



HUME CITY COUNCIL
**HUME CORRIDOR
INTEGRATED
GROWTH AREA
PLAN (HIGAP)
INFRASTRUCTURE
AND DELIVERY
STRATEGY**

DECEMBER 2015

www.hume.vic.gov.au



PREAMBLE

This Infrastructure and Delivery Strategy aims to provide direction of what an appropriate order and timing to the delivery of new development and new infrastructure would be to guide the growth of the Hume Corridor. It does not guarantee that development and infrastructure will occur as outlined and for this reason the Strategy will be updated frequently (at least every 5 years) with the costs, staging and funding of development and infrastructure updated accordingly.

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1. INTRODUCTION

The Hume Corridor will see significant sustained growth and change in the coming 30 years and more. This growth and change brings significant opportunity for improvements in access to jobs, housing and the multitude of services communities and businesses require. However, it also presents a very serious and important challenge to local, state and federal government, and the private and voluntary sectors to deliver new infrastructure and services in step with this change.

There is growing evidence that infrastructure in growth area locations like the Hume Corridor is not keeping up with the rate of development. This includes a report by the Auditor General (see Box 1.1) that concluded that State Governments have continually failed to find sufficient funding to support growth with a backlog of \$10 billion for transport infrastructure alone.

Box 1.1 – Victorian Auditor General’s 2013 report Developing Transport Infrastructure and Services for Population Growth Areas (page viii)

“Over many years, the state has failed to deliver the transport infrastructure and services needed to support rapidly growing communities. This is adversely impacting accessibility, and risks the future liveability of metropolitan Melbourne.

Urgent action is required to address this serious problem. Inadequate public transport and growing gaps in the road network in these communities are creating barriers to mobility, including access to critical services, education and employment opportunities.

In turn, these deficiencies are increasing car dependence, pollution and exacerbating traffic congestion at significant community cost. This both limits state productivity and the time that people can spend with their families.

Despite these growing problems, funding to address the transport needs of growth areas can take more than a generation to materialise. This longstanding disconnect between planning and funding gives credence to the perception that past statewide planning initiatives have been disingenuous.

Growing pressure on state finances heightens the need to effectively prioritise limited funds, and to develop alternative funding sources and implementation strategies to meet the growing challenge.”

Hume City Council has developed a Spatial Strategy to guide the future development of Hume Corridor as enabled by the State Government’s *Growth Corridor Plan, Plan Melbourne* and *Precinct Structure Plans*. The Spatial Strategy outlines the future vision for the area and details where new development and change will occur and what infrastructure is required.

1.1. Purpose of this Document

This Infrastructure & Delivery Strategy outlines in more detail when and how this development, change and infrastructure will be delivered. In doing so, this document serves a number of purposes:

- A document outlining what new infrastructure will be required to meet demand from new development, how much it will cost, and who is responsible to fund it – including investment from Council, State Agencies and State Government.
- Evidence to demonstrate the need for investment in infrastructure to unlock development and achieve the sustainable growth of the area as set out in the Spatial Strategy.
- A tool to prioritise and co-ordinate State and local infrastructure funding priorities to ensure it is delivered in step with development.
- A tool to direct the sequencing and opening up of new development fronts so that they align with the location and enable timely provision of planned infrastructure and services.
- Evidence to support new detailed precinct specific Development Contributions Plans, future development tariffs, and Section 173 Agreements for the delivery of infrastructure.
- A clear document identifying what further work is required, when and by whom to facilitate and enable development and change to deliver the Spatial Strategy.

In so doing, this Infrastructure and Delivery Strategy aims to:

“Enable appropriately staged development that is coordinated with appropriately funded and timely infrastructure delivery.”

1.2. Status of this Document

The content of this document has been informed by meetings and discussions with a range of service providers and private sector agencies. It draws from the Northern Horizons work prepared for NorthLink by ARUP that identifies the infrastructure needs of the whole Northern Sub Region over the coming 50 years.

Many of the actions and investment strategies required to realise this Infrastructure and Delivery Strategy are outside the control of Hume City Council. It is intended that this work will inform the forward planning and investment plans of those responsible for their delivery, notably State Government agencies.

This Strategy provides a preferred and appropriate order and timing to the delivery of new development and new infrastructure needed. It does not guarantee that development and infrastructure will occur as outlined and for this reason the Strategy will be updated frequently (at least every 5 years) with the costs, timing and funding of development and infrastructure updated accordingly.

2. NEW INFRASTRUCTURE

This section outlines what infrastructure projects are required and who is responsible for their delivery. It prioritises the infrastructure projects with the highest priority given to the infrastructure projects that are directly related to unlocking the potential growth of the Hume Corridor, supporting businesses or enabling it to function appropriately.

2.1. Responsibilities

State Government is responsible for the funding and delivery of the most critical, the largest and the most expensive infrastructure projects identified in the Spatial Strategy. These include new train stations, major road upgrades, new schools and a higher education facility and a new hospital.

Hume City Council is responsible for the funding and delivery of more local infrastructure, including local roads, new active sports reserves, community meeting spaces, and early years facilities such as maternal child health and pre schools.

Mainstream State funding and rates funding will be the principal source of funding for much of this new infrastructure with developers also making a significant contribution through Growth Area Infrastructure Charge (GAIC) and local Development Contributions Plans (DCPs).

2.2. Priorities

In many cases, this mainstream funding is only set for a short period (often less than 5 years). This makes investment in large scale State and local infrastructure subject to changing budget and political decisions.

To address this, genuine and justified priorities need to be made that ensure that the most important and most significant infrastructure items are not affected by changing political commitments or funding strategies, and are delivered.

Hume City Council has identified a priority for each of the infrastructure projects identified in the Spatial Strategy for the Hume Corridor area based on the following three levels:

- **Priority 1: Fundamental Infrastructure** – this is infrastructure that is *fundamental* to the management of growth and change such that it must happen to enable growth and change to occur. Failure to deliver should result in new development within the Hume Corridor being capped and planning permits being refused until it is delivered.
- **Priority 2: Required Infrastructure** – this is infrastructure that is *required* and must happen if new development is to occur without impacting on the sustainability of the Hume Corridor. Failure to deliver should result in new development in the area associated with the infrastructure being refused a planning permit until changes to the planning of the affected areas can be made.

- **Priority 3: Desirable Infrastructure** – this is infrastructure that is *desirable* to deliver the overall vision in the Spatial Strategy as it would enhance the overall quality of life of residents in the Hume Corridor. Failure to deliver this infrastructure should not result in any changes to the timing of development occurring but alternative funding or planning should be pursued to achieve comparable benefits.

The new large scale infrastructure items identified in the Spatial Strategy are listed below with associated priority and timing. The Lead Agency refers to the primary agency responsible for progressing the planning and delivery of that specific piece of infrastructure. The Funding Agency refers to the primary agency responsible for funding that piece of infrastructure. In some cases other agencies will be involved in either progressing or funding the infrastructure.

The sequencing of development with this infrastructure is outlined in Section 3 including potential caps to development should fundamental infrastructure be delayed.

2.3. Large Scale New Infrastructure

Transport Infrastructure

The most important and costly infrastructure for the Hume Corridor is transport infrastructure. Without its delivery, new development will place a significant and unacceptable strain upon the existing road and public transport infrastructure and significantly impact upon the liveability, the economy and the sustainability of the Hume Corridor. Timings are based on projected development rates and will be updated regularly.

Road Infrastructure

Aitken Boulevard

Aitken Boulevard is a new arterial road and future Bus Rapid Transit route that will connect development throughout the Hume Corridor and parts of Mitchell Shire to the new and expanded activity centres of Broadmeadows, Craigieburn and Mickleham (Merrifield) and their many job opportunities and services. It will be complete from Somerton Road to Mount Ridley Road by 2016. North of Mount Ridley Road should be a priority in the short term for developer and State Government funding to enable construction to Donnybrook Road by 2021. Funding should also be provided to duplicate it and extend it north to Wallan and south to the Western Ring Road by 2031 with bus priority measures.

Priority: Fundamental Infrastructure

Lead Agency: State Govt (Vic Roads/PTV)

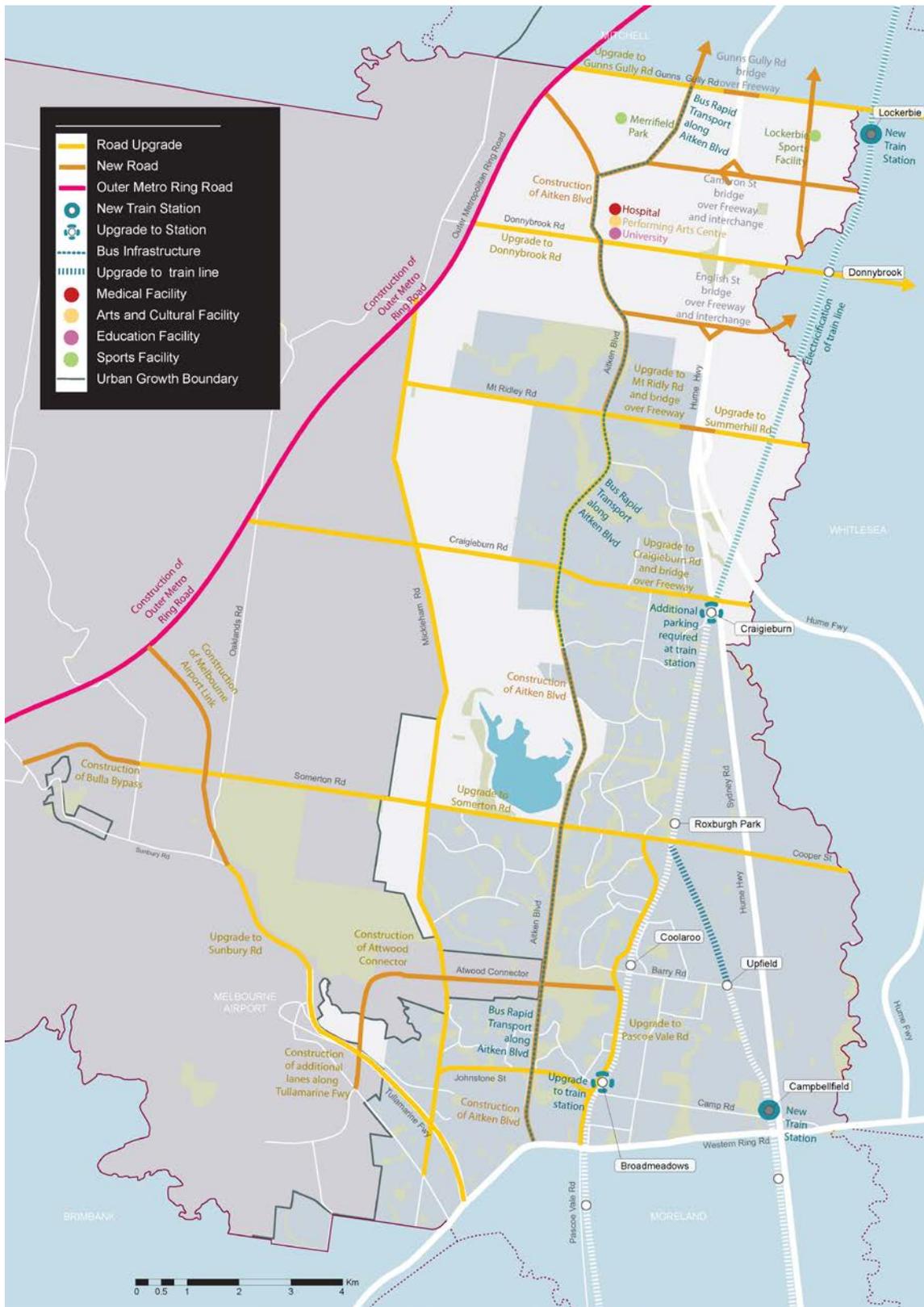
Cost: \$240mil (estimate)

Funding Agency: State Govt and developers

Required Timeframe: Constructed from Somerton Road to Donnybrook Road by 2021 and in full by 2031

Status: Uncommitted

Map 2.1 – Major Infrastructure Requirements Hume Corridor



Attwood Connector

Attwood Connector is an important new road and public transport connection to Aitken Boulevard and Barry Road that will provide high quality access for residents and businesses throughout the Hume Corridor to Melbourne Airport. It should be a high priority for State Government investment to improve access to Melbourne Airport, relieve pressure on Mickleham Road and the Tullamarine Freeway. It should be constructed by 2031.

