



**CONNOR
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Wilton Junction MASTER PLAN

DRAFT
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Wilton Junction MASTER PLAN

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EXECUTIVE SUMMARY

Background

In November 2011, the State Government invited landowners across NSW to nominate sites suitable to deliver additional housing to address Sydney's housing supply shortfall. A number of major landholders in the Wilton area responded to the 'State Government Housing Review' and nominated land adjoining the Hume Highway and Picton Road intersection for consideration. This area has subsequently become known as Wilton Junction.

The major landowners, recognised as the 'Wilton Landowners Rezoning Group', comprise Bradcorp Pty Ltd (Bingara West), Lend Lease (Bingara Gorge), Walker Corporation (lands south of Picton Road in Wilton) and Governors Hill (land comprising the Wilton Aerodrome and adjacent land).

Following a Council resolution, the four major landowners have signed an agreement to work co-operatively with Council to prepare a high level master plan for Wilton Junction. This high level master plan has been prepared for Council's consideration and possible adoption.

A formal community consultation and engagement process will be undertaken to provide the community with an opportunity to provide input into a final master plan which may inform future detailed investigations and rezoning of the land.



Vision for Wilton Junction

The 'vision' for the Wilton Junction New Town is for the creation of a high quality township that delivers housing diversity and choice and a high level of employment and service self-sufficiency by:

- › utilising its locational advantages at the cross roads of the Hume Highway and Picton Road; and
- › building on the exceptional environmental context of the site by integrating the surrounding gorges and bushland with an open space and pedestrian network that permeates the whole site.

Wilton Junction has the potential to become the regional focus for Wollondilly Shire and surrounding areas, attracting a new generation of employment opportunities and ensuring the preservation of the existing village like qualities and lifestyle of existing townships within the Shire as a new town centre and urban growth is consolidated at Wilton Junction.

Key 'principles' underpinning the high level master plan and guiding urban growth and development at Wilton Junction include:

- › Utilise central, prominent and visible locations for employment and town centre related uses and activities to ensure strong exposure and access;
- › Utilise Wilton Junction and an enhanced critical population mass to act as a catalyst and platform to capture employment opportunities and reverse the under-represented south west commercial / office market;
- › Establish a balanced employment base for the region which attracts investment and expenditure for the benefit of the whole Shire;
- › Provide a range of housing types to service the widest possible extent of housing market niches;
- › Create a community heart for every neighbourhood, colocated with recreation, retail and employment activities and accessible transport;
- › Preserve and protect existing vegetation with conservation value and preserve and integrate significant vegetation outside of vegetation protection areas into urban areas;
- › Develop centres that are highly visible, permeable and accessible and act as the focal point of neighbourhoods;
- › Centres developed with a high quality public realm, central village square and active thoroughfares that are flanked by a high level of activity and that emphasise the importance of the pedestrian;
- › Create a sense of neighbourhood through the establishment of meeting places and spaces that foster and promote interaction;
- › Utilise the iconic positioning of 'cross roads' as centres of activity and junctions which capitalise on the movement economy and integration of public transport, walking and cycling;
- › Target self-containment in services and employment, promotion of work from home opportunities and integration of land uses to reduce trip numbers and length;
- › Facilitate a bus network comprising local internal bus services to connect local residents with their town centre and community facilities, district routes to other centres (ie Picton, Tahmoor & Bargo etc) and regional services to connect higher order centres such as Campbelltown;
- › Encourage and provide for non-vehicular movement options;
- › Prepare coordinated infrastructure services plans and explore opportunities to share facilities costs, recognising the respective roles of Federal, State and local government, infrastructure agencies and the developers; and
- › Recognise long term maintenance implications in the selection of infrastructure outcomes.

Assessment Process

A range of investigations have been undertaken to inform the high level master plan, including economic, social, transport and infrastructure studies. These complement previous work undertaken by individual landowners and provide the basis for the plans presented herein. These investigations will require augmentation, expansion and detailing as part of subsequent stages of work.

Wilton Junction Master Plan

The high level Master Plan for Wilton Junction comprises the following key elements:

Town Centre

The town centre comprises a range of precincts which may include a wide variety of uses, including retailing, leisure / recreation, civic functions, commercial, education, accommodation, highway services, community services, health services and special services.

A centrally located retail core is proposed to provide convenience and comparison shopping for the whole of Wilton Junction, a civic core, commercial and office functions, community facilities, leisure and entertainment functions and opportunities for short and long term accommodation options.

The Town Centre's retail core will be the focus of the private and public transport networks, including the possibility of a bus interchange (and a railway station if the Maldon-Dombarton corridor is ever used for passenger services). It will also be the focus of non-vehicular movement networks, with linkages to the residential precincts to the north, south and east.

The centre's location is 'book ended' by existing and proposed high amenity environments (a gorge and a lake) which provide the potential to create a town centre of interest and attraction.

The core of the Town Centre is surrounded by a mixed use precinct that provides for an overflow of lesser scaled activities from the town centre and an increasing focus on community facilities, health facilities, commercial and office space, an increasing proportion of residential development and a range of leisure and entertainment activities that take advantage of their high amenity locations.

A substantial enterprise precinct is proposed which will have an increased focus upon employment, offices and footloose operations seeking a business park type environment. The opportunity exists to facilitate start up businesses through a business incubator facility and to focus on the capture of businesses seeking to integrate the workplace with high amenity and recreational opportunities.

The town centre is ringed by medium density housing precincts that combine proximity to the town centre and all of its services and facilities with high amenity locations attractive to residential development.

Accommodation in and around the town centre might include medium density housing, mixed residential / commercial developments, motels, guest houses, retirement villages and aged care / nursing home establishments.

At the periphery of the town centre and focussed upon the exposure and accessibility provided by Hume Highway and Picton Road, are highway related services and facilities and a bulky goods precinct intended to serve both Wilton Junction and the extensive and growing passing trade on those major roads.

Two significant educational facilities are proposed on the periphery of the town centre, a K-12 public school and a K-12 private school. These locations just outside of the town centre provide an opportunity for students to take advantage of bus routes and pedestrian and cycle networks that focus on the town centre and also increase the propensity for multi-use trips which incorporate the school drop off / pick up trips.

The opportunity exists for one of the K-12 schools to co-locate with the district open space required to serve Wilton Junction as its primary sports fields precinct. Aquatic facilities might also be co-located with the district open space or alternatively, might be delivered by way of a beach and swimming area on the town centre's proposed lake.

The location of the schools raises issues of safety in respect of Picton Road, noise from Picton Road and bushfire risk from adjacent bushland. We believe that all of these matters can be addressed through the detailed design of these schools and surrounding areas and through the implementation of suitable management techniques. In particular, the integration of the district open space with one of the school sites provides further flexibility in the development of a design solution to address these issues. These matters will be investigated as part of the next stage of investigations.

The agglomeration of these activities provide a broader propensity for multi-use of services and facilities and a potential reinforcement of the commerciality of the centre.

The town centre as a whole will be a very substantial employment hub in its own right.



Enterprise Precincts

► The enterprise precincts include the town centre but also include the following areas:

- North and south of Wilton Park Road;
- North and south of Picton Road, east of Hume Highway;
- The Bingara Gorge employment lands, STP and substation site;
- A small triangle of land at the corner of Picton Road and Almond Street; and
- Prospective developments within the neighbourhood centre sites identified within Wilton Junction.

► Together with the town centre (and work from home opportunities) these precincts deliver sufficient floorspace potential to exceed 70% employment self-sufficiency in Wilton Junction; and

► The focus of these precincts will be on clean enterprises which cater for the emerging industries of the twenty first century in attractive landscaped environments. Some light industrial activities are anticipated as well as an element of transport and logistics, which capitalises on the site's strategic location, and food and agricultural product processing, packaging and distribution, which focusses on serving the region's agricultural base.

Neighbourhood Centres

► Neighbourhood centres, comprising a combination of retail and commercial facilities, community facilities, a primary school and areas of active open space, are proposed to serve the 'neighbourhoods' of Wilton Junction. The Town Centre itself will act as a neighbourhood centre for the southwest. Other centres are proposed (or exist) as follows:

- Bingara Gorge;
- Northern precinct of Wilton West; and
- South of Picton Road.

► In the case of the existing Wilton township, the existing local centre should be retained and expanded over time and the Wilton Community Centre and Oval complex enhanced as the focal point of community and recreational activities;

► Each centre is intended to act as a focus for community activity and as the fulcrum of the public transport and pedestrian movement network.



Residential Areas

- › Much of the gently undulating terrain is readily developable for residential purposes and has been identified as residential land in the high level master plan;
- › Areas of scattered vegetation exist within these residential precincts and may need to be considered in greater detail in the next level of investigation;
- › Medium density residential precincts are anticipated in and around the town centre;
- › Low density residential / rural residential areas are retained around Wilton Township to maintain the setting of that town and are proposed in areas where an existing low density environment already prevails as well as in areas providing a transition from residential to primary production;
- › The master plan seeks to make provision for the following housing markets:
 - Family housing as a priority;
 - A component of executive housing to attract managers and CEO's of footloose businesses;
 - Affordable housing choices;
 - Pre-retirement housing for empty nesters;
 - Retirement living products for active retirees; and
 - Aged care accommodation for the elderly.

Special Purpose Areas

- › The high level master plan identifies two alternative locations for the potable water supply reservoirs to serve the Wilton Junction community and incorporates the expanded STP and electricity substation within the defined enterprise precinct.

Open Space

- › The master plan identifies substantial portions of the site to remain as vegetation preservation areas while the inclusion of additional areas of open space provide informal passive and active recreational opportunities. These spaces include large lakes, prominent ridgelines and pedestrian routes that provide connectivity between key facilities and areas of open space;
- › A pedestrian network is identified through Wilton junction with strong connectivity with and between the centres, community and recreation facilities and educational establishments;
- › A golf course is currently under construction within Bingara Gorge and will provide both a recreational opportunity and a visual outlook for many residents.

Vehicular Movement

- › Creation of a network that provides for movement within Wilton Junction, with good access to centres, education, employment/business/town centre, community facilities and recreation opportunities.

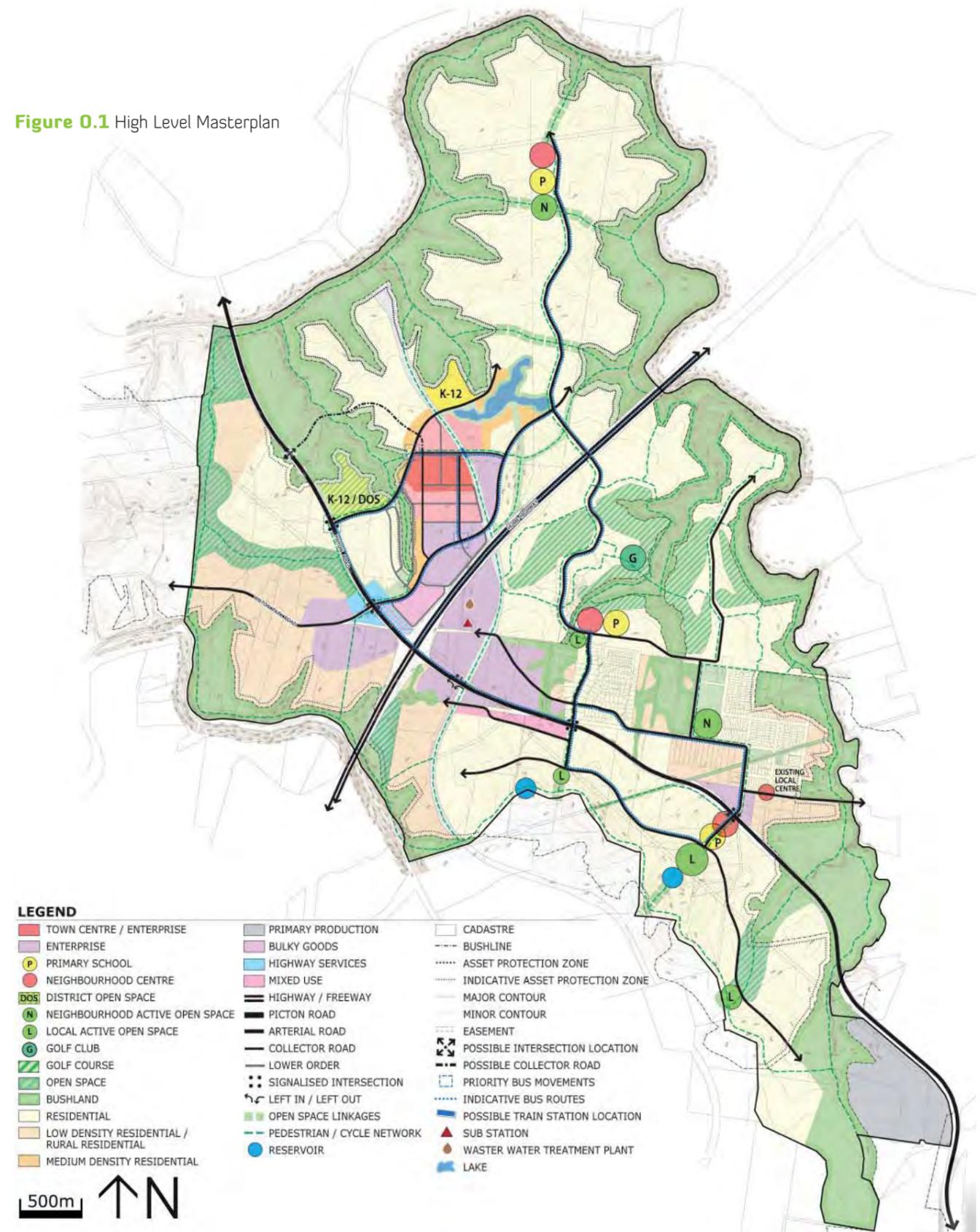
Primary Production

- › The area east of Allens Creek and south of Picton Road is proposed to have no change to its current status. The area is difficult to access and remote from services and facilities and is not considered essential to the creation of Wilton Junction.

Existing Development Interfaces

- › The master plan seeks to minimise change for the existing Wilton township, by maintaining the existing township boundaries and surrounding rural residential land holdings and bushland, maintaining the existing local centre on Appin Road and acknowledging the potential for expanded recreation and community facilities at the Wilton Sportsground;
- › The Bingara Gorge development should be protected from any externalities potentially arising from the STP and adjacent employment lands; and
- › The low density rural lands and rural residential lands should be protected from the impacts of urban development as far as practicable and where interfaces are necessary, those interfaces are minimised.

Figure 0.1 High Level Masterplan



Land Use Composition and Yield

The approximate land use composition of the high level master plan for Wilton Junction can be summarised as follows:

› Residential	1,040 ha
› Medium density residential	16 ha
› Town centre and enterprise lands	202 ha
› Schools (including district open space)	35 ha
› Rural Residential	210 ha
› Open space, bushland protection and primary production lands	1,277 ha

New housing development is expected to total around 11,000-12,000 in addition to the existing dwellings in Wilton Township, Bingara Gorge and surrounding rural residential properties.

Employment numbers are predicted as follows:

› Work from home	2,500
› Within employment precincts in Wilton Junction	9,180
› Direct construction workforce (average over 30 years)	1,700
› Total	13,380

Retail floorspace is expected to include:

› Town centre	25,000 m ²
› Bulky goods	30,000 m ²
› Village or neighbourhood centres	2 @ 5,000 m ²
› Local centres say	5 @ 200-1000 m ²

Social, community and recreation infrastructure is expected to include:

- › Community centres (x 3)
- › Child care centres (x 4)
- › Primary schools (x 4 incl. existing)
- › Private primary / high school (x 1)
- › Public high school (x 1)
- › Community resource centre / library (x 1), Civic Centre
- › Community Health / Integrated Primary & Community Care Centre
- › Leisure Centre Indoor Recreation (gym, leisure pool, courts)
- › District / sub regional sports field (3 playing fields cricket, netball / tennis)
- › 2 local / sub district sports fields (2 playing fields, cricket)

Infrastructure Delivery

Preliminary infrastructure investigations suggest that services can be connected to the study area to support urban development without unreasonable cost or difficulty, and, more particularly, development over the first 5-10 years will require limited augmentation of infrastructure services.

It is premature to expect a detailed and costed infrastructure delivery strategy at this stage, however, it is recognised that such a strategy, including understanding of responsibility for costs, is an essential next step in the progression of Wilton Junction towards its possible eventual development for urban purposes.



Wilton Junction MASTER PLAN

1 INTRODUCTION

In November 2011, the State Government invited landowners across NSW to nominate sites suitable to deliver additional housing to address Sydney's housing supply shortfall.

A number of major landholders in the Wilton area responded to the 'State Government Housing Review' and nominated land adjoining the Hume Highway and Picton Road intersection for consideration. This area has subsequently become known as Wilton Junction.

The major landowners, recognised as the 'Wilton Landowners Rezoning Group', comprise Bradcorp Pty Ltd (Bingara West), Lend Lease (Bingara Gorge), Walker Corporation (lands south of Picton Road in Wilton) and Governors Hill (land comprising the Wilton Aerodrome and adjacent land).

Following a Council resolution, the four major landowners have signed an agreement to work co-operatively with Council to prepare a high level master plan for Wilton Junction.

Wollondilly Shire Council subsequently resolved at its ordinary Meeting on Monday 21 May 2012 to write to the Minister for Planning and Infrastructure and advise of Council's intention to work co-operatively with the four major land owners to prepare a high level Master Plan for a new town at Wilton Junction that would deliver housing, jobs close to home, supporting infrastructure and services and a range of complementary land uses (refer to Appendix 1).

Connor Holmes was subsequently engaged by the four major land owners to independently coordinate and prepare this high level master plan for the Wilton Junction new town which addresses and includes:

- › the creation of a new town at Wilton to provide houses, employment, supporting infrastructure and services and complementary land uses to support liveability and sustainability;
- › an overall structure and staging plan for urban growth and development; and
- › current and future infrastructure (social and physical) requirements, connectivity and capability.

The high level master plan has been prepared for an agreed investigation area that includes all land generally in the vicinity of the Picton Road/Hume Highway interchange at Wilton. Its preparation has included a collaborative design workshop with the Wilton landowners rezoning group, consultants and Council staff and briefing sessions with infrastructure agencies and departments and private sector infrastructure providers.

The purpose of the high level master plan is to provide a basis for key authorities (Wollondilly Shire Council, The Minister for Planning and Infrastructure and State Cabinet, Departments and Agencies) to guide the direction of any potential rezoning prior to undertaking detailed investigations.

Accordingly, this high level master plan has been prepared for Council's consideration and possible adoption.

A formal community consultation and engagement process will be undertaken to provide the community with an opportunity to provide input into a final master plan which may inform future detailed investigations and rezoning of the land.

It should be noted that a probity plan has been prepared by Council and signed by the landowners and governs the protocols of interaction between the parties. It is further emphasised that the agreement to prepare this high level master plan does not represent an agreement to its content or to the future rezoning of the land by either Council or the Department of Planning and Infrastructure.



2 WILTON JUNCTION INVESTIGATION AREA

2.1 Regional Context

Wilton Junction is located within the Wollondilly Local Government Area (LGA) and is approximately 80 km from the Sydney Central Activity District and 30km north –west of Wollongong. Wollondilly is part of the South West Sub-region of Sydney in addition to Liverpool, Campbelltown and Camden.

Wollondilly LGA has an Estimated Resident Population (ERP) of 43,259 people (2011 census), has a predominant rural settlement pattern and includes 16 towns and villages. No individual town within the Wollondilly LGA holds a population greater than 5,000 people. The three largest towns are outlined below with context provided to Wilton's current population (as at Census 2011).

- Picton 4,595 people
- Tahmoor 4,505 people
- Bargo 4,130 people
- **Wilton 1,890 people**

The Wilton Junction Investigation Area includes the existing village of Wilton as well as the Bingara Gorge Estate currently being developed by Lend Lease.

The township of Maldon is located approximately 1.5km to the north-west of the Wilton Junction Investigation area and contains 50% of Wollondilly's employment land supply. Maldon contains large specialised facilities operating in purpose built industries such as cement manufacturing (Boral) and milling (Allied Mills).

A map identifying the spatial location of the Wilton Junction Investigation Area within the context of major centres and transport infrastructure is provided in **Figure 2.1**.

Wilton Junction is located at the intersection of Hume Highway and Picton Road, being the primary arterial between Sydney, Canberra and Melbourne and the key east-west entry into Wollongong respectively. These are key freight and passenger routes and are of local, State and National significance (the Hume Highway is National Highway 1).

The locality is also significant for its close proximity to the Sydney Melbourne heavy rail network (which passes immediately to the west of the subject site). Further, the Maldon-Dombarton rail corridor passes through the subject site and is currently being investigated as a possible future freight route.

The locality is also in the vicinity of the potential alignment of the Outer Sydney Orbital, which is proposed to connect the Central Coast with Wollongong.

Wilton Junction represents the next major focal point south of Campbelltown-Macarthur and is strategically located in respect of transport infrastructure and proximity to major population centres (including Wollongong) and represents a significant opportunity as an employment and residential hub serving the wider region. In particular, it has the distinct advantage of a consolidated land ownership of nearly 1900 ha in the control of recognised land developers, facilitating a relative ease of infrastructure roll out and allotment delivery in comparison to the substantially fragmented ownership of other designated growth precincts.

Wilton Junction represents an opportunity to assist in addressing the pressures experienced in metropolitan Sydney but, through a high level of self-containment, provide a regional focus that has a low level of reliance on Sydney and enhanced connection to Wollongong / South Coast, the South West and the Southern Highlands.

Figure 2.1. Regional Context



2.2 Investigation Area

The Wilton Junction investigation area represents the study area for the Wilton Junction high level master plan and was agreed on 6 July 2012 by the 'Wilton Junction A new town Steering Committee' comprising senior representatives of Wollondilly Shire Council and the 'Wilton Landowners Rezoning Group'.

The investigation area is bound by the Nepean River to the north, Allens Creek to the east, Picton Road to the south-east, a natural escarpment to the south of (and parallel with) Picton Road, the Nepean River to the south-west and a natural spur (and linear cadaster alignment) connecting the Nepean River from the south-west to the north-west.

The investigation area is approximately 2,780 ha (Gross) in area, of which up to 1600 ha is estimated to be developable land with the remaining balance being a mix of conservation and infrastructure land provision.

The major intersection of the Hume Highway and Picton Road converge centrally within the investigation area and the Maldon-Dombarton Rail Corridor (not currently constructed) dissects the investigation area on a north south axis.

A map of the Wilton Junction investigation area is provided in **Figure 2.2**.

The Wilton Junction investigation area comprises a number of individual land owners and four main consolidated landholdings as follows:

- **Bingara Gorge Estate** which is currently being developed by **Lend Lease** to the north-east of the Picton Road / Hume Highway interchange. This site is approximately 455 ha, has a current programmed dwelling yield of 1,165 dwellings and an ultimate yield potential for approximately 1,500- 2,000 dwellings.
- The **Bradcorp site** comprising approximately 877ha to the north-west of the Picton Road / Hume Highway Interchange. This land holding has a potential for approximately 5,000-5,500 dwellings.
- The **Walker Corporation site**, comprising approximately 360ha to the south-east of the Picton Road / Hume Highway Interchange with potential for approximately 2,500-3,000 dwellings.
- The **Governors Hill site**, comprising approximately 180ha to the north-west and south-west of the Picton Road / Hume Highway Interchange with potential for town centre and mixed use development, employment related uses and residential potential for around 500-1,000 dwellings.

In addition there are approximately 30 smaller individual land owners comprising approximately 622ha predominantly in rural residential land holdings.

Figure 2.3 identifies the land ownership composition of the Wilton Junction investigation area and clearly demonstrates the consolidated composition of land ownership and control.

Figure 2.2. Wilton Junction investigation area

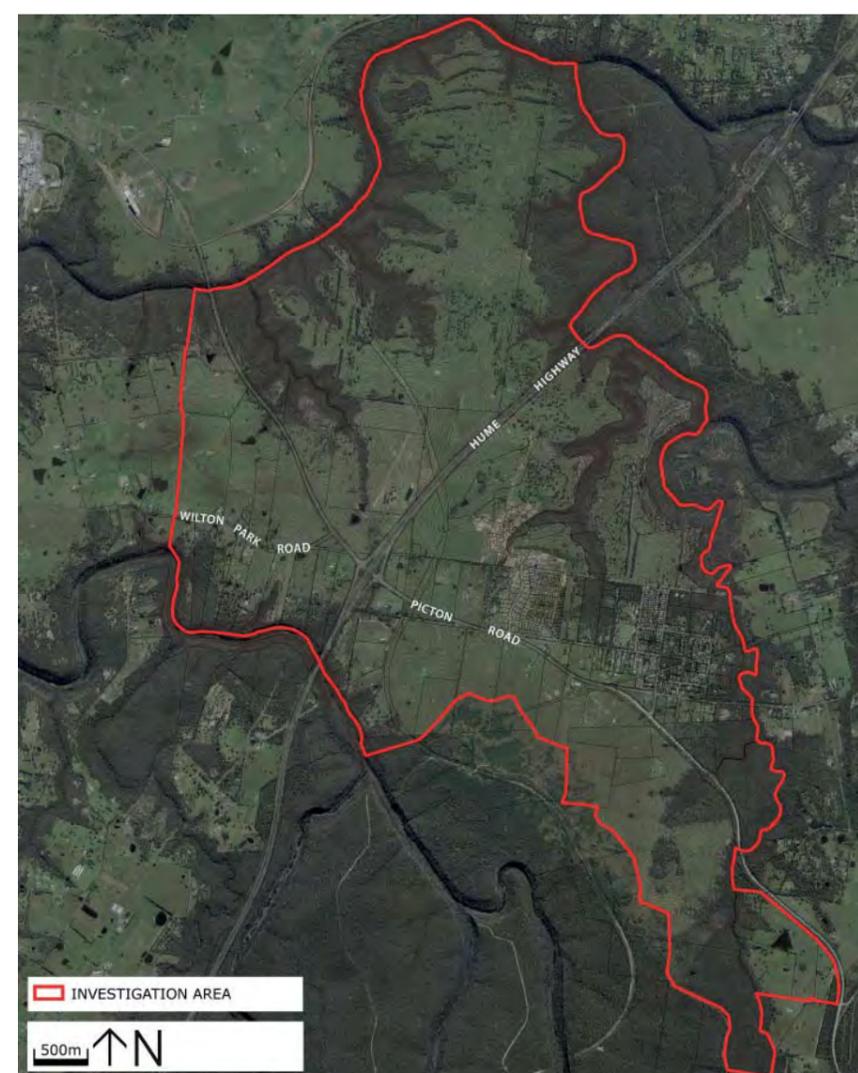
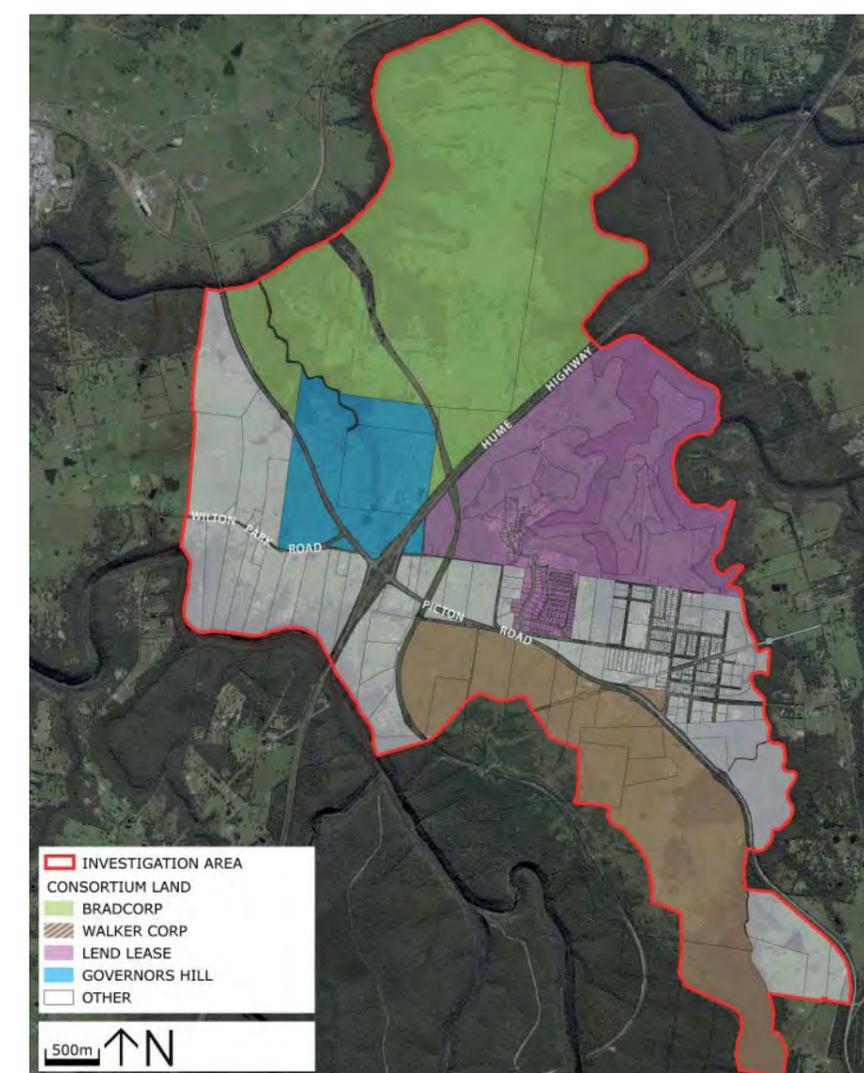


Figure 2.3. Land Ownership / Control



3 CURRENT ZONING

The Wollondilly Local Environmental Plan (WLEP) 2011 came into force via Government Gazette on Wednesday 23 February 2011 and guides planning decisions for the Wollondilly Shire local Government area.

