PORT STEPHENS
COUNCIL

Medowie Planning Strategy

13 December 2016

Table of Contents

EXECUTIVE SUMMARY

The *Medowie Planning Strategy* (the Strategy) has been prepared to provide local direction for land use planning and sustainable growth over the next 20 years. It follows the identification of Medowie as a growth area in the *Port Stephens Planning Strategy* and the *Hunter Regional Plan*.

The Strategy considers a range of local and State land use planning instruments and policies that are used to achieve sustainable development. It aims to guide land use allocation and other provisions of the *Port Stephens Local Environmental Plan 2013*. It forms part of a suite of related strategic delivery plans; sets out implementation (including responsibilities and timing) and requirements for planning proposals (rezoning requests).

The following vision statement is used to guide the strategy:

Medowie is a place of tall trees besides the waters of Grahamstown Dam with a rural residential character, with a plan to accommodate and coordinate future growth with quality community and recreation facilities, good transport infrastructure, and involves the community in its implementation.

The key principles applied are:

1. Urban development is underpinned by infrastructure;
2. The town centre is the focus for commercial and community activity;
3. Rural residential character is balanced with urban development;
4. Development will have a neutral or beneficial effect on water quality and no increase in flooding impacts; and
5. Key koala habitat and corridors are improved or maintained.

Land is identified to accommodate 2,400 new dwellings in residential release areas and additional 180 in rural residential release areas. The population of Medowie in 2016 is 10,300 people; with growth this will increase by 7,200 people to a total of 17,500 people by the year 2036. These figures are estimates under a 'maximum growth' scenario.

Key existing and proposed community and recreation facilities are the Medowie Community Centre; Ferodale Park Sports Complex; a town centre library facility; town square; new public toilets; and a town lake.

The delivery of the envisioned urban development and infrastructure is subject to a wide range of factors including market demand for housing. Its implementation will be gradual and involve a range of stakeholders and funding sources. An implementation panel will be created to monitor its progress.

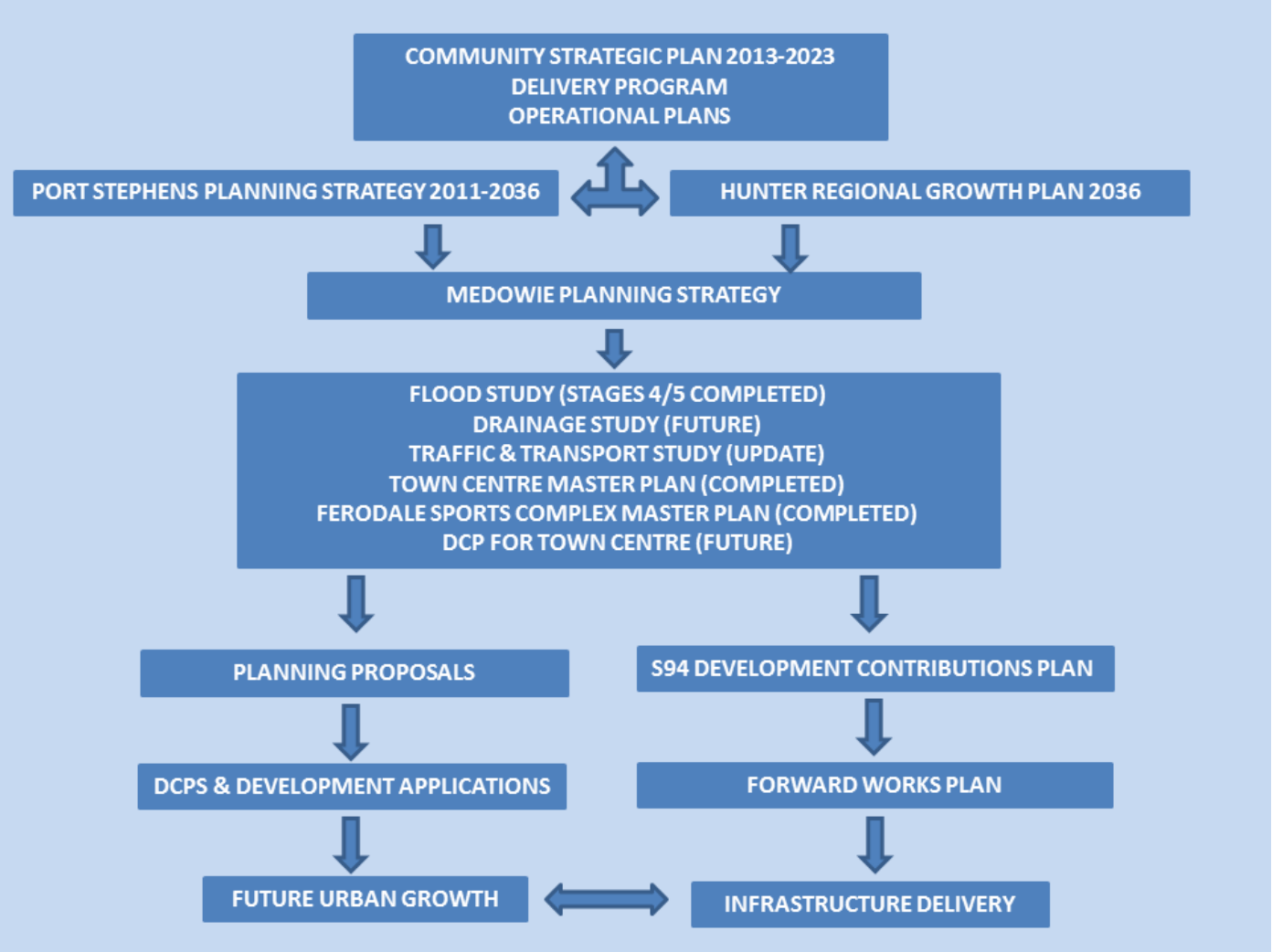
Table 1 Key Aspects

Item	Description
Average household size	2.8 people per dwelling
Population at 2016	10,300 people
Estimated population at 2036	17,500 people (maximum growth)
Residential release areas (12 dwellings/ha)	2,400 new dwellings
Rural residential release areas	180 new dwellings
Commercial land	9.0 ha (approximate) general commercial zoning in the town centre + limited site-specific additional uses
Light industrial land	5.5 ha at Abundance Road
Main community facilities	Medowie Community Centre Ferodale Park Sports Complex Town Centre Library Facility Town square New town centre public toilets Town Lake
Main sports facilities	Yulong Oval Boyd Oval Kindlebark Oval Ferodale Park Sports Complex
Traffic and transport	Road network upgrades Pedestrian and cycle network upgrades including additional shared paths Local infrastructure contributions planning

1.0 PLANNING FRAMEWORK

The preparation of the Strategy follows Medowie's identification as a growth area in the higher order Port Stephens Planning Strategy and Hunter Regional Plan. It sits within a broad planning framework and process as shown in Figure1 *Planning Framework* and is part of a suite of plans that facilitate the delivery of urban growth, development and infrastructure.

Figure 1 Planning Framework



Depending on the resolution of planning issues and market forces, the delivery of urban growth and infrastructure envisioned by the Strategy can be a gradual and long-term proposition over 20 years.

The Strategy it forms an integral part of the overall delivery of growth for Medowie; important to its success will be the effective integration with other technical plans, the local planning framework and Council's infrastructure delivery program.

2.0 KEY PRINCIPLES

This section outlines the five key principles that guide the Strategy.

Principle 1 - Development is supported by infrastructure

Residential release areas are targeted on the expansion of existing areas and main transport routes (Medowie Road and Ferodale Road) with good access to community facilities.
Main aspects of infrastructure for accommodating future urban growth include: traffic and transport infrastructure (including for pedestrians and cyclists); flooding and drainage management measures; community and recreation facilities; provision of reticulated sewer and water; and access to the town centre.

Principle 2 - The town centre is the focus for commercial & community activity

New commercial development will be focused within the existing town centre and guided by the town centre master plan. The objective is to consolidate the town centre as the 'heart' for the social and economic life of the community. Infrastructure works include: roads (in a grid layout); a town square; new public toilets; and shared paths.
Site-specific additional permitted uses in locations outside of the town centre will continue to cater for existing uses and attractions. These include: Pioneer Ridge Boutique Winery; Medowie Macadamias; Medowie Indoor Sports Centre; and the existing service centres on Medowie Road and Ferodale Road.

Principle 3 - Rural residential character is balanced with urban development

A semi-rural outlook is part of the character of Medowie to be retained and balanced with the need for new land for housing to accommodate growth. There are opportunities for further rural residential development, particularly in the vicinity of Brocklesby Road, Abundance Road/Fairlands Road and Grahamstown Road. Land ownership in some parts of Medowie is very fragmented and/or comprising significant vegetation, presenting a main challenge to delivering urban growth.

Principle 4 - Development has a neutral or beneficial effect on water quality & no increase in flooding impacts

Grahamstown Dam is a major source of drinking water for the region and supplies around 50% of its needs on an ongoing basis: maintaining or improving drinking water quality is of very high importance. Future development within the Grahamstown Dam Drinking Water Catchment will need to demonstrate neutral or beneficial effect on water quality and will be connected to the reticulated sewer and water system.
Council and the Hunter Water Corporation will work collaboratively to identify a catchment-wide solution to drainage and water quality through completion of a drainage strategy, including investigation of a town lake within the vicinity of the town centre.
Large areas of Medowie are prone to flooding and the catchment is sensitive to new development. Flood prone land is generally to be avoided for future urban development. It is also not sterilised from appropriate uses subject to assessment (eg consideration of flood fringe areas).

Key Principle 5 – Habitat & key corridors are improved or maintained

The principle of 'avoid, mitigate, offset' should be applied with respect to potential impacts of development on native vegetation. The local koala population is under threat and the preservation of its habitat is important. Key corridors are to be maintained and future development must address the provisions of the *Port Stephens Comprehensive Koala Plan of Management*.

3.0 KEY STRATEGY MAPS

The Strategy includes key maps that show the future vision.

Figure 2 *Strategy Area* shows the extent of the area where the Strategy applies. Figure 3 *Strategy Map* shows the overall concept for the management of development including potential future residential release areas, habitat and key corridors, and community facilities.

The identified residential release areas achieve the dwelling projections in the Port Stephens Planning Strategy and the Hunter Regional Plan.

It is important to link residential release areas to Figure 5 *Planning Precincts* and the accompanying planning precinct table. Each precinct indicates an area for further detailed investigations at later stages of the planning process (planning proposals, development control plans and subdivision development applications). A main purpose of the precinct planning approach is to facilitate the coordinated consideration and delivery of land for residential release.

The precinct areas and dwelling yields are indicative estimates only.

Figure 4 *Town Centre Master Plan*) provides additional guidance within this primary precinct for commercial and community activity. Main features include:

- Commercial development on land with frontage to or generally bound by Medowie Road, Ferodale Road and Peppertree Road;
- A town square;
- New public toilets (with the town square or on Peppertree Road);
- The Ferodale Park Sports Complex;
- Small lot residential development (minimum 300m^2) in the form of detached single dwellings, villas and dual occupancies;
- A town lake on the western side of the Campvale Drain;
- A town centre library service (site to be determined);
- Connecting shared-use paths;
- A grid-type road network (including a new link road running parallel to Peppertree Road and connection to Wilga Road); and
- Building height (potential 2/3 storeys) on the east side of the new parallel link road (only) to accommodate the significant change in local topography.

