

Regrowth Kurri Kurri Initial Village Precincts Concept Master Plan Vision

Prepared on behalf of Loxford Project Management Pty Ltd February 2022 - Revision C







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1.0 Introduction

This master plan report has been prepared to inform the detailed design process and create a vision for the two entry village precincts for the Regrowth Kurri Kurri residential community.

The village precincts master plan has been prepared from a clear understanding of the sites key constraints and opportunities. These have been based on reviewing the following:

- The Regrowth Kurri Kurri Planning Proposal and associated investigation reports
- Onsite investigations and assessment
- Discussions with land owners and various authorities

Regrowth Kurri Kurri site comprises approximately 1440 hectares of the Hydro Land in the north eastern area of the Cessnock and Maitland LGAs.

Regrowth Kurri Kurri is a significant landholding within the Lower Hunter Region, being strategically located on the northern side of Kurri Kurri, with the South Maitland Railway running through the east of the Site and the Hunter Expressway running through the south west of the Site.

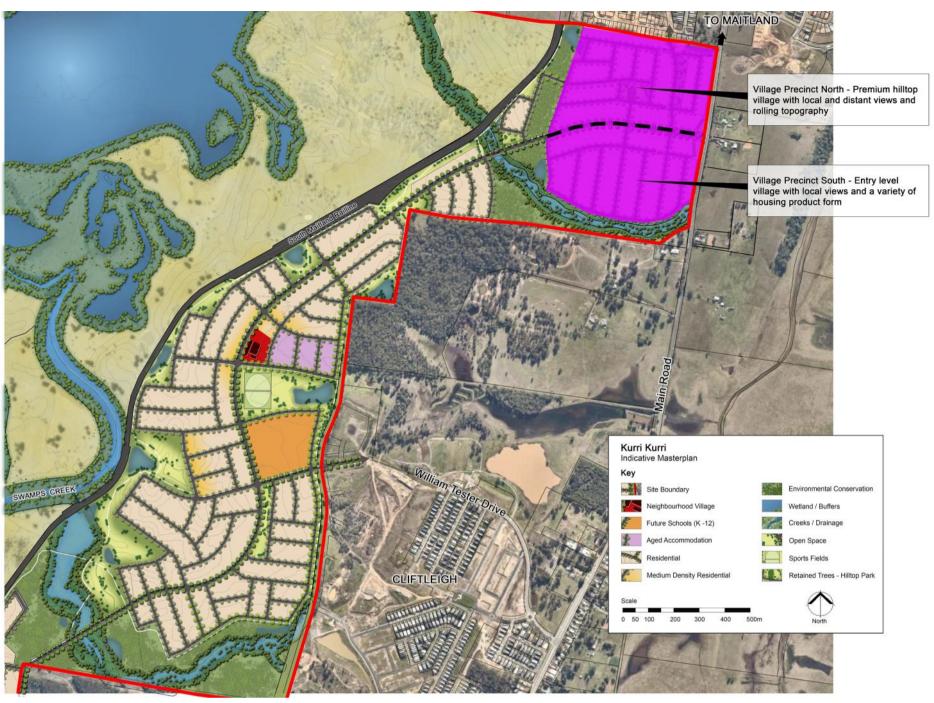
The site is in close proximity to the existing centres of Cessnock, Kurri Kurri and Maitland and is located approximately 33 kilometres to the northwest of the Newcastle CBD.

The overall development will form an integrated community providing for employment through retail, commercial and industrial opportunities, various forms of residential housing and recreational and conservation open spaces.



Regrowth Kurri Kurri Location Plan

2.0 Subject Site - Village Precincts



Village Precincts Location Plan

The proposed new village precincts in the Regrowth Kurri Kurri residential community are located at the major entrance of Cessnock Road north of the overall site.

The villages cover an overall area approximately 38.8ha and currently the property area is being used for agricultural / horticultural purposes.

The site area is proposed to be zoned R1 (General Residential) and RU2 (Rural Landscape).

The area allocated for the first village precincts is a natural extension of neighbouring development and is bounded on all four sides with open space on the western and southern boundaries, development to the north and Cessnock Road on the eastern boundary.

The site can be well serviced and forms a logical gateway announcement into the Regrowth Kurri Kurri residential community.

Due to the steeper topography the villages are expected to yield a lower average net residential than what is expected over the total Regrowth Kurri Kurri residential community. The following is a breakdown of the proposed village precincts.

		Residential Lots		
	Total Area (ha)	A1	Future	Dwellings/ha
Village Precinct - North	19.5	146	65	10.8
Village Precinct - South	19.3	196	48	12.7
Overall	38.8	342	113	11.7

3.0 Site Constraints & Opportunities

3.1 Visual Analysis

It is important to physically understand the site from the ground up. A site inspection was undertaken to ascertain site context and key features.

The site is the highest point in the Regrowth Kurri Kurri development and provides dramatic views both locally to Swamp Creek wetland and to the distant mountains.

The land generally falls north, west and south from this high point with Cessnock Road bounding the eastern boundary.

The recently developed Gillieston Grove development abuts the northern boundary with conventional residential housing.

A riparian corridor and conservation reserve frames the southern boundary and a coal mine subsidence area abuts the western boundary.

The site is predominantly clear of existing vegetation apart from tree vegetation along the minor water course depressions, portions of the mine subsidence area and the riparian corridor.

A group of significant trees at the high point are considered as valuable both from a size and visual amenity perspective.