The Wilton Junction Investigation area currently comprises the following Zones established under the WLEP:

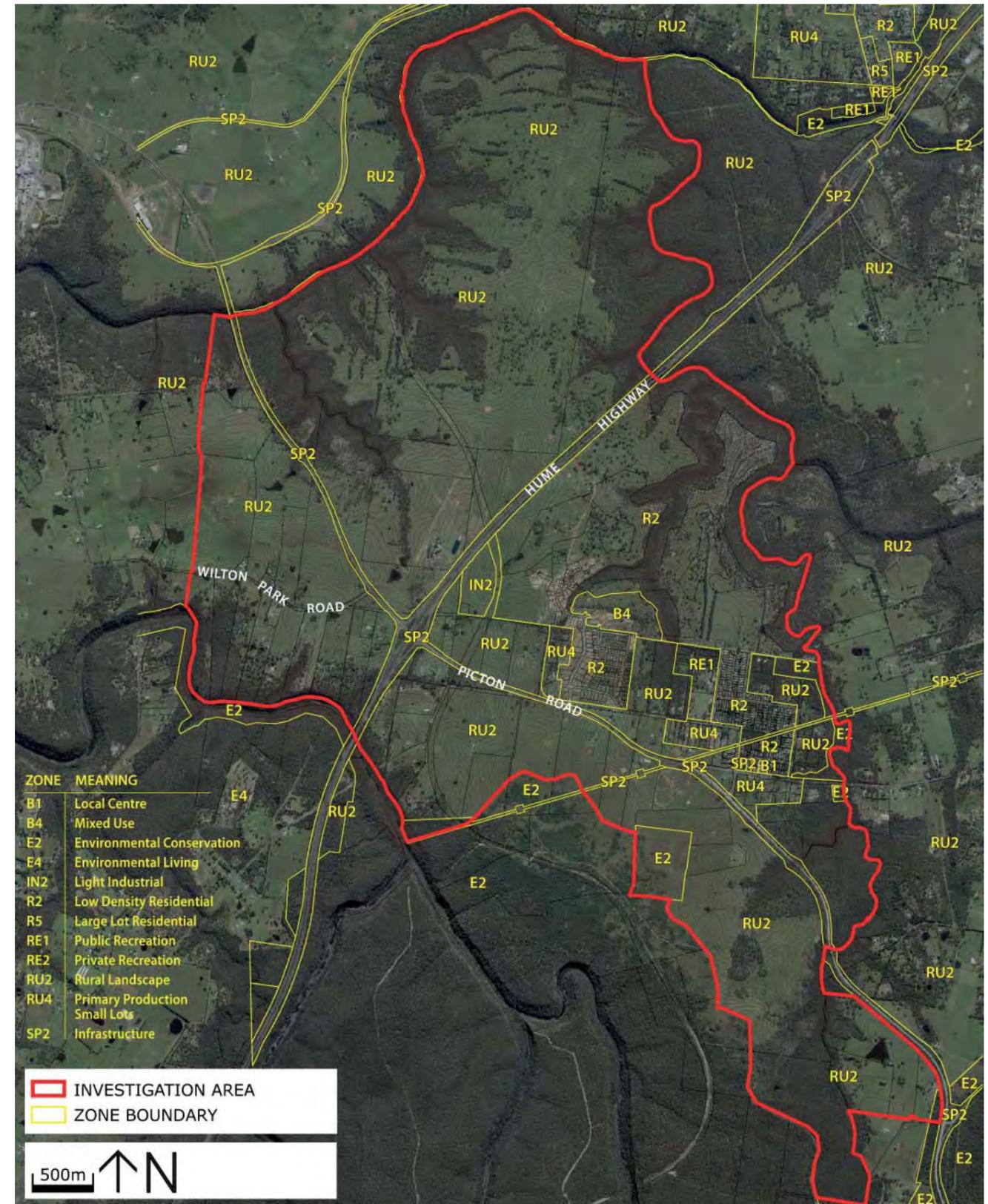
- **R2** Low Density Residential Zone;
- **RU2** Rural Landscape Zone
- **RU4** Rural Small Holdings Zone
- **IN2** Light Industry Zone
- **B4** Mixed Use Zone
- **RE1** Public Recreation Zone
- **E2** Environmental Conservation Zone
- **SP2** Infrastructure Zone

These existing Zones are identified spatially in **Figure 3.1**.

In addition, the Wollondilly Development Control Plan (WDCP) took effect on Monday 19 December 2011 and should be read in conjunction with the Wollondilly Local Environmental Plan (WLEP). The WDCP provides a comprehensive guide to certain types of development in the Shire as well as development in specific areas within the Shire. In particular Volume 7 of the WDCP provides 'Site Specific Controls' for the Bingara Gorge Estate in Wilton Park, which forms part of the Wilton Junction Investigation Area. These site specific controls include a current limit to the number of dwellings that can be developed in the Bingara Gorge Estate which must not exceed 1,165 dwellings.

This high level master plan supersedes and does not directly align with nor respond to the WLEP or WDCP and has been prepared to inform future detailed analysis and investigations to potentially modify and amend these legal planning instruments of development control.

Figure 3.1. Existing Zoning
(Source: Wollondilly Local Environmental Plan)





4 STRATEGIC CONTEXT

4.1 Preamble

This section identifies a number of strategic documents which have been prepared by State and local government that are generally applicable to the south west sub-region of Sydney and / or Wollondilly Shire Council itself. It is emphasised that these reports are only summarised as a contextual reference to the development that may occur at Wilton Junction. They do not directly apply to Wilton Junction since Wilton Junction was not a factor at the time of their preparation. Rather Wilton Junction is a direct response to the invitation by the Minister for Planning for large scale housing opportunities that can be delivered quickly and efficiently to the market.

A number of State and local strategic plans have been prepared to address future urban development and growth in the south-west sub-region of Sydney.

The South West sub-region includes the Liverpool, Campbelltown, Camden and Wollondilly local Government areas and is one of the few significant, unconstrained greenfield areas available for new urban development in the south west portion of the Sydney Basin.

Existing strategic plans and strategies were generally prepared prior to the 2011 'Land Review of the Metropolitan Plan for Sydney'. This review included a general invitation by the Minister to landowners to submit expressions of interest for the development of

their land for housing. The Review was established to identify sites in appropriate locations and with adequate service and infrastructure provision that will increase dwelling production in the short term at no additional cost to government. The Program applied to greenfield sites of 100 hectares or more proposed predominantly for housing.

Members of the the 'Wilton Landowners Rezoning Group' responded to the Ministers invitation to submit land development proposals to assist in the release of land to provide new housing and employment opportunities in the South-West sub-region of Sydney.

The four major land owner subsequently signed an agreement with Wollondilly Shire Council to work cooperatively with Council to prepare a high level master plan for the Wilton Junction investigation Area and review and address the opportunity for an integrated and coordinated approach to the creation of a self-contained new town at Wilton Junction for a population of approximately 30-35,000 people.

This aligns with the approach identified by Government in the NSW State Budget 2012-13 where a new 'Urban Growth NSW' body was established to fast-track rezoning for large-scale housing proposals which have demonstrated private sector readiness and local government endorsement.

Accordingly, whilst existing and historic State and Local strategic plans have informed opportunities for urban development and growth at Wilton Junction, this high level master plan does not directly reflect or respond to the key recommendations and findings of these previous strategies but responds to the more recent 'Land Review of the Metropolitan Plan for Sydney' by the Minister.

4.2 State Strategic Plans

Relevant State strategic plans informing the opportunity for future urban growth and development within the South-West sub-region of Sydney are identified below.

4.2.1 NSW 2021 STATE PLAN

The NSW State Plan, '**NSW 2021: A plan to make NSW number one**' was published in September 2011 and is the NSW Government's 10 year plan to rebuild the economy, return quality services, renovate infrastructure, restore accountability to government, and strengthen the local environment and communities in NSW. The plan sets immediate priorities for action and guides NSW Government resource allocation in conjunction with the NSW Budget.

Goal 4 of the NSW State Plan is to '*Increase the competitiveness of doing business in NSW*'. Relevant targets to deliver this goal include:

- Improve development approval and plan making processes
- Reduce Federal / State duplication of environmental regulations to streamline approvals to boost the State's economy while protecting the environment
- Grow knowledge businesses

Goal 5 of the NSW 2021 State plan is to '*Place downward pressure on the cost of living*'. Two targets to deliver this goal include:

- Facilitate the delivery of 25,000 new dwellings in Sydney per year
- Increase the available green field 'zoned and trunk serviced' lots to always be above 50,000

Goal 19 of the NSW State Plan is to '*invest in critical infrastructure*'. A relevant target to deliver this goal is to '*Increase investment in regional infrastructure*'. A priority Action to achieve this target is to '*Establish a local infrastructure renewal scheme that will provide interest subsidies to local councils to assist in unlocking resources for councils to upgrade urban and economic infrastructure for roads, community halls, libraries, parks, sports grounds and water infrastructure*'.

Goal 20 of the NSW State Plan is to '*Build liveable Centres*'. A relevant target to deliver this goal is '*Planning policy to encourage job growth close to where people live and to provide access by Public transport*'.

Goal 21 of the NSW State Plan is to '*Secure Potable Water Supplies*' with a target to '*Secure long term potable water supplies for towns and cities supported by effective effluent management*'.

Goal 22 of the NSW State Plan is to '*Protect our Natural Environment*' with a target to '*Protect and restore priority land, vegetation and water habitats*'.

Goal 23 of the NSW State Plan is to '*Increase opportunities for people to look after their own neighbourhoods and environments*' with a target to Increase the devolution of decision making, funding and control to groups and individuals for local environmental and community activities.

Goal 24 of the NSW State Plan is to '*Make it easier for people to be involved in their communities*' with relevant targets to :

- Increase community participation; and
- Improve our sense of community.

Goal 27 of the NSW State Plan is to '*Enhance cultural, creative, sporting and recreation opportunities*' with a target to '*Increase participation in sport, recreational, arts and cultural activities in Sydney from 2010 to 2016 by 10%*'.



4.2.2 METROPOLITAN PLAN FOR SYDNEY 2036

The *'Metropolitan Plan for Sydney 2036'* was released on 16 December 2010 and provides a framework for the economic, social and environmental growth of the city to 2036.

Wollondilly local government area is included as part of the Sydney Metropolitan Area.

The sustainable delivery of housing is identified as a key factor in ensuring sustainable growth for Sydney.

To accommodate a 40% population increase in the metropolitan area by 2036, the Plan proposes about 70% of new housing will be delivered in existing urban areas (infill development) and 30% in new release areas on Sydney's fringe.

The Plan highlights the importance of planning for equity, liveability and social inclusion to ensure a socially sustainable Sydney in 2036. Adequate employment opportunities, appropriate and affordable housing as well as physical and social infrastructure are identified as key to achieving the vision.

Key Objectives for Wilton Junction include:

- Focus residential development around town centres, villages and neighbourhood centres;
- Plan for a housing mix near jobs, transport and services;
- Provide for a range of dwellings suited to the changing population
- Improve housing affordability;
- Promote good access to services and timely infrastructure;
- Improve access to shopping, friends and family, parks and recreation and other daily activities;
- Encourage use of active transport – public transport, walking and cycling – to improve community health and connectivity to services and facilities;
- Ensure appropriate social infrastructure and services are located near transport, jobs and housing;
- Promote active healthy lifestyles and community interaction through provision of parks, sporting facilities and public places;
- Provide a diverse mix of parks and public places and improve the quality of local open space; and



- Apply sustainability criteria for new urban development. The sustainability criteria include the provision of mechanisms to ensure infrastructure (including social infrastructure) is provided in a timely and efficient way, and that adequate and accessible services and facilities are available to meet quality and equity objectives.

Action I 6.3 of the Metropolitan Plan for Sydney states:

Action I 6.3 - Conduct an annual land supply assessment:

To facilitate consistent and timely land release decisions, the Government will conduct a land supply assessment each year or more frequently if required. The assessment will evaluate whether more land needs to be released for rezoning and servicing. If more greenfield land is required, Growth Centres precincts will be considered as well as sites outside the Growth Centres which are:

- *identified for future housing under a draft or adopted subregional strategy or*
- *identified for future housing under a local strategy endorsed by the Department of Planning or*
- *located within the urban footprint or adjoining the urban footprint and which meet state government targets relating to jobs closer to home*

Several submissions to the Metropolitan Strategy review requested the release of lands outside the Growth Centres. There are also several other requests with Government of a similar nature. Strategically located sites, as above, will be considered as part of the first annual land supply assessment in 2011.

(Both Bradcorp and Walker made such submissions in respect of Wilton).

The Metropolitan Plan for Sydney therefore identifies and accommodates the potential adoption and facilitation of Growth Centre Precincts, including Wilton Junction, in annual land supply assessments undertaken by the Government.

4.2.3 SOUTH WEST SUB-REGION DRAFT SUB REGIONAL STRATEGY

The Subregional Strategy follows the direction of the Metropolitan Plan and provides a focused planning approach for the Sydney South West Region (which includes Wollondilly).

The Strategy identifies that the South West Subregion is earmarked for substantial growth.

The government's focus for the subregion is to plan for population growth, particularly along the urban-rural fringe in the South West Growth Centre, and to provide the subregion with developed regional open space as an alternative to current provision.

Key directions relating to this study are to:

- Consolidate and strengthen Liverpool as the subregion's Regional City;
- Enhance local centres (in line with the hierarchy of centres and direction proposed in the Metropolitan Plan for Sydney 2036);
- Improve access to retail, office, health, education, leisure, entertainment and cultural facilities and community and personal services;
- Ensure equitable access to parks and public places for all residents in the subregion;
- Ensure open space areas and facilities are managed sustainably to cater for residents and visitors to the subregion;
- Ensure opportunities exist for all residents to pursue cultural activities in the subregion;
- Increase access to quality parks and public places and provide a diverse mix of parks and public places; and
- Improve Sydney's major sporting and cultural event facilities.

Wollondilly Shire Council has maintained that the dwelling targets in the Metro Strategy and the Draft South West Sub-regional strategy are insufficient to accommodate growth forecasts.

Wilton Junction MASTER PLAN

4.2.4 SYDNEY OVER THE NEXT 20 YEARS – A DISCUSSION PAPER MAY 2012

This Discussion Paper is the precursor to generate a new Metropolitan Strategy concurrently with a long term transport Master Plan and State Infrastructure strategy with a view to revitalising Sydney and New South Wales.

The paper sets out principles to shape Sydney and includes:

- › Linking land use planning and transport;
- › Strengthening the economic and employment opportunities that come from growth;
- › Protecting the natural environment and cultural heritage;
- › Providing housing across the City that provides for a range of needs and budgets;
- › Providing access to a range of jobs, particularly to balance growth in Western Sydney,
- › Supporting regional cities with services and infrastructure;
- › Making it easier to access public transport;
- › Providing access to economic and recreational opportunities;
- › Building new places and improving places through design and promote healthy, active lifestyles; and
- › Adapt to climate change.

The paper canvasses the need to provide 570,000 additional dwellings to 2031 to meet the range and diversity of housing stock required and to assist housing affordability.

The outcomes of this work are likely to see additional growth within the greater Sydney area.



4.3 Council Strategic Plans

4.3.1 GROWING YOUR FUTURE TOGETHER – WOLLONDILLY COMMUNITY STRATEGIC PLAN 2030, NOVEMBER 2010

The *'Wollondilly Shire Council Community Strategic Plan 2030'* sets out desired outcomes for the Wollondilly Shire and a vision for a community which is supported by safe, maintained and effective infrastructure and has access to a range of activities, facilities and services.

Key Strategies relevant to Wilton Junction include:

Community:

- › Participate in processes that build community capacity to identify, value, celebrate and respond to diversity and difference;
- › Foster healthy and appropriate activities and services that address all stages of life;
- › Establish and maintain community connections and partnerships, that meet the safety, social, health, leisure and cultural needs of the Wollondilly Shire.
- › Offer access to a range of human services and facilities, which help diminish any disadvantages experienced by residents of a rural shire.

Economy:

- › Strengthen and stabilise Wollondilly's employment base, economic life and communities by supporting environmentally friendly agriculture, leisure and tourism enterprises and other Shire-based enterprises and industries.
- › Support and facilitate the building of the Shire's capacity to foster a sustainable and diverse economy.
- › Support the economic viability of our towns and villages by encouraging appropriate residential development in and around those centres.
- › Provide for appropriate employment land development to accommodate a range of industries and business development opportunities.



Environment:

- › Develop and sustain a carbon-neutral shire with a small ecological footprint.
- › Develop high standards of sustainable water management and water conservation.
- › Protect and preserve a diverse range of native flora and fauna, sensitive natural environments, aboriginal cultural sites and valued rural landscapes while allowing appropriate public engagement with those environmental resources.
- › Maintain a range of functional highly sustainable, attractive built environment's in sympathy with the nearby natural and built environment and the Shire's rural character and heritage values.

Infrastructure:

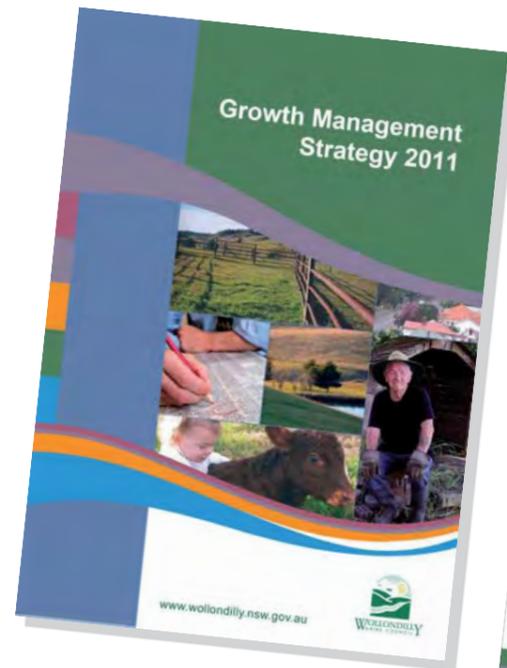
- › Develop and sustain a transport network relevant to user's needs, which promotes public transport, less fuel-thirsty transport and alternatives to road freight.
- › Link the Shire's towns and villages by infrastructure, which supports economic, environmental and community needs.

4.3.2 WOLLONDILLY GROWTH MANAGEMENT STRATEGY 2011

The 'Growth Management Strategy' (GMS) is a strategic document that outlines growth issues facing the Wollondilly Shire.

Based on a 'relatively' natural growth scenario the document sets out key directions for accommodating growth within the Shire. The strategy provides a framework to assist the Council to plan for future services and infrastructure to support the changing community.

The strategy aims for a balanced approach to support residential growth but retain environmental amenity and rural living. On the basis of the natural growth scenario, the Strategy identifies growth in and around townships. In particular, it acknowledges the confluence of Hume Highway and Picton Road as a logical point for the commencement of development in the Wilton area.



4.3.3 WOLLONDILLY SHIRE LOCAL ISSUES PAPER, March 2012

The 'Wollondilly Local Issues Paper', March 2012 identifies issues for the local Government area of Wollondilly and advocates solutions to realise the community outcomes identified within the Wollondilly Community Strategic Plan, 2030.

Identified community aspirations and outcomes include:

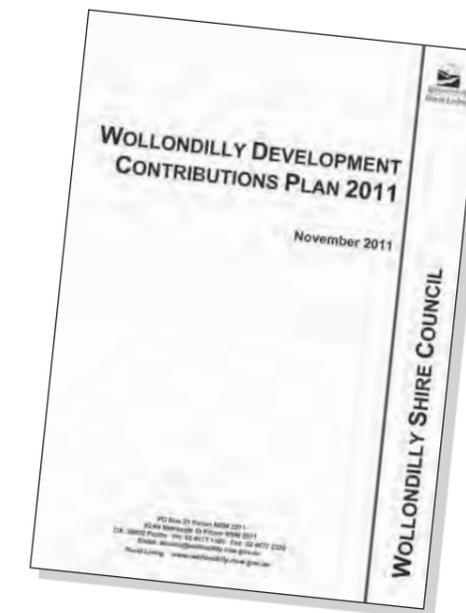
- A resilient community that has access to a range of activities, services and facilities
- An engaged, connected and supported community that values and celebrates diversity;
- A community that has access to employment and is supported through strong diverse economic activity;
- A community that is supported through appropriate, sustainable land use;
- A community that is surrounded by a built and natural environment that is valued and preserved;
- A community that has opportunities to engage with and actively care about their natural environment;
- A community that has access to a range of viable transport options;
- Communities that are supported by safe, maintained and effective infrastructure;
- A community that is supported through engagement, collaboration and partnerships across government agencies and private business; and
- A transparent, effective and sustainable Council.

4.3.4 WOLLONDILLY DEVELOPMENT CONTRIBUTIONS PLAN, 2011

The 'Wollondilly Development Contributions Plan', 2011, levies development contributions for the provision, extension or augmentation of public amenities and public services and incorporates desired standards for these amenities and services.

4.3.5 COMMUNITY STRATEGIC PLAN 2030 (WOLLONDILLY SHIRE COUNCIL, 2008)

Wollondilly Shire Council's Community Strategic Plan establishes the goals and priorities to guide the future of the Shire through to 2030.



5 VISION FOR A NEW TOWN

5.1 Vision for Wilton Junction

The 'vision' for the Wilton Junction New Town is for the creation of a high quality township that delivers housing diversity and choice and a high level of employment and service self-sufficiency by:

- › utilising its locational advantages at the cross roads of the Hume Highway and Picton Road; and
- › building on the exceptional environmental context of the site by integrating the surrounding gorges and bushland with an open space and pedestrian network that permeates the whole site.

Wilton Junction has the potential to become the regional focus for Wollondilly Shire and surrounding areas, attracting a new generation of employment opportunities and ensuring the preservation of the existing village like qualities and lifestyle of existing townships within the Shire as a new town centre and urban growth is consolidated at Wilton Junction.



5.2 Principles for a New Town

Key 'principles' underpinning the high level master plan and guiding urban growth and development at Wilton Junction include:

› Employment and Commercial Drivers:

- Utilise central, prominent and visible locations for employment and town centre related uses and activities to ensure strong exposure and access;
- Maximise the catchment and capture of passing trade from the Hume Highway to maximise employment opportunities and capture escape expenditure;
- Integrate and co-locate employment activities within the town centre;
- Create a high amenity outcome to attract and retain footloose businesses;
- Utilise Wilton Junction and an enhanced critical population mass to act as a catalyst and platform to capture employment opportunities and reverse the under-represented south west commercial / office market; and
- Establish a balanced employment base for the region which attracts investment and expenditure for the benefit of the whole Shire.

› Housing

- Provide a range of housing types to service the widest possible extent of housing market niches;
- Focus upon family housing as the predominant form of housing;
- Deliver a range of housing types including medium density housing and mixed uses incorporating residential development;
- Deliver a range of affordable housing products;
- Recognise the emerging opportunity for pre-retirement housing for empty nesters (downsizing opportunities);
- Provision of retirement living products for active retirees; and
- Provision of aged care accommodation (over time) as the elderly emerge as an increasing component of the housing market.

› Community Facilities:

- Create a community heart for every neighbourhood
- Create a connected and accessible community (by foot, cycle and public transport);
- Adopt an integrated approach to the location and distribution of community services and facilities including the establishment of multi-purpose facilities that capitalise on the synergies of agglomeration and deliver efficiency in service delivery and land take;
- Co-locate community facilities with recreation, retail and employment activities;
- Early provision of community services and facilities
- Flexibility in the use of facilities so they can respond and adapt as needs change; and
- Equitable access to services and facilities.

› Environment

- Preservation and protection of existing vegetation with conservation value;
- Preserve and integrate into urban areas significant vegetation outside of vegetation protection areas;
- Build on existing habitat corridors for connectivity;
- Integration of natural systems into recreational lands;
- Create an urban environment that combines built form into the natural environment;
- Create and promote community ownership and education about and of their environment; and
- Create lakes that will provide a biodiverse aquatic habitat that will attract wildlife.

› Placemaking

- Create a sense of neighbourhood through the creation of meeting places and spaces that foster and promote interaction;
- Utilise the iconic positioning of 'cross roads' as centres of activity and junctions which capitalise on the movement economy;
- Deliver a high quality public realm / domain;
- Integration of public transport, walking and cycling;
- Utilise and promote iconic local species (flora & fauna) to reinforcing a unique sense of place and identity;
- Limit car dependency and the impact of motor vehicle use within activity centres and public and civic spaces; and
- Utilise human and social services as 'soft' community infrastructure that binds the urban fabric of the community.

› Activity Centres:

- Recognise the importance of a critical population mass to generate activity;
- Activate centres as the focal point of neighbourhoods;
- Develop centres that are highly visible, permeable and accessible;
- Centres developed with a high quality public realm and central village square which acts as a primary nodal space in the centre core to offer a place to gather, meet and interact;
- Active thoroughfares that are flanked by a high level of activity and that emphasise the importance of the pedestrian;
- Car parking solutions and service vehicle access that does not dominate the street frontage (ie laneway parking and access, clustered communal and centre block car parking and car parking that is 'sleeved' by built form etc)

› Traffic and Transport:

- Self-containment in services and employment to reduce trip numbers and length;
- Accommodate and promote work from home opportunities;
- Integrate land uses to limit trip generation and vehicle movements;
- Provide for non-car travel modes;
- Facilitate a bus network comprising local internal bus services to connect local residents with their town centre and community facilities, district routes to other centres (ie Picton, Tahmoor & Bargo etc) and regional services to connect higher order centres such as Campbelltown;
- Early delivery of public transport infrastructure to establish and reinforce sustainable transport habits;
- Provision of higher density development and trip generators on bus routes;
- Establishment of a centralised and accessible public transport interchange;
- Establish opportunities for Kiss & Drop, Park & ride / park & share;
- Establish bus priority measures;
- Ensure multi-modal integration with accessible bus routes and stops connected to the cycling and pedestrian network;
- Implementation of parking management practices; and
- Ensure connectivity between the four quadrants, especially for non-vehicular movement

› Infrastructure:

- Size infrastructure for ultimate use but deliver in economic stages;
- Prepare coordinated services plans and explore opportunities to share facilities costs, recognising the respective roles of Federal, State and local government, infrastructure agencies and the developers;
- Cooperation in the delivery of infrastructure;
- Timely provision of social infrastructure; and
- Recognise long term maintenance implications in the selection of infrastructure outcomes.



6 DEMOGRAPHIC PROFILE

6.1 Existing Population Characteristics

Understanding the profile of the existing population of an area can help in predicting the characteristics of the new population attracted to development, as well as underpinning strategies to promote integration of new and existing communities.

Using the 2011 ABS Census of Population and Housing, the community profile of the immediate local area and the village of Wilton has been compared with the Wollondilly LGA and Sydney (Greater Capital City Statistical Area).

Table 6.1 below provides a benchmark for comparison of the key demographic factors that are likely to influence social infrastructure needs and requirements as Wilton Junction grows and changes over the coming decades.