Figure 2 Strategy Area

Figure 3 Strategy Map

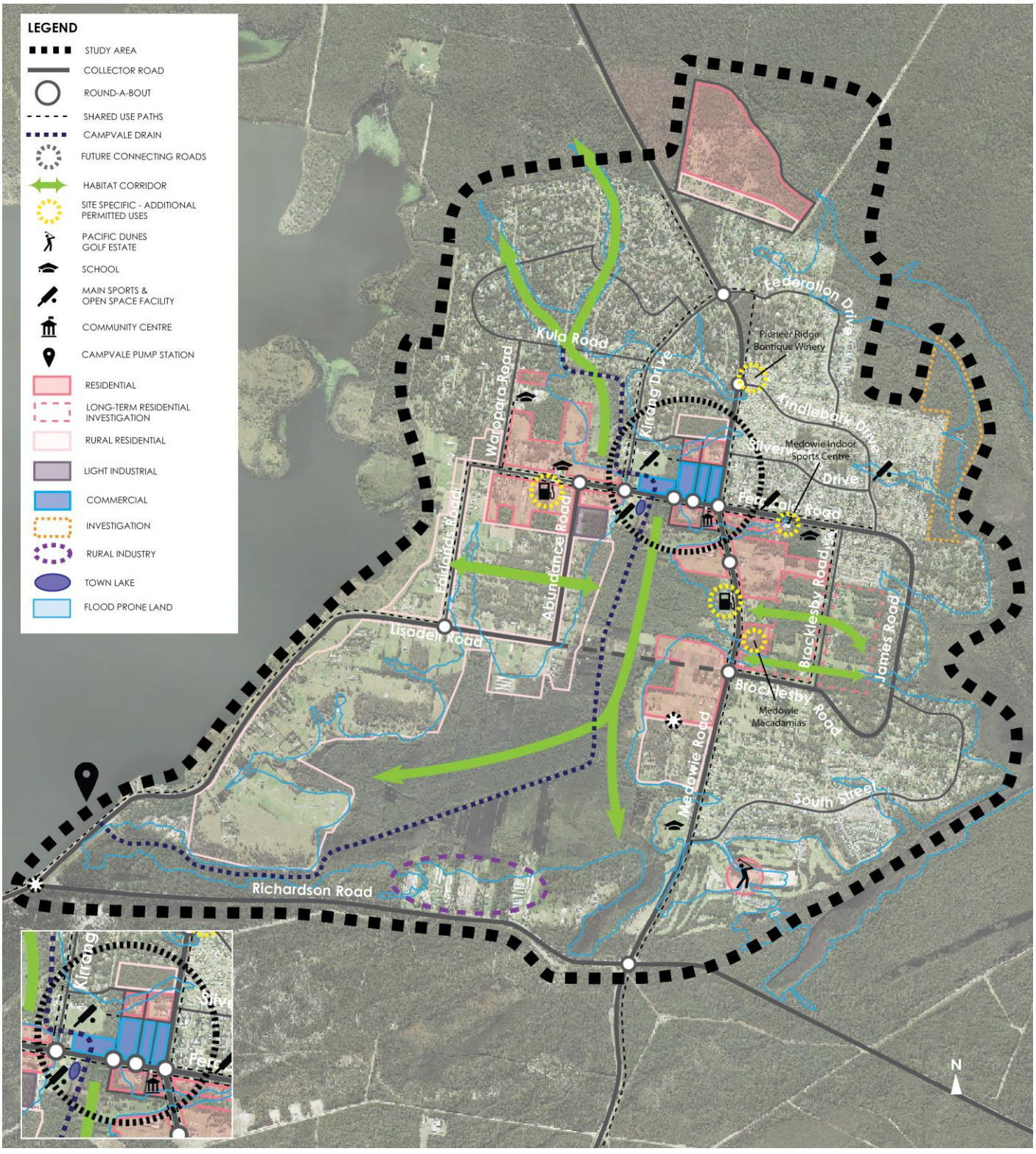


Figure 4 Town Centre Master Plan

Figure 5 Planning Precincts

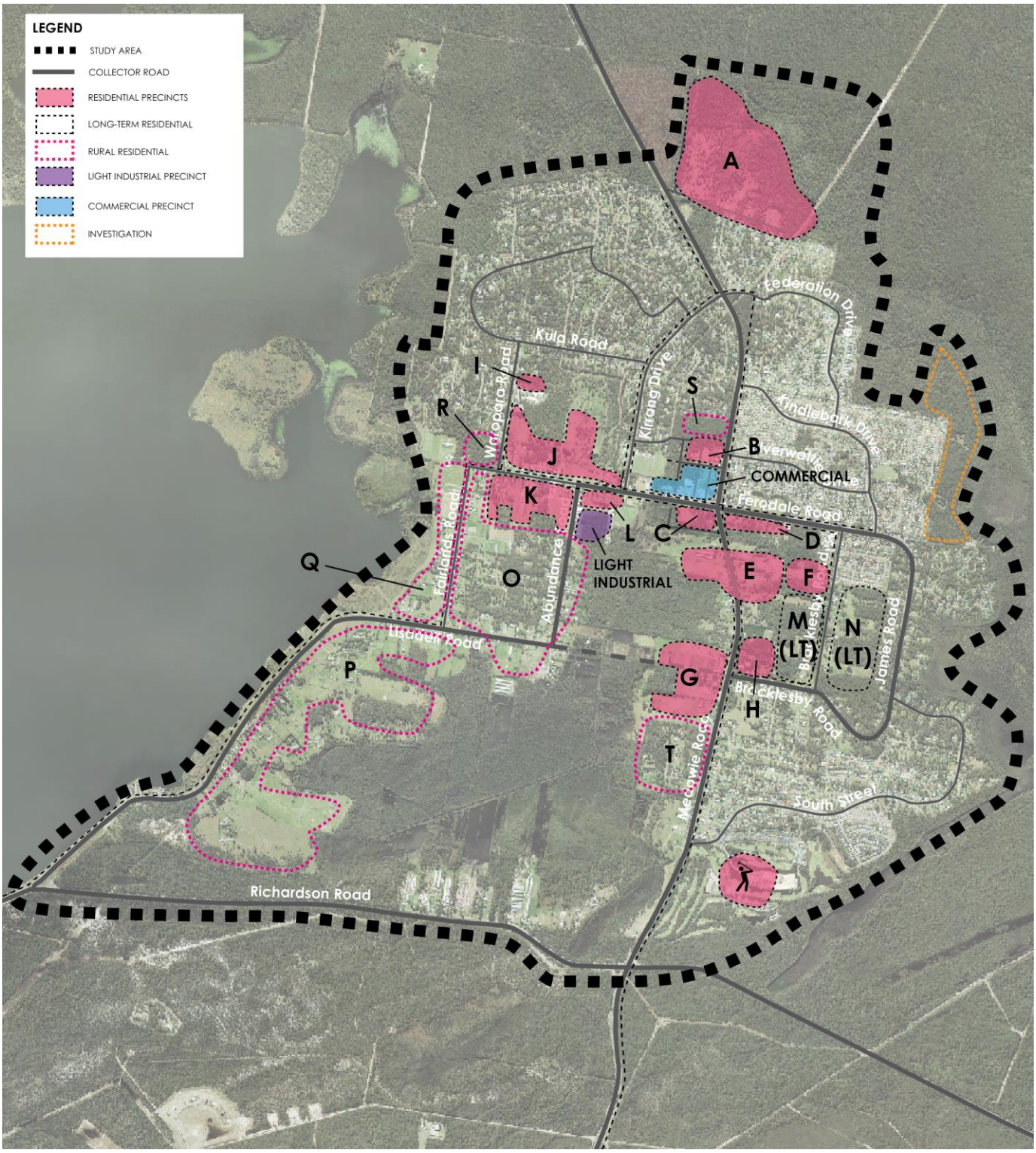


Table 2 Planning Precincts (estimate only)

Precinct	Area (ha) (estimate)	Dwelling yield (estimate)
Residential release areas		
A	40	480
B	4	48
C	4	48
D	6	72
E	25	300
F	5	60
G	28	336
H	5	60
I	2	24
J	28	336
K	20	240
L	3	36
M	10	120 (excludes vegetation)
N	20	240 (excludes vegetation)
TOTAL	**200**	**2400**
Rural residential release areas		

Precinct	Area (ha) (estimate)	Dwelling yield (estimate)
O	100	30 (additional) (1 ha min. lot size)
P	220	120 (additional) (1 ha min. lot size)
Q	25	10 (additional) (1 ha min. lot size)
R	<5	<5 (additional) (8,000m^2 min. lot size)
S	<10	20 (additional) (4,000m^2 min. lot size)
T	25	(Investigate lot size – transition to residential release area)
TOTAL	**385**	**180**
Commercial		
B2 Local Centre Zone	9.0 (5.5 ha existing zoned +4 ha additional)	-
Industrial		
IN2 Light Industrial Zone.	5.5 (existing zoned)	-
Rural Industry		
Richardson Road	Rural Industry Precinct	
Investigation		
Coachwood Drive	Investigate E2 Environmental Conservation Zone	

4.0 LAND USES

Facilitating development and additional housing envisioned by in accordance with the strategy requires the preparation and assessment of planning proposals (rezoning requests) seeking amendment to the LEP. This section provides guidance on land use zones, objectives and lot sizes that apply to the land identified in Figure 3 *Strategy Map*.

4.1 Residential

Priority residential urban release areas are identified to accommodate urban growth. Key determinants include:

- Proximity to existing urban areas;
- Location along main transport routes (Medowie Road and Ferodale Road);
- Access to community facilities;
- Better access to sewer and water infrastructure;
- Reduced land fragmentation;
- Flood-free land; and
- Cleared land.

The intended land use zone in residential release areas is R2 Low Density Residential. The objectives of this zone are:

- *To provide for the housing needs of the community within a low density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To protect and enhance the existing residential amenity and character of the area.*
- *To ensure that development is carried out in a way that is compatible with the flood risk of the area.*

Dwelling density is estimated to be 12 dwellings per hectare (gross) similar to existing residential urban development in Medowie. The general applicable minimum lot size is 500m^2 however actual lot sizes are typically greater than this minimum and will reflect market demand (600m^2 to 700m^2). Residential yield may be affected (reduced) in Medowie because of environmental and drainage and water quality requirements.

Longer-term investigation areas are identified in the vicinity of Brocklesby Road. These areas are subject to a greater combination of significant restraints; however serve as long-term options for investigation. Some parts are identified as important habitat and key corridors and their development may be very difficult to achieve under environmental policy and legislation, and obtaining biodiversity offsets not practicable or reasonable.

4.2 Rural residential

Rural residential development in Medowie is extensive and part of its character and attraction. This feature is retained into the future. Key determinants to the identification of this land use in the Strategy include:

- Land adjoining existing rural residential areas;

- Land that contributes to the semi-rural setting of Medowie;
- Land that is subject to a relatively high level of fragmentation;
- Land in areas that comprise vegetation and is subject to various constraints under policy and legislation (e.g. *Port Stephens Comprehensive Koala Plan of Management*); and
- Land that is already zoned R5 Large Lot Residential.

The intended land use zone in rural residential areas is R5 Large Lot Residential. The objectives of this zone are:

- *To provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality.*
- *To ensure that large residential lots do not hinder the proper and orderly development of urban areas in the future.*
- *To ensure that development in the area does not unreasonably increase the demand for public services or public facilities.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*

The minimum lot size in rural residential areas ranges from 4,000m^2 to 10,000m^2. This is to be based on lot size analysis; transition between rural residential and residential areas; environmental considerations (for example accommodating a dwelling and other structures without excessive clearing for safety and bushfire purposes) and water management considerations. Some areas of rural residential identified are already appropriately zoned or have a suitable minimum lot size for this purpose.

4.3 Environment

The principle of 'avoid, mitigate, offset' should be applied to existing vegetation. It is a significant restraint to delivering development. Habitat and key corridors and areas are indicatively shown in the strategy maps. High value conservation land often coincides with flood prone land or land required for drainage, effectively forming a main habitat corridor in the centre of Medowie in a north-south direction. There is also high value vegetation on elevated flood-free land (eg in the Brocklesby Road area).

The intended land use zones in environmental areas are the E2 Environmental Conservation Zone and the E3 Environmental Management Zone.

The objectives of the E2 Environmental Conservation Zone are:

- *To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.*
- *To prevent development that could destroy, damage or otherwise have an adverse effect on those values.*

The objectives of the E3 Environmental Management Zone are:

- *To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.*
- *To provide for a limited range of development that does not have an adverse effect on those values.*

The identification of habitat and key corridors does not preclude full consideration of the impacts of future development on the biodiversity values of an area at following stages of the planning process.

4.4 Commercial

The Strategy aims to concentrate commercial development in the town centre to consolidate its role as the 'heart' for the social and economic life of the community. Its potential future layout is shown in the higher detail Medowie Town Centre Master Plan.

Key determinants to the identification of commercial land use include:

- Continuity with the existing B2 Local Centre zone;
- Land with frontage to, and generally bound by, Medowie Road, Ferodale Road and Peppertree Road;
- Supply and demand for floorspace; and
- Proximity to community facilities;

The most applicable land use zone for commercial areas in Medowie under the LEP is the B2 Local Centre Zone. The objectives of this zone are:

- *To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area.*
- *To encourage employment opportunities in accessible locations.*
- *To maximise public transport patronage and encourage walking and cycling.*

Outside of the town centre are a small number of site-specific commercial uses such as the Pioneer Ridge Boutique Winery; Medowie Macadamias; Medowie Indoor Sports Centre; and local service stations with ancillary uses. These locations will continue to be supported for site-specific addition permitted uses while concentrating general commercial uses (zoning) within the town centre.

4.5 Light industrial

Previous research indicates there is a sufficient amount of vacant light industrial zoned land already available at Abundance Road to meet future demand. This includes zoned but undeveloped and vegetated land immediately east of the existing industrial area. The Strategy does not intend to identify any additional land for light industrial development in the short to medium term. In the longer term there may be potential merit in investigating expansion of the light industrial land uses towards Ferodale Road. The existing cluster of rural industries along Richardson Road is acknowledged and investigation into this land use area is to be undertaken in the long-term.

The intended land use zone for light industrial areas is the IN2 Light Industrial Zone. The objectives of this zone are:

- *To provide a wide range of light industrial, warehouse and related land uses.*
- *To encourage employment opportunities and to support the viability of centres.*
- *To minimise any adverse effect of industry on other land uses.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.*
- *To support and protect industrial land for industrial uses.*

5.0 INFRASTRUCTURE & ENVIRONMENT

This section sets out the key infrastructure and environmental elements to underpin future growth under the following categories:

- Community and recreation facilities;
- Water management;
- Traffic and transport; and
- Habitat and key corridors.

