

GROWTH CORRIDOR PLANS

MANAGING
MELBOURNE'S
GROWTH



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1

Growth Corridor Plans



Growth Corridor Plans



Melbourne's four Growth Corridors (shown on page 7) are expected to accommodate close to half of Melbourne's new housing and much of the city's future supply of industrial land over the next thirty to forty years. Substantial new communities will emerge in these Corridors. The transport, town centre and open space networks established in the initial development of them will be in place for many generations.

Good strategic planning to guide future development in these Corridors is vital if these new communities are to be provided with diverse local housing and employment opportunities, facilities and services, sustainable transport options, a healthy environment, a high level of amenity and a strong local identity.

The Growth Corridor Plans (GCPs) provide a framework to guide the planning of new communities in each of the Growth Corridors.

WHAT THEY DO

- 1 Set an overarching strategic planning framework to guide future development in the four Growth Corridors
- 2 Inform the Precinct Structure Plan (PSP) process
- 3 Indicate areas of high environmental or landscape value, natural features or open space to be preserved
- 4 Identify, broadly, the location of future residential districts, industrial and employment areas and open space networks
- 5 Indicate the likely strategic transport infrastructure required to support urban development
- 6 Identify the locations for future Major and Principal Town Centres (MTCs & PTCs)



These Plans set out the strategic plan for the future development of Melbourne's Growth Corridors over the next 30 to 40 years. The Plans are a tool to guide and inform future decisions regarding urban development and infrastructure that may be required to service these new communities over the long term. They should not be interpreted as a delivery mechanism or program committing the Government to specific infrastructure or development projects or specific levels of service provision.



The Growth Corridor Plans set the strategic direction for future urban development in the Growth Corridors. They indicate:

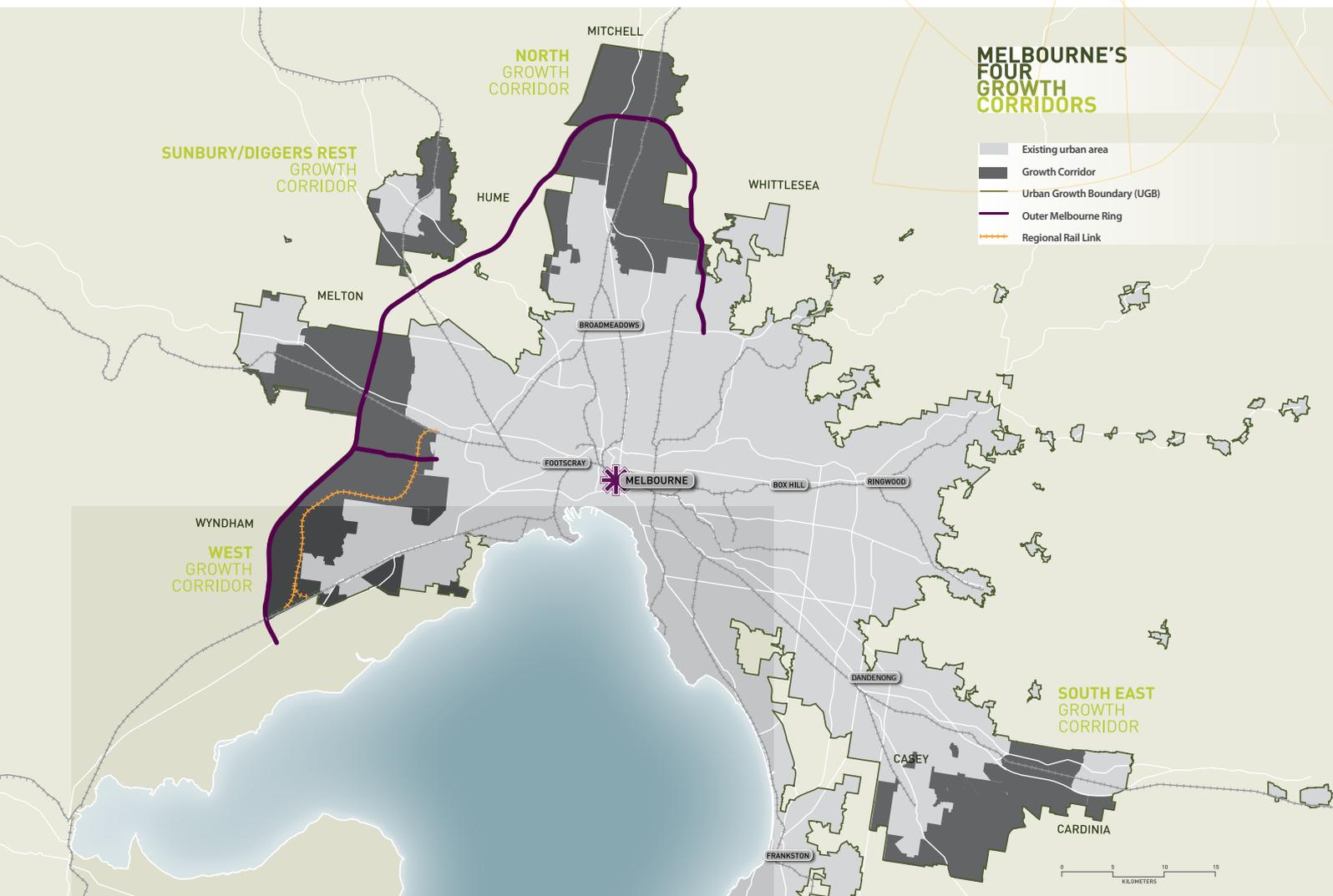
- > areas suitable for urban development and the broad form of development (residential, industrial, business, town centre) that is appropriate for each area;
- > areas of high environmental or landscape value that must be protected from development. The Growth Corridor Plans also identify other areas of constrained land that are not expected to be able to be developed over the life of the Growth Corridor Plan e.g. flood prone;
- > the integrated open space network will provide for the future amenity and recreation needs of growth corridor communities and also play a vital role in preserving natural features/character, heritage, sustaining biodiversity and healthy waterways in an urban environment;
- > the strategic transport infrastructure required to support urban development so that those who live and work in Growth Corridors are able to access jobs and services and have a range of transport choices. The Growth Corridor Plans identify a mix of committed transport networks, and options for

further investigation such as future railway lines and stations, freight centres, freeways, interchanges and arterial roads;

- > regional infrastructure networks including, in particular, the water and sewage infrastructure required to enable development; and
- > locations suitable for a wide range of job-creating activities, including larger town centres, business, and larger industrial precincts.

The Growth Corridor Plans also provide guidance for the way in which the Precinct Structure Planning process should address issues such as:

- > The location, role and function of town centres;
- > The need for smaller scale local employment areas within residential precincts;
- > The detailed design of the Principal Public Transport Network (PPTN) and arterial road network, including how adjacent land uses are to best integrate with the transport network; and
- > Defining edges between urban development and areas of high biodiversity, landscape or drainage significance.



1.1 Beyond the Growth Corridor Plans - Precinct Structure Plans

The Growth Corridor Plans provide a broad land use framework that will guide the future planning and development of new precincts. The diagram on page 8 demonstrates how the Growth Corridor Plans fit into the overall development planning process.

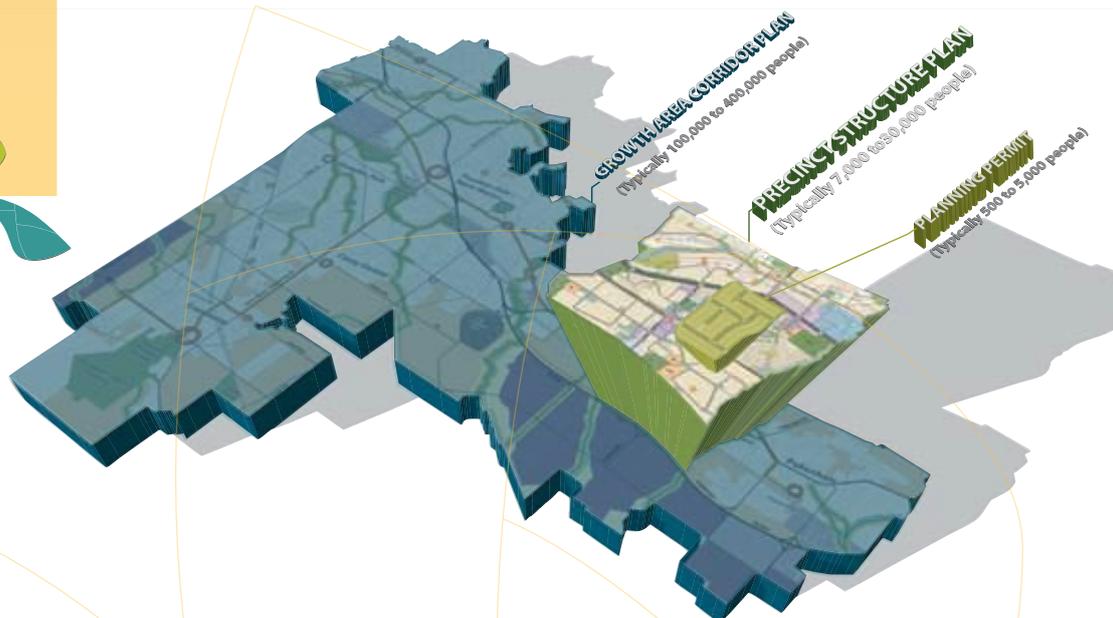
Before development can commence, detailed planning for each precinct must occur in the form of individual Precinct Structure Plans (PSPs), which must be 'generally in accordance' with the Growth Corridor Plans.

A PSP is a consultative process and allows all stakeholders the opportunity to participate in the detailed planning of a precinct.

Unlike the broad strategic view adopted by the Growth Corridor Plans, PSPs are much more detailed planning documents that guide development in a

neighbourhood or group of neighbourhoods. They are generally produced by the Growth Areas Authority (GAA) in partnership with the relevant local Council.

PSPs fill in the detail of the broader picture presented by the Growth Corridor Plans. They set the pattern for neighbourhood development and ensure that individual developments, which may occur over a number of years, effectively fit together to create an attractive, convenient and sustainable local community.



A PSP will typically identify:

- > The proposed location of Local Town Centres and local community facilities such as schools;
- > The detailed alignment of arterial roads and the connector roads that will connect into the arterial network;
- > Local bus routes and more detailed planning for those elements of the regional public transport network (such as the location of bus rapid transit routes and rail stations) that are within the PSP area;

- > Local open space networks, recreation facilities and bicycle and pedestrian trails;
- > How biodiversity and cultural heritage outcomes are expected to be managed within the precinct;
- > Estimated housing yields and the proposed location of areas of higher density housing;
- > Provision for local employment including any areas identified for mixed use areas associated with town centres, smaller industrial areas providing for the needs of local businesses, etc; and
- > Any major sites or easements required for public utilities and other infrastructure.

A Precinct Infrastructure Plan (PIP) is produced as part of the PSP process. This identifies the State and council infrastructure required for development and, in areas where there are significant biodiversity values, a Native Vegetation Precinct Plan (NVPP) sets out areas of native vegetation that are to be retained and those that are able to be cleared, along with any provisions for offsetting the loss of native vegetation.

Detailed Precinct Structure Planning Guidelines (www.gaa.vic.gov.au/PSPGuidelines) provide a step-by-step guide to preparing a PSP

The corridor plans make provision for the following populations and jobs:

	 DWELLING CAPACITY	 POPULATION CAPACITY	 JOBS CAPACITY
WEST	136,000 to 170,000	377,000 to 479,000	164,000 to 202,000
NORTH	93,000 to 117,000	260,000 to 330,000	83,000 to 105,000
SOUTH EAST	83,000 to 103,000	230,000 to 291,000	86,000 to 110,000
SUNBURY/ DIGGERS REST	26,000 to 32,000	71,000 to 90,000	10,000 to 15,000
TOTALS	338,000 to 422,000	938,000 to 1,190,000	343,000 to 432,000

Over the next twenty to thirty years it is possible that household sizes, the mix of dwelling types and average dwelling densities, and the extent of areas that need to be put aside for conservation and other non-urban purposes may vary significantly. Similarly demand for industrial land and average employment densities in industrial areas may also vary. The Corridor Plans need to allow for such variations so that sufficient flexibility is incorporated in planning for possible future infrastructure and service needs. The table above shows the likely upper and lower limits on the population, dwelling and housing capacity of the growth areas.

1.2 RELATIONSHIP TO THE METROPOLITAN PLANNING STRATEGY.

The Victorian Government has commenced work on a new **Metropolitan Planning Strategy** to manage Melbourne's growth and change. Community engagement and communications will be conducted through online forums, stakeholder and community meetings and discussion papers.

Melbourne's population is projected to grow from four million to six million over the next 30-40 years. An extra two million people in our city will change demands on the economy, housing, education, transport, open space, health and community facilities.

Together with development in the established parts of Melbourne, Melbourne's Growth Corridors play an important role in meeting these demands into the future.

Facilitating an ongoing supply of developable urban land within Melbourne's Growth Corridors is an important priority for the Government. A ready supply of accessible, affordable and well serviced land in each of Melbourne's Growth Corridors forms a significant part of Melbourne's overall competitive strength as a place to live and

work and is critical to the broader Strategy.

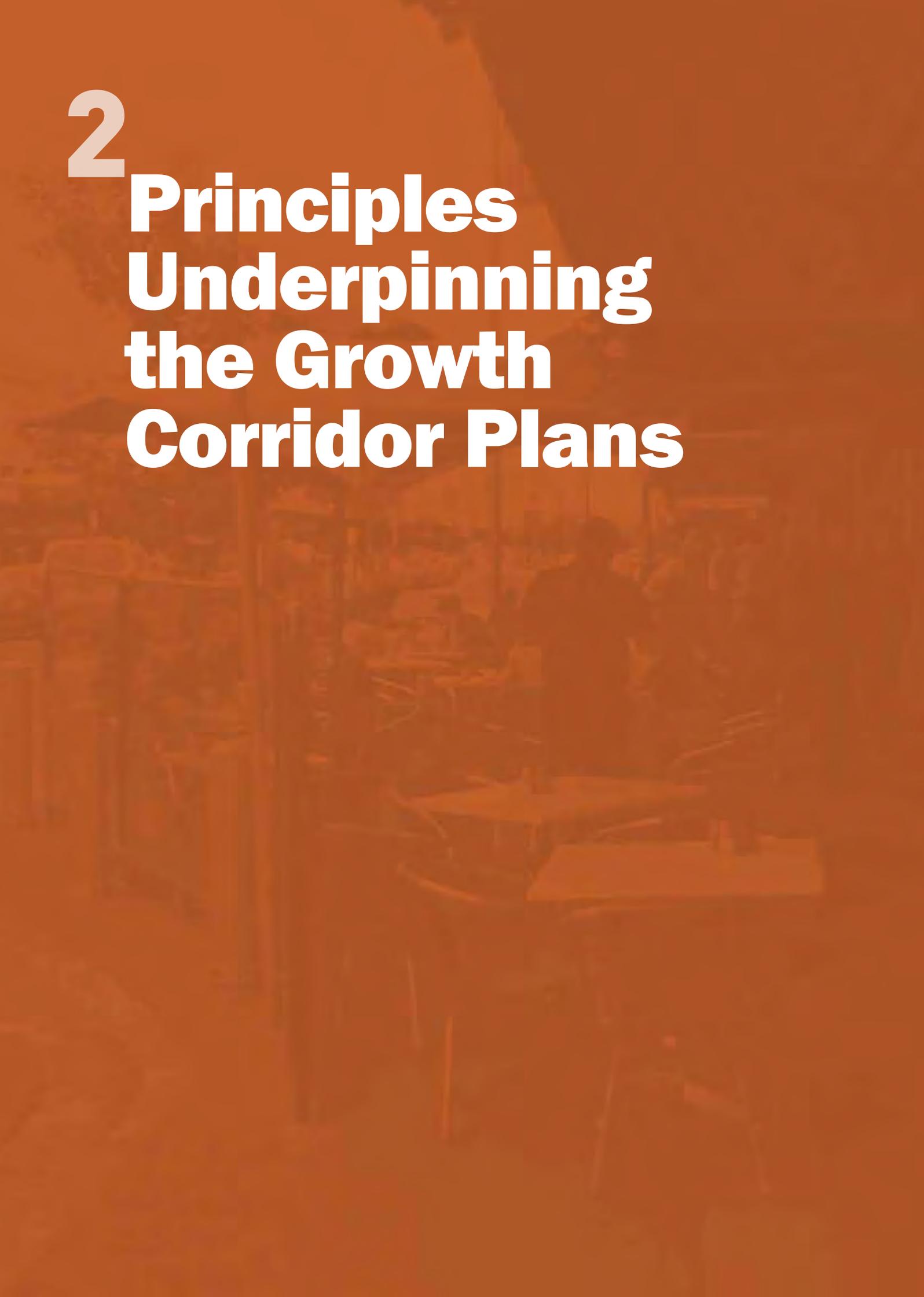
The Growth Corridor Plans will also be an important input to the new Strategy and form the basis of its plans for the Growth Corridors.

Public comments on the draft Growth Corridor Plans have helped the Government to refine how Melbourne's newest suburbs are planned and delivered, as well as directly informing the Government's thinking on the emerging Strategy.



2

Principles Underpinning the Growth Corridor Plans



2

Principles Underpinning The Growth Corridor Plans

While each Growth Corridor is different in terms of, for example, its scale, landscape setting, heritage and biodiversity values or potential employment mix, a suite of planning principles apply to all of them.

Each of the four Growth Corridor Plans have been prepared to address these common Principles, as well as the characteristics and requirements unique to each of them.

These Principles are also intended to apply to the preparation of future PSP's and to the consideration of major development applications.

The Principles listed below are discussed in more detail in Section 3 of this document.



Principle 1:
Create diverse and vibrant new urban communities



Principle 5:
Protect biodiversity, waterways and cultural heritage values



Principle 2:
Integrate transport and land use planning



Principle 6:
Create integrated open space networks



Principle 3:
Plan for local employment creation



Principle 7:
Plan for environmental sustainability



Principle 4:
Create Growth Corridors with high amenity and character



Principle 8:
Stage development to ensure the efficient and orderly provision of infrastructure and services

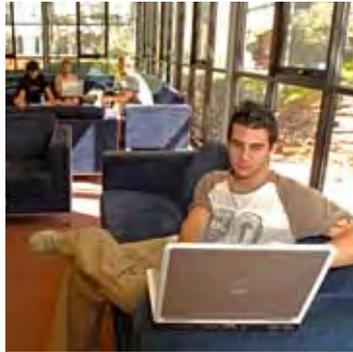
3

The Growth Corridor Planning Principles in Detail

3

The Growth Corridor Principles in Detail

The following sections discuss the Principles outlined in Chapter 2 in more detail. They have been used as the basis for each of the four Growth Corridor Plans that are included in Chapters 4-7. These Principles will also be used to guide the preparation of future PSPs and future infrastructure





3.1 PRINCIPLE 1: CREATE DIVERSE AND VIBRANT NEW URBAN COMMUNITIES

3.1.1 The Growth Corridor Plans aim to create communities of a sufficient size and density to support the provision of regional and local infrastructure and services

New communities need to be planned to be of a sufficient population size to support the levels of infrastructure, services and jobs that residents need, with an aim to be as self sustaining as possible.

Typically, a neighbourhood of approximately 8,000 to 10,000 people is sufficient to support a good range of local service provision, including local shopping, primary health and

education, community and recreation services.

Each neighbourhood is expected to have a Local Town Centre (LTC), accessible to as many residents as possible within easy walking distance. Supporting facilities are expected to include a local primary school and kindergarten, local health services, aged care accommodation, a community centre and sporting ovals and a good level of shops and services.

Community facilities that require larger catchments (such as secondary schools, regional health facilities and sporting fields) should be located to be easily accessed between neighbourhoods by public transport and cycling as well as by car.

Local neighbourhoods should provide a diversity of housing

choices to meet a wide range of needs and lifestyles. The average residential density within local neighbourhoods is preferred to be at least 15 dwellings per hectare. Higher residential densities (i.e. 20 or more dwellings per hectare) should be prioritised in areas of higher accessibility and amenity such as Local Town Centres and close to public transport and parks.

Groups of local neighbourhoods combine to form districts, which are often framed by major infrastructure or physical features such as freeways, rivers, rail lines or other large non-developable areas. These districts need to be self-contained, and generally include a wide range of jobs and a higher order town centre, and good connections should be provided between them.

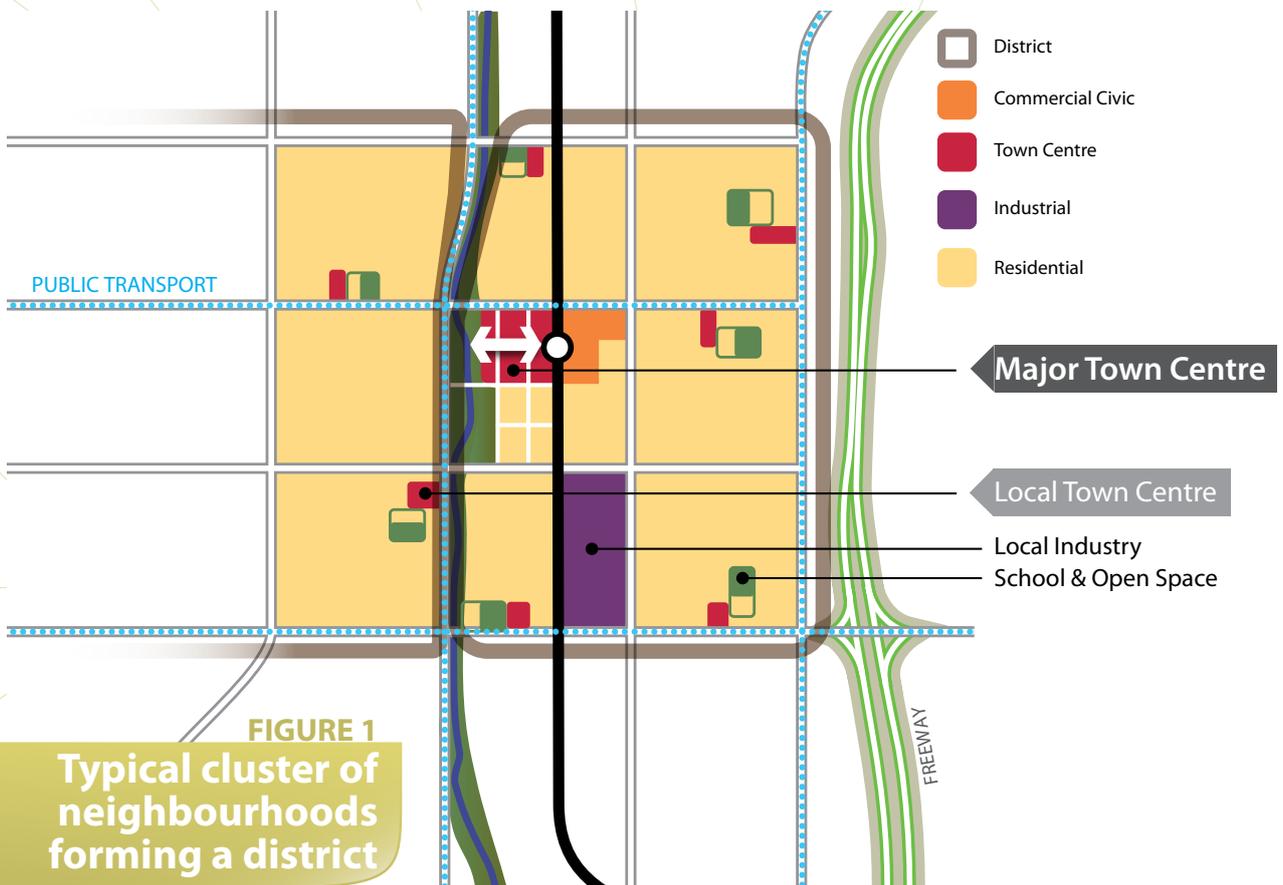


FIGURE 1

Typical cluster of neighbourhoods forming a district

3.1.2 Creating vibrant and attractive Town Centres

All Town Centres will be high quality, well designed locations that create a sense of place and become a highly desirable location to live, work and play as well as enhancing the overall liveability of the Growth Corridor. Centres are expected to combine a considered mix of land uses along with high quality urban design and architecture, public spaces (e.g. parks, public squares) and natural features to form places that are highly accessible, legible, pedestrian oriented and integrated with their surrounding catchments. Town Centres should retain a capacity to grow over time.

A hierarchy of Town Centres is proposed in the Growth Corridors, which are described below:

Local Town Centres (LTC)

Every neighbourhood should have ready access to a LTC, which is expected to be the focal point of neighbourhoods and the social heart. They should provide a good range of local jobs and services for residents. The location of the LTC will be identified in PSPs based on requirements set out in the Precinct Structure Planning Guidelines.

Role: Local needs

Characteristics:

- > Serve a catchment of approximately 8,000-10,000 people;
- > Be a community focal point;
- > Contain a diversity of accommodation types (e.g. medium density housing, possibly aged care)
- > Anchored by a supermarket and a range of specialty shops and supported by a range of non-retail activities such as child care, health services, community meeting spaces, recreational and entertain-

ment facilities;

- > Served by at least a local bus route and be accessible by means of walking and cycling; and
- > Located on a connector street, with access to an arterial road.

Major Town Centres (MTC)

MTCs should accommodate a wide range of shopping, employment, community, health, education and housing options, be located on the PPTN and have good access to the arterial road network.

Role: Sub-regional (District catchment)

Characteristics:

- > Located along the PPTN and highly accessible from the arterial road network;
- > Potential location for regional services such as post-compulsory education and more specialised health and community services, as well as entertainment and shopping; and
- > Will contain a diverse range of housing options, including medium to higher density housing in and around the centre location and a diverse range of businesses and jobs.

Principal Town Centres (PTC)

PTCs will generally comprise the broadest mix of higher-order activities, generating significant numbers of visits.

Role: Regional centre (Whole of Growth Corridor catchment)

Characteristics:

- > Are located on those parts of the transport network that have the highest capacity and greatest accessibility to a regional catchment, well served by heavy rail, as well as multiple public transport routes, arterial roads and regional cycling and trail networks;

- > Most appropriate location for regional services such as post-compulsory education and more specialised health and community services. They should be a focus for Government and community facilities, services and investment;
- > PTCs are expected to accommodate the broadest range of retail activity because they will be the most accessible to a regional catchment and supported by integrated high capacity public transport. They will also be the location for regional scale facilities, and more intensive employment opportunities
- > Enables high intensity uses comprising jobs, shopping, leisure and recreation to co-locate in these centres to encourage multi-purpose trips and are accessible to the largest number of people in the region; and
- > Be the location for medium and high density housing within and close to these centres.

Central Activity Areas (CAA)

Are the largest centres within the metropolitan area beyond Melbourne's CBD. They are similar to Principal Town Centres, but are already well established, with a high level of existing services and facilities and a broad regional catchment within the existing metropolitan area.

A wide range of regional services such as post-compulsory education and more specialised health and community services are expected to locate in CAAs. Like PTCs, they will be a focus for Government and community facilities, services and investment.

Broadmeadows, in the North Corridor, Footscray in the West, and both Dandenong and Frankston in the South East, are designated CAAs that are likely to provide a significant regional

function to support the emerging growth in their respective Corridors

The CAAs should be supported by the complementary hierarchy of PTCs, MTCs and more locally by LTCs.

Specialised Town Centres

Specialised Town Centres may be appropriate in a number of 'Business' precincts. These Centres will have a relatively small retail function, but will provide locations for specialist business services, conferencing, accommodation, recreation (e.g. gym), entertainment etc. Co-location of these activities within a Specialised Town Centre will help to ensure the most efficient provision of infrastructure and allow for multi-purpose trips. They should be highly accessible by public transport.

Creating the retail framework for town centres

Within the Town Centre framework, the highest order Centres, (CAAs & PTCs), will accommodate the broadest range of retail activity because they will be the most accessible to a regional catchment and supported by integrated high capacity public transport. They will also be the location for regional scale facilities, and more intensive and large scale employment opportunities.

The network of Town Centres across the growth areas has been informed by an analysis of catchments, taking into account both existing and planned centres in urban areas. MTCs and LTCs will be expected to provide retail activity commensurate to a level that their catchment and accessibility can support.

The GCP does not seek to apply retail floor space caps for any centre. Each centre is expected to retain a capacity to grow over time.

However, the ultimate size and nature of retail and other uses within each Town Centre will be further informed by more detailed catchment analysis as each Precinct Structure Plan is prepared. This analysis will have regard to the potential impact on existing, developing and planned town centres across each Growth Corridor.

Bulky Goods

Bulky Goods (referred to as 'restricted retail' in Planning Schemes) should ideally be located in or adjacent to higher order town centres or in strategic locations within business precincts as part of a cluster of similar uses. Co-location of bulky goods in these locations is preferred and can allow for a more efficient use of infrastructure, greater accessibility by public transport, combined purpose trips and better employment opportunities.



3.1.3 Providing Regional Community, Health and Education facilities

The new Growth Corridor communities will require a range of community facilities and services to meet their needs over time. The benchmarks for the broader range of community services need to be developed further, but there is a need to consider these services as an integral part of planning new neighbourhoods and districts.

Existing higher-order health, post-compulsory education facilities and community facilities located in established areas will continue to play a significant role in meeting the future needs of residents living within Melbourne's Growth Corridors. However, over time consideration may need to be given to extending such higher order services into the Growth Corridors.

Central Activities Areas, Principal and Major Town Centres provide the most appropriate locations for regional services such as post-compulsory education and more specialised health and community services. Locating services in larger centres achieves a number of benefits:

- > Maximising accessibility to such services, especially by public transport;
- > Contributing to the activation of such centres;
- > Optimising opportunities for joint-use/sharing/integration with other community facilities in the centre; and
- > Enabling links between services and nearby business activities.

Health

The Government recognises a need for additional health services in Melbourne's outer west, north-west and south-east. The planning of new health services will take place in accordance with the *Victorian Health Priorities Framework 2012-22: Metropolitan Health Plan and the Health Capital Resources Plan 2012-22*, and will consider factors such as population growth, service quality and efficiency, the potential for non-hospital models of care, workforce availability and the location of complementary Commonwealth funded and private healthcare services.

As a guide, the following can generally be applied to community based health care services that service catchments larger than local neighbourhoods:

- > Some specialist secondary health including rehabilitation services provided from integrated facilities, for a catchment of approximately 50,000 to 100,000 people, depending on the nature of that population;
- > Integrated ambulatory health care facilities with a catchment of approximately 100,000 to 200,000 people; and
- > Acute health, including emergency care facilities, with a catchment of approximately 500,000 people in a Growth Corridor.

Education

An integrated planning approach is required to planning for compulsory and post-compulsory education services in Growth Corridors. Government and non-government schools, Universities, TAFE Institutes, Registered Training Organisations, VET providers, and other adult education services will all play a critical role in providing for the ongoing lifelong learning needs of people within these new communities.

As a guide, the following typically apply to education facilities that service catchments larger than local neighbourhoods:

- > Government secondary schools with a catchment of approximately 25,000 to 30,000 people;
- > Catholic primary schools and secondary schools, with catchments determined through detailed strategic planning by the Catholic Education Office of Melbourne taking into account population growth rates and demographics in each region; and
- > Independent schools, which will have variable student numbers and are likely to serve a wider regional catchment.

Provision of Higher Education services including TAFE and universities will be determined by review of the capacity of existing services and the anticipated demand for expanded services within each Growth Corridor.



3.2 PRINCIPLE 2: INTEGRATE TRANSPORT AND LAND USE PLANNING

It is important that as many people as possible have easy access to the widest range of jobs, education opportunities, health care, shops and services and leisure and recreation facilities. A range of transport options should be available to people. Integrated transport and land use planning is crucial to delivering economically, socially and environmentally sustainable new communities that promote more efficient patterns of living.

A need to travel long distances for everyday purposes such as going to work or school is costly in terms of time, environmental impact and to household budgets.

The Growth Corridor Plans seek to reduce the length of such trips within the Growth Corridors and to other destinations in Melbourne. The Plans:

- > Encourage self-containment at the neighbourhood and district levels;
- > Promote efficient and compact communities with higher residential densities, close to facilities and supported by integrated public transport;
- > Promote concentrated and mixed use activities – from Local through to the Principal Town Centres;
- > Encourage an increased number and range of employment opportunities within Growth Corridors; and
- > Will encourage, over time, the provision of a full range of facilities and services to be located within Growth Corridors.

3.2.1 Creating an integrated multi-modal transport network

The Growth Corridor Plans propose the development of a multi-modal transport network (including a Principal Public Transport Network [PPTN], arterial road, freight and Principle Bicycle Network [PBN]) to support communities, town centres and employment areas and to provide reasonable travel choices.

The plans identify:

- > High capacity transport links connecting each Growth Corridor to the rest of metropolitan Melbourne;
- > Local transport networks that link people to jobs and services within each corridor; and
- > Existing and future strategic transport corridors, particularly the Principal Freight Network.

Public Transport

Planning for the identified PPTN includes a higher capacity component (including rail) to link the Growth Corridors to the CBD, the rest of metropolitan Melbourne and regional Victoria, as well as linking higher order town centres within each Growth

Corridor. The PPTN identified on the Growth Corridor Plans is indicative and is subject to modification during detailed planning at the PSP stage.