Priority: Required Infrastructure	Lead Agency: State Govt (Vic Roads/PTV)
Cost: \$135 million (estimate)	Funding Agency: State Govt
Required Timeframe: by 2031	Status: Uncommitted

Hume Freeway and Hume Highway

The Hume Freeway and Hume Highway are critical freight and commuter routes that service the many businesses of Hume. Both are anticipated to see significant increases in traffic and congestion in the coming years. New interchanges and flyovers are required in the north of the Hume Corridor along the Hume Freeway, notably a half diamond south of Donnybrook Road that will assist in unlocking employment areas. Upgrades to parallel arterial roads or the construction of the OMR should be prioritised but both roads will need an additional lane to support growth with the stretch north of Mount Ridley Road needed from 2026.

Priority: Fundamental Infrastructure	Lead Agency: State Govt (Vic Roads)/ Federal Govt
Cost: Unknown	Funding Agency: State Govt
Required Timeframe: 2026 onwards	Status: Uncommitted

The Outer Metropolitan Ring (OMR) & E6

The proposed OMR is a major freeway and potential rail route that will connect the outer western port area of Melbourne, Geelong and Avalon Airport with the Hume Freeway. It has the potential to significantly enhance the accessibility of the northern part of the Hume Corridor to these major transport hubs, particularly the Donnybrook Road Employment Precinct and future Beveridge Interstate Freight Terminal in Mitchell Shire. It will also help improve accessibility to the future employment areas in the western and northern areas of Melbourne. Whilst vitally important it does not negate the need for upgrades to parallel arterial roads, notably Mickleham Road and Aitken Boulevard.

Priority: Required Infrastructure	Lead Agency: State Govt (Vic Roads)/ Federal Govt
Cost: Unknown	Funding Agency: State Govt
Required Timeframe: by 2031	Status: Uncommitted

Mickleham Road

Mickleham Road is forecast to see a 56% increase in traffic by 2021 (from 2011) as significant development occurs along its length. This will require staged duplication of the

road north of Somerton Road by 2021 with staged duplication up to Donnybrook Road. An additional lane south of Somerton Road is needed by 2026 with 6 lanes required ultimately along its length to Donnybrook Road.

Priority: Fundamental Infrastructure **Lead Agency:** State Govt (Vic Roads)
Cost: \$110mil (estimate) **Funding Agency:** State Govt
Required Timeframe: commenced by 2021 & staged **Status:** Uncommitted

Pascoe Vale Road

Pascoe Vale Road will be an increasingly important public transport connection in the short to medium term connecting residents north of Somerton Road to the expanding services and job opportunities in the Broadmeadows centre. There is potential to introduce bus priority lanes at intersections or along the entire length. When Aitken Boulevard is completed to the Western Ring Road traffic calming measures should be pursued through the Broadmeadows Metropolitan Activity Centre to improve the amenity of the centre and improve connectivity through this important centre.

Priority: Required Infrastructure **Lead Agency:** State Govt (Vic Roads)
Cost: \$14mil (estimate) **Funding Agency:** State Govt
Required Timeframe: Bus priority by 2026 and traffic calming post 2031 **Status:** Uncommitted

Somerton Road

Somerton Road (combined with Cooper Street) is the most complete east-west arterial road in the Wider Northern Growth Region. Its importance will increase significantly in the short to medium term connecting new residential areas in Greenvale to Roxburgh Park Town Centre and Roxburgh Park Train Station. It is also critical to maintaining excellent connectivity for businesses at Melbourne Airport, the Hume Highway and Cooper Street, and connecting the entire Hume Corridor to Epping Town Centre and the Northern Hospital in Whittlesea. It will also provide important links to and from the growing Sunbury area on completion of the Bulla Bypass. It should be duplicated from Aitken Boulevard to Roxburgh Park Drive with capacity for bus priority on the opening of Aitken Boulevard and also duplicated to Mickleham Road immediately following with duplication to Bulla on completion of the Bulla Bypass. Widening to 6 lanes should commence at the eastern end by 2031.

Priority: Fundamental Infrastructure **Lead Agency:** State Govt (Vic Roads)
Cost: \$40mil **Funding Agency:** State Govt
Required Timeframe: Immediate **Status:** Uncommitted

Craigieburn Road

Craigieburn Road is the only east-west arterial road within the fast growing Craigieburn area. Duplication from the new Craigieburn Town Centre to the Hume Highway should be complete in the immediate term with capacity for bus priority at intersections to enable efficient bus access to the train station. This is critical to minimising traffic issues through the Craigieburn area and providing a genuine public transport alternative to driving to Craigieburn Train Station. Duplication west of the Town Centre to Mickleham Road should be staged with new development. A more effective connection over the Hume Highway and train line will also be important to manage demand onto the Hume Highway, to commuter parking on Potter Street and connections to future development in the City of Whittlesea.

Priority: Fundamental Infrastructure **Lead Agency:** State Govt (Vic Roads/PTV)
Cost: \$40mil plus bridge (estimate) **Funding Agency:** State Govt
Required Timeframe: Immediate and **Status:** Uncommitted
staged with development

Mount Ridley Road

Mount Ridley Road will be a future declared State arterial road that will provide important connectivity across the Hume Freeway to the Craigieburn Employment area and beyond to the Wollert area in Whittlesea. Whilst the bridge over the Hume Freeway is likely to be expensive, it is critical that this connection is made to minimise traffic on Grand Boulevard and the existing freeway crossing to Amaroo that were not designed for high volumes. It should be duplicated with the new bridge constructed by 2031.

Priority: Required Infrastructure **Lead Agency:** State Govt (Vic Roads)
Cost: \$42mil plus bridge (estimate) **Funding Agency:** State Govt
Required Timeframe: by 2031 **Status:** Uncommitted

Donnybrook Road

Donnybrook Road will be an increasingly important future east-west arterial road that will connect new businesses to the Hume Freeway and connect residents within Hume and Whittlesea to employment, the Hume Freeway and Donnybrook Station. It will be particularly important in the coming years before the Cameron Street overpass is constructed to its north and the Mount Ridley Road/Summerhill Road overpass is constructed to the south. It should be duplicated immediately to serve the employment area and in full by 2031. Ultimately it should be 6 lanes.

Priority: Fundamental Infrastructure **Lead Agency:** State Govt (Vic Roads)
Cost: \$50mil **Funding Agency:** State Govt
Required Timeframe: Immediate with **Status:** Uncommitted
duplication complete by 2031

Western Arterial North of Mickleham (Merrifield Town Centre)

A new arterial road is proposed north of the Mickleham (Merrifield) Town Centre that will connect the new residential communities in Mitchell Shire to the Hume Corridor. The first carriageway in each direction will be funded by developers.

Priority: Required Infrastructure **Lead Agency:** State Govt (Vic Roads)
Cost: \$15 million (estimate) **Funding Agency:** State Govt
Required Timeframe: by 2031 **Status:** Uncommitted

Johnstone Street

Johnstone Street is an important east-west link in the south of the Hume Corridor that experiences high volumes at peak time. It is currently a mixture of single lane and dual lane in each direction. Its full duplication would assist in reducing bottlenecks and should certainly occur when Aitken Boulevard is extended south of Somerton Road.

Priority: Required Infrastructure **Lead Agency:** State Govt (Vic Roads)
Cost: \$5-10mil plus bridge (estimate) **Funding Agency:** State Govt
Required Timeframe: by 2031 **Status:** Uncommitted

Airport Drive

Airport Drive is a critical alternative to the Tullamarine Freeway for accessing Melbourne Airport. It is currently being constructed and will need to be duplicated in step with development at Melbourne Airport.

Priority: Required Infrastructure **Lead Agency:** Federal Government
Cost: Privately funded **Funding Agency:** Melbourne Airport
Required Timeframe: Immediate and duplicated with development **Status:** Committed

Tullamarine Freeway

Tullamarine Freeway is the primary means of accessing Melbourne Airport from the south and provides access to the city via city link. Additional lanes are required in the immediate term to retain adequate access to Melbourne Airport.

Priority: Required Infrastructure **Lead Agency:** State Govt (Vic Roads)/ Federal Govt
Cost: Unknown **Funding Agency:** State Govt
Required Timeframe: by 2021 **Status:** Committed

There are a number of new secondary arterial roads that will be constructed as part of the new development areas as single lane roads in each direction initially and will need to be duplicated in the future. These are not likely to be required within the coming 15 years and will be identified in updates to this Infrastructure and Delivery Strategy.

Public Transport Infrastructure

Parking at Craigieburn Train Station

Parking at Craigieburn Train Station is a significant priority for the immediate term. Additional parking should be added to address increases in patronage at Craigieburn Station of 250% by 2021 and 450% by 2031 from 2011 levels.

Priority: Required Infrastructure **Lead Agency:** State Govt (PTV)
Cost: Unknown **Funding Agency:** State Govt
Required Timeframe: Immediate and **Status:** Uncommitted
staged to meet demand.

Extension of Upfield Line

The extension of the Upfield Line to Roxburgh Park and ultimately to Wallan is critical to providing appropriate and equitable access to public transport in the north of the Hume Corridor. It should be delivered as soon as feasible and certainly by 2026.

Priority: Fundamental Infrastructure **Lead Agency:** State Govt (PTV)
Cost: \$400mil (estimate) **Funding Agency:** State Govt
Required Timeframe: by 2026 **Status:** Uncommitted

Lockerbie Train Station

Lockerbie Train Station is vital to providing sustainable travel options from the northern part of the Hume Corridor (Lockerbie and Mickleham Precincts) and wider northern area in the Northern Region. It is also critical to the potential of the Lockerbie Town Centre to attract large scale office development. It is forecast to attract 900 passengers a day at 2021 if constructed by this date and 8,500 per day by 2026. It should be provided by 2026.

Priority: Fundamental Infrastructure **Lead Agency:** State Govt (PTV)
Cost: \$50million (estimate) **Funding Agency:** State Govt
Required Timeframe: by 2026 **Status:** Uncommitted

Upgrade to Donnybrook Train Station

Plans are in place to make minor upgrades to Donnybrook Train Station in the immediate term. Further upgrades and significant increases in car parking are needed to manage the anticipated increase in patronage to 700 passengers a day by 2021 and 10,000 per day by 2031.

Priority: Required Infrastructure **Lead Agency:** State Govt (PTV)
Cost: \$25mil (estimate) **Funding Agency:** State Govt
Required Timeframe: by 2021 **Status:** Uncommitted

Upgrade to Broadmeadows Train Station

The upgrade to Broadmeadows station is vital to improving the appearance and perception of Broadmeadows as an investment location of choice. It should be provided within the immediate term.

Priority: Required Infrastructure	Lead Agency: State Govt (PTV)
Cost: \$25-40mil (estimate)	Funding Agency: State Govt
Required Timeframe: Immediate	Status: Uncommitted

Buses to Craigieburn Train Station

Additional bus services to Craigieburn will be required in the immediate term to meet the demand of residents seeking access to Craigieburn Train Station.