The detailed design and implementation of this infrastructure will be through Council's infrastructure plans, annual forward works plans and planning proposals. In addition, the funding of the infrastructure identified will be outlined through local developer contributions plans from new development. The identification of works in these plans, concurrent with a planning precinct approach to development, will enable orderly design and delivery of infrastructure.

5.1 Community & recreation facilities

As urban development and associated population growth occurs there is a need for Council to provide community and recreational facilities to adopted local standards and at a range of different service levels (local, district and regional).

Regional level facilities are provided at Raymond Terrace (for example Lakeside Leisure Centre, Raymond Terrace Library, Boomerang Park and King Park). The implementation of the *Ferodale Park Sports Complex Master Plan* (refer to Figure 6) is a key item for the local and district provision of recreational open space and community facilities. A focus is on ongoing improvements and upgrades to existing facilities rather than adding additional land.

Implementing the Ferodale Park Sports Complex (already adopted by Council) is a key community and recreation facility project. Main features include:

- Recreation Building (including function rooms and an outdoor deck area);
- Bowling green;
- Playground;
- Grass terrace seating area;
- Additional netball courts; and
- Upgrading the existing northern field plus provision of a new southern field.

Table 3 *Community and Recreational Facilities* is an overview of community and recreation facility requirements for Medowie over the life of the strategy.

Figure 6 Ferodale Park Sports Complex

Table 3 Community & Recreation Facilities

Item	Standard	To meet standard (max. growth)	Provided now	Strategy provision
Multipurpose Community Space	1 for every 5,000 people	3	1	Upgrade existing community centre + a new community space within the Ferodale Park Sports Complex
Libraries	1 branch library for every 20,000 people &1 library lounge for every 10,000 people	<1 branch library or 1.5 library lounges	Regional branch library at Raymond Terrace Library + mobile library service visits	Investigate location and design of library service within the town centre
Parks & Reserves	2.5 ha for every 1,000 people	44 ha	Angophora Park (Pacific Dunes) Casuarina Avenue Reserve Community Centre (small park) Coolabah Reserve Creighton Drive Finnan Park (Grahamstown Dam) Lions Memorial Park Machii Park Boomerang Park (Raymond Terrace)	Improve existing parks & reserves Within the Ferodale Park Sports Complex Town square Consideration of additional small parks within new urban release areas
Sports Fields	1.5 ha for every 1,000 people	26 ha	Kindlebark Oval Boyd Oval Elain Hurst Oval Yulong Oval Ferodale Park Sports Complex Lakeside Sports Complex (Raymond Terrace) King Park Sports Complex (Raymond Terrace) Bruce Mackenzie Complex (Salt Ash)	Retain existing sports fields Implement Ferodale Park Sports Complex Master Plan

Item	Standard	To meet standard (max. growth)	Provided now	Strategy provision
Playgrounds	1 per 220 under 14 year olds	16	Angophora Park (Pacific Dunes) Community Centre (small park) Coolabah Reserve Creighton Drive Kindlebark Oval	Retain existing parks & reserves Ferodale Park Sports Complex Consideration of small parks within new urban release areas
Public amenities (toilets)	1 per every 2,000 people	9	Community Centre Park	Retain existing facilities New public toilets in the town centre commercial area
Aquatic Centres	1 for every 36,000 people	0.5	Lakeside (Raymond Terrace) Swim centre at Ferodale Road East (privately-owned)	Access to lakeside Pool (Raymond Terrace)
Netball Courts	1 for 3,000 people	6	4 at Ferodale Park	4 existing + 2 additional courts at Ferodale Park Sports Complex
Skate Parks	1 for 4,000 people aged 5 to 24	1	1 at Boyd Oval	Improve existing facility at Boyd Oval
Tennis Courts	1 for 2,000 people	9	5 at Boyd Oval	Investigate expansion of existing facility at Boyd Oval

The following points expand on the proposed provision of community and recreational facilities under the strategy:

- **Multipurpose community spaces:** The existing Medowie Community Centre is located at the corner of Ferodale Road and Medowie Road. A second community space is to be constructed as part of the Ferodale Park Sports Complex. Based on projected future population growth under the Strategy, Medowie will require a total of three multipurpose community spaces to meet the infrastructure benchmark. Options include:
    - expanding the existing community centres;
    - improving access to other existing facilities;
    - improved booking systems; and
    - consideration of the role of other privately-owned or public community spaces.

  The provision of a third multi-purpose community space to accommodate full future growth under the Strategy will comprise a combination of these options.
- **Libraries:** The main branch library will continue to be located at Raymond Terrace. However, there is a requirement for a library service (library lounge) at Medowie. Its location is to be in the town centre.
- **Public amenities:** There is a strong community desire for additional quality public toilet facilities in an accessible location within the town centre. This is a key infrastructure item in the Strategy and is to be provided in association with or close to the town square, or along Peppertree Road. Flexibility is retained for their consideration within the commercial area.
- **Parks and reserves:** There is sufficient land area provision of parks and reserves provided at a local, district and regional level. The focus is on ongoing improvements and upgrades to existing parks and reserves, rather than acquiring additional land. Urban release areas may provide additional small-scale local parks on a case-by-case basis.
- **Sports fields and associated facilities:** There is sufficient provision of sports fields and associated facilities. There is, however, increasing demand being placed on existing facilities. The focus will be on ongoing improvements to the existing local and district facilities. The Ferodale Park Sports Complex Master Plan (including an additional oval, 2 additional netball courts and a bowling green) will be implemented. The existing skate park and tennis facilities at Boyd Oval can be added to and improved. There is adequate provision of regional sports fields and associated facilities at Raymond Terrace (Lakeside Sports Complex and King Park).
- **Sports/leisure centre:** Sports/leisure centre facilities are to continue to be provided at the regional level at the Lakeside Leisure Centre (including pool).

5.2 Water management

This section sets down water management principles, summarises the progress of the Medowie Flood Study (prepared by consultants WMA Water in conjunction with Port Stephens Council and the NSW Office of Environment and Heritage) and the commitment to undertake a drainage strategy. Indicative location of water catchments is shown in Figure 7 *Water Catchments*.

5.2.1 Water management principles

Principle 1 - Development will have a neutral or beneficial effect on drinking water quality in the Grahamstown Dam drinking water catchment

Future development within the Grahamstown Dam Drinking Water Catchment needs to demonstrate neutral or beneficial effect on water quality and should be connected to the

reticulated sewer and water system. Controls on development in areas draining directly to the Dam are of critical importance for the protection of water quality and are generally excluded.

Principle 2 – Work collaboratively with Hunter Water Corporation & the community to identify a catchment-wide solution to stormwater drainage and water quality

A drainage strategy will be undertaken to cater for future flows and to address existing drainage issues. It will include assessment of potential stormwater management infrastructure to facilitate future development. The current management approach for Medowie is to include 'offline' detention basins. If the preference from the future drainage strategy is for these basins to be constructed on a sub-catchment basis (rather than on a site-by-site basis) suitable locations will need to be identified. These could be located on drainage outlets from sub-catchments but not located on the main overland flow paths.

Principle 3 - Filling of flood prone land is avoided

The Campvale Drain Inundation Area is a land-locked catchment with limited capacity to convey water away from the area. Given the existing problems with long-term inundation (in the order of weeks) for frequent rainfall events, future filling of flood prone land for urban development could have a cumulative impact on flood levels and should generally be avoided. Flood fringe areas could be investigated.

Principle 5 - Development will not be placed within floodways and flow paths.

Floodway and overland flow paths are areas where flow is of a high velocity or high depth (or a combination of both) and poses a risk to safety or damage to structures. Increasing development density in these locations is not supported due to risk of impacts from flooding. Structures should not be placed in a floodway, and fencing should be limited and not impede flows. The preference is for no development to be located in a floodway. This is consistent with the guidance provided by the NSW Floodplain Development Manual.

5.2.2 Water management studies

Two water management studies have high importance within Medowie and for Strategy purposes: the existing Medowie Flood Study and a future drainage strategy.

Medowie Flood Study

Work on addressing flooding in Medowie is already commenced through the Medowie Flood Study. Detailed mapping is available from Council on request. The process involved the establishment of the Medowie Floodplain Management Committee.

The relevant stages set by the NSW State Government's Flood Policy are:

- Stage One - Data collection (completed);
- Stage Two - Flood Study - Build hydraulic model and define the nature and extent of the flood problem in technical rather than map form (completed);
- Stage Three - Flood Risk Management Study - Update the hydraulic model and determine options in consideration of triple bottom line and risk (completed);
- Stage Four - Flood Risk Management Plan - Planned actions to be adopted for Council. Adopt risk management measures (completed); and
- Stage Five - Plan Implementation - doing the works (ongoing).

Actions for the implementation of the Medowie Floodplain Risk Management Plan will be prioritised into Council's Delivery Program and Operational Plan. High priorities include:

- Progressing the voluntary purchase of the property in the floodway;
- Installation of road depth flood indicators;
- Enhancements to Council's Development Control Plan, minor property adjustments to prevent over floor flooding; and
- Investigation of the purchase of flood inundated land and improvements to the Campvale Drain and lateral drains.

Floodwater inundation on Abundance Road has been highlighted in the Medowie Floodplain Risk Management Study and Plan as well as experienced in the last several floods. As there will be some time before any of the long-term works can commence to mitigate this flood water inundation, it is proposed that Council will utilise mobile pumps on these private properties during flood times (this mitigation measure was not part of the Medowie Floodplain Risk Management Study and Plan).

Hunter Water Corporation is undertaking an options study for the future management of the Campvale flood waters to ensure compliance with the national drinking water guidelines. The options for consideration include diversion of flood flows away from Grahamstown Dam as well as extra treatment processes. Hunter Water expects that its preferred option will be determined by the end of 2016, with the development of the business case and future incorporation into their IPART-approved price path to follow.

Drainage Strategy

The outcomes of the Medowie Flood Study and the potential future urban footprint shown on the Strategy Map will help to inform the completion of a drainage strategy. To be prepared by Council in liaison with the Hunter Water Corporation and address:

- Legal discharge points for future developments;
- Identifying the location of required easements;
- Identifying the location and size of detention basins on a sub-catchment basis;
- Identification of natural flow paths;
- Current drainage infrastructure capacity versus future infrastructure needs;
- Water quality (to assist achieving a neutral or beneficial effect on water quality within the drinking water catchment);
- Water quality and control structures (including a centrally located town lake);
- The management of Campvale Drain; and
- Costings.

A key purpose is to investigate and facilitate the rezoning and subsequent delivery and development of residential urban release areas.

