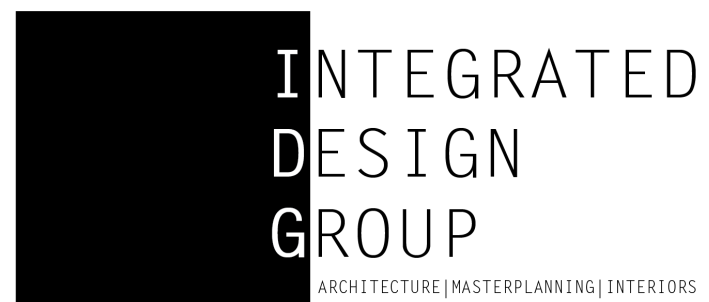


LITHGOW CITY COUNCIL SWEET BRIAR CONCEPT MASTERPLAN SOUTH BOWENFELS

SWEET BRIAR, SOUTH BOWENFELS
8 DECEMBER 2022





PREPARED BY:

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INTRODUCTION

SUBJECT SITE

The subject site is located on the western edges to the Lithgow City Centre. The site contains Three Tree Hill which is a way finding marker to the surround area, and a significant natural feature.

The site benefits from a semi rural context yet still in close proximity to the Great Western Highway and easy access to Lithgow City Centre.

The site is surrounded by smaller pockets of development ranging from low rise residential, educational facilities, medical facilities and retail.

As a reflection of the site's unique position, the zoning allows particular site allow for 400m² sites which provides more opportunity for diversity of housing to include medium density than the surrounding suburbs.



INTRODUCTION

PROJECT OBJECTIVES

The broad objectives and outcomes of the project are to:

- 1)
Plan and design a new and innovative residential estate that meets the needs of the community and reflects current industry best practice and principles in urban design, sustainability, and social outcomes.
- 2)
Prepare and lodge a development application with Lithgow City Council for the subdivision of the land via the NSW Planning Portal.
- 3)
Prepare a business case to test opportunities/risks for the development to provide broader sustainability, environmental and social outcomes against achieving a reasonable return on investment.
- 4)
Explores and if possible, incorporates opportunities for the future provision of more diverse and affordable housing to meet the needs of the community and opportunities to assist with upcoming major project construction workforces.
- 5)
Fulfil Council’s obligations under a Regional Housing Fund Participation Agreement with NSW Department of Planning and Environment



ANALYSIS

LAND USE

The site is located within an existing residential zone and on western edge of town, however it adjoins the Lithgow Hospital, Seniors living, and aged-care services to the east. To the North and further South of the site are DA approved residential subdivisions.

The Australian Bureau of Statistics recent Census Data indicated that the highest industry employment in Lithgow is aged-care services and this site is in close proximity to some of the key services in the city centre.

Opportunities:

- Provide housing on this site for key workers in a health and education employment zone
- Provide housing diversity through increase density models for key workers due to close proximity to work and less requirement for vehicular transport

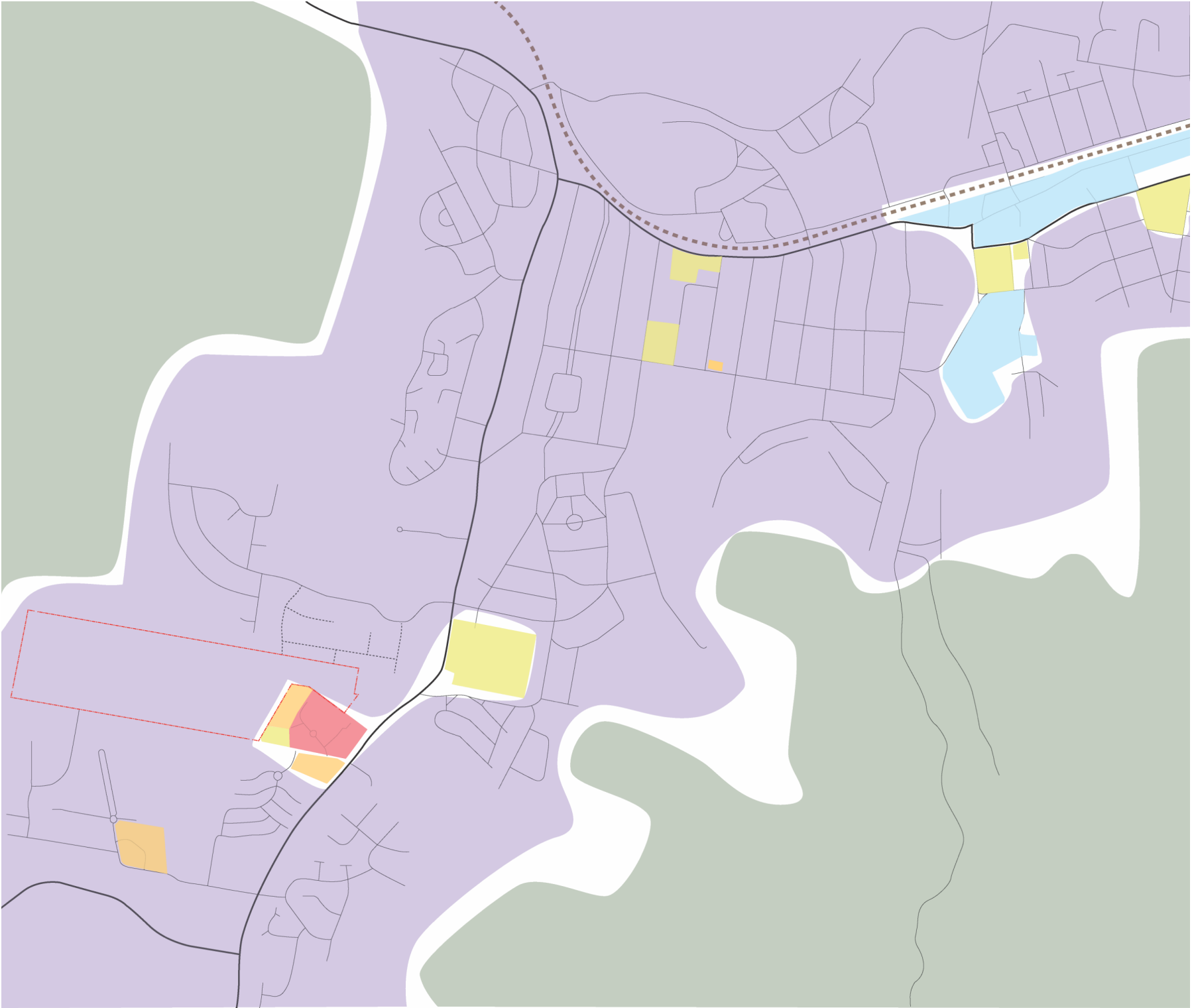
RESIDENTIAL

EDUCATION

RETAIL

AGED CARE

HEALTH CARE







ANALYSIS

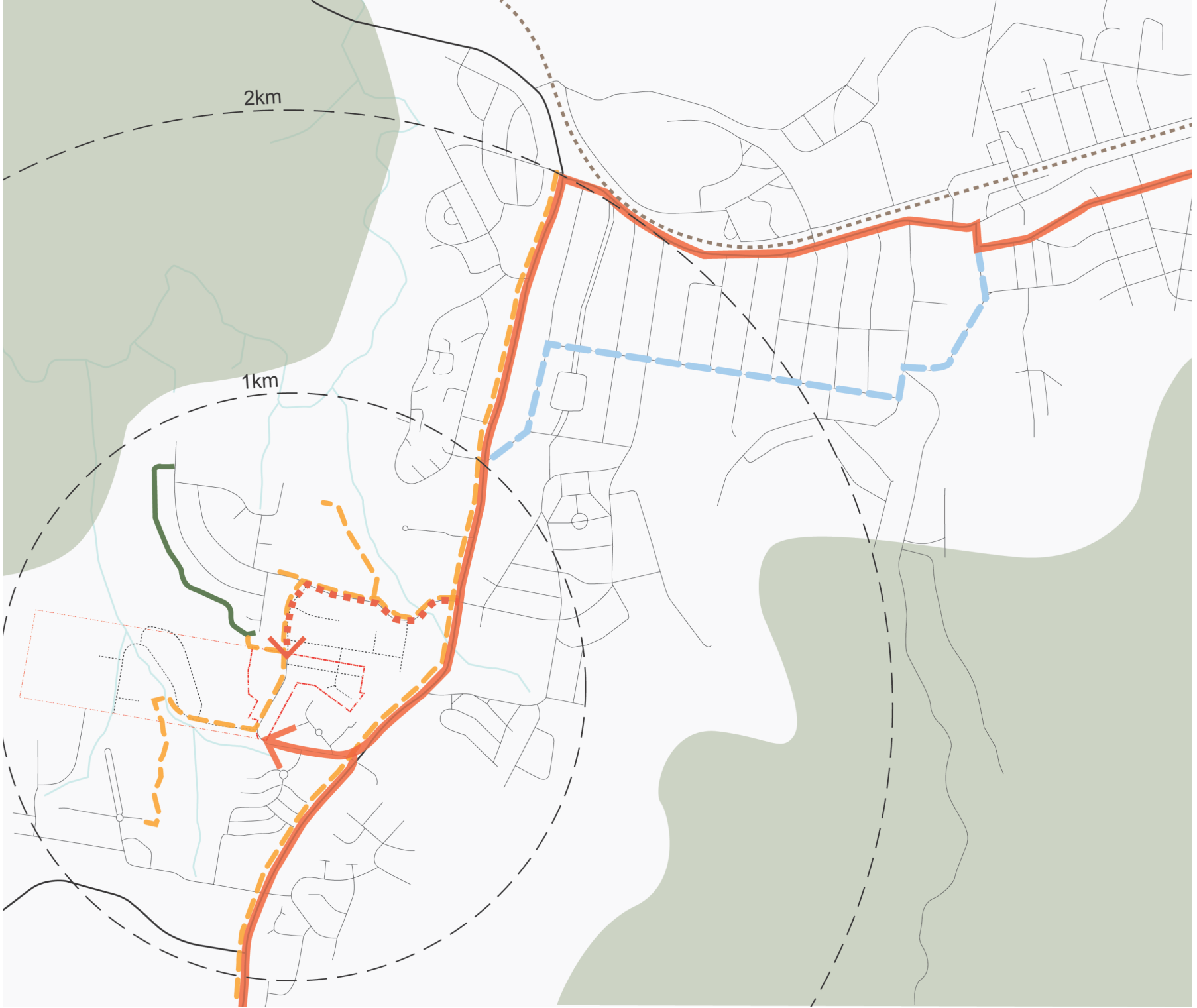
ACCESS

The main access route from Sweet Briar to Lithgow Town Centre runs along the Great Western Highway and onto Main Street. With the proposition of creating a shared walkway along this vehicular route, to increase connectivity to the new subdivision at Sweet Briar. The main arrival point to the site connects in with the existing hospital and aged care services with a grand view to the Three Trees atop the landscaped hill.