Priority: Required Infrastructure	Lead Agency: State Govt (PTV)
Cost: Unknown	Funding Agency: State Govt
Required Timeframe: Immediate and staged with development to the north and west of Craigieburn	Status: Uncommitted

Buses along Aitken Boulevard to Broadmeadows

Aitken Boulevard represents a unique opportunity to provide a high quality and highly attractive bus route for residents throughout the Hume Corridor to sustainably access the important large activity centres of Broadmeadows, Craigieburn and Mickleham (Merrifield). It is critical to achieving a socially just and sustainable Hume Corridor and services should be provided as soon as Aitken Boulevard is complete to Somerton Road and extended as Aitken Boulevard is extended (see above).

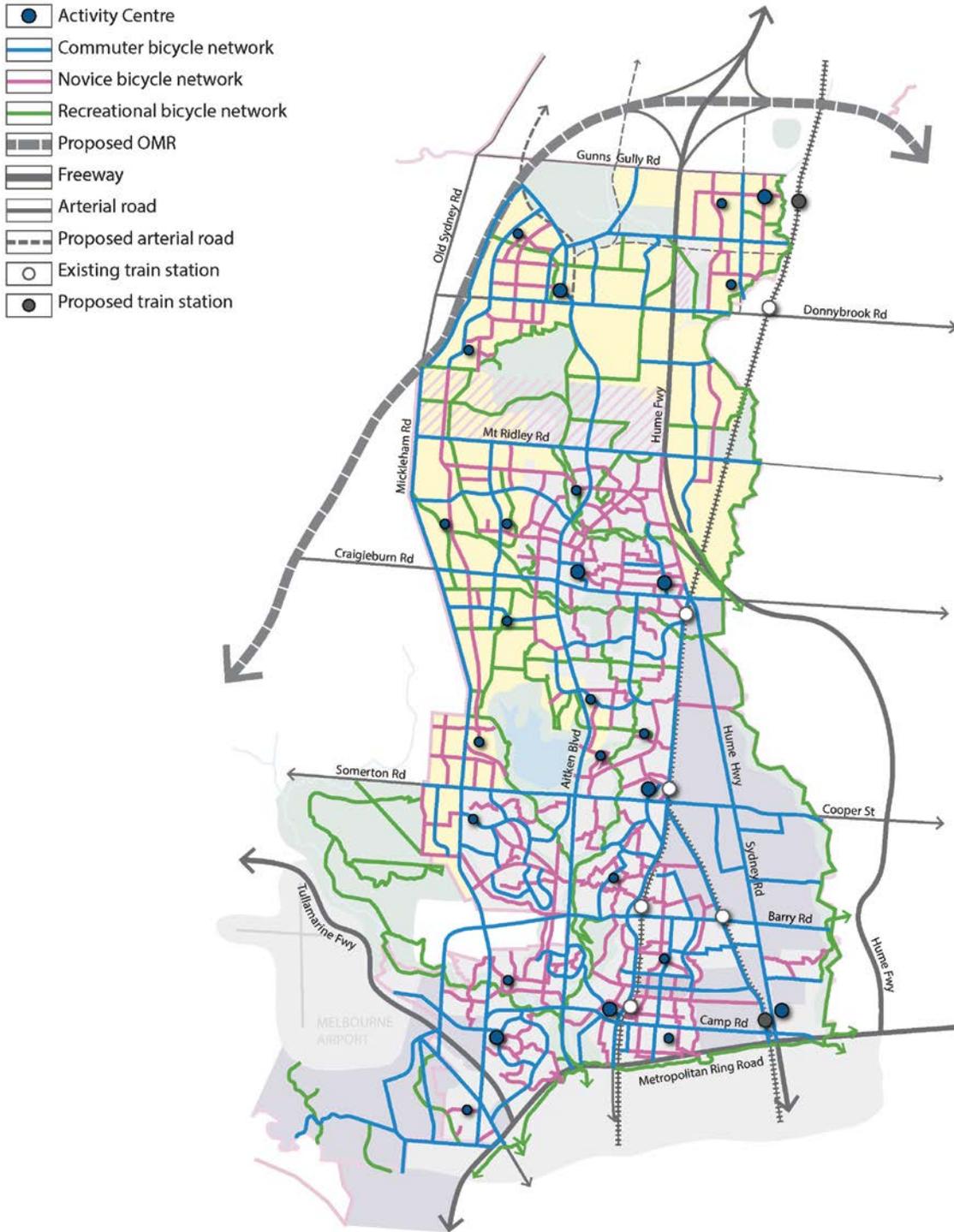
Priority: Required Infrastructure	Lead Agency: State Govt (PTV)
Cost: Unknown	Funding Agency: State Govt
Required Timeframe: Immediate and extended as Aitken Boulevard is constructed	Status: Uncommitted

Buses to Melbourne Airport

Melbourne Airport will continue to be one the largest employment areas in Melbourne and attract significant trips from residents throughout the Hume Corridor. Buses from Wallan to the airport utilising Aitken Boulevard or Mickleham Road and the Attwood Connector are anticipated to attract over 10,000 passengers a day by 2031 and be highly viable from 2026.

Priority: Required Infrastructure	Lead Agency: State Govt (PTV)
Cost: Unknown	Funding Agency: State Govt
Required Timeframe: by 2026	Status: Uncommitted

Map 2.2 – Bicycle Network in the Hume Corridor



Buses to Epping Hospital

Until a hospital is constructed in the Hume Corridor, there will be a need to provide improvements in accessibility to the Northern Health Hospital at Epping, particularly for those living in Craigieburn and Roxburgh Park area.

Priority: Required Infrastructure

Lead Agency: State Govt (PTV)

Cost: Unknown

Funding Agency: State Govt

Required Timeframe: Immediate

Status: Uncommitted

Bicycle Infrastructure

A range of cycle paths and improved cycling infrastructure have been identified in the Hume Bicycle Network Plan and Spatial Strategy that offer potential to reduce the need to travel by private car.

Map 2.2 above shows the location of the bicycle routes in the Hume Corridor. The majority of new paths in growth areas will be developed as part of the construction of new roads and linear open space reserves by developers, Vic Roads and Parks Victoria. Within established areas Hume City Council and VicRoads will be the primary agencies for delivering new paths and improved signage to address gaps in the network.

Health, Education and Leisure Facilities

As the Hume Corridor and wider Northern Region grows, large scale health, education and leisure facilities will be needed to provide acceptable levels of accessibility to these important services. Whilst State Government is still forming its view on the requirements for a hospital or equivalent and a university, Hume City Council is strongly of the view that both are required infrastructure for an area with such a large future population. Such facilities will also provide vital new employment opportunities and help to stimulate greater job diversification.

University

La Trobe University and RMIT offers a high quality option for students wishing to undertake tertiary education as do the courses run from Hume's Global Learning Centres. However, to bring about the step change in skills needed to maintain and increase the economy of the Hume Corridor and the wider Northern Region, and to ensure adequate access to tertiary education, a new university campus is required. Mickleham (Merrifield) Town Centre offers the optimal location in the Hume Corridor for a new university facility with Lockerbie an alternative. It should be provided as soon as practical and viable. With Aitken Boulevard likely to be constructed by 2021 and development advanced in the Mickleham (Merrifield) Town Centre by 2026, an initial presence in 2026 would be reasonable and provide the catalyst to employment needed in the northern part of the Hume Corridor.

Priority: Required Infrastructure

Lead Agency: State Govt

Cost: Unknown

Funding Agency: State & Commonwealth

Required Timeframe: 2026 and staged expansion
Status: Uncommitted

Hospital or Equivalent

The Northern Health Hospital at Epping provides vital services for the Northern Region but with the population of the Hume, Mitchell and Whittlesea areas exceeding 900,000 people, a new public hospital is required. Mickleham (Merrifield) Town Centre is again the optimal location for a future hospital (or equivalent) with Lockerbie an alternative. With Aitken Boulevard likely to be constructed by 2021 and development advanced in the Mickleham (Merrifield) Town Centre by 2026, an interim facility in 2026 would be appropriate and provide the catalyst to employment needed in the northern part of the Hume Corridor.

Priority: Required Infrastructure

Lead Agency: State Govt

Cost: Unknown

Funding Agency: State Govt

Required Timeframe: 2026 and staged expansion
Status: Uncommitted

New Health Services

New health services are proposed at Broadmeadows to meet the needs in the southern part of the Hume Corridor and to take pressure off the Epping Hospital in the short to medium term. New health services are also required in Craigieburn either as an extension to the existing facilities or a new facility within the town centre.

Priority: Required Infrastructure

Lead Agency: State Govt

Cost: Unknown

Funding Agency: State Govt

Required Timeframe: Immediate with staged expansion
Status: Uncommitted

Sports and Leisure Hub

Merrifield Park offers a unique opportunity to provide high quality state scale sports and leisure facilities comparable with Albert Park. Its delivery will require significant investment and commitment to ongoing management arrangements from State Government, Melbourne Water and Hume City Council. It will serve the entire Northern Region, Sunbury and much of the wider northern and western parts of Melbourne.

Priority: Desirable Infrastructure

Lead Agency: State Govt

Cost: Unknown

Funding Agency: State Govt

Required Timeframe: Unknown
Status: Uncommitted

Hume Regional Aquatic Centre and Athletics Facility

A new aquatic and athletics facility is planned as part of the Craigieburn Town Park. It is due to open in 2016. The aquatic facility will serve the Craigieburn, Roxburgh Park and Mickleham Road North area while the athletics facility will serve the entire Hume Corridor.

Priority: Desirable Infrastructure

Lead Agency: Hume City Council

Cost: \$48 million (estimated)

Funding Agency: Hume City Council

Required Timeframe: 2016

Status: Committed

Lockerbie Regional Sports Facilities

Land for additional regional sports facilities is identified in the *Lockerbie PSP* south of the proposed Lockerbie Town Centre. This facility is intended to serve residents in the Lockerbie area as well as residents in the neighbouring future suburbs in Whittlesea and Mitchell.

Priority: Desirable Infrastructure

Lead Agency: Hume City Council/City of Whittlesea/Mitchell Shire Council

Cost: \$50 million (estimated)

Funding Agency: Hume City Council/State Govt

Required Timeframe: Post 2031

Status: Uncommitted

A Performing Arts Centre

A Performing Arts Centre in the Hume Corridor is desirable over the coming 30 years to meet demand for performance space. Further work is required to determine the community needs and to advance the future planning and development of such a facility.

Priority: Desirable Infrastructure

Lead Agency: Hume City Council

Cost: \$30 million (estimated)

Funding Agency: Hume City Council/State Govt

Required Timeframe: To be determined

Status: Uncommitted

Open Space Infrastructure

The Hume Corridor contains a number of unique areas of landscape and natural heritage value that also offer significant major passive recreation opportunities. These areas are critical to providing a source of local identity, encouraging healthy lifestyles and interacting with nature.

Merri Creek Regional Park

The Merri Creek is the largest creek in the Hume Corridor and extends all the way to the Yarra River. High quality parkland, conservation and footpath/bicycle paths are provided from Abbotsford and Fairfield as far as the Western Ring Road. Land has been secured to deliver this to Craigieburn Road and is currently being constructed in stages. Plans are approved to extend this network. There is potential to further this link to Lockerbie Town Centre and beyond in the coming years.

Priority: Desirable Infrastructure **Lead Agency:** State Govt & Hume City Council
Cost: To be determined **Funding Agency:** To be determined
Required Timeframe: staged over coming 30 years **Status:** Part committed to Craigieburn Road

Craigieburn & Mickleham Green Network

There are numerous creek, drainage lines and areas of established and scattered woodland through the growing Craigieburn area that are planned to be connected with walking and bicycle paths and biodiversity links. It will be managed by numerous agencies, notably Parks Victoria and Council.

Priority: Desirable Infrastructure **Lead Agency:** State Government & Hume City Council
Cost: To be determined **Funding Agency:** State Government and Developer
Required Timeframe: in step with development **Status:** Uncommitted

A number of existing open space areas will also be improved in the coming years to improve access and enjoyment of open space by residents throughout the Hume Corridor. These include improvements to the Broadmeadows Valley Park and Jacana Valley Park.