Figure 7 Water Catchments

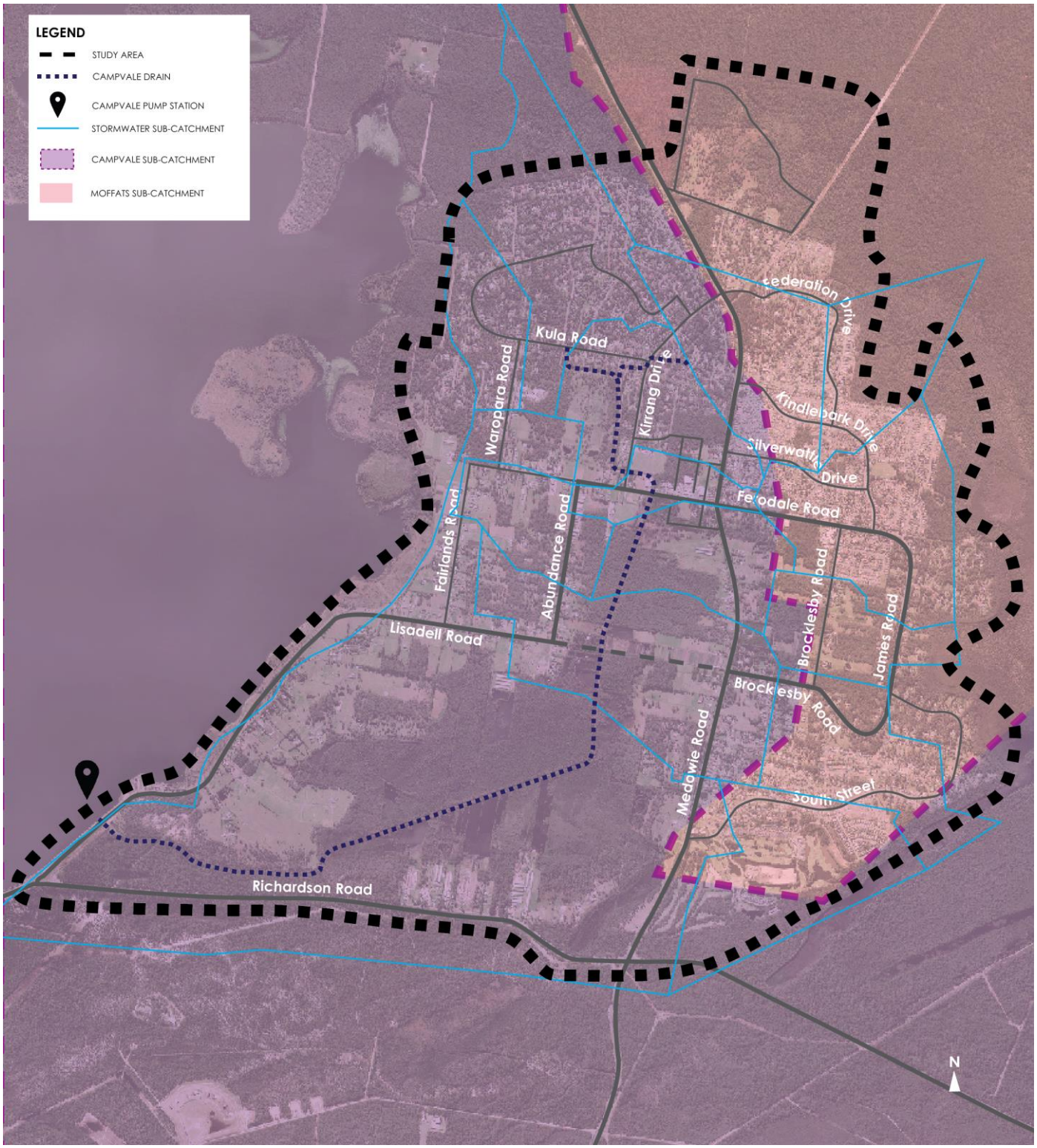
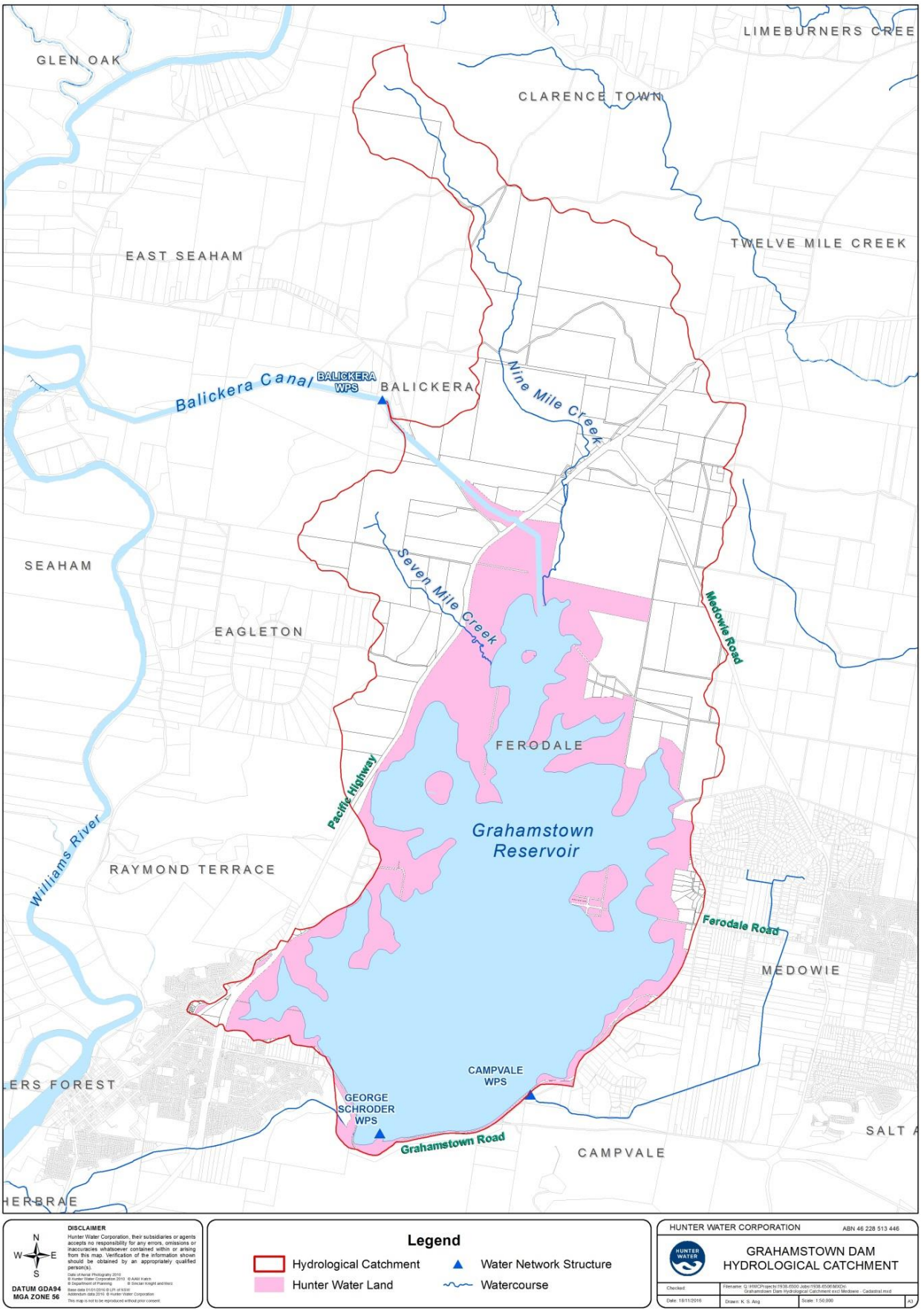


Figure 8 Grahamstown Dam Hydrological Catchment



5.3 Future traffic & transport

This section outlines future transport infrastructure requirements. A road hierarchy and key features is identified to reflect the function and role of the street system and to accommodate the additional growth envisioned by the strategy. It is based on the completed Medowie Traffic and Transport Study (URAP TTW, December 2012) which is to be updated to reflect the Strategy. Flexibility is retained in the Strategy for provision of a taxi facility within the town centre (eg with the new link road extension parallel to Peppertree Road). Summary of the future traffic and transport network is shown in Figure 9 *Future Traffic & Transport*.

5.3.1 Future road network

The future road network comprises of the following roads:

- **Medowie Road:** A sub-arterial road which provides the main access to Medowie and a major link to Williamtown RAAF Base and Newcastle to the south. The existing road reserve width is to be retained to facilitate long-term investigation of 4 lanes.
- **Ferodale Road:** This road provides a major connection to Medowie town centre and is also used as part of a route connecting Medowie to Raymond Terrace. Adjoining Abundance, Lisadell and Grahamstown Roads all function as major collector roads that form part of a main access route to Raymond Terrace. Two new roundabouts are proposed to service the commercial area and upgrades to other roundabouts are proposed.
- **Collector Roads:** The following roads within Medowie provide major access to neighbourhoods while connecting these areas, and therefore function as collector roads: Ferodale Road (between Abundance and Fairlands Road); Fairlands Road; Waropara Road; Kula and Ryan Roads; Kirrang Drive; Federation Drive; Kindlebark Drive; Silver Wattle Drive; South Street; Sylvan Avenue; Boyd Boulevard; Brocklesby Road; James Road; and Peppertree Road (north of Ferodale Road).
- **Brocklesby to Lisadell Road:** A conceptual, very long-term link, has been reinstated as a conceptual link for further potential investigation (only). There are likely to be significant cost, engineering and environmental constraints to its feasibility, including versus the potential transport benefits for the extent of future growth.

5.3.2 Future pedestrian & cycle routes

Five key principles that should be considered for the development of an efficient and usable bicycle pedestrian network:

- Coherence;
- Directness;
- Safety;
- Attractiveness; and
- Comfort.

Key elements of the pedestrian and cycle routes for Medowie are:

- Provision of off-road shared paths within footways along major routes leading to the town centre and joining with major attractors (such as schools and recreation facilities);
- Signposting of rural residential areas of Medowie with a 50km/h speed limit supplemented with 'share the road' signs and pavement markings (e.g. Kula Road). This measure recognises the likely very long-term construction of sealed footways on these roads and the need for on road

cycling within these areas linking with off-road shared paths to destinations throughout Medowie;

- Construction of shared path links:
    - Town centre to Wilga Road;
    - Town centre to Yulong Oval;
    - Cherry Tree Close to Medowie Road;
    - completion of the path between Sylvan Avenue and Ford Avenue;
    - Boundary Road to the town centre;
    - South along Medowie Road towards RAAF Base Williamtown; and
    - 'Kingston' residential release area along Medowie Road to Ferodale Road and a further potential link directly west to the Ferodale Park Sports Complex.
- The route plan is supported by new infrastructure and upgrading of existing infrastructure and intersections to assist road crossings.

5.3.3 Future public transport

Provision of bus bays, including shelter and seating at locations with a higher land use density or levels of activity (schools, sporting and community facilities and the town centre) are to be provided. A primary bus zone is to be located on Peppertree Road to add to the existing town centre bus stops at the Community Centre and on Ferodale Road.

Future traffic and transport upgrades

Projected growth will generate additional transport movements that will necessitate improvements, including new and/or augmented infrastructure to maintain appropriate levels of service, safety and efficiency. The main proposed works and are listed in Table 4 *Traffic and Transport Upgrades*. Costs of traffic and transport infrastructure upgrades will be apportioned approximately 60% to Council and 40% to developer contributions (based on the previous *Medowie Strategy 2009*). A large number of works for future growth are already included in the *Port Stephens Section 94 Development Contributions Plan 2007* based on the former *Medowie Strategy 2009*. Updating the local infrastructure contributions plan is to be undertaken as part of the Strategy's implementation.

