal is for a maximum of 4 storeys, and provides minimum separation for apartment buildings to facilitate compliance during detail design. 1-4 storeys: 6m
3G Pedestrian Entries	Building entries connect to the public realm, are easy to find and large sites provides key pedestrian links.	COMPLIANT – The proposal provides for direct building entries from the adjoining Thomas Street, Gurwood Street, and the pedestrian / cycle link.
3H Vehicle Access	Vehicle access points are safe and minimise conflict.	COMPLIANT – Vehicle access and waste management area can be provided from Thomas Street or Gurwood Street. Location to be provided during separate DA.

08

SOLAR AMENITY STUDY - SITE

ACHIEVING BEST PRACTICE DESIGN

OVERSHADOWING ANALYSIS

Complementing the built form and place analysis, the diagrams adjacent illustrate an appropriate solar amenity for mid-winter between 9am - 3pm on 21 June. Detailed solar amenity studies have been undertaken to ensure an appropriate level of sunlight is achieved for the proposed built form, the adjacent buildings and key open spaces.

The built form shown is to the maximum allowable extent, including double storey over the garages. This is an unlikely situation across the full precinct, and is displayed as a maximum scenario.





10 AM



11 AM



2 PM



3 PM



08

SOLAR AMENITY STUDY - APARTMENT

ACHIEVING BEST PRACTICE DESIGN

OVERSHADOWING ANALYSIS

Whilst there is some overshadowing to adjoining properties in the early morning (9am) and late afternoon (3pm), the overall solar standards of the ADG's are satisfied by the proposal, ensuring communal open spaces and public open spaces receive adequate solar access, particularly between 10am and 1pm.

Overshadowing to adjoining properties and open spaces is minimised through built form orientation and sensitive heights, achieving best practice solar design.



9 AM



12 PM



1 PM





10 AM



11 AM

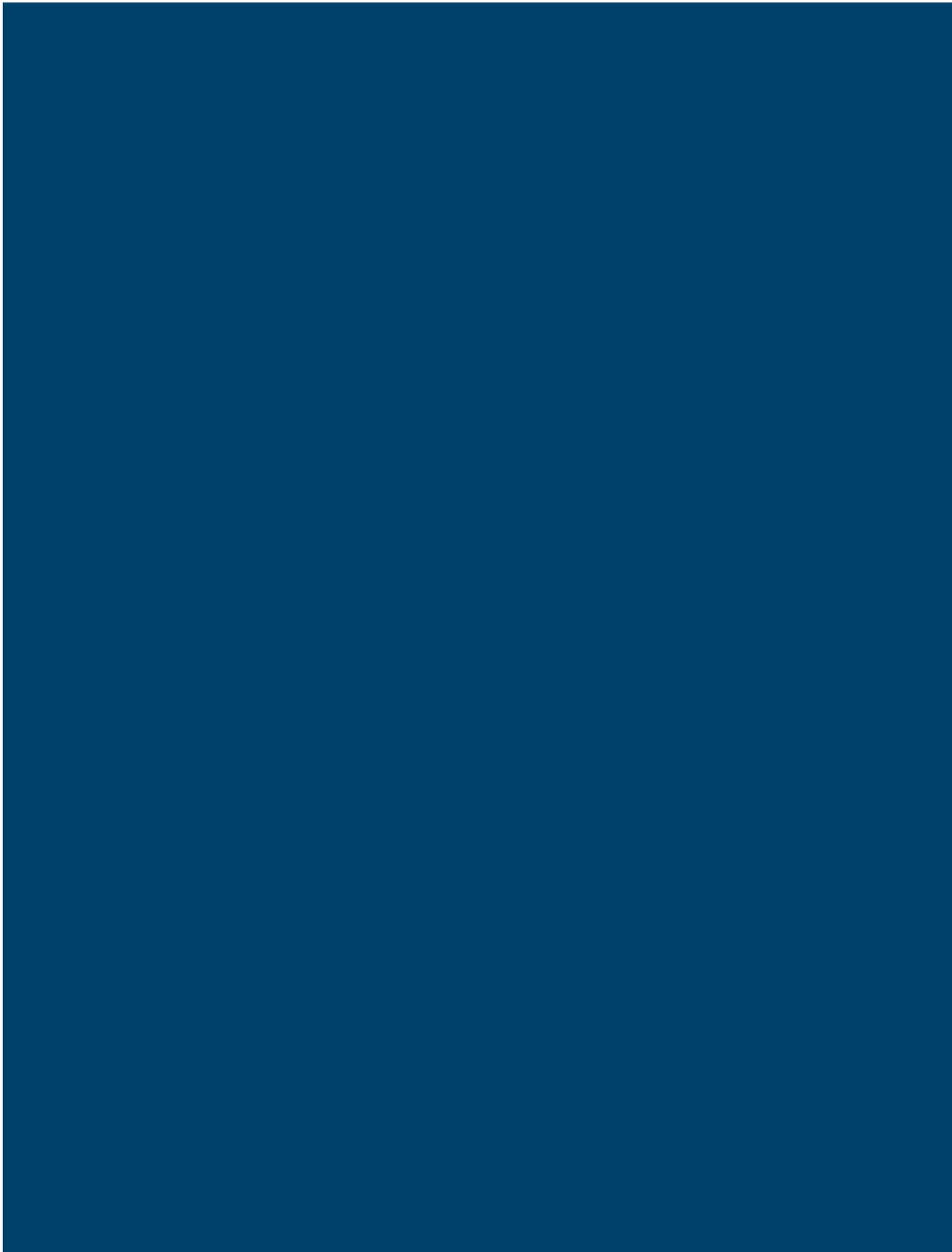


2 PM



3 PM





Appendix 1

Site Specific

DCP Controls

SECTION 1 - GENERAL DEVELOPMENT CONTROLS

GURWOOD STREET SITE, WAGGA WAGGA

SECTION 1 - GENERAL DEVELOPMENT CONTROLS

1.0 - NOTIFICATION OF A DEVELOPMENT APPLICATION CONTROLS

- Future development applications that are inconsistent with the provisions of the approved Urban Design Report and supporting Master Plan will be subject to public consultation requirements.
- Development that will be notified is:
 - Inconsistent with the objectives or intent of this report; and / or
 - Development applications relating to the site identified as 'apartment site' or Residential Aged Care.
- The assessment and notification process of Development Applications, that are required to be notified, will occur concurrently (where required / possible).