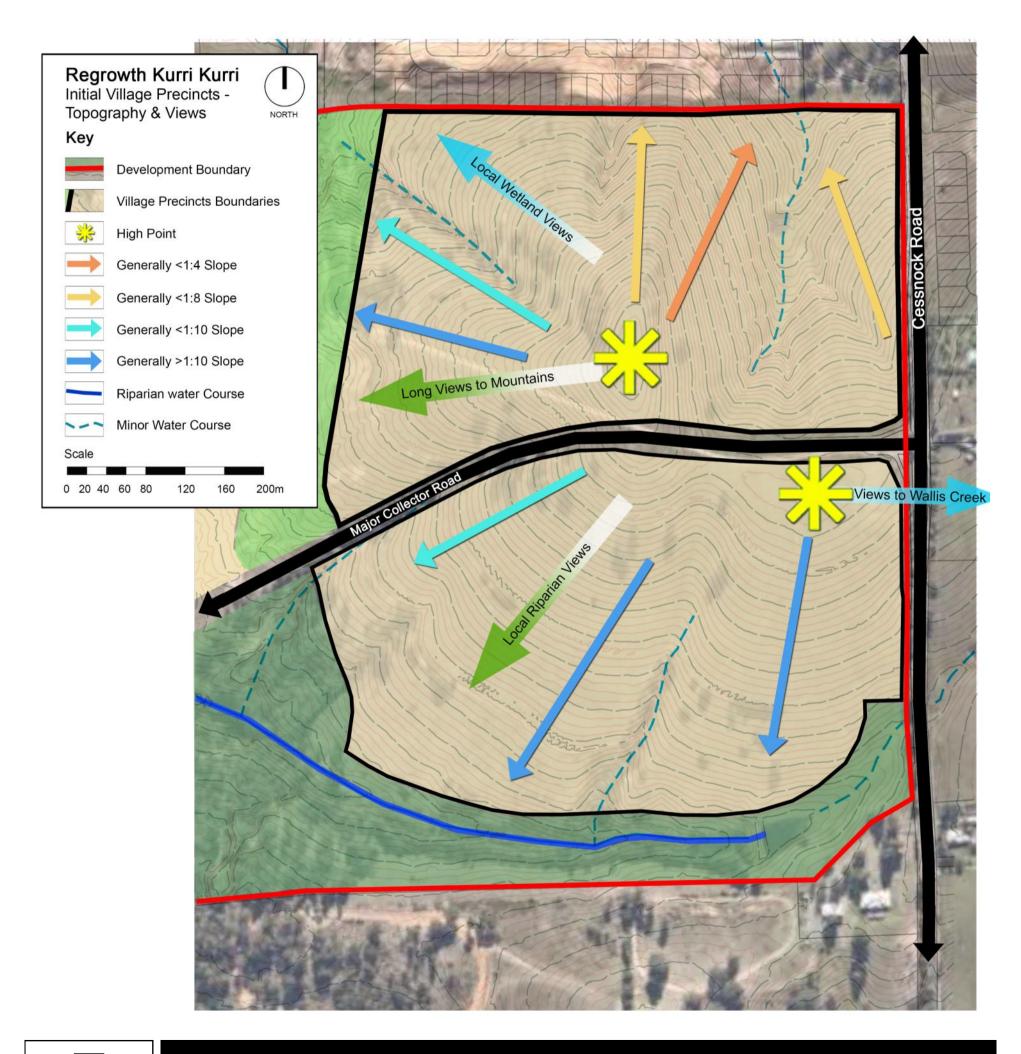
3.0 Site Constraints & Opportunities

3.2 Topography & Views

The site generally represents a hilltop that falls to the north, west and east with the high point / ridge stretching from Cessnock to the centre of the site.

Grade vary from 1:10 to some steeper areas up to 1:4 slope. This provides several opportunities including:

- Maximising views in all directions
- Create a visual amenity and outlook at the high point as a key node
- Provide for diversity of housing that responds to the topography

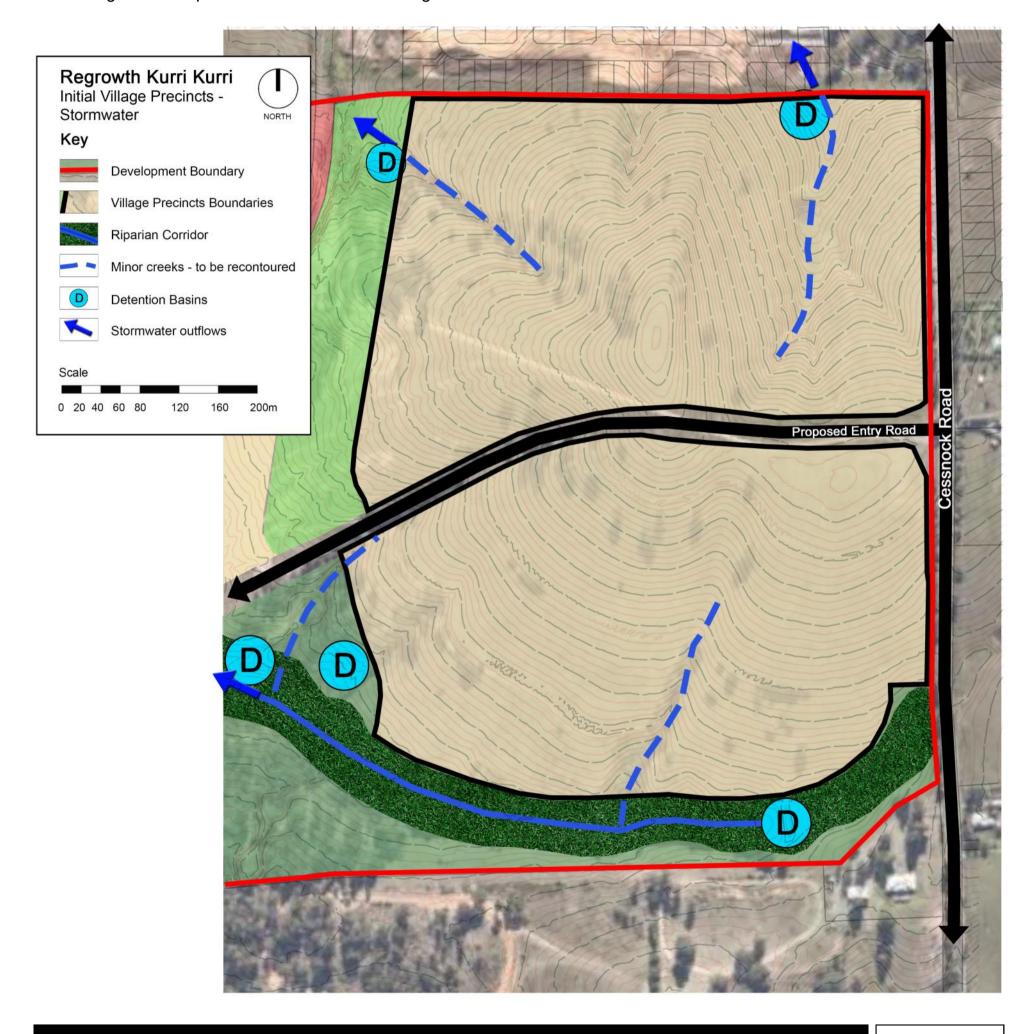


3.3 Stormwater

The site is represents the highest point in the Regrowth Kurri Kurri Development and therefore the village precincts naturally drain to the north, west and south boundaries..

- To accommodate pre-development flows detention basins will be required in several locations as indicated on the plan below.
- Two basins on the northern boundary which will connect into existing stormwater easements in the adjacent Gillieston Grove development
- A small basin on the western boundary which will ultimately flow into the Swamp Creek
- Several online and off line basins by the riparian corridor located on the southern boundary

Opportunity exists to create these stormwater basins into key recreational features and local fauna habitats that are integrated with parks and conservation settings.