Figure 9 Future Traffic & Transport

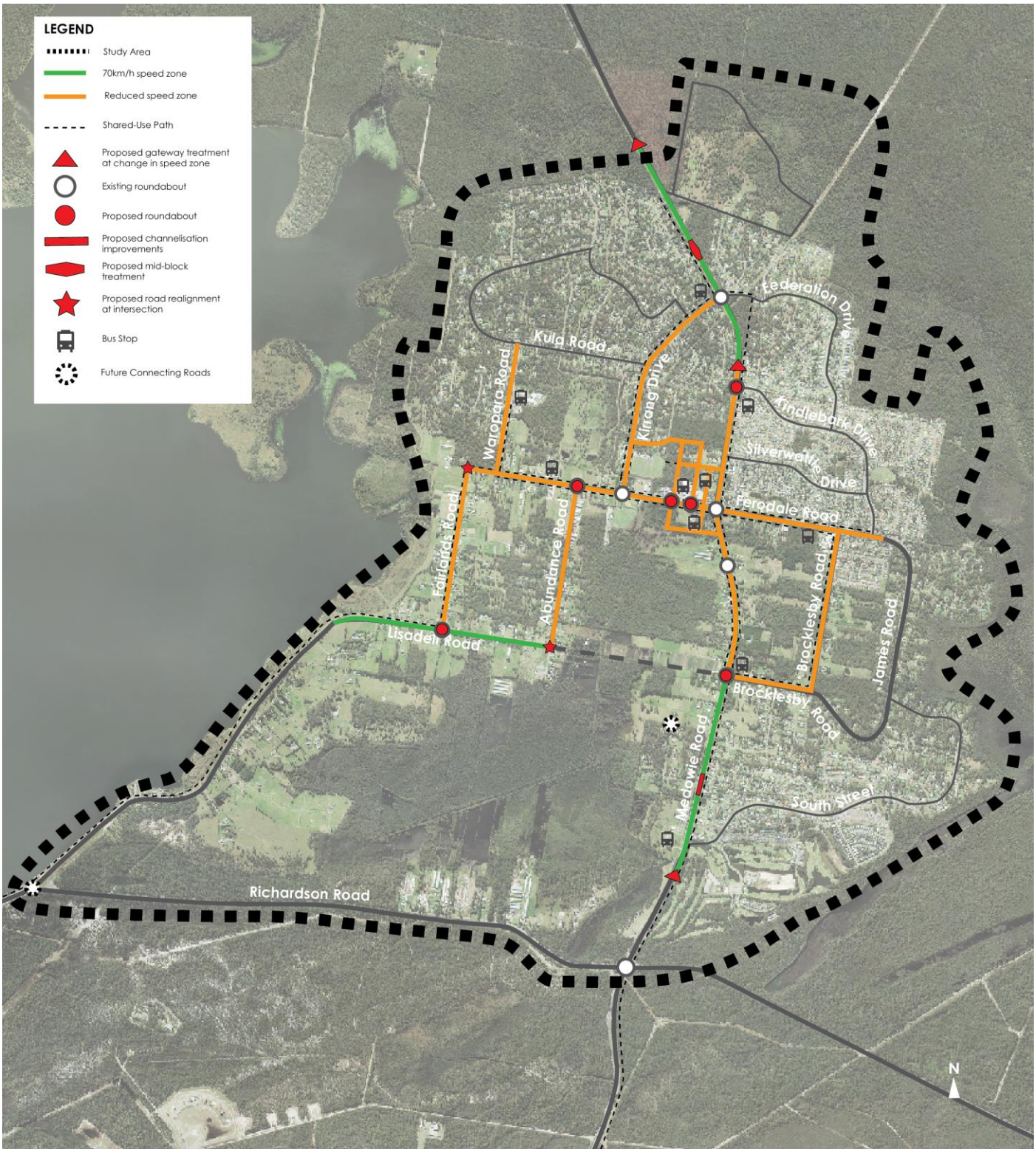


Table 4 Traffic & Transport Upgrades

Location	Works
Medowie Rd (north of Boundary Rd)	Gateway treatment at entrance to Medowie and change in speed zone to 70km/h
Medowie Rd (north of Kindlebark Dr)	Gateway treatment and change in speed zone to 50km/h
Medowie Rd (south of Brocklesby Rd)	Gateway treatment at change in speed zone to 50km/h
Medowie Rd (south of South St)	Gateway treatment at entry to Medowie and change in speed zone to 70km/h
Lisadell Rd and Abundance Rd (Fairlands Rd to Industrial Rd)	Investigate widening of road pavement to provide a minimum carriageway width of 11m (2 x 3.5m wide traffic, 2 x 2m wide road shoulders. Current width varies but has a general minimum of 7m (2 x 3.0m wide traffic lanes 2 x 0.5m wide road shoulders)
Lisadell Rd (at Fairlands Rd)	Roundabout intersection. Short-term priority to widen road shoulder for left turn into Fairlands Rd
Lisadell Rd (at Abundance Rd)	Investigate possible road realignment – introduce horizontal curve to create a T intersection with priority given to the through movement
Lisadell Rd (west of Ferodale Rd)	Gateway treatment at change in speed zone to 50km/h
Abundance Dr (at Ferodale Rd)	Roundabout intersection. Signpost Abundance Rd as the route to Raymond Terrace
Ferodale Rd (at Kirrang Dr)	Existing roundabout – upgrade to current geometric standards
Ferodale Rd (at Peppertree Rd)	Roundabout intersection to replace existing T intersection
Ferodale Rd (at main access to commercial)	Roundabout intersection to replace several access driveways
Medowie Rd (at Brocklesby Rd)	Roundabout intersection (to suit possible future development on west side of Medowie Rd)
Medowie Rd (at Blueberry Rd)	Improve channelization of existing intersection – shoulder widening and left turn lane
Medowie Rd (at Kindlebark Dr)	Roundabout intersection
Various roads (on-road routes in residential areas)	Implement 50km/h area speed zoning with share the road signs supplemented with pavement markings
Off Medowie Rd (Medowie Rd to Cherry Tree Cl)	Off-road shared path
Medowie Rd (Silver Wattle Dr to Ferodale Rd)	Off-road shared path on east side
Various Rd (on-road routes in residential areas)	Implement 50km/h area speed zoning with share the road signs supplemented with pavement markings

Location	Works
Off Ford Av (Ford Av to Sylvan Av)	Complete off-road shared path within cadastral corridor
Medowie Rd (At Silver Wattle Dr)	Install pedestrian refuge island
Silver Wattle Dr (at Medowie Rd)	Install pedestrian refuge island
Kirrang Dr (at Ferodale Rd)	Install pedestrian refuge island
Brocklesby Rd (at Ferodale Rd)	Install pedestrian refuge island to replace existing median with no pedestrian refuge
Medowie Rd (Boundary Rd to Kirrang Dr)	Off-road shared path on west side to future residential area. Investigate possible alternate route – Boundary Rd to Federation Dr via Settlers Cl/Overland Av/Explorers Cl
Medowie Rd (Federation Cl to Kindlebark Dr)	Off-road shared path on east side
Medowie Rd (south of Ferodale Rd at small commercial centre)	Install pedestrian refuge island
Medowie Rd (at Blueberry Rd)	Install pedestrian refuge island
Muir St (town centre to Yulong Oval)	Shared path with bridge over creek
Kirrang Dr (Ferodale Rd to Medowie Rd)	Off-road shared path west side
Brocklesby Rd (Medowie Rd to Ferodale Rd)	Off-road shared path north and west side
Medowie Rd (Ferodale Rd to South St)	Off-road shared path east side
Ferodale Rd	Off-road shared path south side (Kirrang Dr to Coachwood Dr) (Medowie Rd to Coachwood Dr) (Kirrang Dr to Medowie Rd)
Medowie Rd (Ferodale Rd to approx. 500m south)	Off-road shared path west side
Waropara Rd (Ferodale Rd to Medowie Christian School)	Off-road shared path east side
'Kingston' residential release area	Investigate off-road shared path-west to Ferodale Park Sports Complex (subject to engineering and cost review)

5.4 Habitat & key corridors

Medowie contains large areas of significant habitat and important corridors to be retained that are subject to policy and legislative considerations. The most significant ecological issue for future urban planning in Medowie is planning for the conservation of the koala. Other threatened species

are also known to occur in the area and protections apply. The majority of koala habitat and endangered ecological communities in Medowie are situated within and along the border of flood prone land. This allows for a central local fauna corridor to be retained and reinforced. There are also significant areas of koala habitat including corridors located on elevated flood-free land (eg Brocklesby Road area).

5.4.1 Key corridors

Corridor 1 (North-South): This corridor follows the boundary of flood prone land and drainage lines and incorporates a majority of connective patches of preferred koala habitat. It is the 'primary' habitat corridor within Medowie. Koala sighting data suggests that they use the central corridor. It is situated, in part, among some housing lots to the north where tree removal is prohibited without the consent of Council under Section 88b of the *Conveyancing Act 1919* (NSW). This helps to facilitate the possibility of long-term management of koala habitat.

Corridor 2 (East-West): There are indicative connective patches of preferred koala habitat on the western side of Medowie, between Abundance Road and Fairlands Road. These patches connect with the western boundary of Medowie. Hunter Water Corporation has recently undertaken tree planting in proximity to Grahamstown Dam. Strengthening connectivity from Corridor 1 has the potential to ensure long-term koala movement away from identified future residential release areas.

Corridor 3 (East-West): This corridor is located on the largest parcel of preferred koala habitat land in the east of Medowie. A concentration of koala sightings indicates that this area acts as an east-west corridor, deriving from Corridor 1 extending east to a regional corridor outside of Medowie. Sightings and recorded koala-vehicle collisions on Medowie Road suggests koalas readily use the vegetation within Corridor 3. Minimal koala sightings in the Medowie State Forest, further to the east, are most likely due to minimal observation. This area contains undisturbed preferred koala habitat, and its protection within the proposed corridor is vital in a local-regional corridor link.

5.4.2 Port Stephens Comprehensive Koala Plan of Management

The provisions of the *Port Stephens Comprehensive Koala Plan of Management* (CKPOM) apply. The principal aim is to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas, to ensure permanent free-living populations over their present range and to reverse the current trend of population decline.

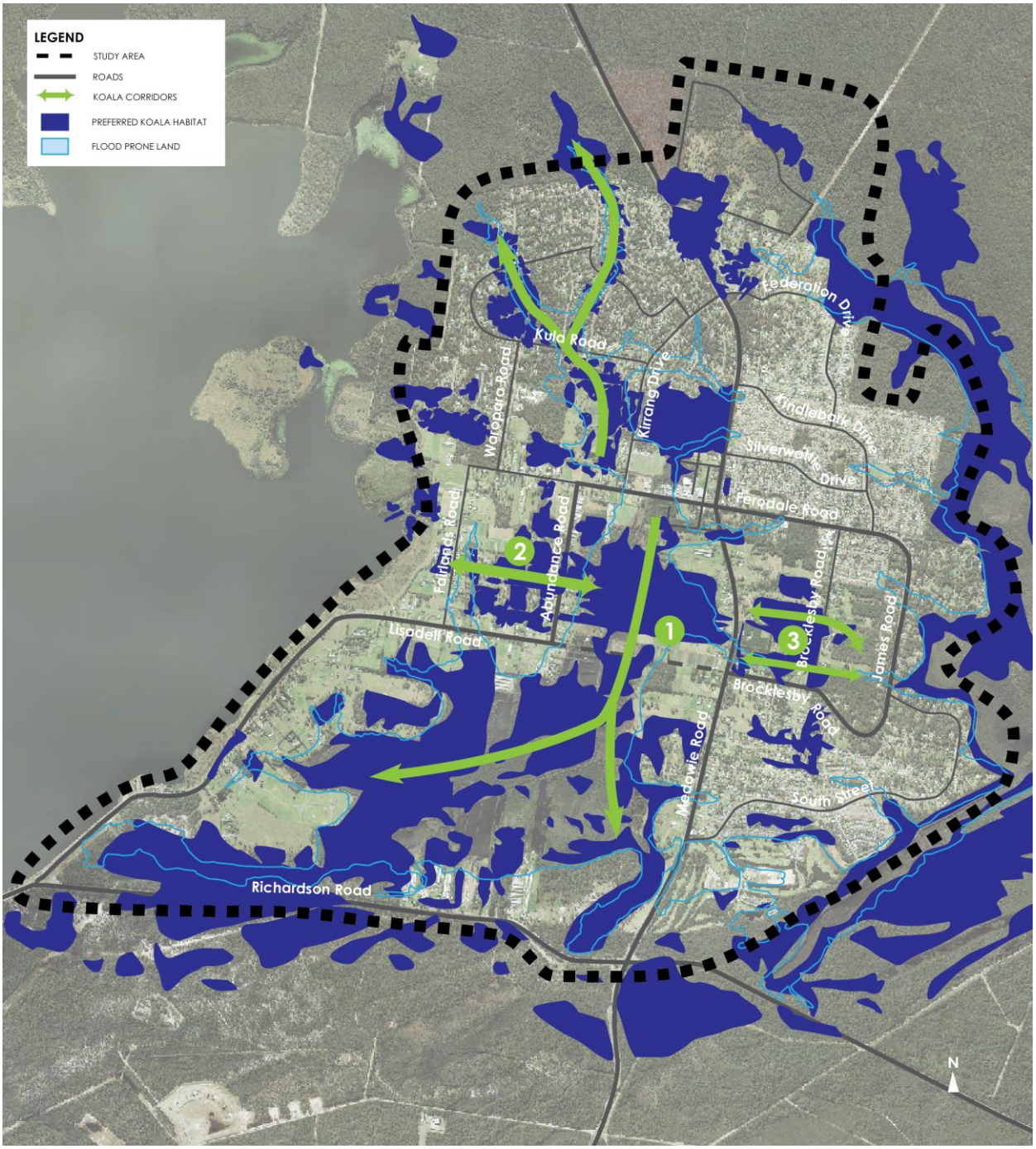
The performance criteria for planning proposals in the CKPOM are that they should:

a) *Not result in development within areas of Preferred Koala Habitat or defined Habitat Buffers;*
b) *Allow only for low impact development within areas of Supplementary Koala Habitat and Habitat Linking Areas;*
c) *Minimise the removal of any individuals of preferred koala feed trees, wherever they occur on the site; and*
d) *Not result in development which would sever koala movement across the site. This should include consideration of the need for maximising tree retention on the site generally and for minimising the likelihood of impediments to safe/unrestricted koala movement.*

Some areas identified for urban development may be inconsistent with the CKPOM, because of proposed development of, or development in proximity to, koala habitat and associated buffers. This would need to be further assessed and considered during the planning proposal stage by site investigations in accordance with approved methodology. In addition to the CKPOM, consideration

is to be given to the protections provided by State and Commonwealth legislation (the TSC Act and the EPBC Act). The Mapping in Figure 10 Habitat and Key Corridors is indicative only.

Figure 10 Habitat & Key Corridors



6.0 IMPLEMENTATION

This section sets out a plan for implementing the strategy and provides guidance on the information required for planning proposals.

6.1 Implementation plan

Implementation will be driven by the Port Stephens Council Economic Development Unit in consultation with an implementation panel, acting in an advisory role and comprised of Councillors, Council staff, community members and other stakeholders on an 'as needed' basis. Council generally has primary responsibility for leading implementation.

Table 5 *Implementation Plan* sets out items, actions, purpose and responsibility for implementation. The timing for actions serves as an indicator to the resources and priorities. Some short term items are able to commence immediately. They are:

- short-term (0-5 years);
- medium-term (5-10 years); and
- long-term (10+ years).

Some matters are already completed or are ongoing.