2.4. Local Scale Infrastructure

To meet the demands of growth, changing community needs and new standards of provision, a large number of local infrastructure projects will also need to be delivered in the coming 30 years within the precincts identified in the Spatial Strategy (see Map 2.2).

These will take the form of:

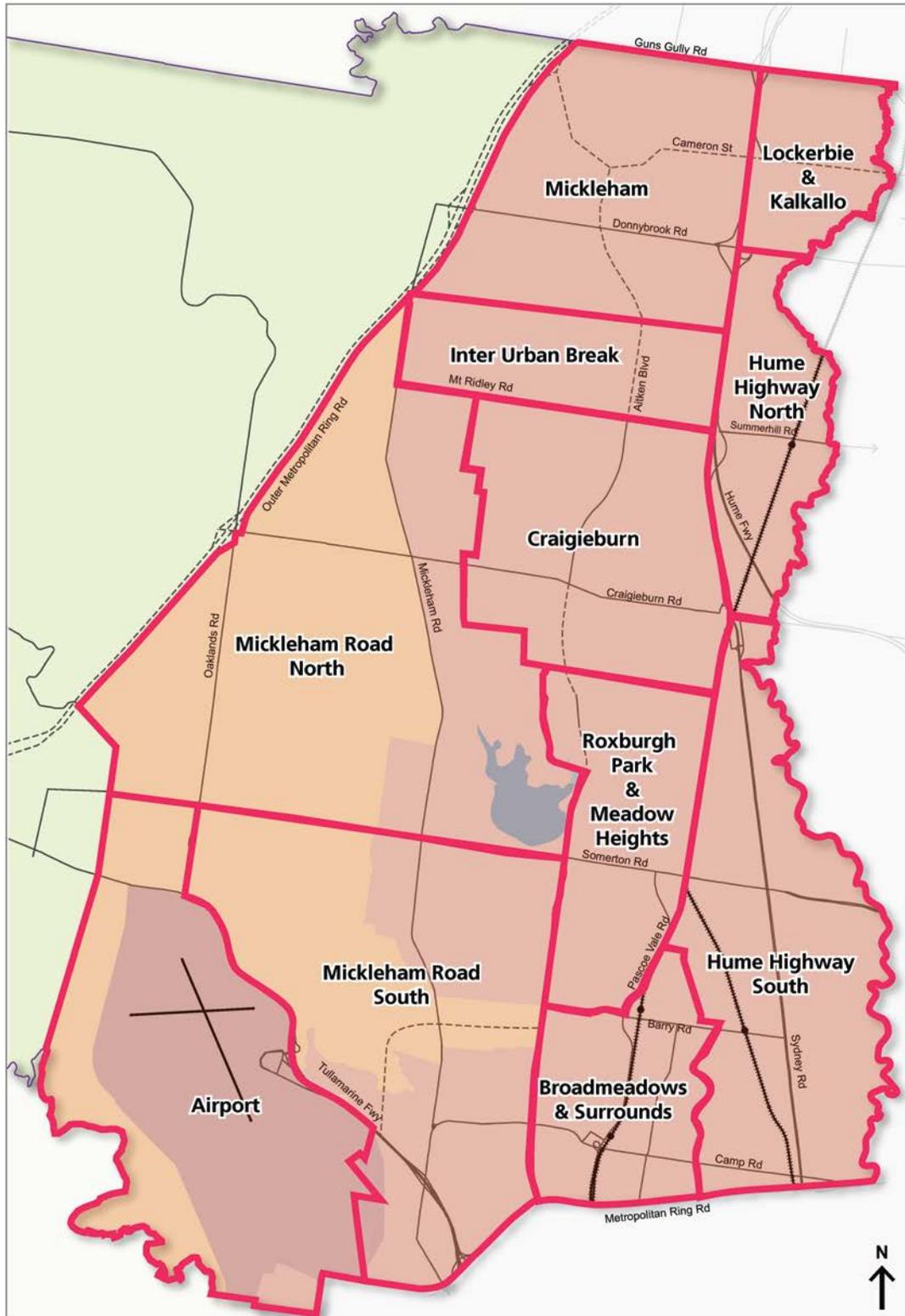
- New infrastructure – new infrastructure where none exists currently to meet an identified service need (typically in new development areas)
- Expanded infrastructure – expansion to existing infrastructure to meet an identified service need (typically in established areas)
- Renewal infrastructure – upgrade to existing infrastructure to improve the condition but not meet an identified service need (typically in established areas).

Hume City Council Facilities

Appendix 1 lists planned and proposed new or expanded local leisure and community infrastructure that are the responsibility of Hume City Council to deliver.

The list is based on current service planning work, discussions with State Agencies and the Hume City Council Open Space Strategy and the Hume City Council Leisure Strategy. There will be a need to provide other new and expanded local infrastructure to meet changing standards and service needs not currently identified, particularly to meet the needs of the increasing number

Map 2.3 - Precincts of the Hume Corridor



of older people. Appendix 1 will be updated to reflect these changes, the outcomes of ongoing service planning and updates to the Open Space Strategy and the Leisure Strategy.

The funding challenges of delivering this local infrastructure are outlined in Section 5.

Local Education and Health Facilities

There are a number of local education and health facilities that are identified in existing plans and are the responsibility of State Government and the private sector to deliver. These required facilities must be delivered to support growth and development and will be controlled in precincts where there is a significant delay in their delivery.

Whilst the timing of such facilities will ultimately be determined by State Government and the private sector, Table 2.1 below identifies recommended timeframes for additional local education facilities to ensure appropriate access to education in the precincts of the Hume Corridor in Map 2.3.

Table 2.1 – Recommended Timing of New Local Education

Precinct Location	Facility	Recommended Timing
Mickleham Road South	Government Secondary School	0-5 years
Mickleham Road North	Government Primary School west of Mickleham Road	5-10 years
	Government Primary School south of Craigieburn Road	15+ years
	Government Primary School north of Craigieburn Road	15+ years
	Private Primary School north of Somerton Road	15+ years
Craigieburn	Government Primary School in northern part of Highlands estate	Immediate
	Government Primary School South of Craigieburn Road	0-5 years
	Government Primary School in R2 PSP area	10-15 years
	Private Primary School in R2 PSP area	0-5 years
Mickleham	Government Primary School north of Donnybrook Road	10-15 years
	Government Primary School south of Donnybrook Road	15+ years
	Government Secondary School	10-15 years
	Private Primary School	10-15 years
Lockerbie	Government Primary School north of Donnybrook Road	5-10 years
	Government Primary School south of Gunns Gully Road	15+ years
	Government Secondary School	10-15 years
	Private Primary School	5-10 years

Recommended timing based on HCC analysis and subject to review. Actual timing will be confirmed by Department of Education and Training (DET) and private education providers.

3. RESIDENTIAL DEVELOPMENT SEQUENCING & INFRASTRUCTURE TIMING

At the heart of this strategy is a commitment to better align development with the delivery of the infrastructure identified in Section 2.

3.1. Why Sequence and Stage Development?

Managing the sequencing and staging of development provides a number of significant benefits for the community, government and the developers. These include:

- Providing early indication of when large infrastructure investments are required, especially those that require long lead in times
- Prioritising limited infrastructure funding to the most important and most needed infrastructure projects
- Ensuring that development and growth is directed to the most infrastructure ready areas
- Aligning various public and private funding and investment streams to development areas at the appropriate time
- Giving the existing and future community and businesses the confidence that the infrastructure they depend upon will be upgraded.

State policy contains a number of clauses that seek to ensure that development and infrastructure are staged, notably Clause 11.02-4 which states:

Objective

To manage the sequence of development in growth areas so that services are available from early in the life of new communities.

Strategies

- *Define preferred development sequences in growth areas to better coordinate infrastructure planning and funding.*
- *Ensure that new land is released in growth areas in a timely fashion to facilitate coordinated and cost-efficient provision of local and regional infrastructure.*
- *Require new development to make a financial contribution to the provision of infrastructure such as community facilities, public transport and roads.*
- *Improve the coordination and timing of the installation of services and infrastructure in new development areas.*

[emphasis added]

3.2. Weaknesses in Existing Plans

Unfortunately, even with this strong State Policy Clause, none of the plans prepared in Melbourne's growth areas include any preferred sequencing and staging or development. There is also no comprehensive infrastructure plan and no mechanisms for ensuring that new State infrastructure is delivered when it is required, particularly transport infrastructure.

This failure is resulting in new communities throughout Melbourne's growth areas being left without adequate infrastructure for periods of time longer than would be desirable, causing economic and social disadvantage.

3.3. Addressing Policy Failure in Development and Infrastructure Coordination

The scale of growth in the Hume Corridor makes it critical that more is achieved around the sequencing of development and timely provision of new infrastructure.

This Infrastructure and Delivery Strategy seeks to rectify this failure in the current plans for the Hume Corridor in three ways:

1. Identifying what fundamental infrastructure is needed to unlock initial development.
2. Directing development fronts towards locations where there is planned infrastructure needed to unlock and support further development.
3. Identifying limits to development should 'fundamental' infrastructure not be provided when required.

3.4. Preferred Sequencing and Staging of Development and Infrastructure in the Hume Corridor

Maps 3.1 to 3.4 shows the preferred sequencing of new residential development within the new development areas of the Hume Corridor over the coming 15 years. It also shows when the major transport, community and recreation infrastructure outlined in Section 2 should be delivered.

The sequencing of residential and employment development reflects:

- Identified constraints to development posed by service infrastructure, topography and land ownership.
- The need to unlock land to enable the delivery of new major retail, community, recreation and leisure infrastructure at an early stage in the development of new areas.

It has been informed by:

- Discussions with developers about their preferred locations for commencing and intentions for new development fronts.
- The anticipated rate of development growth based on ID Consulting projections and discussions with developers.
- Transport modelling and discussions with State transport agencies about the timing of major infrastructure.
- Community Infrastructure Assessments and discussions with service providers.
- The potential for Works in Kind (WIK) contributions by developers in lieu of their GAIC payments.

There are five broad residential development fronts in the Hume Corridor:

Greenvale Lakes and Roxburgh Park Area (in Roxburgh Park and Meadow Heights Precinct)

Development in the Roxburgh Park and Meadow Heights precinct should be predominantly to the east of Aitken Boulevard in the coming years (0-5 years) in the

Greenvale Lakes estate and in the new Roxburgh Park town centre site. This development should facilitate the completion of Aitken Boulevard as a priority with new recreation facilities provided within 5 years. Development west of Aitken Boulevard requires the design and construction of a 'bund' to protect the Greenvale Reservoir before development can commence.

Greenvale and Mickleham Road Area (in Mickleham Road South and North Precincts)

There are 3 development areas either side of Mickleham Road and Somerton Road that are currently under construction. Land to the south of Somerton Road is fragmented which makes development more complex and slow to deliver. Larger land parcels north of Somerton Road are anticipated to progress more quickly and be complete within 10 years generating sufficient demand for the delivery of additional bus routes and local community and recreation facilities. Land further north along Mickleham Road within the area known as Craigieburn West should commence when development in the Craigieburn precinct starts to reduce (5-10 years).

The infrastructure to initially unlock development is principally in place though additional or upgraded intersections will be required from Mickleham Road and Somerton Road. The duplication of Mickleham Road and Somerton Road by 2021 is fundamental to supporting on going development in this precinct.

Development that helps to deliver the north-south connector road network parallel to Mickleham Road through Craigieburn West will be prioritised to provide for new bus routes as will road connections into Craigieburn. This is critical to linking this area and the Merrifield West area to Craigieburn Town Centre and Craigieburn train station.