Table 6.1 Characteristics of existing population

Population	Wilton Junction Local Area	Wilton Village	Wollondilly LGA	Greater Sydney
Population	697	1,890	43,261	4,391,676
Age Groups (%)				
0-4 years	5.4	7.4	7.3	6.8
5-11 years	9.9	10.7	11.1	8.7
12-17 years	8.9	7.8	9.2	7.4
18-24 years	7.9	8.2	9.0	9.5
25-54 years	39.4	42.6	40.6	43.8
55-64 years	15.1	12.8	12.0	10.8
65+ years	13.3	10.5	10.8	12.9
Median Age (years)	39.5	37	36	36
Family Structure (%)				
Couple with children	48.9	56.4	52.6	48.9
Couples without children	34.8	32.8	32.9	33.5
Single parent families	16.3	10.3	13.6	15.7
Other families	0.0	0.6	0.9	1.9
Household Type (%)				
Family household	84.2	87.1	82.2	73.1
Lone person	15.8	12.3	16.1	22.6
Group household	0.0	0.7	1.7	4.3
Average Household Size (no. people)	3.0	3.0	3.0	2.7
% born overseas	12.8	13.0	12.4	34.2

Population	Wilton Junction Local Area	Wilton Village	Wollondilly LGA	Greater Sydney
Income (\$)				
Median household income (\$ weekly)	1,396	1,807	1,487	1,447
Median Individual Income (\$ weekly)	601	714	617	619
Highest education qualification achieved (%)	Second Release	Second Release	Second Release	Second Release
Bachelor or Higher degree	Second Release	Second Release	Second Release	Second Release
Private occupied dwellings (%)				
Low density (separate house)	97.2	98.3	94.5	60.9
Medium density (Semi / Townhouse)	1.4	0.5	3.0	12.8
Higher density (Apartment)	0.0	0.5	1.6	25.8
Housing tenure (%)				
Fully owned	33.8	30.7	30.8	30.4
Being purchased	40.5	54.2	49.6	34.8
Rented	24.3	13.4	16.3	31.6
Number of Motor Vehicles (%)				
None	1.4	1.0	3.3	12.1
1+ motor vehicle	21.7	16.9	23.3	38.4
2+ motor vehicle	74.1	79.4	70.4	46.5

This demographic profile prepared by Elton Consulting reveals that:

- Wilton and Wollondilly LGA have relatively young populations, with a much smaller proportion of the population aged 65+ than Sydney as a whole.
- Families are the most common household type, with a predominance of couple families with children;
- Individual and household incomes in Wilton are well above the median incomes in Wollondilly and Sydney;
- Consistent with the semi-rural character, housing forms in Wilton and Wollondilly LGA are almost exclusively detached dwellings, with only a small proportion of medium density dwellings compared to Sydney;
- The proportion of the population paying off a mortgage is very high in both Wilton and Wollondilly LGA and the proportion of residents in rental housing in both Wilton and Wollondilly LGA is well below that of Sydney;
- Levels of cultural diversity in Wollondilly as a whole are significantly lower than the Sydney metropolitan average; and
- As is common in most semi-rural areas, most households have two or more motor vehicles (almost 80%) in both Wilton and Wollondilly LGA, a much higher rate than the Sydney average.

6.2 Projected Demographic Composition

MacroPlan Dimasi has examined the demographic profile of comparable new estate regions in South West Sydney and derived a likely demographic profile of future residents in Wilton Junction.

Resident populations in new release areas are generally 'younger' and MacroPlan Dimasi believe that the majority of demand for Wilton Junction will come from first home buyers or young families with and without dependent children. These households typically comprise two adults aged between 20 and 49 years and children aged between 0 and 19 years. This has already been observed at Bingara Gorge.

In addition, the opportunity to 'trade-down' from established cities, live near family and relocate to regions with high amenity is expected to draw more 65+ residents. The completion of the golf course in Bingara Gorge and the development of a new town centre with localised service provision will facilitate further inflows of 65+ persons. On this basis, MacroPlan Dimasi projects that 65+ residents will comprise between 8-10% of Wilton Junction's population.

6.2.1 Household Occupancy Rates

In new estate regions, low density dwellings comprise about 3.2 occupants, while medium density dwellings (semi-detached, attached, terrace and villas) generally consist of 2.4 persons. Within Wilton Junction, a higher share of young couples with no children and more retiree households are expected to collectively drive down the average number of occupants per dwelling. Accordingly, occupancy rates are expected to be marginally lower than other new estate regions at 2.8-3.2 persons per household in low density development and 2.0 – 2.6 persons per household in Medium Density development. This equates to an average household size in the order of 2.8 persons per dwelling.

6.2.2 Lot Production

A build out rate of approximately 400 lots per annum is anticipated over the life of the project and is based on the following assumptions:

- Rezoning of Wilton Junction achieved by the end of 2013;
- A total production of 11,000-12,000 lots by 2039;
- An increase in residential land production generally across Sydney's south west.

Table 6.2 identifies projected lot production at Wilton Junction:

Table 6.2 Projected Lot Production at Wilton Junction

Lot Type	2020	2030	2040	Total
Medium	280	487	325	1,093
250 m ²	280	487	325	1,093
350 m ²	420	731	488	1,639
450 m ²	1,065	1,852	1,236	4,153
600 m ²	714	1,243	829	2,787
>750 m ²	350	609	407	1,366
Total	3,110	5,410	3,610	12,130

*200 lots built as at end of 2012

Source: MacroPlan Dimasi, September 2012

6.2.3 Dwelling Completions

Lot production does not represent dwelling completions as population is only realised at the point of dwelling completion and occupation.

Accordingly, the following assumptions have been applied to derive projected dwelling completions:

- One lot equates to one dwelling (across all dwelling typologies);
- A two year lag is anticipated between lot production and dwelling completion and occupation; and
- Sales are achieved at the rate of production.

Table 6.3 presents total and annual average dwelling completions by lot type at five year intervals.

Table 6.3 Average Annual Dwelling Completions

Lot Type	2020	2025	2030	2035	2040	2045	Total
Medium	186	234	248	248	171	5	1,093
250 m ²	186	234	248	248	171	5	1,093
350 m ²	280	351	372	372	257	8	1,639
450 m ²	709	890	941	941	650	21	4,153
600 m ²	476	597	632	632	436	14	2,787
>750 m ²	233	293	310	310	214	7	1,366
Total	2,070	2,600	2,750	2,750	1,900	60	12,130

Source: MacroPlan Dimasi, September 2012

6.2.4 Total Project Population

Based on projected dwelling completions and occupancy rates, the total resident population of Wilton Junction at completion is expected to total approximately 34,200 people. In addition to that forecast for Wilton Junction, the Bingara Gorge estate currently comprises a resident population of 341 persons, occupying 124 completed dwellings (with an average household occupancy of 2.75 persons). Therefore, at completion the total resident population of Wilton Junction is expected to total around 34,541 persons (inc. Bingara Gorge).

The existing population of the wider Wilton area is 1,890 people.

Table 6.4 presents total forecast population at Wilton Junction by age, over five year intervals (excluding the existing Bingara Gorge resident population of 341 persons).

Table 6.4 Total forecast Population at Wilton Junction

Period	Total Population (persons)				
	2020	2025	2030	2035	2041*
0-19	1,870	4,070	6,400	8,730	10,390
20-34	1,210	2,680	4,230	5,780	6,890
35-49	1,300	2,770	4,320	5,870	6,980
50-64	950	2,270	3,670	5,070	6,060
65+	500	1,380	2,310	3,240	3,900
Total	5,840	13,170	20,920	28,670	34,200

*Extended one year to include completion year

Source: MacroPlan Dimasi, September 2012

7 EVIDENCE OF THE LAND

7.1 Topography and Geo-technical Features

The Wilton Junction Investigation Area is generally elevated. The land is undulating and varies in height between 62m AHD and 302m AHD. This is reflective of the incised valleys and ridges traversing the site.

The site generally is more undulating to the extremities and along the water courses with the balance being relatively flat (less than 10% slope).

It generally falls from the high areas near the Hume Highway / Picton Road junction in a reasonably gentle fall toward the tree line adjacent to the waterways which marks the steeper more incised sections which fall to either the Nepean River to the west and north, and to Allens Creek and the Cataract River or their subsidiaries to the east and northeast.

A geotechnical study was undertaken in 2003 over a significant portion of the investigations area. This study undertaken by GHD Pty Ltd was intended to identify the underlying geology and understand the geotechnical implications for potential urban development.

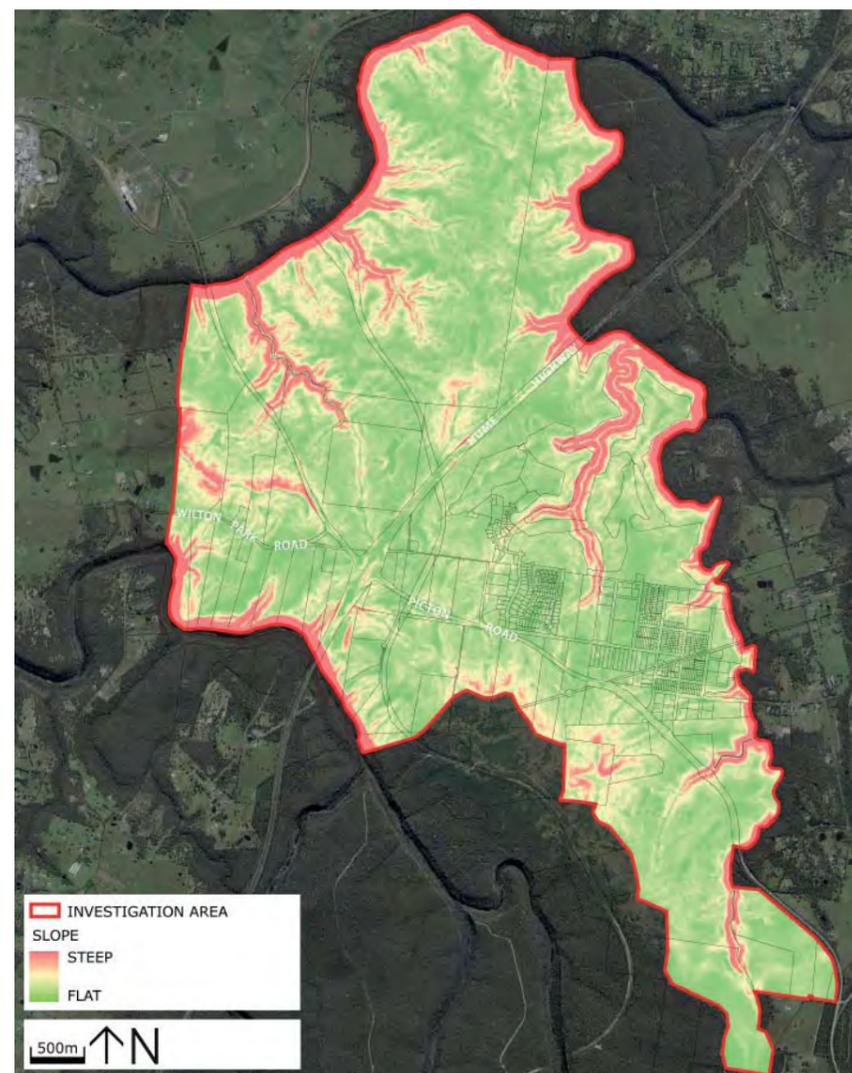
Based on the Geological Survey, NSW, 1966 the investigation area is predominantly identified as underlain by sedimentary bedrock of the Wianamatta Group, Liverpool Sub-group. It primarily comprise Ashfield Shale, the transitional Mittagong formation and Hawkesbury Sandstone.

The preliminary investigations indicate a very low to low risk of instability for the majority (excluding those around the steep gorges along the Nepean and Allens Creek) of the site.

The only other geology of significance is the underlying coal seams. The site is located within the Wilton Mine Subsidence District. Mining and urban development can coexist and this issue is dealt with in more detail specifically below.

Overall this preliminary assessment has concluded that the site has no major geotechnical constraints to development.

Figure 7.1 Slope Analysis



7.2 Environment

7.2.1 Agriculture

The Department of Primary Industries undertook agricultural suitability assessments of this area generally based on data collected in 1985. Some limited field checking was undertaken in 1991 and suitability maps at 1: 50,000 were published in 1995.

The maps published by the Department of Agriculture show most of the land within the investigations area as being is Class 3 (suitable for cropping) and Class 4 (suitable for grazing).

Further details of the classifications can be found at www.dpi.nsw.gov.au

A later study, (Morris, 2000) undertaken specifically in relation to land within the investigation site noted that in relation to the above suitability classifications, these were determined at a high level as opposed to an individual property basis, could have a mapping error margin of some 50m and did not include soil testing.

Morris assessed much of the study area in the context of the nature of the soils on the site and their limitations, water resources available to the land, infrastructure, farm management issues and pest plants to make a detailed assessment of the suitability and capacity of the land for agricultural production.

This study found that much of the land within the investigations area has rocky soils and shallow sub-surface rock.

The rainfall is approximately 950 mm per annum, and some of this water is captured and stored in farm dams, and pumping licenses are not held over much of the site. Furthermore Policy restricts water capture to 10% of property run off on a rolling average, thus limiting the amount of water that can be captured and used on the property.

The land is traversed by major roads, and the largely unconstructed Maldon – Dumbarton Rail corridor and other services such as the gas pipeline. This infrastructure provides major barriers to the management of the land for agricultural use and compromises the properties' potential as a result of decreased efficiencies in operation.

In terms of pest plants and animals this study found that the subject land is prone to thistles, and native animals that have numbers in the drier months to impact the carrying capacity of the land for stock.

In addition the close proximity of the land to the urban township of Wilton further compromises its farming capacity through the potential for the intrusion of pets and in particular dogs which were noted to have previously been an issue.

On the basis of this assessment the study notes that very little of the site is actually suitable or capable of cultivation. Based on the inspection by Morris (2000), in practice the suitability of much of the site for sustainable agriculture using the Department's classifications is Category 4 (60%) with the balance being Category 5.

From a sustainable agriculture perspective (which has social, economic and environmental dimension) due to the rocky nature of the land, its shallow soils, water harvesting limitations and areas of fragmented holdings, the retention of the site in grazing activities is not considered sustainable.

Table 7.2 Agricultural Land Classifications

SUITABILITY CLASSES	LAND USES										
	Horticulture				Field Crops		Grazing Pasture				
	Vegetables		Tree Crops		Irrigated	Rainfed	Improved		Native		
Irrigated	Rainfed	Sensitive	Tolerant ²	Irrigated			Rainfed	Irrigated	Rainfed	Seasonal	Light
1. Arable land suited to continuous cultivation ¹ for uses such as intensive horticulture and field crops. Constraints to sustained high levels of production are absent or minor.	*	*	*	*	*	*	*	*	*	*	*
2. Arable land suited to regular cultivation for uses such as intensive horticulture and field crops. Constraints to sustained levels of production are minor to moderate.	●	*	●	*	*	*	*	*	*	*	*
3. Land suited to cropping but not continuous cultivation. Production risks are managed through: a pasture phase, conservation tillage and/ or fallowing. Constraints to sustained levels of production are moderate.	●	●	●	*	●	●	●	*	*	*	*
4. Land suited to grazing but not cultivation. Agriculture is based on native pastures and/or improved pastures established using minimum tillage techniques. Overall level of production is comparatively low due to major environmental constraints.	●	●	●	●	●	●	●	●	●	*	*
5. Land not suited for agriculture or only light grazing. Agricultural production, if any, is low due to major environmental constraints.	●	●	●	●	●	●	●	●	●	●	●

- * Class having requirements in excess of those needed for sustained production from the land use
- * Class having the minimum requirements for sustained production from the land use
- Class may be suited to the land use depending on the nature of the limiting factors to cultivation and crop production
- Class not suited to land use because of limiting factors to cultivation and / or production

Notes:

- 1 The ability to cultivate is a pre-requisite for cropping in this table
- 2 Tolerant to changes in soil conditions eg. acidity, salinity

Wilton Junction MASTER PLAN

7.2.2 Flora

Much of investigation area has been modified for agricultural purposes.

Remnant areas of the original plateau forest dominated by Narrow-leaved (and broad-leaved) Ironbark, Forest Red Gum, and Grey Box and the woodlands dominated by Common Grey Gum, and Scribbly Gum, and Narrow-leaved Apple remain to the extremities of the site.

Some trees also remain scattered through the paddocks.

In the deeper gullies Sydney Peppermint Gums occur with the Common Grey Gum.

Understorey is largely dominated by hard leaved shrubs.

A previous study (HWR, 2006) over much of the area found no plant species listed as threatened under the Threatened Species Conservation Act, 1995.

Areas of the remnant bushland are identified by the NSW Department for the Environment, Climate Change and Water as forming part of the Cumberland Plain Recovery Plan as priority conservation lands. The majority of these areas are inappropriate for urban development and will form amenity areas and open space within the Master Plan. Alternatively, environmental off-sets may be required to replace the removal of any intact vegetation with conservation value.

Further assessments may be appropriate as the detail of the proposal is developed.

7.2.3 Fauna

Within the general vicinity of the investigation area several threatened fauna species have been recorded. Fauna species, including Koalas, will require further investigation as the development process progresses.

The largest threat to the Koala is the loss of habitat and therefore care will be taken to minimise clearing and disruption to intact vegetation with conservation value. Most of the Koala habitat is located such that it is unlikely to sustain significant development.

Other threats could include interactions with humans (ie traffic and domestic pets). These issues will be addressed as appropriate via education and management as has occurred elsewhere.

7.2.4 Fish

A preliminary assessment of the development of the site on fish species found that it would be unlikely to significantly affect any threatened aquatic species or other matters of significance under the Fisheries Management Act.

7.2.5 Bushfire and Asset Management

The subject area is bushfire prone and bushfire management will be required.

The majority of the highest risk areas are likely to be the native vegetation around the gorges.

Urban development and other assets will need to be protected as part of the development of the area and to this end, it is likely that there will be appropriate 'asset protection zones' around the urban development and the bushland areas. In some cases, particularly in areas of rural living type development, individual dwellings may require asset protection zones.

7.3 Site Contamination

The site is currently largely used for residential development (townships and rural living) and farming – running cattle, with some areas of woodlands not in an active land use.

Previous environmental studies and investigations have identified a long history of agriculture on the site. Evidence of agriculture (including land clearing, fence lines and structures) dates back to the late 1960s.

For the most part the site has been used for grazing livestock and in particular cattle. Such land uses do not pose major contamination threats. Typically former agricultural land is frequently converted to urban uses and there are standard methods and approaches that can be employed to facilitate this.

The only really notable land use on the site was the use of a portion of the site by the Defence Department as the Douglas Park Range.

The Douglas Park Range was used for testing explosives during World War II.

The Defence Department advised the Hon John Fahey MP by letter dated 11 December 1998, that the target area was searched in 1946 and no unexploded ordinances (UXO) were discovered. A further field reconnaissance in 1995 also found no evidence of UXO on the site.

The Council advised a former land owner of the site on 25 August 1992, that it had been advised by the Department of Defence, that only "practice bombs" had been detonated on the site and that the explosive contained in the practice bomb was a detonator similar to a large shotgun cartridge that was designed to discharge a smoke proxy upon impact with the ground.

Although unlikely, if an unexploded ordinance is found on the site it should be cleared by military personnel.

The Department of Defence further advised the Council that this previous use did not pose a major impediment to the future development.



7.4 Mining Subsidence

As previously noted, the investigations area is located within the Wilton Mine Subsidence District.

The coal deposits located beneath this area are considered to be economically viable. In addition, within the Macarthur South Region, opportunity exists to undertake gas drainage, the extraction and recovery of the methane gas associated with the coal seam.

Coal mining is occurring in the general area.

Previous experience is that once the coal resource has been mined the ground can subside and this has been associated with property, such as dwellings, cracking. Damage to properties is usually able to be repaired. However in isolated cases the Mine Subsidence Board has advised that it was more economical to redevelop the property. It is understood that in these cases were in Tahmoor where the dwellings were older dwellings that had been developed without reference to the prospect of later coal mining and thus more susceptible to the impacts of subsidence. This decision to redevelop is also understood to have been made in light of insurance considerations (msec, 2010).

In newer areas, however, development can be designed having regard to prospective future mining - resulting in less damage.

Precedent exists in in regard to the recent Bingara Gorge development that is located within the investigation area. The rezoning of Bingara Gorge was made on the understanding of the mining long wall construction methods and that the long wall design and width would not change, making any subsidence more predictable and within the normal limits for dwellings.

BHP's submission to Wollondilly Shire in respect to its LEP in 2010 stated:

"Illawara Coal continues to work cooperatively with the owners of Bingara Gorge to ensure the two developments can coexist with minimal restrictions to both organisations."

Protocols and structures as previously agreed with BHP Billiton, the Mine Subsidence Board and DPI can and should be applied across this site to the same result.

Figure 7.3 Wilton Mine Subsidence District

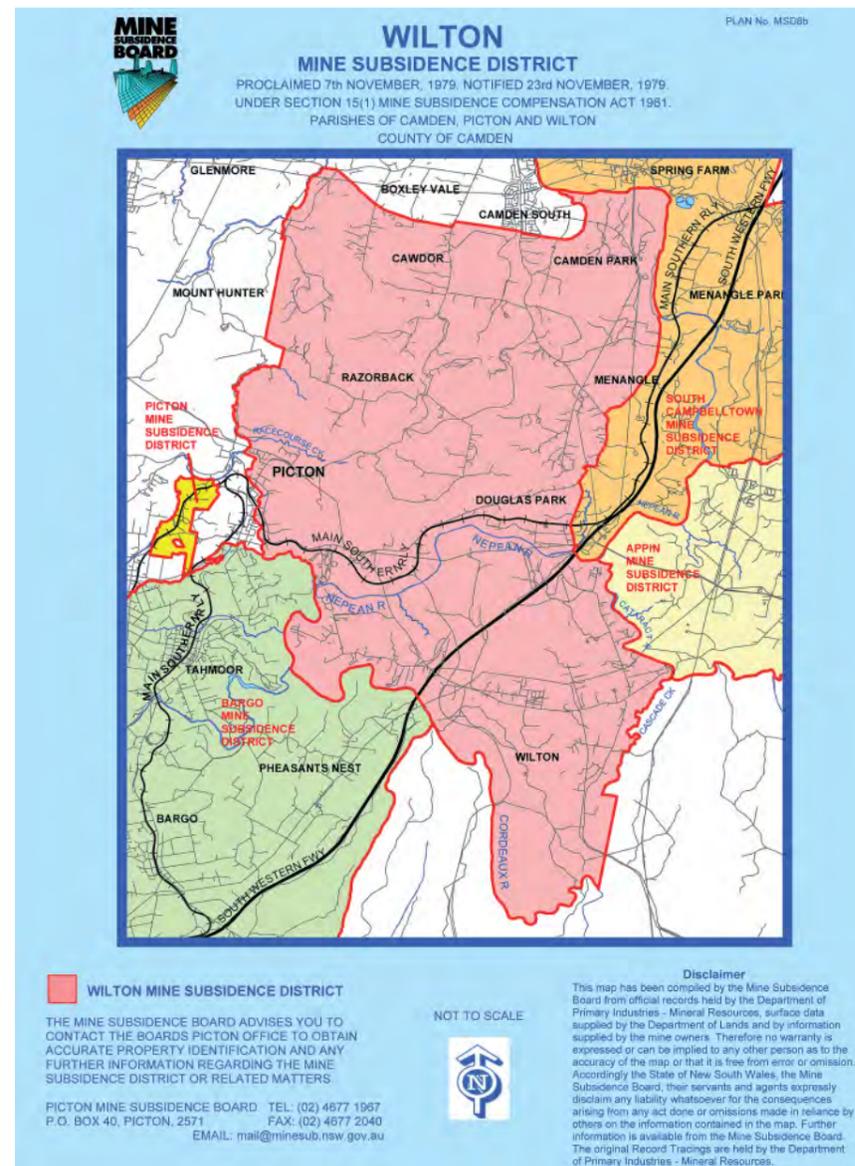
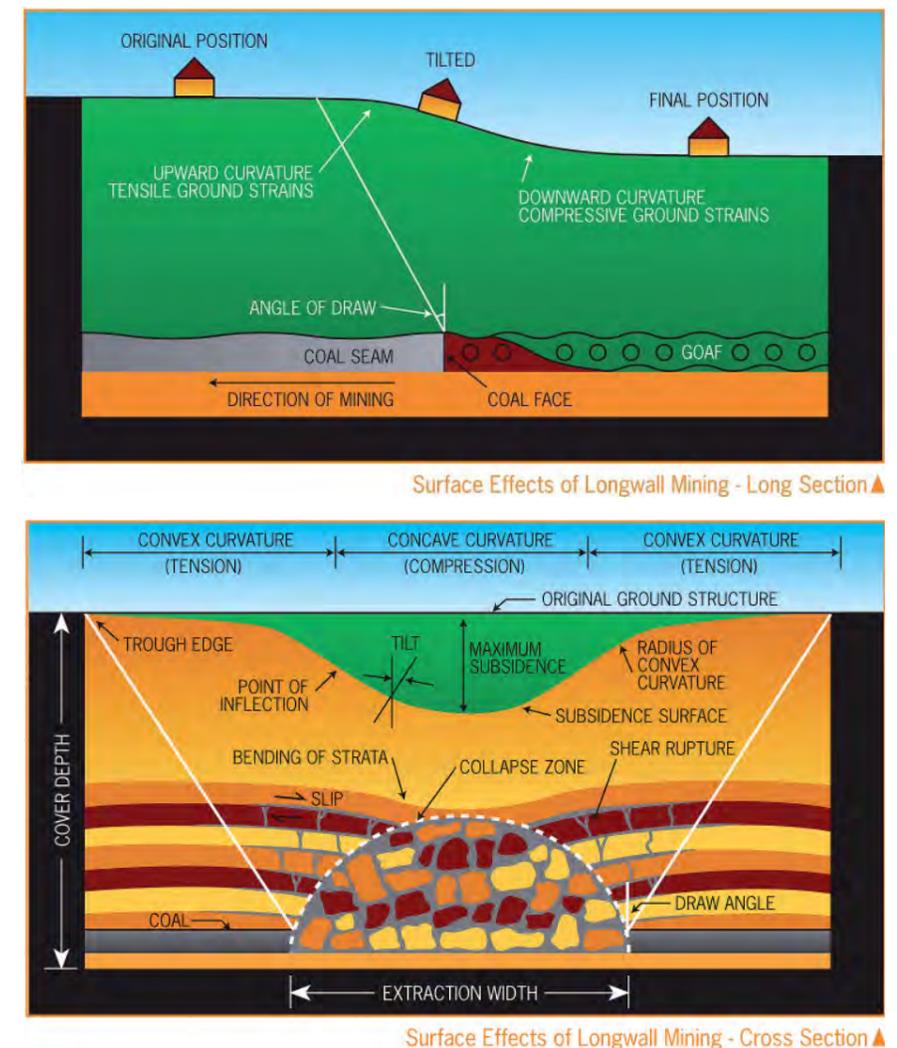


Figure 7.4 Mine Subsidence Effects



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7.5 Cultural Heritage

The word Wollondilly has two Indigenous meanings “water trickling over rocks” or “a place where spirits dwell”. The area is strong in Aboriginal history, with an equally interesting rural foundation built by the first white settlers and generations of migrants following.

Large parts of the investigation area have been the subject of previous archaeological studies both generic (to the general area) and specific. These previous studies have identified Aboriginal sites including art sites, deposits and camp sites within the general vicinity.

A 1986 study by JRC Planning Services identified an inventory of predicted site types within the Macarthur Region. This study identified the ‘Wilton Art Cluster’; an area considered to be of special significance to the Local Aboriginal Land Council. It also identified the possibility of shelters with Art in the Wianamatta Shale Hills and slopes. The second most likely type of site would be open campsites.

Later studies, (Devine, Erby and Mazlin, 1990) noted that there were two major areas in which sites were clustered in the Macarthur South region viz Mt Gilead and Wilton and (Cain, 1992) identified the potential for shelters with art along the Nepean River.

Specific studies commissioned for approximately half of the investigation area identified four previously recorded rock shelters containing art. The art is identified as being part of the Wilton Art Cluster. This study found no other evidence of occupation.

The Wollondilly LEP, 2011 lists six local items and one state item within Wilton including two cottages, St Lukes Anglican Church, the Aboriginal Shelter sites referenced above, the Upper Nepean Scheme Pheasants Weir, Kedron and Wilton Park Stables.