Table 5 Implementation Plan

Item	Action	Purpose	Timing
Implementation panel	Establish panel	Facilitate delivery of infrastructure and development envisioned by the Strategy	Short-term
Drainage Strategy	Undertake drainage strategy in liaison with HWC	Identify drainage solutions to support urban development including detention basin location requirements, easements and the town lake	Short-term.
	Update Local Area Contributions Plan (Section 94 Plan) to include drainage works	To ensure arrangements are in place to collect equitable contributions from new development towards drainage infrastructure	Short-term
	Implement identified works	To construct identified works (existing identified and as updated)	Ongoing
Flood Study	Finalise Flood Study	Determine the nature & extent of the flood problem	Completed
Item	**Action**	**Purpose**	**Timing**

	Floodplain Risk Management Study	Evaluate management options	Completed
	Floodplain Risk Management Plan	Adopt risk management measures	Completed
	Implementation of the Plan	Construction and implementation of risk management measures	Ongoing.
Infrastructure Plans	Align Council infrastructure plans with the Strategy	To facilitate delivery of public infrastructure identified in the Strategy	Short-term
Ferodale Park Sports Complex Master Plan	Commence implementation of Ferodale Park Sports Complex Master Plan	To enable greater public use and enjoyment of the site through the provision of new infrastructure and facilities, expand opportunities for sporting use as well as organised events and gatherings	Short-term
Library Facility	Investigate location and design of a new library facility	To provide a local library facility to meet population growth	Medium-term
Port Stephens Koala Study – distribution and abundance of koalas	Finalise LGA-wide study and investigate potential land use planning issues related to areas of koala generational persistence (core koala habitat) within Medowie	To better understand the distribution, abundance of koalas and their habitat across the PS LGA over time To assist preparation and assessment of planning proposals	Short-term
Sports Field Usage Review	Undertake a sports field usage review	To monitor population growth in Medowie against the standard for the provision of sporting fields	Medium-term

Item	Action	Purpose	Timing
Rural Industry at Richardson Road	Investigate long-term land use planning issues for rural industries along Richardson Road	To set future direction for land use in this particular location	Long-term
Street Tree Strategy	Undertake street tree planting strategy	To improve the scenic amenity of main roads and entrances to Medowie	Medium-term
Town Centre Development Control Plan	Prepare a DCP to implement road layout and design elements of the town centre master plan	To coordinate and facilitate development applications within the town centre in accordance with the town centre master plan	Short-term
Town square and new public amenities (toilets)	Undertake detailed planning for the town square and new public amenities	To provide a high quality public open space and new public amenities in the town centre commercial area	Medium to long-term
Traffic and Transport Strategy	Update existing Traffic and Transport Strategy	Ensure the Traffic and Transport Study reflects the growth identified in the Strategy	Short-term
	Update existing Local Area Contributions Plan (Section 94 Plan) for potential revised infrastructure	To ensure arrangements are in place to collect equitable contributions from new development towards traffic and transport infrastructure	Short-term
	Implement identified works	To construct identified works (existing identified and as updated)	Ongoing
Traffic and Transport – Medowie Road Study	Investigation of strategic feasibility of upgrading Medowie Road to 4-lanes	To strategically review and determine the potential and need for any future upgrade of Medowie Road to four lanes	Long-term
Urban Development Monitoring Program	Monitor dwelling production and take-up rates	To measure demand for residential development in Medowie to inform future planning	Short-term Ongoing

6.2 Planning proposals

Planning proposals are more commonly referred to as rezoning requests. They are required to formally consider the rezoning of land and are a critical first step towards delivering residential release areas. The level of information provided at lodgement of a planning proposal should be sufficient enough, and be proportionate to, the complexity of the proposed amendment. The planning proposal should contain enough information to enable assessment of the merit of the proposal, and demonstrate that relevant environmental, social, economic, and other site specific matters have been identified, and if necessary, that any issues can be addressed with additional information and/or through consultation with State agencies and the community.

Planning proposals are to be based on the whole of a planning precinct and include entire lots. A primary purpose of this approach is to ensure the coordinated delivery of residential release areas among multiple landowners particularly for infrastructure (roads, intersection treatments, drainage infrastructure etc). It is also beneficial for cost-sharing for supporting studies and assessment fees and the administration of the LEP.

To facilitate the efficient assessment and rezoning of land in Medowie the following is generally required:

- A planning proposal prepared in accordance with the format of the NSW Department of Planning and Environment's *A guide to preparing planning proposals*;
- A flora and fauna report (including: site survey; determination of the likelihood of any critical habitat or threatened species, populations or ecological communities, or their habitats; assessment against the CKPOM; indication of potential offsetting requirements in accordance with NSW policy and guidelines; related consideration of bushfire protection requirements/asset protection zones);
- Preliminary or concept level reports on: traffic and transport; flooding and stormwater management; bushfire; reticulated sewer and water servicing; Aboriginal heritage; aircraft noise & safety;
- For planning proposals within the Grahamstown Dam Drinking Water Catchment: – water quality modelling that demonstrates neutral or beneficial effect on water quality (provided post gateway determination);
- For planning proposals seeking a commercial zoning - a preliminary economic assessment addressing supply and demand (provided at lodgement); and
- For planning proposals seeking a site-specific additional permitted commercial use – an economic assessment (provided post gateway determination).
- A development control plan may also be required. Clause 6.3 of the LEP requires the preparation of a development control plan for urban release areas prior to development consent being granted. The objective is to ensure that development occurs in a logical and cost-effective manner, in accordance with a staging plan, and only after site-specific development controls has been prepared.

Preliminary or concept level reports need to indicate that relevant issues can be satisfactorily resolved if a planning proposal proceeds. Further information may be required after initial review by Council and further as part of any conditional gateway determination. A preliminary concept plan may be requested as a separate attachment to the planning proposal (refer to the EP & A Act s117 Direction 6.3 *Site Specific Provisions*).

7.0 SUPPORTING BACKGROUND INFORMATION

This section sets out broad supporting background information that helps to inform and influence the Strategy outcomes.

7.1 Location

Medowie is located in the geographical centre of Port Stephens LGA and is approximately:

- 15km from Raymond Terrace (major regional centre;
- 30km from Newcastle (regional city);
- 35km from Nelson Bay (specialised centre for tourism); and
- 5km from RAAF Base Williamtown and Newcastle Airport (a major Defence facility, regional airport and employment centre).

Medowie Road is the primary transport route and provides connections on to: Newcastle; Raymond Terrace; Nelson Bay; RAAF Base Williamtown and Newcastle Airport; and the Pacific Highway.

Nearby Raymond Terrace is a Major Regional Centre and provides a range of regional level facilities, and government and commercial services for Medowie residents. The focus for commercial activity within Medowie is the existing town centre in the vicinity of Ferodale Road and Peppertree Road.

Medowie is surrounded by land uses and factors that effectively limit its physical outward expansion including:

- To the north - State Forests and State Conservation Areas;
- To the east - Department of Defence land (associated with the Salt Ash Air Weapons Range), forest, wetlands and flood prone land;
- To the south - Groundwater catchment areas for the Tomago Sandbeds, flood-prone land and RAAF Base Williamtown and Newcastle Airport; and
- To the west - Grahamstown Dam.

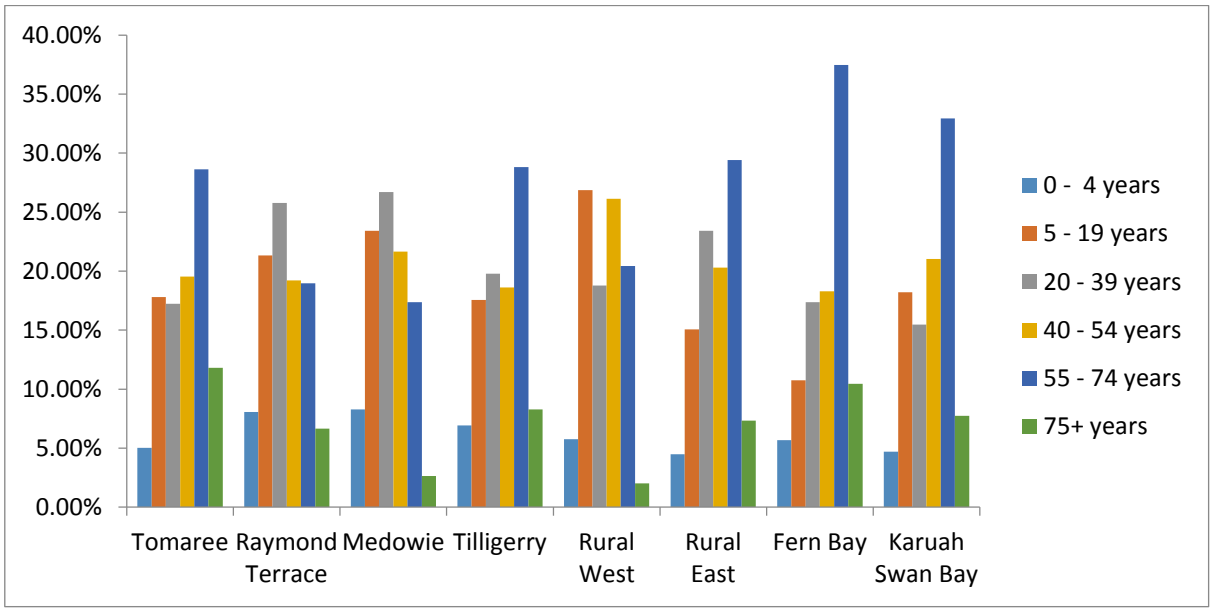
These broad-scale limitations on outward growth act to define the extent of the Strategy. There are also factors within Medowie that limit its internal expansion, including flood prone land and vegetated areas with significant legal and policy protections. Large areas are also located within the Grahamstown Dam Drinking Water Catchment, requiring additional careful consideration to improve or maintain water quality.

7.2 Demographics

Medowie (pop. 8, 844 at 2011 Census) is within the Medowie Planning District, which includes adjoining suburbs of Ferodale (pop. 86) and Campvale (pop. 35), and a total population of 8,965 (2011 Census). The Medowie Planning District catchment increased from 8,472 people in 2006 to 8,965 in 2011, an increase of 506 people, or 4.8%. In 2016 the estimated population of the Medowie Planning District is approximately 10,306.

Medowie has some unique demographic characteristics compared to the wider LGA that are likely to influence future growth and community needs, such as infrastructure and services. For example as can be observed in the following graph the Medowie population includes a higher proportion of children and young people, including those aged between 20 – 39. This younger population is

indicative of an area that is typically still establishing itself as a community, or experiencing higher levels of development activity and attracting new residents.



Comparatively, as is observed in the above the population of the 20 – 39 aged group living in Medowie is 26.67%, similarly to that of NSW (27.17%) and nearly 6% higher than within the Port Stephens LGA (21%). However, Medowie is also experiencing growth of its ageing population at the highest rate in the LGA. These changing demographics will impact on types of future housing stock in Medowie. Currently, housing stock is predominantly 98% single detached dwellings, as opposed to 81.5% of single detached dwellings in the Port Stephens LGA. In Medowie single detached dwellings are occupied with 31.49% of two person households, followed by 20.89% of four person households. The average single dwelling household size in Medowie is 2.82 persons. While the current population and dwellings are likely to meet existing community needs, an ageing population will require more diverse housing choices, which are smaller, incorporate adaptable and high quality design features, and suitably located near services that are affordable.

Table 6 Demographics

Item	Medowie (exc. Campvale & Ferodale)	Port Stephens LGA
Population	9238	67214
Children (0-4)	8.27%	6.3%
Youth (5-19)	23.44%	19.62%
Adult (20-39)	26.67%	20..99%
Adult (40-54)	21.66%	20.25%
Seniors (55-74)	17.36%	24.82%
Aged (75+)	2.60%	8.01%
Single detached dwelling	98%	81.5%
Home ownership	74%	65.9%

7.3 Policy context

Land use planning in Medowie is influenced by a wide range of planning policies and instruments that the set context for the Strategy. This section provides a brief summary of some key instruments and policies and how they influence development and further growth (other instrument and policies may also apply).

7.3.1 Hunter Regional Plan 2036

The Hunter Regional Plan was released in 2016. It projects a population increase of +18,550 people and an increase of +11,050 dwellings for the Port Stephens LGA. Medowie is listed as a centre of local significance in the local narrative including delivery of existing urban release areas.

The Hunter Regional Plan aims to achieve the following goals and relevant directions for greater Newcastle:

- Goal 1 – The leading regional economy in Australia (Direction 1 – Grow Greater Newcastle as Australia's next metropolitan city; Direction 6 – Grow the economy of Mid-coast and Port Stephens);
- Goal 2 – A biodiversity-rich natural environment (Direction 14 – Protect and connect natural areas; Direction 15 – Sustain water quality and security);
- Goal 3 – Thriving communities (Direction 17 - Create healthy built environments through good design; Direction 18 – Enhance access to recreation facilities and connect open spaces); and
- Goal 4 – Greater housing choice and jobs (Direction 21 – Create a compact settlement; Direction 22 – Promote housing diversity; Direction 23 – Grow centre and renewal corridors; Direction 25 – Monitor housing and employment supply and demand; Direction 26 – Deliver infrastructure to support growth and communities).

7.3.2 Lower Hunter Regional Strategy 2006-2031

The Lower Hunter Regional Strategy was released in 2006 and aimed to guide the growth of the Region for the following 25 years. It identified a total new dwelling capacity projection of 12,500 for the Port Stephens Local Government Area, comprised of 5,300 dwellings in infill areas and 7,200 dwellings in new release areas, with the location to be determined by local plans. Medowie was identified as a proposed urban area with boundaries to be defined by local planning: a key reason for preparing the previous *Medowie Strategy* in 2009. The Lower Hunter Regional Strategy is replaced by the draft Hunter Regional Plan.

7.3.3 Port Stephens Planning Strategy 2011-2036

The Port Stephens Planning Strategy is a comprehensive land use planning strategy for the Port Stephens Local Government Area. It responds to the Lower Hunter Regional Strategy and Lower Hunter Regional Conservation Plan by providing local level detail, identifying future growth areas, and incorporating the results of more recent studies (such as the Port Stephens Commercial and Industrial Land Study and the Port Stephens Rural Lands Study).