1.1 - STAGING OF DEVELOPMENT CONTROLS

The staging of development of the Master Plan is to occur in accordance with the approved Urban Design Report. The staging of development may occur non-sequentially. Refer to Page 47 for more details.

1.2 - VEHICLE ACCESS AND MOVEMENTS CONTROLS

- The design of vehicle access and movements, as well as pedestrian access and movements shall adhere to Figure 1.0 - Vehicle Access and Movements (shown below).

1.3 - OFF STREET PARKING CONTROLS

- All developments are required to provide off-street (on site) parking, accessed from rear laneways so as to minimise driveways and parking spaces on streetscapes and increase area for landscape;
- All off-street car parking requirements for Terraces and Secondary Dwellings (Fonzie Flat) are to be in accordance with Table 1: Off-Street Parking;

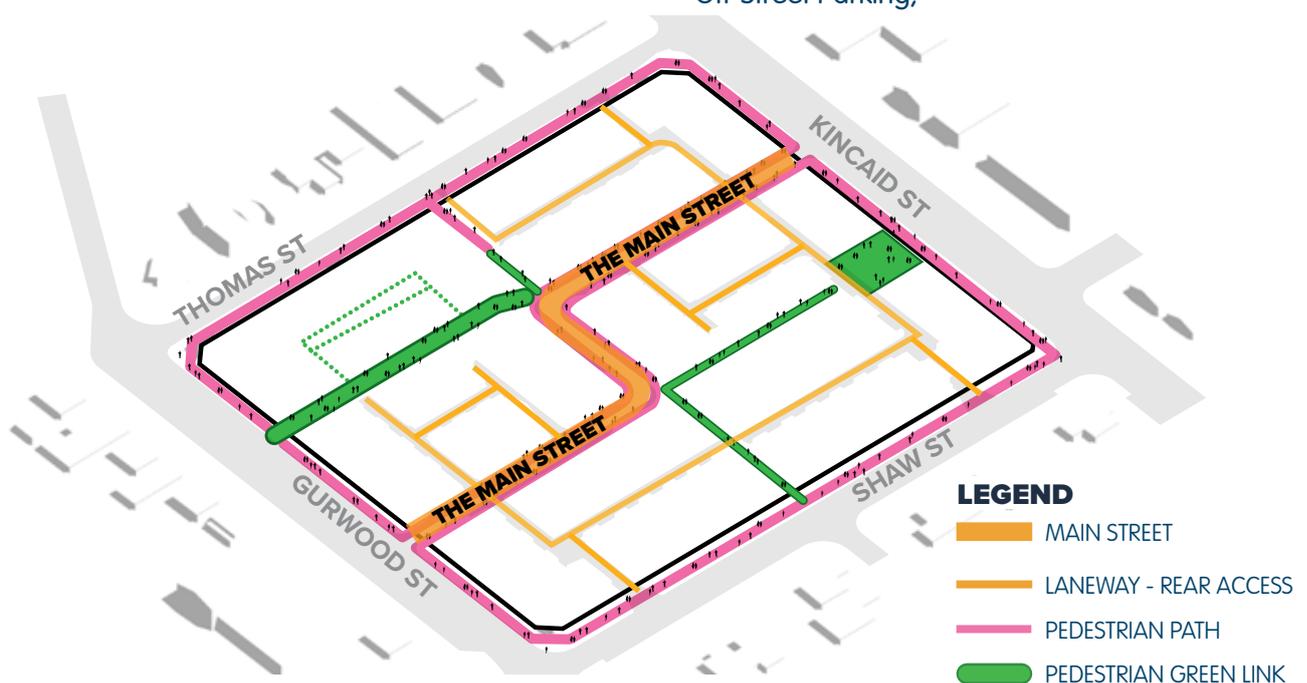


FIGURE 1.0 - VEHICLE ACCESS AND MOVEMENTS

- Parking for Residential Flat Buildings are to meet the minimum requirements of the Apartment Design Guidelines ; and
- All visitor parking for Residential Flat Buildings are to be provided on street.

OFF STREET PARKING		
RESIDENTIAL ACCOMMODATION		CAR PARKING REQUIREMENT
TERRACE TYPOLOGY A	LOT FRONTAGE: 5M - 6M WIDE	1 space per dwelling
TERRACE TYPOLOGY A	LOT FRONTAGE: 6M - 8M WIDE	2 spaces per dwelling
TERRACE TYPOLOGY B	DETACHED LOT FRONTAGE: 14M - 16M	2 spaces per dwelling
TERRACE TYPOLOGY C	SEMI DETACHED LOT FRONTAGE: 9M - 11M	2 spaces per dwelling
TERRACE TYPOLOGY D	DETACHED LOT FRONTAGES: 9M - 12M	2 spaces per dwelling
TERRACE TYPOLOGY E	LOT FRONTAGES: 9.5M - 12M	2 spaces per dwelling
SECONDARY DWELLING TYPOLOGY F	LOT FRONTAGES: 9.5M - 12M	1 Spaces per Dwelling
TERRACE TYPOLOGY G	SEMI DETACHED LOT FRONTAGES: 7.3M	1 Spaces per Dwelling
MANOR DWELLING (APARTMENT DWELLING)		As per the ADGs
SENIORS HOUSING		As per the Housing for Seniors SEPP

TABLE 1.0 - OFF STREET PARKING

1.4 - LANDSCAPE DESIGN

CONTROLS

- All Development Applications for forthcoming stages of development must provide landscaping detail in accordance with Figure 1.1 Landscaping Master Plan (seen adjacent). Refer to Page 35-38 for more details.