All relevant legislative requirements will be abided and further detailed survey work may be required as part of later planning stages.



7.6 Noise Impacts

The investigation area may be impacted by noise emanating from major roads, the potential future activation of the Maldon-Dombarton Rail corridor that dissects the site (if ultimately developed and utilised) as well as other land uses established as part of any future urban development.

Key noise sources could include the Hume Highway and Picton Road, and service infrastructure such as sewerage treatment plants and other industrial land uses.

Noise impacts can be abated and appropriate methods of attenuation can be included following acoustic studies as the urban development proposal progresses.

7.7 Gas Pipeline

The Sydney-Moomba gas pipeline dissects portion of the investigation area (east-west) and is identified in Figure 7.5.

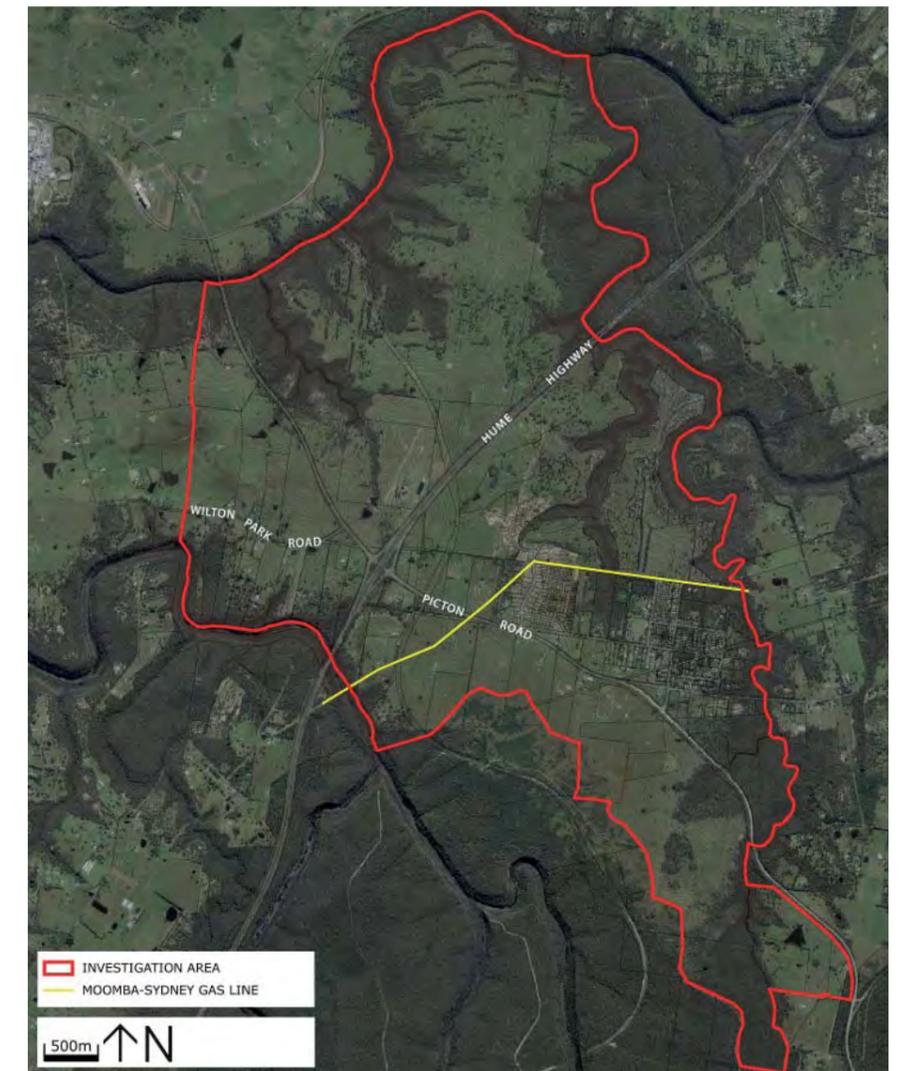
Any future development application for a dwelling or a sensitive land use (ie. School, aged care facilities, health care facilities and child care centres etc.) on land within 750 metres of the gas pipeline easement will require a risk assessment report to be prepared by a suitably qualified and experienced engineer. A risk assessment report must be prepared in accordance with the Australian Standard No. 2885.1 (revised 2005-2006) for pipeline design, construction and operation).

The risk assessment must make recommendations on measures to reduce the risk arising from a rupture of the pipeline etc.

The gas pipeline therefore does not preclude future urban development within the investigation area but requires further detailed analysis and assessment for proposed development in proximity to the gas pipeline easement.



Figure 7.5 Sydney-Moomba Gas Pipeline



Wilton Junction MASTER PLAN

8 MASTER PLAN METRICS AND ANALYSIS

This high level master plan has been informed by a number of 'desk top' background investigations providing required analysis and metrics to inform the preparation of the high level master plan including quantitative land use budgets as well as qualitative guidelines and strategies for the provision of required infrastructure, services and facilities within the Wilton Junction new town.

Background Investigations specifically prepared to inform and support this high level master plan include:

- Economic and land use analysis prepared by MacroPlan Dimasi dated September 2012;
- Wilton Junction – Social Infrastructure Background Investigations Report prepared by Elton Consulting with input from Clouston Associates, dated September 2012;
- Traffic and Transport Analysis prepared by Colston Budd Hunt & Kafes Pty. Ltd. (CBHK) in association with Cardno dated September 2012;
- Wilton Junction Public Transport Strategy, prepared by Cardno dated September 2012;

- Wilton Junction – A New Town Water Master Plan prepared by MWH dated September 2012;
- Wilton New Town Sewerage Scheme – Overview technical memorandum prepared by CH2M Hill dated 11 September 2012;

In addition, where available, individual land owner investigations have also been utilised to inform the high level master plan including:

- Topographical and cadastre surveys;
- Ecological Assessments (flora and fauna);
- Bushfire and Asset Protection Zone assessment;
- Acoustic noise assessments;
- Agricultural land assessments;
- Mine Subsidence analysis;
- Geotechnical assessment;
- Contamination assessment; and
- Aboriginal heritage.

These reports are available separately to this high level master plan but are summarised in the following section.



8.1 Economic Analysis

The economic and land use analysis prepared by MacroPlan Dimasi identified:

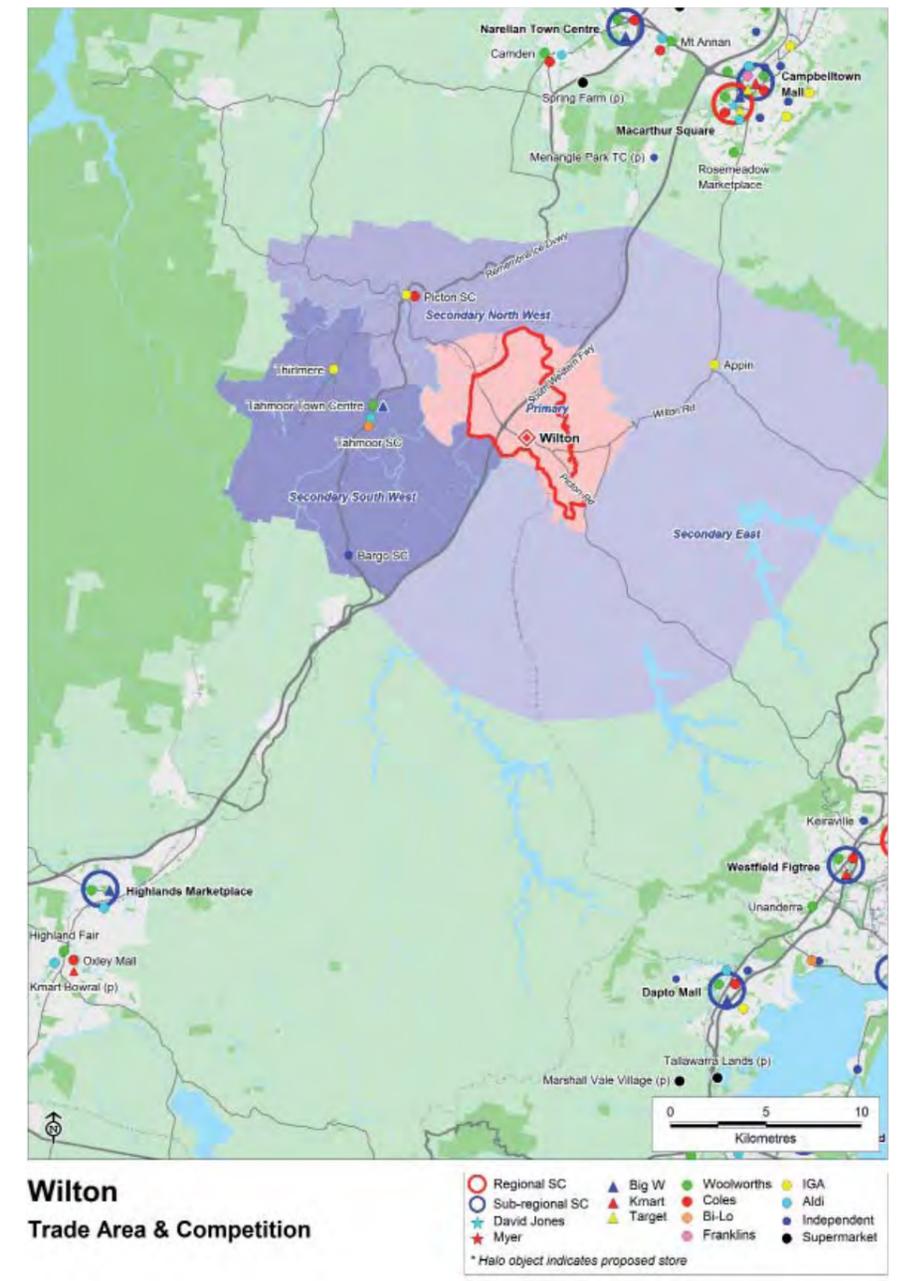
- Population demographics inclusive of projected lot production rates, dwelling completions, occupancy rates and population projections for Wilton Junction;
- Employment forecasts and analysis inclusive of job targets (by sector) to achieve an employment self-sufficiency ratio of 70%;
- An employment and economic development strategy which considers emerging market trends and industries, explores the comparative business advantages of Wilton Junction and develops strategies to attract employment, economic activity and investment to Wilton Junction; and
- A retail analysis that assesses the potential for retail facilities at Wilton Junction (including traditional retail, bulky goods and highway orientated / service centres) including the appropriate size, scale and timing of such facilities.

8.1.1 Retail Need

MacroPlan Dimasi identified a trade area catchment for Wilton Junction that comprises a key primary sector and three secondary sectors. The combination of the primary and secondary sectors forms the main trade area, which is the area from which the majority of retail turnover will be generated.

The main trade area and traditional retail competition in the region is identified in **Figure 8.1**.

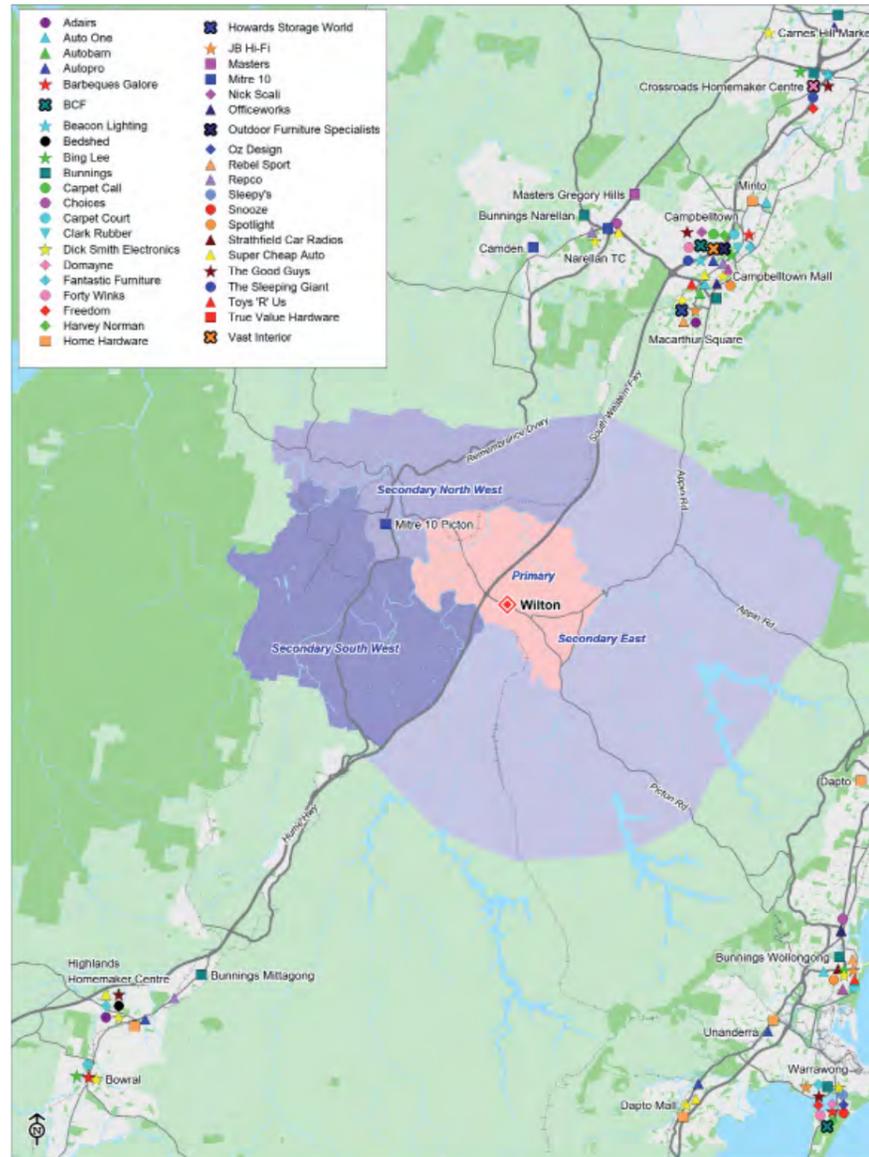
Figure 8.1 Main trade area and traditional retail competition



Source: MacroPlan Dimasi, September 2012

The main trade area and bulky goods retail competition in the region is identified in **Figure 8.2**.

Figure 8.2 Main trade area and bulky goods retail competition



Wilton Trade Area & Bulky Goods Competition

Source: MacroPlan Dimasi, September 2012

The current main trade area population at June 2012 was approximately 25,000 persons of which 3,150 persons are situated within the key primary sector.

MacroPlan Dimasi estimate that the primary sector population will reach about 39,300 persons once the Wilton Junction investigation area reaches capacity at about 2046, growing at an average annual rate of 7.7%. Across the whole main

trade area, the population is expected to reach about 68,800 persons by 2046, growing at about 3% per annum, on average.

The main trade area population comprises a mix of residents that are slightly lower in affluence than metropolitan benchmarks, have much higher levels of home ownership and are fairly typical in terms of family composition.

The current retail expenditure of the main trade area population is estimated at \$305 million, including \$40 million in the primary sector, and is projected to increase to \$1.12 billion by 2046 at a rate of about 3.9% per annum.

In order to provide an accurate picture of the retail floor space demand generated by the main trade area population, the available retail expenditure is translated into an estimate of retail floor space.

Floor space estimates are generated by applying appropriate thresholds of desired turnover levels per m² of floor space, normally referred to as retail turnover densities (RTD's) to the available retail expenditure volume.

The main trade area residents currently generate total retail floor space demand of approximately 47,650 m² across all retail categories and this is estimated to increase by about 3,800 m² per year on average, reaching 139,200 m² by 2046.

Notwithstanding, not all of the retail demand generated by main trade area residents will be captured within Wilton Junction or within the main trade area, for that matter. Although there are existing retail facilities at Picton, Tahmoor and Wilton, totalling close to 36,000 m², there would currently be expenditure escaping, particularly for higher order retail and bulky goods, to centres such as Campbelltown and Liverpool as well as other locations across metropolitan Sydney.

Further, retail facilities at Wilton Junction would be expected to capture a proportion of annual sales turnover from beyond the main trade area. Given its location on both sides of the Hume Highway at the intersection of Picton Road, beyond trade area expenditure could be quite significant, although it would also be quite dependent upon the accessibility and locations of retail facilities within the precinct as well.

Having examined the surrounding competitive retail network, MacroPlan Dimasi consider that 105,656m² of retail floor space is supportable at Wilton Junction assuming that a large scale bulky goods development (either several individual large format tenants, or a dedicated bulky goods centre) will be developed beyond 2026 and that this will have the effect of increasing the trade area market shares as well as the extent of the trade area for this type of retail. This is accounted for by a 50% beyond trade area assumption.

Table 8.1 Wilton Junction Indicative Supportable Floor space (m²) (2012-2046)

Year Ending June	Supermarket(m ²)	Other Retail (m ²)	Total Retail (m ²)
2016	2,456	2,931	5,387
2021	5,381	5,902	11,283
2026	11,729	14,391	26,119
2031	16,887	52,920	69,807
2036	21,913	67,559	89,472
2041	25,154	76,829	101,983
2046	26,151	79,505	105,656

Source: MacroPlan Dimasi, September 2012

Assuming a more modest beyond trade area assumption of 20%, the supportable floorspace reduces to some 58,000m², as identified in the following table:

Table 8.2 Wilton Junction Indicative Supportable Floor space (m²) (2012-2046)

Year Ending June	Supermarket(m ²)	Other Retail (m ²)	Total Retail (m ²)
2016	2,456	2,931	5,387
2021	5,381	5,902	11,283
2026	11,729	14,391	26,119
2031	16,887	20,722	37,609
2036	21,913	26,922	48,835
2041	25,154	30,961	56,115
2046	26,151	32,262	58,412

The recommended composition and mix of retail floor space by MacroPlan Dimasi includes a main town centre (which is likely to include a major dining and entertainment precinct) as well as a range of non-retail commercial uses and retail provision that might include:

- Two (2) or more full-line supermarkets;
- One (1)- two (2) discount department stores; and
- In excess of 100 specialty retailers as well as possible mini-major tenants.

The town centre could accommodate between 20-25,000 m² of retail floor space.

One or two smaller village centres are also recommended at in-board locations, servicing localised catchments. These centres could support up to 5,000-6,000 m² of retail space plus supporting commercial and other non-retail uses to encourage and maximise community benefits. Centres of this size would be sufficient to accommodate full-line supermarkets and supporting retail specialty tenants.

Other smaller neighbourhood shops could establish as the precinct develops, with the market able to determine appropriate locations.

The population of Wilton Junction will also reach sufficient levels of critical mass to support a range of bulky goods retail. This format of retail is most successful if developed with good exposure, high visibility and accessibility and critical mass.

Bulky goods development within Wilton Junction would be supportable over the longer term and could range between 15–30,000 m² depending upon its location within the precinct (ie a much larger provision if located close to the Picton Road and Hume Highway intersection).

MacroPlan Dimasi recommend that in the order of 16 hectares of land (net) is recommended for Wilton Junction which represents approximately 21 hectares (Gross) with allowance for local roads and civic parks and plazas etc.

An indicative retail floor space composition and staging is provided in **Table 8.3**.

Table 8.3 Wilton Junction Indicative Retail Composition

Centre	Role & Function	Size (GFA m ²)	Land Area (ha)	Timing	Land Uses
Town Centre	Primary retail & commercial centre	20,000–25,000 m ²	7 ha	2017 onwards (various stages)	1 x DDS, 2 x supermarkets, specialty retail & secondary retail
Bulky Goods	Local services & employment as well as serving passing traffic	15,000–30,000 m ²	6 ha	2020 onwards	Bulky goods & highway oriented retail
Village Centre/s	Supporting convenience retail & business services	5,000 m ² (each)	3 ha	2026–2036	Small supermarket/s plus retail & non-retail specialties
Local Shop/s	Small shop/s and offices	4,000 m ² (each)	0.5ha	2021–2036	Convenience shops and local services
Total Wilton Junction Retail Floorspace		45,000–65,000 m²	16.5 ha*		

*Net of local roads and parks etc.

NB Town centre FSR = 0.35; village centre FSR = 0.4; bulky goods FSR = 0.5

Source: MacroPlan Dimasi, September 2012

Note that the above land area allowance for bulky goods would increase to 16 ha under the supportable floorspace model that assumes a 50% trade area allowance.

8.1.2 Employment

In order to generate employment forecasts, MacroPlan Dimasi has projected a job composition for Wilton Junction (at completion). The distribution of jobs by industry considered:

- › The current job composition in Wollondilly LGA and Outer South West Sydney Region (OSWSR);
- › Emerging market trends and industries;
- › Wilton Junction's comparative business advantage; and
- › The impact of Wilton Junction's final resident population.

Table 8.4 provides a breakdown of projected job composition at full development of Wilton Junction.

Table 8.4 Job Composition at Completion, Wilton Junction.

Industry	Proportion (%)
Retail Trade	16%
Health Care and Social Assistance	12%
Other Services	7%
Professional, Scientific and Technical Services	7%
Education and Training	7%
Transport, Postal and Warehousing	7%
Wholesale Trade	7%
Manufacturing	7%
Construction	6%
Public Administration and Safety	6%
Accommodation and Food Services	5%
Administrative and Support Services	5%
Electricity, Gas, Water and Waste Services	2%
Financial and Insurance Services	2%
Arts and Recreation Services	2%
Information Media and Telecommunications	1%
Rental, Hiring and Real Estate Services	1%
Agriculture, Forestry and Fishing	0%
Mining	0%
Total	100%

Source: MacroPlan Dimasi, September 2012

Table 8.5 presents projected population, participation rates and resident workers by age for the future Wilton Junction resident population. These participation rates have been derived by MacroPlan utilising ABS labour force and employment participation rates for the Outer South West Sydney Region (OSWSR);

Table 8.5 Working Residents (Participation Rates).

Age Cohort	Population	Participation Rate (%)	Resident Workers
0–14	8,400	0%	0
15–19	2,800	20%	560
20–24	2,400	85%	2,010
25–34	4,800	80%	3,820
35–44	5,300	80%	4,210
45–54	4,900	75%	3,650
55–59	1,800	70%	1,250
60–64	1,400	65%	880
65 and over	2,600	12%	310
Total	34,200	49%	16,690

Source: MacroPlan Dimasi, September 2012

Overall, MacroPlan Dimasi projects that of the 34,200 residents, approximately 16,700 will be workers (full-time and part-time). Effectively, this translates into an overall participation rate of about 50% in Wilton Junction.

According to the ABS 3240.0 Residential and Workplace Mobility (October 2008) publication, approximately 15–20% of employment is undertaken at home or is home-based (e.g. consultant, tradesperson). Wilton Junction is being developed in accordance with leading edge sustainability principles including access to the NBN high-speed internet fibre optic. Accordingly, the proportion of home-based employees could be between 15% and 20%, equating to some 2,500 to 3,300 working residents. In generating forecasts for employment land need, MacroPlan Dimasi has utilised a conservative 15%.

MacroPlan Dimasi confirm that the provision of retail, health and medical facilities, a business park (industrial and office), multiple schools and child care facilities in Wilton Junction may entail sufficient comparative advantage and employment need to develop enough jobs to cater for around 70% of working residents – equivalent to around 9,180 jobs (plus the 2,500 work-from-home jobs).

Table 8.6 provides a breakdown of jobs in Wilton Junction in 2042 and confirms that at least 9,180 jobs would be required and can be anticipated in Wilton Junction to achieve a target employment self-sufficiency ratio of 70% as encouraged by the Department of Planning & Infrastructure in the Metropolitan Plan 2036 (2010).

Table 8.6 Working Residents (Participation Rates).

	Count
Total Residents (persons)	34,500
Total Working Residents (jobs)	16,690
@ 70% self-sufficiency target	11,680
less working from home (15% of working residents)	2,500
Jobs in Wilton Junction EL (jobs)	9,180

Source: MacroPlan Dimasi, September 2012

Total employment land provision in Wilton Junction has been calculated by MacroPlan Dimasi by considering the quantity of jobs in Wilton Junction and the density at which these workers will occupy these premises.

A breakdown of jobs in Wilton Junction employment lands (excluding work from home opportunities) has been prepared by MacroPlan Dimasi and is provided in **Table 8.7**.

Table 8.7 Jobs in Wilton Junction Employment Lands (2042)

Industry	EL Jobs	%
Retail Trade	1,470	16%
Health Care and Social Assistance	1,100	12%
Other Services	640	7%
Transport, Postal and Warehousing	640	7%
Wholesale Trade	640	7%
Education and Training	640	7%
Professional, Scientific and Technical Services	640	7%
Manufacturing	640	7%
Construction	550	6%
Public Administration and Safety	550	6%
Accommodation and Food Services	460	5%
Administrative and Support Services	460	5%
Electricity, Gas, Water and Waste Services	180	2%
Information Media and Telecommunications	90	1%
Financial and Insurance Services	180	2%
Arts and Recreation Services	180	2%
Rental, Hiring and Real Estate Services	90	1%
Agriculture, Forestry and Fishing	0	0%
Mining	0	0%
Total	9,180	100%

Source: MacroPlan Dimasi, September 2012

Retail trade is anticipated to be the dominant employing industry in Wilton Junction, comprising around 1,800 workers of which 1,470 jobs are projected to be taken up by residents. Health care & social assistance (1,100) and other services (640) constitute the next highest employing industries. Of all industries requiring industrial premises, transport, postal & warehousing and manufacturing are expected to be the largest employers – forecast to employ 640 persons each.

To calculate required floor space provision for employment lands MacroPlan Dimasi has utilised industry benchmark employment densities for each employment land use type. The least dense employment land type is industry and enterprise, with each hectare of space providing for just 35 workers (approximate) – this equates to around 280m² per worker. Office and retail entail similar employment densities, with each employee requiring 25m² of space. Although sporadic, an average employee density of 25m² per employee had been utilised for health offerings.

On this basis, MacroPlan Dimasi anticipates that a provision of at least 169 hectares (Gross) is required for employment land purposes (including retailing) at Wilton Junction.

Table 8.8 Employment Land Need, Wilton Junction

	Employment Land	
	NFA (ha)	Gross (ha)
Commercial (excluding health & retail)	21	26
Retail Trade	16	20
Health & Social Assistance	6	7
Total Commercial	43	52
Industry & Enterprise	95	115
Total	139	169

Notes:

- Education not included
- Excludes schools / education
- FSR applied to GFA to derive NFA

Source: MacroPlan Dimasi, September 2012

Notwithstanding, when calculating land supply budgets it is essential that a buffer is built into forecasts for supply to take into account land that has been designated for future development that typically may not become available for development. Achieving employment land targets may require supply in excess of target requirements. Uncertainty as to the action of land owners (private and Government), the need for competition and choice in the market, the likelihood of environmental, buffer and other constraints, and the risk of changes in policy direction (ie response to local community concerns) necessitates that available supply exceed demand. Accordingly, a buffer (of say 20%) should be adopted and applied when calculating and designating land for employment purposes.

8.1.3 Construction Employment

In addition to the aforementioned permanent employment workforce, there will be a construction workforce on the Wilton Junction site for some thirty years. Given the length of this development period, it is reasonable to assume this workforce is effectively permanent.

Research undertaken on behalf of the Urban Development Institute of Australia in 2010 by Property Insites predicted the construction workforce, contribution to Gross State Product, wages and taxation payable for every one million dollars invested in development projects were as follows:

Direct Impacts

- 8.5 full time equivalent jobs
- State and Federal taxes of \$91,581
- Wages and salaries of \$327,220
- 6.9% of Gross State Product (c. \$25B in 2010)

Total (Direct and Indirect) Impacts

- 15.5 full time equivalent jobs
- State and Federal taxes of \$198,009
- Wages and salaries of \$748,806
- 13.7% of Gross State Product (c. \$49B in 2010)

Based upon a typical year in which some 400 allotments and 400 dwellings are constructed, employment generated by the Wilton Junction development could be expected to be some 1,700 direct jobs and a total of 3,100 direct and indirect jobs.

8.2 Social Infrastructure

The Wilton Junction Social Infrastructure Background Investigations Report prepared by Elton Consulting (with input from Clouston Associates) has identified the social infrastructure requirements for the proposed new town at Wilton Junction.

Elton Consulting identify that the development of Wilton Junction provides an opportunity to address some of the social issues prevalent in Wollondilly Shire, as these issues are linked with the small and dispersed population of the Shire and its fringe location. Wilton Junction will help create a critical population mass that can support the viability of transport services, employment opportunities and social infrastructure, thereby benefitting the Shire as a whole.