The aim is for all neighbourhoods and other significant trip generators to be located within 3 kilometres of such services.

The balance of the PPTN is likely to comprise of strategic bus links between Major Town Centres, major employment areas and rail stations.

Throughout the Growth Corridors, land uses along suitable parts of the PPTN will generally be managed to support development of higher density housing and other uses that are likely to benefit from public transport access.

The PPTN in the Growth Corridors will typically be complemented by planning for a comprehensive local bus network to be defined in PSPs. Arterial and collector roads will be designed to carry bus services so as to enable public transport services to be delivered as efficiently as possible.

The ultimate PPTN will be designed through PSPs to meet the anticipated patronage demand and objectives described in sections 4 to 7.

The arterial road network

Planning of the arterial road network has been based on the 'SmartRoads' framework. This framework strongly links transport decisions with land use planning, by managing the many competing demands for limited road space. Assigning preferred routes for each transport mode across the Growth Corridors will enable the efficient operation and management of the transport network into the future.

SmartRoads will assist the implementation of the Growth Corridor Plans by enabling high-level strategic decisions to be made about how each transport mode, including pedestrians and cyclists will be managed in the broader growth area. Precinct Structure Plans will also be influenced by SmartRoads, with 'Road Use Hierarchy Plans' and 'Network Fit Assessments' guiding decisions for the provision of future transport infrastructure.

The identified primary and secondary arterial road networks for the Growth Corridors have been developed on the basis of providing a 1.6km (1 mile) arterial road grid pattern wherever possible, with this basic grid being modified where necessary to take account of the proposed form of urban development and of environmental and other constraints. Inclusion of any arterial roads in the plans does not indicate a commitment to funding or declaration as a state arterial road.

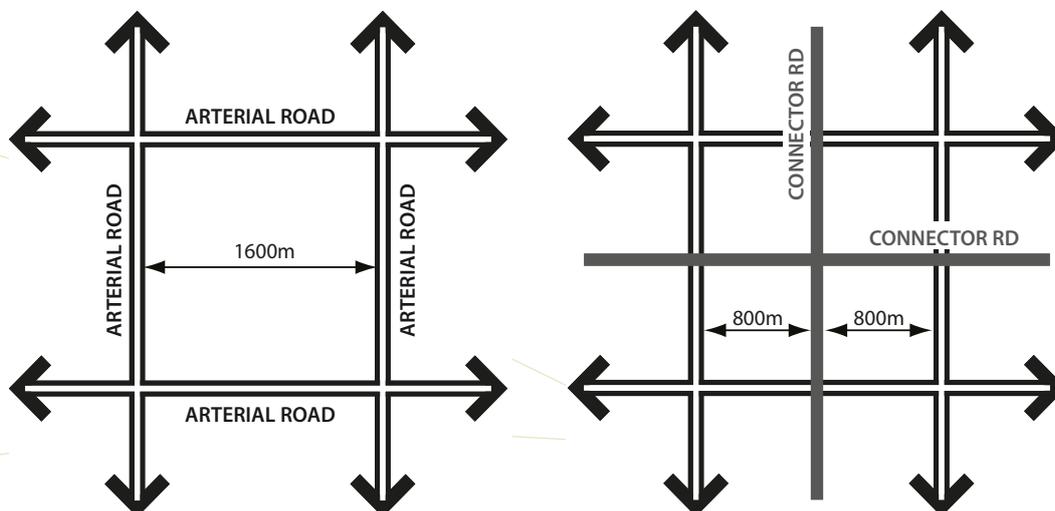
The arterial road network identified within Growth Corridors will usually consist of 6 lane divided primary arterials and 4-lane divided secondary arterials, depending on local demand.

Generally every second road in the grid will be a primary arterial which caters for long-distance through traffic. Some of these will be designed primarily to carry freight. These primary arterial roads will typically be spaced at 3.2 km intervals.

The alternating arterials will generally be designed as secondary arterial roads, where public transport functions will be prioritised. Catering for long-distance, through traffic will be a lower priority on these routes, and there will be greater opportunities for connectivity across them, with collectors and/or pedestrian crossings being spaced more regularly than is acceptable along primary arterial routes.

Precinct Structure Plans will:

- > Be based on an analysis of future traffic generation and demand, which are in turn based on population projections, dwelling and employment densities and local circumstances e.g. physical conditions;
- > Identify the type of roads needed and the precise alignment of roads and road reserves; and
- > Deliver land for road reserves and the early road infrastructure to support new communities via developer contributions or works in kind.



<> <http://www.vicroads.vic.gov.au/Home/TrafficAndRoadConditions/HowWeManageTraffic/Smartroads/>

Other features of the new road network identified in the plan include:

- > Locating town centres on intersections with secondary arterials, wherever possible. Such centres should not straddle arterial roads;
- > Arterials should have the capacity to be divided by a median with potential boulevard treatment where appropriate;
- > Public transport priority at intersections should be considered on all arterials, as appropriate;
- > Opportunities for pedestrians to cross arterials will generally be provided at every major intersection and at PPTN stops in locations of high activity; and

Connector streets provide for short distance travel and access to Local Town Centres and community facilities. Connectors will normally be a two-lane road located midway between arterial roads. Direct property access is expected on these streets, including providing for 'main street' style town centres.

Freight Network and Freight Precincts

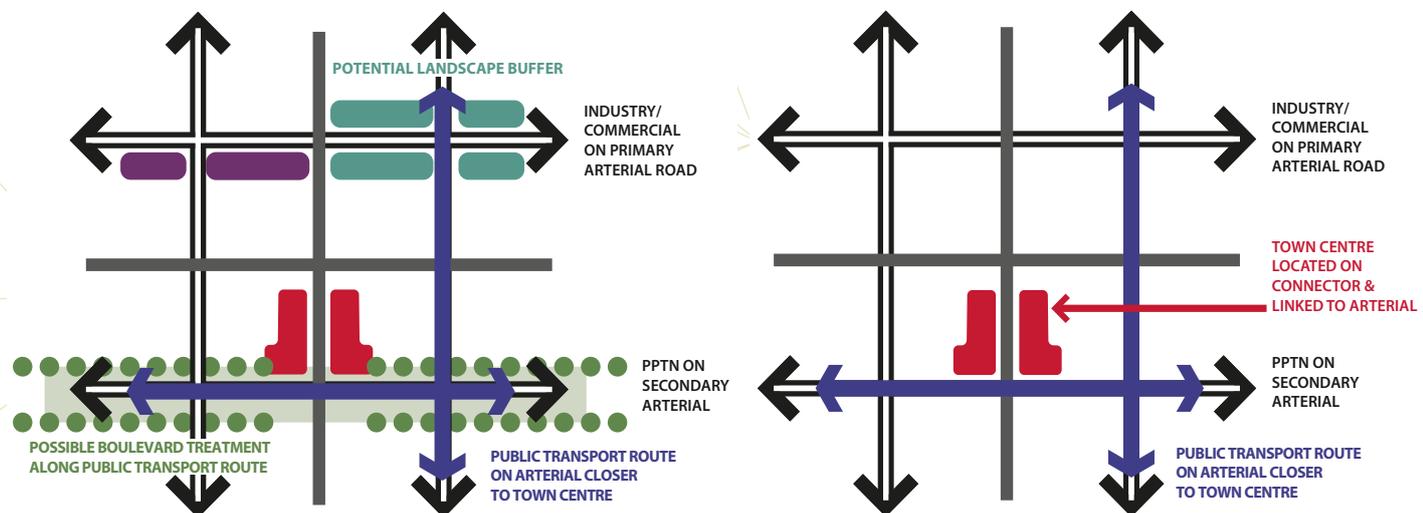
Planning for Melbourne's growing freight task is aimed at developing a freight network with sufficient capacity which is well connected to precincts of aggregated freight activities.

A Principal Freight Network (PFN), comprising road and rail, has been designated and aims to provide sufficient capacity for current and future demand. The PFN, which will be progressively expanded, is linked to a range of existing and proposed freight precincts including intermodal freight terminals, commercial trading ports and airports.

Improving capacity and connectivity for the PFN is an ongoing task and underpins productivity for the freight sector. Freight planning recognises a hierarchy of freight precincts, with additional 'gateway' precincts which are anticipated to be established at key locations in Growth Corridors, appropriately connected to the PFN.

Metropolitan freight planning is also expected to progressively decentralise freight activities from central Melbourne to selected outer industrial areas, reinforcing the role of the proposed gateway freight precincts in growth areas.

Designated freight precincts will be planned in more detail through precinct structure planning, project development investigations, and the use of statutory planning tools where appropriate.



<http://www.vicroads.vic.gov.au/Home/TrafficAndRoadConditions/HowWeManageTraffic/Smartroads/>

3.2.2 Opportunities for locating higher density land uses

The PPTN routes are expected to be supported by land uses that can generate demand for public transport trips. In the Growth Corridors, the following activities are expected to be located along the PPTN:

- > Principal and Major Town Centres (including retail, high density residential development and regional health, education and community facilities); and
- > Higher density employment precincts.

Prioritising investment in high capacity public transport (especially rail stations) requires that land uses capable of generating significant public transport patronage levels are co-located in order to facilitate combined purpose trips, ideally in PTCs or MTCs or employment precincts. This will ensure that infrastructure is provided and used in the best and most efficient manner. Possible new rail stations are therefore identified where there is a large residential catchment and/or at major destinations, such as a PTC and/or clusters of other high trip generating facilities.

The Growth Corridor Plans locate PTCs next to existing or identified rail stations. Major Town

Centres are located either at rail stations, or other key PPTN nodes. Early planning for public transport infrastructure to significant employment generating precincts is also considered to be important in terms of being able to affect travel patterns and important decisions.

All major activity nodes (including town centres) are shown to be located where PPTN routes intersect or where local public transport services interconnect with the PPTN.

Town Centres, local commercial centres in employment areas and other higher density precincts should be designed to integrate well with public transport services. The highest density land uses and those facilities that are most likely to attract the most trips should be located closest to a public transport node.

The location and design of PTCs and MTCs should also provide good accessibility via the arterial road network, while not allowing arterial roads to divide functions within the centre from each other or from the major public transport node. Such town centres will, wherever possible, be located on secondary rather than primary arterial roads.

Wherever possible, Local Town Centres should also be located so that they have ready access to the PPTN.

3.2.3 Creating complementary walking and cycling networks

Provision for bicycle routes should generally be planned for the majority of arterial roads that form part of the Principal Bicycle Network (PBN) and local arterial and collector roads, normally in the form of bicycle lanes, exclusive bicycle paths or shared paths. These routes should be integrated with and supported by the Metropolitan Trail Network (MTN) and together link residential communities with key employment, education, shopping and recreation destinations.

Particular emphasis will be placed on ensuring that the designs of town centres, mixed use and business precincts provide convenient access from walking and cycling networks and have a high level of pedestrian amenity.

Cycling networks should have a high degree of connectivity, continuity and permeability. Bicycle routes should directly connect to major destinations, other bicycle routes and other transport corridors to provide a network of continuous and interconnected routes. The bicycle network should be permeable to enable easy and ready access by users. The network should generally be a combination of shared paths, exclusive bicycle paths and on road bicycle lanes to provide for all levels of riding skill.





3.3 PRINCIPLE 3: PLAN FOR LOCAL EMPLOYMENT CREATION

Communities in outer Melbourne have experienced high levels of population growth but low or delayed employment growth.

Often the number of jobs available is substantially below the number of workers living in the area. Even where the number of available jobs is higher there has often been limited diversity in local job opportunities. As a result many residents still have to travel long distances to access jobs that match their skills.

Diversifying the typical employment base in Melbourne's Growth Corridors will require a progressive shift to an employment mix closer to that which currently exists in Melbourne's established middle ring suburbs.

An underlying aspiration of these plans is to help facilitate at least one new job for each additional household across the Growth Corridors and also to increase the diversity of employment opportunities available to Corridor residents.

Around one third of job opportunities can be created within local neighbourhoods, with the remainder created across the sub-region, within a network of higher order town centres, business and industrial precincts.

3.3.1 Neighbourhood level employment

Employment opportunities within local neighbourhoods are expected to comprise a broad mix of local retailing, education, community services, home based businesses and other non retailing jobs in and around town centres.

Community services within local neighbourhoods should generate employment in primary and secondary schools, kindergarten and childcare centres, community centres, medical centres, and retirement/aged care facilities, etc.

Local Town Centres are also expected to also generate jobs in local supermarkets, specialty retailing and some non retailing activities.

Residential PSPs are expected to provide for smaller industrial/commercial precincts interspersed across local neighbourhoods to meet local requirements for businesses and service trades, such as new business start-up units. In each case the need for such areas will be confirmed as part of the PSP process.

3.3.2 Employment in Principal and Major Town Centres

Principal and Major Town Centres are expected to cater for a substantial component of employment choice across the Growth Corridors. These centres are likely to include a broad range of retail facilities, as well as a wide mix of commercial, community, education, health, cultural, recreation and leisure facilities.

The location of these types of activities in larger town centres will mean that they have access to an extensive workforce, as well as maximising opportunities to generate additional business and employment growth that, over time, should add to total job numbers and diversity in the Growth Corridors.

Strategic planning for larger town centres needs to provide for longer-term needs, and sufficient land should be set aside in these centres to enable a wide variety of such uses to establish over time.

On the basis that a full range of non-retail services are concentrated in the higher order town centres, then they have the potential to generate around one-quarter of all jobs required across the Growth Corridors.

Upon ultimate development, Principal Town Centres are expected to generate between 6,000 to 10,000 jobs while Major Town Centres are expected to generate 2,000 – 6,000 jobs.

3.3.3 Employment in business precincts

Not all commercial and office related employment is suitable for location within town centres. For example, offices linked to research and development activities may be better located in business precincts.

Business precincts identified on the Growth Corridor Plans are large flexible multi-use areas that provide for a wide range of employment opportunities. They are located so as to have excellent access to the arterial road and Principal Public Transport Network and a local resident workforce.

The Growth Corridor Plans generally locate such precincts adjacent to town centres or along PPTN routes, so as to facilitate the provision of public transport access as employment levels grow over time. The integration of public transport in these business precincts is considered to be an important component of any future PSP development and delivery.

Business precincts are expected to deliver more intensive forms of employment generating uses in comparison to industrial areas. They will accommodate a wide range of employment generating uses including service industry, office and commercial activity, and research and development and some bulky goods (restricted retail).

A range of supporting ancillary uses will be expected to co-locate in local scale 'Specialised Town Centres'. These centres will have a relatively small retail function, but will provide locations for specialist business services, conferencing, accommodation, recreation, entertainment etc. Co-location of these types of activities within a Specialised Town Centre will help to ensure the most efficient provision of infrastructure and allow for multi-purpose trips. Specialised Town Centres should be highly accessible by public transport.

Business precincts are expected to deliver minimum job densities in the range of 30-40 jobs per gross hectare, and this employment range will be used as a minimum guide for the preparation of PSPs in these locations and should be exceeded where possible, particularly on sites of high strategic importance.

In some locations (as identified on the plan), these precincts may also include residential, cultural, recreational and civic uses as part of a broader mix of activities which support the overall employment activities. In such circumstances, these business precincts are expected to deliver minimum job densities in the range of 15-20 jobs per gross ha, and this employment range will be used as a minimum guide for the preparation of PSPs in these locations.

Business related activities are typically expected to be the predominant land use in these locations. Preserving the potential for these precincts to deliver employment outcomes is the most important planning and development outcome. This should be the principal measure guiding planning and development decisions in these locations.

Future detailed planning for these precincts will therefore need to demonstrate that employment provision is based on realistic demand over the medium to long term.

Whilst it might be expected that residential and non-core employment uses could be delivered within some of these precincts (as shown on the Growth Corridor Plans) in the shorter term (and in advance of the higher order employment activities), sufficient land must be protected to ensure an appropriate supply of strategically located land is preserved over the entire duration of the plan (e.g. 30-40 years).

Any proposals for land uses other than employment related uses will need to demonstrate that the overall objective for the land to deliver significant employment generating outcomes for the local area and the wider corridor would not be prejudiced.

Residential areas should be designed to complement and enhance the area for employment

activities.

3.3.4 Industrial land supply

The availability of stocks of competitively priced land for manufacturing and logistics uses has been a significant source of competitive advantage for Melbourne in the past. Ensuring that this competitive advantage is protected in the future is an important planning outcome to achieve in Melbourne's Growth Corridors. The Growth Corridor Plans provide sufficient industrial land for up to the next 40 years.

Safeguarding strategically located industrial land over the entire lifetime of the Growth Corridor Plans is critical because the opportunity to 'retro-fit' industrial precincts into any Corridor is not possible once sensitive land uses (e.g. residential) are allowed to establish.

Melbourne currently has sufficient land to meet the needs of large-scale industrial development for the next 25 years. However, planning for additional industrial areas must occur well before the existing land supply nears its end. The Growth Corridor Plans currently allow for 10- 15 years of additional broad hectare industrial land in addition to the existing supply.

Setting aside a large supply of land to meet Melbourne's longer term industrial and logistics needs



will enable the city to cater for increasing demand as the sector grows. The Port of Melbourne is Australia's most important container port and container movements through Victoria are forecast to increase by 240% over the period from 2008 to 2030 (from 2 million to 6.8 million TEUs). The regional trading ports of Hastings and Geelong also have major import and export roles. The associated logistics and warehousing arising from this shipping growth is substantial. The reduction in availability of large vacant sites and the increasing value of industrial land in established suburbs, together with the continuing displacement of industrial uses in inner and middle suburbs by residential redevelopment, means that Growth Corridors are likely to increasingly be Melbourne's primary source of land for manufacturing and logistics uses.

Outer urban industrial precincts will also help to cater for currently unforeseen demand associated

with changing economic structures and the possibility of higher metropolitan population growth.

The Growth Corridor Plans propose extensions to a number of existing industrial nodes, and the creation of new nodes in key locations on metropolitan transport networks.

The industrial areas identified in the Growth Corridor Plans are generally large (i.e. over 200ha). Such large precincts provide opportunities for co-location of companies serving similar sectors/markets, as well as providing opportunities for industries that have large land use buffer requirements to find suitable sites.

The criteria adopted for locating major industrial precincts are:

- > good access to the Principal Freight Network (PFN) and via the network to ports, airports and intermodal freight terminals;
- > the availability of sufficient unfragmented land holdings to enable the development, over time, of clusters of related businesses
- > relatively flat land with good access to services and infrastructure so as to enable economic subdivision and building development; and
- > the ability to provide adequate buffers from residential and other sensitive land uses to enable planning and EPA guidelines for residual air and noise emissions to be met.



Rob Blackburn



Rob Blackburn



The distribution of industrial precincts between the Growth Corridors has been based upon an assessment of market preferences and the level of existing industrial land stocks. Relatively more industrial land has been identified in the West and, to a lesser extent, the North Growth Corridors as these areas provide better access to the interstate freight network and to Melbourne's ports and airports.

Around half of the additional industrial land supply is located in Melbourne's west, either as an extension to the existing industrial node at Laverton or along the OMR and freeway network. Much of this will be linked to the proposed Western Interstate Freight Terminal at Truginina.

Additional industrial land supply is also identified in Melbourne's north, either along the Hume Fwy or as an adjunct to the proposed potential Beveridge Interstate Freight Terminal and OMR/E6 road reservation, providing for longer term road and rail freight distribution.

Comparatively less industrial land is identified to be added in the South-East Growth Corridor, due largely to the fact that this Corridor already has a significant longer term supply of industrial land in Dandenong, Officer and Pakenham South, as well as port-related industrial development opportunities at the Port of Hastings.

Smaller areas of industrial land have been identified in Sunbury, largely to meet the local population based industrial needs of the township, and to help increase the comparatively low job self-containment rates of the town. The improvement of transport options to metropolitan employment opportunities will also help to provide a diversity of jobs for Sunbury's residents.

In areas set aside for industrial purposes, PSPs are expected to deliver land predominantly for industrial uses with some allowance for a range of ancillary supporting services. Job density of 15-20 per gross hectare should be achieved.





3.4 PRINCIPLE 4: **CREATE NEW SUBURBS WITH HIGH AMENITY AND CHARACTER**

3.4.1 Protect and reinforce the physical features that distinguish each Growth Corridor

The protection and enhancement of existing landscapes within and adjoining Melbourne's Growth Corridors will provide the basis for creating new communities of high amenity and a strong local identity.

The ridgelines, hilltops, waterway corridors, and areas of special environmental and heritage significance in each Growth Corridor are the key to creating strong local character. The Growth Corridor Plans identify areas of special landscape significance that should be protected and enhanced, so as to make an ongoing contribution to the livability of the Growth Corridor.

Planning of each corridor should maximise the contribution that these landscape features make to the local character and amenity of the Growth Corridor.

In some instances it may be sufficient to protect such landscape features by excluding them from the areas identified for urban development. For more prominent areas it may be necessary to consider special planning and design controls that will prevent the gradual erosion of the character of such areas.

The final boundaries of landscape-related non-urban zones will be determined at the PSP stage, based on a more detailed local assessment of landscape character and values. The Growth Corridor Plans indicate where some instances where there may be some potential for review of the current zonings.



3.4.2 Design built form to enhance the local character

The urban environment of Melbourne's Growth Corridors should be designed and developed in a way that enhances amenity and local identity.

At the local level, aspects of neighbourhood design that warrant special attention include:

- > The design and layout of Local Town Centres
- > The design of local open space networks, parks, gardens and town squares
- > The design and treatment of the arterial road network and adjoining land uses.

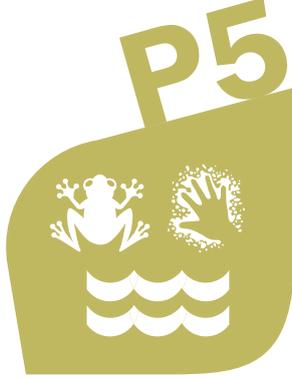
The PSP Guidelines provide further guidance on how each neighbourhood can be planned and developed to achieve this goal.

Other critical elements of built form in Growth Corridors that warrant special design attention include:

- > Key arterial roads that provide a prominent spine through urban areas. A high standard 'boulevard' treatment may need to be considered in some locations; and
- > Significant regional infrastructure projects that require special care so as to not adversely impact on the character and identity of new Growth Corridors. These include road and rail projects, quarries and industrial nodes.

Creative urban and landscape design solutions are required in these locations to mitigate any potential adverse amenity features, and wherever possible enhance the character of the area.





3.5 PRINCIPLE 5: PROTECT BIODIVERSITY, WATERWAYS AND CULTURAL HERITAGE VALUES

3.5.1 Implementing the Melbourne Strategic Impact Assessment agreement under the EPBC Act 1999

In 2010, the Victorian Government completed a strategic assessment of the impact of urban development and related infrastructure projects on Matters of National Environmental Significance (MNES) within Melbourne's expanded Urban Growth Boundary.

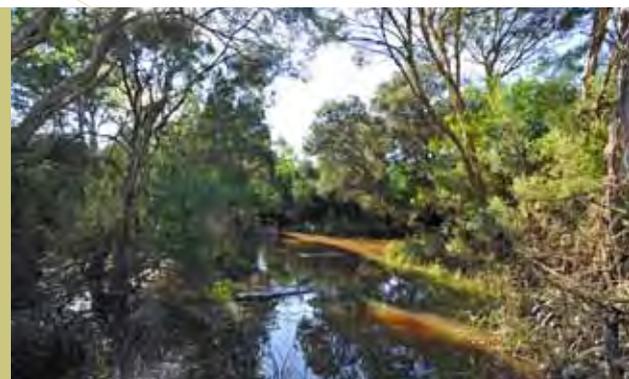
This assessment was undertaken as part of an agreement between the Victorian State and Commonwealth Governments under part 146 of the *Environment Protection and Biodiversity Conservation Act*, 1999 (EPBC). Its purpose is to both conserve nationally important biodiversity values and facilitate long term urban development outcomes within Melbourne's Growth Corridors. The agreement is intended to cut red tape and streamline environmental assessments for development projects within Melbourne's Growth Corridors.

The 'Program'¹ approved under this bilateral agreement identifies a series of processes and mitigation measures that the Victorian Government will use to meet the requirements of the EPBC Act 1999. In particular it:

- > Establishes grassland reserves of approximately 15,000 hectares immediately west of Melbourne and proposes a new 1,200 hectare grassy woodland reserve north-east of Melbourne. These reserves will offset the impact of development within the expanded Growth Corridors, as well as provide enhanced environmental protection for nationally listed grassland and woodland communities and several listed threatened species;
- > Sets aside a series of sites within the UGB for protection due to their biodiversity values. These are generally described on pages 9 and 10 of the approved 'Program report'². This includes, for example, a large network of protected environmental areas associated with Merri Creek and its environs within the North Growth Corridor. This will include important stands of grassy woodlands and remnant native grasslands, and habitats for the Growling Grass Frog;
- > Creates a series of 'Prescriptions' for managing MNES which are likely to be impacted as a result of urban development. They identify how impacts are to be mitigated, including through the provision of appropriate offsets or strategic planning initiatives. The Prescriptions are intended to be used in the Precinct Structure Planning process and in approvals required for transport infrastructure, extractive industries and other development approvals within the Program;
- > Requires the preparation of conservation strategies for the protection and management of the Golden Sun Moth (GSM), Growling Grass Frog (GGF) and Southern Brown Bandicoot (SBB). These strategies identify important populations, and areas to be retained for biodiversity conservation purposes; and

¹ The Program is the Urban Growth Boundary (UGB) review that was announced by the Victorian Government on 2 December 2008 that resulted in the revised UGB alignment, approved under Amendment VC68 to the Victorian Planning Provisions and gazetted on 6 August 2010.

² 'Delivering Melbourne's Newest Sustainable Communities – Program Report', December 2009, Department of Planning and Community Development



- > Requires the preparation of Biodiversity Conservation Strategies (BCS) that draw together all relevant strategies for managing MNES in each corridor as well as the intent and requirements of the prescriptions. These strategies have informed the Growth Corridor Plans and will have an ongoing role in the preparation of PSPs within Growth Corridors. The intent and requirements outlined in the Prescriptions are fulfilled by the Biodiversity Conservation Strategy and Sub-Regional Species strategies, and with Commonwealth Government agreement and implementation of the commitments made in the strategies, the prescriptions will cease to remain in force.

The relationship between the Growth Corridor Plans and other parts of the approved program under the EPBC Act 1999 are described in figure 4 of section 5.2 of the *'Program Report'*.

3.5.2 Setting aside areas for biodiversity protection that are of sufficient size and connectivity to sustain their biodiversity values in the longer term

The Growth Corridor Plans identify key waterways and areas of high biodiversity value that have the potential to provide sustainable habitat for threatened species as part of the integrated open space network for the each Corridor.

Consistent with the strategic approach taken by the bilateral agreement under the EPBC Act 1999, priorities for conservation of habitat have been determined at a regional level. It is important to ensure that areas identified for biodiversity conservation are of a sufficient size and characteristics to have good prospects of maintaining their biodiversity value over time. Connectivity between areas of habitat both within a Growth Corridor and in terms of linkages to natural areas outside the Growth Corridor is often critical to biodiversity outcomes.



3.5.3 Protecting and Enhancing Growth Corridor Waterways

The major waterways and riparian corridors that run through the Growth Corridors are important to biodiversity and cultural heritage conservation, the amenity of the Growth Corridors and the protection of water quality within and downstream of the Growth Corridors.

The management of stormwater associated with urban development is extremely important for the health of waterways. Mitigating the effects of new development in increasing the volume, duration and intensity of stormwater run-off events will be critical.

For waterways with particular environmental value, the aim should be to maintain pre-development flow volumes, quality and frequency of stormwater discharges and in all cases adjustments to natural streams and floodways should be minimised.

Reducing the direct connection of stormwater pipes to such waterways, through the use of water sensitive urban design and the construction of wetlands, for example (using different techniques in different catchments to reflect local conditions), is important in improving waterway health.

Precinct Structure Planning will respond in greater detail to local waterway values ensuring that Melbourne's waterways continue to provide a network of flora and fauna habitats, flood protection and natural open spaces that make a major contribution to the livability of the Growth Corridors.

3.5.4 Protecting areas of significant Aboriginal cultural heritage and post-contact heritage

Known and likely areas of Aboriginal cultural heritage and post-contact heritage value have been considered in the preparation of the Growth Corridor Plans.

In the case of Aboriginal cultural heritage there is likely to be a strong correlation between sites of heritage significance and waterways and other landscape and biodiversity features that are proposed to be included in open space networks. The Growth Corridor Plans provide for such cultural heritage values to be protected in the ongoing planning and management of the open space network for each Growth Corridor.

The meaningful integration of Aboriginal cultural and post contact heritage will also be considered at the PSP stage and in many instances a Cultural Heritage Management Plan will be required to satisfy the requirements of the *Aboriginal Cultural Heritage Act 2006*.





3.6 PRINCIPLE 6: CREATE INTEGRATED OPEN SPACE NETWORKS

3.6.1 Plan Open Space to Achieve Multiple Outcomes

Open space networks within Growth Corridors have been planned on an integrated basis. Integrated planning of active and passive open space networks can play a key role in protecting environmental, heritage and drainage values, providing for the recreation needs of the community and establishing the liveability and 'sense of place' of each Growth Corridor. By taking advantage of opportunities to use land for multiple purposes it can also ensure that land is used efficiently and so contribute to the overall sustainability of the Growth Corridors.

The identified open space networks are based on linear features such as creeks and ridgelines and incorporate other protected areas such as prominent hilltops, conservation reserves and regional parks, along with encumbered land such as utility easements and retarding basins.

Detailed planning, development and ongoing management of parts of the open space network should seek to contribute to biodiversity conservation, heritage protection, recreation, flood management, waterway and water quality protection and amenity enhancement.

3.6.2 Locating Regional parks in tranquil areas of high landscape value

Regional parks provide primarily for passive recreation rather than more intense active recreational needs. Often they will also preserve areas of significant conservation value.

The Growth Corridor Plans make provision for regional parks to provide for passive recreation opportunities in tranquil locations with a high quality landscape setting. Where possible they have been located to take advantage of natural features such as waterways. The Department of Sustainability and Environment (DSE) will determine the size, boundary location and acquisition process for these regional parks. Addition-

ally, some Growth Corridor councils have well advanced plans for development of regional parks that have been identified in the Growth Corridor Plans.

In some cases, regional active open space is suggested adjacent to regional parks. Wherever possible the design of the PPTN and local bus routes should make it possible to access regional active open space and regional parks by public transport.

As a general guide, planning for regional parks in the Growth Corridors is based upon the standard of providing regional parks of at least 40 hectares for each 150,000 people.



3.6.3 Providing regional active open space/sporting facilities to meet the needs of Growth Corridor communities

Local active and passive open space is provided within local neighbourhoods via Precinct Structure Plans and Development Contributions Plans (DCPs). *The Precinct Structure Plan Guidelines* provide guidance on the amount and location of such open space.

The provision of higher order active open space areas is an important component of the open space network within the Growth Areas, in addition to local active open space areas. These should typically be between 20-40 hectares in size (dependant on the needs/demands of the area) and are intended to cater for a range of sporting activities with particular emphasis on low participation sports such as rugby, baseball and hockey as well as higher order competition facilities.

Higher order active open space is generally provided at a rate of 0.5 hectares per 1000 people, dependant on the specific demand/needs within in each growth area.

The Growth Corridor Plans suggest potential locations for higher order active open spaces. These will need to be further investigated, particularly with Councils who would normally deliver these areas. Alternative locations for the higher order open space may be determined through the Precinct Structure Planning and Council facilities planning processes. In some instances, there may be opportunities to co-locate higher order active open space with other existing or planned open space areas including regional parks, passive parks and land set aside for drainage, landscape or biodiversity reasons. There are benefits in this approach and the Corridor Plans identify several locations where active and passive open space areas can be co-located to deliver a high amenity outcomes for the community. Whilst there may be opportunity for some active open space to be located on land set aside for drainage purposes, supporting infrastructure such as pavilions, car parking, all weather surfaces and some of the grassed sporting fields generally are required to be provided on unencumbered land.

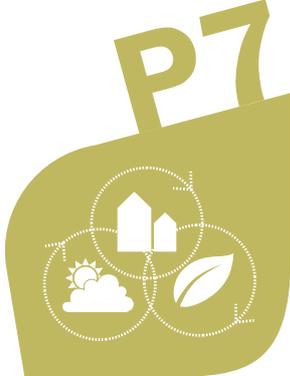
3.6.4 Planning extensions to metropolitan trails in Growth Corridor open space networks

The Growth Corridor Plans identify extensions to the Metropolitan Trail Network (MTN). They provide shared use paths for walkers and cyclists in open space settings for recreation and active transport. These trails link open space/recreation nodes, (including regional parks and regional sports precincts) to protected hilltops and waterways and areas protected for their biodiversity and/or heritage values. In some cases they also provide links to town centres, particularly where these are located adjacent to major waterways.

The MTN will be complemented by the Principle Bicycle Network (PBN), which will primarily provide for cycling within arterial and other road reservations and easements.