Opportunities:

- Provide housing development that promotes a walkable character and easy access to public transport to promote health and reduce vehicular traffic.
- Connect housing development in with local environmental assets such as bush and park areas

-  MAIN ACCESS ROUTE
-  PROPOSED SHARED ZONE
-  RECREATIONAL PATH
-  LOCAL ROUTE



ANALYSIS

TRANSPORT

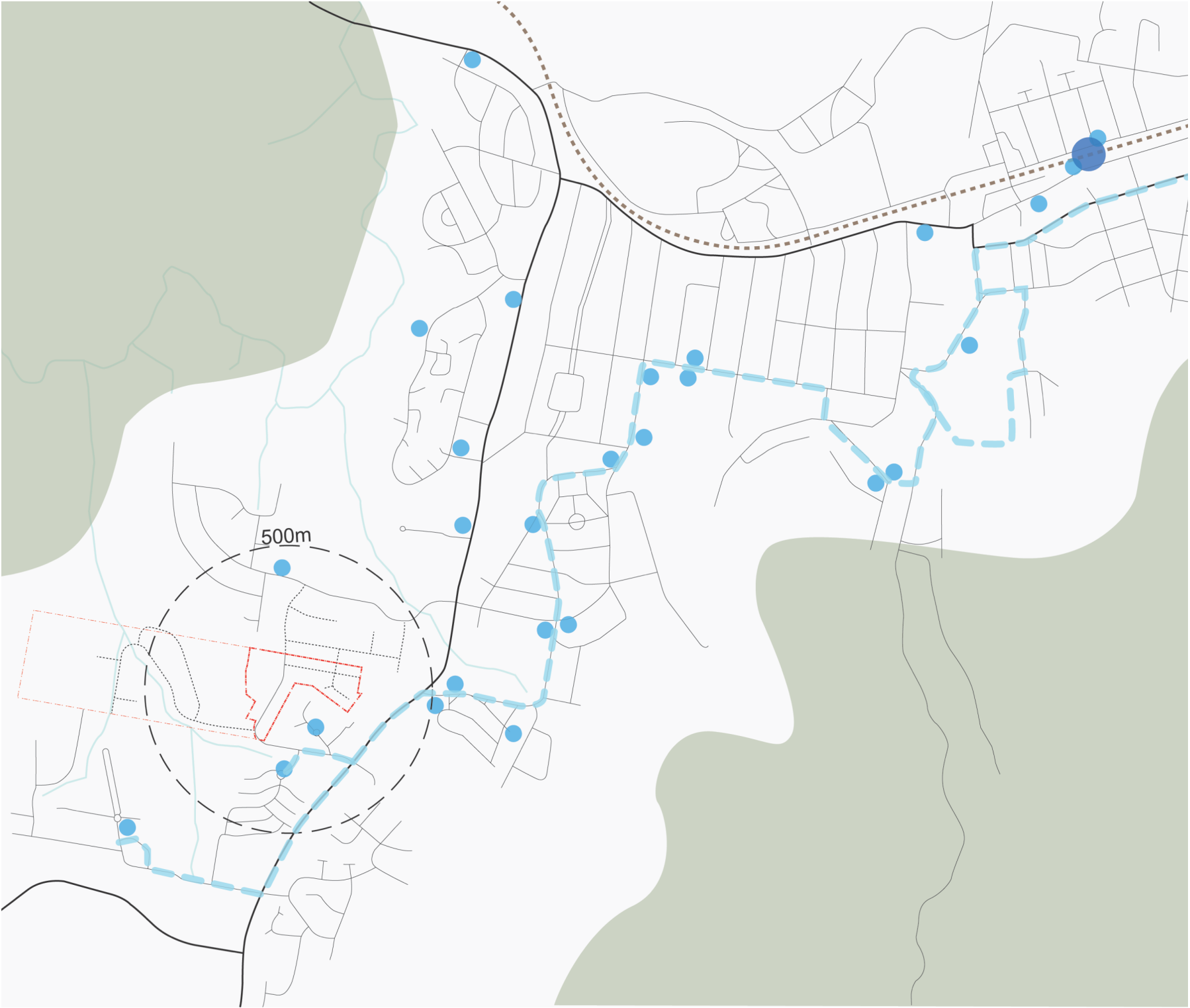
Bus routes connect the neighbouring hospital and aged care services to the train station and town centre on the hour hour.

The two closest bus stops are within 500m from the site both to the north and to the south.

The provides potential to develop a landscaped pedestrian connection running from north to south and with potential connection through the hospital to access bus stops and promote pedestrian movement throughout the new residential subdivisions.

Opportunities:

- Connect housing development in with local environmental assets such as bush and park areas



ANALYSIS

GREEN SPACE

Lithgow has a large number of outdoor sporting fields for public use with smaller pockets of recreational outdoor space available.

The proposed subdivision to the north has dedicated open green space at the centre of the subdivision and there is an opportunity to incorporate and expand the open green space within the Sweet Briar proposal, connecting to this network of open spaces through bicycle and pedestrian paths networks and provide access to the significant community asset of Three Tree Hill as the centre point to any residential subdivision.

Opportunities:

- Opportunity to connect green spaces through residential development and bicycle paths
- Provide view lines and direct visual connections through residential road network to the sites key feature Three Tree Hill



- RECREATION
- SPORTING
- PASSIVE

ANALYSIS

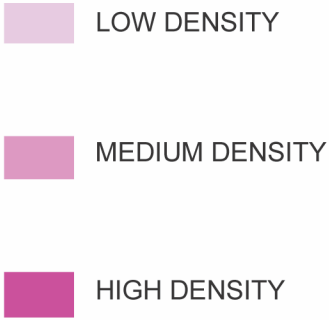
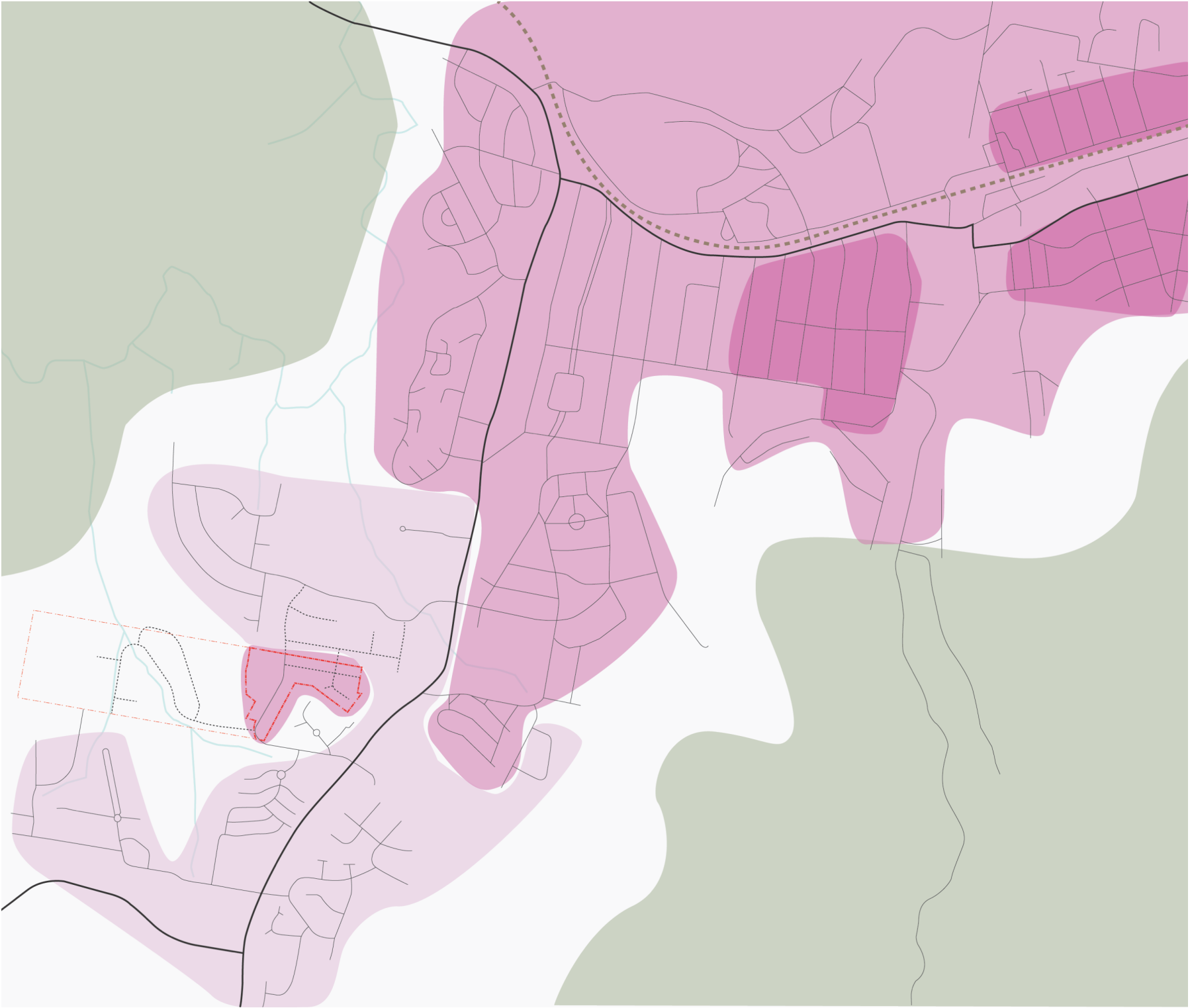
RESIDENTIAL DENSITY

Density in Lithgow ranges from high density to low density housing, with high density areas primarily located within close proximity the older centre of Lithgow close to transport, retail, commercial and community centres.