Craigieburn Precinct

Much of the new development areas in the Craigieburn Precinct are controlled by large developers making sustained high levels of growth likely over the coming 15 years. The preferred sequencing of the new development areas is aimed at initially (0-5 years) expanding south of Craigieburn Road to deliver the final sections of Aitken Boulevard and to unlock land for new community and recreation facilities planned south of Craigieburn Road in both the Highlands Estate and the Aston Estate.

In the period from 5 to 10 years, the development should spread westwards north of Craigieburn Road to unlock land for further community and recreation facilities and to deliver a new north-south connector road that will be an important future bus route.

The duplication of Craigieburn Road in the short term is fundamental to this area developing appropriately and enabling effective bus services to the Craigieburn Train Station.

Mickleham Precinct

New intersections from Donnybrook Road are needed to unlock residential development on both sides of Donnybrook Road in the relatively isolated Mickleham Precinct. It is vital that housing development be directed towards the land planned for local retail,

community and recreation facilities to enable their delivery within 5 to 10 years. Temporary facilities maybe required if development is too slow to help build social connectedness and ensure an appropriate standard of service provision.

The extension of Aitken Boulevard from Mount Ridley Road to Donnybrook Road is also vital to enabling appropriate access and bus services from this area to the existing larger scale community and recreation facilities in Craigieburn and the Craigieburn Town Centre, and access to the Craigieburn Train Station.

On the north side of Donnybrook Road development should be focussed on delivering a new connector road to the Mickleham (Merrifield) Town Centre once the land identified for community and recreation facilities is unlocked to enable appropriate pedestrian, cycling, bus and car access from this area to the future town centre.

Upgrades to Donnybrook Road in step with development and an upgrade to Donnybrook Station within 5 – 10 years is needed to manage the large increase in commuter and industrial traffic this area will experience.

Lockerbie and Kalkallo

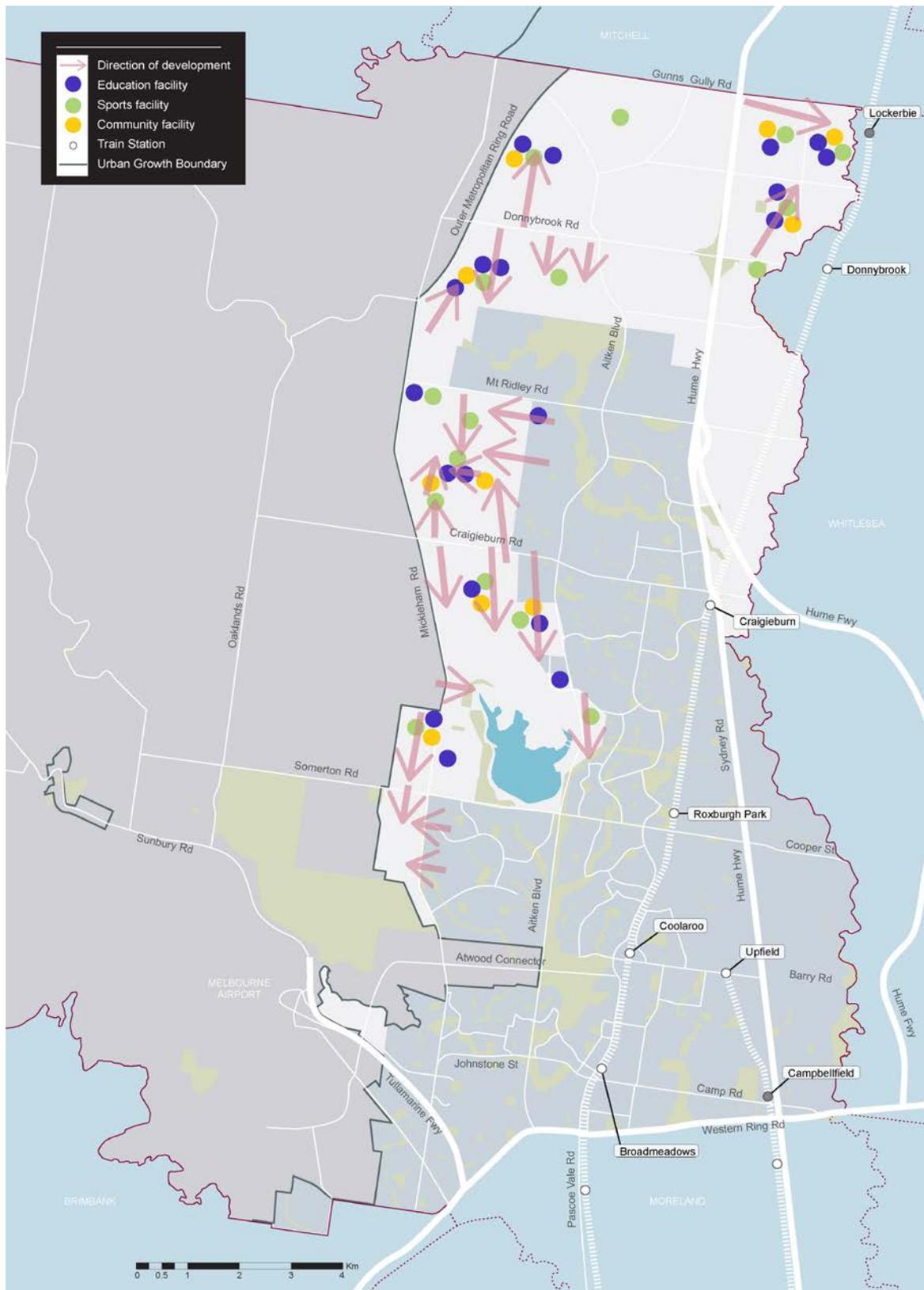
New intersections from Donnybrook Road are needed to unlock initial residential development in the relatively isolated Lockerbie Precinct. Development should be directed towards unlocking the land identified for recreation and community facilities in the southern part of this precinct to enable their development within 5-10 years.

A new access off the Hume Freeway at Gunns Gully Road must be provided to unlock residential development further north as there is insufficient capacity at the intersections with Donnybrook to support development north of Kalkallo. Development utilising this new access should be directed to unlocking the land planned for community and recreation facilities north of Kalkallo (10-15 years) the future Lockerbie Train Station and Donnybrook (Lockerbie) Town Centre to enable their timely delivery. A road connection from this new development area to the initial development immediately north of Donnybrook Road is critical to provide a viable bus route for this area.

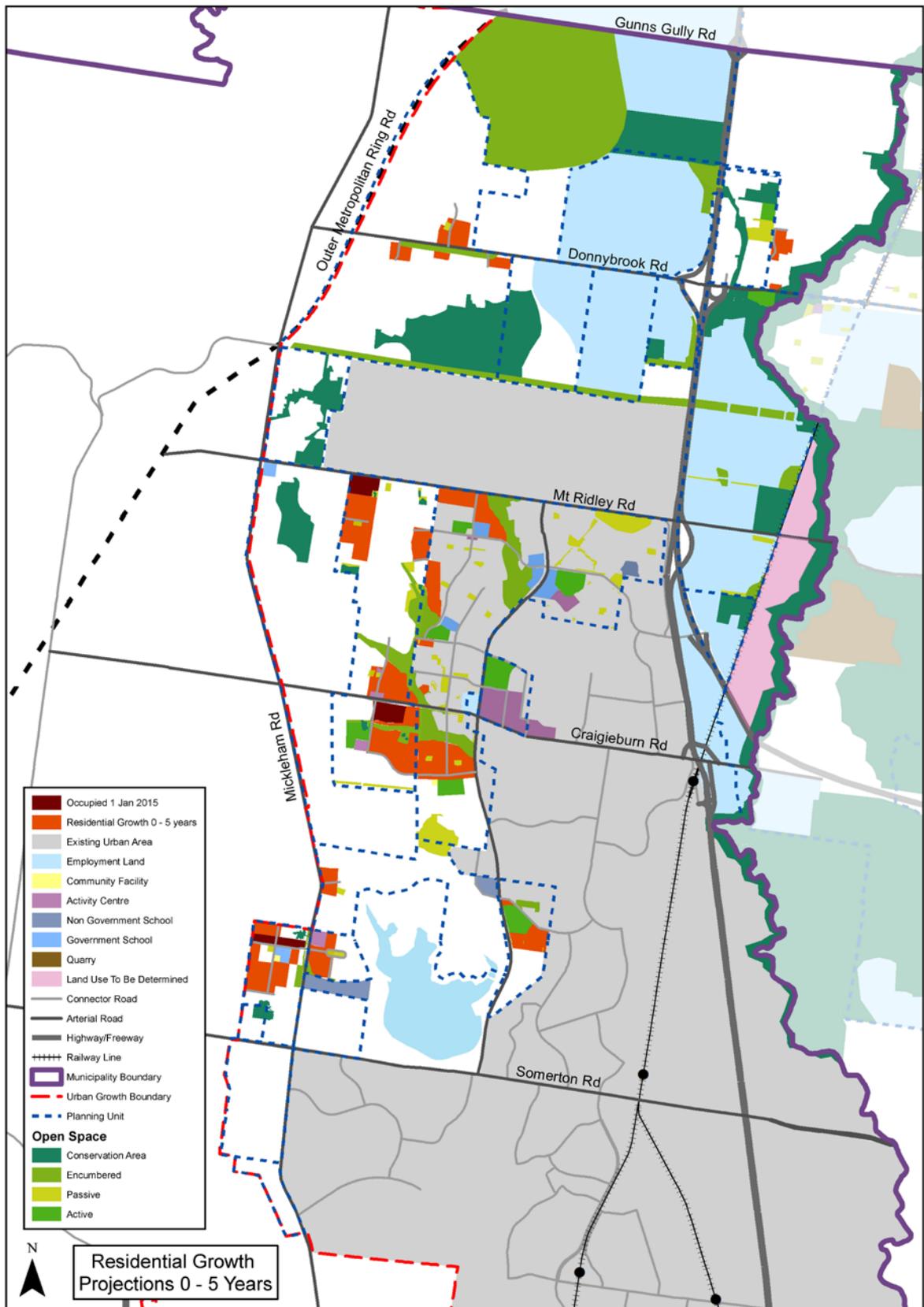
Upgrades to Donnybrook train station and duplication to Donnybrook Road will be required within 5-10 years to support the additional demand in this precinct and in the neighbouring new development areas in the City of Whittlesea.

Development in the Kalkallo Township should occur when reticulated services are provided to the area along Donnybrook Road and Cameron Street.