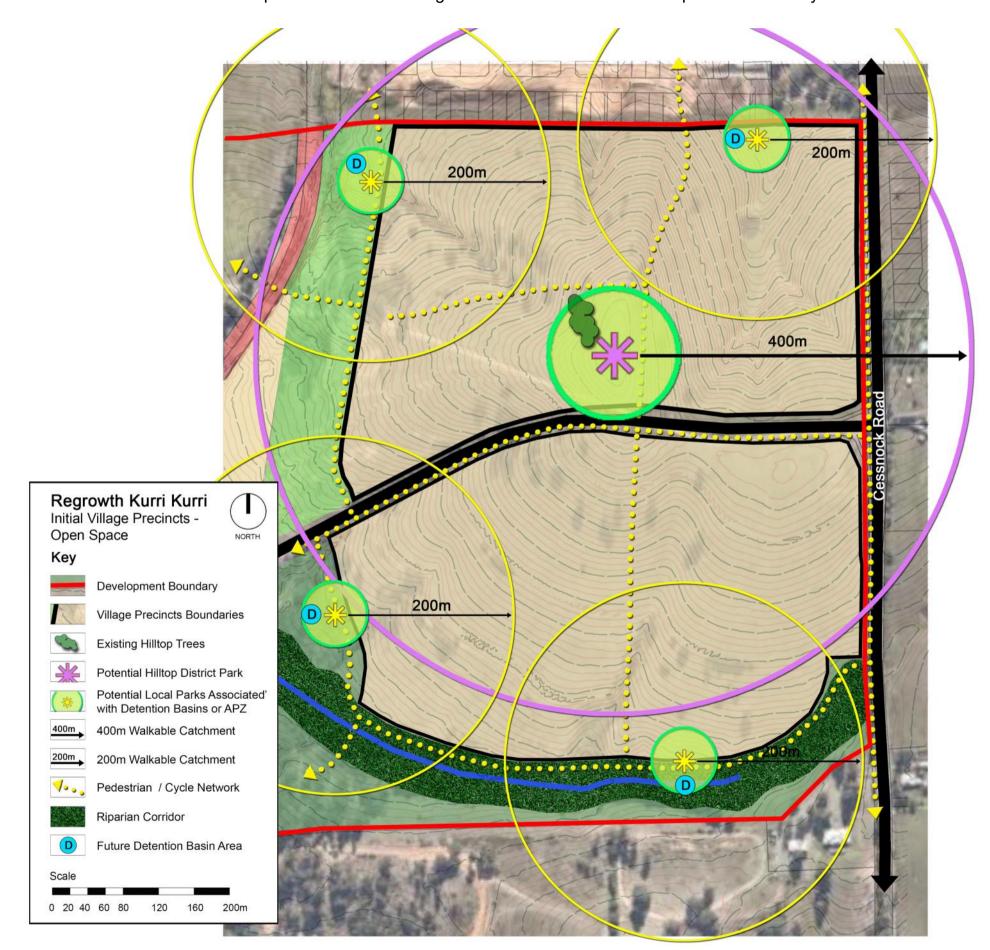
3.0 Site Constraints & Opportunities

3.4 Vegetation and Open Space

Due to its agricultural / horticultural land use, much of the site is clear of existing vegetation apart from tree vegetation along the minor water course depressions, portions of the mine subsidence area to the west and the riparian corridor. A grouping of significant trees of good size and quality also exists on the top of the hilltop.

Opportunity exists to provide for the following:

- A district park on the hilltop that incorporates the group of significant trees that is within a 400m walkable catchment of the proposed residential villages.
- Create a series of smaller local amenity parks associated with the required detention basins. These would be suitable for residents located near by and predominantly within a 200m walkable catchment.
- Create a pedestrian and cycle network that connects the various parks, revegetated mine subsidence area and conservation / riparian areas on the southern boundary.
- Utilise the main development boulevard as a green street avenue that is also pedestrian and cycle focused.



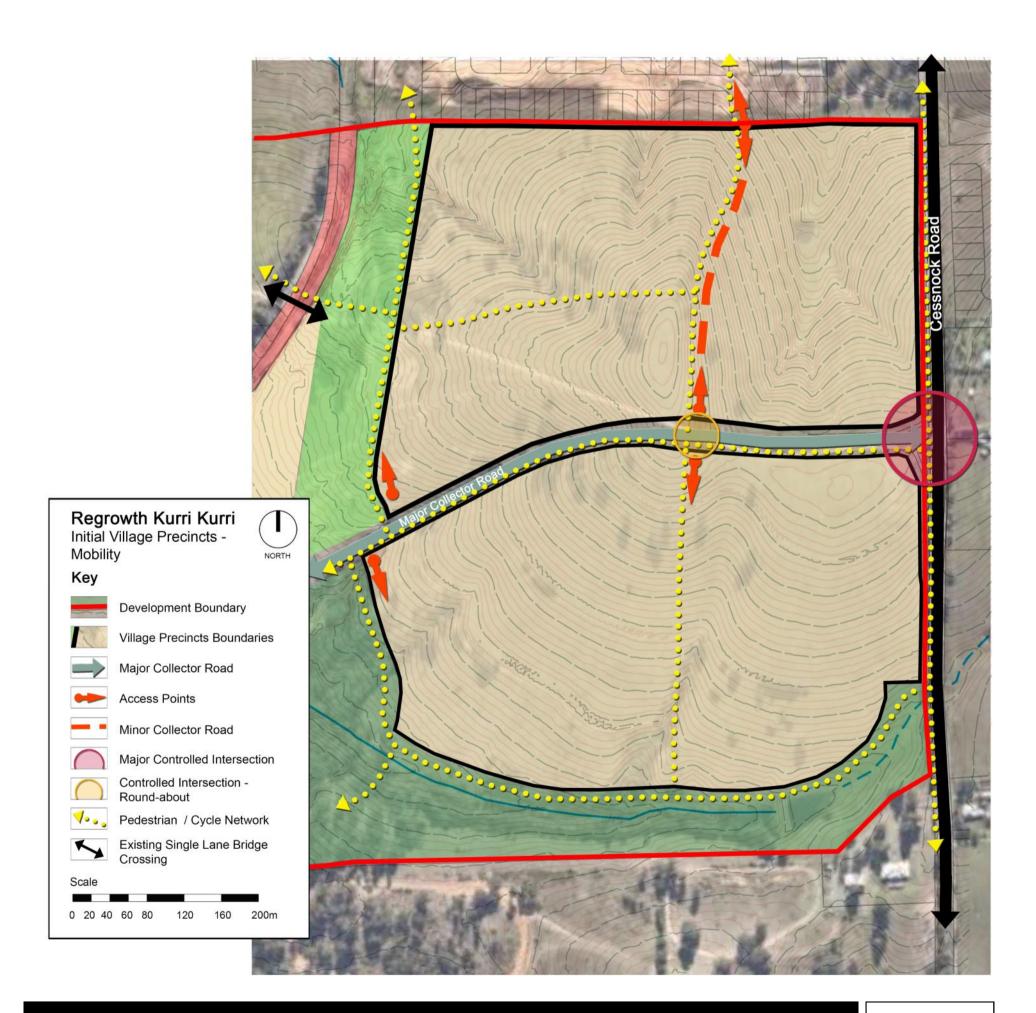
3.5 Mobility

A controlled intersection off Cessnock Road that is located at the current site access point is proposed, and is at the high point of the site. This intersection will form the gateway entry into the Regrowth Kurri Kurri development. The main development boulevard style collector road dissects the site to create to distinct village precincts north and south of the proposed road.

The main collector (Auburn Street) from Gillieston Grove abuts the northern boundary and provides an opportunity to connect this collector to the main development boulevard providing for better access and future public transport.

Local road access into the proposed village precincts will be predominantly off the proposed collector roads.

Opportunity exists to create very strong pedestrian and cycle ways both as part of the proposed main roads and the proposed open spaces. Safe connections should be implemented to provide good access to Swamp Creek to the west of the Maitland Rail Corridor.