This higher density provides a useful precedent for diversity of housing in the Lithgow City and how this can be achieved to activate suburbs and communities through a diverse demographic.

Opportunities:

- Opportunity to provide localised area of higher density closer to key transport and employment areas
- Opportunity to explore low density housing options on smaller lots due to sites unique minimum lot size (400m²)



ANALYSIS

TOPOGRAPHY

Topography is what defines the site with the Three Tree Hill and prominent location and views across should be maintained.

From this analysis we also understand the developable areas of the site, highlighting the opportunities for different types of development, driving the proposing locations of the residential and open space areas.

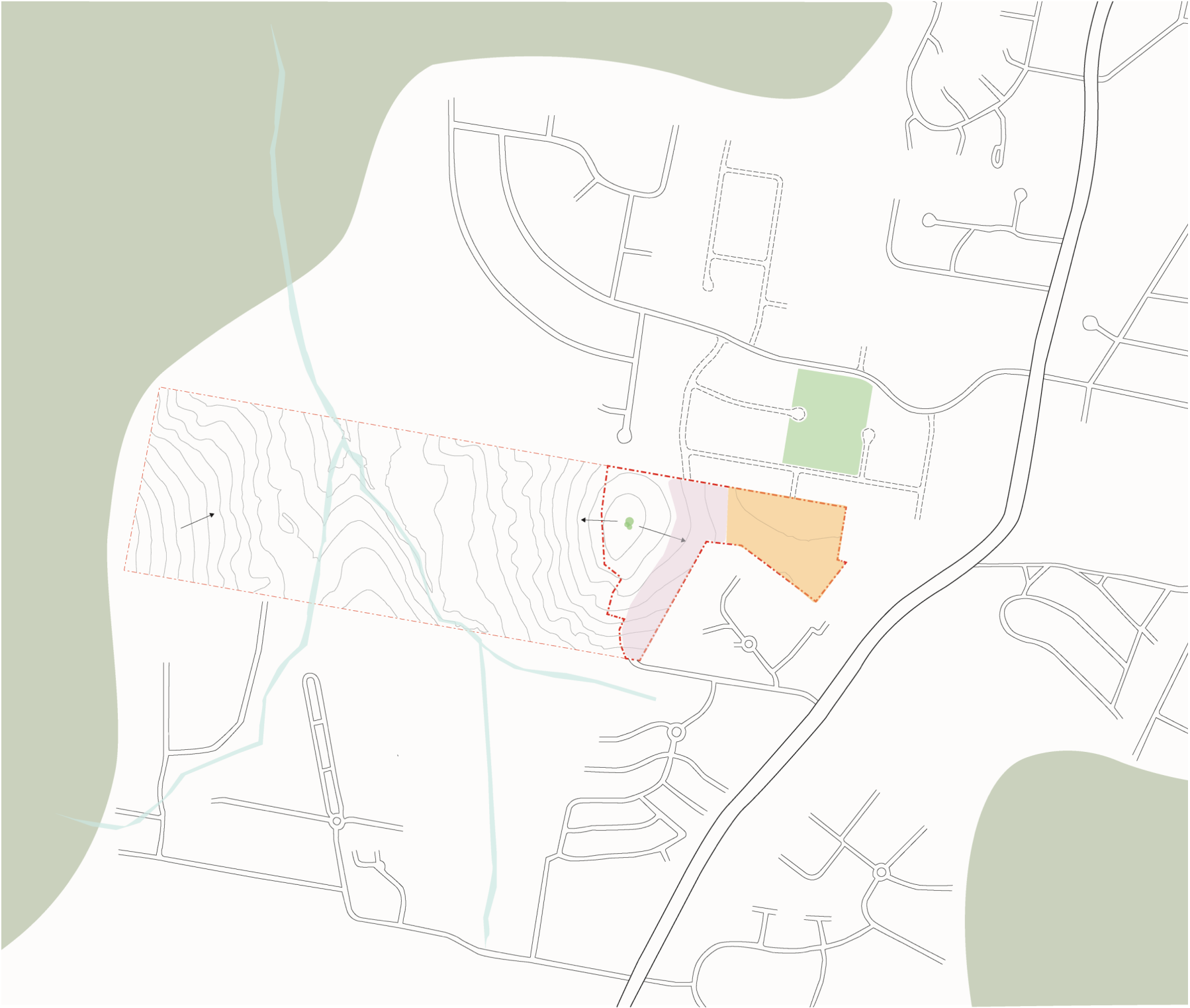
Areas on greater topography can be developed through tradition single detached dwellings which are stepped appropriate to deal with slop, while flatter areas of the site present opportunity for higher density residential developments.

Identified on the adjacent diagram is the primary developable area for a residential area which allows for a greater density of development

- Opportunities:**
- Develop higher density typology on the level area of the site by incorporating terraces, studios and townhouse typologies
 - Redirect collector road to better respond to the topography and allow for more housing yield on sloping land
 - Provide alternative low density housing type that specifically addresses areas of significant slope and allows for minimal excavation and ground works.

HIGHER DENSITY
DEVELOPMENT
AREA

LOWER DENSITY HILL
SIDE DEVELOPMENT



ANALYSIS

ENVIRONMENT

Climate conditions local to Lithgow range from cold winters with high westerly winds and occasional snow to hot dry summer days with large expansive views to the western horizon, whilst nestled into the mountains to the east.

In the semi-rural context the site is also located in bushfire zone which is impacted by surrounding vegetation, and the topography and exposure to large areas of grassland and vegetation to the west.

Opportunities:

- Develop road network to provides houses with best opportunity to access north light
- Planting and landscape management takes into account bushfire risk. Provide access to part to allow for regular maintenance and monitoring of conditions.
- Road network provides for access for fire trucks and fire fighting strategies



- VEGETATION BUFFER
- VEGETATION CATEGORY 3
- VEGETATION CATEGORY 1

ANALYSIS

VIEWS

With the topography of the site, the Three Trees Hill is a significant landmark in the local area. Views of the top of the hill become the focal point from almost any point along the highway.

As such the views to the site a significant and any residential development should look to ensure that these views are maintain and enhances from the site surrounding.



There are local views to the north across the valley, to the east to mountains, and a large expansive view at the western edge of the site towards the sunset.

There is also an adjacent heritage item and while views to this item are not significant from the subject site, views from this item across to the Three Tree Hill are important to maintain to reinforce.

Opportunities:

- Develop road network which directs you towards Three Tree Hill that marks the site as a destination and promote the character of the hillside village
- Provide views to Three Tree Hill and for pedestrian movement and wayfinding through new subdivision
- Provide buffer landscaping and fence treatment along boundary with local heritage item



-  HERITAGE SITE
-  VEGETATION BUFFER

ANALYSIS

SITE ACCESS

The site is primarily accessed on Col Drewe Drive off the Great Western Highway and this p[art] of the site presents an opportunity for an entry point to the subdivision that is visible and easy wayfinding.