The Port Stephens Planning Strategy identifies Medowie as a Priority 1 Urban Release Area, to be developed over a 20 to 25 year period with a yield of 2,700 dwellings (comprised of infill and new release development) at an average density of 15+ dwellings per hectare.

The Medowie Planning Strategy is a companion document to the Port Stephens Planning Strategy.

7.3.4 Ministerial directions

Under section 117 of the EP and A Act the Minister for Planning has issued a range of Directions that influence land use planning. The principal Directions that influence land use planning in Medowie, and taken into broad consideration for the Strategy, are:

- Direction 2.1 *Environment protection zones* (discussed previously);
- Direction 3.4 *Integrating land use and transport*;
- Direction 3.5 *Development near licensed aerodromes;*
- Direction 4.3 *Flood prone land*; and
- Direction 5.1 *Implementation of regional strategies*.

Planning proposals seeking to implement the Strategy must be consistent with, or provide adequate justification for departure from, these and the range of other applicable Directions.

Ministerial Direction 3.4 *Integrating land use and transport*

The objective of this Direction is to ensure that urban structures, building forms, land use locations, development designs, subdivision and street layouts achieve the following planning objectives:

a. Improving access to housing, jobs, and services by walking, cycling and public transport, and
b. Increasing the choice of available transport and reducing dependence on cars, and
c. Reducing travel demand including the number of trips generated by development and the distances travelled, especially by car, and
d. Supporting the efficient and viable operation of public transport services, and
e. Providing for the efficient movement of freight.

The Strategy seeks to meet the objectives of this Direction by identifying areas for urban development that are a logical expansion of existing urban areas, that also provide access to main transport routes (vehicle, walking and cycling), the commercial centre and community and recreational facilities. A shared path network (for both pedestrians and cyclists) is reinforced and planned to facilitate walking and cycling. The Strategy reinforces the existing town centre as the focus for commercial and community activity and the primary destination for public transport, walking and cycling.

Ministerial Direction 3.5 *Development near licensed aerodromes*

The objectives of this Direction are:

a. To ensure the effective and safe operation of aerodromes, and
b. To ensure that their operation is not compromised by development that constitutes an obstruction, hazard or potential hazard to aircraft flying in the vicinity, and
c. To ensure development for residential purposes or human occupation, if situated on land within the Australian Noise Exposure Forecast (ANEF) contours of between 20 and 25, incorporates appropriate mitigation measures so that the development is not adversely affected by aircraft noise.

The Direction applies when a relevant planning authority prepares a planning proposal that will create, alter or remove a zone or a provision relating to land in the vicinity of a licensed aerodrome. It is relevant because Medowie is in the general vicinity of Williamtown Royal Australian Air Force Base, Newcastle Airport, and the Salt Ash Air Weapons Range.

Two ANEF maps have been published in recent years in relation to the LGA:

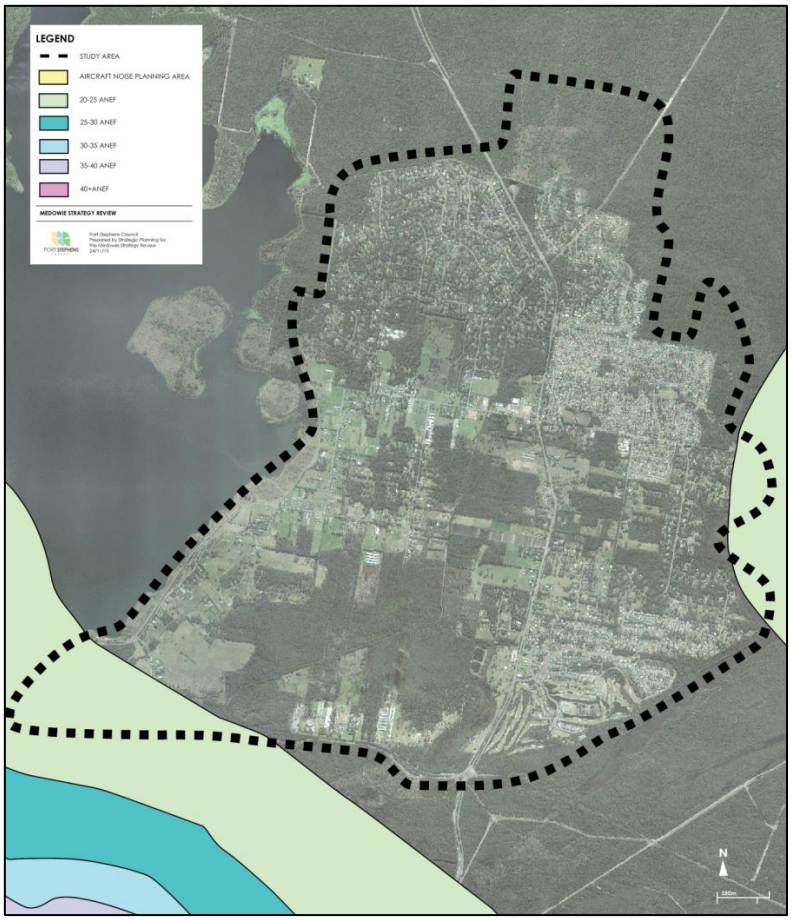
- *RAAF Base Williamtown & Salt Ash Weapons Range 2025 ANEF*. This forecast was made on 10 August 2011 and is based on predicted conditions in 2025. It primarily reflects the operation of Joint Strike Fighter combat aircraft after 2018 and the continued operation of the Hawk aircraft.
- *RAAF Base Williamtown & Salt Ash Weapons Range 2012 ANEF*. This forecast was made in 2003 and is based on predicted conditions in 2012. It primarily reflects the operation of existing Hornet and Hawk aircraft and is expected to continue to at least 2018.

These maps form a composite 'Aircraft Noise Planning Area'.

The main issue to consider is aircraft noise in relation to ANEF 2025. The majority of Medowie is not located within ANEF contours; however land outside of contours can still be subject to aircraft noise. Bird strike, building height and building material and lighting also require consideration (refer to the LEP and DCP).

The Strategy seeks to satisfy this Direction by not identifying land for residential urban growth within ANEF noise contours or within the *Aircraft Noise Planning Area*. The exception is a minor area in the south-west of Medowie identified as rural residential and within the 20 to 25 ANEF 'conditionally acceptable' noise contours. The amount of additional potential development that is facilitated in this particular area is minor (approximately 10 lots). It is already zoned R5 Large Lot Residential with an applicable minimum lot size range of 1 to 2 hectares.

Figure 11 ANEF (2025)



Ministerial Direction 4.3 Flood prone land

The objectives of this Direction are:

a. *To ensure that development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005 and*
b. *To ensure that the provisions of a local environmental plan on flood prone land is commensurate with flood hazard and includes consideration of the potential flood impacts both on and off the subject land.*

Substantial areas of Medowie are prone to flooding. The Strategy seeks to meet the objectives of this Direction by generally avoiding the identification of flood prone land for future urban development. Planning proposals are also required to demonstrate adequate consideration of the flood environment to avoid any additional impacts.

Ministerial Direction 5.1 *Implementation of regional strategies*

The objective of this Direction is to give legal effect to the vision, land use strategy, policies, outcomes and actions contained in regional strategies. Medowie is identified in the Lower Hunter Regional Strategy as a proposed urban area with boundaries to be defined by local planning. The Strategy implements this Direction through its broad consideration of land use planning issues and subsequent identification of potential urban release areas to deliver additional land for housing.

7.3.5 Port Stephens Local Environmental Plan 2013

The LEP is the legal instrument that zones land, imposes standards to control development, and implements State and local policy outcomes for land use planning. In order to consider amendments to the LEP a planning proposal (rezoning request) is required. It comprises a written legal instrument and a series of maps (refer to the website www.legislation.nsw.gov.au for the current version of the LEP including but not limited to zoning and lot size maps).

7.3.6 Port Stephens Development Control Plan 2014

The *Port Stephens Development Control Plan 2014* contains detailed development design principles and controls.

Urban release areas identified in the Strategy will require the preparation of site-specific development control plans that address a range of detailed planning matters set out in Clause 6.3 *Development control plan* of the LEP including:

- A staging plan for the timely and efficient release of urban land, making provision for necessary infrastructure and sequencing;
- An overall transport movement hierarchy showing the major transport routes and connections to achieve a simple and safe movement system for private vehicles, public transport, pedestrians and cyclists;
- An overall landscaping strategy for the protection and enhancement of riparian areas and remnant vegetation, including visually prominent locations, and detailed landscaping requirements for both the public and private domain;
- A network of passive and active recreation areas;
- Stormwater and water quality management controls;
- Amelioration of natural and environmental hazards, including bushfire, flooding and site contamination and, in relation to natural hazards, the safe occupation of, and the evacuation from, any land so affected;
- Detailed urban design controls for significant development sites;

- Measures to encourage higher density living around transport, open space and service nodes;
- Measures to accommodate and control appropriate neighbourhood commercial and retail uses; and
- Suitably located public facilities and services, including provision for appropriate traffic management facilities and parking.

Location-specific development control chapters will be used to implement a number of initiatives outlined in the strategy and the town centre master plan.

7.3.7 Development contributions plans

Section 94 developer contributions plans provide for the levying of contributions, as a condition of development consent, towards the public capital costs for facilities required as a result of new development. These plans also detail Council's policy for the assessment, collection, spending and administration of contributions.

The yearly allocation of funds to specific projects takes place during the budget process, which is undertaken as part of the Council's *Operational Plan*, although the overall allocation of funds to projects is shown in the *Port Stephens Section 94 Development Contributions Plan 2007* (incorporating the *Medowie Local Area Contributions Plan – Traffic and Transport*). Updating the development contributions plans is a key action to implement the Strategy.

7.4 Water catchments

Water management is critical in Medowie to maintain drinking water quality and address flooding and drainage. This sub-section describes the relevant catchments including the Grahamstown Dam drinking water catchment; the Campvale swamp catchment; and the Moffat's swamp catchment. The indicative location of each catchment is shown previously in Figure 7 *Water Catchments.*

7.4.1 Grahamstown Dam drinking water catchment

Maintaining healthy drinking water catchments is fundamental to the provision of safe, high quality drinking water for the region. The quality of the water stored in our region’s dams and sandbeds affects the level of subsequent treatment required and therefore the cost of the water delivered to the community. In addition to the provision of safe drinking water, effective catchment management also achieves multiple benefits such as improved habitat and lifestyle benefits through improved amenity.

Grahamstown Dam, operated by Hunter Water, is a major source of drinking water for the Lower Hunter region, supplying around 50% of its needs on an ongoing basis.

A large proportion of Medowie is located within the Grahamstown Dam catchment area, which coincides with the Campvale Sub-catchment shown in Figure 16 *Catchment Map*. Campvale Drain collects rainwater runoff in Medowie, and Hunter Water Corporation's Campvale Pumping Station pumps water from the drain into Grahamstown Dam. There is no alternative discharge for these flows. Campvale Drain has a catchment area of approximately 19.5km^2 and represents approximately one quarter of the Grahamstown Dam catchment. It contributes around 7% of the water flowing into the Dam.

A small area of land along the western edge of Medowie drains directly into Grahamstown Dam. Controls on development in areas draining directly to the Dam are of critical importance for the protection of water quality. Risks from land use in this area are two-fold; those associated with

stormwater run-off, and those associated with increased and uncontrolled land use intensity. Not only is the risk of pathogens and nutrients increased in this area from direct drainage into the Dam, but more intense development also results in greater risks from indirect and uncontrolled activities associated with adjacent development, such as informal recreation, pollution, swimming, dog walking etc. As land use intensity increases in proximity to the Dam, so does the risk to water quality in the drinking water source. Increased development on land draining directly to the Dam is highly constrained and requires very careful consideration for these reasons.

Water is extracted from Grahamstown Dam approximately 2.5 kilometres from the Campvale Drain outlet, at the George Schroeder Pump Station in Finnan Park (located along Grahamstown Road). It is then delivered to Grahamstown Water Treatment Plant for treatment to the standard required by the *Australian Drinking Water Guidelines* before distribution to Hunter Water Corporation's system.

The Campvale Drain catchment is highly urbanised with additional growth planned. In addition to the Medowie urban centre, it also includes a diverse range of land zonings including residential, rural residential, rural small holdings, commercial, industrial, environmentally protected, and forestry land. Stormwater runoff from urban areas, agricultural areas, non-sewered properties and the reticulated wastewater system all have the potential to introduce water quality hazards and contribute to declining water quality in the Drinking Water Catchment.

If not managed appropriately, increasing development within the catchment could cause a deterioration of water quality within Grahamstown Dam. Hunter Water Corporation uses a risk-based approach to identify and manage potential threats to water quality in accordance with the *Australian Drinking Water Guidelines*. This includes maintaining robust multiple barriers, with protection of water sources being of paramount importance.

As with other areas within the drinking water catchments, the Campvale Drain catchment is subject to the *Hunter Water Regulation 2015* (NSW) As such, any proposal that has the potential to impact on Hunter Water's water reserves is subject to review under Section 51 of the *Hunter Water Act 1991* (NSW) which requires Council to notify Hunter Water Corporation of development applications that may impact the drinking water source.