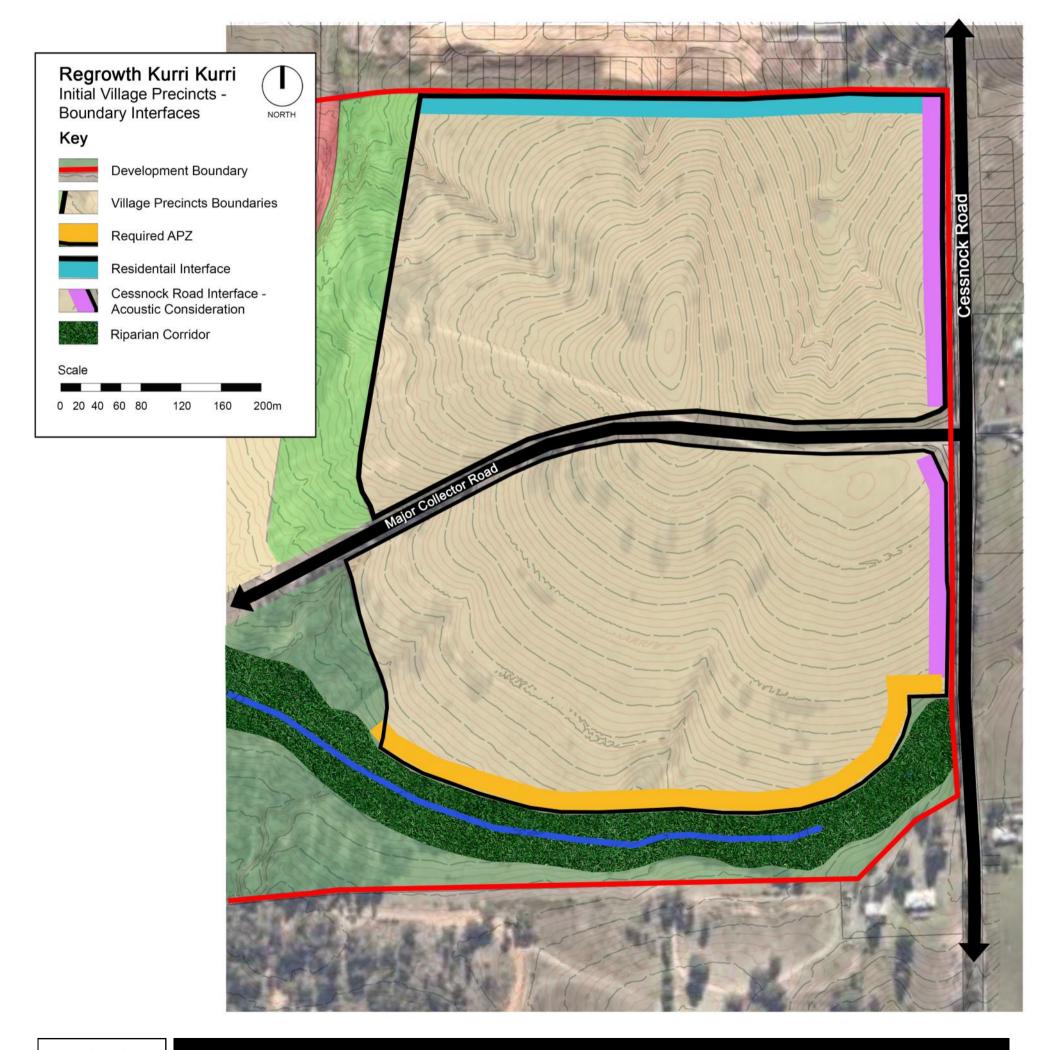


3.0 Site Constraints & Opportunities

3.6 Interfaces

Each of the site boundaries offers a different requirement in terms of an interface outcome.

- Consideration to acoustic interface treatment with Cessnock Road on the eastern boundary
- The northern boundary provides for a typical rear fence residential interface with two drainage easements and access to Auburn Street
- Both the western and southern boundary provides an open space interface with the southern boundary requiring an APZ from the existing riparian corridor.

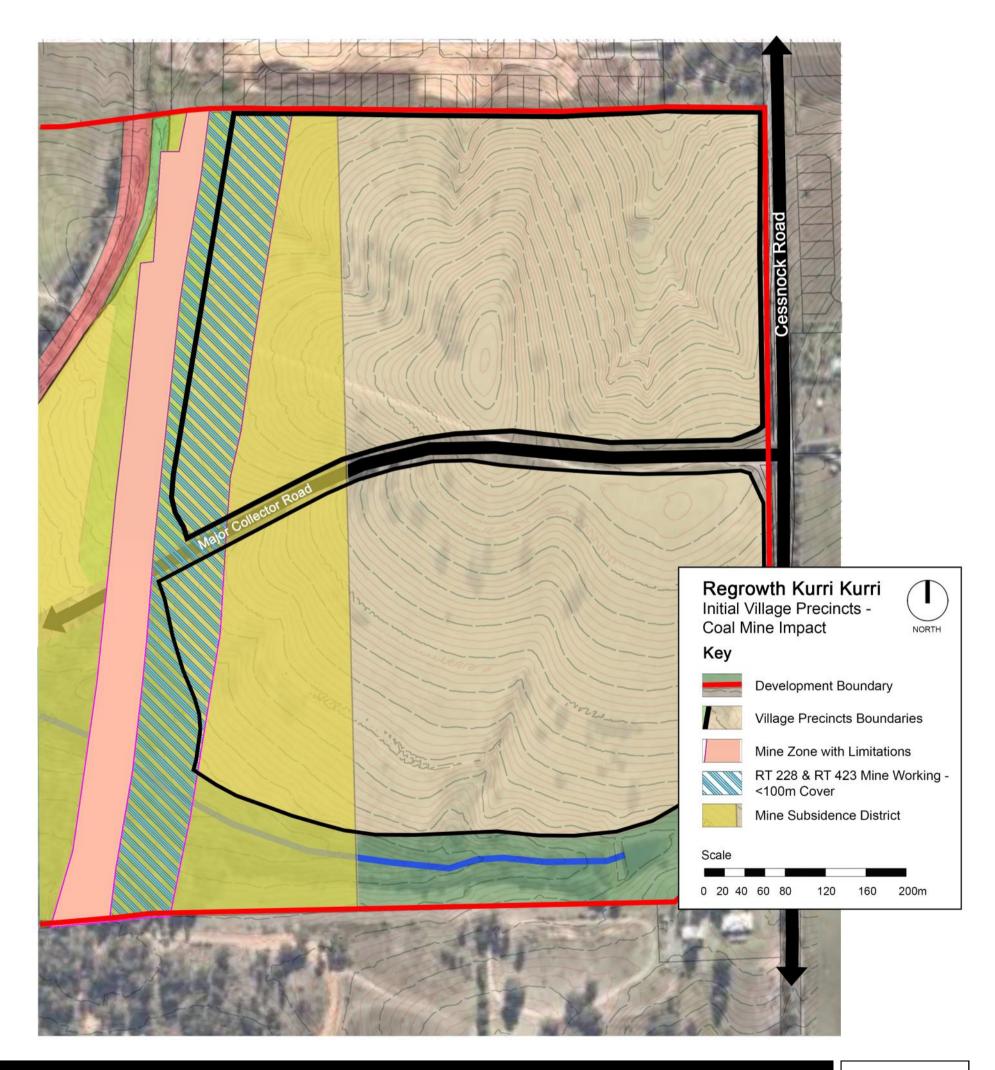


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3.7 Mine Subsidence Area

An existing coal mine seam exist on the western boundary running north / south and is summarised in two portions of disturbance:

- The area to to the west being potentially limited for residential development and
- And area to the east more than 100m cover and suitable for development



4.0 Development Vision

4.1 Vision Statement

"The proposed two village precincts will reflect the overall Regrowth Kurri Kurri residential community vision of a garden village feel created by a seamless landscape between private gardens, green streets and a thread of various forms of open space. Water management through natural water elements, WSUD and various landscape features will form a linking common character to create a sense of place.

A range of housing styles will be delivered that draw upon strong architectural elements of traditional housing character, adapt to today's lifestyle and respond to a variety of household formations through size and vertical scale.

The first village precincts will set a high quality residential development standards that will meet government objectives, and community expectations to deliver a new unique address for Regrowth Kurri Kurri."



Artist Impression - Entrance Boulevard (Indicative Only)



4.2 Key Regrowth Kurri Kurri Vision Principles

The following are key principles that have been captured in establishing the developments Vision Statement.

Choice

Develop a residential community which provides a wide range of housing choice, including appropriate density, affordable and adaptable housing.

Community

Create community connections and opportunities for neighbourhood interaction through spatial integration of public and private open space and connectivity to the adjoining land.

Connectivity

Provide safe and convenient access to existing assets as well as creating new facilities and infrastructure that will encourage engagements from the surrounding community.

Sustainable Landscape

Provide sustainable development outcomes through vegetation conservation, innovation in stormwater management, water conservation, energy efficiency and urban biodiversity.

Develop a sustainable attractive landscape character through retention of significant trees, extensive streetscape planting and landscaping within public/semi-private open spaces that integrates with and complements the built form.

Built Form

Through working with appropriate builders and the development of Design Guidelines achieve built form of a scale and style that is appropriate to the size of allotment and desired streetscape character, in order to achieve scale relationships to the public realm.