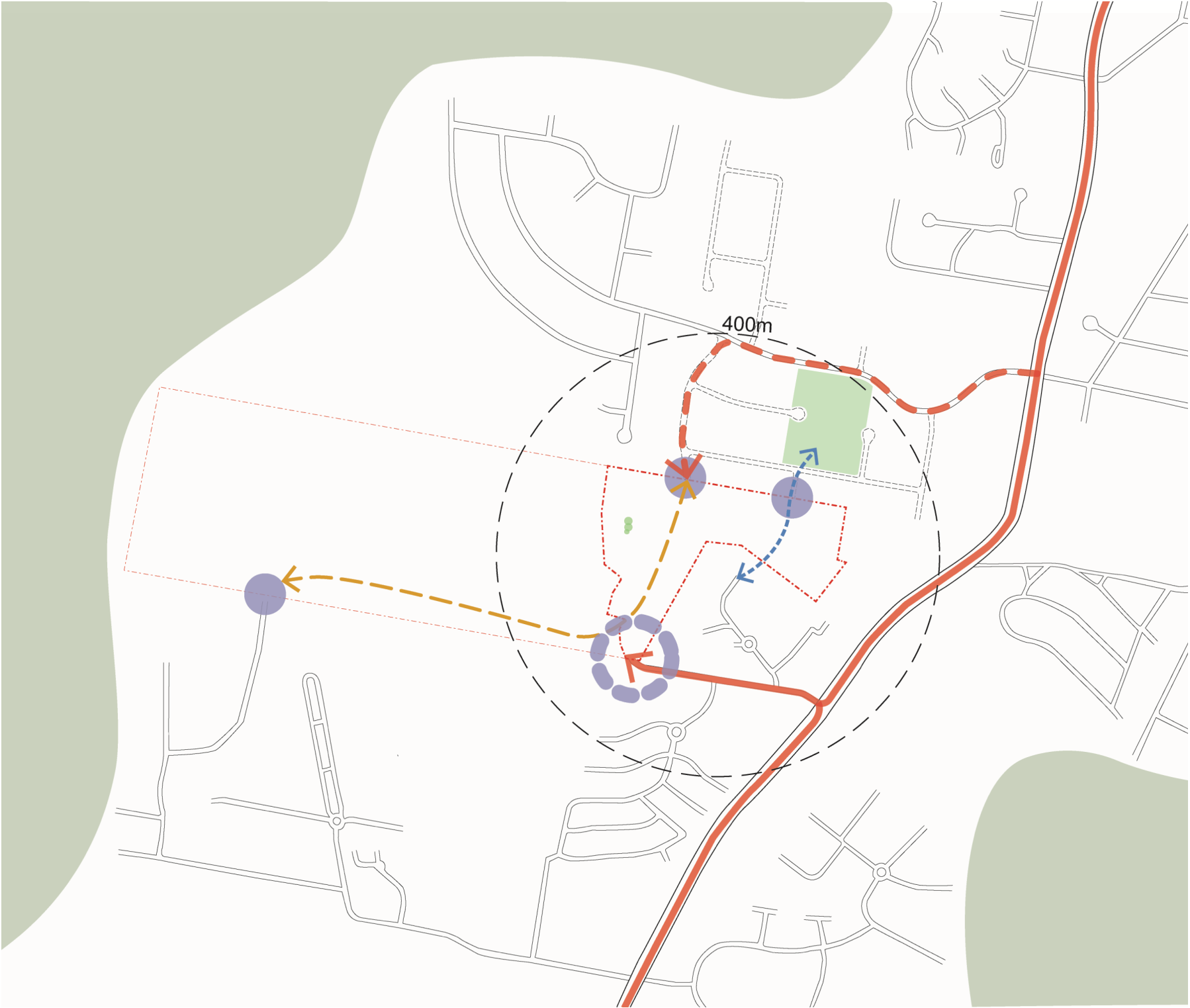
With the proposed DA subdivision to the North, there is another primary access point is to James O'Donnell Drive and through to Lithgow Town Centre.

These access points creates a potential connection through the site towards the west to increase permeability in the site, and provide more pedestrian links through the surrounding suburbs.

Opportunities:

- Utilise existing and approved connection points from neighbouring properties and existing roads
- Provide connection to existing residential developments to the west through internal collector roads
- Potential for north-south connection through site to connect surround residential developments to employment and education areas.

- PRIMARY ACCESS INTO SITE
- PROPOSED ROAD INTO SITE
- PROPOSED ACCESS THROUGH SITE
- PEDESTRIAN LINK
- PRIMARY ACCESS POINT
- PROPOSED ACCESS POINTS



ANALYSIS

CENSUS DATA | AUSTRALIAN BUREAU OF STATISTICS




Recent census data indicates that the demographics of Lithgow City heavily focus towards those working in trade and technical industry, clerical and admin and community and personal service workers.

Data indicates that Aged Care Residential Services is the second larges employment industry in Lithgow, and with the Lithgow Hospital, and Three Tree Lodge Aged Care facility, it is reasonable to assume that workers in this industry would be looking for housing close to work.

- Opportunities:**
- Provide key worker housing for rental
 - Provide smaller lot housing for key workers that promotes walkable communities higher density residential living

PERSONS	Dominant groups
An analysis of the jobs held by the resident population in Lithgow Urban Area in 2016 shows the three most popular occupations were:	
<div><ul style="list-style-type: none">• Technicians and Trades Workers (751 people or 17.4%)• Clerical and Administrative Workers (588 people or 13.6%)• Community and Personal Service Workers (561 people or 13.0%)</div>	
MALE	Dominant groups
An analysis of the jobs held by the male resident population in Lithgow Urban Area in 2016 shows the three most popular occupations were:	
<div><ul style="list-style-type: none">• Technicians and Trades Workers (613 males or 28.0%)• Machinery Operators And Drivers (489 males or 22.4%)• Labourers (319 males or 14.6%)</div>	
FEMALE	Dominant groups
An analysis of the jobs held by the female resident population in Lithgow Urban Area in 2016 shows the three most popular occupations were:	
<div><ul style="list-style-type: none">• Clerical and Administrative Workers (463 females or 22.8%)• Community and Personal Service Workers (400 females or 19.7%)• Professionals (342 females or 16.9%)</div>	

<u>Industry of employment, top responses</u>	Lithgow (C)	%	New South Wales	%	Australia	%
<i>Employed people aged 15 years and over</i>						
Coal Mining	618	8.1	19,153	0.6	46,491	0.4
Aged Care Residential Services	253	3.3	67,209	2.0	211,621	2.0
Supermarket and Grocery Stores	216	2.8	74,487	2.2	254,275	2.4
Accommodation	215	2.8	34,450	1.0	113,377	1.1
Local Government Administration	202	2.6	43,378	1.3	142,724	1.3
Of the employed people in Lithgow (C), the most common responses for industry of employment included Coal Mining 8.1%, Aged Care Residential Services 3.3%, Supermarket and Grocery Stores 2.8%, Accommodation 2.8% and Local Government Administration 2.6%. View the data quality statement for industry of employment (INDP)						

	People	21,090
	Male	50.7%
	Female	49.3%
	Median age	45
	Families	5,215
	Average children per family	
	for families with children	1.8
	for all households (a)	0.6
	All private dwellings	9,684
	Average people per household	2.3
	Median weekly household income	\$984
	Median monthly mortgage repayments	\$1,387
	Median weekly rent	\$230
	Average motor vehicles per dwelling	1.8

MEDIAN AGE : 46
MARITAL STATUS:
married: 43.8%
not married: 45%
de facto: 11.2%
CULTURAL DIVERSITY:
English: 41.5%
Australia: 41.4%
Irish: 11.9%
Scottish: 11.3%
Australian Aboriginal: 6.3%
COUNTRY OF BIRTH:
Australia: 82.1%
England: 2.4%
New Zealand: 1.0%
MEDIAN PERSONAL INCOME PERSONAL: \$632
FAMILY COMPOSITION:
Couple family without children: 44.1%
Couple with children: 35%
One parent family 19.2%cv
SINGLE PARENTS
Female 79.3%
Male 20.6%

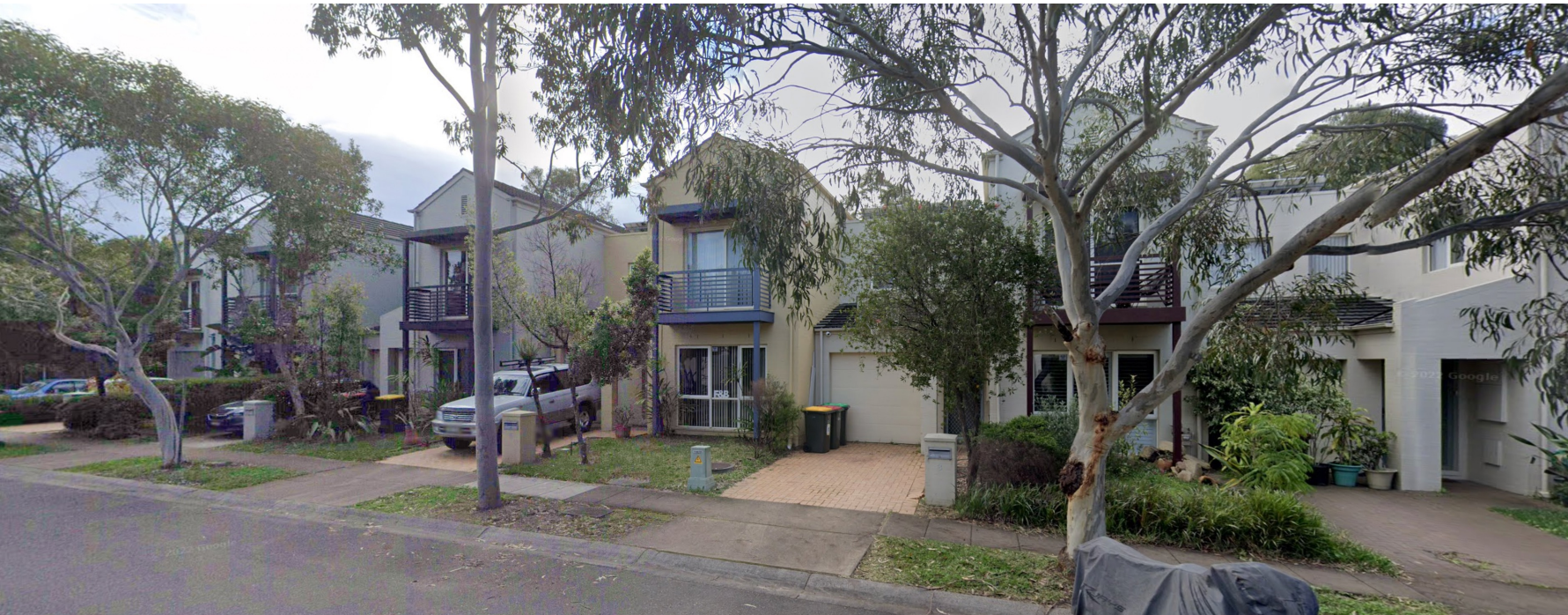
EXAMPLES

NEWINGTON

Originally the Sydney Olympic Village, the suburb of Newington in Sydney's Inner West demonstrates how density can be achieved in a suburban context around key facilities and within commuting distances of shops and services.