The MTN will be supplemented by local trails provided primarily for recreation purposes. These local trails will be identified in PSPs.





3.7 PRINCIPLE 7: PLAN FOR ENVIRONMENTAL SUSTAINABILITY

In planning Growth Corridors it is important to ensure that appropriate attention is paid to environmental sustainability and resilience and the possible impacts of changing climate conditions, including the adaptability of environments to deal with these impacts. This involves the protection of important biodiversity, cultural heritage and landscape features, which are dealt with in some detail in Principles 4 and 5, and the facilitation of the use of sustainable transport options covered primarily by Principles 1, 2 and 3. The following factors should also be considered:

3.7.1 Using land efficiently to minimise the need for future conversion of additional rural areas to urban use

Allocating land within the Growth Corridors efficiently will mean that the capacity of these areas to accommodate future housing and industrial land demand will be increased and the need to convert additional land from rural to urban use will be reduced.

This will be achieved by encouraging a mix of uses in town centres and other identified areas and average densities that ensure the best use is made of developable land.

Land required for community purposes such as community facilities, transport reservations, floodways and retarding basins, and utility easements should be planned to enable efficient use for multiple purposes wherever possible. Consideration should also be given to innovative use of public land for community or environmental purposes such as food production and heat sinks.

3.7.2 An integrated water management approach to planning water infrastructure for Growth Corridors

Water supply, stormwater management and sewage treatment in the Growth Corridors should be planned as an integrated system. Wherever efficient to do so, servicing should include provision of treated recycled water and harvested stormwater so as to reduce potable water use.

The location of sewage treatment facilities has been determined in the Growth Corridor Plans to take advantage of natural topography, so as to minimise construction costs and energy use associated with pumping of sewage and treated recycled water.

Planning for urban development should take account of the increased likelihood of storm events. Wherever possible provision should be made to reduce and delay stormwater runoff from developed areas and the design of urban areas and open space networks should take account of local flood events.



All urban development will be required to meet best practice quality standards for stormwater runoff. This will be achieved in PSPs by using a variety of techniques in different catchments that reflect local conditions.

3.7.3 Wildfire Mitigation

A number of areas within Melbourne's Growth Corridors form part of broader landscapes that are designated as being bushfire prone.

In some instances, parts of the Growth Corridors also fall within or adjoin areas that have a high fire risk and have been included within a Bushfire Management Overlay in local planning schemes.

The management of bushfire risk in growth areas will be achieved by:

- > Ensuring that the ongoing transition of land from 'rural' to 'urban' provides for a managed fire break between the rural/urban interface during high fire danger periods.
- > Ensuring that there is an appropriate risk treatment of the interface between urban areas and permanent bushfire hazards (such as on the edge of the UGB, adjacent to large

grassland reserves, major river and creek reserves, etc.). This will typically comprise an area of defensible space between urban development and bushfire hazards, and an area within which all buildings will be constructed to a prescribed Bushfire Attack Level. Defensible space areas will typically comprise a road reserve, and managed vegetation on public (and sometimes private) land.

- > Ensuring that subdivision layouts allow for emergency vehicle access, safe egress routes away from fire hazards, fire hydrants, and static water supplies where necessary.

All Precinct Structure Plans will include measures to ensure that bushfire hazards are appropriately considered and addressed.

3.7.4 Maintaining local quarrying potential

The Growth Corridors contain significant mineral resources and a number of operating quarries. To avoid the need to transport construction materials substantial distances it is important to enable the continued operation of these quarries and for appropriate buffers to be maintained from the working surfaces of all quarries.

3.7.5 Planning for landfills

The Growth Corridor Plan also ensures that approved and operational landfills referred to in *The Metropolitan Waste and Resource Recovery Strategic Plan* and potential organic waste treatment/recovery are protected from encroachment by sensitive uses. Any development within 500m of putrescible landfill sites will be subject to an environmental audit to ensure that any potential landfill gas migration is mitigated. Some existing quarries may also have the potential to be utilized for landfill purposes in the future upon completion of extraction of the resource at the site. In this case buffer requirements will also need to be taken into account when planning these PSPs to ensure appropriate land uses and separation distances are maintained.





3.8 PRINCIPLE 8: STAGE DEVELOPMENT TO ENSURE THE EFFICIENT AND ORDERLY PROVISION OF INFRASTRUCTURE AND SERVICES

3.8.1 The Growth Corridor Plans take a long-term view of development in Melbourne's Growth Corridors

This is necessary in order to plan properly for new town centres, to identify future infrastructure requirements, and to provide and maintain sufficient land to ensure competition in land markets for both housing and employment purposes and to help keep downward pressure on land prices to maintain housing affordability.

At the same time, it is necessary to plan for the sequencing of urban development to enable the orderly provision of infrastructure and services. Without agreement on sequencing there is a real risk that infrastructure provision will be either unnecessarily expensive or will not be available when required. It also needs to be recognised that priorities need to be set for infrastructure provision as Government and utilities agencies do not have access to unlimited funds for infrastructure investment.

Development of the Growth Corridor Plans involved consideration of the way in which development might best be

sequenced both to allow for sensible infrastructure investment priorities and to maintain competition in the land market. In this context, the provision of water, sewage and transport infrastructure are especially important as they tend to require very large capital expenditure that is difficult to provide in an incremental way.

In line with the policy principles set out in Clause 11 of the State Planning Policy Framework, priority will be given to facilitating urban development and infrastructure provision for areas that:

- > form logical and contiguous extensions of existing urban areas, especially where development in such areas will enable the early provision of infrastructure, facilities and services required to provide for the needs of the existing community;
- > will enable the staged extension of infrastructure networks in a way that minimises the real cost of infrastructure provision;
- > are not subject to major constraints or uncertainties that could delay development

and are of a size and with a pattern of land ownership that is likely to result in a substantial and predictable yield of housing and/or industrial land; and

- > support the effective and early development of the network of town centres and employment precincts identified in the Growth Corridor Plan.

Where appropriate, departure from these staging principles may be justified either on the basis that it is necessary to maintain competition in the land market in the relevant Growth Corridor or because land owners in an area that would not normally warrant a high priority for infrastructure provision are willing and able to fund the costs of bringing forward the provision of infrastructure required to enable development.



4

**The
West
Growth
Corridor Plan**



WEST GROWTH CORRIDOR PLAN

- Existing Urban
- Urban Growth Boundary
- Freeway
- Arterial Road
- Local Collector Road
- Principal Freight Network
- Railway Line
- Rail Station
- Opportunity for future Rail Station
- Rail Stabling
- Principal Public Transport Network
- Specialised Town Centre
- Central Activity Area
- Principal Town Centre
- Major Town Centre
- Industrial
- Business
- Business with Residential
- Residential
- Proposed Regional Open Space
- Existing Open Space
- Regional Active Open Space (under investigation)
- Biodiversity Values
- Landscape Values
- Non-urban/Utilities
- Potential Urban
- Quarry
- Rivers & Creeks
- Waterway Corridor
- Investigation Area

Inclusion of arterial roads in the plans does not indicate a commitment to funding or declaration as a state arterial road

Infrastructure items shown are indicative and will require further investigation

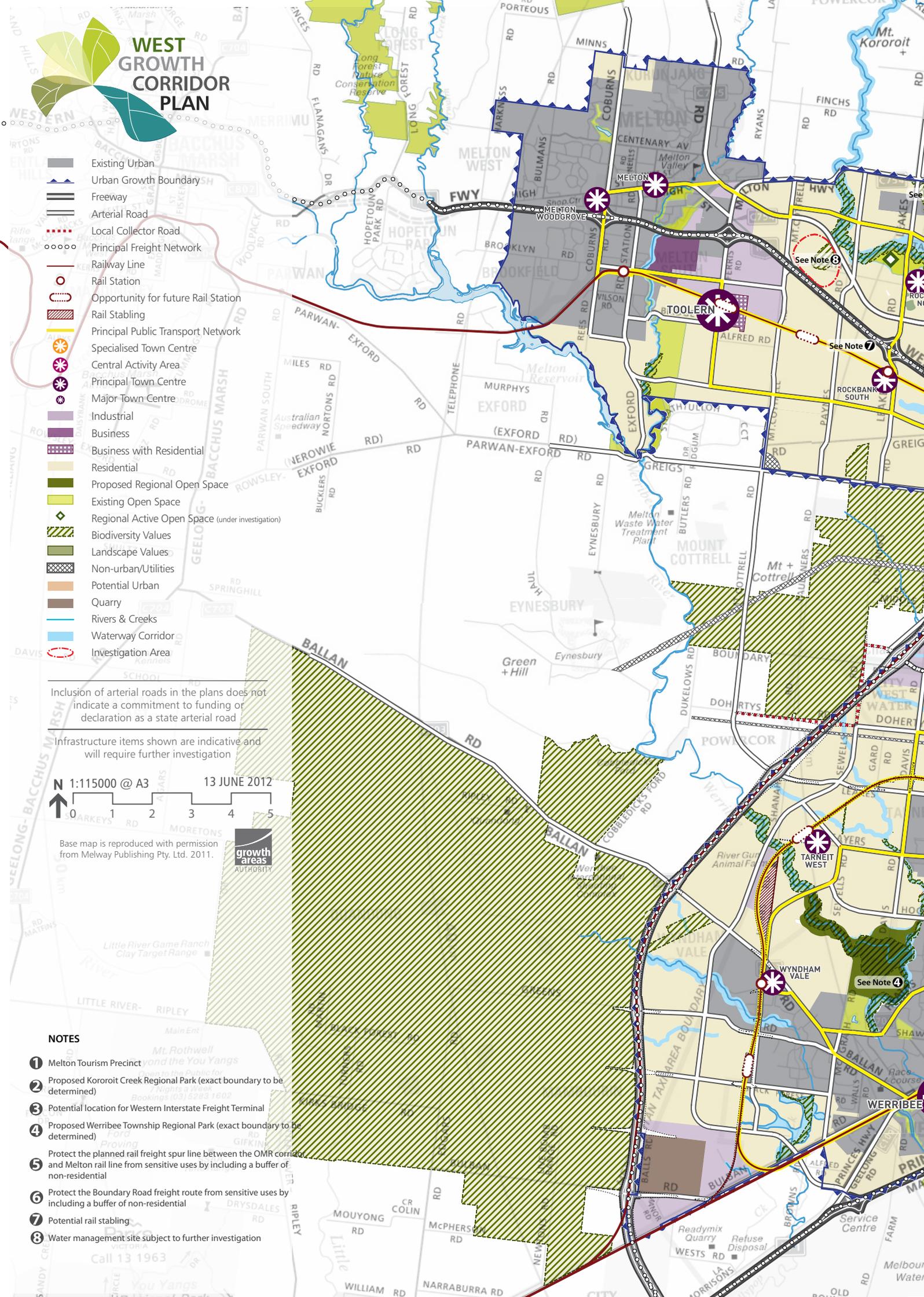
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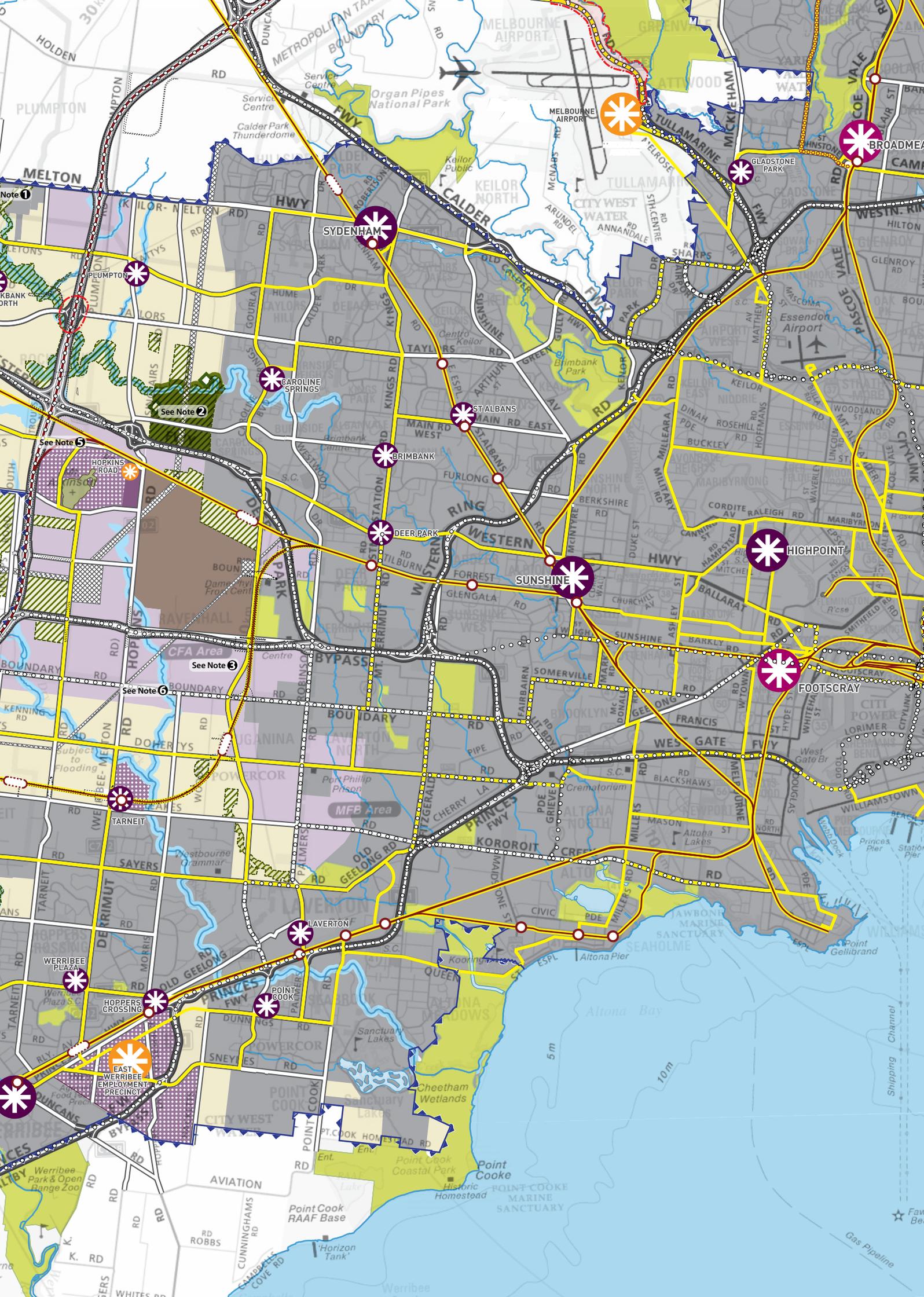
Base map is reproduced with permission from Melway Publishing Pty. Ltd. 2011.



NOTES

- 1 Melton Tourism Precinct
- 2 Proposed Kororoit Creek Regional Park (exact boundary to be determined)
- 3 Potential location for Western Interstate Freight Terminal
- 4 Proposed Werribee Township Regional Park (exact boundary to be determined)
- 5 Protect the planned rail freight spur line between the OMR corridor and Melton rail line from sensitive uses by including a buffer of non-residential
- 6 Protect the Boundary Road freight route from sensitive uses by including a buffer of non-residential
- 7 Potential rail stabling
- 8 Water management site subject to further investigation







THE WEST Growth Corridor Plan

4.1 CONTEXT

Melbourne's western region is one of the fastest growing in Australia. The area covered by the West Growth Corridor Plan will eventually accommodate a population of 377,000 or more people and have the capacity to accommodate at least 164,000 jobs.

The region has a strong manufacturing and logistics base, and it will continue to play a vital role in meeting Victoria's industrial and logistics needs. However, communities in Melbourne's west are heavily reliant on the CBD and inner west for jobs and services, and this places considerable pressure on the transport network.

The future development of Melbourne's west will be substantially shaped by the following significant transport projects:

- > The Regional Rail Link (RRL) project, which will provide tracks to the north of Werribee to carry VLine services from Geelong and beyond, to free up the congested Werribee line to enable an improved

metropolitan service to Werribee and eventually to Wyndham Vale. Two new stations are proposed on the RRL, at Wyndham Vale and Tarneit, with opportunities for four more stations in the longer term;

- > The proposed Outer Metropolitan Ring (OMR) transport corridor – this will enhance connectivity between key international transport hubs including the Port of Melbourne and Melbourne Airport, and provide high speed road and rail transport links for freight and people across the west and north metropolitan area;
- > The Melton rail line corridor – new stations identified at Toolern and Paynes Road, and an upgraded station at Rockbank, will provide an opportunity for transit oriented development along this corridor; and
- > The proposed Western Interstate Freight Terminal at Truganina. A new intermodal freight terminal will significantly improve Melbourne's freight handling capacity and reinforce the economic importance of Melbourne's west.

Creating greater local self containment, job and housing diversity, and improved transport links are priorities for the western metropolitan region. The West Growth Corridor Plan seeks to address these priorities by:

- > Improving road, public transport and freight networks across the region;
- > Extending the western industrial node, and connecting it to a new freight terminal and the broader transport network;
- > Creating a diversity of new communities, well serviced by public transport and with very high amenity by building on natural features such as regional parklands, creeks and waterways, and creating high quality town centres and urban areas; and
- > Creating attractive and accessible locations for a wide range of jobs, investment, and services – including in six new higher order town centres.



VISION

4.2

The West Growth Corridor will play a significant role in the diversification of the broader western region over time. The Hopkins Road Business Precinct, and the Werribee Employment Precinct, together with existing and planned Principal and Major Town Centres, will provide significant new opportunities for living, jobs, investment and services within the region.

The region will also continue to play a vital role in meeting Victoria's industrial, freight and logistics needs over the long term, whilst diversifying the employment offer of the region. Planned upgrades to the freeway and freight facilities in Melbourne's west will reinforce its importance to the industrial sectors.

Each local neighbourhood will have its own character, defined by its natural setting, and opportunities to integrate locally distinctive features into the development of the Growth Corridor will be maximised. These include waterways, hills, regional parks and open space, and biodiversity reserves, as well as more distant views to the hills to the West and North, and to the CBD.



4.3 LANDSCAPE, ENVIRONMENT AND OPEN SPACE

The West Growth Corridor is characterised by its grasslands biodiversity and the major waterways that connect it to inner Melbourne and Port Phillip Bay, as well as by a range of cultural heritage values. These features provide significant opportunities to address the broad needs of the region by creating new active and passive recreation areas alongside waterways and in areas with high landscape or biodiversity values.

The Growth Corridor Plan recognises this wide range of values. Combined, they make up an integrated open space network for Melbourne's west. This network provides an important natural setting for the entire western corridor and will make a major contribution to the amenity and

sense of place for future communities.

Residents and visitors will be able to access the open space via a comprehensive trail network that will extend throughout the West Growth Corridor.

4.3.1 Landscape

The West Growth Corridor is characterised by a flat to undulating landscape that is dissected by a number of waterways and enclosed by distant views to the You Yangs and Brisbane Ranges to the west, and the Great Dividing Range to the north. The key landscape features that form part of the broader setting for urban development as shown in the images below include:

- > The natural drainage system across the Growth Corridor – this will form the spine of the open space network which connects different

parts of the corridor in both visual and landscape terms. The Werribee River and Kororoit, Skeleton/Dry, Davis and Lollipop Creeks are particularly important in this regard;

- > Mount Atkinson and Mount Cottrell are important landscape features. They will be preserved and, where relevant, urban areas will benefit from vistas to these features from a range of vantage points across the Growth Corridor;
- > Distant views to the CBD, You Yangs, Brisbane Ranges and the Great Dividing Range; and
- > Finer grained and recurring elements across the landscape such as the dry stone walls and original 19th century mile grid subdivision pattern will be incorporated into the new urban landscape where possible.



4.3.2 Biodiversity

The West Growth Corridor has significant biodiversity values including threatened communities of Natural Temperate Grasslands of the Victorian Volcanic Plain. Threatened fauna species that utilise ecological communities as well as degraded landscapes include Striped Legless Lizard, Golden Sun Moth (GSM), and Growling Grass Frog (GGF). Threatened flora species exist throughout the Growth Corridor with populations of Spiny Rice flower, and Large Fruit Groundsel, occurring in a number of locations.

The major waterways of Werribee River and Kororoit Creek are biodiversity corridors that provide important habitat and connectivity through the Growth Corridor for species such as the Growling Grass Frog.

Two large grasslands reserves are to be established outside

the Urban Growth Boundary in Melbourne's west. The Western Grasslands Reserve (totalling 15,000ha) will ensure the long term conservation of this nationally threatened Natural Temperate Grasslands ecosystem.

The following biodiversity values are recognised by the West Growth Corridor Plan:

- > Large areas of habitat for the GSM which also have confirmed records of nationally important plants such as Spiny Rice Flower;
- > Habitat for the GGF along the Werribee River, Kororoit Creek and its tributaries, as well as Lollypop and Davis Creeks, and Deanside wetlands;
- > The Clarke Road grasslands, which supports one of two remaining sites of the Small Golden Moths Orchid in the world, as well as Spiny Rice flower. This area will form

part of the wider Kororoit Creek regional park. An area of approximately 50 ha extending to the north of the Kororoit Creek will also be protected for conservation to incorporate Spiny Rice-flower, Golden Sun Moth habitat, ephemeral wetlands and high quality remnant grassland. The finalisation of the boundaries for the regional park will consider the inclusion of this area in the park;

- > A small but important site to the north-west of the Clarke Road grasslands supports many Spiny Rice-flower in high quality native grassland habitat and will be protected for conservation;
- > The Truganina Cemetery and its edges contain several populations of nationally threatened plant species;





- > The completion of the Truganina South Golden Sun Moth reserve on Woods Road;
- > The Deer Park Quarry Grasslands, which provides habitat for the Striped Legless Lizard and the Spiny Rice flower;
- > The area between the railway line and Western Freeway at Rockbank supports a large population of Large-fruit Groundsel and Spiny Rice-flower and will be protected for conservation; and
- > The area of high quality native grassland south of Greigs Road will also be protected to conserve a very large population of Spiny Rice-flower contiguous with the Western Grassland Reserves.

4.3.3 Drainage

Significant floodplains exist along Kororoit Creek and the Werribee River, which are important features of the Western Plains landscape. These major waterways, together with the numerous smaller tributaries and local wetlands, include areas of cultural heritage and provide habitat for significant native flora and fauna.

The lower reaches of the Werribee River flow through coastal wetlands which form part of the Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site. Ramsar³ wetlands require a high level of control over the quality and quantity of surface water discharge, which will affect management of stormwater entering the Werribee River.

The alignments of the Outer Metropolitan Ring Road (OMR) and Regional Rail Link (RRL) corridors will also affect waterways and flood plains.

All of these issues will need to be considered in development of stormwater systems servicing the West Growth Corridor.



³ Ramsar wetlands are wetlands of international importance listed under the Convention on Wetlands also known as the Ramsar Convention. The Convention was signed in 1971 at a meeting in the town of Ramsar, in Iran. The aim of the convention is to halt the worldwide loss of wetlands and to conserve those that remain.

4.3.4 Regional Parks and Open Space

A new regional park is currently under development along Toolern Creek, to the south of Melton.

Additional regional parks are identified along Kororoit Creek, (west of Caroline Springs); and the Werribee Township Regional Park on the Werribee River. The indicative boundaries of these parks are shown on the West Growth Corridor Plan. Further biodiversity information is required to finalise the northern boundary of the Kororoit Creek regional park, and further drainage information is

required to finalise the western and northern boundaries of the Werribee Township regional park.

The proposed Western Grassland Reserves will also provide significant passive open space opportunities. Public access to these reserves will focus visitors into areas where the impact on biodiversity can be minimised.

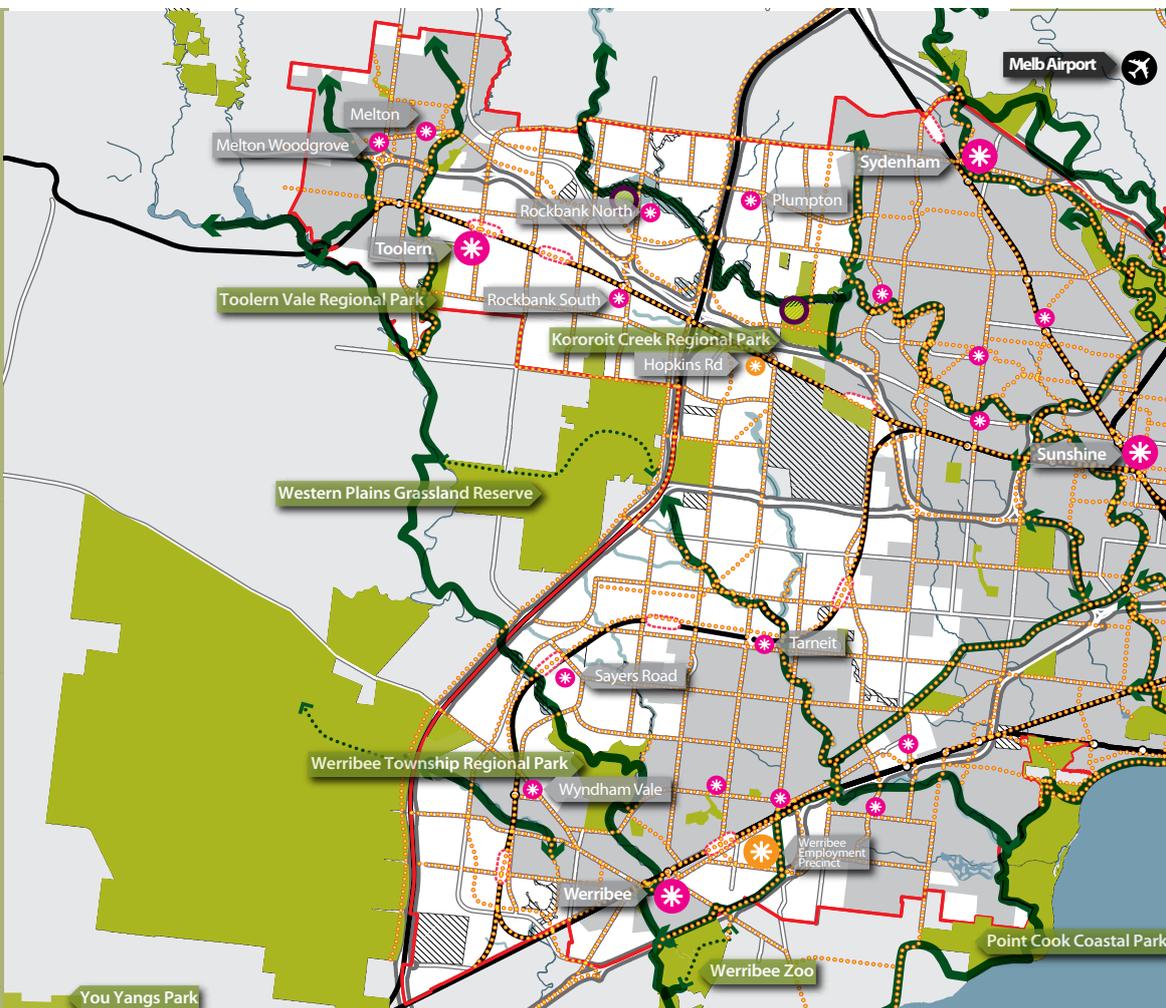
Two potential locations for a regional active open space facility are identified, adjoining the Kororoit Creek regional park and along Kororoit Creek close to the Rockbank town centre. These facilities are intended to meet a need for

sports with a regional catchment. The delivery of these facilities will need to be further investigated before any final decisions can be made.

These parks will be connected by a series of trails focused particularly along the waterways. Some of these will form part of the MTN, and others will form more local trails to be provided through PSPs.

The plan below explains how all forms of open space will be integrated.

West Integrated Open Space Concept Plan



- Central Activity Area
- Principal Town Centre
- Major Town Centre
- Train Station
- Future Station
- Opportunity for Future Rail Station
- Urban Growth Boundary
- Existing Urban Area
- Area Outside UGB
- Regional Open Space (not all publicly accessible)
- Potential Regional Open Space (not all publicly accessible)
- Potential Regional Active Open Space
- Potential Bicycle Network
- Principal Bicycle Network Links
- Metropolitan Trail Network
- Metropolitan Trail Network Links
- Landscape Values

4.4 CREATING COMMUNITIES

4.4.1 Residential Districts within the Growth Corridor

In the northern (Melton) section of the Growth Corridor, the OMR and the Western Freeway/Western rail line clearly define the larger scale residential districts within the corridor.

In the southern (Wyndham) section of the Growth Corridor, a series of residential districts are located along the regional rail link corridor.

Each of these districts is of a sufficient size to support a Major Town Centre, and each can provide a mix of jobs and housing types/densities.

Connections between districts will be provided by a grid of arterial roads and extended public transport networks. New Major Town Centres are located along the RRL at Tarneit and Sayers Road stations, on the Melton rail line at Rockbank, and on the PPTN, at Leakes Road (Rockbank), and Hume Drive. Each is centrally located within its district, and will be accessible by multiple transport modes.

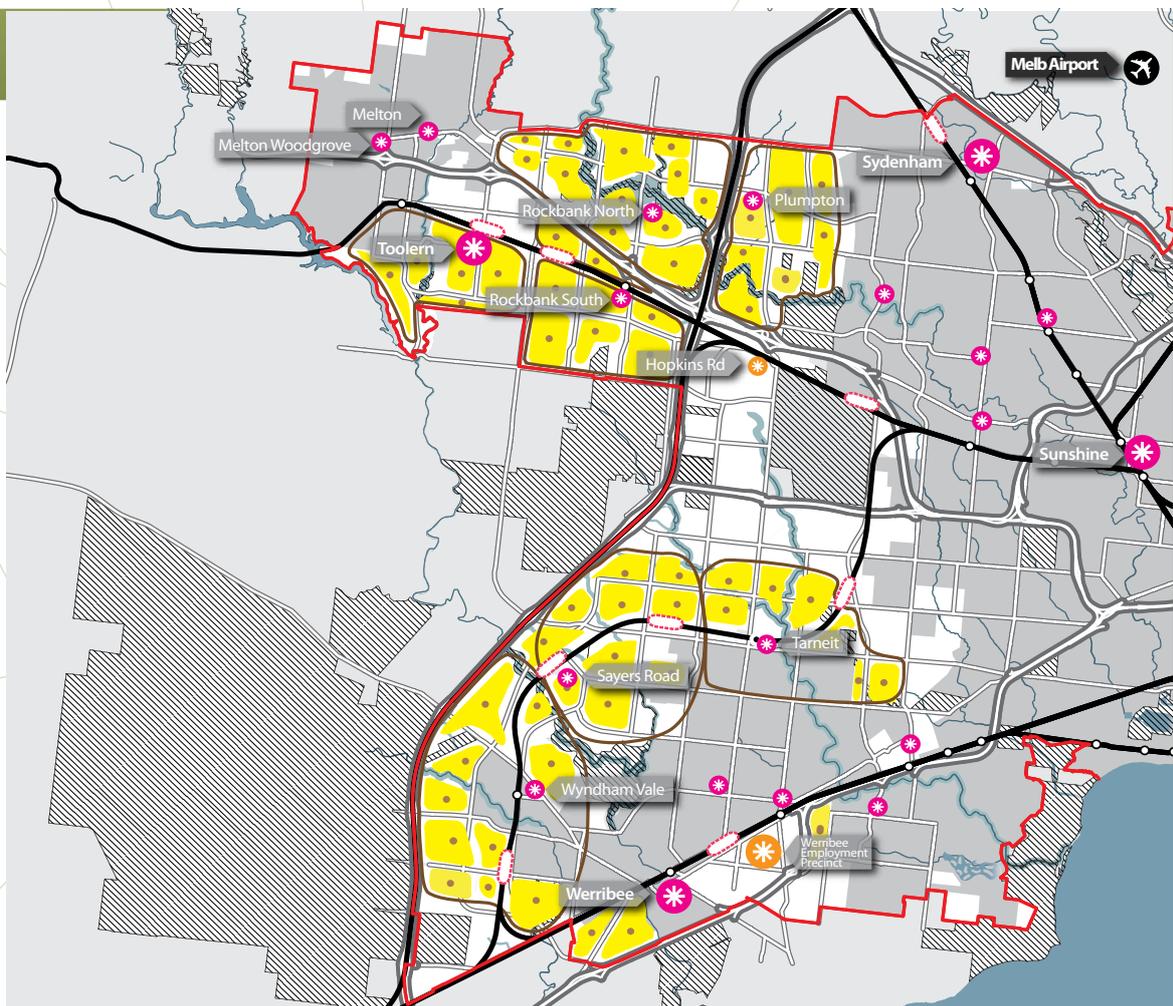
Arterial roads will be grade-separated from the RRL and the OMR, and they will be designed to minimise their impact on the amenity and accessibility of these locations.

Creeks and waterways will also play an important role in connecting these districts via the Metropolitan Trail Network and local trails.

This is particularly the case with the Kororoit Creek, which will provide an important east-west link between communities across either side of the OMR.

West Community Concept Plan

- Central Activity Area 
- Principal Town Centre 
- Major Town Centre 
- Train Station 
- Future Station 
- Opportunity for future Rail Station 
- Urban Growth Boundary 
- Existing Urban Area 
- Area Outside UGB 
- Constrained Land 
- Local Neighbourhood 
- New Residential Districts 



4.4.2 Character and Identity

The sense of place for each of these communities will be created from natural features, particularly local wetlands, waterways and creeks such as Werribee River, Kororoit Creek, Davis Creek, Skeleton/Dry Creek and Lollipop Creek.