5.0 Over Arching Design Principles

5.1 Overall Design Principles

Apart from the Vision Principles the Regrowth Kurri Kurri and the initial village precincts are based on several over arching urban design principles that underpins the thinking process and makes for a robust outcome that ensures a strong structure that is sound and adaptable. These are as follows:

Environment

- Work with the existing and surrounding landscape, landform and climate conditions
- Optimise solar orientation to maximise energy efficiency

Visual Framework

· Optimise existing, and establish new views and vistas

Neighbourhood Character

- Establish a memorable sense of place
- Respond holistically to the existing and future context, within and beyond the site

Long Term Approach

Plan for minimised consumption of renewable resources, such that existing and new infrastructure is maximised

Responsive

• Develop a market led design that is robust for change

Prioritise Place

- Establish a vibrant public realm that extends throughout the development
- Retain existing trees and other desirable site features wherever possible
- Treat site water as an asset, conveying it throughout the public realm and employing best practice WSUD
- Respect and integrate with the conservation areas
- Support a range of transport alternatives such as public transport, cycling and walking
- Integrate new development into the surrounding urban context and its existing and future pattern and character
- Design the street structure to respond to existing and or new view corridors terminating at a desirable element such as open space, vegetated areas, desirable site features or a civic element. A respect for the landscape that recognises the existing character through enhancement and reestablishment of dramatic landscape planting and habitat
- Ensure streetscapes form part of the overall landscape setting and structure
- Deliver a landscape outcome that respects the prevailing climatic conditions
- Provide for bold landscape settings and activities that have far greater attraction than just the local community
- Delivers public spaces that are attractive, beautiful and sometimes whimsy that are activated people places

Street Hierarchy

- Locate significant roads wherever possible to follow subtle contours
- Locate local roads generally perpendicular to contours providing for frequent views and site management
- Edge open space with esplanade streets and/or houses that provide a direct street address to the open space
- Provide a connected network of streets that are easy to navigate and promotes walkability
- Provide safe well connected cycle and pedestrian networks that promote a healthy option for the community and assist to reduce car dependence

Responsive Housing

- Achieve lot dimensions that support viable housing types
- Incorporates local public transport routes, stops and activity hubs and a housing mix that responds to this transport infrastructure
- Ensure affordable and diverse hosing choices
- Deliver housing that provides opportunity for sustainable efficiency
- A diversity of product that responds to the ever-changing household mations
- Deliver diversity of design and built form
- Provide for housing that not only relates to the streetscape but also is designed to help activate these streets as people places.
- Provide for diverse affordable housing options







6.0 Village Precincts Master Plan

6.1 Concept Plan Vision

The two village precincts represents a unique opportunity to set the benchmark for the new address at Regrowth Kurri Kurri residential community. With its primary access of Cessnock Road the major road linkages Maitland and Kurri Kurri the site is well serviced and offers good market exposure.

The proposed masterplan responds to the Regrowth Kurri Kurri planning proposal and site opportunities to create a robust and adaptable design.

Through the site abutting natural open space to the west and south and the use of the sites topography of being a hilltop falling to the north, west and south, a philosophy of capturing views both locally of open space and more distant of the mountains and Swamp Creek is imbedded within the design.

The location of the main collector boulevard effectively centrally divides the site into the two village precincts from the high point creating a more premium precinct to the north and a more conventual precinct south.

A Neighbourhood Park celebrating the high point will become a focal points for the community and is within the 400 metres walking distance from all homes. The park will include both passive and active recreation at the local level and will include playgrounds, shelters and kick about areas.

In designing to accommodate the stormwater management function, various nodes will be created providing for different points of interest, engaging public art and "nature play" activities. Natural wetland detention will be the incorporated within smaller parks to the north and riparian corridors and conservation areas to the south.

Overall the abutting and new open space network has been integrated into the master plan in a manner that delivers permeability when walking and cycling, active play and a community with an outdoor culture that encourages a healthy active community.

Roads will also form part of the overall landscape networks creating green shady avenues that capture local open space views, providing for local and broader walking and cycling networks into the surrounding and future facilities. The Regrowth Kurri Kurri main central boulevard will be the major central spine connecting the proposed and future village precincts.

Stylish innovative and diverse housing options will be delivered to match population trends but also respond to the steeper site topography. The housing options will deliver value for money, flexibility, secure, comfortable and convenient living.

Housing variety will create interesting streetscapes but also attract people of differing ages, backgrounds, lifestyle needs and household incomes – creating a dynamic and vibrant community.

The master plan has been designed to be adaptable to market conditions with generally a standardised allotment grid that allows for a variety of product widths and density to be incorporated at anytime throughout the delivery process.

The initial two village precincts has been established with many underlying desired design principles, that will ensure the new sustainable community will be socially, environmentally and community conscious to ensure the success of overall Regrowth Kurri Kurri residential development.



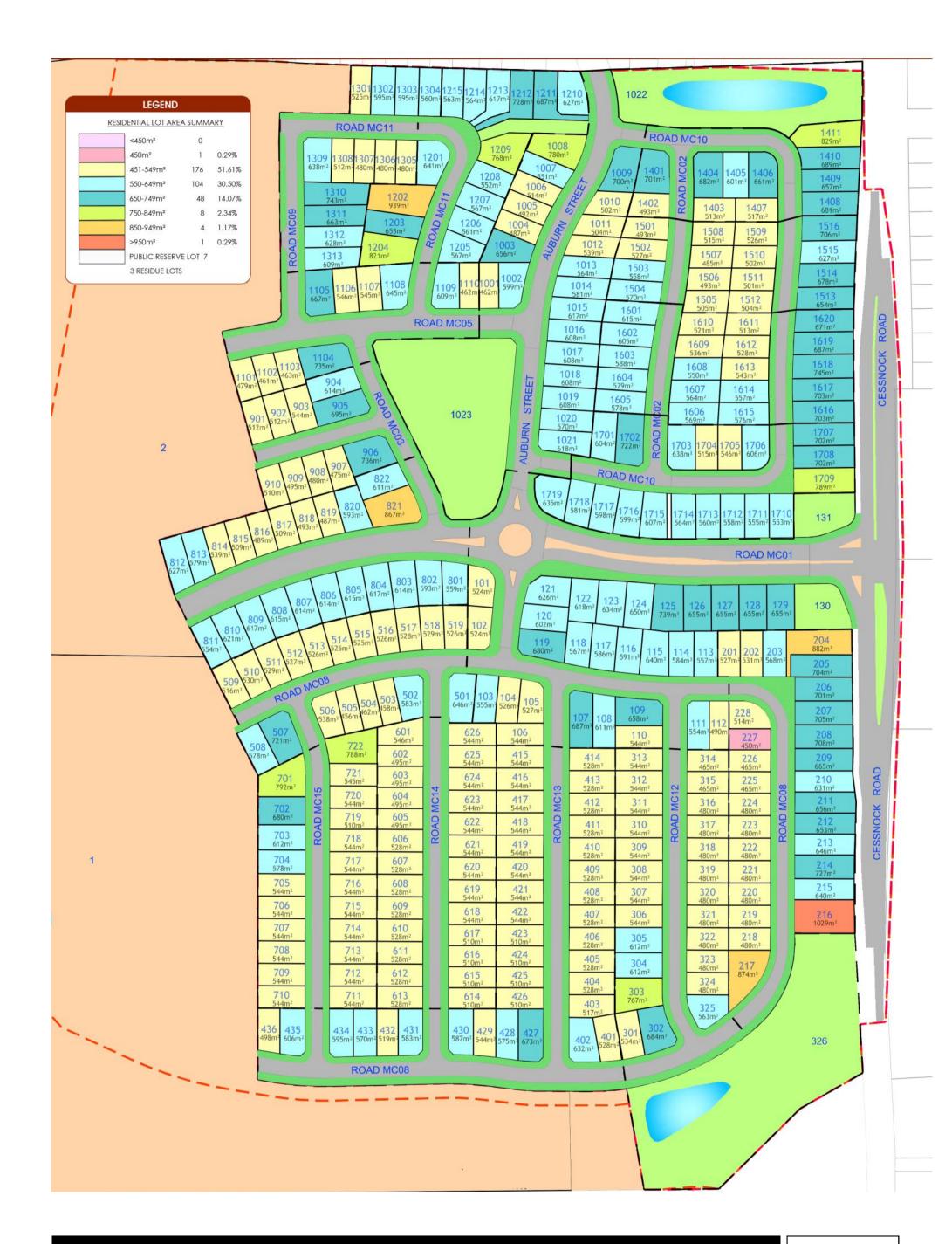
6.2 Lot Plan

There are seven detached / semi detached products proposed for the two village precincts. The first stages are as follows:

Lot Area	No of Lots	%
<450m²	0	
450m²	1	0.29%
451-549m²	176	51.61%
550-649m²	104	30.50%
650-749m²	48	14.07%
750-849m²	8	2.34%
850-949m²	4	1.17%
>950m²	1	0.29%
Total	342	100

The approach to lot placement is generally to deliver a integrated "salt and pepper" approach where housing is dispersed by product type throughout the development in grouping and is reflective of site topography.