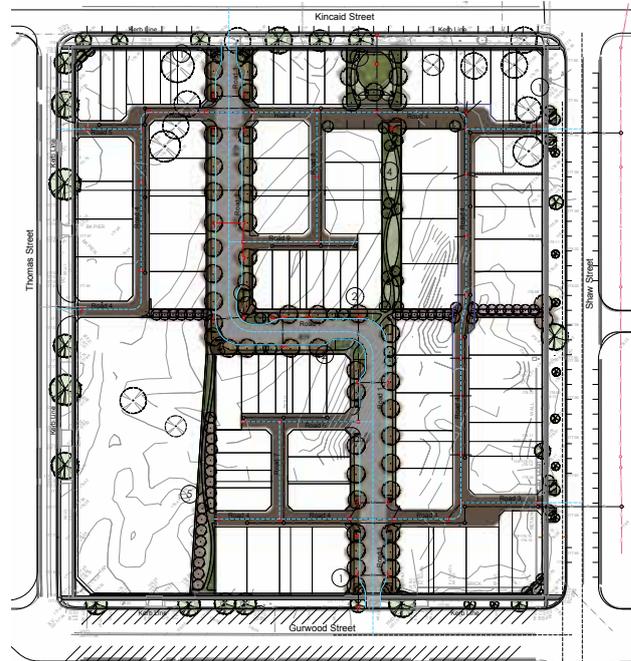


FIGURE 1.1 - LANDSCAPE MASTER PLAN

1.5 - SAFETY AND SECURITY

CONTROLS

- Maximise opportunities for natural surveillance of public spaces and building or site entrances.
- Use good site planning to clearly define public, semi-public and private areas.
- Entries are to be clearly visible and identifiable from the street, and are to give the resident/ occupier a sense of personal address and shelter.
- Minimise blank walls along street frontages.
- Avoid areas of potential concealment and 'blind' corners.
- Provide lighting to external entry areas, driveways and car parks in accordance with the relevant Australian Standards. The lighting is to be designed and sited to minimise spill and potential nuisance to adjoining properties.

09

SECTION 2 - SUBDIVISION & PRECINCT LAYOUT

GURWOOD STREET SITE, WAGGA WAGGA

1.6 - EROSION AND SEDIMENT PRINCIPLES

Soil erosion from building sites, especially sloping sites is a major pollutant of our watercourses and stormwater drainage systems. This section contains controls that ensure property development stakeholders implement reasonable measures to preserve the existing vegetation, provide adequate measures to prevent soil loss and rehabilitate the site through interim and long term re-vegetation strategies.

OBJECTIVES

- Protect the environment against soil erosion and loss of soil from construction sites.
- Prevent the degradation of drainage systems, waterways and aquatic environments from deposition of soil and foreign material from construction sites.
- Prevent flood damage of individual properties caused by sediment reducing the flow capacity of the stormwater drainage system.
- Promote the implementation of erosion and sediment control measures by persons undertaking construction and earthworks activities to prevent the loss of soil from the site.

CONTROLS

- An Erosion and Sediment Control Plan is to be submitted with the development application.
- Water diversion or filtration measures including sand bags, silt fencing or straw bale sediment filter fencing are to be implemented on the downslope property boundary, including, where appropriate, the rear of the lot.
- All sediment control measures are to be installed prior to commencement of work on the site. The measures are also to be maintained in a sound and workable condition until completion and must not be removed from the site until permanent rehabilitation/stabilisation measures have been completed.
- Vehicle admittance onto the site shall be restricted during wet or muddy conditions.

- The placement of blue metal, gravel or similar materials is required on the identified single access point if access is necessary under wet or muddy conditions. This will prevent erosion by concentrated run-off and minimise tracking of mud from the site on to the road.
- Temporary fencing is to be installed along the boundary adjoining roadways to prevent vehicles by-passing the designated driveway access.
- Locate stockpiles so that the material is wholly within the property boundary and not in a position where it can be washed into the gutter or roadway.
- Coverage of stockpiles should be provided to prevent loss by wind erosion, unless the material is too coarse to be wind blown (e.g. coarse sand).
- Sediment fencing must be provided down slope of all stock piles. Where the catchment exceeds 2 ha, a diversion bank/fence must be constructed immediately upslope of all stockpiles
- Disturbed areas are to be stabilised disturbed areas with seeded topsoil or turf as quickly as possible or by no later than 14 days, after completion of construction works. Use of turfed terraces or turf strips along embankments may facilitate quick stabilisation of those areas.
- All erosion and sediment control devices should be kept in place until the site is fully stabilised and /or landscaped.

1.7 - DEVELOPMENT ADJOINING OPEN SPACE

OBJECTIVE

- Ensure that developments adjoining open space contain impacts within their boundaries and don't impinge on, or rely on the open space area as a buffer; and
- Encourage positive visual and physical relationships between private developments and public areas and reserves.

CONTROLS

The three defining elements for park frontage housing are:

- **Front block boundary treatment** - mandatory fencing with gate access encouraged to contribute to the traditional 'garden suburb' character. Include daytime habitable rooms to park frontage for passive surveillance;
- **A reduced front setback as per the controls in this document; and**
- **On-site parking** - typically a two car garage at the rear or side.

The defining elements for park frontage mailboxes are:

- **Activation** - mailboxes require the postal service and residents to use the footpaths along the edge of fences on a regular basis. This allows for chance encounters with neighbours who are using the public open space.
- **Passive Surveillance** - With residents accessing their front open space to check the mailbox, it provides passive surveillance to the open space. This helps with providing a safe environment to the public open space.
- It is preferred that these linear parks/ paths are given 'street names' that an address can be attributed to. However, it is also possible to have the address related to the laneway for emergency services purposes and an address plate identified at the front and rear. However, it is highly recommended that the postbox be located at the front of the dwelling.

SECTION 2 SUBDIVISION & PRECINCT LAYOUT

Subdivision should occur broadly in accordance with the layout detailed in the Urban Design Report and should take place in accordance with the Urban Design Principles, being:

- Provide a robust development framework that gives confidence in quality outcomes but facilitates creativity, innovation and organic growth;
- Stitch into the existing community fabric in a fine grain manner;
- Connect to the Health & Knowledge Precinct in a physical and value-based manner;
- Optimise public spaces through multi-functional design and built form interface;
- Facilitate a life- long community model;
- Promote green and active travel, reducing reliance on the private vehicle;
- Provide attractive and logical built form transitions; and
- Enable flexibility to respond to Wagga Wagga's needs.

2.1 - STRATA SUBDIVISION

CONTROLS

- Any building that is proposed for strata subdivision is required to comply with relevant fire safety provisions. Council may require associated fire upgrading works as part of an application for strata subdivision.

2.2 - TOPOGRAPHY, VIEWS AND SETTING

CONTROLS

- All Development Applications should demonstrate how Views and setting contribute to a sense of place and are site responsive. Views and Setting will be assessed in accordance with the intent of the endorsed / approved Master Plan.