The town centres at Tarneit, Sayers Road and Leakes Road (Rockbank) adjoin or are near to waterways, and can be designed so the waterways are integrated into the character of the town.



Creeks and waterways will also provide alternative connections between communities via the MTN.

Opportunities exist to ensure that some of the arterial road routes are designed to have a strong boulevard character. This will potentially require such routes to have a wider cross section to allow for tree planting and wider medians. The key route for consideration of such treatment is the north-south connection between the Wyndham and Melton, i.e. Hopkins or Tarneit Roads. Hopkins Road specifically will play a vital role as it will link the Sunbury/Diggers Rest Corridor through to the West Corridor all the way down to Werribee ensuring the connection of residents to jobs and town centres. Leakes or Dohertys Roads, and Taylors Road or Hume Drive provide the opportunity for a similar treatment in an east-west direction.

Character and identity in this corridor is also provided by areas such as the Warrensbrook Fair Tourism Precinct, the Rockbank Beam Wireless Station and the Deanside complex of buildings. The opportunities provided by features such as these to create a distinctive character for the west should be maximised.

4.4.3 Rockbank

The existing low density township of Rockbank is located between the Western Freeway and the Melton rail line. The relationship between the area bound by Paynes Road, the Western Freeway, Hopkins Road and the rail line presents significant design challenges. Opportunities exist to enable this area to be redeveloped to a more transit oriented form of development over time. Great care will need to be taken to ensure that any new infrastructure projects, including grade separations, rail line upgrade and stabling and the OMR enable continued access to the precinct, and do not unduly impact on amenity. This area will be planned as part of a broader PSP.



4.4.4 Regional Community, Health and Education Services and Facilities

Victoria University is the main provider of campus based post compulsory education in Melbourne's west. The University of Ballarat, Deakin University and Gordon TAFE also have a presence in the region, and there are also specialist research focused facilities, including the University of Melbourne's veterinary hospital and the RMIT flight school at Point Cook.

These facilities are spread across the region and are in reasonable proximity to the Growth Corridors. Whilst it is not anticipated that a new campus for post compulsory education will be required in the west in the foreseeable future, additional community based facilities will be needed over time.

Primary, secondary and tertiary health services, both hospital and community based, are provided by a combination of state and commonwealth government and private including not for

profit providers. Primary care services are mainly provided by general practitioners. Community health services provided by ISIS Community Health at Brimbank, and Wyndham and Djerriwarrh Health Service at Melton, Bacchus Marsh and Caroline Springs, deliver a range of primary health care services.

Western Health is the major public provider of acute and sub acute health services for western metropolitan Melbourne. It provides a range of health services from three hospital campuses in Footscray, Sunshine and Williamstown. Djerriwarrh Health Service provides a local hospital in Bacchus Marsh and a superclinic at Melton. Ballan District Health and Care provides services including a GP Super Clinic.

The Werribee Mercy Hospital serves the Wyndham corridor, as well as neighbouring areas. Residents of this Growth Corridor also access Sunshine Hospital, Western Hospital and other inner metropolitan specialist hospitals for tertiary and state-wide health services. Tertiary mental health services are provided at a range of locations in the west and south west by Melbourne Health, the Royal Children's Hospital, Werribee Mercy Hospital and a

range of non government organisations. Significant growth is being delivered at the Sunshine Hospital site, and services at Werribee Mercy Hospital are also being expanded.

Additional residential aged care capacity will be required to provide for an expanding and ageing population in Melbourne's west.

Strategic planning will take account of interface communities on the metro-rural fringe, consider the need for health and medical precincts in major centres and include a focus on the potential for co-location of services.

More comprehensive and specialist education, health and community facilities would normally be located in the higher order town centres, including the existing Sydenham Town Centre such as Werribee Plaza, and centres identified at Toolern, Tarneit and Manor Lakes



4.5 EMPLOYMENT

Melbourne's west does not generate sufficient employment to provide for the job needs of its rapidly growing population. As a result, Melbourne's west has a strong reliance on the CBD and inner west for jobs and services.

Over time, the West Growth Corridor will achieve greater local job self containment. In total this Corridor has the capacity to accommodate between 164,000 and 202,000 new jobs across a range of employment sectors and locations.

This will be achieved in a variety of ways, including new investment and job creation including in existing and planned town centres, business precincts, and industrial areas.

4.5.1 Town Centres

A wide range of businesses and job opportunities will emerge over time in the Principal Town Centres at Werribee, Toolern, Sunshine and Sydenham.

The Toolern Town Centre will be the primary centre for the north western portion of the West Growth Corridor, as well as the regional hinterland, including Bacchus Marsh. It is well connected to the Growth Corridor, and to regional areas by the Western Freeway and Western rail line and the PPTN along Ferris road.

The Major Town Centres across the northern (Melton) part of the corridor are well connected to Toolern, Sunshine and Sydenham via the main rail line and the PPTN.

Werribee Town Centre will be the primary centre for the southern (Wyndham) half of the corridor. Together with the Werribee Employment Precinct, this centre will be a focus for a wide range of jobs and services for the Growth Corridor and the broader region. The established Werribee Plaza also performs an important sub-regional retail role.

The Wyndham Vale, Sayers Road and Tarneit town centres will be designed to integrate with the Regional Rail Link stations. Tarneit Town Centre in particular will play an important strategic role because it is central to the southern part of the corridor and is located with the intersection of Leakes and Derrimut/Hopkins roads and the proposed Tarneit Station.

4.5.2 Employment Precincts

The West Growth Corridor Plan makes provision for:

- > 3,960 gross hectares of industrial land;
- > 1,410 gross hectares of business land; and
- > Around 100 gross hectares of additional land could also be provided for a range of local industrial and commercial activities across residential PSPs. These will be identified as required through the PSP process.



The Western Industrial Node

The Growth Corridor Plan identifies a 1,510 (gross) hectare extension to the Western Industrial Node, which would be accessible by a new freeway link between the Western Ring road and the OMR. The precinct will have ready access to rail freight, and could accommodate a major new freight terminal, to enable the transfer of interstate freight between

road and rail from the Ports of Melbourne and Geelong to other parts of Australia.

The land that forms part of this precinct south of Boundary Road has a depth of 400m. This precinct should provide a suitable land use buffer between the terminal and residential uses further south and could consist of light industrial and service industry type uses.

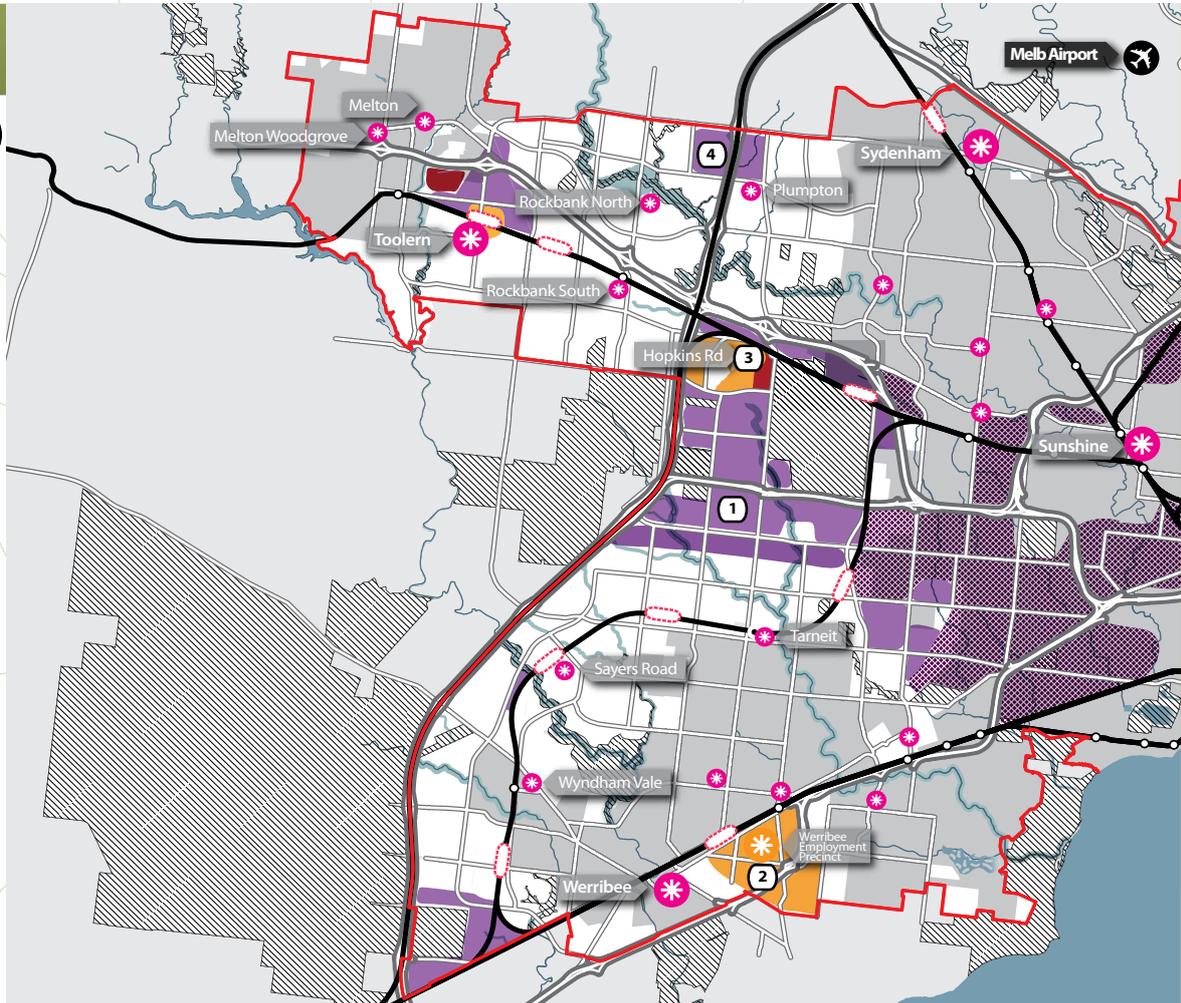
Werribee Employment Precinct

The 730 (gross) hectare Werribee Employment Precinct is currently home to a number of research and development organisations including CSIRO Food and Nutritional Sciences, Victoria University, Melbourne University Veterinary Clinic, the Dairy Innovation Centre and Agrifood Technology.

The Precinct has the potential to create a major higher skilled "white collar" employment hub for the west, linking to the existing Werribee City Centre. Residential development can also be accommodated.

West Employment Concept Plan

- Central Activity Area** 
- Principal Town Centre** 
- Major Town Centre** 
- Train Station** 
- Future Station** 
- Opportunity for future Rail station** 
- Urban Growth Boundary** 
- Existing Urban Area** 
- Area Outside UGB** 
- Constrained Land** 
- Industrial** 
- Existing Industrial** 
- Business** 
- Business with Residential** 
- Western Industrial Node** 
- Werribee Employment Precinct** 
- Hopkins Road Commercial Precinct** 
- Melton Highway Industrial Precinct** 



Hopkins Road Business Precinct

The Hopkins Road Business Precinct is strategically located to contribute to the achievement of a greater diversity of employment opportunities in the West Growth Corridor. The Precinct is 590ha in total area (from the Melton highway to the conservation reserve south of Mt Atkinson) and it provides opportunities to integrate a mix of higher density residential and employment uses which have potential to directly connect to the arterial road system, the future OMR/Western Highway interchange and the designated PPTN. The Precinct will

also benefit from the local amenity provided by Mt Atkinson and the local conservation reserve. The Hopkins Road Precinct will accommodate a 400 (gross) hectare business precinct comprising a mix of business uses (such as office parks, research and development) together with conventional, medium and higher density residential uses. It will also comprise a 120 (gross) hectare industrial precinct between the Western highway and the Melton rail line and a 65 (gross) hectare commercial precinct along Hopkins road.

The layout of these uses will need to respond to the interface with the existing Quarry, the railway line, OMR, freight spur line and the Western Highway, to ensure non sensitive uses are located away from these facilities. In particular, the planned rail freight spur line between the OMR corridor and Melton rail line will be protected from sensitive uses by including a buffer of non-residential uses.

A small Specialised Town Centre will be located in the Precinct to support the business activities and provide amenity for residents and workers. The ability for this precinct to succeed as a higher order employment location will depend on, amongst other factors, its accessibility which will require careful planning at the PSP stage. A future PSP will also need to ensure that any residential community within this location is of sufficient size to operate as a self-contained neighbourhood, supported by transport, open space and community infrastructure. Careful planning and analysis of catchments for services will, therefore, be required.

Although there are no plans to provide a station in this location during the timeframe of the Corridor Plan, there is potential for a Hopkins Road rail station in the longer term which could

be explored, and opportunities for its potential future provision preserved.

Toolern Employment Precinct

This Precinct has direct access to the Western Freeway and Melton rail line. It will be serviced by a high amenity mixed use precinct and Principal Town Centre at Toolern and will be readily accessible to the PPTN by a new rail station and a north-south public transport connection.

Around 470 (gross) hectares of industrial land is located within the Precinct, as well as 120 (gross) hectares of mixed use employment activities, located around the Melton harness racing facility.

Melton Highway Industrial Precincts

A new 325 (gross) hectare industrial precinct is identified along the northern part of the OMR. With two interchanges onto the OMR (at the Melton Highway and Taylors road), the Precinct will have direct freight access to the metropolitan area, the Port of Melbourne and regional Victoria.

The Precinct will be serviced by the PPTN along Hume Drive, and will be close to two identified Major Town Centres at Plumpton and Leakes Road (Rockbank).

South West Quarries Industrial Node

This Precinct has direct access to the Princes Freeway via the OMR. This area consists of approx 350 (gross) hectares of industrial land and will require careful planning to ensure uses do not impact adversely on the future operations of the quarry and also the surrounding residential area.



4.6 TRANSPORT

4.6.1 Public Transport

Urban development in Melbourne's west will be supported by three main rail spines:

- > Planning for rail services and station development along the Melton rail line, including multi modal integration, to support Principal and Major Town Centres, as well as strategically located park and ride facilities;

- > A reservation exists for the extension of the existing metropolitan rail line from Werribee to Wyndham Vale; and
- > Construction of the RRL, with new stations in the short term at Wyndham Vale and Tarneit, and planning for stations at Truganina, Davis Road, Sayers Road and Wyndham Vale South in the longer term.

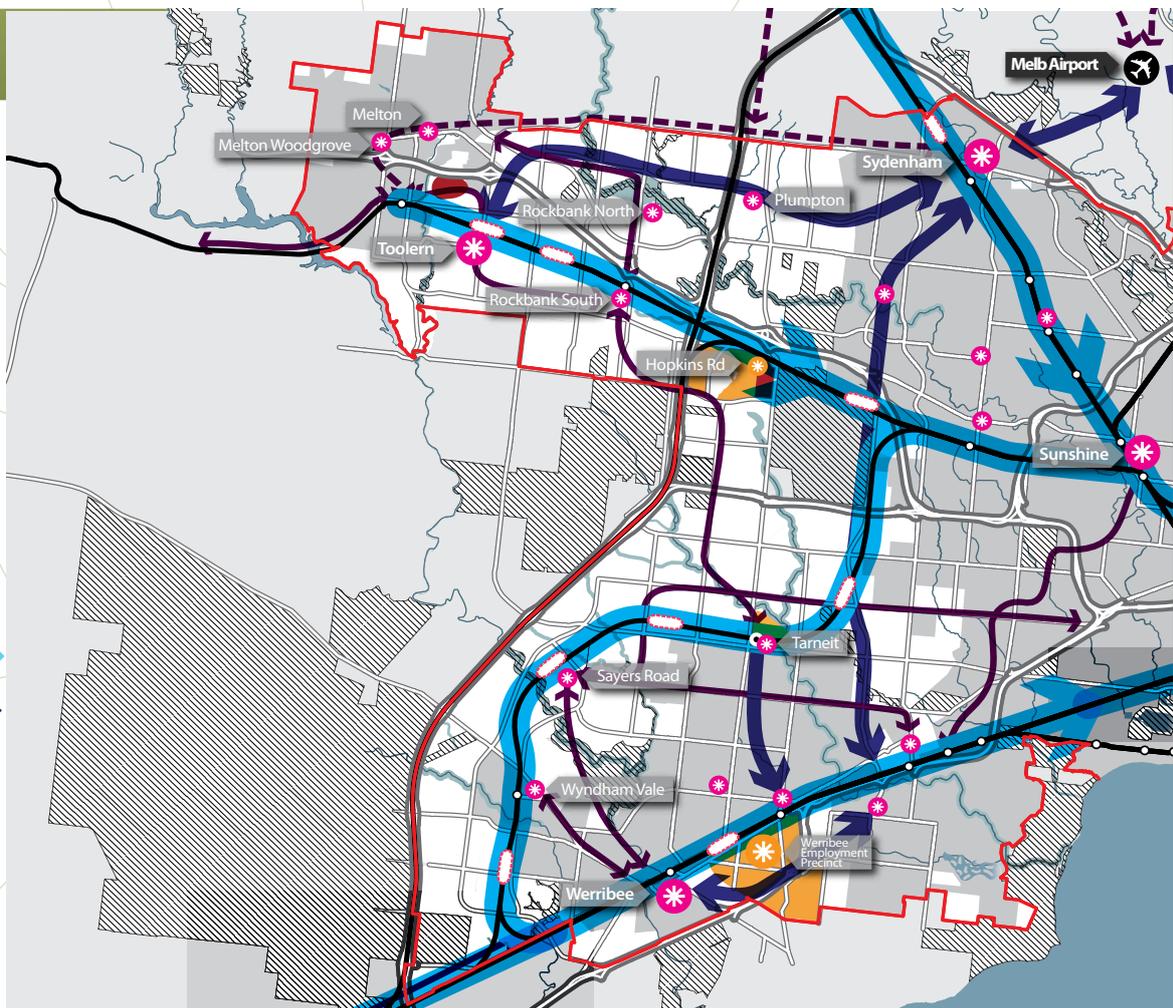
The development of new rail lines to Melbourne and Avalon Airports are currently under investigation.

The Growth Corridor Plan focuses

higher density and mixed use development opportunities along these rail lines.

These three rail spines are supported by public transport networks identified in the Corridor Plan to link the two parts of the Growth Corridor through the western industrial node. The northern part of the Corridor is served by an identified PPTN that links districts north and south of the Melton Rail line to stations and town centres.

West Public Transport Concept Plan



Planning for higher capacity public transport, initially in the form of SmartBus type services, but with the potential to be upgraded to a higher capacity transport mode, will be undertaken.

A network of potential local bus routes will be planned as part of preparation of PSPs.



4.6.2 Arterial Road Networks

The Growth Corridor Plan proposes the development, over time, of a new grid of north-south and east-west arterial roads, crossing the OMR and the Western rail/freeway corridor. These roads will provide critical linkages between communities, and to housing, jobs and services.

The following parts of the arterial road network require further planning over time:

- > The east-west arterial road network across the OMR, north of the Western Freeway, including a possible new interchange and a potential crossing to service the PPTN; and
- > The future arterial road network and its relationship with the Princes Freeway and the RRL.

4.6.3 Planning for Freight networks

The rail freight network in the west comprises rail corridors of significance, including:

- > Tottenham-Newport-Altona-Geelong corridor (including Melbourne-Adelaide-Perth mainline);
- > Tottenham-Sunshine-Melton-Ballarat corridor;
- > Sunshine-Sydenham-Bendigo corridor;
- > Sunshine-Brooklyn-Newport corridor including the Sunshine grain terminal and Hanson's quarry terminal.

Future rail proposals include the Western Interstate Freight Terminal-Deer Park-Sunshine-Jacana rail line and the Outer Metropolitan Transport Ring Corridor.

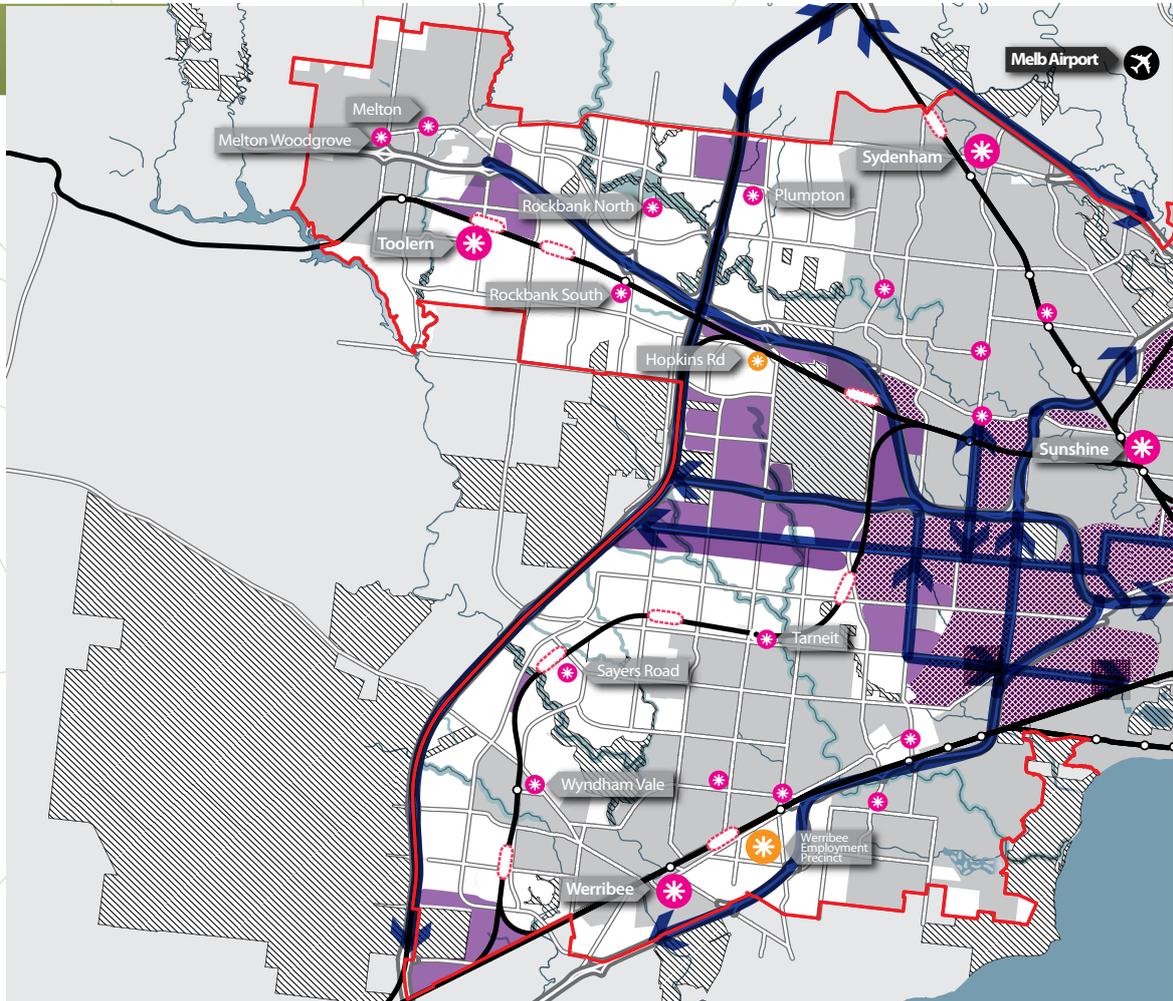
The rail freight network is supported by terminals, rail yards and maintenance facilities, including: the Altona intermodal terminal; Spotswood intermodal terminal; Altona North intermodal terminal; Spotswood Locomotive Maintenance Centre; and the Tottenham rail yards.

Parts of the arterial road and rail network in Melbourne's west will be planned to carry freight as a key function. Critical parts of the road freight network include:

- > Western Freeway
- > Princes Freeway
- > The Outer Metropolitan Ring Transport Corridor
- > Boundary Road
- > East-West Link
- > Palmers Road

West Freight Concept Plan

- Central Activity Area 
- Principal Town Centre 
- Major Town Centre 
- Train Station 
- Future Station 
- Opportunity for future Rail Station 
- Urban Growth Boundary 
- Existing Urban Area 
- Area Outside UGB 
- Constrained Land 
- Industrial 
- Existing Industrial 
- Freight Demand 



The West Growth Corridor Plan also makes provision for a Western Interstate Freight Terminal within the Western Industrial Node. The precinct between Boundary and Middle Roads has been identified as a preferred location for this facility.

Major distribution centres are expected to locate within and adjacent to the terminal area.

There is also the potential for a new Port Shuttle terminal in this location.



4.7 OTHER INFRASTRUCTURE

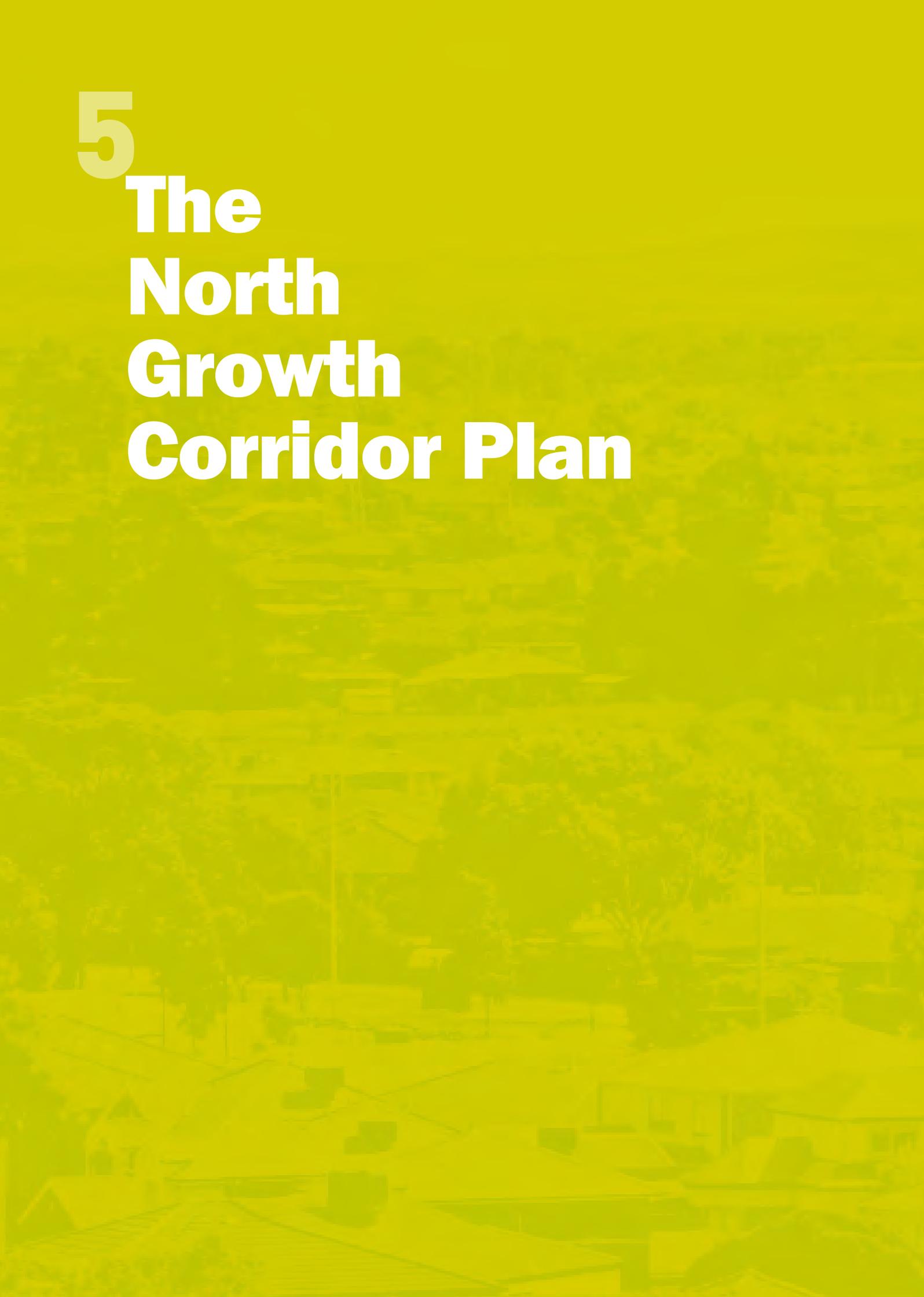
The West Growth Corridor Plan recognises and protects a range of existing and prospective infrastructure facilities including a site identified for a future electricity terminal station at Mount Cottrell, between Boral's Deer Park quarry and the OMR and a number of transmission easements.

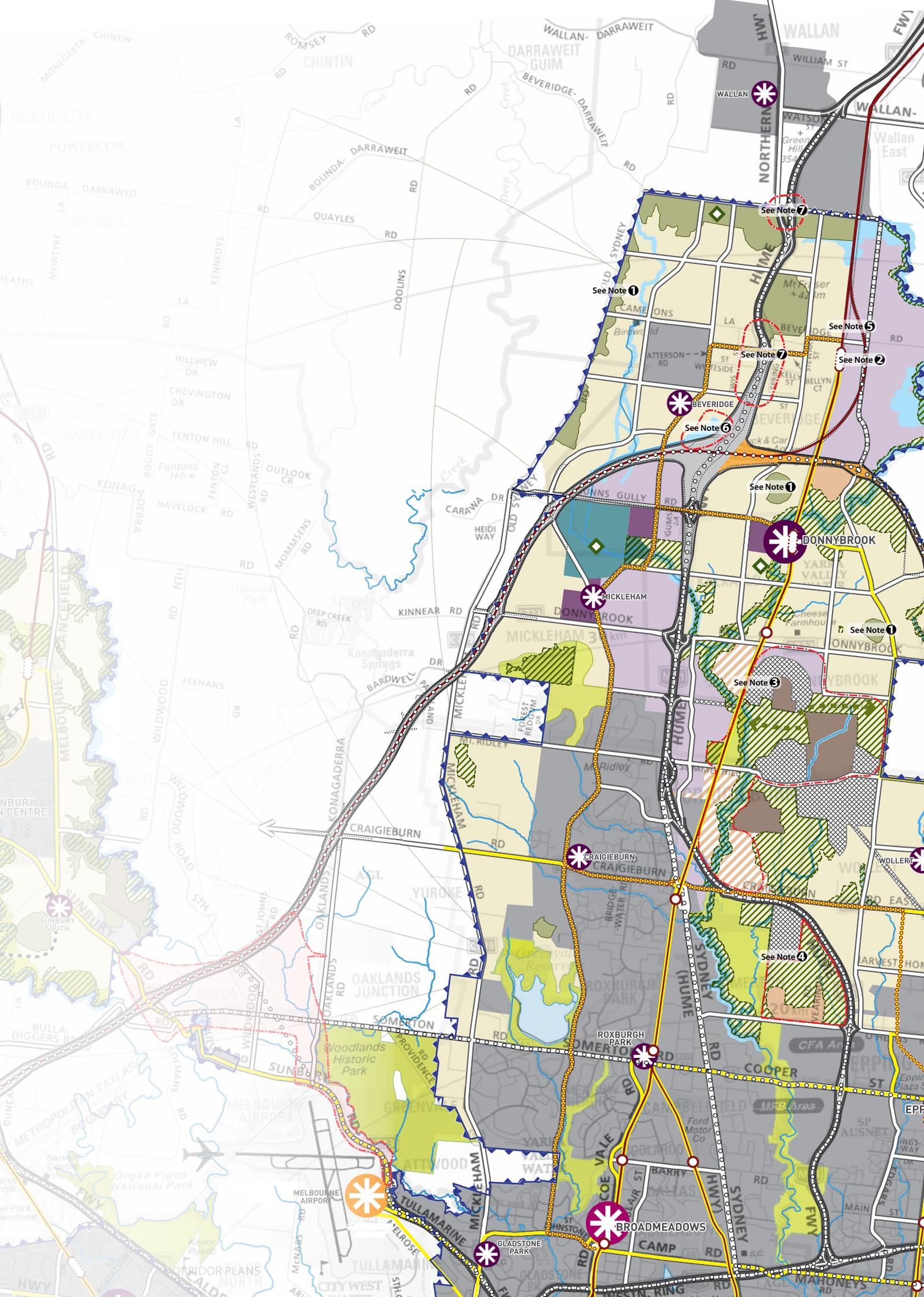
It ensures that approved and operational quarries are protected from encroachment by sensitive land uses and identifies industrial or commercial development activities adjacent to existing Holcim and Boral quarry sites within/adjacent to the UGB. On that basis, these precincts could be rezoned from Farming Zone to Urban Growth Zone. Any buildings proposed within 200m of the title boundary of these quarries will be subject to a risk assessment to be undertaken at PSP stage, to ensure that the impact of rock blasting is acceptable.

The Growth Corridor Plan ensures that approved and operational landfills referred to in The Metropolitan Waste and Resource Recovery Strategic Plan and potential organic waste treatment/recovery are protected from encroachment by sensitive uses. Any development within 500m of the putrescible landfill sites at Werribee and Deer Park will be subject to an environmental audit to ensure that any potential landfill gas migration is mitigated.