Housing typology has a variety of areas ranging from 200-500m² with a townhouse typology and a unique Australian contemporary character.

The Newington example demonstrates how smaller lot housing can provide a significant range of housing diversity from 2 bedroom apartments to 5 bedroom dwellings.



EXAMPLES

THORNTON

Initially conceptualised by Landcom, Thornton in North Penrith utilizes a range of housing densities from terraces and townhouse typologies near the community facilities and train station, transitioning into lower density suburban housing as the distance increases from the central community area.

Wirth a central park area the road network is a simple arrangement of link roads from surrounding areas, and circular roads around the precinct allowing for easy wayfinding and direct connections to neighbouring areas.

The Thornton example demonstrates hour diversity of housing works in a single subdivision, and how building up density from the edges to the centre provides a clear public open space and central focus to a residential suburb.



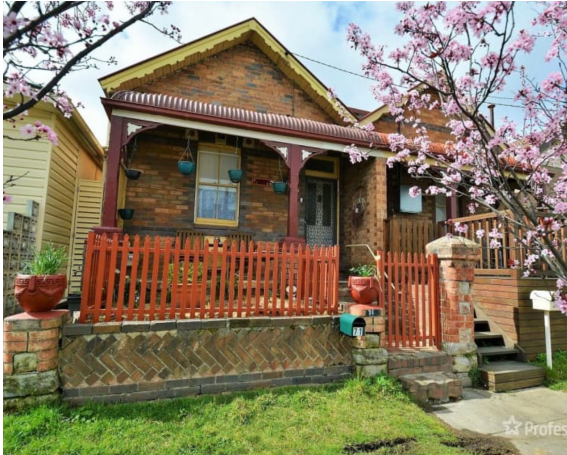
EXAMPLES

LAURENCE STREET, LITHGOW

Laurence Street in Lithgow displays the current medium density typologies in regional New South Wales, with lots starting at 300m² in size.

The entirety of the 'traditional' town plan of Lithgow is laneway based, and when compared with many newer parts appears to serve the townscape much better.

The Laurence Street example shows how single storey small lot housing with small front setbacks and rear laneways provides an active streetscape with well defined private open space through the incorporation of positive fencing options.



EXAMPLES

CHIFLEY ROAD, LITHGOW

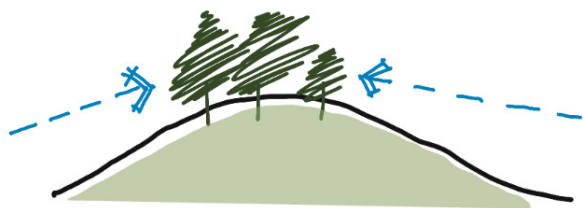
Housing along Chifley Road in Lithgow responds to the slope of the land by creating a consistent front fence along the streetscape with minor variations in building height as the building mass steps down with the topography.

As noted previously the entirety of the 'traditional' town plan of Lithgow is laneway based, and when compared with many newer parts appears to serve the townscape much better.

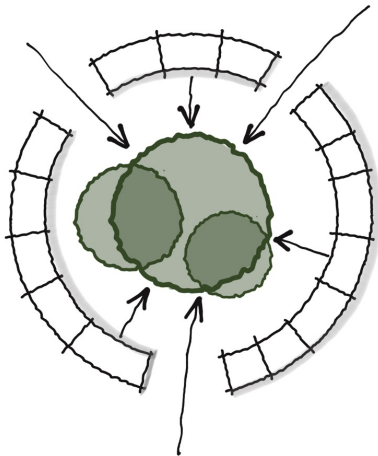
Chiefly road provides an example of how laneway development promotes active pedestrian-based streetscapes, and how row housing typologies present a fine grain texture to a streetscape and ample opportunities for engagement with between the public and private realm despite topography challenges.



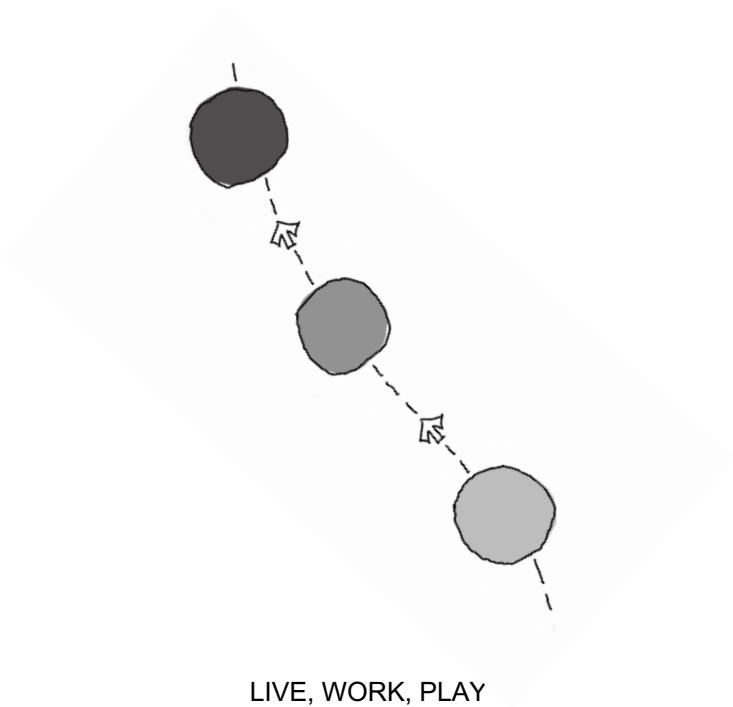
DESIGN PRINCIPLES



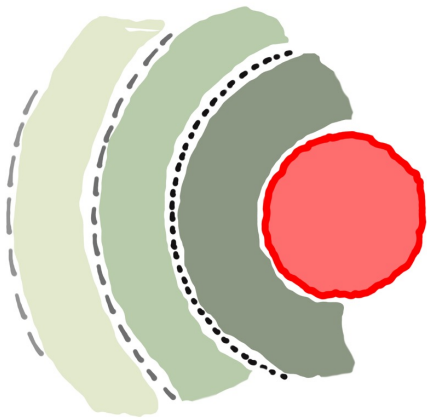
VIEWS TO LANDMARKS



CONNECTION TO PUBLIC GREEN SPACE



LIVE, WORK, PLAY



LAYERS OF DENSITY AND DIVERSITY

DESIGN PRINCIPLES

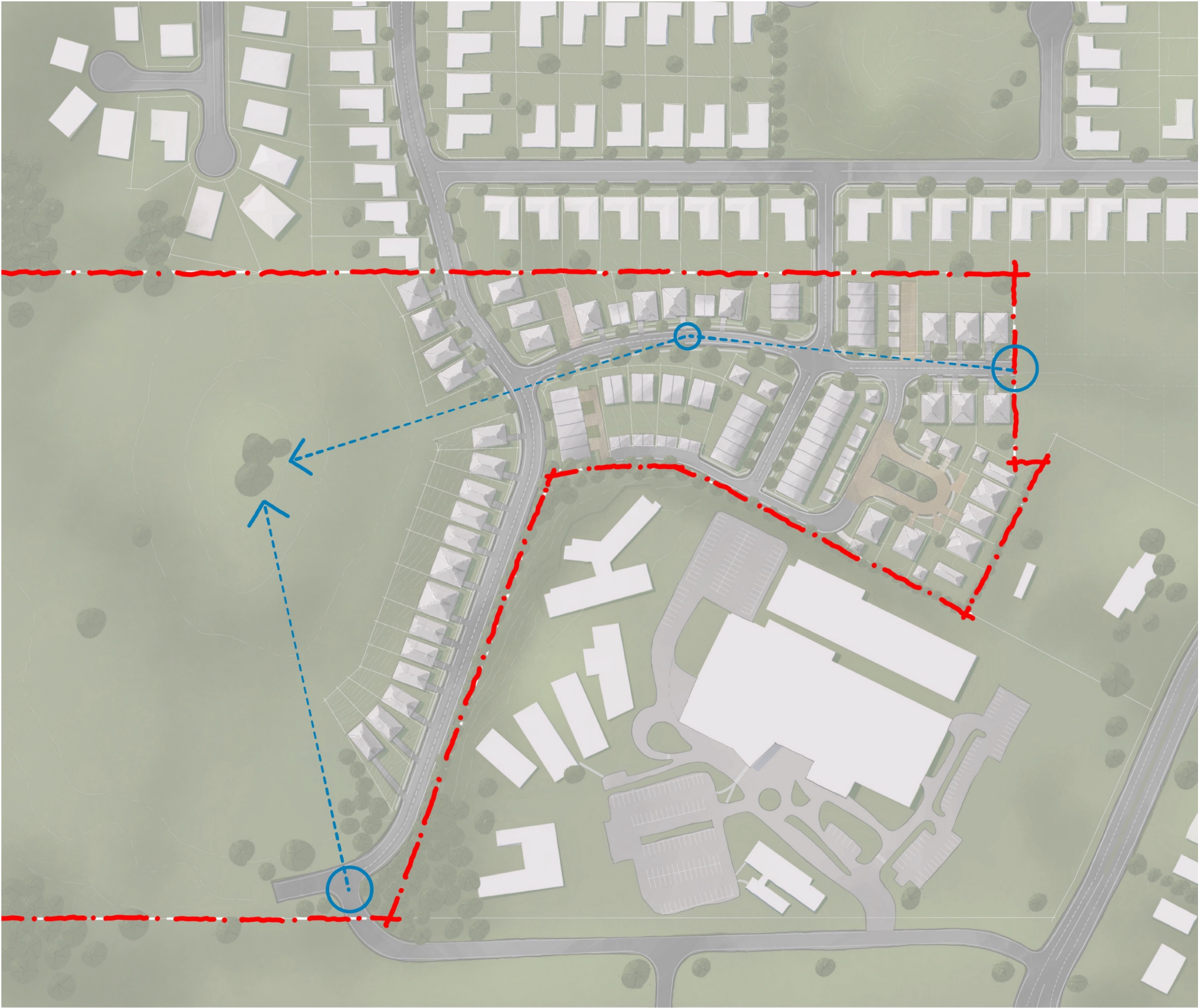
VIEWS TO LANDMARKS

The proposed development includes the construction and delivery of a series of new local roads with associated road drainage, services and stormwater drainage facilities. All local roads are to be dedicated to Council as part of the subdivision.