SECTION 3 - RESIDENTIAL DWELLINGS

GURWOOD STREET SITE, WAGGA WAGGA

2.3 - DESIGN FOR USE & ACCESSIBILITY

CONTROLS

- All Development Applications should demonstrate design for use and accessibility to complement the intended outcomes of vehicular and pedestrian movement of the Master Plan. Design for Use and Accessibility will be assessed in accordance with the intent of the endorsed / approved Master Plan.

2.4 - SOLAR ACCESS, ENERGY EFFICIENCY, SIZE AND SHAPE OF LOTS

Dwelling typologies have been designed to allow for good design opportunities for solar access to the dwelling and adjoining/neighbouring dwellings.

CONTROLS

- All future development shall demonstrate good solar access and how the development maximises solar access and liveability of the dwellings constructed through the use of private open space, whilst minimising solar amenity impacts to adjacent dwellings; and
- All development applications will be assessed against a performance based criteria assessment for Solar Access and should generally be consistent with Solar Amenity Studies (see page 71-74) for Terraces and Apartments.
- All development applications must demonstrate equitable amenity and reasonable solar impact across the proponent's site as well as neighbouring sites. This also includes anticipated impacts beyond immediate neighbours and including precinct-wide onward effects within the expectations established by the concept master plan.
- Refer to pages 71-74 for a detailed Solar Amenity Study - for Terraces and Apartments.

2.5 - OPEN SPACE PARKS AND THE PUBLIC DOMAIN

CONTROLS

- The inclusion of open space and green linkages within the public domain ensures that all dwellings have access to publicly accessible green space within a short distance, improving neighbourhood activity and passive surveillance; and
- All Development Applications shall demonstrate how it complements the design of open spaces and the public domain, and maximise opportunities for all occupants to interact with and utilise public open space.

2.6 - WATER SENSITIVE URBAN DESIGN

CONTROLS

- The endorsed / approved Master Plan shown detailed within the Urban Design Report has been complemented by an endorsed / approved Stormwater Plan to provide appropriate water clearing outcome; and
- All future development shall be designed to integrate with the endorsed Stormwater Design for the precinct.

2.7 - SERVICES

OBJECTIVES

- Ensure the efficient and cost-effective provision of services; and
- Share services trenching wherever possible for current and future provision of services and telecommunications.

CONTROLS

- Subdivision can only be considered where there are appropriate arrangements for servicing (electricity, gas, water, sewer and communications).

SECTION 3: RESIDENTIAL DWELLINGS

Section 3 contains the controls for residential development. The controls apply to all applications for residential accommodation and residential subdivision unless specified in the heading.

3.0 - PRINCIPLES FOR RESIDENTIAL DEVELOPMENT

Sustainability and efficient use of resources:

- Use passive solar design principles to maximise thermal performance for good internal amenity;
- Select materials to support good thermal performance and maximise the sustainability of the design;
- Achieve a density and scale that reflects the zone and proximity of the site to transport, shops, schools or community uses; and
- Implement resource reuse.

Design quality:

- Building siting, footprint, scale and bulk should be compatible with adjoining development and the established or intended built form; and
- Integrate building design and landscaping with north facing internal living areas that link to quality private open space.

3.1 - CENTRAL WAGGA WAGGA EXISTING CHARACTER

- The residential streets of Wagga Wagga's central business area have a strong landscape character associated with the mature street trees. Their absence of garages and parking structures in the streetscape is a function of the rear lane access of many streets, and allows the landscape to dominate.
- The consistent built form and setbacks contribute to the coherent character of the area. The site cover and landscaped area controls are intended to discourage patterns

of excessive site cover, and to retain the pattern of buildings and open space.

- The endorsed Master Plan for the Gurwood Street Site complements the existing character of Central Wagga Wagga and principles for Residential Design. The Master Plan provides opportunities on a key central city site in the medium density zone to enhance the existing character and built form whilst being consistent with the Future directions below:

3.2 - FUTURE DIRECTIONS AND OPPORTUNITIES

The following recommendations identified allow development to support and promote the key directions of development for Central Wagga Wagga. These recommendations are supported by the endorsed Master Plan.

- Opportunities for Secondary Dwellings fronting rear lanes, and not affect the amenity of adjoining sites. Parking can be accommodated without impacting the street;
- Retaining the existing landscaped character of the streets, and maintaining the use of the rear lanes for vehicle access and associated structures; and
- Retaining the current patterns of building/open areas through site cover and landscaped area requirements.

3.3 - SITE CONTEXT AND LAYOUT CONTROLS

- The controls of this section encourage site responsive developments that are compatible with neighbourhood character. Site responsive developments respond to their site context take advantage of site features and minimise impacts to neighbours.

3.3.1 - SITE LAYOUT CONTROLS

- Development should be individually tailored for the site, taking advantage of orientation, locating buildings to minimise cut and fill on

GURWOOD STREET SITE, WAGGA WAGGA

sloping sites, and integrating landscaping and built form.

- The principles of passive solar design are fundamental, and are best achieved by orienting living areas to the north, and designing for natural cross ventilation.
- Orient dwellings to maximise passive solar design opportunities with their long axis generally east-west;
- Living rooms should face north where possible.

OBJECTIVES

- Encourage site responsive development that is compatible with existing or desired built form;
- Facilitate sustainable development through passive solar design;
- Integrate landscaping and built form;

- Encourage designs which respond to the physical context and characteristics of the particular site; and

- Encourage design that maximises the opportunity for passive surveillance of communal spaces from private living areas.

CONTROLS

- Use site characteristics such as trees, changes in level or rock outcrops as features within the site layout;
- Integrate access, landscaping and services in the site layout, avoiding underutilised spaces;
- Orient living spaces to maximise solar access; and
- Facilitate natural cross ventilation within dwellings through the location of windows and doors.