The development area proposal comprises of 342 residential Torrens Title allotments, varying in size from 450sqm to 1029sqm. The balance of the two village precincts comprises of three future residual lots of 7.74ha, 13.77ha and 1.50ha.

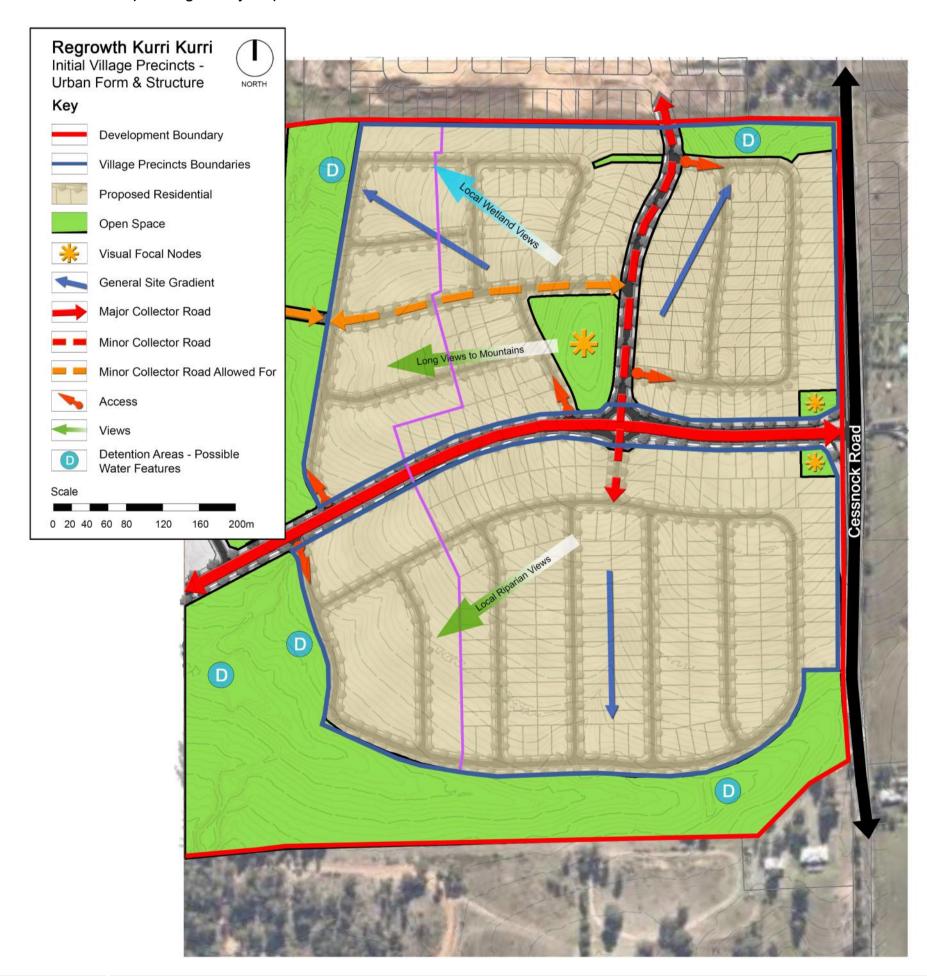


Lot Plan 20

6.3 Urban Form & Structure

Major influences of the proposed Master Plan include:

- Adopting traditional neighbourhood principles
- · Responding to views and vistas to Swamp Creek, the mountains and the local riparian and conservation area
- Responding to the site's natural elements such as topography, vegetation, drainage flow paths etc.
- A residential grid that provides flexibility of product that can respond to market influences
- Creating a series of village precincts that can offer different value propositions
- Ensuring the ability to manage major overland stormwater flows
- Creating a key focal node at Cessnock Road entry to provide a gateway into the Regrowth Kurri Kurri residential community
- Responding to any required future connection west of the Maitland rail line

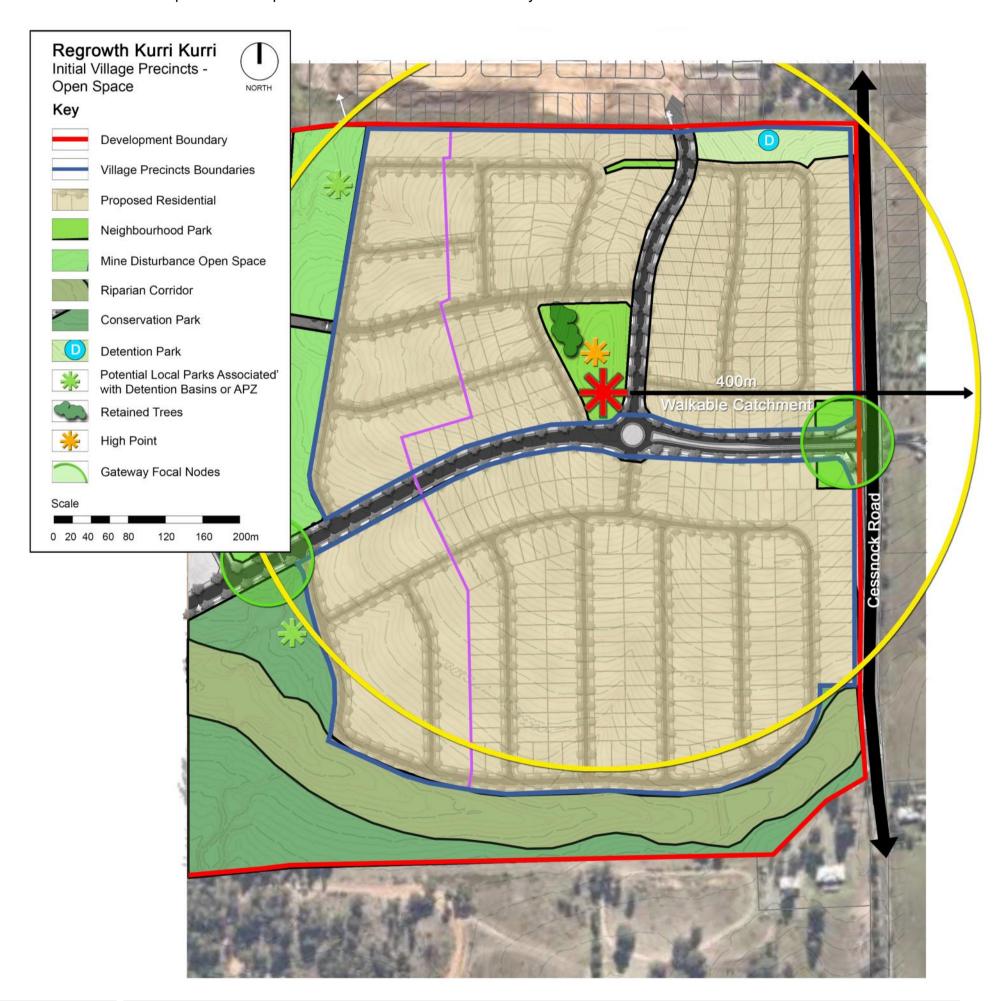




6.4 Open Space

The open space network is comprised of:

- District park located at the sites highest point and provides for a series of various activities and spaces for both village precincts and is with a 400m walkable catchment
- Retention of existing trees within the proposed neighbourhood park
- A riparian and conservation area to the south that also provide for pedestrian and cycle networks
- A larger vegetated area over the mine subsidence area on the western boundary which will also provide for pedestrian and cycle networks
- Streets that have avenue planting providing an extension and connection to the open space
- Clearly defined entry and exit focal nodes along the main boulevard collector road
- Landscape areas that provide the detention function for any overland stormwater flows

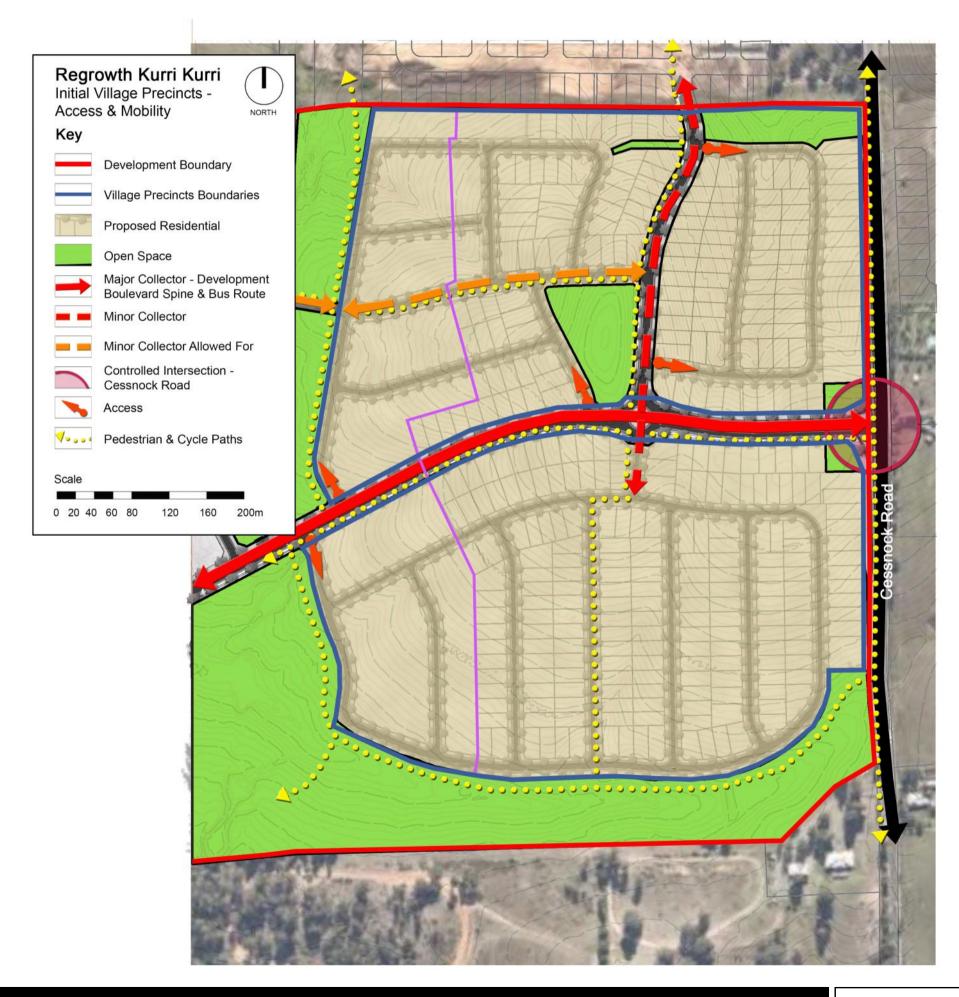


6.5 Access & Mobility

Master Plan Mobility and Access Principles

The major access and movement network derives from a number of key objectives and influences:

- Controlled access locations and priorities at Cessnock Road and along the main boulevard collector road
- Provision of a main boulevard collector road that services the overall Regrowth Kurri Kurri site, is reflective of the Planning Proposal and effectively dissects the site to create two village precincts
- A legible street pattern that maximises views and respects site topography
- Integrates with the existing network to the north to provide total integration
- Provides for a potential future access to the western portion of the Regrowth Kurri Kurri site
- Provides logical extension of existing and future pedestrian and cycle networks that is incorporated within the proposed landscape and major roads



6.6 Streetscape

To ensure a high level of accessibility throughout the site a hierarchy of major and local roads has be established. The quality of the streetscape is crucial to providing outlook for homes and also creating an engagement pleasing context for future residents to live in.

The following proposed road classifications are proposed for the sites.

- 1. Collector Street
 - Entry Boulevard
 - Minor Collector

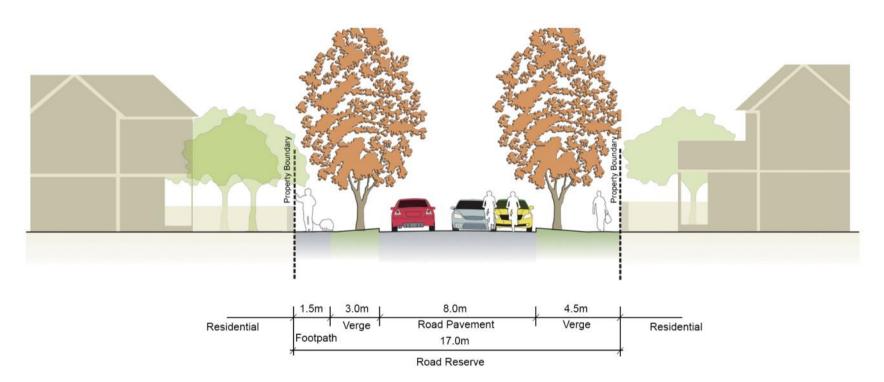
2. Local Streets.

Each type will be characterised to provide legibility to the road network through themed landscaping from selected species, level of maturity, frequency, patterning and street lighting, fencing and overall character.

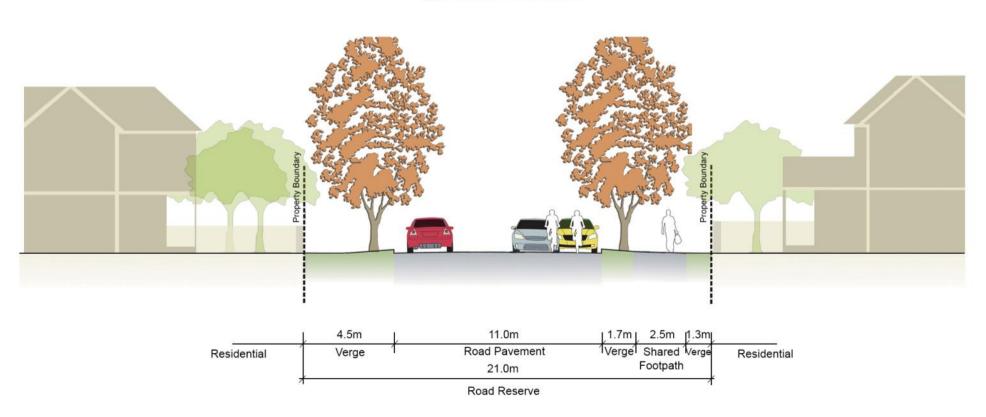
The streetscape proposals will create a legible network of vehicular, pedestrian and bike linkages forming a hierarchy of streets that reinforce arrival and destination points, public realm and built form.