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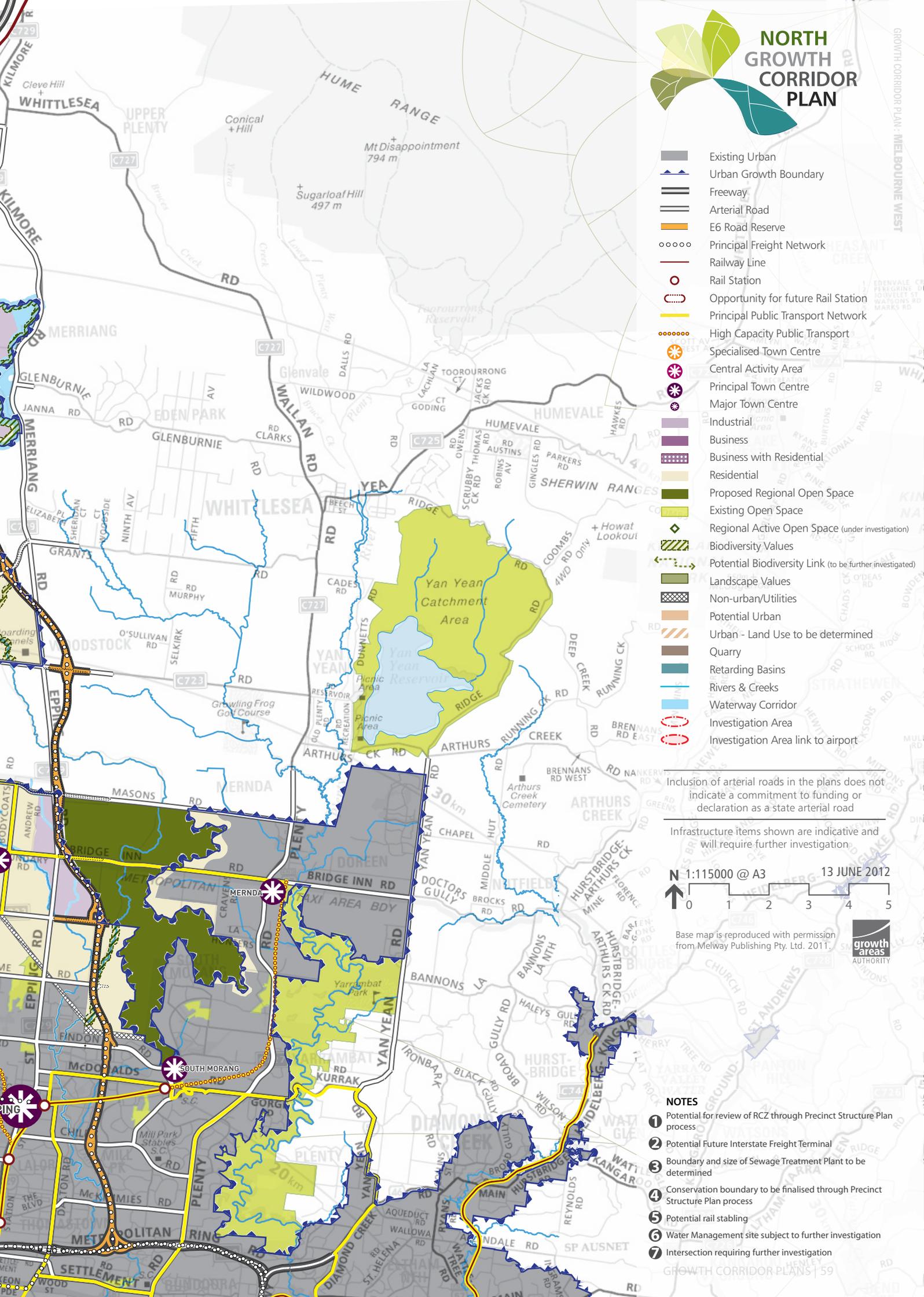
The North Growth Corridor Plan







NORTH GROWTH CORRIDOR PLAN



- Existing Urban
- Urban Growth Boundary
- Freeway
- Arterial Road
- E6 Road Reserve
- Principal Freight Network
- Railway Line
- Rail Station
- Opportunity for future Rail Station
- Principal Public Transport Network
- High Capacity Public Transport
- Specialised Town Centre
- Central Activity Area
- Principal Town Centre
- Major Town Centre
- Industrial
- Business
- Business with Residential
- Residential
- Proposed Regional Open Space
- Existing Open Space
- Regional Active Open Space (under investigation)
- Biodiversity Values
- Potential Biodiversity Link (to be further investigated)
- Landscape Values
- Non-urban/Utilities
- Potential Urban
- Urban - Land Use to be determined
- Quarry
- Retarding Basins
- Rivers & Creeks
- Waterway Corridor
- Investigation Area
- Investigation Area link to airport

Inclusion of arterial roads in the plans does not indicate a commitment to funding or declaration as a state arterial road

Infrastructure items shown are indicative and will require further investigation.

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NOTES

- 1 Potential for review of RCZ through Precinct Structure Plan process
- 2 Potential Future Interstate Freight Terminal
- 3 Boundary and size of Sewage Treatment Plant to be determined
- 4 Conservation boundary to be finalised through Precinct Structure Plan process
- 5 Potential rail stabling
- 6 Water Management site subject to further investigation
- 7 Intersection requiring further investigation



THE NORTH Growth Corridor Plan

5.1 CONTEXT

Melbourne's north is undergoing substantial transformation, with a widening socio-economic mix, and a diversifying economy. The region plays an international and interstate gateway role in terms of the Melbourne Airport, Hume Freeway and the Melbourne-Sydney-Brisbane rail line. Whilst it has maintained its nationally significant role in advanced manufacturing and logistics, it is also developing new strengths in the knowledge economy.

The area covered by the Growth Corridor Plans will eventually accommodate a population of 260,000 or more people and has the capacity to provide for at least 83,000 jobs. The majority of new industrial land for the northern metropolitan region will be located within the North Growth Corridor.

The North Growth Corridor has good accessibility to the CBD and other major employment precincts. It features excellent road, rail, freight and public transport infrastructure, most notably Melbourne Airport and other significant logistics hubs.

Broadmeadows Central Activities Area will continue to evolve and act as a major anchor for the region to support the emerging growth in the Northern Corridor.

In the longer term, the Outer Metropolitan Ring/E6 road reservation (OMR/E6) and the Beveridge Interstate Freight Terminal (BIFT) will reinforce the economic functioning of this corridor, and it will also benefit from ongoing upgrades to roads and public transport over time.

Ensuring that the North Growth Corridor is an attractive location for a wide range of businesses, and a wide diversity of households are key challenges.

The North Growth Corridor Plan seeks to meet these challenges by:

- > preserving and enhancing the natural features of the Growth Corridor, including the significant landscape and biodiversity values. New communities will benefit from an integrated open space network that provides a distinctive character and amenity, and existing biodiversity values will be preserved and enhanced;
- > providing an enhanced public transport network comprising new rail stations along the Sydney-Melbourne rail line supported by a series of high capacity public transport services which will connect substantial parts of the

corridor to higher order town centres and to stations along the heavy rail corridor;

- > extending the northern region's public transport and arterial road networks into the Growth Corridor so that future residents and workers will enjoy a similar level of accessibility to those living and working in established parts of the north;
- > creating new town centres and employment areas that contribute to the ongoing diversification and growth of the northern region's economy. New Town Centres will be planned to complement the significant role of the Broadmeadows CAA for Melbourne's north. These town centres have been located on the public transport networks to maximise accessibility; and
- > providing for a variety of housing choices that can meet the needs of the new communities not only on initial development but also as the community matures and changes over time.



5.2

The North Growth Corridor will make a significant contribution to the growth and diversification of the broader northern metropolitan area. It will offer a diversity of housing, employment and lifestyle opportunities, supported by a high quality transport network that focuses on Broadmeadows, Epping and Donnybrook.

The Corridor takes the form of a series of distinct urban districts interspersed with open space and employment precincts. Communities will be well connected to jobs, town centres and the broader region by a high quality transport network.

Each community will have a distinctive character, defined by its natural setting – the foothills, grasslands, woodlands, creeks and waterways – and well designed, accessible town centres.



5

5.3 LANDSCAPE, ENVIRONMENT AND OPEN SPACE

The North Growth Corridor is characterised by the hills flanking its western, northern and eastern edges, the flat plateau towards the western edge of the Corridor and the more undulating landform towards the east. The eucalypt woodland, particularly towards the eastern edge of the corridor, and Merri and Darebin Creeks are also significant elements in the landscape. Many of these features also provide a range of cultural heritage values.

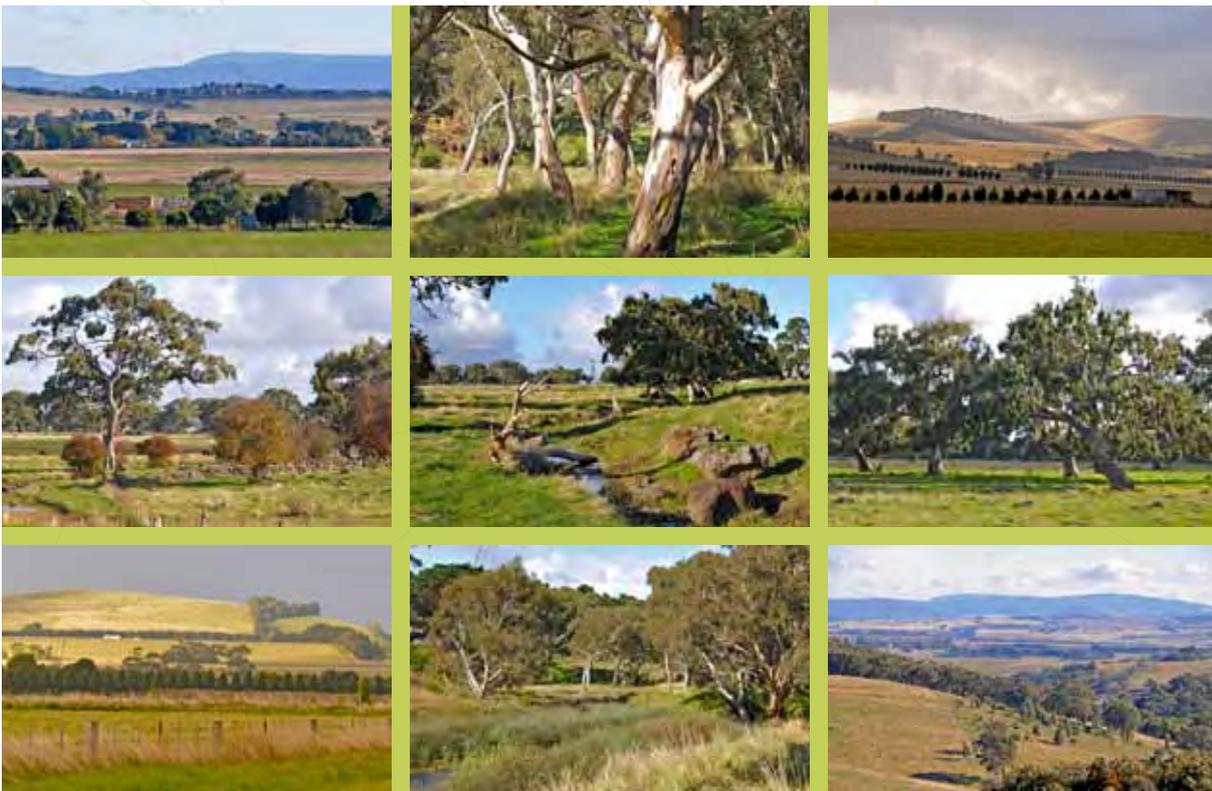
These features provide significant opportunities to create new active and passive recreation areas alongside waterways and both in the flat plateau towards the west and the more undulating red gum areas towards the east.

The Growth Corridor Plan recognises this wide range of values. Combined, they make up an integrated open space network for Melbourne's North, which provides an important natural setting for the entire North Corridor. It will make a major contribution to the future amenity and sense of place for future communities. Residents and visitors will be able to access the open space via a comprehensive trail network that will extend throughout the North Growth Corridor.

5.3.1 Landscape

The North Growth Corridor is characterised by a large valley floor space, flanked by the foothills of the Great Dividing Range, and incised by the Merri and Darebin creeks. The key landscape features that form part of the broader setting for urban development include:

- > Retention of key views to the hills that flank the Growth Corridor to the west, north and east;
- > Retention of distant views from the Growth Corridor to the Great Dividing Range to the north and north east.
- > Retention of an inter-urban break between the northern edge of the Growth Corridor and Wallan. The edge of urban development has been identified as just south of the saddle that commences at the intersection of Old Sydney Road and Beveridge Darraweit Road, and links south-east to Mt Fraser;
- > Retention of the red volcanic cones at Mt Frazer and Bald Hill, and the protection of vistas to these features from a range of vantage points across the Growth Corridor; and



- > Utilisation of the natural drainage system across the Growth Corridor to create a network of open spaces which connect different parts of the corridor in both visual and landscape terms. Merri, Kalkallo and Darebin Creeks are particularly important in this regard.

Further work needs to be undertaken to determine the most appropriate mechanism for recognizing and protecting these landscape features. In some instances the land will remain undeveloped due to its intrinsic characteristics (i.e. hill tops, slopes, drainage and floodways), while in other instances it may become part of the more formed open space network.

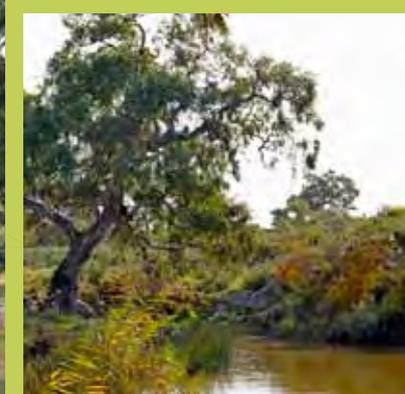
5.3.2 Biodiversity

The North Growth Corridor includes significant biodiversity values, with substantial areas of River Red Gums scattered across the landscape, and threatened communities of Natural Temperate Grasslands of the Victorian Volcanic Plain and Grassy Eucalypt Woodland of the Victorian Volcanic Plain. Much of these areas have been excluded from development.

Retention of these areas of biodiversity value will be additional to the delivery of a 1,200 hectare woodland reserve outside the UGB and west of the E6 road reservation between Wollert and Woodstock.

The following biodiversity values are recognised by the North Growth Corridor Plan:

- > The Craigieburn Grasslands, and land to its north and east. This area supports Stony Knoll Shrubland EVC, Grey Clay Drainage-Line Aggregate EVC and Plains Grassland EVC, a substantial number of scattered large old River Red Gums and patches of Grassy Eucalypt Woodland, Curly Sedge and Matted Flax Lily;
- > The RCZ area and adjoining areas, immediately to the north of Craigieburn Road East, which supports patches of Plains Grassy Woodland EVC and Plains Grassland EVC, as well as patches of Grassy Eucalypt Woodland, Curly Sedge and Matted Flax-Lily;
- > The RCZ area to the east of Merri Creek and south of Woody Hill supports patches of Plains Grassy Woodland EVC and Plains Grassland EVC as well as large amounts





of scattered trees. Growling Grass Frog is common along this stretch of Merri Creek, and the area to the east provides suitable habitat for the species. Small patches of Natural Temperate Grassland and Grassy Eucalypt Woodland also occur here;

- > The RCZ area further east supports large numbers of large old scattered trees and patches of Grassy Eucalypt Woodland of the Victorian Volcanic Plain. The area also provides connectivity between biodiversity values in the Merri Creek and the significant areas of Grassy Eucalypt Woodland to the eastern side of the urban growth boundary, where the large Grassy Eucalypt Woodland reserve is proposed;
- > The area adjoining the existing Mount Ridley Nature Conservation Reserve supports a large patch of Grassy Eucalypt Woodland. The area includes a number of very large old River Red Gums and populations of Matted Flax-lily and Golden Sun Moth;
- > The RCZ area to the south of the E6 road reservation and to the east of the rail line includes a significant number of large old scattered trees, particularly towards the east. Curly Sedge, Matted Flax-lily and several other threatened flora species also occurs on the site. Growling Grass Frog has been identified north of the creek near the railway line. The creek corridor and adjacent stony knolls are generally in good condition;
- > The Merri Creek and its environs are identified as important breeding habitat for the Growling Grass Frog, and also support Latham's Snipe. The location of the Principal

Town Centre identified in the plan means that the habitat corridor required to protect the Growling Grass Frog through this area has been narrowed at this point, to 50m wide;

- > West of the Hume Freeway at Kalkallo is an area of Plains Grassland EVC either side of the Kalkallo Creek. The area will be protected for conservation due to the presence of Golden Sun Moth, Matted Flax-lily and important habitat for the Growling Grass Frog and waterbirds. The site adjoins the proposed Kalkallo Retarding Basin which will be designed and managed to provide additional habitat for Growling Grass frog and migratory waterbirds; and
- > There is an area of confirmed Grassy Eucalypt Woodland in the north west of the current Farming Zone to the east of Mickleham Road, which also supports Golden Sun Moth. This patch of approximately 30 to 40 hectares will be protected for conservation.

5.3.3 Drainage

The North Growth Corridor includes part of the Yarra River catchment and its major waterways include Merri, Darebin and Kalkallo Creeks. These waterways and numerous smaller tributaries include areas of cultural heritage, and provide habitat for significant native flora, native frog and fish species, and other fauna.

Other significant landscape features include floodplains associated with Merri Creek, local wetlands, and the Melbourne Water Greenvale Reservoir and Kalkallo Retarding Basin.

There are opportunities for improvements to waterways, including enhancing existing farm drains to address flooding risks

while restoring waterway health. The existing Kalkallo Retarding Basin, and other existing and future proposed retarding basins that might be identified in PSPs, can be expanded to serve some upstream development.

The alignment of the Outer Metropolitan Ring/E6 road reservation will affect waterways and the location of stormwater management infrastructure.

Due to highly erosive waterways in the upper catchment, development may need to be carefully staged in some areas to allow for construction of appropriate stormwater management infrastructure.

Melbourne Water's proposed regional retarding basin at Kalkallo has the potential to become an important regional open space facility for Melbourne's north. The retarding basin is required to manage the increase in stormwater flows



resulting from the new urban development. It will be designed to temporarily store, then gradually release, the increased flows to protect downstream waterways and properties from flooding. The retarding basin is likely to be used for other beneficial purposes such as improving water quality.

5.3.4 Regional Parks and Open Space

The City of Whittlesea has established a vision for Quarry Hills as a new regional park, containing significant biodiversity, geological, cultural heritage and landscape values. The Growth Corridor Plan recognises these

values, and further work needs to be done by Council to resolve detailed development issues and further realise this vision.

Opportunities exist to create significant regional open space facilities at the Kalkallo retarding basin (subject to further investigation and approvals). This could incorporate passive and active open space elements, whilst ensuring that the stormwater retarding function of the facility is maintained.

A series of existing and planned open spaces will be connected by a MTN over time. These include the Merri, Kalkallo and Darebin Creeks, the Quarry Hills park, the

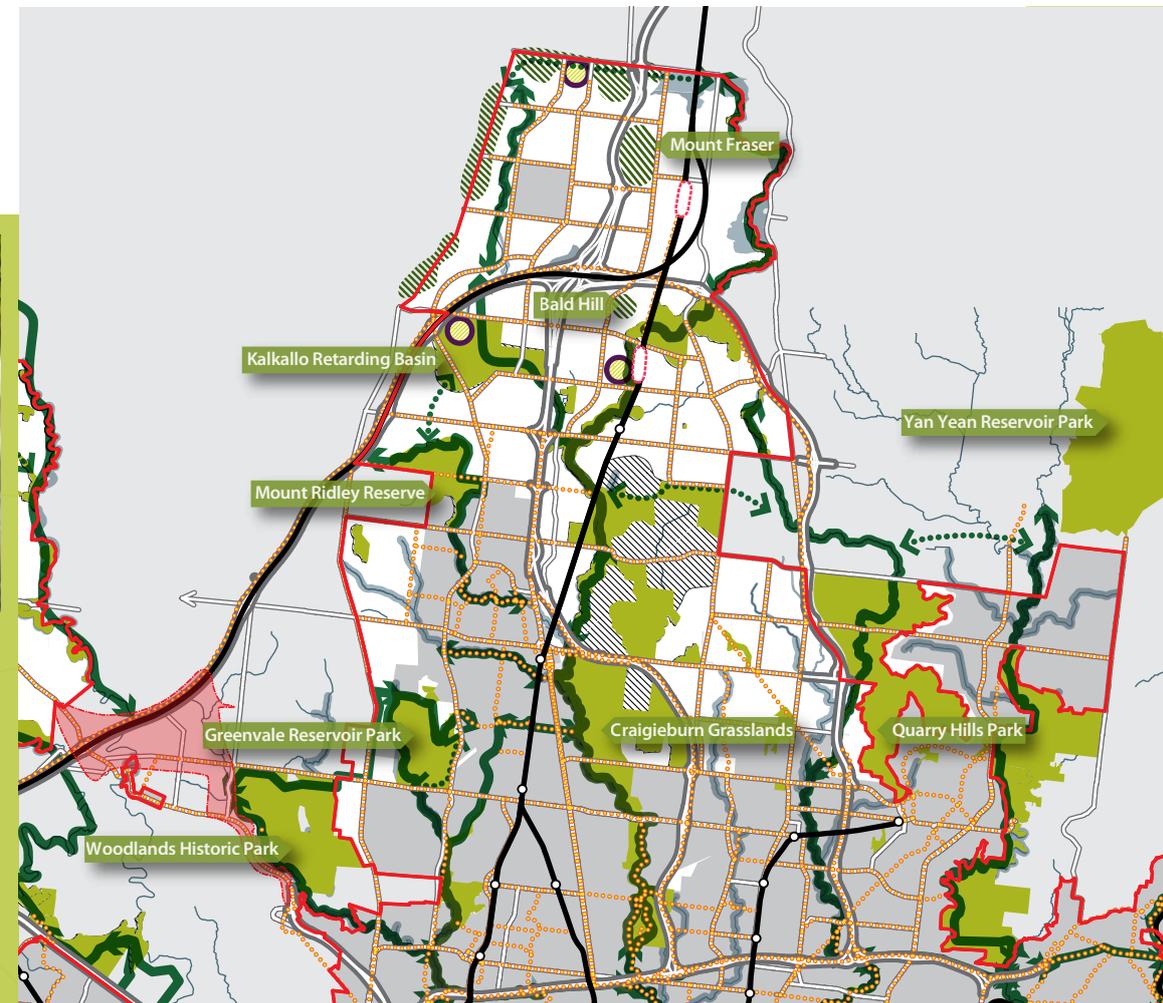
proposed grassy eucalypt woodland reserve outside the UGB, the protected Grassy Eucalypt Woodland area south of Donnybrook Road and the Kalkallo retarding basin.

In addition, an open space buffer is identified between the northern edge of the Growth Corridor and Wallan. The ridge line to the west of the Growth Corridor along with the prominent volcanic hills within the northern portion of the Growth Corridor will also be protected from urban development.

A potential location for a regional active open space facility is identi-

North Integrated Open Space Concept Plan

-  Central Activity Area
-  Principal Town Centre
-  Major Town Centre
-  Train Station
-  Future Station
-  Opportunity for future Rail Station
-  Urban Growth Boundary
-  Existing Urban Area
-  Area Outside UGB
-  Investigation Area: OMR link to airport
-  Regional Open Space (not all publicly accessible)
-  Potential Regional Active Open Space
-  Potential Bicycle Network
-  Principal Bicycle Network Links
-  Metropolitan Trail Network
- Metropolitan Trail Network Links
- Landscape Values





fied within this buffer, along with potential facilities on the Merri Creek south of the Donnybrook Principal Town Centre, and at the Kalkallo retarding basin. These facilities are intended to meet a need for sports with a regional catchment. The delivery of these facilities will need to be further investigated before any final decisions can be made. Whilst in some instances land will be set aside because of its intrinsic characteristics (i.e. biodiversity values, drainage, slope etc) in other instances the land may form part of the formal open space system and be delivered by development contributions or other processes.

5.4 CREATING COMMUNITIES

5.4.1 Residential Districts within the Growth Corridor

The identified urban districts are defined by the city shaping elements such as the OMR, the Hume Freeway, the Sydney-Melbourne rail line and also by the landscape and areas of special environmental significance within the Growth Corridor.

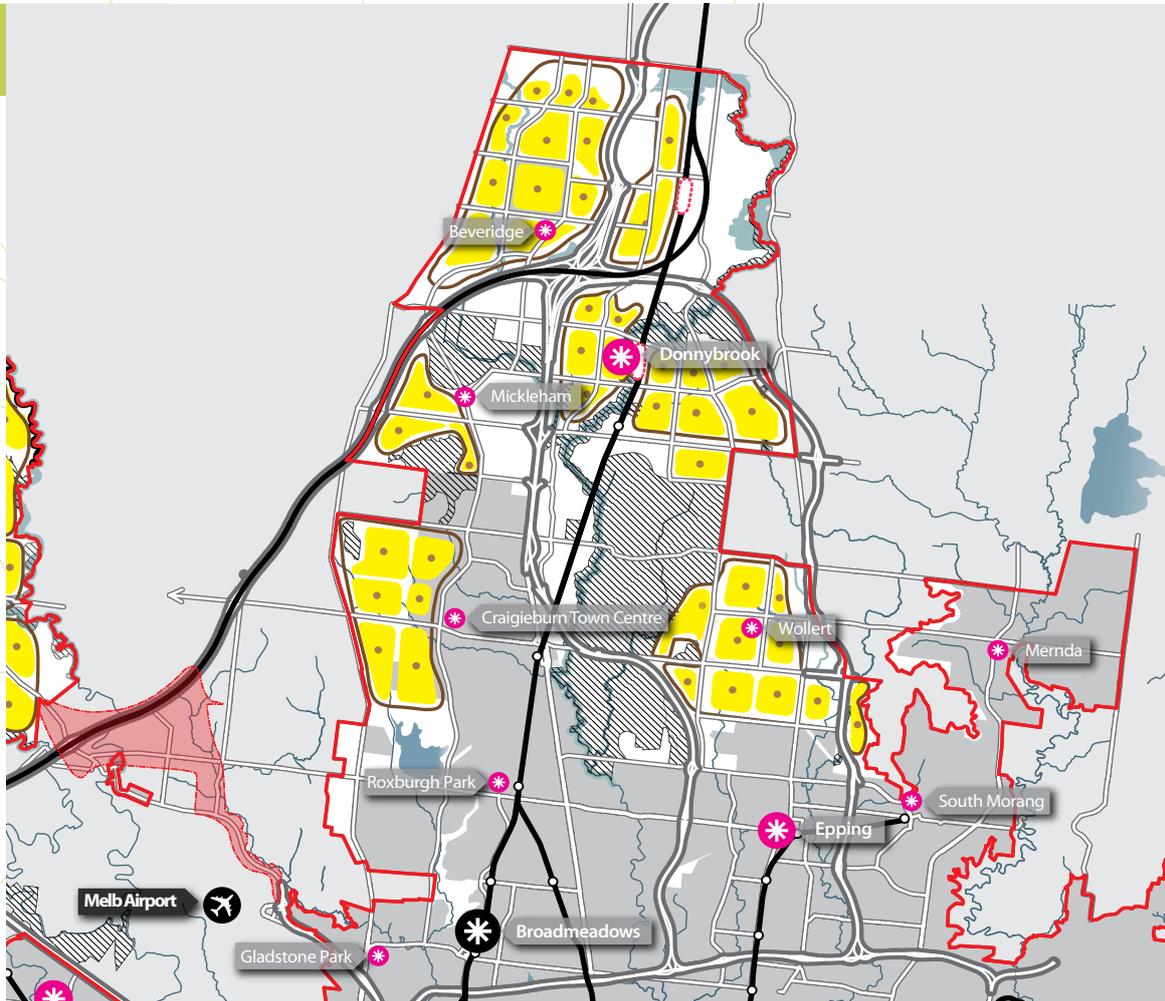
The districts are of a sufficient size to each support a Major Town Centre (or the Principal Town

Centre in the case of the Donnybrook district) and can each be expected to provide for a mix of types and densities of housing development, as well as a range of jobs.

Careful attention will need to be paid to the provision of connections between these communities, particularly those to the west of the Hume Freeway and north of the OMR/E6 road reservation with the Principal Town Centre at Donnybrook. The Growth Corridor Plan shows a series of arterial road connections and PPTN connections between these districts to achieve this.

North Community Concept Plan

- Central Activity Area 
- Principal Town Centre 
- Major Town Centre 
- Train Station 
- Future Station 
- Opportunity for future Rail Station 
- Urban Growth Boundary 
- Existing Urban Area 
- Area Outside UGB 
- Investigation Area: OMR link to airport 
- Constrained Land 
- Local Neighbourhood 
- New Residential Districts 



A sense of place needs to be provided for each of these communities based around the attractive natural landscape, particularly in the form of hills and creeks that each district contains.

5.4.2 Character and Identity

The sense of place for each of these communities will be created from natural features, particularly the hills that frame the Growth Corridor, volcanic cones and the creeks and woodland reserves within and adjacent to it.



The town centres at Donnybrook, West Beveridge, Mickleham and Wollert adjoin or are near natural features including creeks, high points and woodland/grassland areas, and can be designed so as to integrate these features into the character of the town.

Creeks and waterways will also provide alternative connections between communities via the MTN.

Opportunities exist to ensure that some of the arterial road routes are designed to have a strong boulevard character. This will potentially require such routes to have a wider cross section to allow for tree planting and wider medians. The E14/Aitken Boulevard will be designed as a boulevard to provide a higher amenity environment for journeys along this key north-south road spine.

5.4.3 Existing Settlements within the Growth Corridor

The North Growth Corridor includes the existing townships of Beveridge, Kalkallo and Donnybrook. It also includes Mandalay, which is a large residential neighbourhood which is already partially developed. PSPs will need to carefully consider how these should be integrated with new development, and how services and facilities, including public transport, are to be provided, and where, as part of emerging growth. It will be important that existing communities and networks are sustained and given the opportunity to be enhanced over time.

Wallan

Over time, urban development in Melbourne's North will come close to Wallan township, which will have a significant impact on the character and functional role of this town. This has been factored into the planning of Melbourne's North. Wallan will require good transport connections to the services and facilities planned in the North Growth Corridor. Its community will rely on connectivity to the North Growth Corridor for a range of employment, economic and community facilities. Wallan can be linked into the Corridor via public transport links into the Aitken Boulevard PPTN and Sydney – Melbourne rail line. Additional arterial road connections are identified that would link Wallan and the Growth Corridor, in addition to the existing Hume Freeway and Northern Highway.

More detailed work on these relationships will need to be done as part of structure planning of both Wallan and the urban precincts within the North Growth Corridor.



5.4.4 Regional Community, Health and Education Services and Facilities

The Melbourne North Growth Corridor will require a range of community facilities and services to meet the needs of new communities and to build the capacity of facilities already situated within the Growth Corridor.

The major campus based post compulsory education providers in the north are La Trobe University at Bundoora, RMIT at Bundoora, Kangan Institute at Broadmeadows and Craigieburn, and NMIT at Epping and Greensborough. Goulburn Ovens TAFE operates to the north of the metropolitan boundary.

The expected growth in demand for campus based Higher Education and Vocational Education and Training (VET) in the north can largely be met from existing campuses.

However, additional TAFE services, with a focus on VET qualifications and Higher Education feeder courses, could be considered in the north to help ensure locally relevant provision of post compulsory education services.

Primary, secondary and tertiary health services, both hospital and community based, are provided by a combination of state and commonwealth government programs and private including not for profit providers. Primary care services are mainly provided by general practitioners. Community health services, provided by Dianella Community Health in Hume and Plenty Valley Community Health at Whittlesea, deliver a range of primary health care services.

Northern Health is the key provider of acute and sub acute public healthcare in Melbourne's northern region, operating five major public healthcare facilities including The Northern Hospital, Bundoora Extended Care Centre, Broadmeadows Health Service, Craigieburn Health Service and PANCH Community Health Service. Tertiary mental health services are provided at a range of locations by Melbourne Health, Austin Health and a range of non government organisations. The Austin Hospital and inner metropolitan specialist hospitals also serve the North Growth Corridor for tertiary and state-wide health services.

The Northern Hospital at Epping, and Kilmore and District Hospital are currently being expanded. Super clinics are being developed at Wallan and South Morang. The Wallan GP Super Clinic will be supported by an integrated primary care service to be built at Mitchell Community Health Service. Planning for the upgrade of ambulance services is occurring within the context of the statewide service network. Additional residential aged care capacity will be required to provide for an expanding and ageing population in the North Growth Corridor.

Strategic planning will take account of interface communities on the metro-rural fringe, consider the need for health and medical precincts in major centres and include a focus on the potential for co-location of services.

More comprehensive and specialist education, health and community facilities would normally be located in the higher order town centres, including the existing Broadmeadows town centre, and the centres identified at Donnybrook and Mickleham.