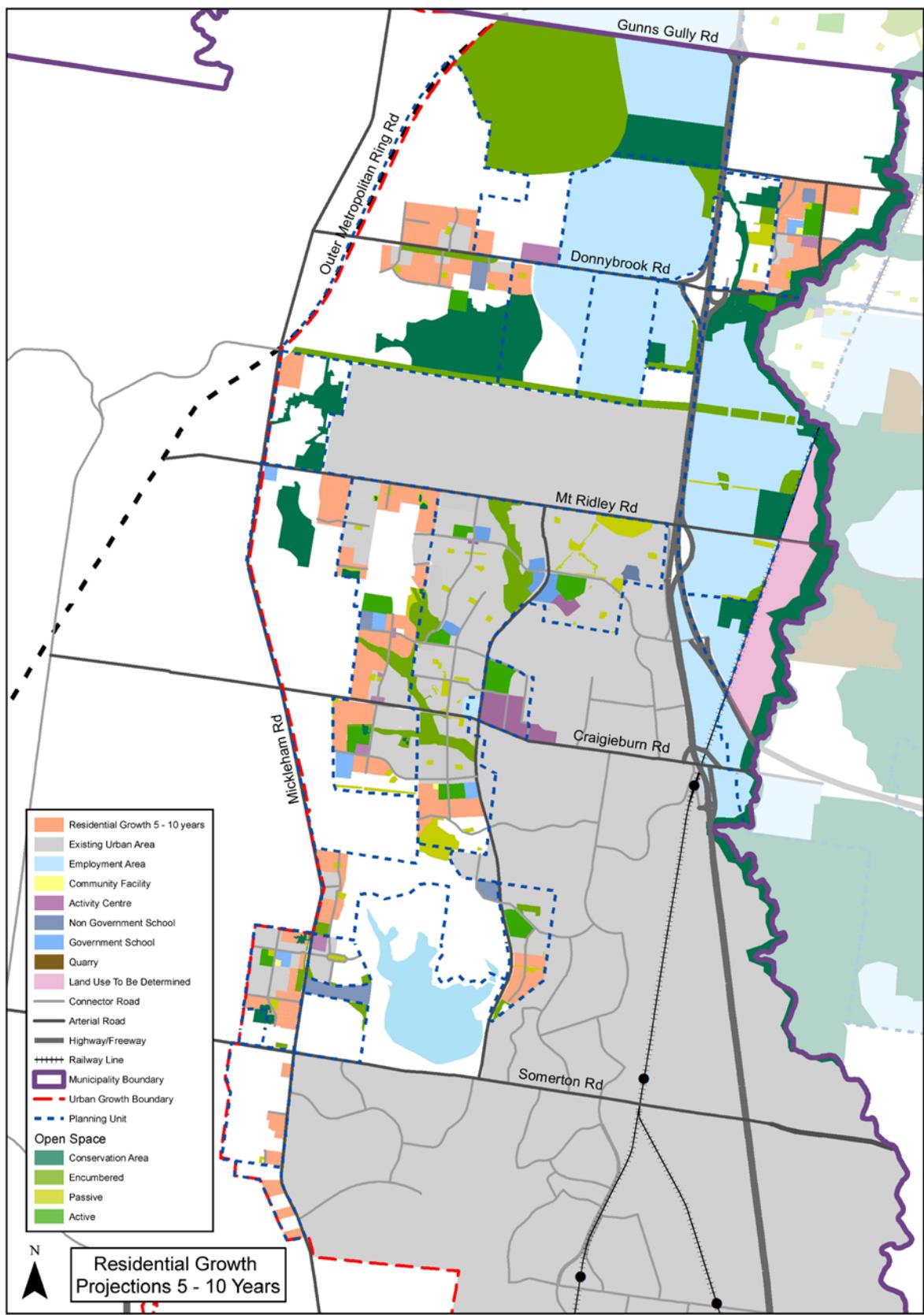
Map 3.1 Preferred Sequencing and Staging of New Residential Development



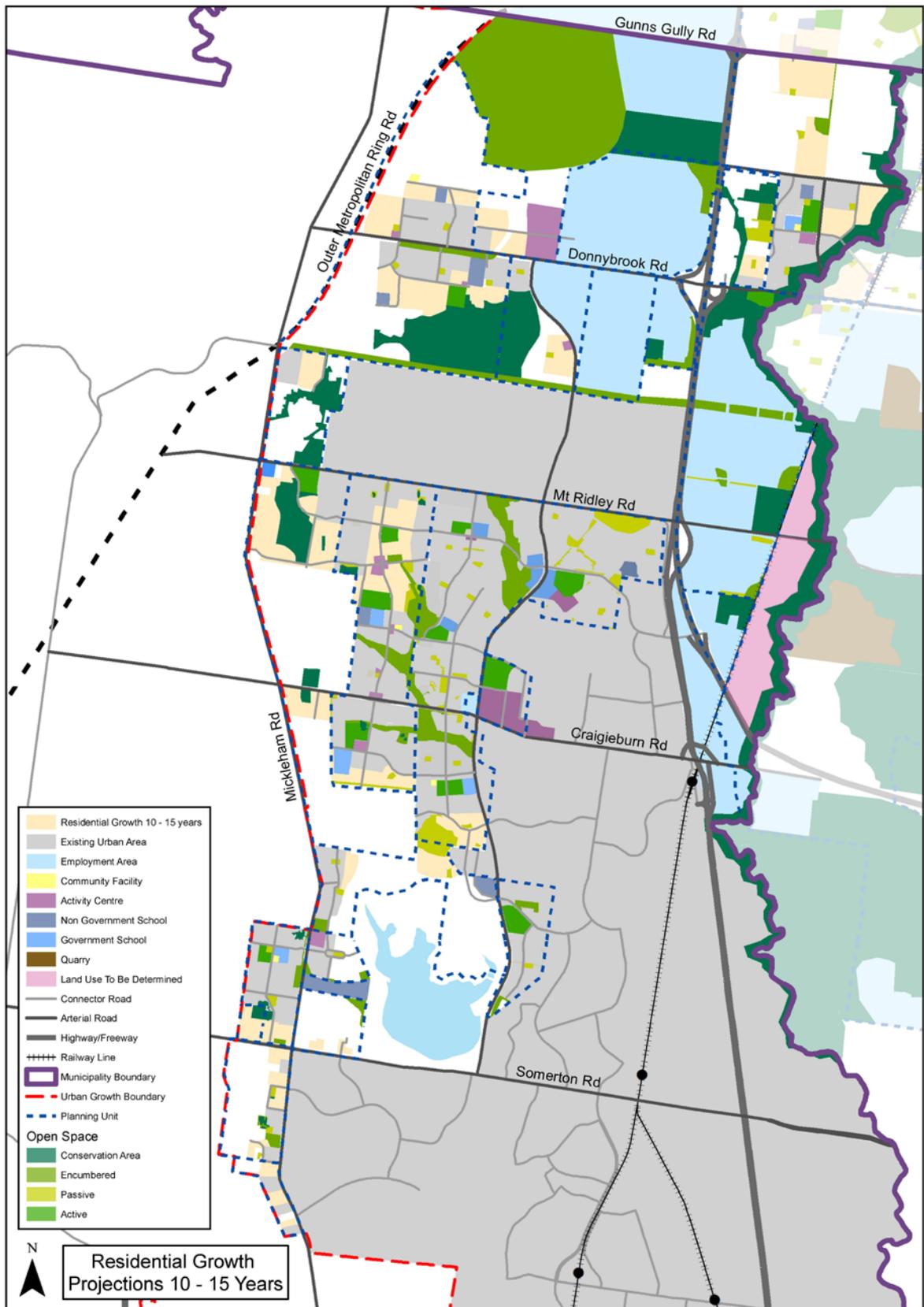
Map 3.2 – Location of New Residential Development 2015-19



Map 3.3 – Location of New Residential Development 2020-24



Map 3.4 – Location of New Residential Development 2025-29



3.5. Limits to Residential Development in the Growth Areas of Hume Corridor

The availability and capacity of existing major transport and community infrastructure is currently acceptable in the Hume Corridor. However, if the ‘fundamental’ infrastructure identified in Section 2 is not delivered in accordance with the timeframes outlined then the rate of development should be controlled.

Table 3.1 lists the ‘fundamental’ infrastructure needed in the next 10 years that is triggered by new development and the limits to this new development that should apply were that infrastructure not to be delivered. These caps are based on the scale of development included in the Transport Assessments that identified the need for the upgrades listed in Table 3.1 below. The precincts are those in Map 2.2 above.

Table 3.1 – Limits to Development

Fundamental Infrastructure	Date Required	Limit to Development
Mickleham Road Duplication - Somerton Road to Craigieburn Road	By 2021	Mickleham Road North Precinct limited to 2,500 lots Craigieburn Precinct limited to 17,500 lots
Somerton Road Duplication - Aitken Boulevard to Roxburgh Park Drive and Mickleham Road	By 2021	Mickleham Road North Precinct limited to 2,500 lots.
Craigieburn Road Duplication – Hothlyn Drive to Craigieburn Town Centre and Mickleham Road	By 2021	Craigieburn Precinct limited to 17,500 lots

The limits identified in Table 3.1 will apply unless infrastructure assessments are provided that demonstrate further development can be supported. These infrastructure assessments must meet the requirements in Box 3.1 below.

Beyond the next 10 years, limits to development should apply to development in Mickleham, Lockerbie, Woodstock and Donnybrook (City of Whittlesea) precincts should there be delays to Aitken Boulevard duplication, Mickleham Road duplication, Lockerbie Train Station, Donnybrook Road duplication, and Hume Freeway Upgrade.

3.6. Advocating for Infrastructure

Hume City Council does not want to have to limit development but equally is not prepared to support new development that does not have adequate infrastructure. It has advocated since the Urban Growth Boundary was changed in 2010 for State Government to commit to infrastructure delivery in step with development and raised significant concern that the *Growth Corridor Plans* and *Plan Melbourne* have been approved with no commitment to infrastructure funding and delivery.

Hume City Council will continue to advocate for new infrastructure and work with the State Agencies and the development industry to track infrastructure funding.

Box 3.1 – Infrastructure Assessments for Increased Development Beyond Identified Limits

To identify the potential for increased development beyond the identified limits to development in Table 3.1, an Infrastructure Assessment must be undertaken that:

1. Confirms the design capacity of the fundamental infrastructure item
2. Confirms the current use of the fundamental infrastructure item
3. Confirms the spare capacity of the fundamental infrastructure item
4. Confirms the timing and funding for the completion of the upgrade of the fundamental infrastructure item

The methodology in the infrastructure assessment must be approved by Hume City Council and relevant State Agency (e.g. Vic Roads).

Development proposed beyond the limit identified in Table 3.1 will only be supported if the infrastructure assessment identifies:

1. There is sufficient spare capacity within the use of the fundamental infrastructure design capacity to support the scale of additional development proposed

And/or

2. Funding is provided within the State Government budget for the completion of the full upgrade works required for the fundamental infrastructure within 1 year of the additional proposed development commencing.

4. ACHIEVING POPULATION & JOBS GROWTH BALANCE

Around the world, expanding cities are facing significant challenges in matching local jobs growth with population growth. Melbourne is no different and the distance and journey time its residents travel to access work has increased significantly as the city has grown.

The Hume Corridor currently has a high level of self sufficiency (112%) and relatively high self containment rate with approximately 18,000 people living and working in the area.

The timing and the rate of development in employment areas is highly dependent upon the performance of the economy and business confidence and is less predictable than residential development. Table 4.1 shows the recent rates and aspirational projections of employment growth within the Hume Corridor compared to growth in the labour force and working population. It shows that if these aspirational projections are met, the Hume Corridor will retain a high level of self sufficiency of jobs to labour force.

Table 4.1: Population and Jobs Growth

	Working Age Population	Labour Force	Target Number of Jobs	Self Sufficiency
2006	71,800	50,000	56,800	114%
2011	82,400	58,000	65,000	112%
2021	107,900	75,530	83,000	110%
2031	130,000	91,000	100,000	110%
2046	161,200	112,840	124,000	110%

Source: AEC Economic Assessment

To achieve this, an additional 35ha employment land (45ha of gross) and around 5,000 to 7,000sq.m of office floorspace would be required each year.

To provide maximum potential for these job targets and land requirements to be met, it is critical that the infrastructure (particularly transport infrastructure) identified in Section 2 is delivered in the timeframes identified to:

- unlock new development sites
- achieve quality access to major road and transport network
- retain short journey times to major destinations like Melbourne Airport
- provide a high level of reliability in journey times
- provide access to a large workforce
- retain and enhance the image of the Hume Corridor as a high quality location for businesses and investment.

5. FUNDING INFRASTRUCTURE

5.1. Funding State Infrastructure

The cost of providing the State road, public transport, education, health and leisure infrastructure identified in Section 2 as well as in the Wider Northern Growth Area is phenomenal.

State Infrastructure is principally funded through the annual budgeting process. However, the Growth Area Infrastructure Contribution (GAIC) provides State Government with a modest additional pool of funds to deliver State infrastructure in growth areas.

Table 5.1 shows the current and projected GAIC funds in the Hume Corridor and compares this to the estimated expenditure required to deliver the State infrastructure needed in accordance with the timeframes of this Strategy. Due to uncertainty on costings, this table does not include costs for the extension to Upfield Line, the OMR, additional lane on Hume Freeway, new bus services, additional parking at train stations and a new university.