NEW PRECINCT CONTROLS

PUBLIC / PRIVATE INTERFACE				
FEATURES	FRONT SETBACK	ARTICULATION ZONE	PERMISSIBLE ARTICULATION ELEMENTS	INTERFACE
GREEN LINK	2.0m	2.0m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> • 1.2m high courtyard wall with 50% permeability
NEW INTERNAL STREET	2.5m to 3.5m	3.0m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> • 2.5m setback & 1.2m fence with 50% permeability OR • 3.5m setback & 1.5m high fence with 50% permeability if Private Open Space faces north
KINCAID STREET	3.5m	2.0m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> • 1.2m high courtyard wall OR • 1.5m high fence with 50% permeability if Private Open Space in front
GURWOOD STREET	2.5m	1.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> • 1.2m fence with 50% permeability OR • 1.5m high fence with 50% permeability if Private Open Space in front
MIXED-USE ON GURWOOD STREET & POCKET PARK	3.5m	3.5m	Awnings over shopfronts	<ul style="list-style-type: none"> • Provide an awning over shop fronts to boundary line
SHAW STREET	2.5m	1.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> • 1.2m fence with 50% permeability OR • 1.5m high fence with 50% permeability if Private Open Space in front
THOMAS STREET	2.5m	1.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> • 1.2m fence with 50% permeability OR • 1.5m high fence with 50% permeability if Private Open Space in front
PEDESTRIAN LINKS (SECONDARY FRONTAGE)	1.5m side setback	0.5m	Minimal articulation to limit blank facades to pedestrian links	<ul style="list-style-type: none"> • 1.5m high fence with 50% permeability • Fence to property boundary
COMPACT LANEWAY	2.5m	2.5m	An Entry Feature / Portico, Balcony / Deck / Verandah, Window Box Treatment / Bay Window, Awning or window feature, Sun Shading	<ul style="list-style-type: none"> • 1.2m high courtyard wall with 50% permeability

TABLE 3.0 - SETBACKS & INTERFACE TO CREATE STREETScape CHARACTER

3.3.2 - STREETScape

Walkability is promoted through an attractive, comfortable and tailored streetscape response. Irrespective of lot size or house type; setbacks and frontage controls are driven by the location/ interface condition. This results in a consistent character.

OBJECTIVES

- Contribute to an attractive and engaging streetscape promoting walking, cycling and community interaction;
- Enables continuous footpaths and pedestrian priority through rear lane access;
- Fencing is to allow for passive surveillance of open space links, and create a consistent streetscape character;
- Setbacks and fencing/courtyard wall specifications to ensure that northern oriented private open spaces (in the front yard) is private, useable and has adequate amenity whilst contributing to an attractive streetscape;
- Setbacks to reflect the proposed character for the site. As every dwelling will have rear garage access the streetscapes are freed of driveways and parking spaces;
- Residential front setbacks are generally minimal contributing to a sense of enclosure and urbanity appropriate for a medium density neighbourhood;
- Ensure building façades are articulated to complement and enhance the streetscape and neighbourhood character;
- Encourage contemporary and innovative design to establish a preferred neighbourhood character in new and transitional residential areas; and
- Avoid excessively long blank walls, particularly to end terraces.

CONTROLS

- North facing lots shall have a private open space located to the north;

- All fencing heights and level of permeability are to adhere to the prescribed Interface detailed in Table 3.0 - Setbacks & Interface for Streetscape Character;
- Mandatory front fence on Kincaid Street and facing open space;
- Fence height is to be consistent forward of the building line, with no tapering;
- All development shall adhere to the prescribed setbacks below in Table 3.0 Setbacks & Interface to Create Streetscape Character;
- Reduced front planting setbacks are offset by additional deciduous tree planting every 3 on-street parking spaces, and within the Green Links;
- Daytime uses (rooms that face onto the public domain) are required for all houses overlooking open space / parks, enhancing security and passive surveillance;
- Each dwelling must have a front door and a window to a habitable room in the building wall that faces a primary street;
- The maximum total area of building elements in the articulation zone must not be more than 35 percent of the area of the articulation zone.

3.3.3 - CORNER LOTS AND SECONDARY FACADES

Sites with dual frontages need to ensure that the side (or secondary) facade is attractive as it contributes to neighbourhood character.

OBJECTIVES

- Encourage development (building lines and fences) on corner sites to respond to all street frontages; and
- Provide Passive surveillance to pedestrian links.

CONTROLS

- Houses on corner lots are to ensure an acceptable address to both frontages. Continue materials around the corner to the

GURWOOD STREET SITE, WAGGA WAGGA

secondary road so that the building “turns the corner”;

- The maximum total area of building elements in the articulation zone must not be more than 35 percent of the area of the articulation zone;
- Corner fencing for allotments siding on to laneways to be semi permeable and low (1.2m high);
- All development blocks with secondary frontage to pedestrian links shall follow the prescribed fencing requirements in Table 3.0: Setbacks and Interface to Create Streetscape Character; and
- Daytime uses (rooms that face onto the public domain) are required for all houses overlooking open space / parks, enhancing security and passive surveillance.

3.4 - SITE AREA, BUILDING FORM AND ENVELOPE

CONTROLS

- The site area, building form, scale and bulk should be appropriate to the intended built form of the locality, which includes the following:
 - Terrace Dwelling Typology (refer Figure 3.0 - Lot Typologies on pages 91-92);
 - Secondary Dwelling Typology (refer Figure 3.0 - Lot Typologies on pages 91-92); and
 - Manor Dwelling Apartment Typology (refer Figure 3.0 - Lot Typologies on pages 65-66).
- Site cover, landscaped area, setbacks and solar access are the main controls to ensure appropriate bulk and mass; and
- Development Applications must adhere to these typologies in order to support and satisfy the desired outcomes.
- Refer to Typology Location and Yields on Page 45 for indicative parameters for the density of each development stage.

3.4.1 - SITE AREA PER DWELLING

CONTROLS

- Individual lots sizes should allow for an average lots size across the site no greater than 300sqm per dwelling; and
- Each Stage of the development must demonstrate an appropriate response to the above control.

3.4.2 - SITE COVER

CONTROLS

- 80% site coverage for lots below 150m² where Private Open Space achieves solar access; and
- 65% site coverage for lots over 150m².