The key feature of this road network is the orientation of these roads towards the natural landmark on the site, Three Tree Hill.

By curving around the contours the collector road running north to south responds more appropriately to the topography and accentuates the base of the hill allowing for development to the perimeter.

The new local road running from east to west leads directly towards Three Tree Hill. This encourages pedestrian movement around the site as there is clear wayfinding to local landmarks and it sets up the character of the streetscape.



DESIGN PRINCIPLES

CONNECTION TO PUBLIC GREEN SPACE

The masterplan develops a clear connection of residential dwellings to a number of public green space assets within or adjacent to the site.

Providing all houses in the subdivision with simple and clear access to public open spaces it promotes a healthy walkable community. It also provides activated streetscapes.

Wider verges or islands along the local roads also provides for a softer landscape experience as you traverse the site.

The subdivision deliberately leaves an open area along the western side of the north south collector road which provides a direct visual and walkable connection to this landmark space.



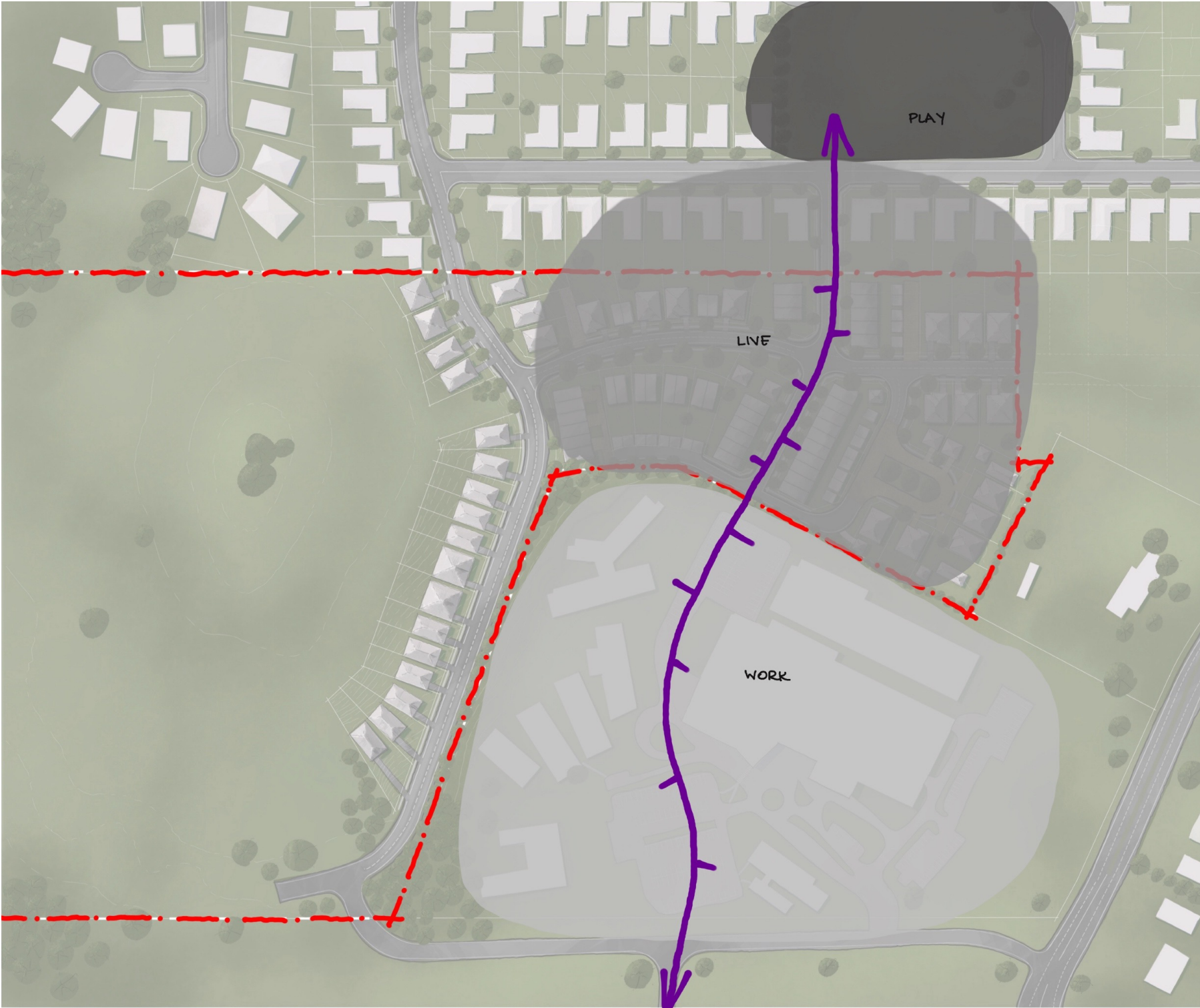
DESIGN PRINCIPLES

LIVE | WORK | PLAY

The masterplan has been designed around the connection between the residential area, employment and recreation areas and the principle of ‘LIVE, WORK, PLAY’.

The subdivision layout and road network are designed around a “live, work, play” axis promoting the idea that through a pedestrian network residents in the local area can live, work and play within walking distance of their dwellings.

There is potential that the employment generating facilities such as the hospital, university and aged care facility can access housing for key workers who often work shift hours that aren’t conducive to regular daily commuting, specifically meeting their staff needs.



DESIGN PRINCIPLES

LAYERS OF DENSITY AND DIVERSITY

In response to the site analysis of environmental conditions, topography, and zoning the masterplan looks to provide housing diversity through a mix of house types that respond to each of these factors.

The site presents a limited opportunity to Lithgow to demonstrate housing diversity and address affordability

The zoning permits minimum 400m² lot sizes for single detached dwellings and while smaller than surrounding areas, this allows for a variety of dwelling types to the perimeter of the subdivision which provide a consistent blend into the neighbouring developments. It provides for the larger 4 bedroom dwelling currently in good supply in Lithgow.

The next layer of density is a series of attached dual occupancies which under the current LEP allow for 2 dwellings on 600m². This housing type presents the opportunity for larger extended families through the incorporation of granny flats.

On the more level area of the site, close to employment zones and central to the site, the masterplan provides the opportunity to provide medium density housing a series of 1, 2 and 3 bedroom townhouses, terraces.



CONCEPT MASTERPLAN

CONCEPT MASTERPLAN

- 1

HILLSIDE HOME UPHILL - single dwellings (Min. 400m²)
- 2

HILLSIDE HOME NARROW - single dwellings (Min. 400m²)
- 3

HILLSIDE HOME WIDE - single dwellings (Min. 400m²)
- 4

HILLSIDE HOME LOWSIDE - single dwellings (Min. 400m²)
- 5

ATTACHED SPLIT LEVEL HOME LOWSIDE - Terraces or Town Houses (Multi Units)
- 6

TWO STOREY 4B DWELLING AND GRANNY FLAT - Dwelling + Granny Flat (450m²)
- 7

SINGLE STOREY 3B DWELLING ATTACHED - Attached Dual Occupancy (Duplex)
- 8

SINGLE STOREY 2B DWELLING - Attached Dual Occupancy (Duplex)
- 9

ATTACHED TWO STOREY DWELLING - Terraces or Town Houses (Multi Units)
- 10

TERRACE DWELLING Terraces or Town Houses (Multi Units)
- 11

TYPICAL 4B DWELLING - single dwellings (Min. 400m²)
- 12

TYPICAL 4B WITH DETACHED GARAGE - single dwellings (Min. 400m²)

HOUSING TYPES	TOTAL DWELLINGS	STAGE 1 DWELLINGS	STAGE 2 DWELLINGS	LOT PRICES \$	HOUSE SIZE	HOUSE & LAND PRICES \$ 000s
Lots - single dwellings (Min. 400m ²)	27	20	7	\$ 240,000 +	4 bedroom 2 garage	\$700 - \$800
Dwelling + Granny Flat (450m ²)	7	4	3	\$ 260,000 +	3 + 1/2 bed GF	\$800 - \$1,000
Attached Dual Occupancy (Duplex)	10	8	2		3 bedroom	\$600 - \$700
Detached Dual Occupancy (Detached)	4	0	4		3 bedroom (+std.?)	\$650 - \$750
Terraces or Town Houses (Multi Units)	32	17	15		2 or 3 bedroom	\$500 - \$600
Total	80	49	31		Range	\$500 - \$1,000