Table 5.1a: State Infrastructure Costs & GAIC Collected Over Time

Years	State Infrastructure Costs	GAIC Collected	Surplus/Deficit
2015-19	\$107,170,000	\$53,100,000	-\$54,070,000
2020-24	\$332,622,000	\$69,400,000	-\$263,222,000
2025-29	\$668,910,000	\$54,500,000	-\$614,410,000
2030-34	\$856,038,000	\$45,200,000	-\$810,838,000
2035-39	\$189,260,000	\$41,800,000	-\$147,460,000
Total	\$2,154,000,000	\$264,000,000	-\$1,890,000,000

Note: Table excludes the Upfield Line Extension, OMR, additional lane on Hume Freeway, new bus services, additional parking at train stations and a new university as costs are unknown

It shows a significant funding allocation will need to be identified in the State budget on an annual basis to supplement the GAIC.

It also shows that the GAIC funding will need to be prioritised appropriately. Hume City Council believes that the GAIC funding should be prioritised towards the 'Fundamental' infrastructure items outlined in Section 2 with priority given to the projects listed in Table 5.1b.

5.2. GAIC Works in Kind

New legislation allows for developers to undertake 'works in kind' (WIK) in lieu of making their GAIC payments. The legislation contains a number of conditions relating to when WIK is permitted, notably that a WIK Agreement must be lodged prior to GAIC being triggered for a title.

Table 5.2 below identifies the projects that would be suitable for WIK in the Hume Corridor. There are a number of Fundamental Infrastructure items identified in Section 2 that are not

listed. Whilst these are significant priorities for delivery, the cost and timing of these items means that WIK is not considered a suitable funding approach.

For more information on the GAIC please go to – www.mpa.vic.gov.au

Table 5.1b Priority State Infrastructure Projects for GAIC Funding

Priority	Infrastructure Project	Location	Cost	Suitable GAIC WIK
1	Somerton Road Duplication	Staged with priority initially to Aitken Boulevard and then Mickleham Road	\$10-15 million (estimate)	Yes in parts
2	Craigieburn Train Station Parking	Land adjoining Craigieburn Train Station	Unknown	No
3	Craigieburn Road	Staged with priority Hanson Road to Dorchester Close and then Aitken Boulevard to Mickleham Road	\$15-20 million (estimate)	Yes (see Table 5.2)
4	Mickleham Road Duplication	Staged with priority Somerton Road to Craigieburn Road and then to Donnybrook Road	\$40-50 million (estimate)	Yes in parts (see Table 5.2)
5	Aitken Boulevard North of Somerton Road	New road through inter urban break. Staged duplication with priority to Mount Ridley Road to Craigieburn Road and then south to Somerton Road before completing duplication north	\$100 – 150 million (estimate)	Yes in parts (see Table 5.2)
6	Donnybrook Road Duplication	Staged with Priority from Hume Freeway to Aitken Boulevard and Hume Freeway to Donnybrook Station before completing duplication	\$25-30 million (estimate)	Yes (see Table 5.2)
7	Donnybrook Train Station Upgrade	On Donnybrook Road east of Lockerbie	\$10-25 million (estimate)	Yes (see Table 5.2)
8	Lockerbie Train Station	East of Donnybrook (Mickleham) Town Centre	\$50-80 million (estimate)	Yes (see Table 5.2)

Table 5.2 – Suitable GAIC Works in Kind Projects

Infrastructure Project	Location	Cost	Justification	WIK to be Provided by
Aitken Boulevard first lane through inter urban break and duplication	Mickleham Precinct	\$9-12mil (estimate)	Aitken Boulevard is a critical part of the arterial road and principal public transport network serving the Northern Growth Region. The first lane is required to be constructed through the Donnybrook Road and Merrifield Employment Precinct as part of their development. Extending this first lane south and duplicating it as part of development would help to unlock the employment potential of this precinct and provide vehicular, public transport and cycling access for residents in the Mickleham Precinct to Craigieburn Town Centre and Craigieburn Train Station.	Developers in the Mickleham Precinct
Lockerbie Train Station	Lockerbie Precinct	\$50-80mil (estimate)	Lockerbie Station is the most vital additional station in the Northern Growth Region and critical to providing train services into the Melbourne CBD for over 30,000 future residents. Delay in its delivery will place unacceptable pressure on Craigieburn Train Station. The station would unlock employment potential of the Donnybrook (Lockerbie) Town Centre	Developers in the Lockerbie Precinct
Donnybrook Train Station Upgrade	Lockerbie Precinct	\$10-25 million (estimate)	Donnybrook Station will be required to service in the short to medium term until Lockerbie Train Station is constructed. It requires upgrade including significant additional parking.	Developers in the Lockerbie Precinct
Mickleham Road Duplication	Mickleham Road North Precinct & Mickleham Precinct	\$40-50mil (estimate)	Mickleham Road is a critical part of the arterial road and freight network serving the Northern Growth Region. It is forecast to see significant growth in use in the coming years. Duplicating the road at the same time as providing new intersections would utilise resources more efficiently.	Developers in the Mickleham Road North Precinct
Craigieburn Road	Mickleham Road North	\$15-20mil (estimate)	Craigieburn Road is a critical part of the arterial road and principal public transport network serving the Northern Growth Region. It provides the	Developers in the Mickleham

Infrastructure Project	Location	Cost	Justification	WIK to be Provided by
Duplication	Precinct		main point of access to Craigieburn Town Centre and Train Station and is forecast to see significant growth in use in the coming years. Duplicating the road at the same time as providing new intersections would utilise resources more efficiently.	Road North Precinct
Donnybrook Road Duplication	Mickleham Precinct	\$25-30mil (estimate)	Donnybrook Road is a critical part of the arterial road and freight network serving the Northern Growth Region. It is vital to unlocking the employment potential in the Mickleham Precinct and will see significant growth in use in the coming years. Duplicating the road at the same time as providing new intersections would utilise resources more efficiently.	Developers in the Mickleham Precinct
Gunns Gully Road Interchange	Mickleham & Lockerbie Precinct	\$50-70 mil (estimate)	This interchange is needed to unlock development in the central and northern part of the Lockerbie precinct. It will also help unlock the employment potential of the Donnybrook Town Centre and potential employment area to the west of Hume Freeway.	Developers in the Mickleham & Lockerbie Precincts
Cameron Street Bridge	Mickleham Precinct	\$20-30 million (estimate)	Cameron Street Bridge across the Hume Freeway is an important connection between two large residential and employment growth areas and potential important part of the principal public transport network.	Developers in the Mickleham Precinct
Hume Freeway Interchange	Mickleham & Hume Highway Precinct	\$30 – 40 million (estimate)	The interchange with the Hume Freeway is critical to unlocking and realising the potential of two large employment areas and minimising congestion on the Donnybrook Road ramps.	Developers in Mickleham & Hume Highway North Precincts
Construction of Merrifield Park	Mickleham Precinct	Unknown	Merrifield Park represents a unique opportunity to increase participation in sports and leisure in the Northern Growth Region. It would help to realise the economic potential of Mickleham (Merrifield) Town Centre.	Developers in the Mickleham Precinct

5.3 Funding of Local & Higher Order Infrastructure

As with State Infrastructure, the funding of new and upgraded local and higher order infrastructure and services will be drawn from mainstream funding as well as bids to State and Federal Government. However, a significant proportion of the funding for new infrastructure will be drawn from development contributions to meet the demands generated from new development. Development Contribution Plans (DCPs) are already approved for many of the new development areas.

Table 5.3 and 5.4 shows that for some of these plans and these development areas there is a fairly significant shortfall in funding, particularly for higher order infrastructure. Some of this shortfall can be met through Council rates and revenue but other funding sources will be required.

Table 5.3 – Shortfall in Infrastructure Funding in Development Contribution Plans for Local Infrastructure

Development Contribution Plan	Cost of Infrastructure	Development Contribution	Shortfall in funding
Lockerbie	\$120,234,454	\$120,234,454	\$0
Merrifield West	\$88,573,625	\$66,929,821	\$21,643,804
Greenvale Central	\$40,505,411	\$37,517,632	\$2,987,779
Greenvale North R1	\$15,427,021	\$7,100,313	\$8,326,708
Greenvale West R3	\$13,874,725	\$10,597,106	\$3,277,619
Craigieburn R2	\$52,199,015	\$40,691,167	\$11,507,848
Total	\$330,814,250	\$283,070,492	\$47,743,757

Table 5.4 – Shortfall in Infrastructure Funding in Development Contribution Plans for Higher Order Infrastructure

Development Contribution Plan	Cost of Infrastructure	Development Contribution	Shortfall in funding
Lockerbie	\$79,638,515	\$16,400,000	\$63,238,515
Merrifield West	\$111,975,508	\$9,476,562	\$102,498,946
Craigieburn R2	\$45,899,455	\$2,721,769	\$43,177,686
Total	\$237,513,478	\$28,598,331	\$208,915,147

Values based on Jan 2015 figures. Tables subject to review and change.

For the higher order infrastructure in Lockerbie, some development contributions will be collected from new developments covered by the Lockerbie DCP in the City of Whittlesea and Mitchell Shire. Additional funding from both Councils may also be directed to these facilities as there are a number of residents that will live within the catchment of these facilities and are likely to use them.

Land acquisition for the higher order facilities at Mickleham (Merrifield) Major Town Centre and Merrifield Regional Park is only partially funded by the Merrifield West DCP. Development contributions from new development areas in the catchment area of these facilities should be directed to this funding shortfall. These include the adjoining Beveridge West area in Mitchell Shire, Mickleham Major Town Centre and Lindum Vale in Hume.

Even with these potential contributions, significant State and Federal funding will be required to address the significant shortfalls in funding in the new development areas.

Should additional funding not be identified to meet these funding shortfalls, Hume City Council will need to consider the following measures:

1. Reviewing the approved DCPs to reduce the funding shortfall.
2. Reduction in the identified scope of works for infrastructure, particularly for underfunded infrastructure.
3. Delaying the delivery of infrastructure that is underfunded and not required to deliver essential services.

6. FURTHER WORK

6.1. Housing Strategy

The Spatial Strategy identified a range of future housing challenges in the Hume Corridor, particularly a lack of diversity in house size to meet the needs of the growing number of small households. It identified areas with the best potential to deliver this more diverse housing. Further work is required to fully respond to these challenges.

The **aim** of this further work is to:

“Prepare a housing strategy which informs future planning zone changes and other measures to increase housing diversity.”

The **objectives** for this further work are:

1. To fully quantify the likely demand and potential to deliver more diverse housing product within the Hume Corridor
2. To map the areas where changes to planning zones and controls would be suitable to facilitate this more diverse housing product whilst protecting existing street character
3. To prepare guidelines to inform the future design of smaller housing product and future car parking requirements.

This work should be undertaken in the coming 5 years and should be used to inform future reviews of infrastructure needs.

6.2. Craigieburn Road Design

Craigieburn Road is a major arterial road in the Hume Corridor that links new and existing residential areas to the Craigieburn Town Centre, Craigieburn Plaza, Craigieburn Train Station and the Hume Highway/Freeway. New development is and will continue to occur along its length in the 25 coming years.

Detailed design work is required to ensure that the future upgrade of Craigieburn Road appropriately balances the need to address the current and future transport requirements for the road with the potential to support and facilitate the future new development along its length.

Design guidance is also required for the new development to ensure that it does not adversely impact on the transport requirements and maximises the benefits of any investment in the road reserve, particularly in the public realm and landscaping.

The **aim** of this further work is to:

“Prepare a detailed road design along the length of Craigieburn Road to ensure that the future upgrade of the road and new development appropriately accommodate the existing

and future transport requirements and maximise the potential for transit oriented development.”