3.4.3 - MINIMUM FRONTAGES

CONTROLS

Minimum lot frontages for Terrace Dwelling Typologies are as follows (see Figure 3.0 - Lot Typologies on pages 91-92 for more details):

- Terrace Typology A: 5m (minimum) - 8m lot frontage;
- Terrace Typology B (Detached): 14m (minimum) - 16m lot frontage;
- Terrace Typology C (Semi-Detached): 9m (minimum) - 11m lot frontage;
- Terrace Typology D (Detached): 9m (minimum) - 12m lot frontage;
- Terrace Typology E: 9.5m (minimum) - 12m lot frontage;
- Secondary Dwelling Typology F (Fonzie Flat): 9.5m (minimum) - 12m lot frontage;
- Terraces Typology G: 6.3m (minimum - 7.3m lot frontage;
- Residential Flat Buildings = (Manor Flats): 20m to the primary address.

Variations can be considered to the minimum frontage requirement where it can be demonstrated that the resulting development achieves a reasonable density and can satisfy the amenity considerations of this Section.

3.4.4 - SOLAR ACCESS

Dwelling typologies have been designed to allow for good design opportunities for solar access to the dwelling and adjoining/neighbouring dwellings.

CONTROLS

- All future development shall demonstrate good solar access and how the development maximises solar access and liveability of the dwellings constructed through the use of private open space, whilst minimising solar amenity impacts to adjacent dwellings; and
- All development applications will be assessed against a performance based criteria assessment for Solar Access and should generally be consistent with Solar Amenity Studies (see page 71-74) for Terraces and Apartments.
- All development applications must demonstrate equitable amenity and reasonable solar impact across the proponent's site as well as neighbouring sites. This also includes anticipated impacts beyond immediate neighbours and including precinct-wide onward effects within the expectations established by the concept master plan.
- Refer to pages 71-74 for a detailed Solar Amenity Study - for Terraces and Apartments.

3.4.5 - PRIVATE OPEN SPACE

All dwelling typologies are designed to allow good design opportunities for private open spaces;

CONTROLS

- All development applications will be assessed against a performance based assessment on the quality of private open spaces.

Private open spaces permissible for Terrace Dwelling Typologies are as follows (see Figure 3.0 - Lot Typologies on pages 91-92 for more details):

- Terrace Typology A:
Min 12.5m² area with min 2.5m dimension located adjoining habitable room facing north orientation. Additional open space via

balconies potentially over garage to achieve solar access;

- Terrace Typology B (Detached):
Min 36m² area with min 6m dimension courtyard located adjoining habitable room;
- Terrace Typology C (Semi-Detached):
Min 18m² area with min 3m dimension located adjoining habitable room facing north orientation;
- Terrace Typology D (Detached):
Min 18m² area with min 3m dimension courtyard located adjoining habitable room;
- Terrace Typology E:
Min 25m² area with min 5m dimension courtyard located adjoining habitable room;
- Secondary Dwelling Typology F (Fonzie Flat):
Balcony min 8m² with min 2m dimension;
- Terraces Typology G (Semi-detached):
Balcony min 8m² area with min 2m dimension

3.4.6 - FRONT SETBACKS

All front setbacks are detailed in Table 3.0 - Setbacks and Interface to Create Streetscape Character;

3.4.7 - SIDE AND REAR SETBACKS

CONTROLS

All minimum side setbacks for Terrace Dwelling Typologies are as follows (see Figure 3.0 - Lot Typologies on pages 91-92 for more details):

- Terrace Typology A: 0m;
- Terrace Typology B (Detached): 0.9m;
- Terrace Typology C (Semi-Detached): 0m-1.5m;
- Terrace Typology D (Detached): 0.9m;
- Terrace Typology E: 0m;
- Secondary Dwelling Typology F (Fonzie Flat): 0m;
- Terrace Typology G: 0m

All rear setbacks for Terrace Dwelling Typologies are as follows (see Figure 3.0 - Lot Typologies on pages 91-92 for more details):

GURWOOD STREET SITE, WAGGA WAGGA

- Terrace Typology A: 1m from rear boundary;
- Terrace Typology B (Detached): 1m from rear boundary;
- Terrace Typology C (Semi-Detached): 1m from rear boundary;
- Terrace Typology D (Detached): 1m from rear boundary;
- Terrace Typology E: 1m from rear boundary;
- Secondary Dwelling Typology F (Fonzie Flat): 1m from rear boundary for garage; and 0m for apartment at upper level.
- Terrace Typology G: 0m from rear boundary

3.5 - DESIGN DETAILS

A number of detailed design elements contribute to good quality developments. They combine to support the sustainability qualities, environmental “friendliness” and liveability of housing.

3.5.1 - BUILDING ELEMENTS

Quality built form is supported by clever use of building elements such as balconies, eaves, sun shading devices and appropriate use of materials.

OBJECTIVES

- Encourage quality and visually interesting buildings through the use of building elements; and
- Facilitate passive solar design principles.

CONTROLS

- Use verandahs or pergolas to link internal and external living areas;
- Porches are to be integrated into the building design, and are to be used to create a sheltered and clearly visible entry;
- Locate ancillary components such as aerials, satellite dishes, air conditioning units and the like so they are not visible from the street;
- For dual occupancy developments, each dwelling is to have a separate entry; and
- Secondary dwellings are to appear as a

single occupancy from the public domain, except from rear lane viewpoints.

3.5.2 - MATERIALS AND FINISHES

OBJECTIVES

- Encourage the use of external materials and finishes that are suited to their location and support consistent quality streetscapes.
- Encourage use of materials that have good thermal performance.
- Promote the use of materials that are climate responsive and contribute to innovative building design.
- Discourage corporate colours in building facades.

CONTROLS

- Select materials for their environmental performance, durability, detail and appearance to achieve quality appearance.
- Avoid large unbroken expanses of any single material.
- Minimise use of highly reflective or glossy materials on building exteriors.
- Use contrasting materials in combination with design elements for features such as corner elements.
- For larger developments, use recessive colours for the upper levels to help minimise building bulk.
- C6 For residential developments, corporate colours (when used in relation to a corporate identity) are not to dominate the building facade. The colours should integrate with the existing/proposed external materials and finishes to support a consistent quality streetscape.

3.5.3 - PRIVACY

All development applications will be assessed against a performance based criteria assessment for Privacy and should generally be consistent with intended outcomes for visual privacy.

3.5.4 - GARAGES, CAR PORTS, SHEDS AND DRIVEWAYS

Design of garages, carports, sheds and driveways must contribute in a positive way to the laneway and character of the locality. Refer to Figure 3.0 - Lot Typologies on pages 91-92 for more details.