Existing facilities, services and recreation opportunities in the surrounding area are limited, consistent with the relatively small and dispersed population of the Shire. Wilton Sportground, which includes playing fields, courts and a community centre, is located within Wilton Township. Other than some of the new facilities being developed at Bingara Gorge, there are no existing facilities and services that will have capacity to meet demand generated by development at Wilton Junction.

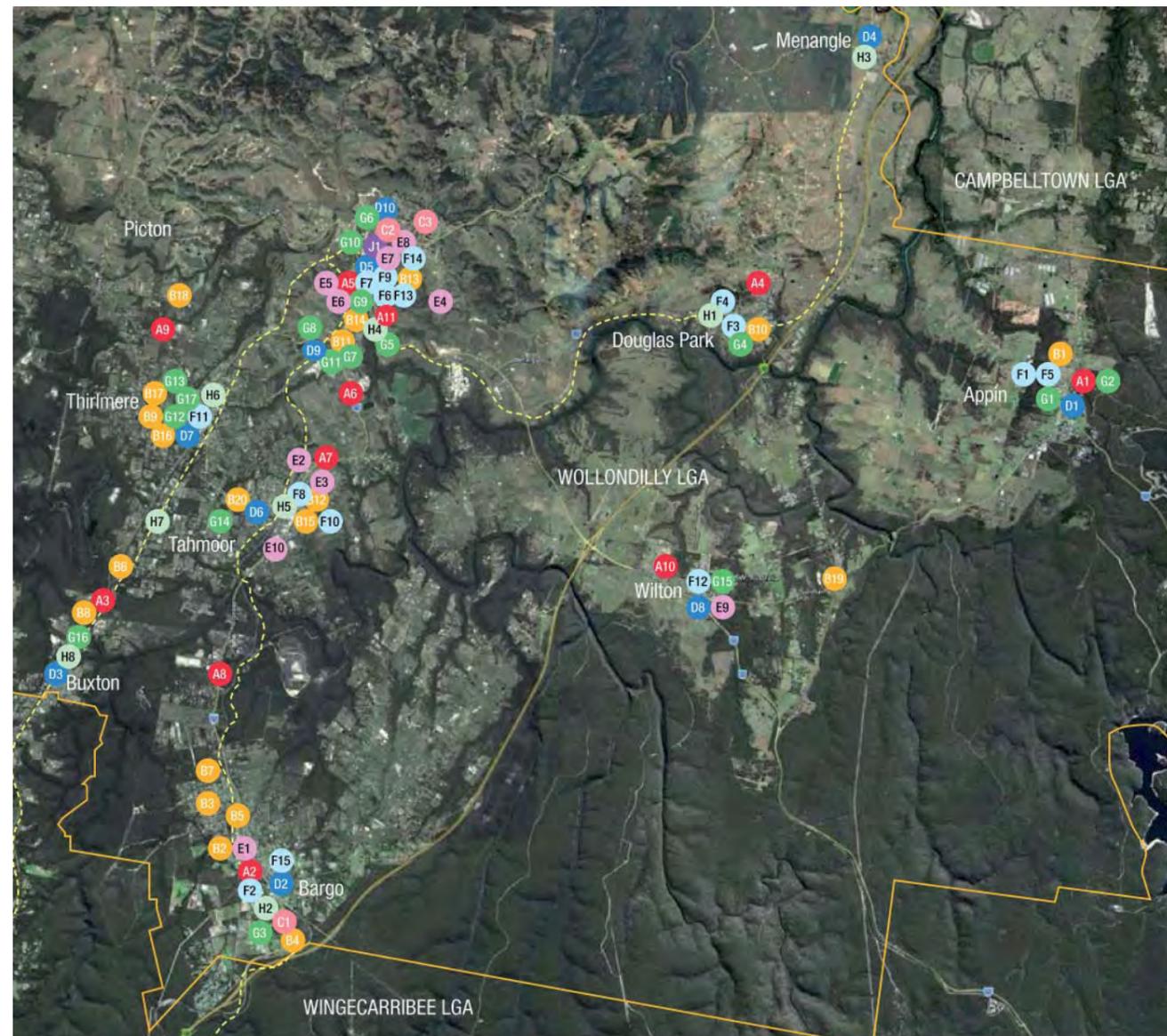
This means that a range of new facilities, services and open space will need to be developed within Wilton Junction, consistent with the goal of creating a self-contained new town.

Figure 8.3 identifies existing Social and Community Infrastructure within the Wollondilly LGA. In addition, the following new facilities have been provided or are planned for Bingara Gorge:

- A new government primary school, which opened at the beginning of 2011;
- A country club, providing bar, dining and lounge facilities, Community function and meeting space totalling 577 m²;
- A temporary community facility, to function until the permanent community function and meeting space is provided;
- A leisure centre, likely to comprise a gym, tennis courts, studio space and leisure pool;
- Sporting facilities, provided through an upgrade of Wilton Sportsground;
- 18 km of walking paths and trails;
- A further 8.12 ha of recreational open space, in the form of local and neighbourhood parks;
- An 18 hole golf course;
- A private sector child care centre;
- Medical practice; and
- Chemist.

Many of the social needs of the Wollondilly population for higher order facilities and services are met by facilities located in Camden and Campbelltown, and these have not been mapped in **Figure 8.3**.

Figure 8.3 Existing Community Infrastructure



- PUBLIC TRANSPORT FACILITY**
- H1 Douglas Park Railway Station
 - H2 Bargo Railway Station
 - H3 Menangle Railway Station
 - H4 Picton Railway Station
 - H5 Tahmoor Railway Station
 - H6 Thirimere Railway Station
 - H7 Couridjah Railway Station
 - H8 Buxton Railway Station
- LIBRARIES**
- J1 Wollondilly Library and Information Service - Picton

- OPEN SPACE AND RECREATION**
- G1 Gordon Lewis Oval / Appin AIS Sportsground
 - G2 Appin Park Reserve
 - G3 Bargo Sportsground
 - G4 Douglas Park Sports Ground
 - G5 Glenrock Reserve Picton
 - G6 Hume Oval Picton
 - G7 Wollondilly Leisure Centre and Swimming Pool Picton
 - G8 Crown Reserve Picton
 - G9 Victoria Park Picton
 - G10 Apex Park Picton

- G11 Bridge Street Reserve Picton
 - G12 Thirimere Sportsground
 - G13 Lin Gordon Reserve Thirimere
 - G14 Tahmoor Sports Ground
 - G15 Hannerford Oval Wilton / Wilton Sportsground
 - G16 Telopea Park Buxton
 - G17 Thirimere Memorial Park
- LGA Boundary
— Railway Line

- SCHOOLS**
- A1 Appin Public School
 - A2 Bargo Public School
 - A3 Buxton Public School
 - A4 Douglas Park Public School
 - A5 Picton Primary School
 - A6 Picton High School
 - A7 Tahmoor Public School
 - A8 Wollondilly Anglican College Tahmoor
 - A9 Thirimere Primary School
 - A10 Wilton Public School
 - A11 St Anthony's Primary School Picton
- CHILD CARE FACILITIES**
- B1 Step by Step Appin
 - B2 Bargo Child Care Centre
 - B3 Little Elves Childcare Centre Bargo
 - B4 Kids Korner Childcare Centre
 - B5 Bargo OSHC
 - B6 Pioneer Preschool Buxton
 - B7 Little Elves Childcare Centre Bargo
 - B8 Little Possums Early Learning Centre Buxton
 - B9 Fidgety Frogs Early Learning Centre Thirimere
 - B10 Fidgety Frogs Early Learning Centre Douglas Park
 - B11 Busy Bees Preschool and Long Day Care Picton
 - B12 Presbyterian Child Care Centre Tahmoor
 - B13 Sugar and Spice Pre School and Long Day Care Picton
 - B14 Picton Pre School Kindergarten LTD
 - B15 Rainbow Playhouse Pre-School Tahmoor
 - B16 Thirimere Pegasus Early Education Centre
 - B17 Thirimere Preschool
 - B18 Two Little Feet/ Winsome Farm Thirimere
 - B19 Cath's Kindy Wilton
 - B20 Tahmoor Pre-School Kindergarten
- Note: Haven't include family day care facilities.
- LICENSED LEISURE FACILITIES**
- C1 Bargo Sports Club
 - C2 Picton Bowling Club
 - C3 Antill Park Country Golf Club Picton
- EMERGENCY SERVICES**
- D1 Appin Fire Station
 - D2 Bargo Rural Fire Service
 - D3 Buxton Rural Fire Service
 - D4 Menangle Rural Fire Service
 - D5 Picton Rural Fire Service
 - D6 Tahmoor Rural Fire Service
 - D7 Thirimere Rural Fire Service
 - D8 Wilton Rural Fire Service
 - D9 Picton Police Station
 - D10 Picton Fire Station
- MEDICAL AND HEALTH FACILITIES**
- E1 Bargo Surgery
 - E2 Optimum Medical Services Tahmoor
 - E3 Challenger Robert Tahmoor
 - E4 Dr Rowland Bigg Picton
 - E5 Dr Newton N G Picton
 - E6 Dr John Chiang Picton
 - E7 Picton Family Medical Centre
 - E8 Dr Mark C Lerche Picton
 - E9 Dr Bernd Rupprecht Wilton
 - E10 Wollondilly Community Health Centre Tahmoor
- COMMUNITY FACILITIES**
- F1 Appin Community Hall
 - F2 Bargo Community Hall
 - F3 Douglas Park Progress Hall
 - F4 Douglas Park Community Centre - Incl children's services facilities, a sports and community hall space and change rooms.
 - F5 Appin Sportsground Clubhouse
 - F6 Shire Hall Picton
 - F7 Picton Community Centre
 - F8 Tahmoor CWA Hall
 - F9 Picton District AH and I Hall
 - F10 Tahmoor Community Centre
 - F11 Thirimere Community Hall
 - F12 Wilton Community Centre
 - F13 Wollondilly Shire Hall
 - F14 Wollondilly Shire Council
 - F15 Bonnie Cottage Bargo

SOCIAL INFRASTRUCTURE OBJECTIVES

Based upon contemporary trends and leading practice for social infrastructure, the following principles are proposed by Elton Consulting to guide the provision of community facilities and human services within Wilton Junction:

Community facilities should be designed to:

- Respond to local needs and reflect the local community's identity, values and aspirations;
- Contribute to the health, well-being and quality of life of residents, support their lifestyle needs and choices and encourage the development of social capital;
- Make the most efficient use of limited resources, where appropriate being multipurpose, co-located with other facilities and able to accommodate shared and multiple use arrangements;
- Be provided in an efficient, timely and coordinated way, ensuring that they are available to residents as early as possible and residents are not disadvantaged through delays in delivery;
- Ensure flexibility in their use, so they can respond and adapt as needs change (ie where appropriate, buildings should be capable of delivering a range of services, rather than designated for single uses or specific target groups that may quickly become out dated);
- Promote equitable access for all sections of the population, through the distribution, design and management of facilities;

- Comply with Crime Prevention through Environmental Design principles and reduce risks of vandalism and poor security through consultation with police concerning the design and location of facilities;
- Promote innovation and creativity in the way agencies come together to deliver services, recognising the need for collaborative planning and partnerships to achieve effective and efficient delivery of human services;
- Be accessible for all user groups, with all facilities meeting accessibility standards; and
- Develop sustainable ownership, governance, management and maintenance arrangements for facilities.

The location of community facilities should be guided by the following criteria. Community facilities should be:

- Central to their catchment population and easily accessible by the majority of their users;
- Visually prominent, with a main street location and presentation to the street;
- Accessible by public transport, and located to maximize access for pedestrians and cyclists;
- Located to enhance a sense of community, vibrancy and local civic identity, and to help create a focal point or hub for the community;
- Where appropriate, clustered together or co-located on a single site to provide opportunities

for shared use of resources (management, parking, meeting rooms, amenities, play equipment) and for convenience, visibility and capacity for a "one stop shop";

- Located to provide a high level of safety and security, particularly at nights and weekends (ie achieved through high levels of activity, casual surveillance, lighting and proximity to public transport etc);

➤ Where possible, located adjacent to open space to allow for larger outdoor community events, spill over activities and children's play; and

- Located to ensure access to safe and convenient parking, including shared parking with surrounding land uses where appropriate.

The population of Wilton Junction will be large enough to require a variety of both local and district level facilities and services, and to support the viability of a range of commercial, as well as publicly provided, facilities and services.

Wilton Junction will also contribute to demand for some new facilities to serve the Shire as a whole. Some of these may be located within Wilton

Junction, although this will need to be confirmed through consultations with responsible Agencies.

Elton Consulting recommend that the high level master plan make provision for the following social infrastructure:

Table 8.9 Social and Community Infrastructure Requirements

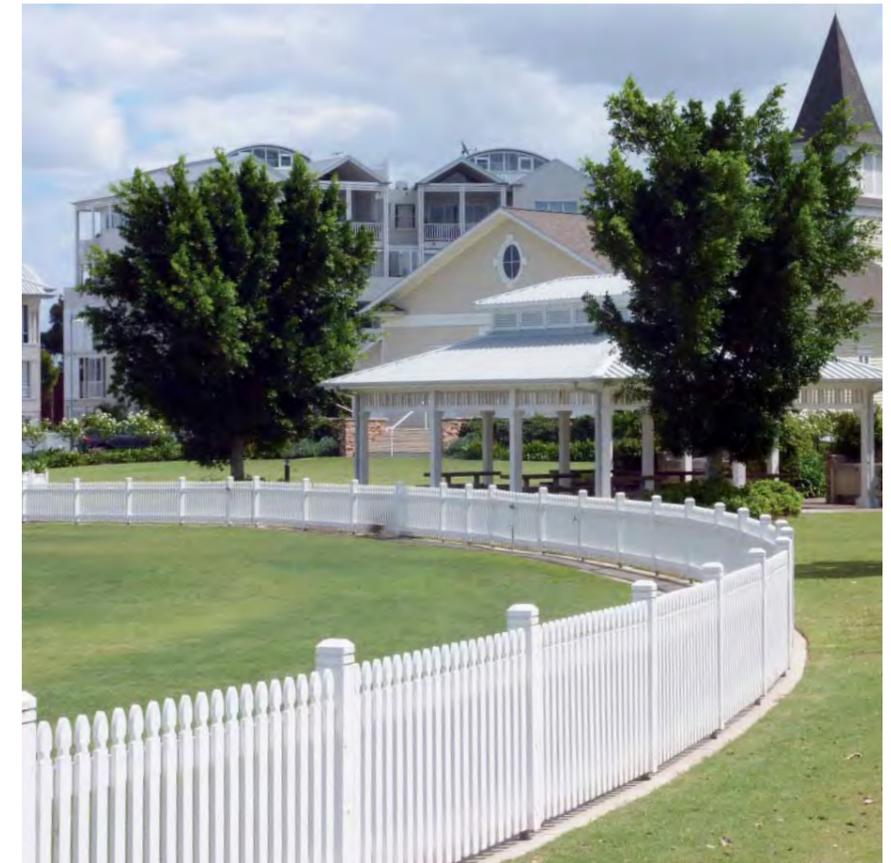
Facility Type	Number required	Size and Site	Location
Local Level Facilities			
Multi-purpose community centres	3 (including one already proposed in Bingara Gorge)	Each with floorspace 550-650 m ² Site area approx 2,500 m ²	Village / neighbourhood activity centres in Bingara gorge, Wilton West and Walker Corporation lands
Public primary schools	4 (including one already built in Bingara Gorge)	3 hectares	Central to catchment; As per DEC guidelines. Close to but not in village / town centres
Child Care Centres	Initial provision of 4 (including one already proposed in Bingara Gorge)	Approx. 2,500 m ²	Adjacent to primary schools / community centres
Medical Centres			Allowance made in commercial zones within neighbourhood activity centres
Informal meeting and entertainment venues, such as cafes and restaurants	Subject to lifestyle preferences of incoming population and market demand		Allowance made in commercial zones within neighbourhood activity centres
Facilities for Wilton Junction as a whole			
Co-located community, civic and cultural facility comprising: <ul style="list-style-type: none"> • District level community resource centre • Central library • Arts and cultural facility • Council civic and administration centre 	1	Site area approx. 1.5 ha plus adjoining outdoor open / civic space	Prominent location in town centre as civic focal point
Community health / Integrated Primary and Community Care Centre	1	10,000 m ² floorspace	Prominent location in town centre, close to other community / civic uses
Public high school	1	6 hectares	Central to catchment; As per DEC guidelines
Private primary / high school	1	9 hectares	Similar to DEC guidelines
Human service organisations, medical centres, allied health services		Allowance included in two centre floorspace assessment in retail and employment study	Office and commercial area of town centre
Informal meeting and leisure venues, such as cafes, bars and restaurants	Subject to lifestyle preferences of incoming population and market demand	Allowance included in town centre floorspace assessment in retail and employment study	Commercial area of town centre

Source: Elton Consulting, September 2012

8.2.1 RECREATION & OPEN SPACE

Elton Consulting in association with Clouston Associates have identified that the following open space and recreation facilities will be required to address the needs of the Wilton Junction population:

- › A variety of accessible local parks for informal play and passive recreation that support family and community activity and that provide a diversity of recreation settings and opportunities for all age groups and all abilities;
- › High quality parks with well-maintained facilities such as paths, play equipment, fencing, landscaping and shelter from sun, wind and rain;
- › Outdoor areas for larger gatherings and cultural events (e.g. extended family and group picnics, amphitheatre, markets);
- › Multi-purpose playing fields suitable for a variety of field sports, and able to accommodate both junior and adult sporting activities for males and females;
- › Access to both outdoor and indoor courts for court sports;
- › Indoor spaces for activities such as dance, martial arts, yoga, fitness, gym;
- › Access to recreation, entertainment and leisure opportunities and meeting places that target young people;
- › Access to aquatic facilities that include a variety of leisure and fitness activities and programs consistent with local needs and preferences;
- › A network of walking and cycling tracks linked to key destinations and recreation nodes;
- › Options to enhance fitness in parks and trails;
- › Opportunities for adventure based activities, such as mountain biking, trail bikes, horse riding, rock climbing;
- › Opportunities to enjoy bushland, water and other natural settings, for picnics, bushwalking and as spaces for reflection, rest and relaxation; and
- › Opportunities that increase incidental physical activity, through design of footpaths, road networks and accessible, safe and well lit walking and cycling tracks.



Elton Consulting and Clouston Associates recommend the following broad standards for the provision of open space and recreation in Wilton Junction:

- › All residents should ideally be within a 10 minute walk from some form of open space that contains opportunities for day-to-day passive recreation requirements (eg local park, bushland/creek corridor or district park). The physical geography of the site and its associated road/rail networks will not make this a fixed rule, but rather it forms one measure of accessibility to open space.
- › Local parks will be optimally 0.5 Ha but have an absolute minimum size of 0.2 ha. Local parks any smaller than this tend not to provide adequate diversity of recreation opportunity, create amenity issue for adjoining residences and add costs per hectare for maintenance.

- › District parks will have a minimum size of 2 Ha up to a general maximum of 5 Ha, as such parks should combine active and passive recreation in most instances. In the case of town centres where such parks combine the town park, sports facilities, leisure centre, event space and the like the total land area may reach 10 Ha. Sports grounds will be provided in two tiers.

It is recommended that the quantum and distribution of open space (excluding regional open space) be derived from master planning and demographic analysis and should be matched with a review of Council's expectations together with a baseline reference to State numerical standards (ie the NSW Government Guidelines 2010):

8.3 Transport

Colston Budd Hunt & Kafes (CBHK) has undertaken a strategic transport review of the proposed Wilton Junction Masterplan.

8.3.1.1 Traffic Conditions

Wollondilly's Tracks model has been used to extract traffic flows along Picton Road (between Menangle Road and Almond Street) and Hume Highway for the scenarios for 2011, 2021 and 2036. This area is where traffic from the proposed Wilton Junction development will have its greatest impact. Wollondilly Council has requested that the study area be extended into Picton and this will be undertaken when more detailed transport investigations are undertaken.

A review of the extracted traffic flows for these scenarios has found that for Picton Road:

- in 2011, traffic flows were some 600 to 950 vehicles per hour (two way) in the morning and afternoon peak hour. Traffic flows were highest east of Hume Highway;
- in 2021, traffic flows would be some 1,200 to 1,600 vehicles per hour (two way) in the morning and afternoon peak hour. Traffic flows would be highest east of Hume Highway;
- in 2036, traffic flows would be some 1,550 to 2,150 vehicles per hour (two way) in the morning and afternoon peak hour. Traffic flows would be highest east of Hume Highway.

Based on the directional split of traffic in the peak periods (some 60% to 70% in the peak direction), the above traffic flows indicate that Picton Road

would require duplication about midway between 2021 and 2036. Based on these traffic flows, intersections along Picton Road (at Menangle Road, Pembroke Avenue and Almond Street) would require upgrading from priority control to roundabout or traffic signal control by 2021. The Hume Highway/Picton Road interchange would also require upgrading from priority control. Due to the high volume of turning movements, traffic signals would provide the best solution combined with augmentation of the existing bridge to provide separate turning lanes.

A review of the extracted traffic flows for these scenarios has found that for the Hume Highway:

- in 2011, traffic flows were some 1,600 to 2,100 vehicles per hour (two way) in the morning and afternoon peak hour. Traffic flows were highest north of Picton Road;
- in 2021, traffic flows would be some 2,100 to 3,200 vehicles per hour (two way) in the morning and afternoon peak hour. Traffic flows would be highest north of Picton Road;
- in 2036, traffic flows would be some 3,100 to 4,100 vehicles per hour (two way) in the morning and afternoon peak hour. Traffic flows would be highest north of Picton Road.

Based on these traffic flows the Hume Highway would not require upgrading, however, there would be reduction in the level of service in 2021 and 2036 compared to 2011 (a good level of service in 2011 reducing to a satisfactory level of service by 2036).

8.3.1.2 Traffic Generation of Wilton Junction

Traffic generation for future development of Wilton Junction has been based on RMS Guidelines and work undertaken for the Bingara Gorge development. For the residential component, a conservative (worst case) traffic generation position of 0.7 trips per lot (two way) has been adopted with a 70%/30% split out/in in the morning peak period (reverse in the afternoon peak period). A proportion of these trips would be internal to the site with people undertaking employment, retail, educational and recreational trips within the site. This will be balanced by other trips being attracted to the new town centre and its associated employment, retail, educational and recreational facilities. For this strategic review it has been assumed that these two traffic movements would be similar in scale and balance each other. However, as part of our further investigations we propose to test the ability of the total development to reduce its vehicular trip generation, both internal and external to the site. This may include the development of a trip generation matrix exploring internal and external traffic generation rates (having regard to the traffic reduction initiatives proposed in Section 8.3.1.4). This could have implications for a reduction in overall vehicular numbers on key roads.

Two conservative scenarios have been assessed:

1. 2021 with 2,000 dwellings within Wilton Junction (this includes the existing/approved development of Bingara Gorge). Access would be via Pembroke Avenue; and
2. 2036 with 11,000 dwellings within Wilton Junction (this includes the existing/approved Bingara Gorge).

Scenario 1 (2021) would generate an additional 630 vehicles per hour (two way) in the morning and afternoon peak periods. Traffic from Bingara Gorge is included within the base 2021 traffic flows. Scenario 2 would generate an additional 6,930 vehicles per hour (two-way) in the morning and afternoon peak periods.

Traffic was distributed to the road network based on the Tracks model and the Wilton Masterplan Staging Plans.

8.3.1.3 Access and Internal Roads

Access to Wilton Junction will make use of existing (which will be upgraded) and new access points along Picton Road. An indicative road layout is shown in the Wilton Junction Masterplan. This shows four major access points along Picton Road (two east of the Hume Highway at Pembroke Street and Almond Street) and two west of the Hume Highway. These intersections are a minimum of 500 metres apart and will need to be traffic signal controlled. Consideration could be given to some secondary access to Picton Road (left in/left out).

Within the site, the Masterplan shows a network of collector and local roads. Where these collector roads join Picton Road it is suggested that direct access to these roads be denied until at least the first internal intersection (in order to optimise traffic flow).

Where practical, vehicular, cyclist and pedestrian connections between the four

areas of the Masterplan would be provided separate to Picton Road and Hume Highway. It is noted that the existing bridge over the Hume Highway (north of Picton Road) provides this opportunity although it would require upgrading to provide pedestrian/cyclist access. With Picton Road passing through a cutting west of Hume Highway, there is the opportunity to provide a crossing over Picton Road once land on both sides of Picton Road is developed.

In 2021 access would be via Pembroke Avenue (four - way traffic signal controlled intersection) and the western access closest to the Hume Highway (traffic signal controlled T-intersection)

8.3.1.4 Traffic Effects

The traffic effects of the two development scenarios (2021 and 2036) have been assessed. The assessment found that the 2,000 lots developed by 2021 could be accommodated by the road network required for base 2021 conditions. No major additional upgrades would be required other than the upgraded accesses to Picton Road.

With transport initiatives to reduce external traffic generation, it is possible to contain vehicle trips and concomitant transport infrastructure augmentation. With development traffic in place and the adoption of initiatives to reduce traffic generation, by 2036 the surrounding road network would require only limited additional upgrading compared to the 2036 base case. These upgrades may include:

- further upgradings of the Hume Highway/Picton Road interchange; and
- further upgrading of the Picton Road intersections with Pembroke Road, Menangle Road and Almond Road.

Transport initiatives to reduce traffic generation include:

- co-location of land uses to reduce travel;
- provision of internal cycle and pedestrian links;
- provision of internal public transport services (buses);
- provision of public transport services (buses) external to the site (to Picton, Wollongong and Campbelltown);
- allow for possible connections to possible future train services;
- development of green travel plans; and
- provision and encourage working from home (with high speed internet connections).

8.3.1.5 Next Steps

The next steps in the transport planning process will be:

- i) refinement of TRACKS modelling;
- ii) detailed traffic analysis based traffic movements from modelling;
- iii) determination of roadworks including conceptual layouts for intersections.

8.3.3 PUBLIC TRANSPORT

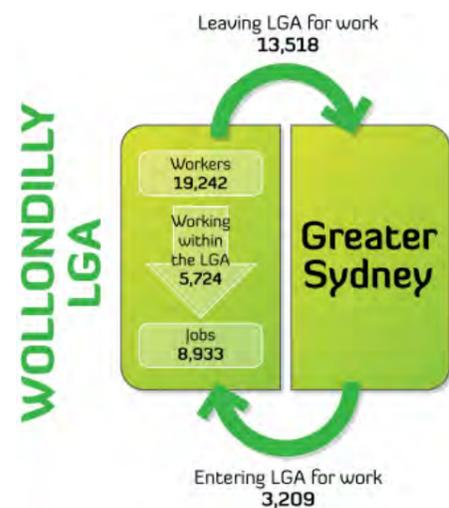
Cardno has prepared a 'Public Transport Strategy' for Wilton Junction. This strategy was prepared to examine the existing public transport within a policy and planning context, details the area's current demographic and travel data, records existing public transport services and provides an overview of the impact of the Wilton Junction new town on public transport demand.

A public transport network concept and strategy for Wilton Junction has been prepared and proposes conceptual network and service levels, supporting infrastructure and initiatives, as well as cost estimations.

8.3.2.1 Travel Demand Analysis

ABS journey to work data (Census 2011) reveals that of the 19,242 workers in Wollondilly LGA, only 5,724 workers are employed in the Wollondilly LGA with 13,518 workers leaving the Wollondilly LGA every day. This is demonstrated in **Figure 8.4**

Figure 8.4 Working Population and Employment flows – Wollondilly LGA



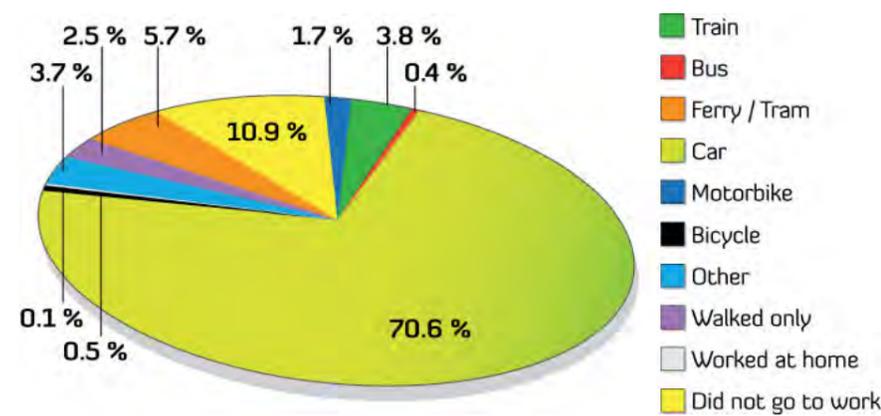
Source: Cardno, September 2012

Of the residents traveling outside of the LGA for work, the majority travel to neighbouring LGAs; Campbelltown received 12.4% of Wollondilly's working population, followed by Camden with 11.2%.