CONCEPT MASTERPLAN

CONCEPT MASTERPLAN - STAGING

- 1

HILLSIDE HOME UPHILL - single dwellings (Min. 400m²)
- 2

HILLSIDE HOME NARROW - single dwellings (Min. 400m²)
- 3

HILLSIDE HOME WIDE - single dwellings (Min. 400m²)
- 4

HILLSIDE HOME LOWSIDE - single dwellings (Min. 400m²)
- 5

ATTACHED SPLIT LEVEL HOME LOWSIDE - Terraces or Town Houses (Multi Units)
- 6

TWO STOREY 4B DWELLING AND GRANNY FLAT - Dwelling + Granny Flat (450m²)
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STAGE 1

STAGE 2

HOUSING TYPES	TOTAL DWELLINGS	STAGE 1 DWELLINGS	STAGE 2 DWELLINGS	LOT PRICES \$	HOUSE SIZE	HOUSE & LAND PRICES \$ 000s
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CONCEPT MASTERPLAN

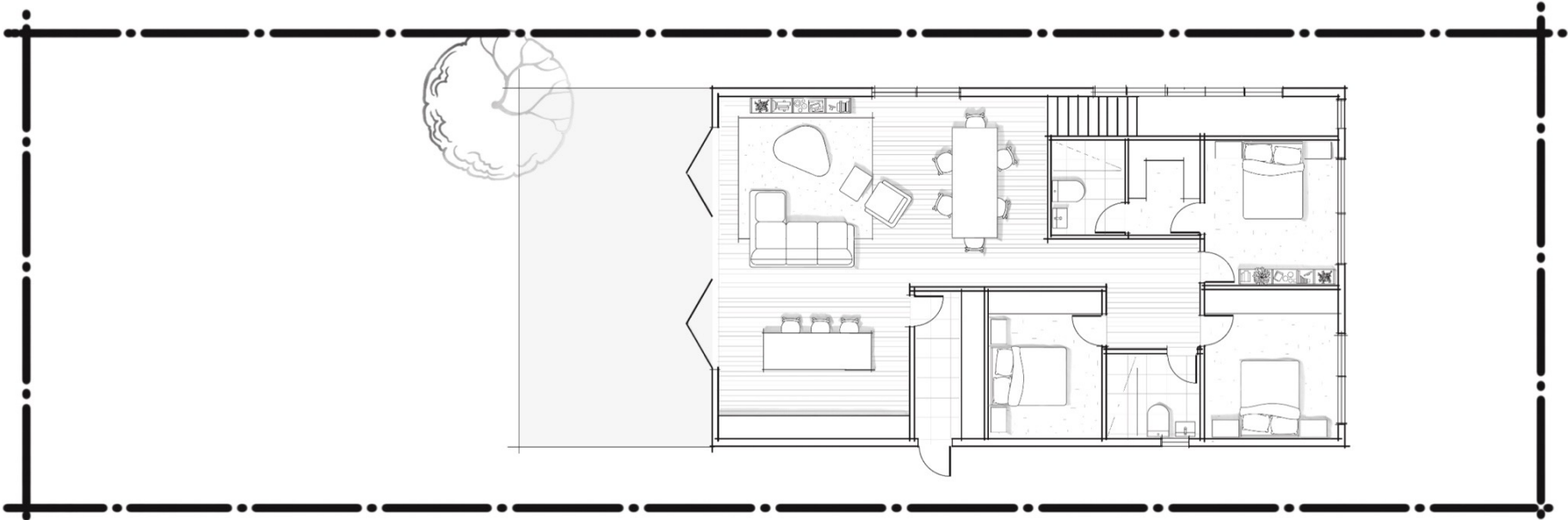
PERSPECTIVE IMAGE