5.5 EMPLOYMENT

The North Growth Corridor is one of the most important industrial regions in Australia, with good road and rail links to metropolitan markets and to New South Wales, in particular, via the Sydney rail line and the Hume Freeway, and because of its proximity to Melbourne Airport, which is the region's largest employer.

This will enhance further with the development of the Outer Metropolitan Ring (OMR)/E6 road reservation, which will improve road and rail access to Geelong and South Australia, and with the potential Beveridge Interstate Freight Terminal (BIFT) which is designed to enable the transfer of interstate freight between road and rail from Victoria's two largest ports at Melbourne and Geelong, to other parts of Australia.

Key objectives for the North Growth Corridor are to build on this potential to provide additional industrial land supply:

- > to help maintain Melbourne North's good job to dwelling ratio, and
- > to improve the range and diversity of jobs in the employment market, which is relatively more "blue collar" compared with metropolitan Melbourne.

In total, the North Growth Corridor Plan has the capacity to provide between 83,000 and 105,000 new jobs, in a range of employment categories.

5.5.1 Town Centres

Broadmeadows Central Activities Area (CAA) is expected to be the primary regional centre of the North Corridor. It is expected to be a priority location for major regional services, facilities and a focus for investment attraction. In addition to this, a range of centres are identified to complement the significant regional role that Broadmeadows CAA is likely to provide. Creating new town centres and employment areas will contribute to the ongoing diversification and growth of the region's economy.

The Broadmeadows CAA will be complemented by the existing Epping PTC, and a new PTC at Donnybrook, as well as a network of existing and planned Major Town Centres and neighborhood centres across the Northern Growth Corridor.

The Donnybrook Principal Town Centre is located along the Sydney-Melbourne rail line and there are opportunities for a future rail station in this location. The town centre is adjacent to the Merri Creek open space

corridor and careful design will be required to ensure that biodiversity and amenity issues are addressed whilst also creating a strong link between the town centre and proposed rail station.

New Major Town Centres are identified along the higher capacity public transport routes at Mickleham, West Beveridge and Wollert. The higher capacity public transport route is shown to run along Aitken Boulevard supporting Mickleham Town Centre, Beveridge Town Centre, the developing Craigieburn Town Centre and through the significant employment areas identified north and south of Merrifield.

A Major Town Centre is also identified at Mernda in the Plenty Valley.

A Local Town Centre will be developed at Beveridge alongside the Melbourne to Sydney railway and adjacent to the potential Beveridge Interstate Freight Terminal (BIFT). Although it is premature to predict how the BIFT will evolve in terms of its relationship to the town centre, higher order services and facilities should not be precluded from locating at the Beveridge LTC.





5.5.2 Employment Precincts

The North Growth Corridor Plan makes provision for:

- > 2,810 (gross) hectares of industrial land;
- > A possible 320 (gross) hectares of business land (the exact amount is dependent upon the outcomes of land uses to be determined following further investigation); and
- > Around 120 (gross) hectares of additional land could also be provided, for a range of local industrial and commercial activities across residential

PSPs. These will be identified as required through the PSP process.

Beveridge Interstate Freight Terminal

The Beveridge Interstate Freight Terminal (BIFT) is a longer term freight, logistics and related industry concept. Planning for this facility is in the very early stages. The site represents the ideal location for the facility based on its location alongside the Melbourne-Sydney-Brisbane rail line, Hume Freeway and proposed OMR. Almost 1,010 (gross) hectares of land east of the Melbourne-Sydney rail line

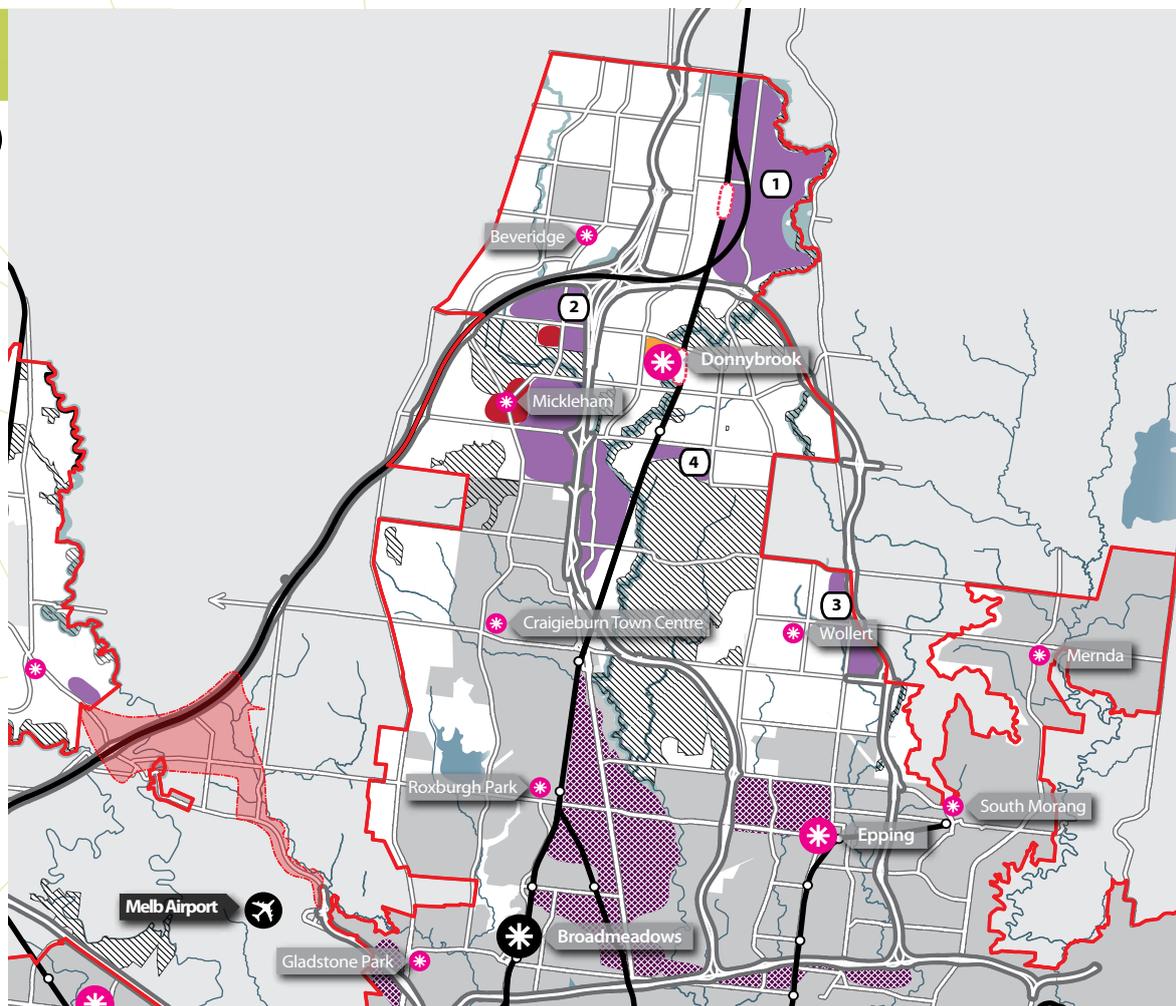
and north of the E6 reservation is identified for the proposed intermodal freight terminal and associated freight and logistics based industrial area. Further investigations will determine the exact area required for the core terminal requirements, with the remainder of the Precinct designated for industrial and freight related uses.

Mickleham

The existing Craigieburn industrial corridor will be extended up to the Outer Metropolitan Ring Transport Corridor, alongside the Hume Freeway. This will provide an additional 310 (gross) hectares of industrial land with excellent

North Employment Concept Plan

- Central Activity Area
- Principal Town Centre
- Major Town Centre
- Train Station
- Future Station
- Opportunity for future Rail Station
- Urban Growth Boundary
- Existing Urban Area
- Area Outside UGB
- Investigation Area: OMR link to airport
- Constrained Land
- Industrial
- Existing industrial
- Business
- Business with Residential
- Beveridge Interstate Freight Terminal
- Mickleham Industrial Precinct
- Wollert Industrial Precinct
- Donnybrook Road Industrial Precinct



access to the freight network in addition to 60 (gross) hectares of business land which is identified to provide a more appropriate interface with the proposed Kalkallo retarding basin. This is in addition to 600 (gross) hectares of industrial land and 80 (gross) hectares of Business use south of the Kalkallo Retarding Basin.

Wollert

215 (gross) hectares of land for industrial uses is identified alongside the proposed E6 road reservation for general industrial uses. This provides an opportunity to buffer the existing Hanson quarry/landfill site at Wollert with appropriate uses whilst providing both local and regional employment opportunities. This area is expected to provide for more local service business uses, as well as freight based industry.

Donnybrook Road

100 (gross) hectares of land for industrial uses is identified to the south of Donnybrook Road. Donnybrook Road will be designed primarily to carry freight, and will have good access onto the Hume Freeway and the E6 road reservation.

5.6 TRANSPORT

5.6.1 Public Transport

Urban development in Melbourne's North needs to be supported by planning for inter-connected high capacity public transport corridors in each of the central, western and eastern flanks.

The Growth Corridor Plan focuses higher density and mixed use development opportunities along areas adjacent to the Melbourne-Sydney rail line wherever practical.

Key features of public transport network planning for Melbourne's North Corridor include:

- > Planning for services and stations development along the Sydney-Melbourne rail line, including multi modal integration, to support Principal and Major Town Centres, as well as strategically located park and ride facilities;
- > Planning for higher capacity public transport, initially in the form of bus rapid transit on the arterial road network, but with the potential to be upgraded to a higher capacity transport mode;
- > A potential arterial road based SmartBus network;
- > A potential network of local bus routes across the area, to be planned in PSPs.

The potential to create a new rail line to Melbourne Airport is currently under investigation.

Detailed planning will be required to determine the most effective form of higher capacity additions to the public transport network.



5.6.2 Arterial Road Networks

In order to provide future access between urban communities in the corridor, the Growth Corridor Plan proposes a new grid of north-south and east-west arterial roads crossing the freeways. These roads will provide critical access across local communities and between housing, jobs and services.

The Corridor Plan recognises the potential for additional access onto the Hume Freeway, north and south of the OMR, and also recognises the need for

further investigation of these interchanges. There is a need to ensure that this important national freight route does not become congested with local traffic, but there is also a need to provide some additional access to the Freeway to serve the new homes and jobs proposed. Further investigations regarding this issue are required.

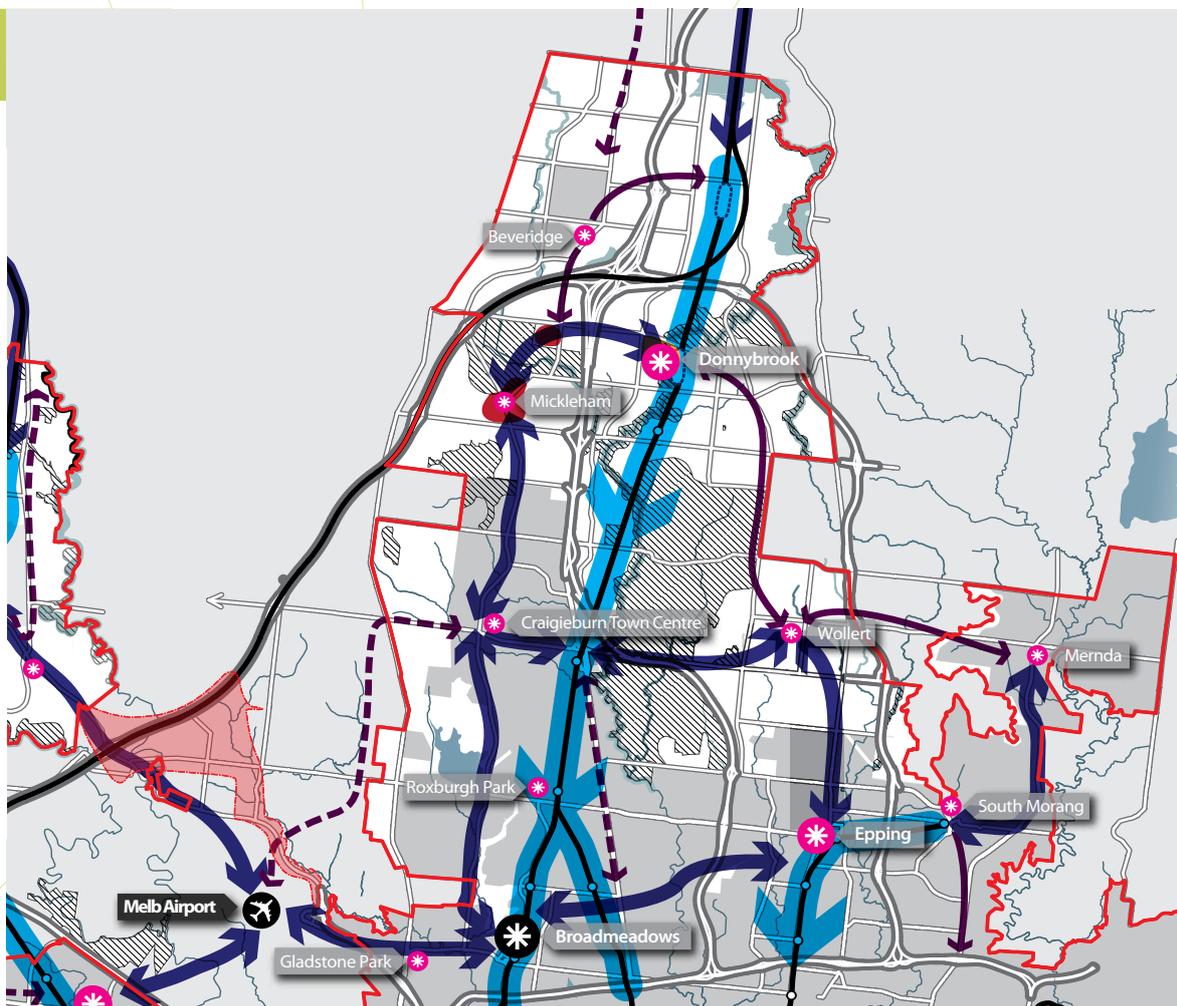
5.6.3 Planning for Freight

The Melbourne North Corridor is centred on the existing spinal rail corridor and rail facilities which can be expanded. The rail freight network in the north comprises rail corridors, including:

- > Tottenham-Jacana-Somerton-Beveridge corridor (including Melbourne-Sydney-Brisbane mainline);
- > Kensington-Essendon-Jacana corridor;
- > North Melbourne-Upfield-Roxburgh Park corridor.

North Public Transport Concept Plan

- Central Activity Area
- Principal Town Centre
- Major Town Centre
- Train Station
- Future Station
- Opportunity for future Rail Station
- Urban Growth Boundary
- Existing Urban Area
- Area Outside UGB
- Investigation Area
- Business
- Business with Residential
- Metropolitan Demand
- Regional Demand
- Subregional Demand
- Other Major Demand



The rail freight network is supported by terminals and maintenance facilities, including: the Somerton Intermodal terminal; Kensington grain terminal; and McIntyre wagon maintenance facility.

The North Growth Corridor Plan identifies a substantial area of land east of the Melbourne-Sydney rail line and north of the E6 reservation as a potential interstate freight terminal and industrial area. Further investigations are required to confirm requirements for the freight terminal (Beveridge Interstate Freight

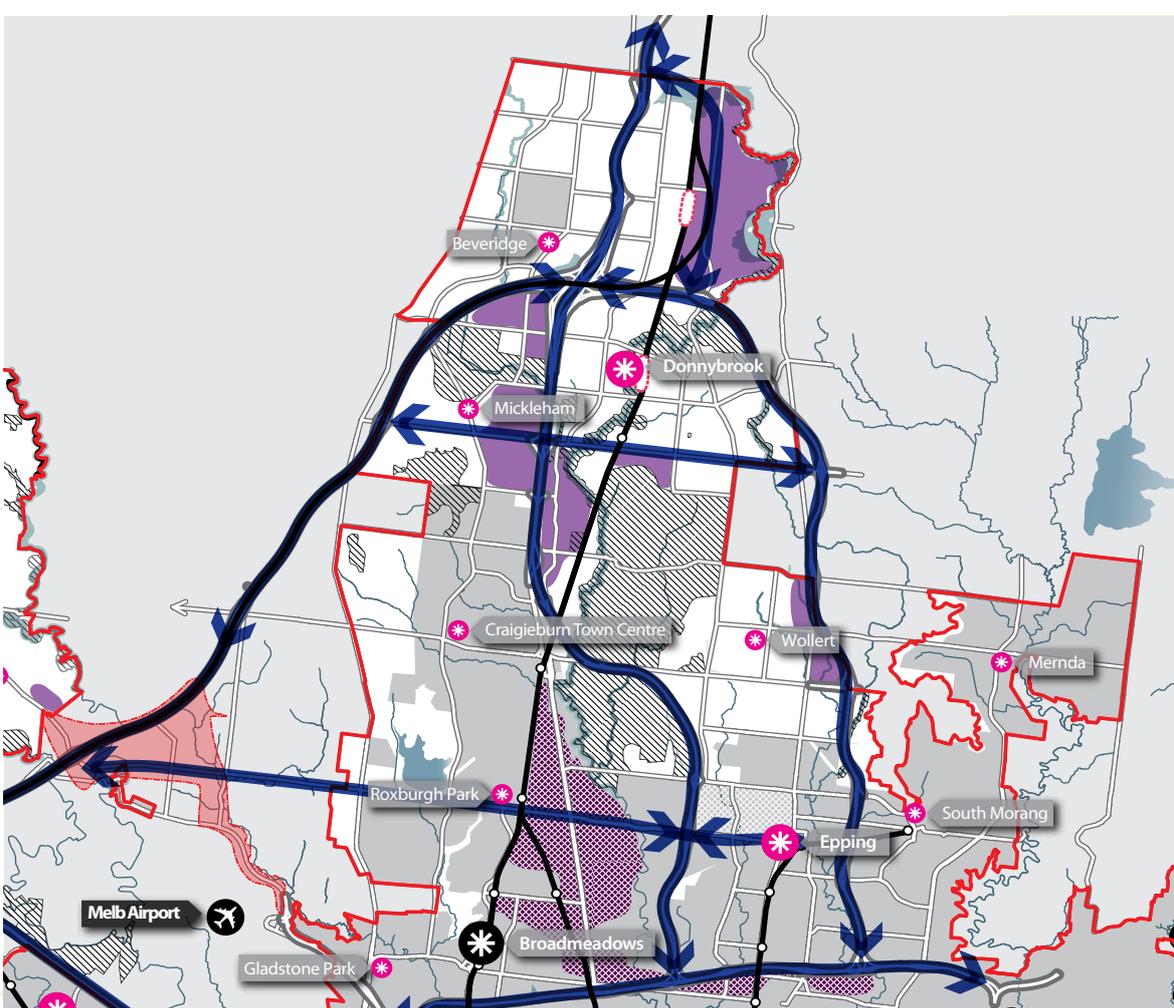
Terminal) but this site is very well suited for this gateway freight precinct, with road and potential rail access to the Melbourne-Sydney-Brisbane corridor, which is the busiest and most significant freight transport corridor in Australia.

Some of the road network will be planned to carry freight as a key function. This is shown on the Growth Corridor Plan and includes:

- > The Hume Freeway;
- > The Outer Metropolitan Ring/ E6 road reservation;
- > Donnybrook Road;
- > Somerton Road; and
- > The Metropolitan Ring Road.

North Freight Concept Plan

-  Central Activity Area
-  Principal Town Centre
-  Major Town Centre
-  Train Station
-  Future Station
-  Opportunity for future Rail Station
-  Urban Growth Boundary
-  Existing Urban Area
-  Area Outside UGB
-  Investigation Area: OMR link to airport
-  Constrained Land
-  Industrial
-  Existing Industrial
-  Freight Demand



5

5.7 OTHER INFRASTRUCTURE

The Plan recognises and protects a range of existing and prospective infrastructure facilities including a potential gas fired power station at Wollert, a new waste water treatment plant at Donnybrook, and the Melbourne Water retarding basin at Mick-leham. With regard to a gas fired power station at Wollert, if built, such a facility has the potential to generate significant noise and it will therefore be necessary to take account the sort of buffer requirements for such a facility in considering its ultimate siting, and also in determining land uses on sites surrounding the APA Gasnet site at Wollert. This latter issue will be addressed as part of Precinct Structure Planning for the Wollert area.

The provision of a new sewage treatment and recycled water plant is essential to allow for development of much of the Growth Corridor. A 50 hectare site (approximately) towards the southern end of Langley Park Drive, between Barro's Woody Hill quarry and the railway line has been identified as the best location for this facility. This location presents the opportunity to co-locate the sewage treatment plant within part of the buffer to the existing quarry.

The North Corridor Plan ensures that approved and operational quarries are protected from encroachment by sensitive land uses. It also locates industrial or commercial development activities adjacent to existing quarry sites within/adjacent to the UGB. On that basis, these precincts would be rezoned to Urban Growth Zone, but any buildings proposed within 200m of the title boundary of such quarries will be subject to a risk assessment to be undertaken at PSP stage, to ensure that the impact of rock blasting is acceptable.

The plan ensures that approved and operational landfills are protected from encroachment by sensitive uses. Any development within 500m of the putrescible landfill site at Wollert will also be subject to an environmental audit to ensure that any potential landfill gas migration is mitigated.



5.8 URBAN DEVELOPMENT INVESTIGATION AREAS

More detailed assessment is required of the precincts immediately north of Craigieburn road, on either side of the Sydney-Melbourne Rail line.

In the area generally to the east of the Melbourne-Sydney railway line and between Craigieburn Road and Donnybrook Road, an investigation area is shown on the North Growth Corridor Plan.

This area presents a number of potential urban development opportunities, including the future alternative use of the Austral Bricks site. There remain a number of complex environmental, buffer (to existing quarries or future utility uses) and connectivity related issues requiring more detailed investigation before any decisions can be contemplated about the best long term use or uses within this Precinct. The necessary investigations and land use decisions can occur as part of a local Precinct Structure Plan process for this area. The Growth Corridor Plan also highlights the potential for an east-west habitat corridor to connect through from Merri Creek to the Urban Growth Boundary between Summerhill Road and Donnybrook Road.

The land west of Merri Creek was brought into the UGB in 2005. Some of this was identified for employment purposes at that time, and some was identified as having potential

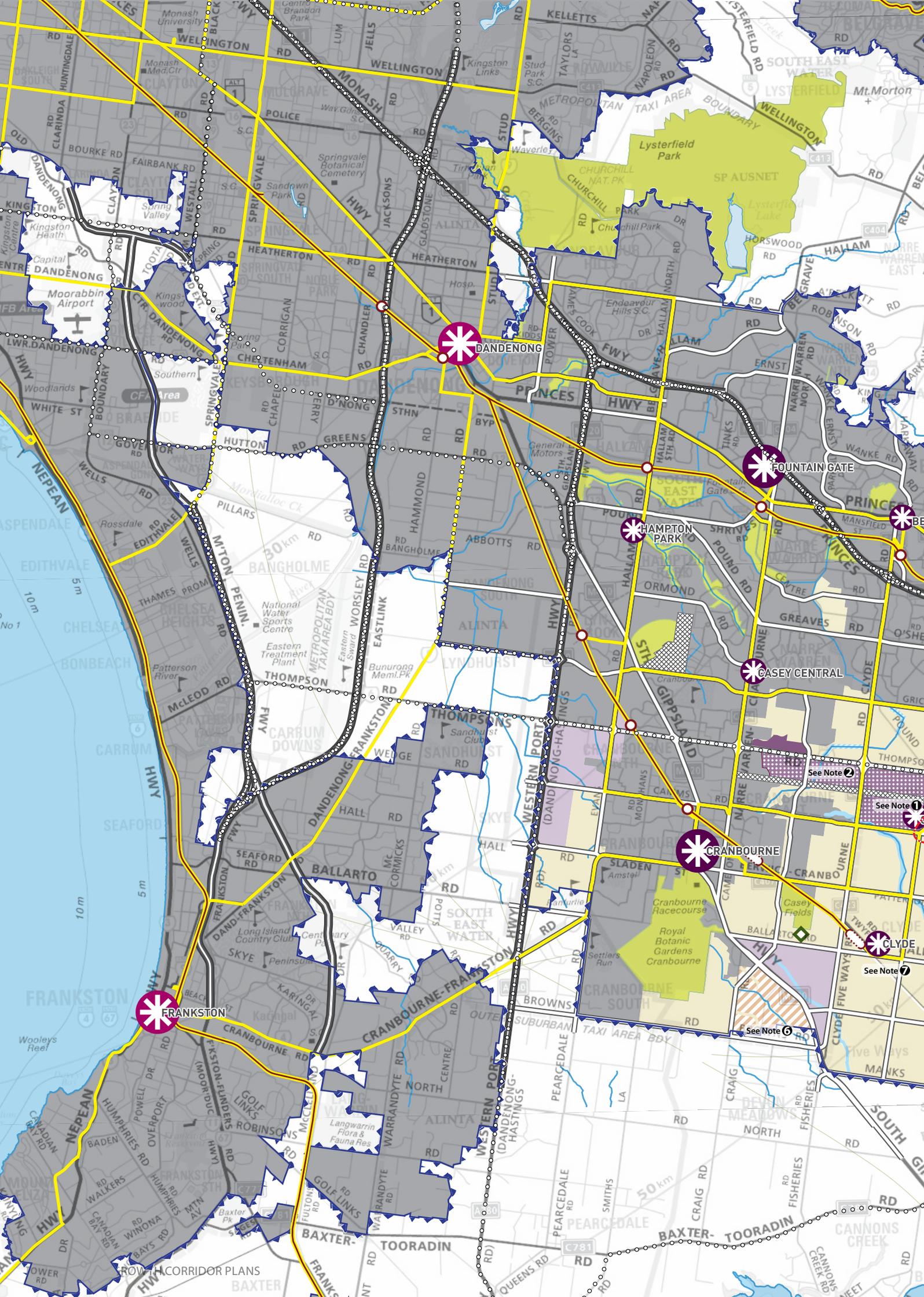
environmental sensitivity. Whilst the area is clearly appropriate for urban development, its size, proximity to the rail line and access constraints mean that its best long-term use also requires further consideration. This is best done in the context of further detailed planning work required along the Merri creek, and at the Austral Brickworks site.

Land to the east of the Melbourne-Sydney rail line, north of Merri Creek and south of the E6 road reservation may also have urban development potential. Part of the area has previously been identified as a potential future quarry. The area is proximate to the identified Donnybrook Principal Town Centre and rail station, so its development would have a beneficial impact on the catchment of this town centre. Biodiversity values have been assessed through the BCS and are represented in the GCP. Further investigation at the PSP level in relation to quarrying, drainage, suitability of land use types and yields, buffers and access will need to be undertaken to determine the sites development potential. If this area is determined to be developable, then the developable area would probably be rezoned to Urban Growth Zone.



6

The South East Growth Corridor Plan



DANDENONG



FOUNTAIN GATE



HAMPTON PARK



CASEY CENTRAL



CRANBOURNE



FRANKSTON

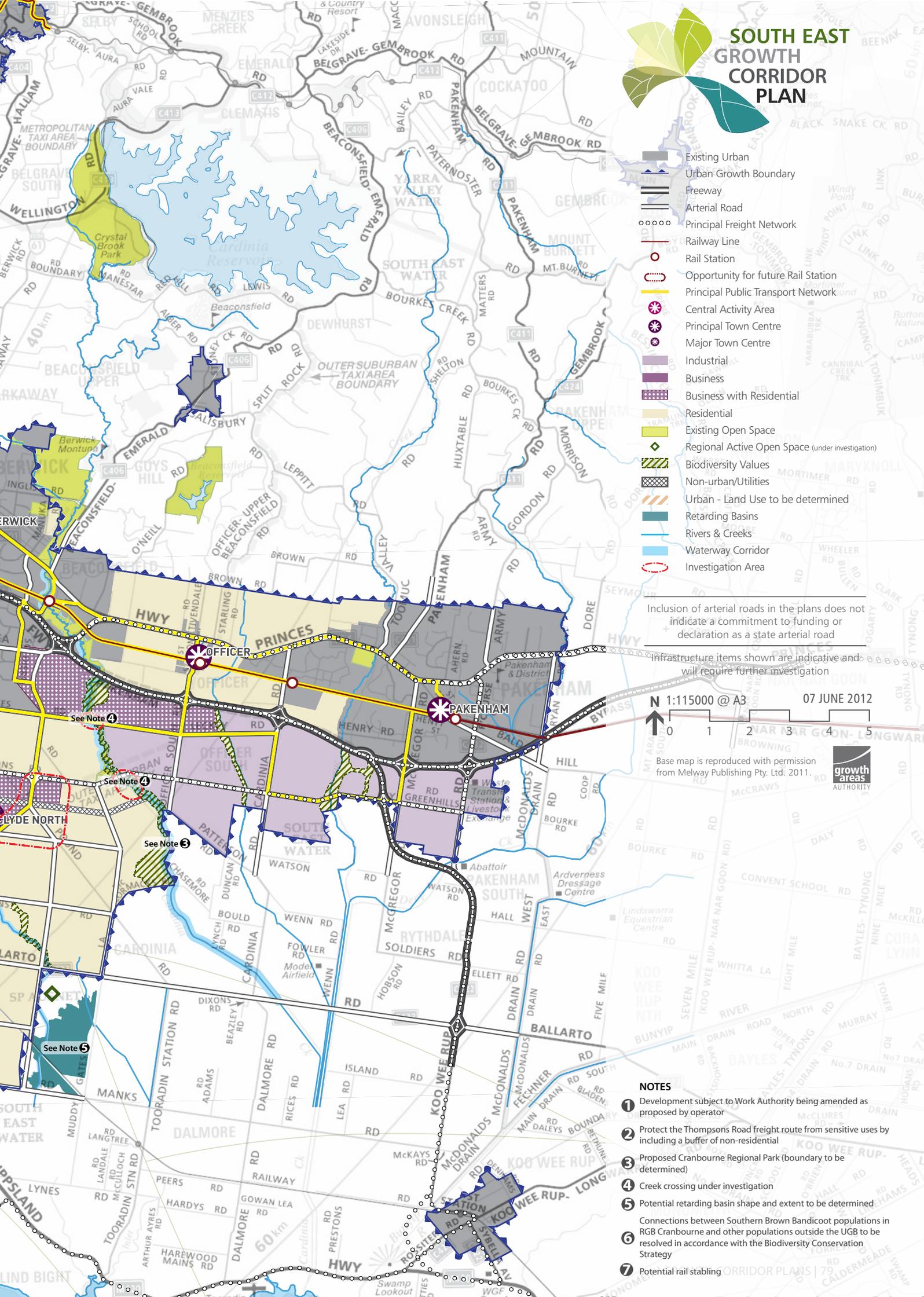
See Note 2

See Note 1

See Note 7

See Note 6

SOUTH EAST GROWTH CORRIDOR PLAN



- Existing Urban
- Urban Growth Boundary
- Freeway
- Arterial Road
- Principal Freight Network
- Railway Line
- Rail Station
- Opportunity for future Rail Station
- Principal Public Transport Network
- Central Activity Area
- Principal Town Centre
- Major Town Centre
- Industrial
- Business
- Business with Residential
- Residential
- Existing Open Space
- Regional Active Open Space (under investigation)
- Biodiversity Values
- Non-urban/Utilities
- Urban - Land Use to be determined
- Retarding Basins
- Rivers & Creeks
- Waterway Corridor
- Investigation Area

Inclusion of arterial roads in the plans does not indicate a commitment to funding or declaration as a state arterial road

Infrastructure items shown are indicative and will require further investigation

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Base map is reproduced with permission from Melway Publishing Pty. Ltd. 2011.

NOTES

- 1 Development subject to Work Authority being amended as proposed by operator
- 2 Protect the Thompsons Road freight route from sensitive uses by including a buffer of non-residential
- 3 Proposed Cranbourne Regional Park (boundary to be determined)
- 4 Creek crossing under investigation
- 5 Potential retarding basin shape and extent to be determined
- 6 Connections between Southern Brown Bandicoot populations in RGB Cranbourne and other populations outside the UGB to be resolved in accordance with the Biodiversity Conservation Strategy
- 7 Potential rail stabling



THE SOUTH EAST Growth Corridor Plan

6.1 CONTEXT

The South East Growth Corridor is located on the outer edge of this broader economic region, and is heavily reliant on the established urban areas for jobs and services. As a result, many residents in this Corridor travel considerable distances to access jobs and services offered in places like Dandenong, Frankston, Knox, Kingston and Mulgrave. The area covered by the Growth Corridor Plans will eventually accommodate a population of 230,000 or more people and has the capacity to provide for at least 86,000 jobs.

Improving the local self-containment of jobs in the South-East Growth Corridor is a key objective of the Corridor Plan.

The wider south-east economic region is substantial in its own right. Its economy is closely linked to the wider metropolitan area with a distinctive focus on manufacturing and technology and it features a high degree of employment self-containment at the sub-metropolitan scale.

Central Dandenong is the CBD of the south east, and it is well connected to the rest of Melbourne by rail and road. It

is also connected to a series of Principal Town Centres and specialised employment precincts across the south east region.