Further, the Wollondilly 2011 Growth Management Strategy states that around 70% of high school aged students residing in the LGA travel to schools outside of Wollondilly Shire.

The majority of residents in the Wollondilly Shire Council LGA travel to work by private vehicle while very few use public transport, as demonstrated in **Figure 8.5**.

Figure 8.5 Mode of Transport for Wollondilly resident workforce

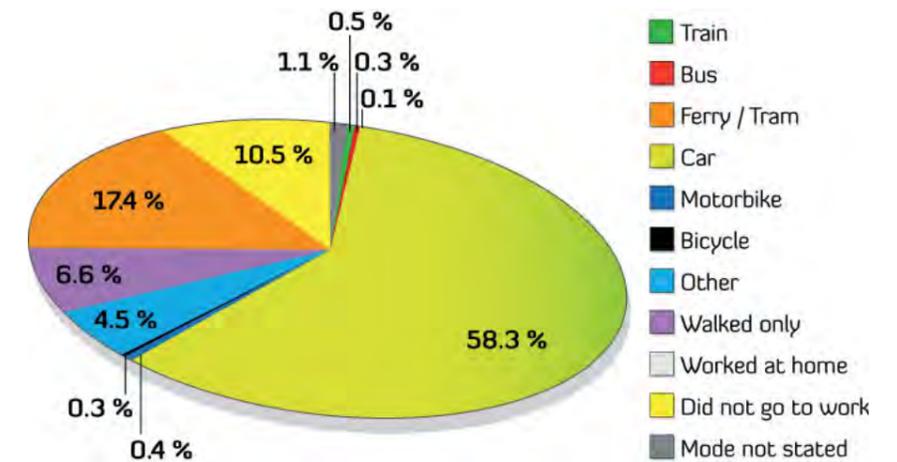


Source: Cardno, September 2012



The 2006 ABS Journey to Work (JTW) data demonstrates that of the 30% of the Wollondilly working population that work within the shire, 58% travelled to work by car, 7% walked or cycled and less than 1% caught public transport. Notably, 17.4% worked from home, a significant proportion of local workers. These results are shown in **Figure 8.6**.

Figure 8.6 Journey to Work



Source: Cardno, September 2012



8.3.2.2 Existing Public Transport Services

The Wilton bus service to Picton and the Picton Railway Station is very limited and is unlikely to be considered a viable transport alternative for the majority of Wilton residents.

Rail

The Wollondilly Shire is serviced by the Southern Highland train line, providing connection to Campbelltown to the north and Moss Vale to the south.

The South Coast line links Wollongong to the south-east of the Wilton Junction site with Sydney and other south coast destinations.

The Southern Highlands and the South Coast lines are shown in on **Figure 8.7** provided by Cardno.

Construction was commenced on a freight line between Maldon (near Picton) and Dombarton (near Port Kembla) to provide a short cut to access the port in the early 1980's. The line was to be electrified but construction was halted within the decade leaving an unfinished tunnel and bridge.

The rail corridor for the completion of the Maldon-Dombarton rail line runs through Wilton Junction development.

On August 17, 2012 The Federal Infrastructure and Transport Minister Anthony Albanese announced approval for the \$25.5 million funding needed to complete the freight line's planning and detailed design work. There is no mention of plans for passenger services to operate on the line, however if they did a Wilton train station could be considered.



Figure 8.7 Regional Train Services



Source: Cardno, September 2012

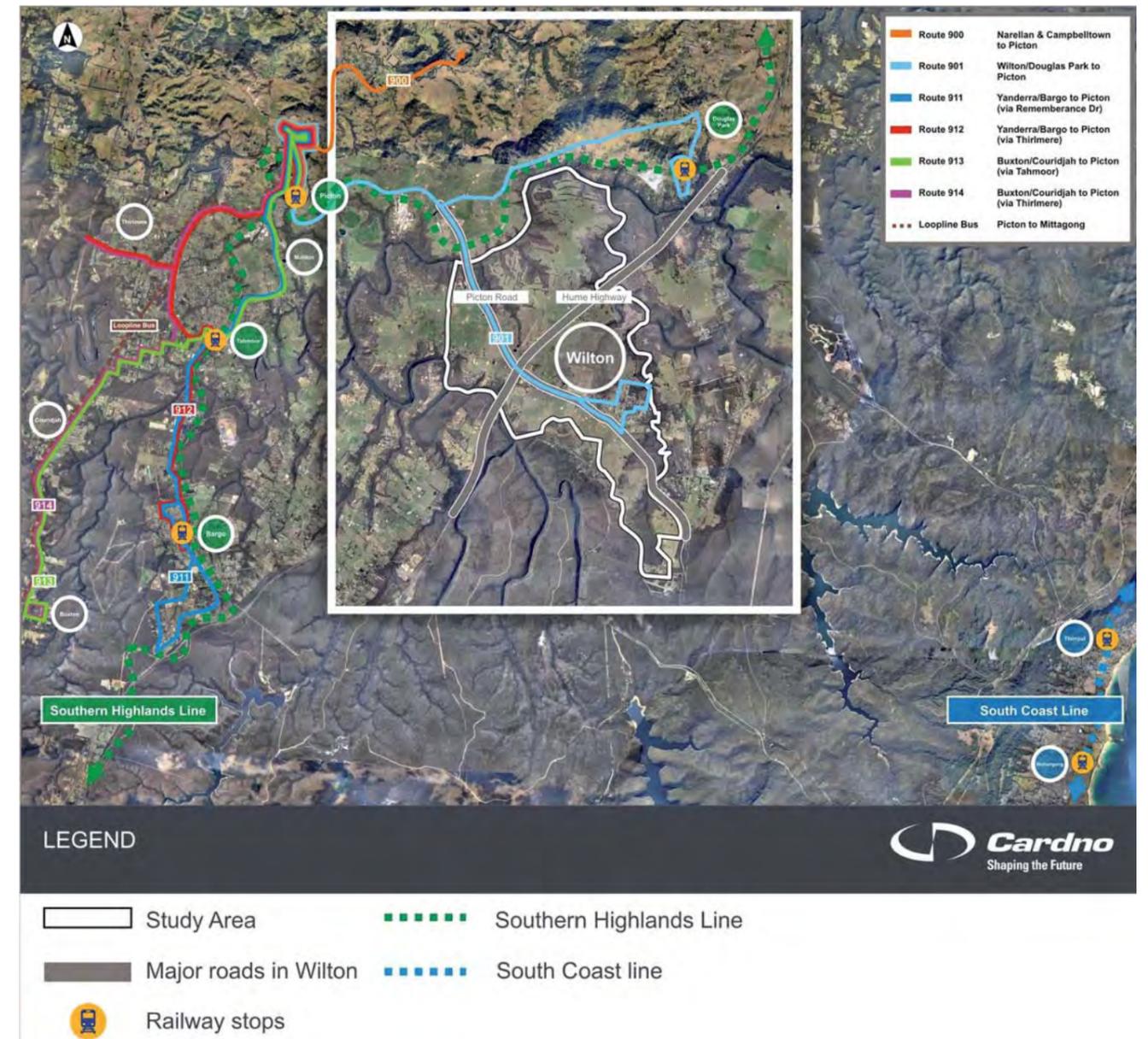
Bus

Picton Buslines provides a limited bus service (Route 901) connecting the Wilton village with the Picton train station, route, shown in Figure 8.8. Other destinations such as Camden, Narellan, Yanderra, Bargo, Thirlmere, Buxton and Tahmoor are accessible via interchange at Picton.

The Picton Bus lines service also allows adults to use school bus services.



Figure 8.8 Picton Bus Lines Service



Source: Cardno, September 2012

8.3.2.3 Public Transport Strategy

To facilitate the creation of a viable public transport network to service Wilton Junction residents, workers and students, a 10% public transport mode share target has been adopted for Wilton Junction for all trip types by 2031.

The following vision has also been identified for Wilton Junction's Public Transport Strategy:

"The residents and visitors of Wilton Junction will enjoy an accessible, connected public transport network that will be seen as a viable alternative to private car use. Equitable and efficient access to services and facilities will be supported by attractive, practical and convenient public transport and integrated with the active transport network."

This strategic target and vision are to be achieved through the following five (5) guiding principles:

- 1 *Provision of an integrated and responsive public transport network.*
- 2 *Development of urban form and land uses that support accessible and effective public transport provision.*
- 3 *Transport network design that provides for safe and efficient public transport services.*
- 4 *Ensuring high quality supporting infrastructure.*
- 5 *Appropriate multi-modal integration of transport networks.*

Guiding Principle 1: 'Provision of an integrated and responsive public transport network' will require a public transport network to connect residential areas (and other patronage generators) to designated centres and transport interchanges as well as providing an alternative to car use for local trips within Wilton Junction.

For Wilton Junction this will require a combination of regional, local and rural services.

Guiding Principle 2: 'Development of urban form and land uses that supports attractive and effective public transport' will require the development of Wilton Junction in a way that facilitates the movement of all modes, including public transport. This can be achieved through:

- Provision of a permeable, grid network for pedestrians and cyclists;
- Prominent and high quality walking and cycling facilities connecting residents to destinations and transport;
- Walkable neighbourhoods based around community nodes, including bus stops;
- Residential densities at a minimum of 15 dwellings per hectare to support public transport (where ever possible and practical);
- Provision of higher density development and trip generators on higher order roads that are appropriate for bus routes;
- Development of 80%-90% of dwellings within 400-500m of a bus route (ie a 5 minute walk); and
- Ensuring that gradients of roads and associated infrastructure (such as pathways) are within standards and do not present barriers to future use by bus services and passengers.

Guiding Principle 3: 'Transport network design that provides for safe and efficient public transport services' involves the development of a transport network that is designed to support the variety of public transport service needs and ensuring that passengers are appropriately connected with services, facilities and social opportunities.

A higher road network must provide efficient, direct connections to where people want to go and bus priority measures should also be considered and adopted along routes which are designated as high frequency or strategic corridors for public transport provision.

Guiding Principle 4: 'Ensuring high quality supporting infrastructure' involves the development of :

- Bus stops that are optimally located to meet demand;
- Bus stops within 400m-500m of 80-90% of the population they serve;
- Bus stops located adjacent to side streets where possible;
- Safe and accessible crossing points located adjacent to bus stop facilities;
- Bus stops in town, neighbourhoods and rural centres that are placed within walking distance of key destinations;
- Co-located inbound and outbound bus stops (where appropriate); and
- Town centre bus stops and design following Crime Prevention through Environmental Design (CPTED) principles.

A town centre interchange is recommended in the Public Transport strategy and this facility should be prominently located within the town centre frame (once this has been determined) and consider future opportunities for integration with rail services in order to 'future proof' the land uses and transport network. Interchange facilities should also be provided within the neighbourhood centres.

Guiding Principle 5: 'Appropriate multi-modal integration of transport networks' promotes efficient transfers between public transport trips through appropriately design and located public transport interchanges including facilities such as kiss & ride, 'park & ride' and 'share & ride'.

8.4 Infrastructure

A key role of the high level master plan is to determine the suitability and feasibility of the land within the Wilton Junction investigation area being developed for urban purposes. This includes a review of infrastructure capacity and augmentation capability to support future urban growth.

Investigations have been undertaken to determine the feasibility of providing water, sewer, electricity, gas and telecommunications infrastructure and services to Wilton Junction.

8.4.1 WATER

'Wilton Junction – A new Town Water Master Plan' has been prepared by MWH to investigate the feasibility of supplying drinking water services to the proposed Wilton Junction new town.

Two Water Filtration Plants (WFP) are currently located in the vicinity of the proposed Wilton Junction, the Macarthur Water Filtration Plant (WFP) and Nepean WFP. The Macarthur WFP is located at Wilton Road, Appin approximately 9 km to the east of Wilton. The Nepean WFP is located at Nepean Dam near Bargo, approximately 16 km to the south of Wilton.

8.4.1.1 The Macarthur Water Filtration Plant

The Macarthur WFP has a design capacity of 265 megalitres per day (MLD) is located on Wilton Road, between Broughtons Pass and Appin (about 20 km south of the Campbelltown Central Business District).

It is operated by Trility (formerly United Utilities Australia Pty Ltd) and treats raw water sourced from Cataract, Cordeaux, Avon or Nepean Dams and supplies filtered water to the Campbelltown, Narellan and Appin Distribution Systems.

The Macarthur WFP currently supplies potable water to the township Wilton via the Appin Water Distribution System.

Based on the projected growth at Wilton Junction, it appears that the Macarthur WFP has an ultimate spare capacity of 33 MLD and will not require any additional capacity to service the estimated Wilton Junction demand of 24 MLD. This will however need to be verified with Sydney Water.

8.4.1.2 The Nepean Water Filtration Plant

The Nepean WFP is located near Bargo in the Southern Highlands and treats water from the Nepean Dam. The plant was upgraded in 1993, and at that time the maximum operating capacity was 36 MLD.

The significant storages in the Nepean System are the Nepean Reservoir WS252 (14ML, FSL 413m) and Thirlmere Reservoir WS306 (15ML capacity, FSL 348m).

The Nepean WFP does not currently have sufficient capacity to supply the additional demand to the Wilton Junction development, and a plant upgrade would be required. This upgrade may include treatment, storage and pumping station facilities. This will need to be verified with Sydney Water at a later stage.

8.4.1.3 Water Servicing Options

MWH considered three (3) water servicing option including:

Option 1 – Supply from the McArthur Water System;

Option 2 – Supply from Nepean Dam WFP (via Picton); and

Option 3 - Supply from Nepean Dam WFP (via Hume Hwy)

MWH conclude that it is feasible to service the proposed Wilton Junction development with a water supply from the existing Macarthur WFP. This option is the lowest cost option that utilises the spare capacity at the Macarthur WFP and requires the shortest pipeline route. The option is also flexible and can be staged to suit Wilton Junction as the development occurs.

8.4.1.4 Recommended Water Infrastructure

The new infrastructure required for this option includes:

- Installation of new pumping units at WP302 to supply the maximum day demand of the total Wilton area;
- Construction of 2 x 9 ML reservoirs located south of Picton Road on a local hilltop;
- Construction of 6.5 km of DN600/500450mm main generally along Wilton Road;
- A new crossing of Broughtons Pass Gorge;
- Approximately 21 km of DN500-200 distribution network;
- 1.5 ML elevated reservoir to service land to the south east of the proposed development area above a ground level of RL 245m; and
- A water pumping station with a capacity of 4 MLD to fill the elevated reservoir.

This new infrastructure will need to incorporate the 2 ML reservoir proposed to be constructed by Sydney Water for the Bingara Gorge development which would have the capacity to service the first 2,000 lots at Wilton Junction (pending how the system is optimised).

8.4.2 SEWER

The 'Wilton New Town Sewerage Scheme – Overview' – Technical Memorandum prepared by CH2M Hill investigates the feasibility of a gravity feed sewerage system at Wilton Junction.

CH2M Hill has reviewed the opportunity for gravity reticulation systems serving individual lots. These gravity systems will be intercepted by trunk sewers which in turn will gravitate to pump stations which will feed flow under pressure to a central treatment facility(s).

8.4.2.1 Sewerage Collection and Transfer

An indicative plan of the key transfer routes of a sewerage system for Wilton Junction is provided in **Figure 8.9**.

Figure 8.9 Identifies:

- The proposed Treatment Facility – Site 1;
- Alternative treatment sites, Site 2 to the east and 3 to the west;
- Larger pump stations;
- smaller pump stations;
- Trunk gravity sewers; and
- Possible rising mains returning flows to treatment facility.

Where feasible, cost effective and preferred within the development, the alternative of using pressure systems that provide for proprietary pumps at each lot to pump in to a pressure main which also feeds to a treatment facility (s) can also be considered. However, due to the site topography and fact that the existing development at Bingara Gorge has a gravity system,

CH2M Hill have assumed for planning purposes that gravity systems will be generally adopted.

8.4.2.2 Treatment Facility

The treatment facility(s) proposed will be small footprint plant(s) using latest technology processes which producing a high quality significantly nutrient reduced effluent suitable for re-use purposes as a resource in accordance with National Guidelines for Water Recycling and the NSW Environmental Guidelines for Effluent Irrigation. The treatment plant(s) are likely to be Membrane Biological Reactor (MBR) plants incorporating odour control and noise control facilities in keeping with the effluent quality needs, and the needs for a facility relatively close to residential areas.

CH2M Hill has identified the need for a new central treatment facility immediately adjacent to the existing Bingara Gorge facility. The benefits of siting a new central facility immediately adjacent to the existing Bingara Gorge facility include:

- There is already an existing sewerage treatment plant adjacent the proposed site and the area is zoned for industrial uses;
- Existing zoning of the land is appropriate for the development of an expanded treatment facility;
- The location is near the centre of the whole of the subject land, close to early development which is planned in general to extend outwards from this area and which will be close to the higher generation of flows (note: this also means that pipelines from mainly peripheral pump stations will not be excessive);

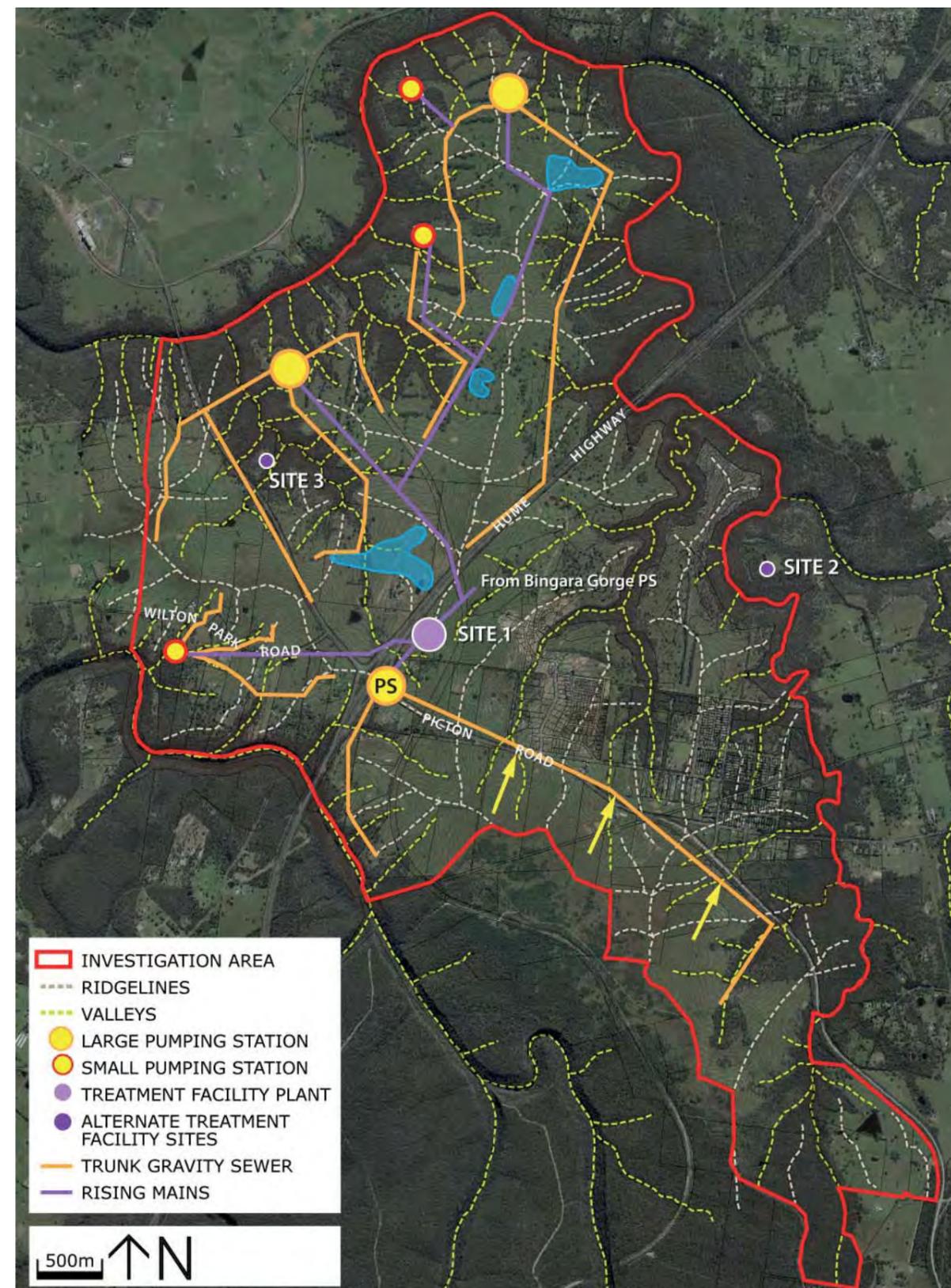
- Present separation distances from residential development are some 150m;
- Utilities and services are already nearby, where as they would have to be extended to any alternative sites;
- As the facility will be in an industrial area it will be effectively screened from adjoining sensitive uses; and
- As the development grows a licence will be required for a treatment facility and having a single licence may have advantages operationally.

As a result of improved process technology and odour and noise controls, waste water treatment plants can be located very close to residential developments. Notwithstanding, CH2M Hill recommend the preservation of a buffer separation of at least 150m to the nearest sensitive residential receptor.

Accordingly, in the case of the proposed treatment facility at the preferred site, CH2M Hill would propose that for planning purposes:

- Odour modelling for the proposed facility and selected treatment trains confirm appropriate odour and noise controls that should be adopted for both the ultimate and staged facility;
- Such controls relating to both the design and the operation of the facility are implemented; and
- A minimum separation distance of 150m between the new treatment facility and the nearest residential properties be maintained, to provide for a safety margin in the event of an operational upset or unusual condition (power outages etc).

Figure 8.9 Proposed Sewerage Treatment System



Wilton Junction MASTER PLAN

8.4.2.3 Effluent Disposal

Disposal of effluent will initially be to a storage lake in West Wilton from which a pump system will deliver reused effluent for beneficial irrigation of parks and gardens and possibly used in the employment areas for non-potable use. Further disinfection/ treatment may be required at this stage subject to the usage required. This will be assessed in line with National Guidelines for Water Recycling and the NSW Guidelines for Irrigation of Effluent.

Surplus flows will cascade into another storage lagoon(s) to be provided within West Wilton where the effluent will be cocktailed with available stormwater which will also be directed to this water feature.

The disposal route for these flows will need to be determined as part of the design development in conjunction with relevant Authorities.

The subject area falls within the 'Lower Hawkesbury Nepean Nutrient Management Strategy Area'. The approach to disposal of surplus flows will therefore target levels of nutrients and suspended solids that would not significantly increase net loads in the Nepean River, with the aim of posing no additional ecological stressors on river ecology. The storage lake design would feature a current best-practice biological treatment suited to the local conditions. Models of outputs from the storage lake would consider the relatively low surplus flow volume and sensitive selection of discharge points to minimise impacts of discharge on fish and plant life. The treated surplus would be designed to discharge lower net nutrient loads than currently licensed treatment plans in the region. Recent data on the status of river ecology would be used design

a monitoring program that will assess the environmental effects of the disposal within a regional context.

8.4.2.4 System Operation

Planning for the treatment system should allow for private operation and control with all work performed in accordance with standards that would not preclude Sydney Water from participating in the system.

8.4.3 ELECTRICITY

An electricity substation at Bingara Gorge and a 66kV feeder line through Wilton West have been constructed to serve the Bingara Gorge development.

Endeavor Energy confirm that the new substation will secure electricity supplies to Wilton, Maldon and Douglas Park and can be expected to require future augmentation to service the ultimate Wilton Junction New Town by way of a second substation, but is expected to be adequate for substantial growth of Wilton Junction.

8.4.4 GAS

The Moomba-Sydney gas pipeline traverses the study area. Alinta Energy has connected to the Moomba-Sydney gas pipeline (refer to Figure 7.5) and, accordingly, gas will be available to service the Wilton Junction New Town.

8.4.5 TELECOMMUNICATIONS

Main trunk telecommunication cables pass through the investigation area and can be augmented to provide fibre to the home.

8.5 Infrastructure Availability, Delivery & Funding

Preliminary infrastructure investigations suggest that services can be connected to the study area to support urban development without unreasonable cost or difficulty, and, more particularly, development over the first 5-10 years will require limited augmentation of infrastructure services.

It is premature to expect a detailed and costed infrastructure delivery strategy at this stage, however, it is recognised that such a strategy, including understanding of responsibility for costs, is an essential next step in the progression of Wilton Junction towards its possible eventual development for urban purposes.

In considering the approach to infrastructure provision the Landowners Group have taken the view that, while not all major sites in Wilton Junction have been nominated for review under the Government's Review of Potential Housing Sites process, it is critical to address the objectives and evaluation criteria set out in the invitation to landowners to submit expressions of interest.

The stated objective in the Review process in relation to infrastructure is:

To provide infrastructure and services for new communities in a timely and efficient manner at no additional cost to Government.

Matters for consideration as part of the evaluation process include:

- willingness and capacity of the landowner to finance the planning and infrastructure associated with delivery of the housing;
- availability of enabling infrastructure, capacity of regional transport networks and accessibility of human services;
- capital and recurrent costs to state and local government of providing infrastructure and services; and
- impact on existing government infrastructure investment and commitments to other areas.

Willingness and Capacity:

All four land owners are proven developers with a track record of successful delivery of urban development. They have the willingness, financial capability, expertise and experience to both plan for and facilitate timely delivery of required infrastructure and services to the future community of Wilton Junction.

This will however, require continuation of the involvement and support of a range of State agencies and Wollondilly Shire Council throughout the planning and delivery phases.

Commitment by the Landowners will need to be augmented by a Government commitment to a level of support for infrastructure similar to that for other master planned communities in Sydney's Growth Centres. This will ensure that

the supply of housing and employment opportunities in Wilton Junction New Town is affordable and remains competitive.

Availability of Enabling Infrastructure:

Wilton Junction will have the key benefit of availability of existing infrastructure (water, sewer electricity, gas, telecommunications and social infrastructure) to support the early stages of the new town. This infrastructure includes that associated with the Bingara Gorge development, the presence of major regional roads and sub-regional human services.

Investigations undertaken by the four major landowners have shown that this existing infrastructure can be augmented and improved in a cost effective and financially viable manner to service the development of the new town in the early stages.

As development progresses new facilities and services will be provided to meet the needs of the growing population. Again, it is considered that the delivery of these new facilities and services is both feasible in terms of time frame and viable in terms of cost.

Capital and Recurrent Costs:

The four landowners recognise that financial contributions will need to be made to the capital cost to support infrastructure delivery in the same manner as Government has required in the Growth Centres and Metropolitan Development Program sites. It is an important principle that infrastructure provision at Wilton Junction is delivered at no additional cost to government.

The Landowners believe that it is equally important that developer infrastructure contributions are in line with those of metropolitan Growth Areas.

The landowners will seek to explore with both State Government and Wollondilly Shire Council, opportunities to directly deliver infrastructure to an agreed standard in-lieu of financial contributions in order to maximise opportunities for their effective and timely delivery to residents.

With the economic benefits and associated multiplier effects that will result from the development of Wilton Junction New Town the four landowners expect that State and Local Government will receive new sources of income that will assist in meeting the recurrent costs of infrastructure provided.

Impact on Investment and Commitment in Other Areas:

Wilton Junction New Town will deliver additional sources of housing and employment to meet the demands of Sydney's growing population that are not currently being met. Wilton Junction New Town is a new and complimentary investment and commitment to accommodate the growth of Sydney, rather than a competitor to existing planned growth.

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9 URBAN DESIGN WORKSHOP

A collaborative urban design workshop was held on the 9th August 2012 with the Wilton landowners rezoning group, sub-consultants and Council staff. The workshop was facilitated by Connor Holmes, in collaboration with David Lock Associates and Elton Consulting.

The workshop was a forum to explore the existing context of the master plan investigation area, develop and agree on a vision and key principles to guide the potential future growth and development of Wilton Junction and to begin to develop a framework and structure for future urban growth and development.