The **objectives** for this further work are:

1. To map and identify the current, planned and potential future land use and development along the length of Craigieburn Road
2. To confirm the future transport role and road, bus and bicycle requirements of Craigieburn Road in the coming 5, 15 and 30 years in consultation with VicRoads and Public Transport Victoria
3. To identify the optimal location and design of future carriageways, medians, bus lanes, bike paths and landscaping, intersections and service roads
4. To prepare design guidelines for the interfacing development so that it realises the optimal transit orientated development outcome.

This work should be undertaken in the coming 5 years to guide future investment in the road and adjoining land.

6.3. Mickleham Road Design

Mickleham Road is a major arterial road in the Hume Corridor that will service major new residential development along its length and provide an important connection between the future Donnybrook Road employment precinct, Melbourne Airport and the Western Ring Road prior to the Outer Metropolitan Ring being constructed.

Detailed design work is required to inform its future upgrade and relationship with future residential areas.

The **aim** of this further work is to:

“Prepare a detailed road design for Mickleham Road to ensure that it addresses future transport requirements, retains a strong landscaped character and provides an appropriate amenity for future residential development.”

The **objectives** for this study are:

1. To confirm the future transport role and road, bus and bicycle requirements of Mickleham Road in the coming 5, 15 and 30 years in consultation with VicRoads and Public Transport Victoria
2. To identify the optimal location and design of future carriageways, medians, bus lanes, bike paths and landscaping, intersections and service roads

This work should be undertaken in the coming 5 years to guide future planning for the future Craigieburn West area and detailed road design.

6.4. Campbellfield Structure Plan / Urban Development Framework

The Spatial Strategy identifies the significant potential for change around the Campbellfield Activity Centre. A Structure Plan or Urban Design Framework should be prepared to facilitate and manage this change.

The **aim** of this further work is to:

“Prepare a Structure Plan or Urban Design Framework to guide change around the Campbellfield Activity Centre that realises the opportunities for a bulky goods precinct, office/high tech business park that retains the option for a metropolitan and High Speed Rail Station.”

The **objectives** for this study are:

1. Guide the development of a bulky goods precinct along Hume Highway to Bolinda Road and an office/high tech business park along Camp Road to the west of the train line
2. Safeguard the potential for a metropolitan train station with grade separated train crossing of Camp Road, and the long term potential for a High Speed Rail Station
3. Retain the potential for residential and more office development should either station be developed
4. Enable links to the Merri Creek Regional Parklands.

This work should be undertaken in the coming 5 years to guide future planning for the land around the centre.

6.5. Craigieburn Structure Plan / Urban Development Framework

The Spatial Strategy identifies the significant potential for change around the Craigieburn Plaza and Craigieburn Train Station Activity Centre. A Structure Plan or Urban Design Framework should be prepared to facilitate and manage this change.

The **aim** of this further work is to:

“Prepare a Structure Plan or Urban Design Framework to guide change around the Craigieburn Plaza and Craigieburn Train Station that realises the opportunities for a more intense and diverse range of housing, improvements to the movement network and increased local retail and service provision.”

The **objectives** for this study are:

1. Guide the redevelopment of Benston Street as a major pedestrian and cycle connection to the station from Craigieburn Road and Craigieburn Plaza
2. Enable the development of high quality townhouses and apartment housing along the parts of Craigieburn Road, Benston Street and Hothlyn Drive near the station

3. Enable the development of more health and community service uses with above ground floor apartments along Craigieburn Road.

This work should be undertaken in the coming 5 years to guide future planning for the land around the centre.

7. MONITORING AND REVIEW

This Infrastructure and Delivery Strategy sets out the indicative development and infrastructure timelines and further work required to enable sustainable growth of the Hume Corridor as set out in the Hume Corridor HIGAP Spatial Strategy. It will be continually monitored and updated to reflect changes in circumstance, particularly if the projected rate of development exceeds or significantly slows.

Monitoring and review of the rate of development and delivery of infrastructure is particularly important to ensure that there is not an inappropriate lag between the commencement of development and the required infrastructure. As outlined in Section 2, delays to the delivery of 'Fundamental' and 'Required' infrastructure may require a revision to the Spatial Strategy and measures to slow or control further development.

A Monitoring Report will be prepared every two years in accordance with the Monitoring Indicators in the Spatial Strategy and reproduced below. This Monitoring Report will report any minor changes to this Infrastructure and Delivery Strategy with a more comprehensive update undertaken every 5 years or sooner if required.

Table 7.1 – Monitoring Indicators

HIGAP AIM	Monitoring Indicators	Frequency	Source
Build on the economic strengths of the Hume Corridor whilst seeking to diversify the economy and increase the number, accessibility and range of business and employment opportunities.	The change in the number and diversity of jobs compared to the 2011 Census data.	5 Years	Census Data
	The amount of additional industrial and commercial land developed and available within the Hume Corridor	2 years	UDP
Enable a high level of choice and accessibility to popular and viable activity centres throughout the Hume Corridor containing a range of employment, shopping, cultural and leisure and health facilities	The change in the scale of retail and office floorspace in activity centres against the targets and caps in the Spatial Strategy.	5 Years	HCC
	The number of additional activity centres within the Hume Corridor.	5 Years	HCC
	The number of additional leisure and health facilities located in the activity centres within the Hume Corridor.	5 Years	HCC
To manage travel demand and realise the economic, social and environmental benefits of increased transport choice	The provision of new ‘fundamental’, ‘required’ and ‘desirable’ regional transport infrastructure compared to the requirements and timelines specified in the Infrastructure and Delivery Strategy.	2 Years	HCC
	The change in mode share of trips within the Hume Corridor.	5 Years	HCC
	The change in the vehicle travel times between key destinations within the Hume Corridor.	5 years	HCC
To increase the diversity and choice of housing, particularly for smaller households and the growing number of older and younger people	The scale of new low, conventional, medium and high density housing within Hume Corridor.	5 Years	HCC
	The change in the mix of housing in the Hume Corridor.	5 Years	HCC
	The scale of housing land supply in the Hume Corridor	2 Years	UDP

HIGAP AIM	Monitoring Indicators	Frequency	Source
Secure the delivery of state and regional scale health, education and sports infrastructure in the Hume Corridor	The provision of new 'fundamental', 'required' and 'desirable' regional health, education and sports infrastructure and services compared to the requirements and timelines specified in the Infrastructure & Delivery Strategy.	2 Years	HCC
Deliver and fund local community and leisure facilities to meet the full and changing needs of the community over time throughout the Hume Corridor	The provision of new 'fundamental', 'required' and 'desirable' community, leisure, cultural and educational infrastructure and services compared to the requirements and timelines specified in the Infrastructure & Delivery Strategy.	2 Years	HCC
Protect and manage the areas of significant natural heritage in ways that balance protection with opportunities for leisure and recreation, sensitive urban development and road connectivity where appropriate.	Amount of land contained within conservation reserves in the Hume Corridor.	2 Years	HCC
	Amount of land containing natural heritage values that is accessible to the public.	2 Years	HCC
	Number of additional road connections within areas of natural heritage sensitivity.	2 Years	HCC
Enable appropriately staged development that is coordinated with appropriately funded and timely infrastructure delivery	The provision of new 'fundamental', 'required' and 'desirable' infrastructure compared to the timelines specified in the Delivery & Infrastructure Strategy.	2 Years	HCC
	The location of new development compared to the staging plans contained within the Infrastructure and Delivery Strategy.	2 years	HCC

Appendix 1 – Schedule of Council Local Infrastructure

Precinct	Infrastructure Type	Description	Anticipated Timing
Broadmeadows and Surrounds	Learning & Education	Expansion of Broadmeadows Global Learning Centre	TBC
	Leisure and Recreation	Regional Soccer Facility at John Ilhan Reserve	0-5 years
	Leisure and Recreation	Upgrade to Jack Roper Reserve	0-5 years
Mickleham Road South	Leisure and Recreation	New sports grounds and facilities at Greenvale Recreation Reserve	Under construction
	Leisure and Recreation	Upgrade and expansion to Greenvale Recreation Centre	0-5 years
Roxburgh Park and Surrounds	Leisure and Recreation	New cricket and soccer facilities in Greenvale Lakes development	0-5 years
	Community Facility	Expansion of Bluebird Way community facility to include expansion of meeting spaces for adult learning, PAG, youth and arts/cultural activity	5-10 years
Hume Highway South	Leisure and Recreation	New park at Bolinda Road	0-5 years
Mickleham Road North	Community Facility	New multi purpose community facility west of Mickleham Road to include preschool, occasional child care, MCH, adult learning, PAG, large and small community meeting spaces, arts and cultural spaces	0-5 years
	Leisure and Recreation	New sports reserve west of Mickleham Road	5-10 years
	Leisure and Recreation	New sports reserve north of Craigieburn Road – sports to be determined	15+ years
	Leisure and Recreation	New sports reserve south of Mount Ridley Road – sports to be determined	15+ years
	Community Facility	New multi purpose community facility south of Craigieburn Road to include preschool, MCH, occasional care, visiting services, adult learning, PAG, community meeting space	15+ years

Precinct	Infrastructure Type	Description	Anticipated Timing
	Community Facility	New multi purpose community facility north of Craigieburn Road to include preschool, MCH, occasional care, adult learning, consulting rooms, youth facilities, community meeting spaces	15+ years
	Community Facility	Expansion of community hall south of Mount Ridley Road to include preschool, MCH, occasional care, community meeting space	10-15 years
Craigieburn	Leisure and Recreation	New sports reserve in north part of R2 PSP area for tennis	10-15 years
	Leisure and Recreation	New sports reserve in central part of R2 PSP area for AFL/Cricket	5-10 years
	Leisure and Recreation	New sports reserve in southern part of R2 PSP area for soccer	0-5 years
	Leisure and Recreation	Upgrade to Craigieburn Gardens	0-5 years
	Leisure and Recreation	New sports reserve in southern Highlands for AFL/Cricket	0-5 years
	Community facility	Upgrade to early years community facility on Craigieburn Road	0-5 years
	Community Facility	New multi purpose community facility in southern Highlands to include preschool, MCH, visiting services, adult learning, PAG, community meeting space	0-5 years
	Community Facility	New multi purpose community facility in R2 PSP Area to include preschool, MCH, community meeting space	10-15 years
Hume Highway North	Leisure and Recreation	Upgrade to Laffan Reserve – sports to be determined	5-10 years
Mickleham	Leisure and Recreation	New sports reserve south of Donnybrook Road for AFL/Cricket	15+ years
	Leisure and Recreation	New sports reserve south of Donnybrook Road adjoining woodlands – AFL/Cricket or Soccer	5-10 years

Precinct	Infrastructure Type	Description	Anticipated Timing
	Leisure and Recreation	New sports reserve north of Donnybrook Road for AFL/Cricket and tennis	15+ years
	Community Facility	New multi purpose community facility south of Donnybrook Road to include preschool, occasional child care, MCH, adult learning, PAG, large and small community meeting spaces, arts and cultural spaces	15+ years
	Community Facility	New multi purpose community facility north of Donnybrook Road to include preschool, occasional child care, MCH, adult learning, PAG, large and small community meeting spaces, arts and cultural spaces	10-15 years
Lockerbie	Leisure and Recreation	New sports reserve north of Donnybrook Road for Soccer and tennis	5-10 years
	Leisure and Recreation	New sports reserve south of Gunns Gully Road for AFL/Cricket and tennis	15+ years
	Community Facility	New multi purpose community facility north of Donnybrook Road to include preschool, playgroup and other flexible community meeting space	5-10 years
	Community Facility	New multi purpose community facility south of Gunns Gully Road to include preschool, MCH, playgroup, occasional child care, large and small community meeting space, classrooms for adult education/neighborhood house programs, arts/cultural spaces	15+ years

Components of community facilities and identified sports are subject to change. Anticipated timing is indicative and should not be relied upon for investment decisions. Timings are based on assumptions about anticipated rates of development, community need and forward funding. They are subject to continual review and updates.