Residents in the South East Growth Corridor will continue to rely upon the broader metropolitan south eastern suburbs for employment and services however over the longer term, the potential exists for the South East Growth Corridor to be re-positioned as central to an emerging sub-regional economic triangle comprising Dandenong, the Casey/Cardinia employment area and the Port of Hastings.

The proposed land use and transport framework will facilitate this outcome, by providing opportunities for greater business investment and better sub-regional transport connectivity.

Facilitating jobs and investment within the region, together with a transport network that links people to those jobs, has been the primary influence shaping this plan.



Development of the South-East Growth Corridor will continue to enhance the region's self-sufficiency, sustainability and distinctiveness by providing a good range of new employment opportunities which are well-connected by appropriate transport links between homes and new and existing jobs. New job opportunities will be provided at Pakenham, Thompsons Road and South Gippsland Highway, as well as in the existing and identified town centres and within new residential communities. Dandenong and the south eastern metropolitan suburbs will also continue to be a major focus for employment, services and facilities provision in the region.

The existing sense of place will be enhanced through the design of precincts enabling residents to enjoy access to a network of waterways, biodiversity corridors and open spaces, as well as providing ready access to vibrant town centres, local services and job opportunities. Opportunities to integrate the waterways, the Royal Botanic Gardens Cranbourne, local hills and views to more distant hills including the Dandenong Ranges, will be maximised.





6.3 LANDSCAPE, ENVIRONMENT AND OPEN SPACE

Melbourne's South East Growth Corridor comprises areas of important biodiversity, drainage, flood mitigation, landscape and cultural heritage values. Significant opportunities exist to create new active and passive recreation areas to address the open space needs of the broader region.

The Corridor Plan recognises the wide range of ecological, cultural, recreational and social values across the South East Growth Corridor.

Combined, these values make up an integrated open space network. This network provides an important natural setting for the entire Growth Corridor. It will make a major contribution to the future amenity and sense of place for future communities.

Residents and visitors will be able to access the open space via a comprehensive trail network that will extend throughout this Growth Corridor.

6.3.1 Landscape

Key landscape elements that require particular attention include:

- > Retention of distant views to the Dandenong Ranges to the north;

- > Utilisation of the natural drainage system that flows into the Western Port to create a network of open spaces which connect different parts of the Corridor in both visual and landscape terms. Cardinia Creek, Clyde Creek, Gum Scrub Creek and Toomuc Creek are particularly important in this regard; and

- > Retention of the rural character of the areas adjoining the UGB. The areas adjoining the UGB support a range of agricultural, hobby farms and equestrian industries, which add considerably to the character and amenity of Melbourne's south east. The planning and design of activities along this interface need to ensure that urban activities within the UGB do not adversely impact on the functions or amenity of these rural edges.



6.3.2 Biodiversity

This Growth Corridor has significant biodiversity values associated with its major creek lines. Habitat exists for fauna species including Growling Grass Frog, and Southern Brown Bandicoot. These species are not reliant on extant native vegetation and utilise a generally highly degraded rural landscape.

The existing landscape provides habitat and permeability for the Southern Brown Bandicoot through scattered patches of habitat throughout the Growth Corridor. The most significant of these areas is the Royal Botanic Gardens Cranbourne which supports high quality habitat and an important population of Southern Brown Bandicoot.

Scattered threatened flora species exist throughout the Growth

Corridor and in particular along the southern end of the railway line and along Manks Road.

The following biodiversity values are recognised by the South East Growth Corridor Plan:

- > Cardinia Creek Corridor. Areas for Growling Grass Frog protection have been identified along Cardinia Creek. Some of these areas are likely to be included in the area identified for the Cranbourne Regional Park;
- > Clyde Creek Corridor. Areas for Growling Grass Frog protection have been identified along Clyde Creek Corridor generally downstream of Tucker Road and extend east to the Muddy Gates Drain West Branch;
- > Habitat for the southern brown bandicoot at the Royal Botanic Gardens, Cranbourne and nearby areas. Options

for the connection between bandicoot populations in RGB Cranbourne and other populations outside the UGB will be resolved in accordance with the Biodiversity Conservation Strategy); and

- > Clyde-Tooradin Grasslands on the Railway Line – Public Use Zone Transport. The southern end of the South East (Cranbourne) railway line is to be established as a conservation area in order to protect and manage Maroon Leek Orchid and Swamp Everlasting. In determining the boundary of the conservation area consideration has been given to the need to provide rail services in future. A Conservation Management Plan will be developed for the management of the conservation area.





6.3.3 Drainage

The South East Growth Corridor includes parts of four major catchments:

- > the Mornington Peninsula catchment;
- > the Dandenong catchment;
- > the Cardinia Creek catchment; and
- > the Dalmore catchment.

Major local waterways include Cardinia Creek, Clyde Creek and the Western Contour Drain. These waterways, numerous smaller tributaries and wetland areas include areas of cultural heritage, and provide habitat for significant native flora, native frog and fish species, and other fauna.

Waterways in this Growth Corridor ultimately discharge to Western Port, an internationally recognised Ramsar⁴ wetland. Ramsar wetlands require a high level of control over the quality and quantity of surface water discharge.

Significant areas of Southern Casey are prone to shallow sheet flooding.

To address local flooding, and protect the downstream Koo Wee Rup Flood Protection District and the Western Port Bay Ramsar site, more flood storage areas will be required to service development in this corridor than in other Growth Corridors. A regional retarding basin of approximately 250ha is proposed by Melbourne Water beyond the south east corner of the Urban Growth Boundary to provide some of the flood storage capacity required.

The retarding basin is proposed to be located north of Manks Road, between the Western Contour Drain and Muddy Gates Lane. This will control the quantity and quality of stormwater flows into the Western Port Bay, and its delivery is vital to enable the development of the recently expanded Growth Corridor.

The retarding basin is required to help manage the increase in stormwater flows resulting from the new urban development. It will be designed to temporarily store then gradually release the increased flows to protect downstream properties from flooding. The retarding basin also has the potential to be used for other beneficial purposes such as improving water quality and the provision of active and passive open space

This regional asset may also be able to provide additional environmental or recreational benefits. Opportunities will exist for the facility to contribute to the broader biodiversity value of the region. For instance, the wetlands within the basin might contribute to the habitat for a variety of migratory birds associated with the Ramsar wetlands to the south, as well as provide habitat for the Growling Grass Frog.

6.3.4 Regional Parks and Open Space

A network of waterways, biodiversity corridors and open spaces will extend across the South East Growth Corridor.

This network will comprise land which has been set aside for a range of purposes, including biodiversity protection, drainage, flood mitigation, active and passive recreation, landscape and cultural heritage protection. The major open space nodes within this network include:

- > The Royal Botanic Gardens Cranbourne;
- > The Casey Fields sporting precinct;
- > The Cranbourne regional parkland identified along Cardinia Creek; and
- > The proposed regional flood retarding basin and wetlands along the south-east edge of the UGB.

Key open space linkages within



⁴ Ramsar wetlands are wetlands of international importance listed under the Convention on Wetlands also known as the Ramsar Convention. The Convention was signed in 1971 at a meeting in the town of Ramsar, in Iran. The aim of the convention is to halt the worldwide loss of wetlands and to conserve those that remain.

this network include Clyde and Cardinia Creeks and the associated Growling Grass Frog corridors, and modified local drainage networks within local neighbourhoods.

This open space network will ensure that the specific environmental functions are protected and enhanced, whilst also ensuring that the features provide value to the community by providing a recreation function, and linking nodes with linear trails.

Open space nodes will be connected by a series of trails focused particularly along the creeks. Some of these will form

part of the MTN (and shown on the Growth Corridor Plan), and others will form local trails to be provided through PSPs.

Specific initiatives within this network include the following:

Cardinia Creek Regional Park

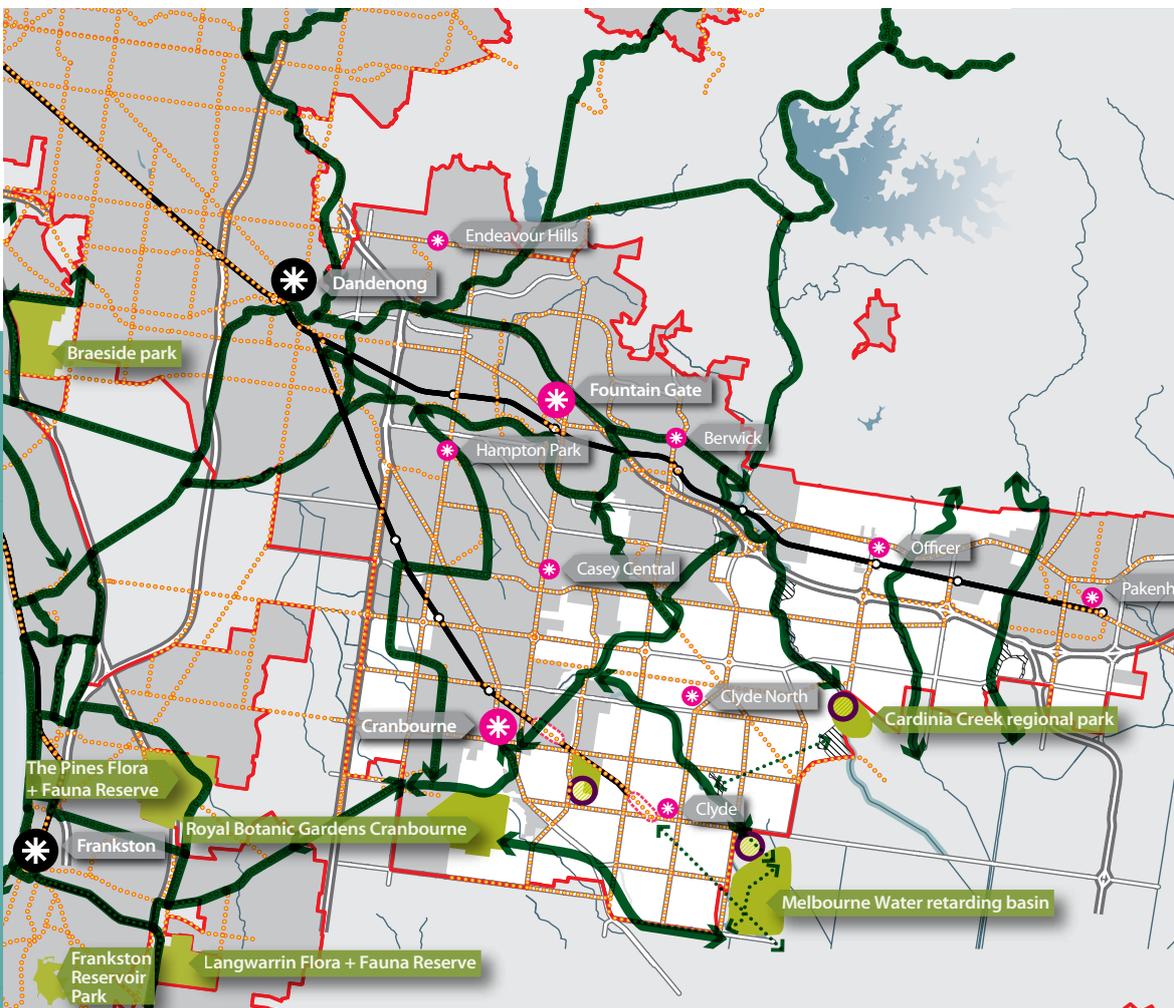
A new regional park is identified along Cardinia Creek, generally south of Thompsons Road. The location of this regional park is subject to investigation. The location of the Thompsons Road crossing of Cardinia Creek (under investigation by VicRoads) may form the northern boundary of the park.

6.3.5 Regional active open space

There is likely to be a need for additional regional active open space within the South East Growth Corridor. Short term opportunities exist to extend the existing Casey Fields facility, which the City of Casey is currently exploring. Additional opportunities might exist to provide new regional active open space outside the Urban Growth Boundary to the north west of the proposed Melbourne Water retarding basin.

South East Integrated Open Space Concept Plan

-  Central Activity Area
-  Principal Town Centre
-  Major Town Centre
-  Train Station
-  Future Station
-  Opportunity for future Rail Station
-  Urban Growth Boundary
-  Existing Urban Area
-  Area Outside UGB
-  Regional Open Space (not all publicly accessible)
-  Potential Regional Active Open Space
-  Potential Bicycle Network
-  Principal Bicycle Network Links
-  Metropolitan Trail Network
-  Metropolitan Trail Network Links
- Landscape Values





6.4 CREATING COMMUNITIES

6.4.1 Regional self-containment

Central to creating liveable communities in the south east is the need to create a more self-contained region which offers more jobs and facilities and better, high quality, public transport and road connections.

The regional focus for higher order services and facilities, and a significant number of jobs, will be

central Dandenong. Over time, a substantial number of jobs will also be provided in the Pakenham employment corridor, as well as the planned employment precincts at Minta Farm, along Thompsons Road, the South Gippsland Highway and within both existing and planned town centres.

The South East Growth Corridor Plan creates opportunities for investment across a wide range of precincts to maximize the region's potential for the creation and diversification of local job opportunities.

6.4.2 Residential Districts within the Growth Corridor

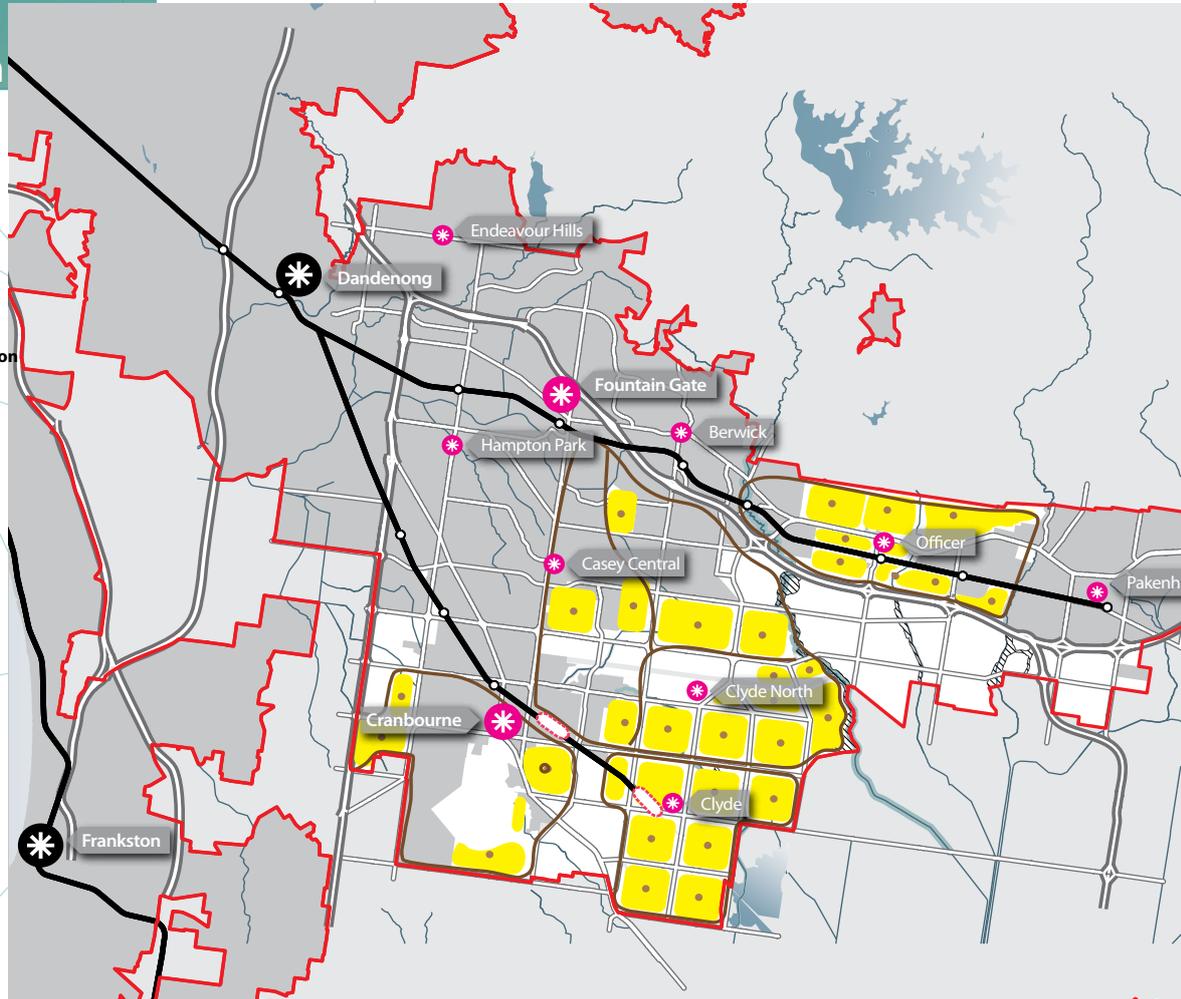
Two new residential districts are identified in the new Growth Corridor, focused on new Major Town Centres at Clyde and Clyde North.

Each of these districts is of a sufficient size to support a Major Town Centre within it, and each can provide a mix of jobs and housing types/densities.

Connections between districts will be provided by a grid of arterial roads and extended public transport networks.

South East Community Concept Plan

-  Central Activity Area
-  Principal Town Centre
-  Major Town Centre
-  Train Station
-  Future Station
-  Opportunity for future Rail Station
-  Urban Growth Boundary
-  Existing Urban Area
-  Area Outside UGB
-  Constrained Land
-  Local Neighbourhood
-  New Residential Districts



6.4.3 Character and Identity

The sense of place for each of these communities will be created from natural features, particularly the creeks, ridgelines, and views to highpoints such as the Dandenong Ranges and Royal Botanic Gardens Cranbourne.

The town centre at Clyde North is near Clyde Creek, and can be designed to integrate this waterway into the character of the town.

Creeks and waterways will also provide alternative connections between communities via the MTN.

Opportunities exist to ensure that



some of the arterial road routes are designed to have a strong boulevard character. This will potentially require such routes to have a wider cross section to allow for tree planting and wider medians. Thompsons Road is a key route for consideration of such treatment.

6.4.4 Regional Community, Health and Education Services and Facilities

The major campus based post compulsory education providers in the South East are Monash University's Berwick and Peninsula (Frankston) campuses, and Chisholm Institute at Berwick, Dandenong, Cranbourne and Frankston.

It is anticipated that the expected growth in demand for campus based Higher Education and Vocational Education and Training (VET) can largely be met from existing campuses. However, additional TAFE services, with a focus on VET qualifications and Higher Education feeder courses, could be considered in Cardinia to help ensure locally relevant provision of post compulsory education services.

Primary, secondary and tertiary health services, both hospital and community based, are provided by a combination of state and commonwealth government and private providers. Primary care services are generally provided by general practitioners. Tertiary mental health services are provided at a range of locations by Southern Health and a range of non government organisations. Southern Health is the major provider of services in Melbourne's south-east and operates six hospital campuses and a range of community based services delivering a range of primary health care services. Monash Medical Centre at

Clayton and Moorabbin provides specialist services. The Kingston Centre provides specialist aged care, mental health and sub acute services. People living in the South East Growth Corridor also access the Alfred Hospital and other inner metropolitan specialist hospitals for tertiary and state-wide health services.

Dandenong Hospital provides a range of acute services including mental health and primary care. Casey Hospital, at Berwick, provides a range of acute health services. Cranbourne Integrated Care Centre provides a range of day, outreach and aged care assessment services.

A number of services and sites in the South East Growth Corridor are currently being expanded. Master planning is underway at Casey Hospital for the growth and development of acute health services to meet future demand. A major expansion of children's services is planned at the Clayton site. A GP Super Clinic which is intended to integrate a range of primary care services is being established in Berwick. Planning for the upgrade and expansion of ambulance services is occurring within the context of the state-wide service network.

Additional residential aged care capacity will be required to provide for an expanding and ageing population in Melbourne's south-east.

Strategic planning will take account of interface communities on the metro rural fringe, consider the need for health and medical precincts in major centres and include a focus on the potential for co-location of services.

More comprehensive and specialist education, health and community facilities would normally be located in the higher order town centres, which include Pakenham, Officer, Cranbourne/ Cranbourne East and Clyde.



6.5 EMPLOYMENT

The South East Growth Corridor will continue to have a strong relationship to the Dandenong Central Activities Area (CAA) and other major employment destinations in the broader south east metropolitan area. This will continue to drive the need for improved transport connections between the Growth Corridor and major job locations.

However, over time, the South East Growth Corridor will aim

to achieve greater local job self containment. In total, the South East Growth Corridor Plan area is expected to accommodate between 86,000 and 110,000 new jobs, across a range of employment sectors and locations.

This will be achieved in a variety of ways, ranging from home based businesses and jobs in Local Town Centres through to employment in large town centres and industrial precincts.

6.5.1 Town Centres

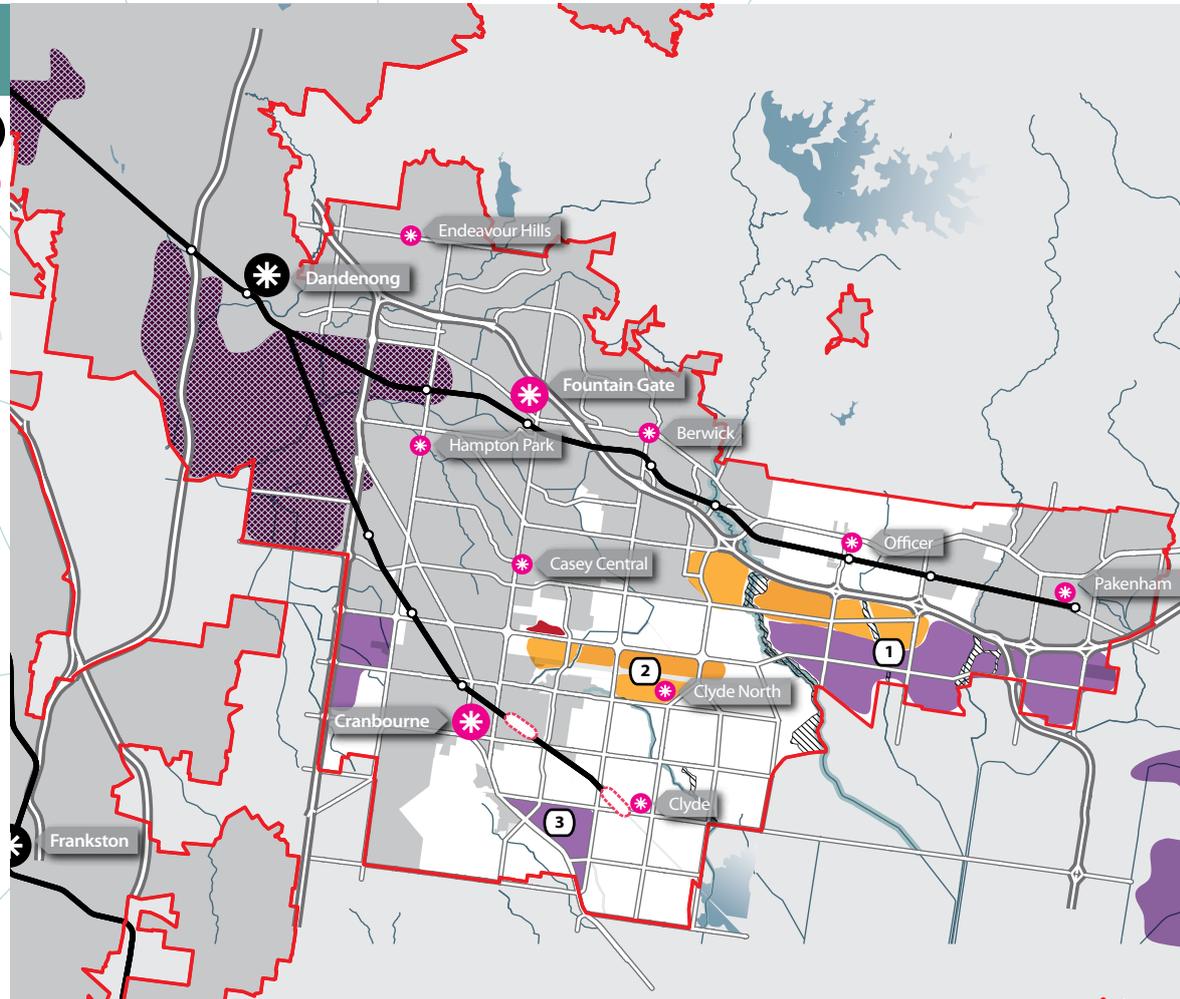
A wider range of businesses and job opportunities will emerge over time in Dandenong CAA along with the Principal Town Centres identified at Cranbourne and Fountain Gate and the Major Town Centres identified at Pakenham, Officer, Berwick and Casey Central.

Two new Major Town Centres are identified in the Growth Corridor Plan at Clyde, adjacent to a new rail station along the extended Cranbourne rail line, and at Clyde North, on the PPTN which links Cranbourne to Officer and beyond.

South East

Employment Concept Plan

- Central Activity Area
- Principal Town Centre
- Major Town Centre
- Train Station
- Future Station
- Opportunity for future Rail Station
- Urban Growth Boundary
- Existing Urban Area
- Area Outside UGB
- Constrained Land
- Industrial
- Existing industrial
- Business
- Business with Residential
- Officer-Pakenham Employment Corridor
- Thompsons Road Employment Corridor
- South Gippsland Highway Industrial Node



6.5.2 Employment Precincts

The South East Growth Corridor Plan makes provision for:

- > 2,370 (gross) hectares of industrial land;
- > 1,290 (gross) hectares of business land; and
- > Around 60 (gross) hectares of additional land could also be provided, for a range of local industrial and commercial activities across residential PSPs. These will be identified as required through the PSP process.

Officer-Pakenham Industrial/Business Corridor

This corridor has good freight and public transport connections, and will be an attractive location for a wide range of advanced manufacturing and commercial enterprises, as well as the more traditional manufacturing, warehouse and logistics, commercial and some high density residential uses.

It has direct freight access to the metropolitan area and the Port of Hastings via the South Gippsland Highway, Western Port Highway.

It will be anchored by high amenity business parks planned at Cardinia Road to the east and Minta Farm to the west, and will be well serviced by the PPTN identified to connect to the Officer Town Centre and rail line, and the broader south-eastern metropolitan area.

Thompsons Road Business Corridor

This corridor will have excellent freight access to the metropolitan area and the Port of Hastings. It will be serviced by a high amenity business precinct and Major Town Centre identified at Clyde North, and will be readily accessible to the PPTN by a series of north-south public transport connections.

Around 520 (gross) hectares of business land is identified along Thompsons Road including around the Clyde North Town Centre. Along with employment uses, this Precinct allows some residential development and a mix of business services, service industry and associated uses. Detailed planning will investigate the type of employment and industrial land uses that are appropriate, some of which will be influenced by the presence or proximity to physical and man-made constraints, such as the transmission easement. The Thompsons Road freight route will be protected from sensitive uses by including a buffer of non-residential land uses.

South Gippsland Highway Industrial Node

A new 250ha (gross) industrial precinct is identified along the South Gippsland Highway. This precinct will also enjoy excellent freight access to the metropolitan area and the Port of Hastings the South Gippsland Highway and Western Port Highway. It will be serviced by a new railway station, and Major Town Centre at Clyde.



6.6 TRANSPORT

6.6.1 Public Transport

Urban development in the South East Growth Corridor will be supported by the two metropolitan rail lines to Cranbourne and Pakenham. Planning will provide for rail services and station development, to include multi-modal integration, to support Principal and Major Town Centres as well as strategically located park and ride facilities.

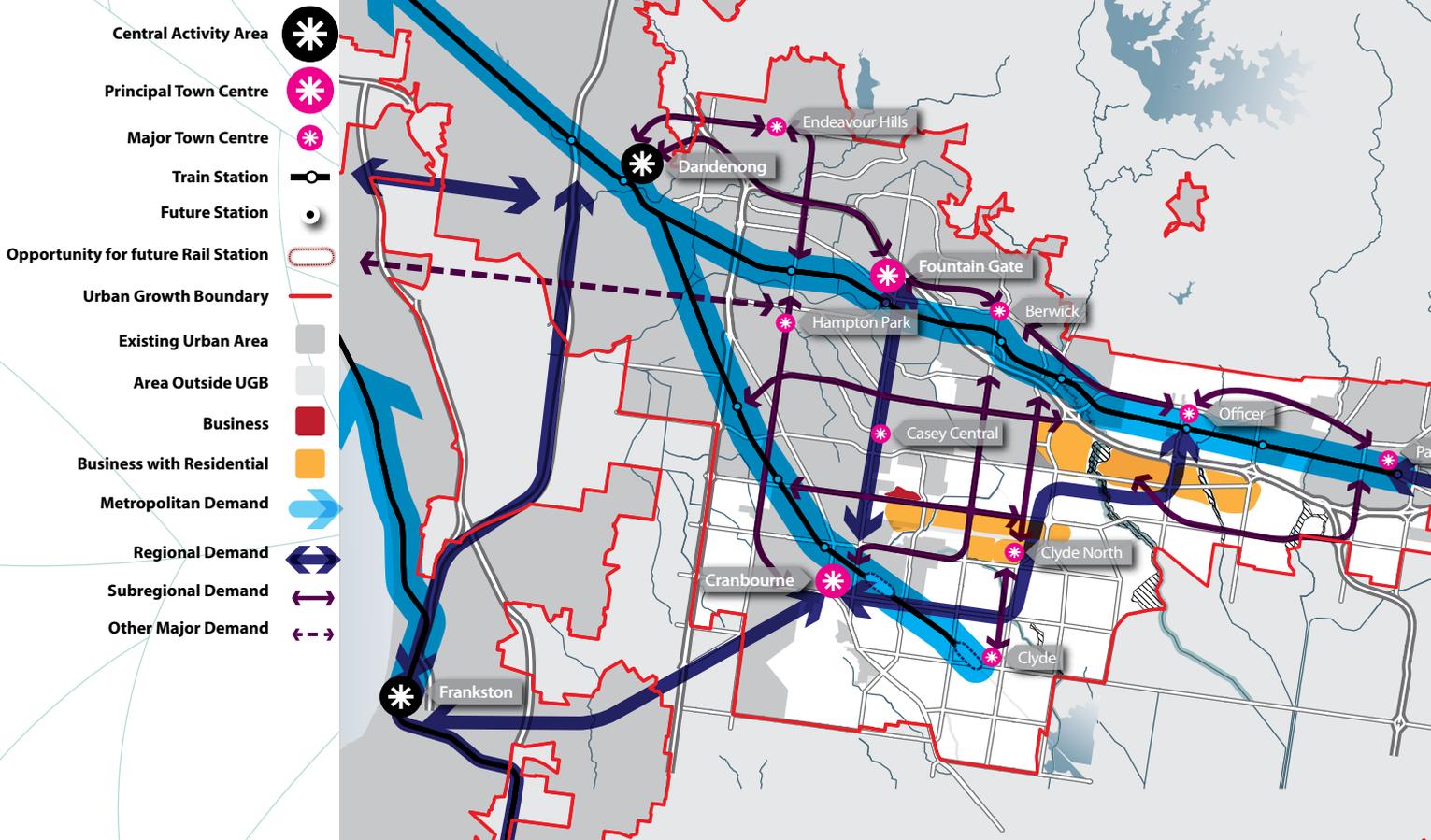
The identified PPTN will provide a basis for a potential future strategic bus network linking rail stations along and between the Cranbourne and Pakenham rail lines, as well as connecting the Major Town Centres and the large employment areas.

Parts of the arterial road network along the PPTN can be designed to accommodate potential higher capacity public transport network such as busways in the future. The connection from Cranbourne to Officer has potential for this higher capacity service for example.

The planning for the PPTN will extend beyond the Growth Corridor, linking to Dandenong South, Frankston and a range of jobs and services in the southern metropolitan region.

In addition, planning for a network of potential local bus routes will be provided across the area, and these routes will be planned as part of PSPs. For example, it is envisaged that major east – west routes such as Thompsons Road (which is a part of the PFN), may also provide for local bus services.

South East Public Transport Concept Plan



6.6.2 Arterial Road Networks

The Growth Corridor Plan proposes the development over time of additions to the grid of north-south and east-west roads, to provide critical linkages between communities, and to housing, jobs and services.

Planning for development of the grid will take into account the need for:

- > Links between Cranbourne and town centres at Officer and Pakenham;
- > North-south public transport routes;
- > Crossings of Cardinia Creek.





6.6.3 Planning for Freight

Planning for the freight network in the south east will aim to enable freight connections between the current freight facilities south of Dandenong, the Port of Hastings, and the Pakenham employment corridor.