Traditional Local Streets

The network of local traditional streets are designed to deliver a slow, safe traffic speed environment with single carriageways, on street parking, street tree planting, grass verges, footpaths and unique lighting to help create liveable residential streets.



Typical Local Street Detail



Typical Minor Collector Street Detail - Auburn Street

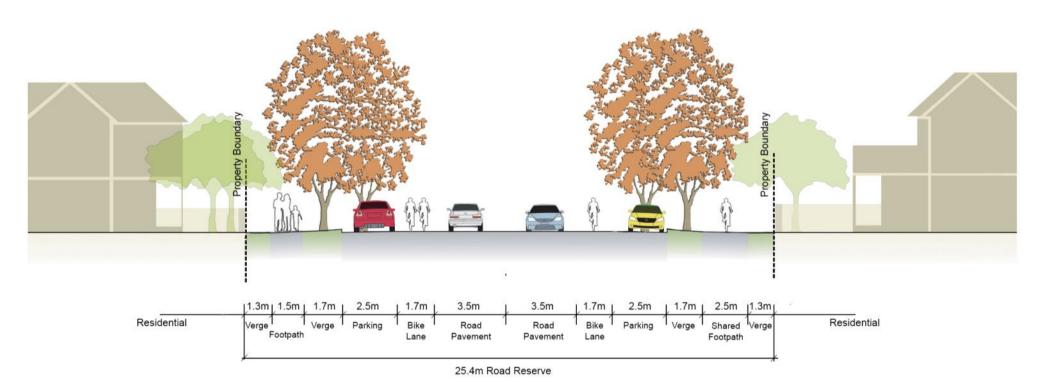
Collector Streets

The main Regrowth Kurri Kurri Collector spine road will be the priority access for the residential community and will be designed to be a tree lined avenue with a central medium in places that creates a balance of achieving good traffic flows whilst catering for safe pedestrian and cycle network that is activated by housing.

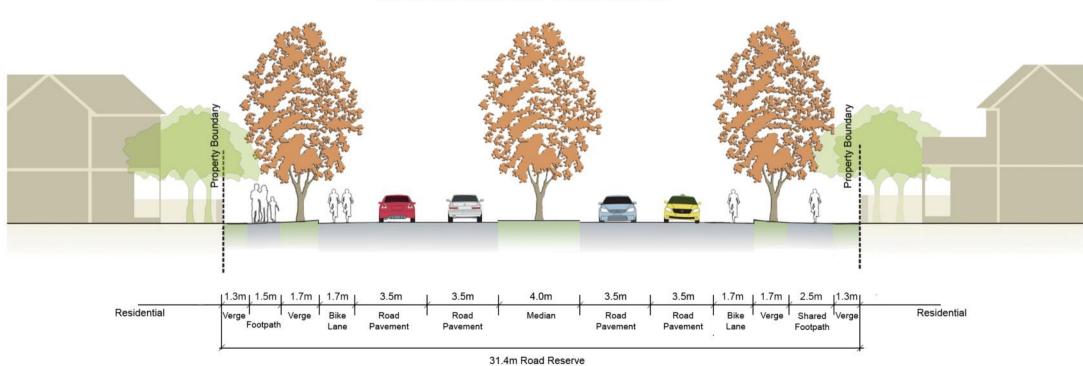
The extension of Auburn Street from Gillieston Grove will be designed as a minor collector with similar attributes as the main spine collect however without a medium strip

Both Collector Roads will be designed to cater for cycle ways, major pedestrian networks and potential future public transport.





Regrowth Kurri Kurri Main Collector Road Section - Auburn St to L.O.W



Regrowth Kurri Kurri
Main Collector Road Section - Cessnock Rd to Auburn St

6.7 Water Management - WSUD

There will be two main elements of the integrated water management strategy. These are:

- Provide a stormwater treatment within the landscape spaces through both storage and quality measures
- Provide flood mitigation measures to protect both upstream and downstream residents from existing overland flows and increased flows from any new development

In addition to above there is great opportunity to create the open space network as an integrated WSUD system through the introduction of bio retention measures through a mix of streetscape and Local Park bio retention rain gardens to provide for stormwater treatment and also to create "self irrigating" green spaces along streetscapes. These can also form part of traffic management solutions.



7.0 Housing Response

7.1 Overall Vision

The proposed Regrowth Kurri Kurri Residential Community will provide for diverse housing options that will meet emerging demographics and projected markets.

A range of housing product types from rear loaded terraces to large manor homes will for par of the housing diversity.

These homes will be designed to offer flexible living spaces, which are a necessity in adapting to today's ever changing needs.

In a contemporary way, housing styles will draw upon traditional architectural elements providing simple lines and symmetry, various pitched roves, articulated facades, roof overhangs and verandahs.

7.2 Village Precincts Housing Form and Distribution

The village precincts master plan has been strategically planned to provide a mix of lot types and housing typologies that will accommodate the market profile, whilst providing appropriate density for the relative topography the site.

Key Considerations are:

- Providing a variety of options that are market-driven for different household income levels including housing affordability requirements.
- Providing a variety of options for first, second and third home buyers.
- · Providing choices for a range of lifestyles and price points
- Careful consideration of lot sizes, pattern and placement to reinforce the desired character and deliver various product options to cater to market changes, price positioning and slope.
- Development of built form guidelines

The village precincts offer seven detached / semi detached products

Detached / Semi Detached Housing Allotments as follows:

450m²

451-549m²

550-649m²

650-749m²

750-849m²

850-949m²

>950m²









7.2 Creating an ESD Vision

Through built form guidelines there will be a strong emphasis in achieving a minimum 6 star energy rating and ESD initiatives incorporating requirements such as:

- Design of dwellings should wherever possible take advantage of northerly aspects, natural ventilation and light in order to minimise the use of heating / cooling systems and artificial lighting.
- Maximise use of a variety of such overhangs as verandahs, eaves and balconies, to provide shade in the summer
- Promote the use of energy efficient light fittings, appliances, hot water systems and services
- Landscape design that incorporates deciduous trees and permeable ground cover elements located away from foundations
- The use of renewable energy sources where possible, such as solar panels with battery storage etc.
- Provide flexibility and adaptability to dwelling designs for changing household formations
- Educate prospective purchasers on sustainable design criteria and innovative sustainable initiatives including water-wise innovations

7.3 Orientation

The village precincts Master Plan has been designed to maximise solar access through placement of road orientation to be on the north - south and east west axis. This will ensure that homes can be fully designed to reach optimum solar management outcomes.

It is envisaged that housing within the proposed village precincts will achieve greater than 95% solar efficiency.











7.4 Built Form Product

Detached Homes

A range of detached homes will be delivered on a variety of allotment sizes with various areas and widths ranging from 17m - 25m frontages. A general depth of 35 metres is adopted however this may vary to respond to location, topography etc.

These homes will be a mix of single and two storey product and will have the ability to accommodate two undercover car accommodation spaces.

These home types will be integrated within the streetscapes in a diverse yet cohesive manner in groups of two or more.

Generally these homes will be set back a minimum of 5m to the front facade and 5.5m to the car accommodation. Articulation measures such as verandahs, porticoes and balconies may be able to encroach upon the front setback by 0.5m.







Semi Detached Homes

Semi detached allotment products will still take on a more traditional frontage but will be able to be built on one nominated boundary.

The homes will generally be lots under 560 sqm, have a maximum frontage of 16m and provides for more of a courtyard style living.

Semi detached homes provide for the ability to deliver on a more affordable housing product that still can be suitable for a variety of household formations including senior living and families.

Apart from building on a nominated boundary home setbacks are similar to detached homes.





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