OBJECTIVES

- Minimise the visual dominance of garages and driveways in the laneway.
- Where possible, locate garages so as to assist in protecting dwellings from early morning and late afternoon summer sun.

CONTROLS

- Where possible, consolidate shed functions into the garage structure provided to the dwelling, rather than two separate structures;
- Sheds may only be erected on residential land where a dwelling house is constructed or under construction and must be used for purposes ancillary to the residential use of the land; and
- An outbuilding shall not be located in front of the main building line. Variations may be considered for a balcony, deck, patio, pergola, terrace or verandah.

3.5.5 - SITE FACILITIES

These controls apply to all residential developments other than single dwellings. Site facilities include garbage and servicing areas, mail boxes, drying areas, external storage areas and utility services (gas, water, telephone, and electricity). Integrating these facilities into the overall design of a development improves site function and appearance.

OBJECTIVES

- Ensure site facilities are integrated into site design, and are convenient, visually discreet and easy to maintain;
- Encourage an attractive residential setting and quality public domain; and
- Minimise duplication of trenches for services and the like.

CONTROLS

- For dual occupancy developments, multi-dwelling housing and residential flat developments, utility services are to be provided underground;
- For larger developments where more than 10 units are proposed, avoid banks of mail boxes in excess of six;
- Locate mail boxes so that they are clearly visible from the street or main entry. The plans are to include details of the location for letter boxes and any associated shelter structure;
- Garbage areas are to be easily accessible within the site, and are to have adequate lighting. The area should be visually screened from adjoining developments and public spaces; and
- Provide an external drying area in an area that receives reasonable solar access. The drying area is to be screened from the street or adjoining public spaces.

3.5.6 - CHANGING THE LANDFORM – CUT AND FILL

Earthworks (including cut and fill) require development consent under the LEP. This section contains controls for changes to the natural landform through excavation and fill in order to minimise environmental impacts, and to avoid artificial differences between sites, especially in the urban context where significant differences in levels at the boundary can reduce amenity and result in dangerous landforms and structures.

Excessive cut and fill reduces the ability to interpret natural landforms, and can exacerbate ground water and salinity issues. Controls are necessary to prevent erosion and sedimentation, and changes to natural creeks and watercourses.

OBJECTIVES

- Encourage site responsive development and protect the amenity of adjoining land;
- Avoid excessive earthworks and minimise changes to the natural landform;

- Encourage site layout and building design that is appropriate to the site conditions, including use of split levels, pier foundation or suspended floor house designs;
- Avoid adverse impacts on salinity by minimising the potential for surface water to enter the groundwater in recharge areas;
- Avoid inappropriate fill being introduced to sites; and
- Ensure adequate provision of drainage in relation to cut and fill practices.

CONTROLS

- Excavation is not to exceed a maximum depth measured from ground level (existing) as follows:

(a) If located no more than 1m from boundary – 1.5m, and

(b) If located more than 1m but not more than 1.5m from any boundary – 2m, and

(c) If located more than 1.5m from any boundary – 3m.

Any depths and/or setbacks outside of the above may only be considered where there is no unreasonable or unacceptable impact on the amenity of the adjoining properties (direct overlooking and loss of privacy, overshadowing to areas of principal private open space and living areas).

- C2 Fill is not to exceed:
 - (a) 1.5m above ground level (existing), and
 - (b) Must be contained by either:
 - (i) A retaining wall or other form of structural support that does not extend more than 1.5m from the closest external wall of the dwelling house, or
 - (ii) An unprotected sloping embankment or batter that does not extend from the dwelling house by more than 3m, in which case the toe of the embankment or batter must be more than 1m away from a side or rear boundary.

Variations to the above setbacks can be considered where the applicant can demonstrate that there is an acceptable impact on the amenity of the adjoining properties (privacy, overshadowing).

- Retaining walls and support for earthworks that are more than 600mm above or below ground (existing) and within 1m of the boundary or more than 1m above the ground level in another location, must take the form of a retaining wall or other form of structural support that:

(a) has been certified by a professional engineer, and

(b) has adequate drainage lines connected to the existing stormwater drainage system for the site, and

(c) does not result in any retaining wall or structural support with a total height measured vertically from the base of the retaining wall or structural support to its uppermost portion is:

(i) more than 1.5m in height and within 1m from a side or rear boundary, or

(ii) more than 3m in height at any other location.

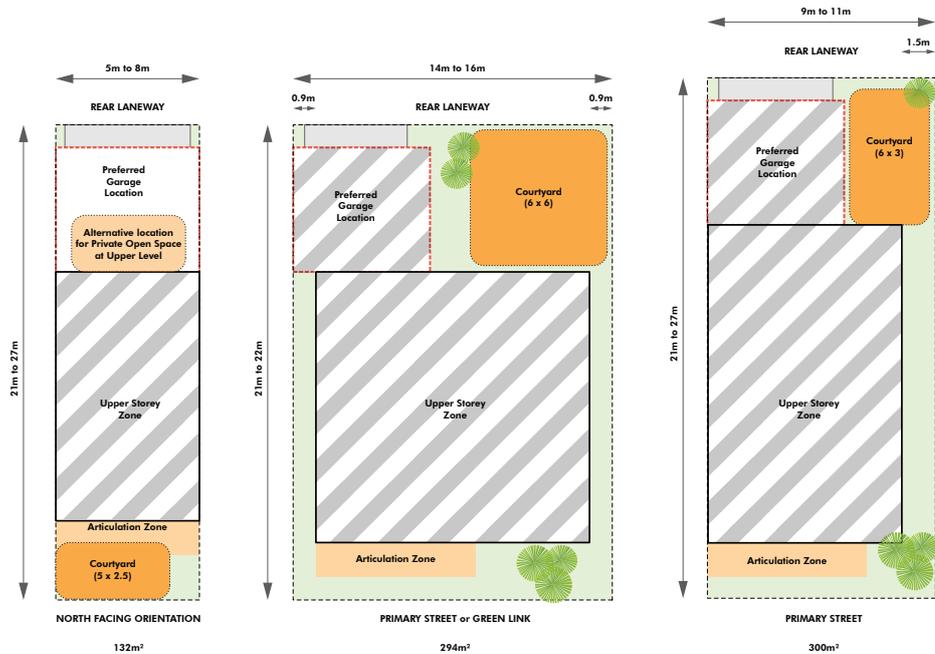
- Retaining walls are not to be located within the easement. The retaining wall shall be located outside the easements zone of influence.
- No cut or fill to take place within easements.
- To encourage site responsive development, excavation and retaining walls greater than that specified in C1 to C3 above can be considered where the design responds to the slope (or incorporates split levels). The additional retaining wall height is to facilitate basements, garages or the like at the lower level. The excavation is to be adequately retained and drained, in accordance with approved engineering details.
- Where achievable, any proposed dwelling is to be designed incorporating retaining

walls and fill within the dwelling. Should the provision of retaining walls and fill not be achievable within a proposed dwelling due to demonstrated site constraints they should be located as close to the proposed dwelling as is possible, to minimise the impact on the amenity of the adjoining properties.