Key urban framework elements examined in this forum included:

- employment and economic activity;
- community and recreation;
- place making;
- environment;
- centres;
- traffic and transport; and
- infrastructure.

The outcome and key findings of the urban design workshop have informed the preparation of this high level master plan.

10 PRELIMINARY AGENCY CONSULTATION

Preliminary consultation was undertaken with State Government Agencies primarily to identify any issues that could preclude urban development within the investigations area, or alternatively that would be fundamental in shaping any urban development, such that, as appropriate, the high level Master Plan could be designed having regard to these key issues.

From this preliminary consultation it was concluded that there are no immediate issues that would preclude future urban development at Wilton Junction.

Preliminary Agency consultation did however raise a number of issues (eg the identification and protection of conservation areas, bushfire management and the identification of threatened species at Wilton Junction etc) that will ultimately inform the structure, form and extent of urban development. In developing the high level master plan, land uses have been notionally arranged and areas configured to generally address these matters in a broad sense. Further refinement in relation to these issues is appropriate as the proposal for urban growth and development at Wilton Junction progresses through various levels of analysis (ie rezoning and later development assessment etc).

Other issues identified that will also require future further consideration include the underlying coal seams and mining subsidence; cultural heritage; waste water disposal; agriculture; ground water management; and water sensitive urban design.

On the basis of this consultation, it is considered that all of the issue raised can be appropriately addressed to enable urban development as the proposal progresses.



11 DESIGN RESPONSE TO SITE OPPORTUNITIES & CONSTRAINTS

11.1 Overview

A range of issues impact upon the subject site's suitability for urban development purposes. These include the following site characteristics:

- › Topography
- › Vegetation
- › Fauna
- › Cultural heritage
- › Mining subsidence
- › Contamination
- › Agriculture
- › Bushfire management
- › Infrastructure
- › Traffic and transport
- › Non-vehicular movement
- › Noise
- › Visual interfaces
- › Existing development interfaces

Additionally, a range of human service requirements arise out of the development of the land for urban development purposes and require consideration in any design response for the site. These include the need to provide for:

- › A range of housing opportunities;
- › A range of employment opportunities;
- › Retail, commercial, community, education, recreation and entertainment facilities commensurate to the population to be served; and
- › Infrastructure requirements including roads, public transport, power, water, waste water disposal, stormwater management, gas supply, telecommunications and the like.

Most of these issues have been discussed in previous sections of this report and, accordingly, those details are not reiterated here. However, it is relevant to consider the design responses to those issues. These are discussed in the following paragraphs and where relevant are illustrated on the accompanying opportunities and constraints map for the whole study area (see **Figure 11.1**) and for areas of detail (see **Figures 11.2** and **11.4**).

Topography

- › The vast majority of the site is suitable for urban development purposes, with the gorges providing the only land too steep for development;
- › The flattest land is most suitable for large floor plate structures such as employment and retail buildings;
- › Flatter land is also desired for active playing fields; and
- › Some of the prominent ridgelines within the site provide an opportunity for open space and walking trails with attractive views over the surrounding area.

Vegetation

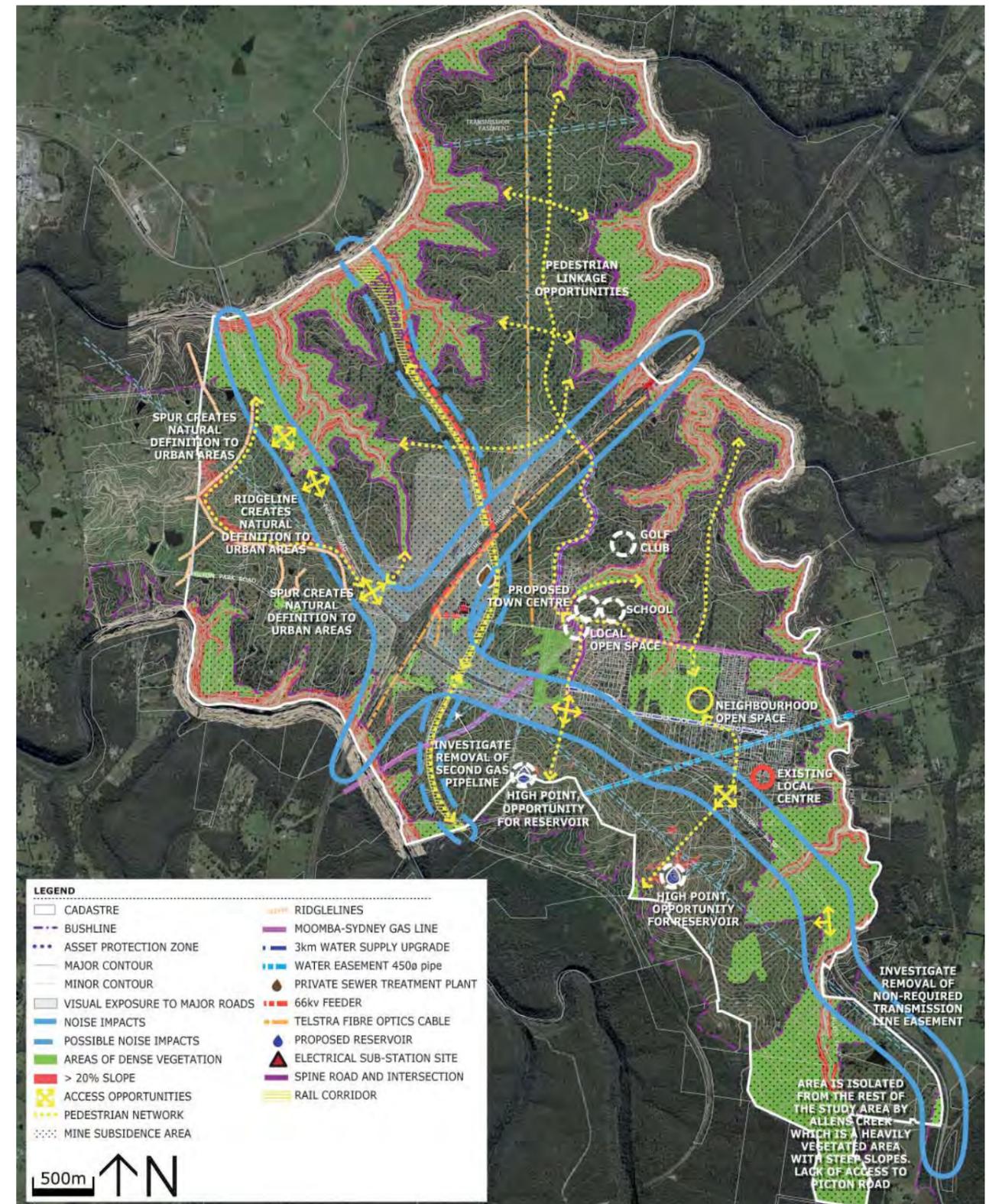
- › Substantial portions of the site are recognised as retaining significant dense bushland and these areas are broadly identified by the NPWS Bushline and the bushline established through the ecological studies conducted by landowners' specialist consultants. These broad analyses have been ground truthed in some areas to provide a higher order of definition of bushland areas;

Figure 11.1
Site Opportunities and Constraints

- › Some areas of scattered vegetation outside of the bushline will require more detailed consideration as to the worthiness of preservation;
- › More substantial areas of vegetation and key individual trees of note should be incorporated into future urban design outcomes wherever practicable;
- › It is noted that vegetation preservation may include areas that are outside of current bushline protection areas; and
- › Opportunities may exist for the use of vegetation offsets in some locations, but this is a matter for later consideration.

Fauna

- › Protection of intact bushland will assist with the protection of fauna habitat;
- › Key Indigenous and European heritage sites will require protection and management, however, their identification and incorporation into a high level master plan is not considered necessary at this stage. A more detailed evaluation is anticipated as part of a future stage of investigation.



Mining Subsidence

- › The entire study area is potentially at risk from mine subsidence, with the whole area underlain with coal seams; and
- › Since a substantial portion of the land is already zoned for urban development (Bingara Gorge Estate and Wilton Township), the high level master plan only acknowledges the mine subsidence risk at this stage. The adopted mine subsidence parameters for this locality are the same as applying across all of the urban release areas in Camden, Campbelltown and Bingara Gorge.

Contamination

- › Advice suggests that contamination from agricultural use of the subject land is likely to be minimal and that no munitions from the former Douglas Park testing range have been found nor does the former range impose a likely impediment to development. Accordingly, the master plan does not identify any contamination risk areas; and
- › Groundwater investigations may be necessary at a later date.

Agriculture

- › While there is some debate about the class of agricultural land within the site, the most recent and detailed inspection (ie. on-site rather than desk top) suggests a relatively poor quality of soil and conditions (ie. suitable for grazing and rough grazing) and that this should not represent a constraint on converting the land from agriculture to urban development.



Bushfire Management

- › Asset protection zones and bushfire management strategies will be required and will need to be part of detailed investigations at a later stage of this process;
- › The urban area within Bingara Gorge is accurately defined by the existing planning instrument and has therefore been adopted by the high level master plan;
- › Asset protection zones have been ground truthed for the whole of the north west quadrant of the study area and have been adopted for the purpose of the master plan; and
- › All other areas will require ground truthing at a later date.

Infrastructure

- › Development in the vicinity of the Moomba – Sydney gas pipeline will be required to meet AS 2885.1. This does not preclude a range of urban development forms in close proximity to that gas main;
- › The existing electricity substation location (adjacent to Bingara Gorge) will be retained;
- › A second sub-station may be required eventually to serve the study area. No location has yet been determined;
- › The actual route of the 66kV feeder line to the Bingara Gorge sub-station has obviated the need for the empty transmission easement located generally south of Picton Road. This should be extinguished so as not to become an unnecessary constraint on future development;
- › There is an existing Sewerage Treatment Plant (STP) adjacent to Bingara Gorge. Allowance needs to be made for the future expansion of the treatment site. Expansion can be accommodated within the area designated “Bingara Gorge Employment Lands, STP and Substation” site while providing a suitable separation distance from the Bingara Gorge community;
- › The STP will incorporate odour control and noise control facilities and enable the facility to be located relatively close to residential areas (a 150m buffer separation is recommended);
- › The high level master plan identifies the “Bingara Gorge Employment Lands, STP and Substation” site as the location for expanded STP facilities; and
- › Water is expected to be supplied via a pipeline from the Macarthur Water Filtration Plant at Appin. It will require reservoir storage at a high point south of Picton Road. Two alternative locations have been identified on the high level master plan.



Traffic and Transport

- › It is recognised that considerable upgrades to Picton Road and the Hume Highway / Picton Road interchange will be required to facilitate urban expansion in the study area. It is not appropriate that a high level master plan resolve the details of these upgrades at this time;
- › The high level master plan does identify preferred access points to / from Picton Road, but again does not seek to define the design details of these intersections;
- › Intersection locations are based upon the following:
 - The location of existing access points
 - Suitable vertical and horizontal road alignments
 - The land form adjacent to the intersections
 - Separation distances between intersections, including the Hume Freeway interchange
- › Signalised intersections and an urban road environment are preferred over grade separated interchanges and a high speed rural road for the safety and amenity of the existing and incoming population. However, it is acknowledged that the approach to these matters will need to be resolved with RMS at a later date;
- › Future detailed plans will need to address the designs required for priority bus movement through intersections and elsewhere;
- › The high level master plan can identify intersections for future bus priority investigations as well as an indicative location of bus routes and a bus interchange. It can also identify a possible station site should the Maldon-Dombarton line ever be used for passenger services. This does not in any way pre-empt the use of that line for passenger or freight services. Detailed discussions will be required to confirm bus services and routes in the future;
- › A key design consideration for the bus routes will be the connectivity of the Town Centre, the Neighbourhood Centres, employment areas, schools and recreation areas; and
- › Future studies may investigate the viability of a direct bus link to the Hume Highway.



Non Vehicular Movement

- It is desirable to develop a comprehensive pedestrian and cycle network in order to promote fitness, provide access to key services and facilities and to avoid the unnecessary use of vehicles within the proposed urban area;
- A low impact pedestrian network is preferred in sensitive gorge areas; and
- Connectivity over the Hume Highway (at the existing bridge) and under the Highway (at the Nepean River crossing immediately south of the subject land) is desirable.

Noise

- The Hume Highway and Picton Road are existing noise sources that will require management. These roads are in cuttings for parts of their length and, hence, noise characteristics are modified in these locations;
- The Maldon-Dombarton railway alignment, if ever used for freight movement, could become a further noise source requiring management; and
- As far as possible, these noise interfaces are proposed to be managed through the selection of non-residential land uses adjacent to the greatest noise sources and especially around the Hume Highway Picton Road interchange.

Visual Interfaces

- Land in the vicinity of the Hume Highway / Picton Road interchange, in particular, generally has high levels of exposure / visibility to passing traffic and therefore has a propensity for the accommodation

of land uses that can take advantage of that high exposure (and accessibility); and

- Land adjacent to other sections of the Hume Highway and Picton Road also has good exposure and can be considered for commercial land uses.

Existing Development Interfaces

- The master plan seeks to minimise change for the existing Wilton township, by maintaining the existing township boundaries and surrounding rural residential land holdings and bushland, maintaining the existing local centre on Wilton

Road and acknowledging the potential for expanded recreation and community facilities at the Wilton Sportsground;

- The Bingara Gorge development should be protected from any externalities potentially arising from the STP and adjacent employment lands; and
- The low density rural lands and rural residential lands should be protected from the impacts of urban development as far as practicable and where interfaces are necessary, those interfaces are minimised.

11.2 Employment Lands and Town Centre

Land in the vicinity of the Hume Highway / Picton Road interchange has been identified as having the greatest propensity for commercial development due to its visual exposure to high levels of passing trade and its high degree of accessibility via those two major roads.

In view of the desire to achieve a high level of self-sufficiency in both employment and service provision for Wilton Junction, the area around the Hume Highway / Picton Road interchange has been specifically assessed in terms of its suitability for a

range of non-residential uses that take advantage of the locality's visibility, exposure and accessibility.

In undertaking this assessment it has been determined that the north western quadrant of this intersection represents the preferred location for a town centre to serve Wilton Junction. This determination is based upon the quadrant's following key advantages:

- Consolidated land ownership facilitating development of a comprehensive town centre;
- The greatest extent of land with visibility to Hume Highway;

- The most immediate access to Hume Highway (at the Aerodrome entrance);
- The largest area of gently sloping relatively unconstrained land; and
- Central to the largest contiguous residential population.

Land in all four quadrants has the propensity for a range of employment and commercial uses, in the north western quadrant, those uses would complement the town centre, while in the south west, south east and north east quadrants, employment and commercial land uses would make up the bulk of those areas.

Figure 11.2 Opportunities and Constraints - North West Quadrant

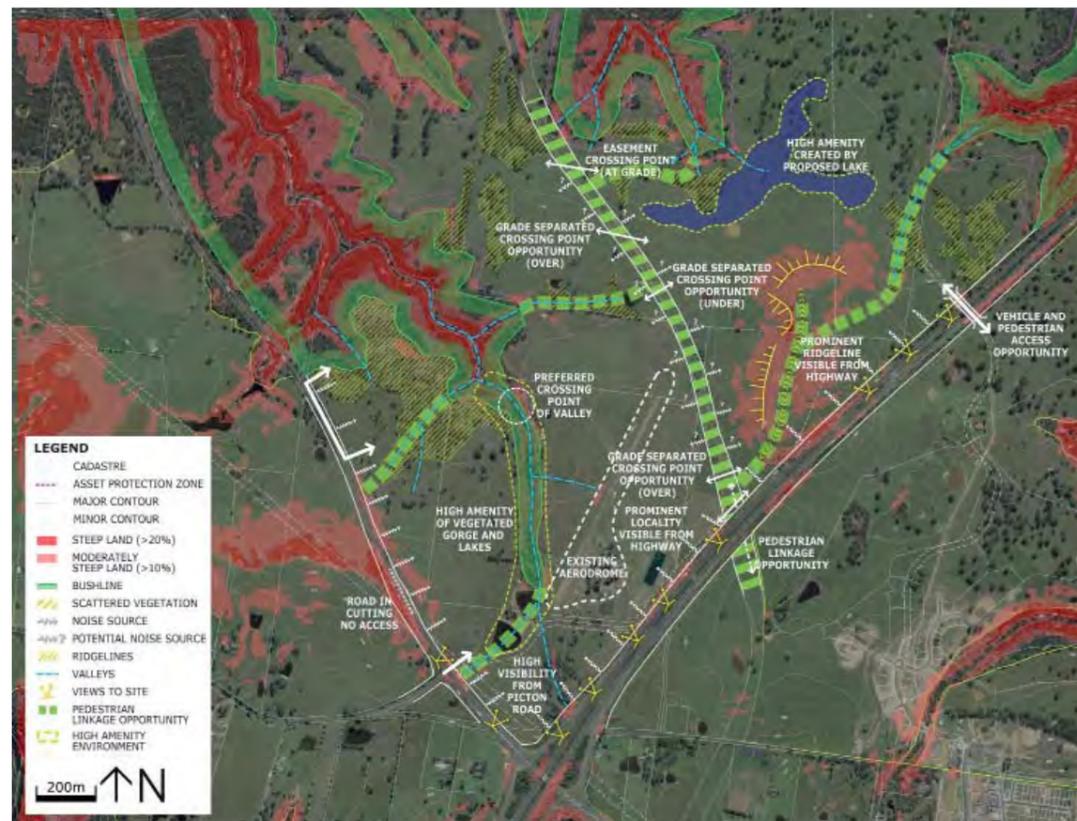
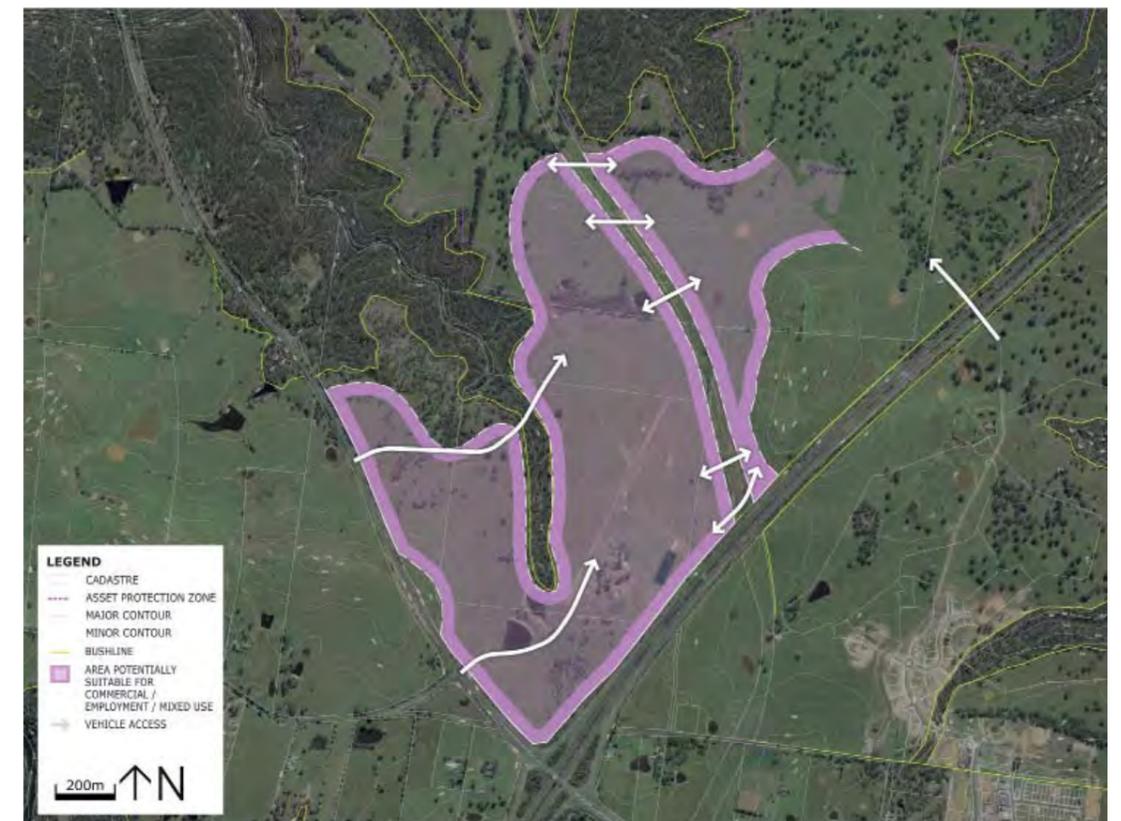


Figure 11.3 North West Quadrant



Wilton Junction MASTER PLAN

As can be seen from the following site opportunities and constraints plans for employment lands and the town centre, the same broad assessment criteria used in assessing the overall site have been applied to these specific areas.

These analyses have determined that relatively extensive areas of gently undulating land are available for employment use in the north eastern quadrant, while a more constrained strip of land is available along the

south side of Picton Road in the south eastern quadrant. Gently sloping land is available within the south western quadrant, both north and south of Wilton Park Road, with its extent determined by natural barriers (ridge lines and valleys), steeper slopes and areas of extensive vegetation.

By far the largest area is available in the north west quadrant, which is divided by a vegetated gorge but which creates a high amenity environment for incorporation into any future

development. The Maldon-Dombarton railway corridor also traverses this area, providing an opportunity to be used as a non-vehicular movement corridor and link to the town centre, but also creating prospective noise issues and crossing point difficulties if it is ever used as a railway corridor.

The following plans identify the land which has been evaluated and deemed suitable for employment and town centre functions.



Figure 11.4 Opportunities and Constraints - South / East Quadrants

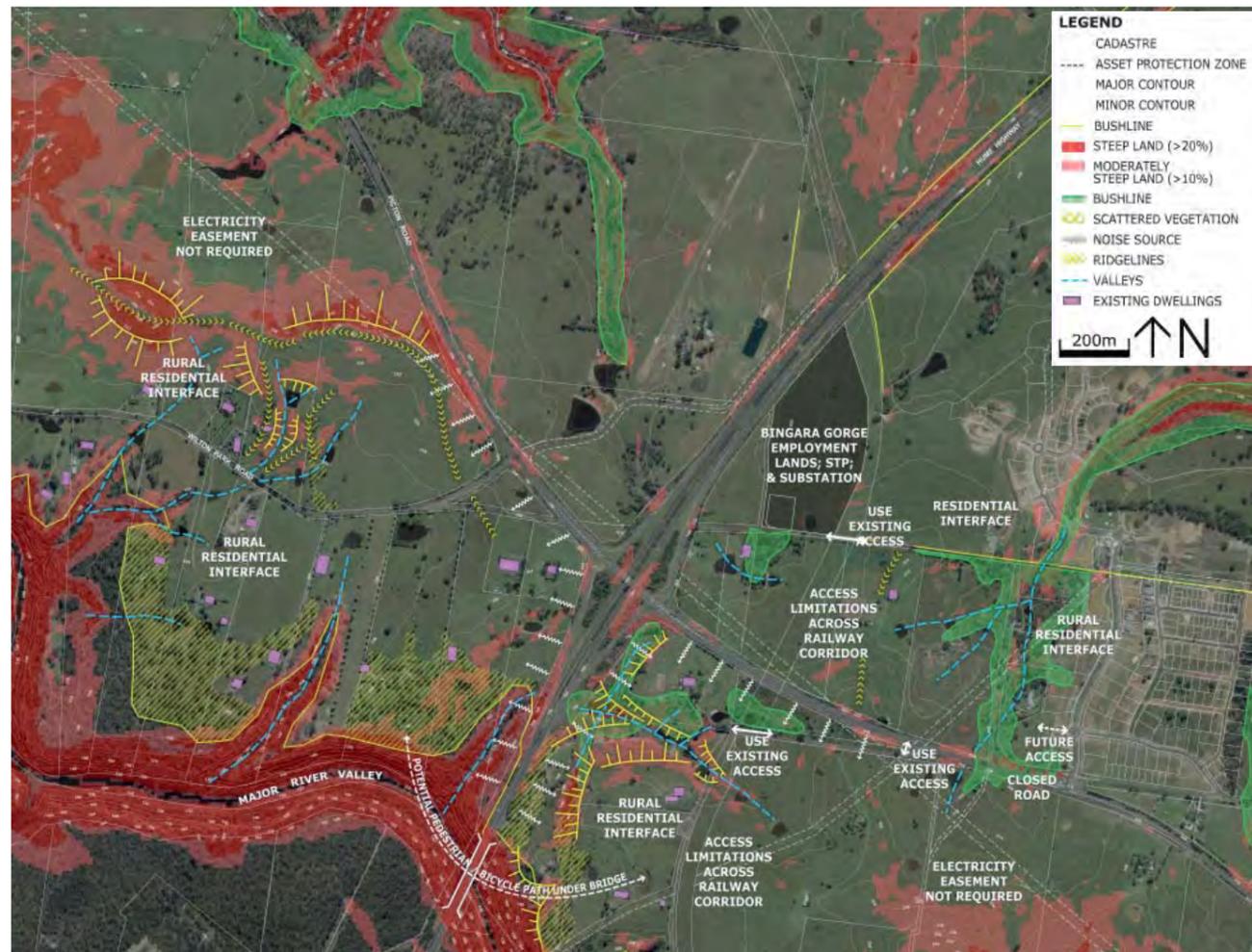
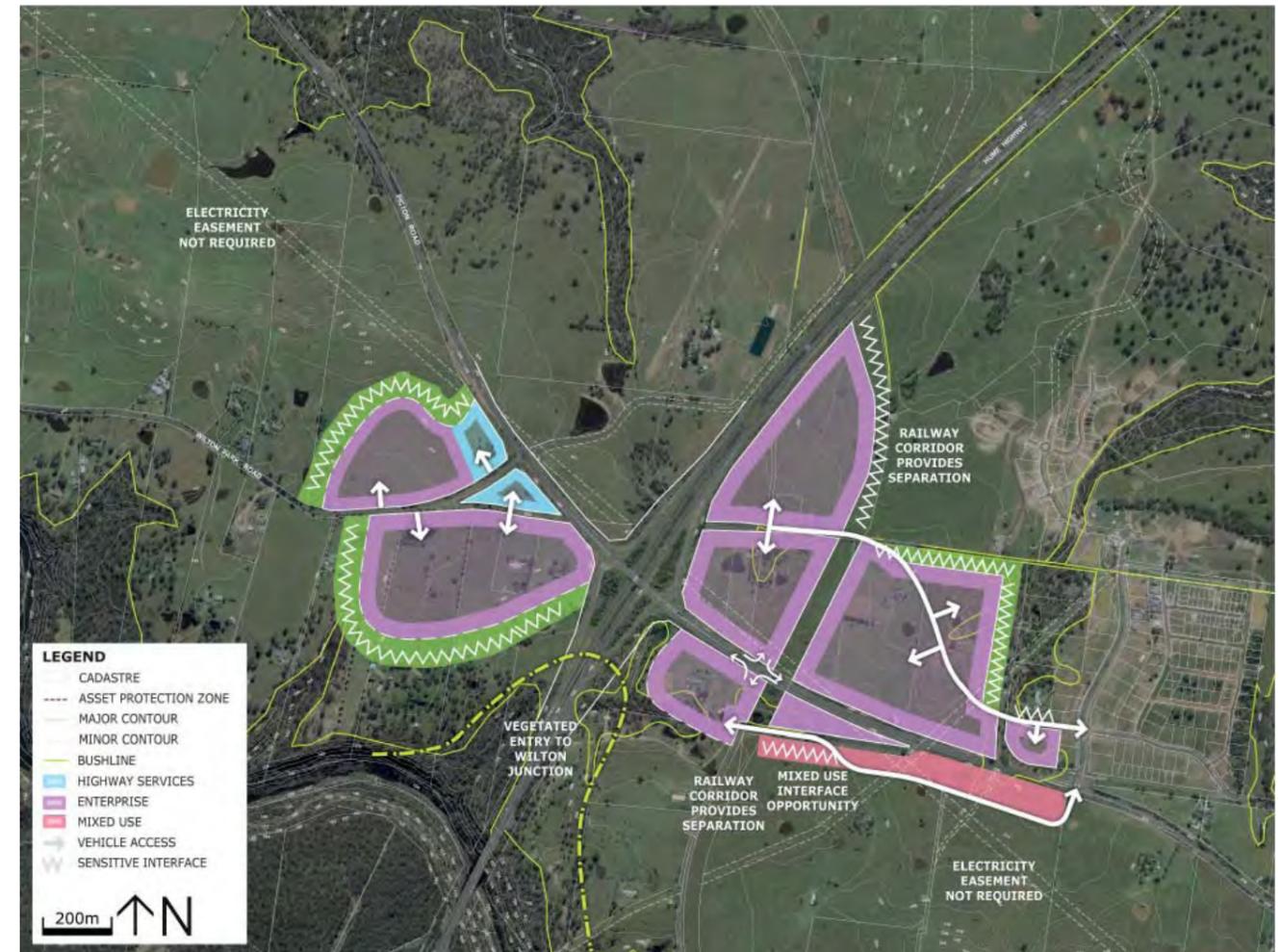


Figure 11.5 South / East Quadrants



12 WILTON JUNCTION MASTER PLAN

12.1 Key Elements

The high level Masterplan for Wilton Junction comprises the following key elements:

- › Town centre
- › Employment lands / enterprise precincts
- › Mixed use precincts
- › Schools / education facilities
- › Active recreation areas (and a golf course)
- › Neighbourhood centres
- › Local centres
- › Special purpose areas (reservoirs, substations and STPs)
- › Passive open space and recreation areas
- › Protection areas
- › Residential areas
- › Medium density residential areas
- › Low density residential areas
- › Primary production areas
- › Vehicular and non-vehicular movement corridors and infrastructure corridors / sites

These elements are identified on **Figure 12.1** and are discussed in the following paragraphs.