EXAMPLE HOUSE TYPES

2 | HILLSIDE HOME NARROW

FIRST FLOOR

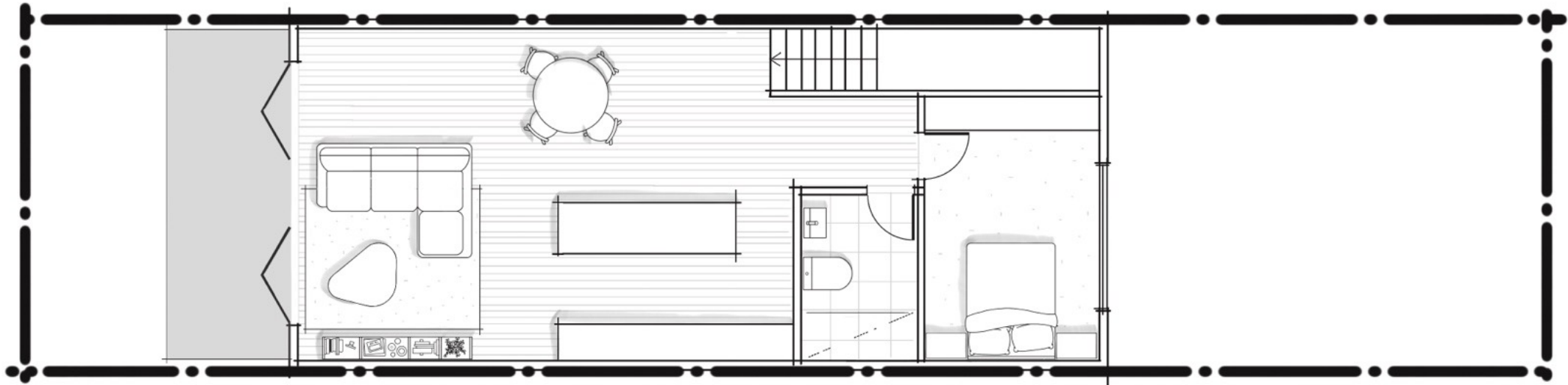


GROUND FLOOR

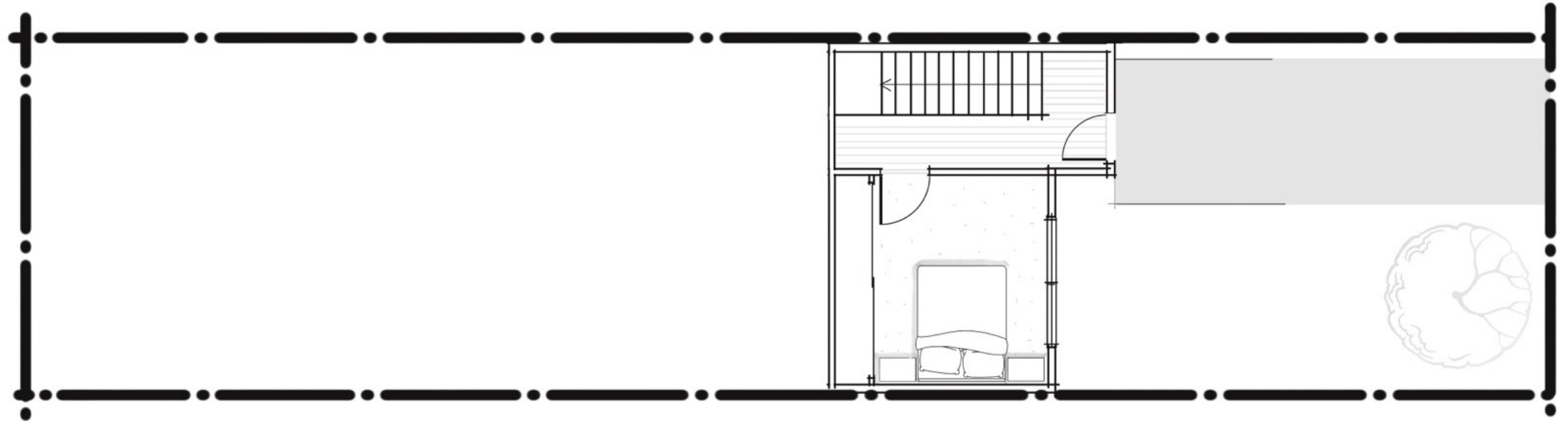


EXAMPLE HOUSE TYPES

5 | ATTACHED SPLIT LEVEL HOME LOWSIDE



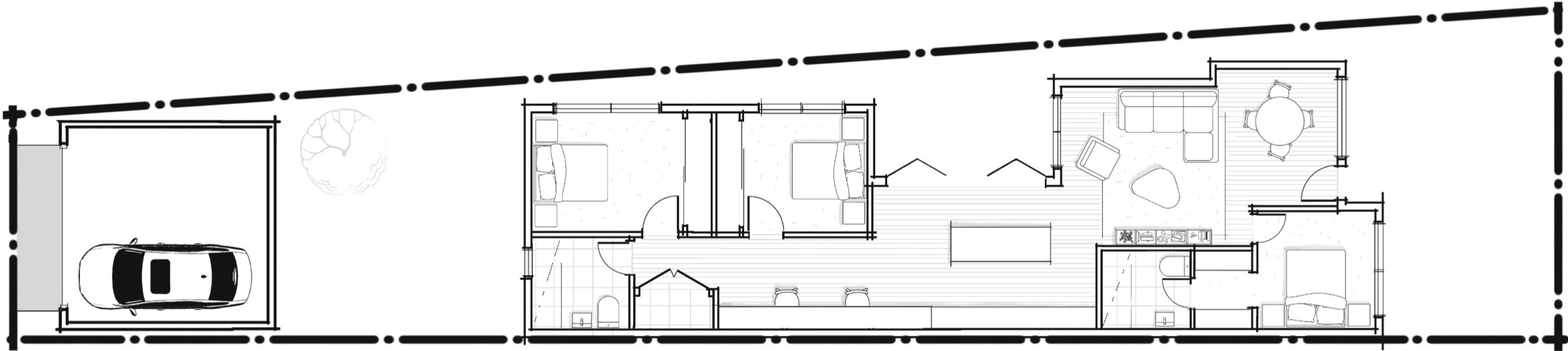
FIRST FLOOR



GROUND FLOOR

EXAMPLE HOUSE TYPES

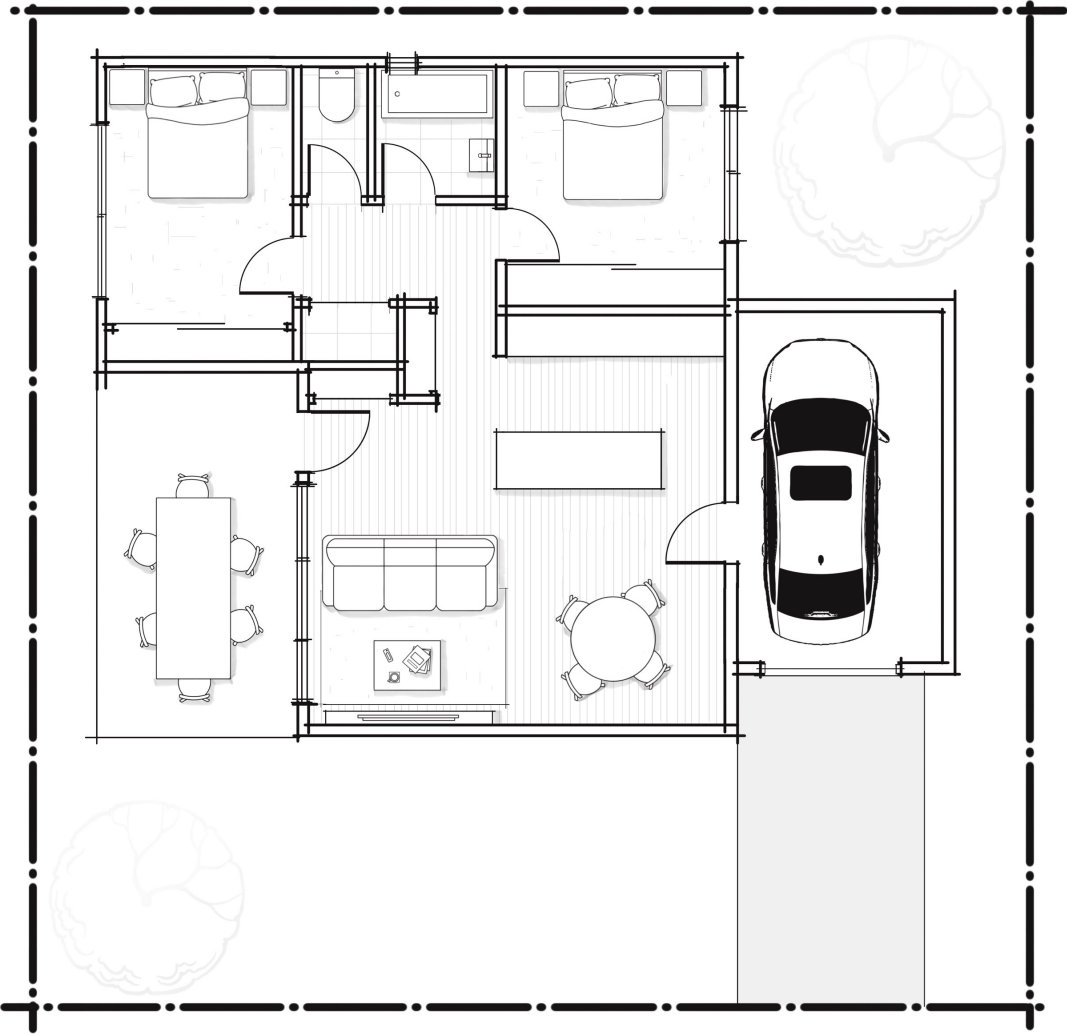
7 | SINGLE STOREY 3B DWELLING ATTACHED



GROUND FLOOR

EXAMPLE HOUSE TYPES

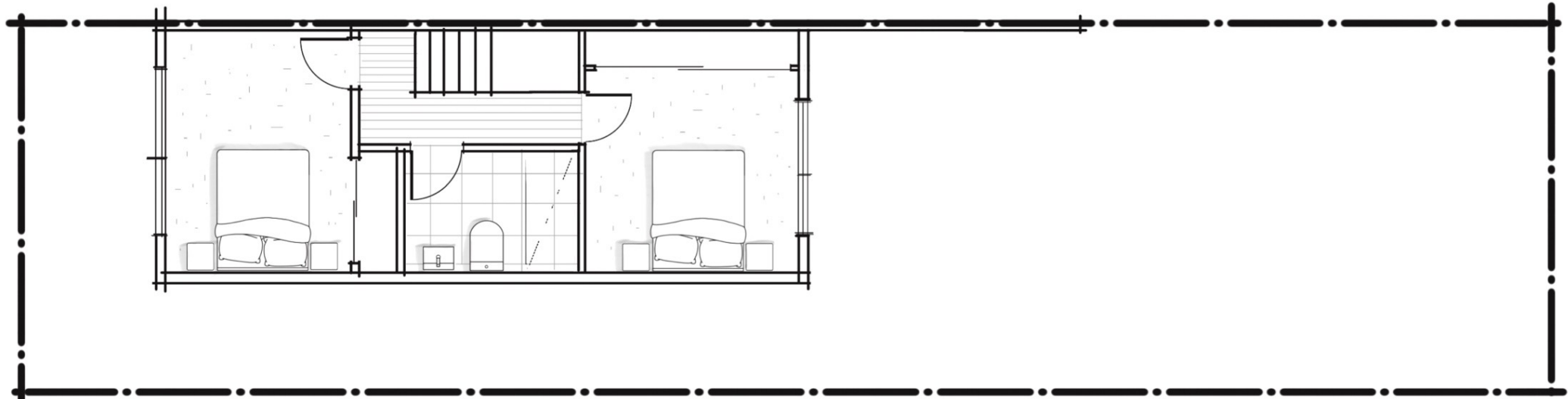
8 | SINGLE STOREY 2B DWELLING



GROUND FLOOR

EXAMPLE HOUSE TYPES

9 | ATTACHED TWO STOREY DWELLING



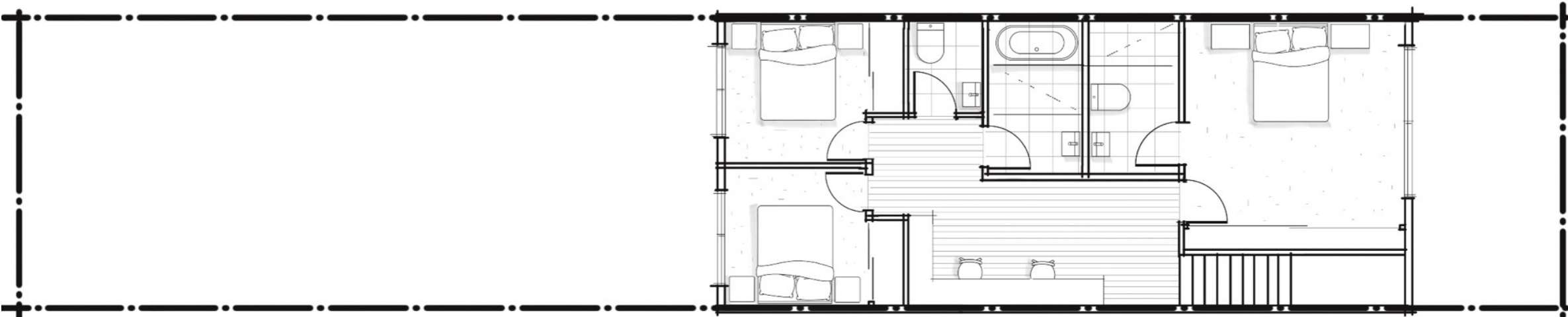
FIRST FLOOR



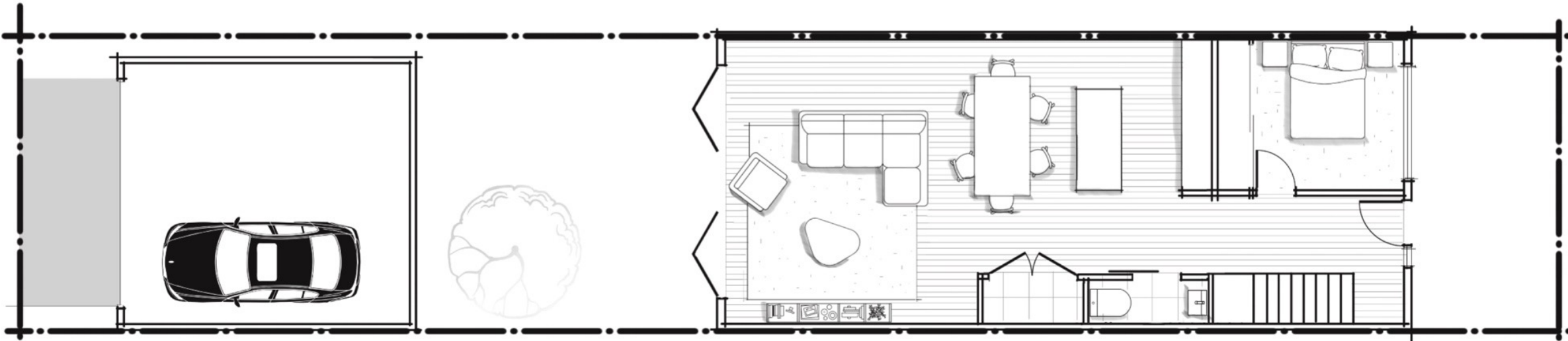
GROUND FLOOR

EXAMPLE HOUSE TYPES

10 | TERRACE DWELLING



FIRST FLOOR



GROUND FLOOR