Any development application within the Drinking Water Catchment is also subject to the provisions of *Clause 7.8 Drinking Water Catchments* of the *Port Stephens Local Environmental Plan 2013*. The objective of this Clause is to protect drinking water catchments by minimising the adverse impacts of development on the quality and quantity of water entering drinking water storage areas.

Managing the Region's drinking water catchments requires effective collaboration between a range of stakeholders including Hunter Water, local government, regulators, the agricultural, commercial and industrial sectors, landowners and the community.

Working together to protect water supplies will ensure that Hunter Water Corporation can continue to provide safe, reliable and affordable drinking water for the Region. This is outlined in Water Management Principle 2 - *Council and Hunter Water Corporation will work collaboratively to identify a catchment-wide solution to drainage and water quality*.

7.4.2 Campvale swamp catchment

The Campvale Catchment is bound by a ridgeline to the east of Medowie Road, Richardson Road to the south and Grahamstown Dam to the west. The catchment rises in forest north of the township, drains south via the Campvale Drain into the Campvale Drain Inundation Area, then

south-west to the Campvale Water Pumping Station which transfers water into Grahamstown Dam.

The drainage system within the catchment consists of relatively ill-defined natural watercourses, open drains, pipes and pits, culverts and the downstream pumping station. Most of these elements are in Council's care and control and lie within road and drainage reserves, public reserves and drainage easements. However some of these elements are controlled by other bodies such as Hunter Water Corporation.

Campvale Drain terminates at Campvale Drain Water Pumping Station which is owned by Hunter Water Corporation. The pump station houses four pumps. Each pump has a maximum capacity of approximately 1.35m^3/sec (or approximately 120 ML/day). The pumps are responsible for conveying the majority of all stormwater runoff from the catchment into Grahamstown Dam. The pump operation is automated and dependent on the water level at the off-take location.

The frequency, extent and period of flooding are the main concerns for land owners in the Campvale Drain Inundation Area.

From a flooding perspective this sub-catchment is relatively unique in that outflow from the catchment is limited by pump rate and does not scale. Due to this constraint there are two different types of flood-affected residences within the wider Campvale Catchment. Residences upstream of Ferodale Road are impacted by water moving downstream, and residences in lower areas by inundation due to rising water as the swamp fills in long duration flooding events. The lowest residences in the sub-catchment are at 7.5 to 8.0m AHD and depending on losses the swamp can be filled to such heights by the 5% (1:20) to 2% (1:50) AEP event.

7.4.3 Moffats swamp catchment

The Moffats Swamp Catchment is bound to the north and north east by a ridge running through the Medowie State Forest, to the west by a ridge line running east of Medowie Road and then down to the southern boundary at Richardson Road. The eastern boundary is defined by a previously mined sand barrier which adjoins the Tomago Sand Beds.

Key concerns in relation to flooding have been received from residents in the lower areas bordering the fringe of the swamp and some properties near Boundary Road.

There are four main outlets from Moffats Swamp:

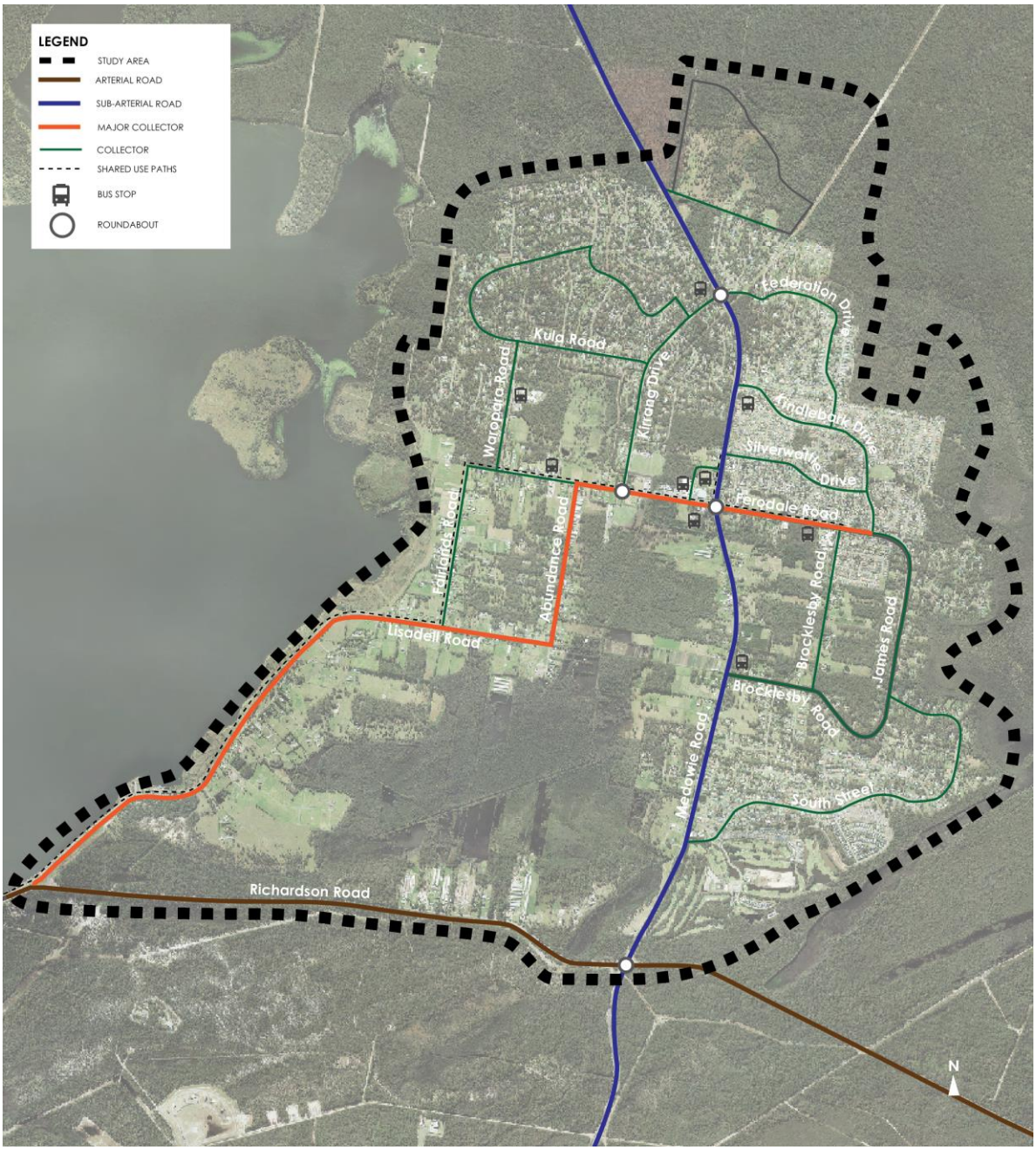
- Swan Bay – the majority of floodwaters currently exiting the swamp are through a trapezoidal shaped concrete spillway to the east with an invert level of RL 8.35m AHD. This outlet flows to Racecourse Swamp, which drains to Twelve Mile Creek and then Swan Bay;
- Campvale Swamp – a natural ridge between Moffats Swamp and Championship drive operating when the swamp level rises above 9.5m AHD; and
- Salt Ash – A partially blocked triple box culvert with an invert level of 8.7m AHD; and
- Salt Ash – A natural saddle south of the concrete spillway draining into the nearby Moffats Creek and dispersing towards Salt Ash, activated only in high flows (approximately 10m AHD).

The availability of multiple outlet locations, and the fact that outlet capacity increases as stage increases in the Swamp, make Moffats Swamp quite different to Campvale. Again though in Moffats as in Campvale, a large flood event (in the order to the 2% AEP event) can fill the swamp and cause low-lying houses (lowest residential floor levels in Moffats Swamp are approximately 9.5m AHD) to be impacted by rising water levels. However, the most likely flooding mechanism is as flowing water moves past or through properties on the way to the swamp proper.

7.5 Existing traffic & transport

This subsection describes the existing traffic and transport network in Medowie. Further detail is available in the Medowie Traffic and Transport Study (to be updated as part of the implementation of the Strategy).

Figure 12 Existing Traffic & Transport



7.5.1 Road network

The main vehicular approach routes to Medowie are from the Pacific Highway and Richardson Road.

The existing road network is shown in Figure12 *Existing Traffic & Transport* and comprises the following roads:

- **Pacific Highway:** main arterial route located north and west of Medowie providing a major link to the north coast, Brisbane and Raymond Terrace;

- **Richardson Road:** a major sub-arterial road connecting Nelson Bay and Raymond Terrace;
- **Medowie Road:** a major sub-arterial road that bisects the town and is the primary structural axis connecting the town to the Pacific Highway, Richardson Road, Williamtown and the rest of Port Stephens;
- **Ferodale Road:** a main street within the town which intersects with Medowie Road at the town centre and is secondary to the main spine formed by Medowie Road. It connects three major trip generators – the town centre and associated retail and commercial services and two primary schools;
- **Kirrang Drive:** a north-east/south-west road connecting Medowie and Ferodale Roads to service the north-west sector of Medowie.
- **Brocklesby Road:** an access road to the residential area, connecting Medowie and Ferodale Roads to serve the east and south-east sector of Medowie.
- **Abundance Road:** a north-south road off Ferodale Road to the industrial area of Medowie and joins with Lisadell Road.
- **Lisadell Road:** an east-west road that, with Abundance Road, forms a western entry route into Medowie.
- **Fairlands Road:** a north-south road off the west end of Ferodale Road connecting to Lisadell Road.
- **Peppertree Road:** a relatively short no-through road off Ferodale Road, west of Medowie Road, that provides access to the shopping area.

Except for Medowie Road having a sub-arterial function, the roads in Medowie have a collector or local classification.

The major approaches to Medowie are the Pacific Highway and Richardson Road, which provide an east-west approach from the north and the south respectively, via Medowie Road. These are arterial roads with an average daily traffic volume ranging from 15,000 to 20,000 vehicles per day along the Pacific Highway and 8,000 to 11,000 along Richardson Road.

The intersection of Medowie Road with Richardson Road is controlled with a two lane roundabout while the intersection with Pacific Highway is channelized.

Under road capacity criteria the current roads within Medowie are operating at a good level of service with ample capacity.

7.5.2 Pedestrian & cycleway network

The existing cycleway network links Medowie to Raymond Terrace via Grahamstown Dam. Within Medowie a cycleway/shared path travels along the length of Ferodale Road, followed by Fairlands Road, Lisadell Road and along Grahamstown Road, before linking to Richardson Road. The location of the path along the length of Ferodale Road provides an opportunity to link future urban areas to the centrally located commercial, recreational and community facilities in Medowie and provide a safe and viable transport mode alternative for residents. There are a number of other lengths of shared paths in Medowie that often form incomplete lengths.

7.5.2 Public & transport

Medowie is served by both school and public bus services with routes along Richardson Road, Medowie Road, part of Ferodale Road and major local roads with residential areas. Services run between Raymond Terrace and Lemon Tree Passage as well as Stockton and Newcastle.

Main bus stops, with varying levels of amenity, are at the following locations:

- Peppertree Road (North of Coles);
- Ferodale Road (commercial area);
- Ferodale Road (community centre);
- Intersection of Federation Drive and Medowie Road;
- Intersection of Kindlebark Drive and Medowie Road; and
- Intersection of Brocklesby Road and Medowie Road.

Bus stops are also located at each school however shelters are not always provided.

There are numerous other signposted bus stops. The level of usage is inferred to be low due to surrounding low density development, particularly in rural residential areas.

8.0 MAIN REFERENCE DOCUMENTS

Ecological Report (Draft) Medowie Strategy Review, Port Stephens Council, May 2014.

Hunter Regional Plan 2036 NSW Government (Department of Planning and Environment), 2016.

Lower Hunter Regional Strategy 2011-2031, NSW Government (Department of Planning), 2006.

Medowie Strategy, Port Stephens Council, 2009 (and amended 2013).

Medowie Traffic and Transport Study, URaP TTW Consulting Services, December 2012 v6.

Medowie Section 94 Contributions Plan Traffic and Transport, URaP TTW Consulting Services, January 2015.

Medowie Local Area Contributions Plan – Traffic and Transport, Port Stephens Council, March 2015.

Medowie Flood Study, WMA Water in conjunction with Port Stephens Council and the NSW Office of Environment and Heritage, May 2012.

Port Stephens Commercial and Industrial Lands Study, SGS Economics and Planning, July 2010.

Port Stephens Development Contributions Plan 2007 (including amendments 3 December 2015 for Medowie Traffic & Transport and 7 July 2016 for Ferodale Sports Complex facilities), Port Stephens Council, 2007.

Port Stephens Planning Strategy 2011-2036, Port Stephens Council, 2011.

Review of Standards Guiding the Provision of Council's Community and Recreational Facilities, Final Report, AEC Group, August 2013.

Port Stephens Strategic Asset Management Plan 2016-2026, Port Stephens Council, 2016.