Town Centre

The town centre comprises a range of precincts which may include a wide variety of uses, including:

- › Retail
 - Supermarkets
 - Specialty shops
 - Discount department stores
 - Mini-majors
 - Cafés, restaurants, take-aways
 - Retail services
- › Leisure / Recreation
 - Bars, cafés, restaurants
 - Hotels
 - Cinemas
 - Gaming / amusements
 - Bowling
 - Gymnasium
 - Clubs / nightclubs
 - Leisure Centre / indoor recreation / aquatic facilities
- › Civic
 - Administration
 - Function centre
 - Library
 - Community centre
 - Meeting hall
- › Commercial
 - Offices
 - Post office
 - Bank
 - Personal services
 - Professional services

› Education

- Child care
- Early learning / pre-school
- Primary school
- High school
- Tafe
- Special education
- Training

› Accommodation

- Medium density housing
- Mixed residential / commercial
- Motel
- Guest house
- Retirement village
- Aged care / nursing home

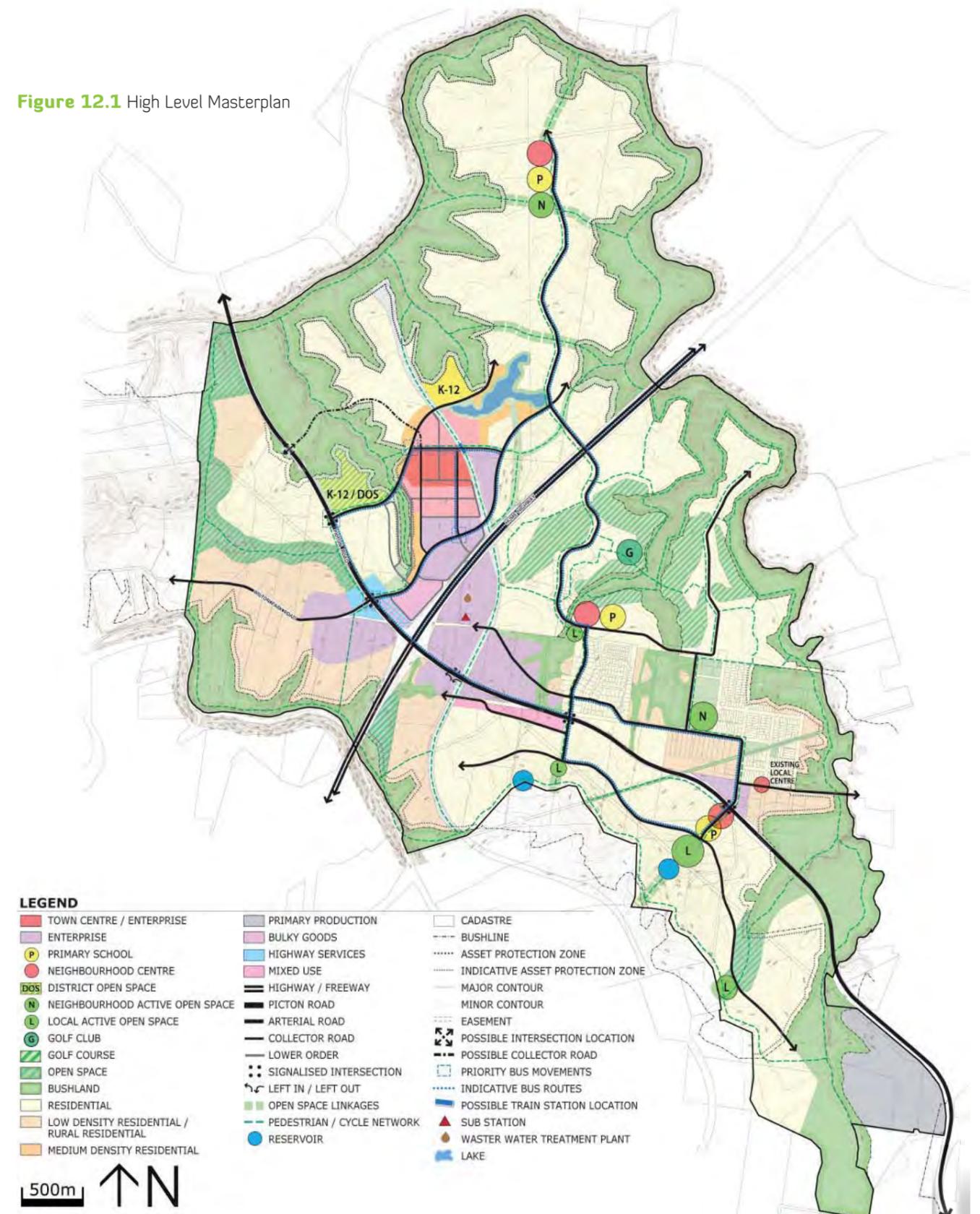
› Highway Services

- Petrol filling station
- Truck stop
- Automotive repairs and supplies
- Fast food, cafés
- Motel
- Car cleaning / detailing
- Service trade premises

› Community Services

- Community centre
- Youth services
- Aged services
- Employment services
- Not-for-profit groups
- Government agencies

Figure 12.1 High Level Masterplan



Wilton Junction MASTER PLAN

Health Services

- GP Plus
- GP Clinic
- Specialist clinics
- General practitioners
- Dental / physio / chiro
- Visual / hearing
- Veterinarian
- Massage
- Dietician
- Paediatrics / Child health

Special Services

- Police
- Fire
- Ambulance
- Courts
- Funerals

A centrally located retail core is proposed to provide convenience and comparison shopping for the whole of Wilton Junction, a civic core, commercial and office functions, community facilities, leisure and entertainment functions and opportunities for short and long term accommodation options.

The Town Centre's retail core will be the focus of the private and public transport networks, including the possibility of a bus interchange (and a railway station if the Maldon-Dombarton corridor is ever used for passenger services). It will also be the focus of non-vehicular movement networks, with linkages to the residential precincts to the north, south and east.

The centre's location is 'book ended' by existing and proposed high amenity environments (a gorge and a lake) which provide the potential to create a town centre of interest and attraction.

The core of the Town Centre is surrounded by a mixed use precinct that provides for an overflow of lesser sealed activities from the town centre and an increasing focus on community facilities, health facilities, commercial and office space, an increasing proportion of residential development and a range of leisure and entertainment activities that take advantage of their high amenity locations.

A substantial enterprise precinct is proposed which will have an increased focus upon employment, offices and footloose operations seeking a business park type environment. The opportunity exists to facilitate start up businesses through a business incubator facility and to focus on the capture of businesses seeking to integrate the workplace with high amenity and recreational opportunities.

The town centre is ringed by medium density housing precincts that combine proximity to the town centre and all of its services and facilities with high amenity locations attractive to residential development.

Accommodation in and around the town centre might include medium density housing, mixed residential / commercial developments, motels, guest houses, retirement villages and aged care / nursing home establishments.

At the periphery of the town centre and focussed upon the exposure and accessibility provided by Hume Highway and Picton Road, are highway related services and facilities and a bulky goods precinct intended to serve both Wilton Junction and the extensive and growing passing trade on those major roads.

Two significant educational facilities are proposed on the periphery of the town centre, a K-12 public school and a K-12 private school. These locations just outside of the town centre provide an opportunity for students to take advantage of bus routes and pedestrian and cycle networks that focus on the town centre and also increase the propensity for multi-use trips which incorporate the school drop off / pick up trips.

The opportunity exists for one of the K-12 schools to co-locate with the district open space required to serve Wilton Junction as its primary sports fields precinct. Aquatic facilities might also be co-located with the district open space or, alternatively, might be delivered by way of a beach and swimming area on the town centre's proposed lake.

The location of the schools raises issues of safety in respect of Picton Road, noise from Picton Road and bushfire risk from adjacent bushland. We believe that all of these matters can be addressed through the detailed design of these schools and surrounding areas and through the implementation of suitable management techniques. In particular, the integration of the district open space with one of the school sites provides further flexibility in the development of a design solution to address these issues. These matters will be investigated as part of the next stage of investigations.

The agglomeration of these activities provide a broader propensity for multi-use of services and facilities and a potential reinforcement of the commerciality of the centre.

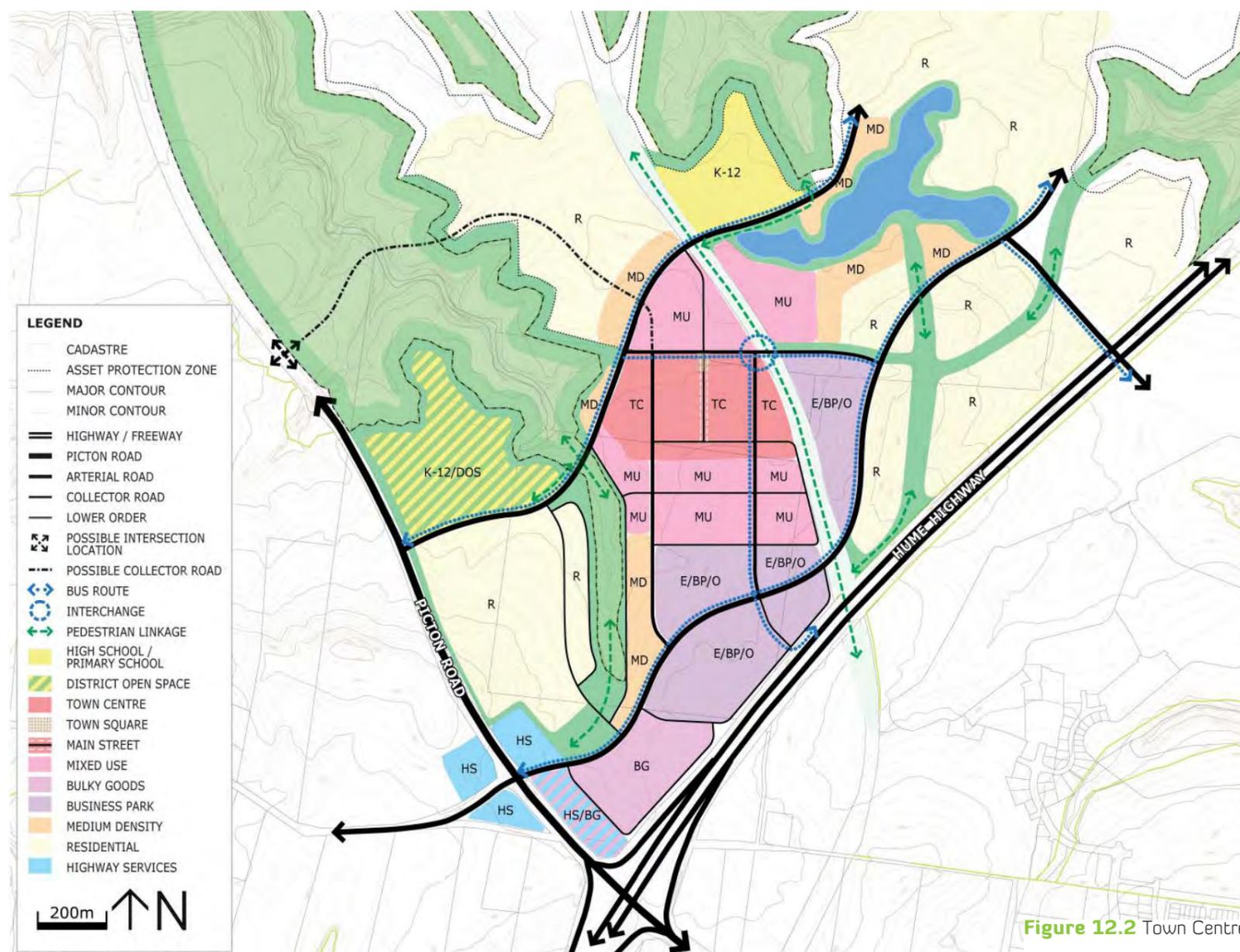


Figure 12.2 Town Centre Masterplan

The town centre as a whole will be a very substantial employment hub in its own right.

Enterprise Precincts

- › The enterprise precincts include the town centre but also include the following areas:
 - North and south of Wilton Park Road
 - North and south of Picton Road, east of Hume Highway
 - The Bingara Gorge employment lands, STP and substation site
 - A small triangle of land at the corner of Picton Road and Almond Street
 - Prospective developments within the neighbourhood centre sites identified within Wilton Junction
- › Together with the town centre (and work from home opportunities) these precincts deliver sufficient floorspace potential to exceed 70% employment self-sufficiency in Wilton Junction; and
- › The focus of these precincts will be on clean enterprises which cater for the emerging industries of the twenty first century in attractive landscaped environments. Some light industrial activities are anticipated as well as an element of transport and logistics, which capitalises on the site's strategic location, and food and agricultural product processing, packaging and distribution, which focusses on serving the region's agricultural base.

Neighbourhood Centres

- › Neighbourhood centres, comprising a combination of retail and commercial facilities, community facilities, a primary school and areas of active open space, are proposed to serve the 'neighbourhoods' of Wilton Junction. The Town Centre itself will act as a neighbourhood centre for the southwest. Other centres are proposed (or exist) as follows:
 - Bingara Gorge
 - Northern precinct of Wilton West
 - South of Picton Road
- › In the case of the existing Wilton township, the existing local centre should be retained and expanded over time and the Wilton Community Centre and Oval complex enhanced as the focal point of community and recreational activities;
- › Each centre is intended to act as a focus for community activity and as the fulcrum of the public transport and pedestrian movement network.

Special Purpose Areas

- › The high level master plan identifies two alternative locations for the potable water supply reservoirs to serve the Wilton Junction community and incorporates the expanded STP and substation within the defined enterprise precinct.

Residential Areas

- › Much of the gently undulating terrain is readily developable for residential purposes and has been identified as residential land in the high level master plan;
- › Areas of scattered vegetation exist within these residential precincts and will need to be considered in greater detail in the next level of investigation;
- › Medium density residential precincts are anticipated in and around the town centre;
- › Low density residential / rural residential areas are retained around Wilton Township to maintain the setting of that town and are proposed in areas where an existing low density environment already prevails as well as in areas providing a transition from residential to primary production;
- › The master plan seeks to make provision for the following housing markets:
 - Family housing as a priority
 - A component of executive housing to attract managers and CEO's of footloose businesses
 - Affordable housing choices
 - Pre-retirement housing for empty nesters
 - Retirement living products for active retirees
 - Aged care accommodation for the elderly



Primary Production

- › The area east of Allens Creek and south of Picton Road is proposed to have no change to its current status. The area is difficult to access and remote from services and facilities and is not considered essential to the creation of Wilton Junction.

Open Space

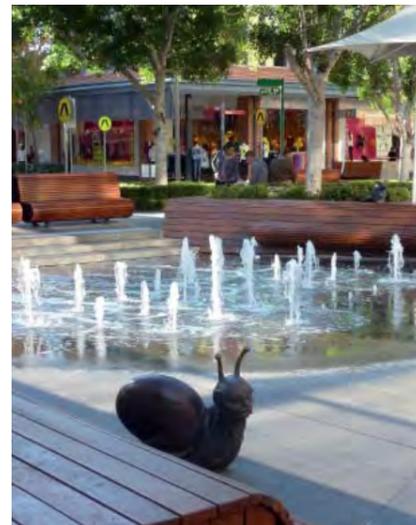
- › The master plan identifies substantial portions of the site to remain as vegetation protection areas while the inclusion of additional areas of open space provide informal passive and active recreational opportunities. These spaces include areas of scattered bushland, prominent ridgelines and pedestrian routes that provide connectivity between key facilities and areas of open space;
- › A pedestrian network is identified through Wilton junction with strong connectivity with and between the centres, community and recreation facilities and educational establishments;
- › A golf course is currently under construction within Bingara Gorge and will provide both a recreational opportunity and a visual outlook for many residents.

Vehicular Movement Network

- › Creation of a network that provides for movement within Wilton Junction, with good access to centres, education, community facilities and recreation opportunities.



Wilton Junction MASTER PLAN



Wilton Junction MASTER PLAN

12.2 Staging

It is too early in the process to establish a fixed sequence of development and, indeed, we would strongly argue that strict sequencing has the propensity to deliver monopolistic conditions that are contrary to competition and hence stifle innovation and affordability, and, therefore, should not be countenanced.

Accordingly, we provide the following map merely as a guide to the roll out of development within the study area. Essentially, it acknowledges the following:

- › Continued development of Bingara Gorge during the rezoning and approval process for the wider study area;
- › Initial development in close proximity to the centre of the study area, with progressive development towards the extremities of the study area;
- › Early residential development in Wilton West in close proximity to the Hume Highway overpass;
- › Early residential development in Wilton South in close proximity to the Picton Road / Pembroke Parade intersection;
- › Early development of highway services, retailing, employment lands and residential in close proximity to the Picton Road /Wilton Park Road intersection;
- › Development of the town centre commencing only once a sizable catchment population has been established within the study area;
- › Progressive roll out of community, education and recreation facilities commensurate with population demands; and
- › Progressive roll out of employment lands in all 4 quadrants of the Hume Highway / Picton Road intersection.



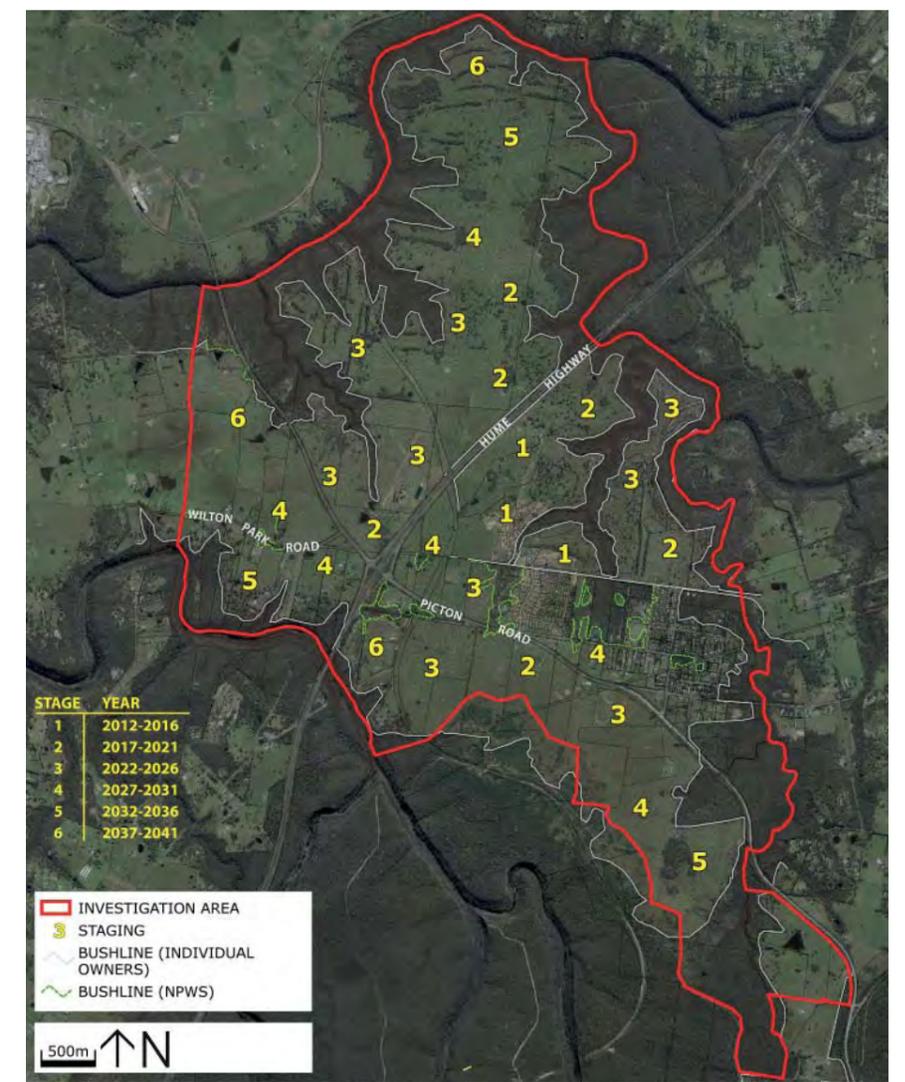
12.3 Land Use Composition & Budget

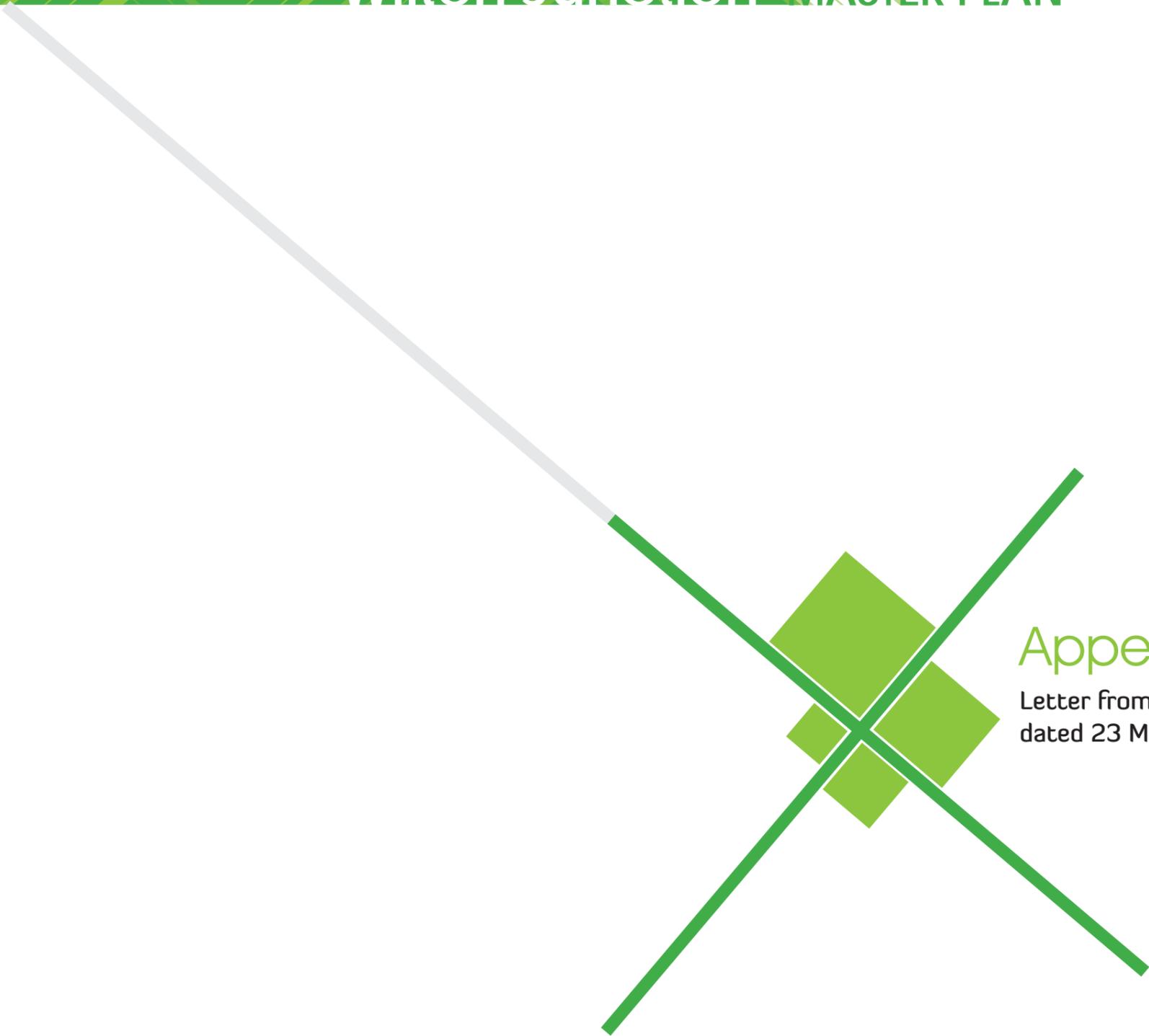
The approximate land use composition of the high level master plan for Wilton Junction can be summarised as follows:

› Residential	1,040 ha
› Medium density residential	16 ha
› Town centre and enterprise lands	202 ha
› Schools (including district open space)	35 ha
› Rural Residential	210 ha
› Open space, bushland protection and primary production lands	1,277 ha



Figure 12.3 Staging





Appendix 1

Letter from Wollondilly Shire Council
dated 23 May 2012



Our Reference: 2592 LM:JS

The Hon. Brad Hazzard
Minister for Planning and Infrastructure
Level 33, Governor Macquarie Tower
1 Farrer Place
SYDNEY NSW 2000

23 May 2012

Dear Minister,

MEMORANDUM OF UNDERSTANDING BETWEEN WOLLONDILLY SHIRE COUNCIL AND KEY DEVELOPERS FOR THE MASTER PLANNING OF THE WILTON AREA

At its Ordinary Meeting of 21 May 2012, Wollondilly Shire Council made the following resolution:

1. That Council writes to the Minister for Planning and Infrastructure to advise that an agreement has been signed by representatives of Bradcorp, Lend Lease, Walker Corporation and Governors Hill Pty Ltd agreeing to work co-operatively with Council to prepare a high level master plan in relation to "Bingara Gorge", "Wilton South", "Wilton Aerodrome" and "Wilton West" consistent with our adopted position that land releases at Wilton should not be on an ad hoc basis but should be part of a coordinated master planned approach for the entire Wilton area.
2. That the Minister be advised that it is Council's intention that this master plan include:
 - All lands generally in the vicinity of the Picton Road/Hume Highway interchange at Wilton
 - The creation of a new town at Wilton to provide housing, employment, all supporting infrastructure and services, and a full range of complimentary land uses to support liveability and sustainability
 - An overall structure and staging plan
 - All infrastructure requirements and an infrastructure funding strategy, to ensure timely and cost-effective delivery of all infrastructure.

.../2

All Correspondence to PO Box 21 Picton NSW 2571
62-64 Menangle Street Picton DX: 26052 Picton Phone: 02 4677 1100 Fax: 02 4677 2339
Email: council@wollondilly.nsw.gov.au Web: www.wollondilly.nsw.gov.au ABN: 93 723 245 808

TRIM 2592

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3. That the Minister be advised that the developers are willing to fund the preparation of the master plan and that this process will be commencing immediately.
4. That the Minister be invited to be part of the master planning process or nominate a senior officer from the Department of Planning to be involved with the preparation of the master plan.
5. That the Minister also be requested to facilitate the partnership and support from key infrastructure providers, Infrastructure NSW and all relevant State agencies.

The purpose of this letter is to bring to your attention, as Minister for Planning and Infrastructure, Council's position with regards to the NSW Government's Review of Potential Housing Opportunities as it applies to the Wilton area.

With respect to point 5 of the resolution, Council would also like to raise with you the possibility of an early declaration of the master planning of the Wilton area as State Significance Development or seek its inclusion on the Metropolitan Development Program.

If you have any questions regarding this matter please contact Council's Manager Strategic Planning – David Smith on phone (02) 4677 1138 or via email david.smith@wollondilly.nsw.gov.au.

Yours faithfully

Les McMahon
GENERAL MANAGER