- All retained material is to have a gradient of at least 5%.
- Fill material is to be substantially from the site only. Imported fill material is not encouraged.
- Cut and fill outside the building envelope is not to exceed 600mm.
- Stormwater or surface water runoff is not to be redirected or concentrated onto adjoining properties so as to cause a nuisance. Adequate drainage is to be provided to divert water away from batters.
- Earthworks should not be carried out within the angle of repose of adjoining property. Unless such works are supported by certified structural engineer reports and do not impact on neighbouring property.

09

GURWOOD STREET SITE, WAGGA WAGGA



TYOLOGY

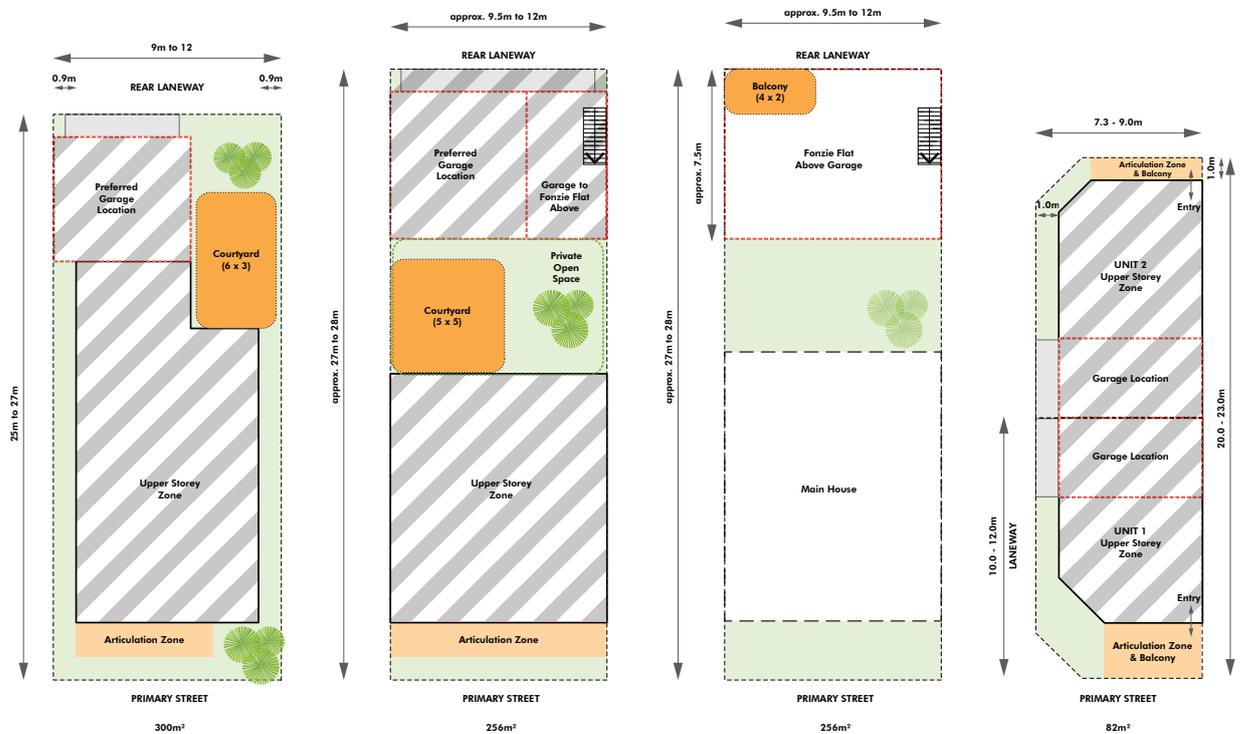
A

B

C

	5-8m X 21/22m Terrace	14-16m X 21-22m Detached	10m X 21-23m Semi-Detached
Principle Front Setback, Encroachments and Private Frontage	Refer to Character based Setbacks Table	Refer to Character based Setbacks Table	Refer to Character based Setbacks Table
Garage Front Setback	1.0m from rear boundary	1.0m from rear boundary	1.0m from rear boundary
Principle Side Setback	0m	0.9m	0.0m to 1.5m
Principal Private Open Space	Min 12.5m ² area with min 2.5m dimension located adjoining habitable room facing north orientation. Additional open space via balconies potentially over garage to achieve solar access	Min 36m ² area with min 6m dimension courtyard located adjoining habitable room	Min 18m ² area with min 3m dimension located adjoining habitable room facing north orientation

Note: Location of elements are indicative only and subject to site specific detailed design.



D

E

F

G

	10m X 25-27m Detached	9.5-10m X 27-28m Terrace	Secondary Dwelling 'Fonzie Flat'	7.3-9.0 X 10-12m Compact Semi-Detached
Principle Front Setback, Encroachments and Private Frontage	Refer to Character based Setbacks Table	Refer to Character based Setbacks Table	Refer to Character based Setbacks Table	Refer to Character based Setbacks Table
Garage Front Setback	1.0m from rear boundary	1.0m from rear boundary	1.0m from rear boundary for garage 0.0m for Apartment at upper level	1.0m from Side Boundary
Principle Side Setback	0.9m	0.0m	0.0m	0.0m
Principal Private Open Space	Min 18m ² area with min 3m dimension courtyard located adjoining habitable room	Min 25m ² area with min 5m dimension courtyard located adjoining habitable room	Balcony min 8m ² with min 2m dimension	Balcony min 8m ² with min 2m dimension

HATCH | RobertsDay

Urban Design Report | The Leagues