Parts of the road network will be planned to carry freight as a key function, including:

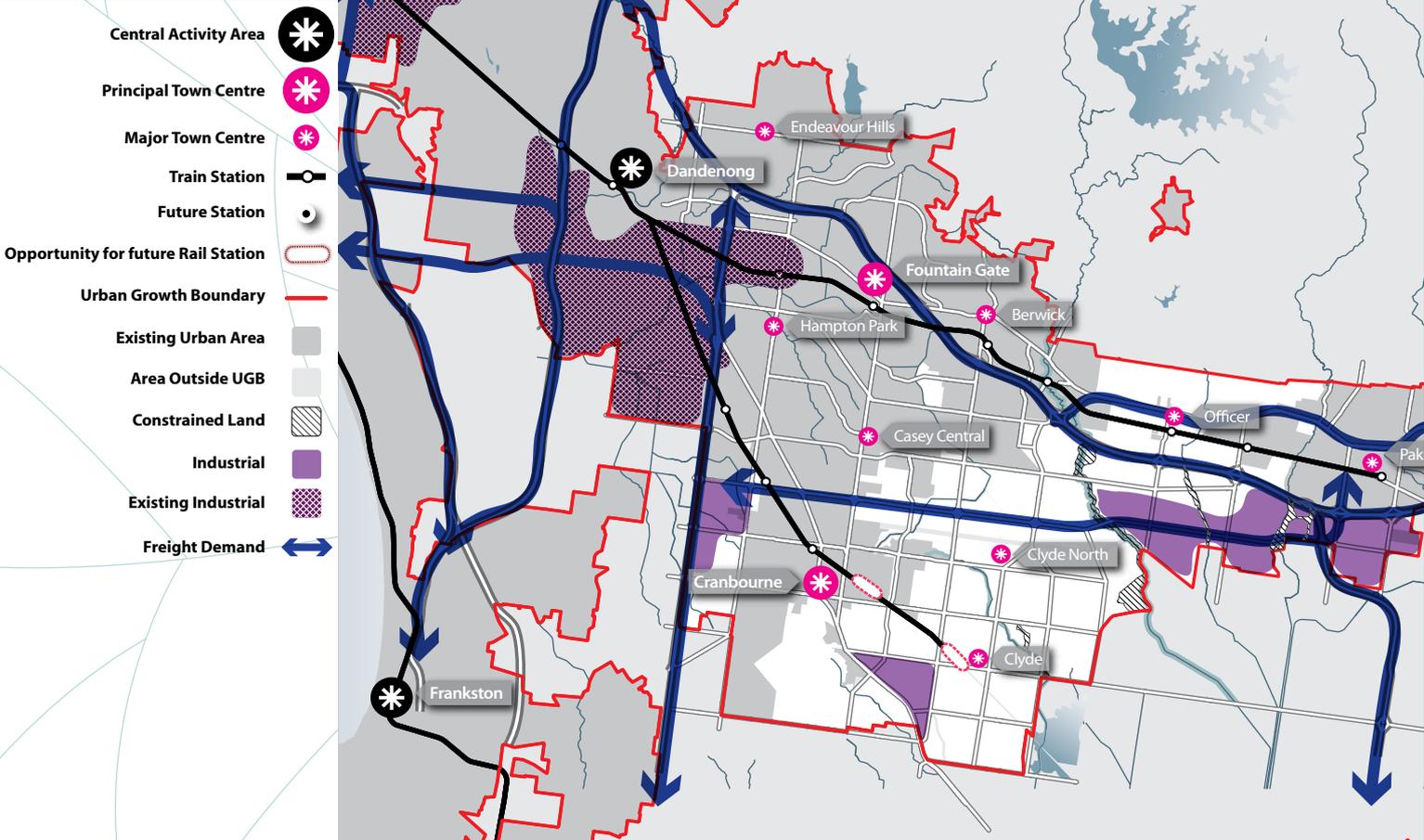
- > The Princes Freeway;
- > The Western Port Highway;
- > Eastlink;
- > The Mornington Peninsula Freeway; and
- > Thompsons Road.

The rail freight network in the south-east comprises rail corridors, including the

Dandenong-Pakenham corridor, Dandenong-Lyndhurst-Cranbourne corridor and the Frankston-Hastings Port rail line. The key future rail development is the proposed Lyndhurst-Hastings Port rail line.

A notable existing rail terminal is the Hanson's Westall quarry terminal. Important proposed rail terminals include the: Hastings Port intermodal terminal and the South-east Intermodal Freight Terminal at Lyndhurst and/or Greens Road Dandenong

South East Freight Concept Plan



6.7 OTHER INFRASTRUCTURE

South East Water (SEW) is currently preparing an Integrated Water Management Strategy for its service region. One of the key issues to be addressed by this Strategy is whether a new Sewage Treatment Plant (STP) will be constructed to service urban growth in the South East Growth Corridor. The decision regarding the need or otherwise for a new STP in this region will depend on whether there is sufficient use

for non-potable recycled water across the region.

In the event that there is insufficient demand for non-potable water in the region, then it is likely that the Eastern Treatment Plant, which already provides non-potable recycled water, will be relied upon to meet the sewage treatment requirements of this Growth Corridor.

Alternatively if sufficient future demand for non-potable recycled water can be confirmed, then a new STP will be considered as part of its Strategy. SEW has suggested that a new STP might be co-located with Melbourne Water's retarding basin, but investigations will continue. Consideration needs to be given to two areas with adverse amenity potential are included in the Growth Corridor, and need to be planned carefully:

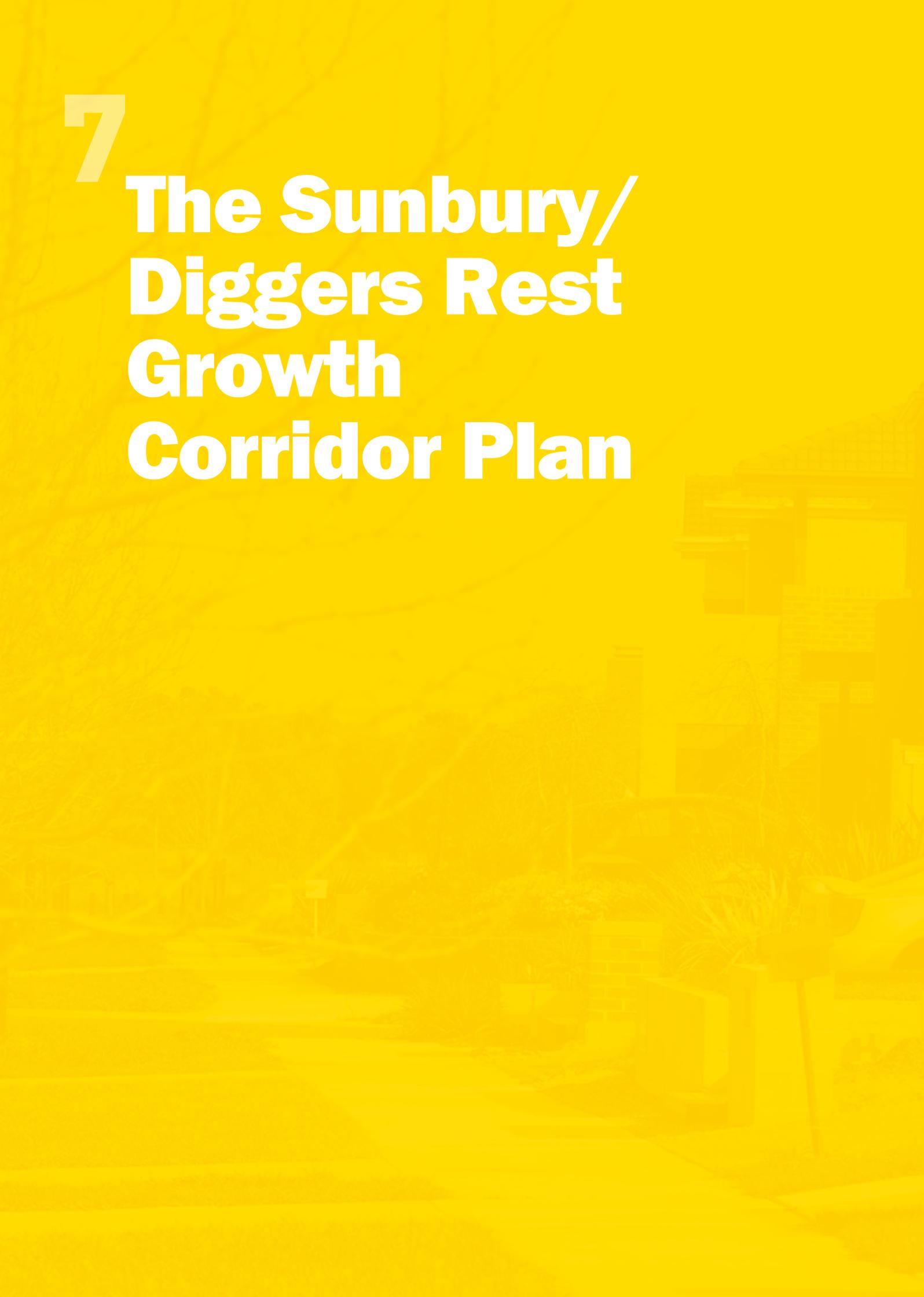
The major quarry in the South East Growth Corridor lies to the south of Thompsons Road, and to the west of Berwick-Cranbourne Road. This quarry is currently zoned Special Use Zone, and land within a 500m buffer of the quarry is zoned Farming Zone. However, the operator of this quarry has indicated a willingness to close it down to enable urban development on the quarry site and on surrounding parcels. The Growth Corridor Plan identifies urban uses on the quarry site and on surrounding parcels, but it should be noted that this redevelopment is subject to the current works authority being extinguished.

An area further west along Thompson Road currently contains a poultry farm, a natural resource distribution centre and an abattoir. The owners of each of these facilities and associated land have indicated a willingness to close down operations. This needs to be coordinated to avoid uses that have ceased continuing to be constrained by neighbouring uses. The Growth Corridor Plan identifies business (with some broader uses) in this area, to enable this redevelopment to occur. This will be planned in more detail in a PSP.



7

The Sunbury/ Diggers Rest Growth Corridor Plan





SUNBURY/DIGGERS REST GROWTH CORRIDOR PLAN

- Existing Urban
- Urban Growth Boundary
- Freeway
- Arterial Road
- Road Link (under investigation)
- Principal Freight Network
- Railway Line
- Rail Station
- Opportunity for future Rail Station
- Principal Public Transport Network
- Specialised Town Centre
- Principal Town Centre
- Major Town Centre
- Industrial
- Business
- Business with Residential
- Residential
- Existing Open Space
- Regional Active Open Space (under investigation)
- Biodiversity Values
- Landscape Values
- Quarry
- Retarding Basins
- Rivers & Creeks
- Waterway Corridor
- Investigation Area
- Investigation Area OMR link to airport

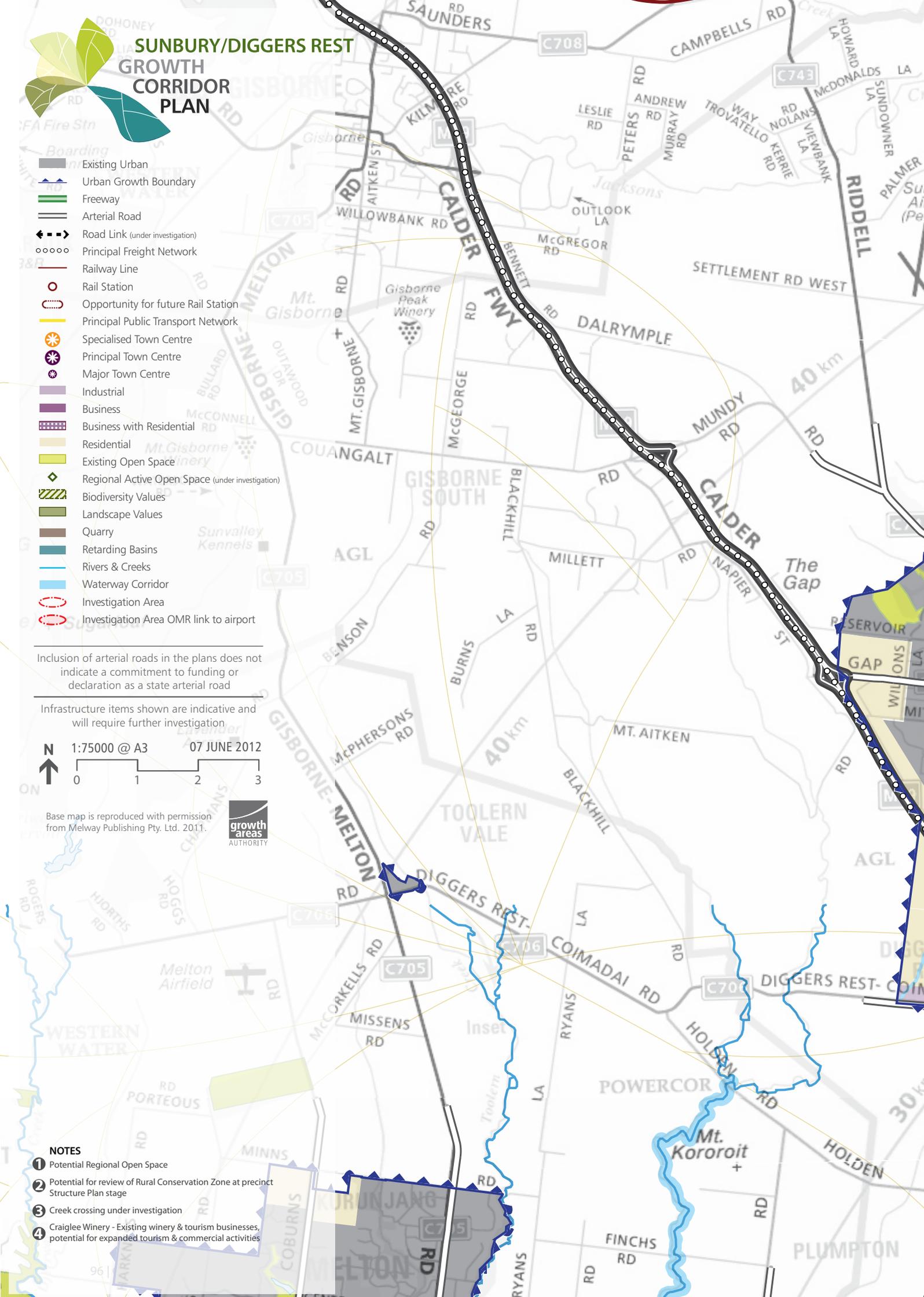
Inclusion of arterial roads in the plans does not indicate a commitment to funding or declaration as a state arterial road

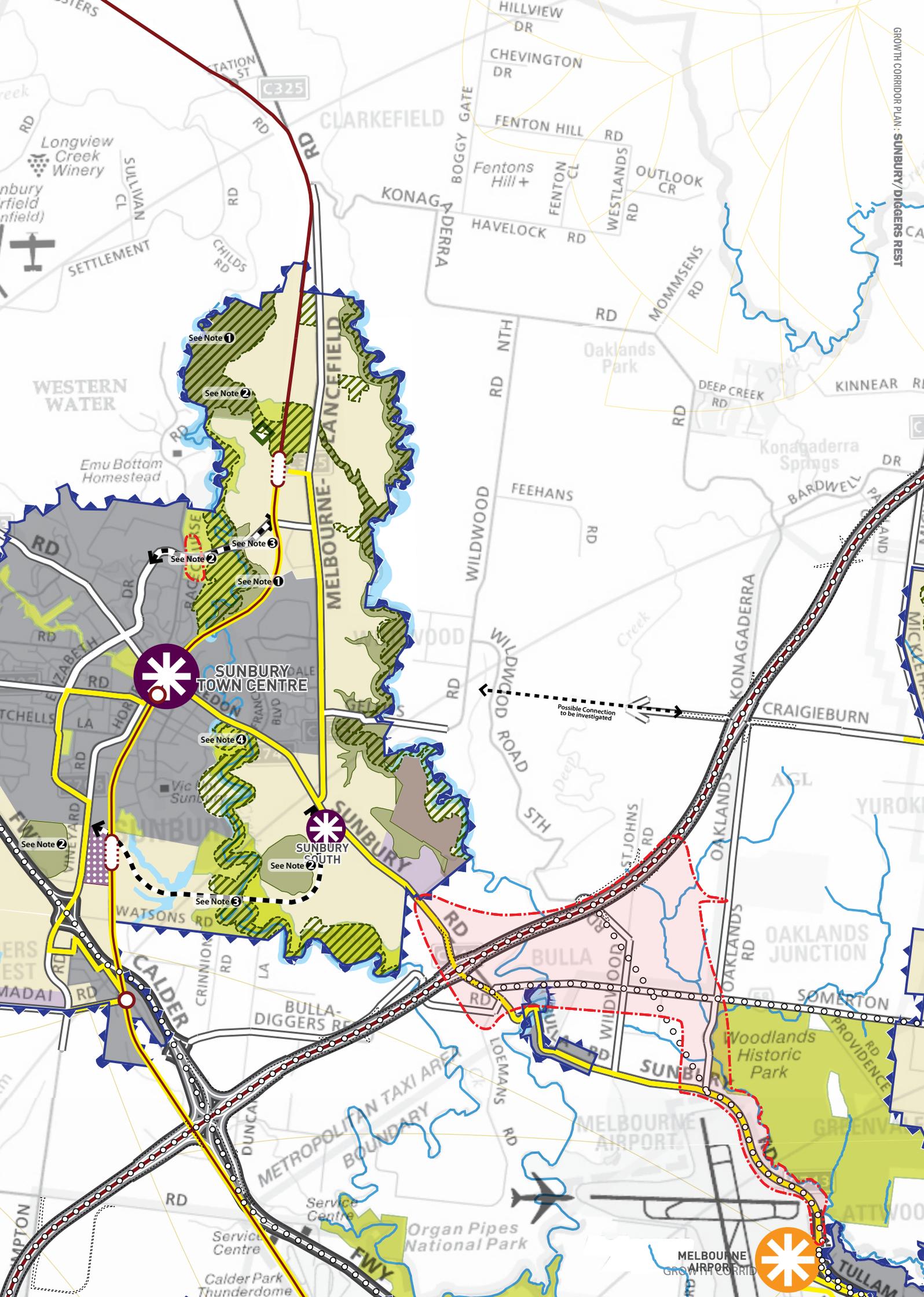
Infrastructure items shown are indicative and will require further investigation

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- NOTES**
- 1 Potential Regional Open Space
 - 2 Potential for review of Rural Conservation Zone at precinct Structure Plan stage
 - 3 Creek crossing under investigation
 - 4 Craiglee Winery - Existing winery & tourism businesses, potential for expanded tourism & commercial activities





SUNBURY TOWN CENTRE



SUNBURY SOUTH

See Note 1

See Note 2

See Note 3

See Note 2

See Note 1

See Note 4

See Note 2

See Note 2

See Note 3

Possible Connection to be investigated

MELBOURNE AIRPORT GROWTH CORRIDOR





THE SUNBURY/DIGGERS REST Growth Corridor Plan

7.1 CONTEXT

Sunbury and Diggers Rest sit within a landscape of surrounding hills, intersected by treed creek valleys and open space linkages. The area covered by the Growth Corridor Plan will eventually accommodate a population of at least 71,000 people and some 10,000 jobs.

The Sunbury Principal Town Centre is well established and services the residents of Sunbury, Diggers Rest and the broader region. Residents value its 'country town' feel as well as the benefits of being close to major employment precincts such as Melbourne Airport and Broadmeadows.

The towns have access to Melbourne's CBD via the Calder and Tullamarine Freeways, and will benefit from more improved train services on the electrified Sunbury rail line.

There is relatively limited local employment within Sunbury and Diggers Rest, due in the main to its proximity to other larger employment locations including Melbourne Airport which is a major employer in the north.

As a result, there is pressure on the local road network and rail services at peak times.

Sunbury's layout has been defined by the plateau and incised creeklines. These characteristics give the town much of its character, and they also create a series of distinct urban areas that connect to the main town centre via a radial network of arterial roads. Sunbury Road is the only main creek crossing, with east-west connections through the town centre limited, resulting in congestion at peak times.

Key Issues to be addressed in the future development of Sunbury and Diggers Rest are:

- > The need to improve local transport links, including creek crossings and improved capacity on the main approach roads to the town;
- > Improving the range of local jobs and services available to the community;
- > Strengthening the role of the Sunbury Principal Town Centre, as well as providing for quality local access to complementary shopping and community facilities within a connected network of Local Town Centres;
- > Increasing the population of Diggers Rest to a size that will sustain a broader range of local shopping, education and community facilities;
- > Preserving and enhancing the semi rural and natural setting of Sunbury as the township develops; and
- > Establishing an accessible open space system, particularly along Jacksons and Emu Creeks.



7.2

Sunbury and Diggers Rest will develop as a highly attractive and liveable regional city linked to but distinct from the metropolitan area.

Its distinctive creek environs, hills and rural hinterland provide an attractive landscape setting for the township, which will be maintained and enhanced.

The environmental and cultural heritage values of Jacksons and Emu Creeks will be protected and enhanced, and community access to these areas will be improved over time.

The Sunbury Town Centre will grow in importance as a regional hub, and will be complimented by a series of smaller town centres that meet the local shopping and other needs of residents.

Diggers Rest will grow to become a more self contained neighbourhood, supported by a Local Town Centre, open space and community facilities.

Transport access will improve over time, with the extension and electrification of rail services and extensions to the local bus networks, as well as road upgrades that improve connectivity within and to the town centre. These upgrades will better link the community to employment areas beyond Sunbury, including Melbourne Airport, the Craigieburn employment corridor and opportunities proposed in the Melton corridor.

Additional employment opportunities will be provided within the town over time, within the Sunbury Town Centre, local centres and new local industrial precincts.



7.3 LANDSCAPE, ENVIRONMENT AND OPEN SPACE

The Sunbury/Diggers Rest Growth Corridor comprises areas which are important for a range of biodiversity, drainage, flood mitigation, landscape and cultural heritage values. In addition, significant opportunities exist to create new active and passive recreation areas to address the open space needs of the broader region.

The Growth Corridor Plan recognises this wide range of ecological, cultural, recreational and social values across the West Growth Corridor.

Combined, these values make up an integrated open space network for Sunbury. This network provides an important natural setting for the entire Growth Corridor. It will make a

major contribution to the future amenity and sense of place for future communities.

Residents and visitors will be able to access the open space via a comprehensive trail network that will be focussed along Jackson and Emu Creeks.

7.3.1 Landscape

The landscape of Sunbury is one of its most significant features. Sunbury includes and is surrounded by a number of volcanic cones rising out of the extensive volcanic plain.

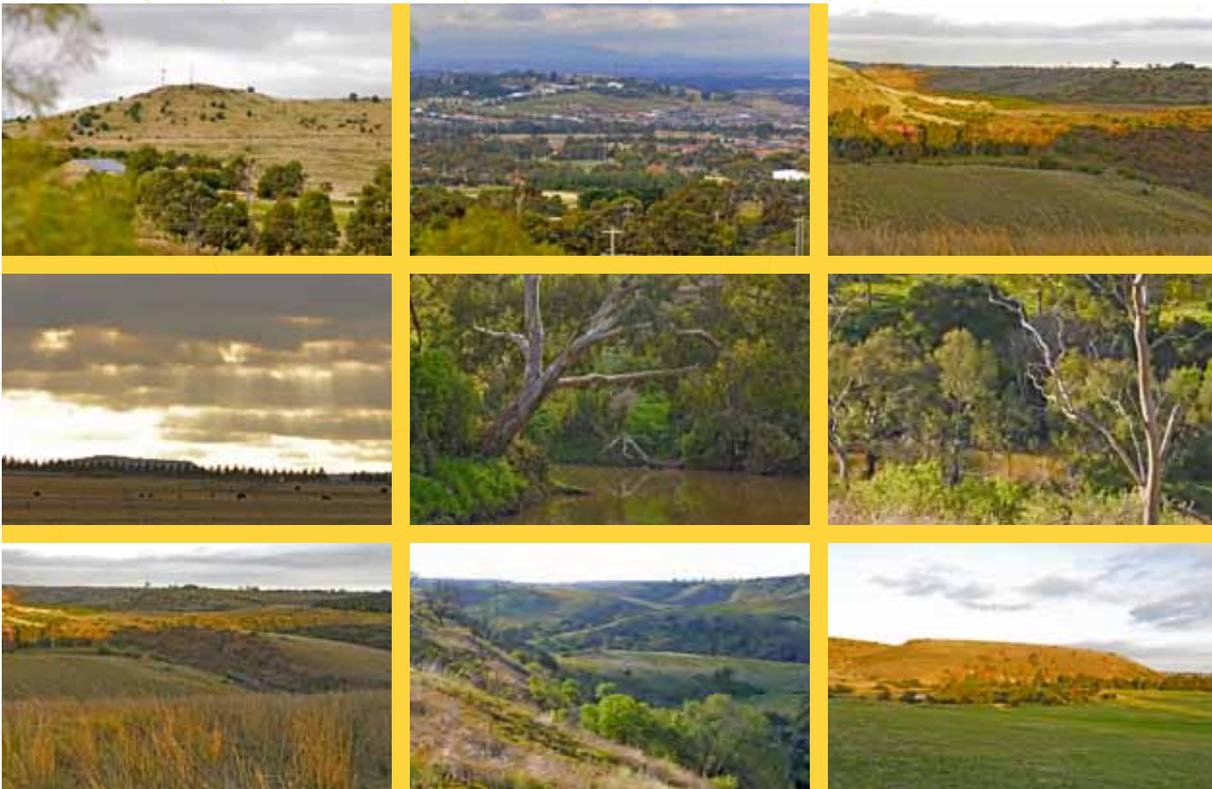
The plain has been deeply incised locally by Jacksons Creek and Emu Creek and their tributaries. The combination of steep hills, incised valleys and elevated plateaus creates a visually diverse and varied landscape that is worthy of preservation and provides a unique natural setting

for Sunbury.

As the township has grown, urban development has begun to spread from the valley into these hills and plateaus, at Jacksons Hill and Goonawarra for example. Future urban growth will continue this spread and it is important to manage this growth in a way that retains and enhances these striking landscape values.

The key landscape features that form part of the broader setting for urban development include:

- > Emu Creek and its tributaries, which flanks the eastern edge of Sunbury. This creek's environs contain significant natural and biodiversity values;
- > Jacksons Creek, which traverses the Growth Corridor. As well as containing



significant biodiversity values, this area is well located for recreation opportunities to enable the area to be enjoyed and managed in the long term;

- > The conical hills of Redstone Hill and Big Hill in the new Growth Corridor and Jacksons Hill, Mount Holden and Burke Hill in the established part of Sunbury or outside the urban growth boundary. By careful design, it may be possible to incorporate some urban development on the lower slopes of those hills within the new Growth Corridor, yet retain the qualities of these hills as striking natural features. This will be explored in Precinct Structure Planning; and
- > Retaining a semi-rural character to the main approach roads to Sunbury and Diggers Rest.

7.3.2 Biodiversity

The Sunbury/Diggers Rest Growth Corridor includes areas of significant biodiversity values, particularly along Jacksons and Emu Creek, both of which provide important corridors for flora and fauna, including the Growling Grass Frog. The Holden Flora and Fauna Reserve is an important asset and adjoins the Jacksons Creek to the south of Sunbury.

Some areas of the Grassy Eucalypt Woodland remain within and adjoining Sunbury, particularly to the east and west of Lancefield Road and to the north of the new station identified at Lancefield Road. Three areas will be protected for conservation.

7.3.3 Drainage

The Sunbury/Diggers Rest Growth Corridor includes parts of four major catchments: the Koro-

roit Creek East Branch catchment; Kororoit Creek catchment; Jacksons Creek-Maribyrnong River catchment; and the Emu Creek-Maribyrnong River catchment.

These waterways ultimately discharge into Port Phillip Bay. The deeply incised valleys of Jacksons and Emu Creeks and their numerous smaller tributaries and local wetlands include areas of cultural heritage, and provide habitat for significant native flora, frog and fish species, and other fauna.

Stormwater management systems including flood management and quality treatment infrastructure will need to be provided within the development areas before discharging to the Jacksons and Emu Creek valleys. Development staging may need to consider the provision and timing of appropriate stormwater management systems.



7.3.4 An Integrated Open Space Network

Jacksons Creek provides an excellent opportunity for passive recreation, and opportunities to deliver regional open space along the creek will continue to be explored with landowners, Council, DSE and Parks Victoria. Parks Victoria also proposes to investigate public access to the Holden Flora and Fauna Reserve.

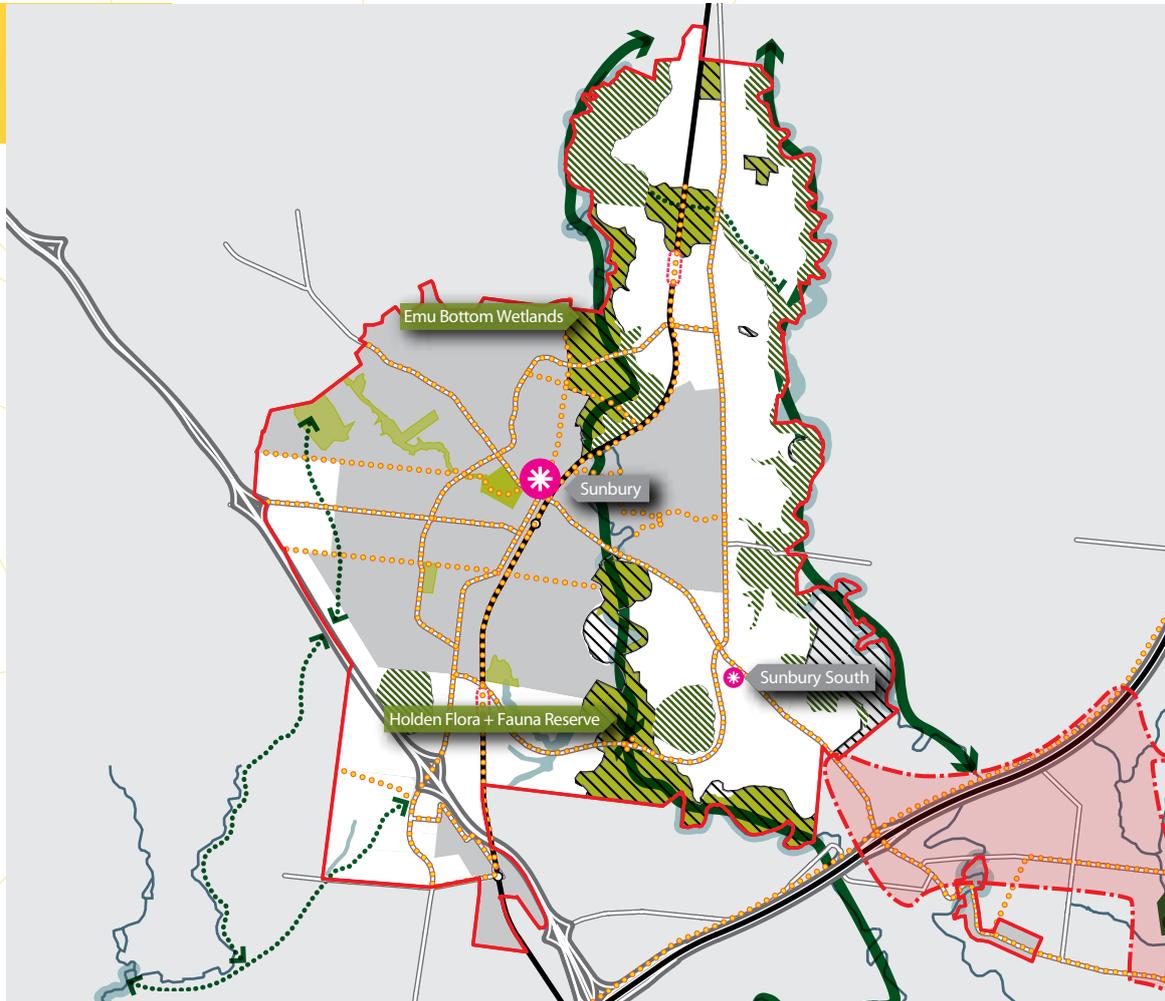
A potential location for a regional active open space facility is identified within the Jacksons Creek corridor, south of Emu Bottom. This area is relatively flat, and may present an opportunity for active sports provision, however the relationship between this potential use, biodiversity values and flood risk needs to be explored.

The MTN identified in the plan is focused on the creeks in Sunbury, which would be linked by a series of trails and shared paths across the township.

Sunbury

Integrated Open Space Concept Plan

- Central Activity Area 
- Principal Town Centre 
- Major Town Centre 
- Train Station 
- Future Station 
- Opportunity for future Rail Station 
- Urban Growth Boundary 
- Existing Urban Area 
- Area Outside UGB 
- Investigation Area: link to airport 
- Regional Open Space (not all publicly accessible) 
- Potential Regional Active Open Space 
- Potential Bicycle Network 
- Principal Bicycle Network Links 
- Metropolitan Trail Network
- Metropolitan Trail Network Links
- Landscape Values



7.4 CREATING COMMUNITIES

7.4.1 Character and Identity

Sunbury's landscape, its separation from Melbourne and its role as a regional centre make it unique amongst the four Growth Corridors. The new communities in Sunbury/Diggers Rest will need to be designed to feed off the existing Sunbury Town Centre, and improved road, public trans-

port and cycling and pedestrian links to the town centre will need to be provided. In achieving this, it will be important to consider how the landscape character can be retained in a larger, more developed Sunbury. This will focus in particular on the relationship between the new communities and the heavily incised creeks that provide a major opportunity for recreation and to enjoy the relatively tranquil, natural setting.

7.4.2 Residential Districts within the Growth Corridor

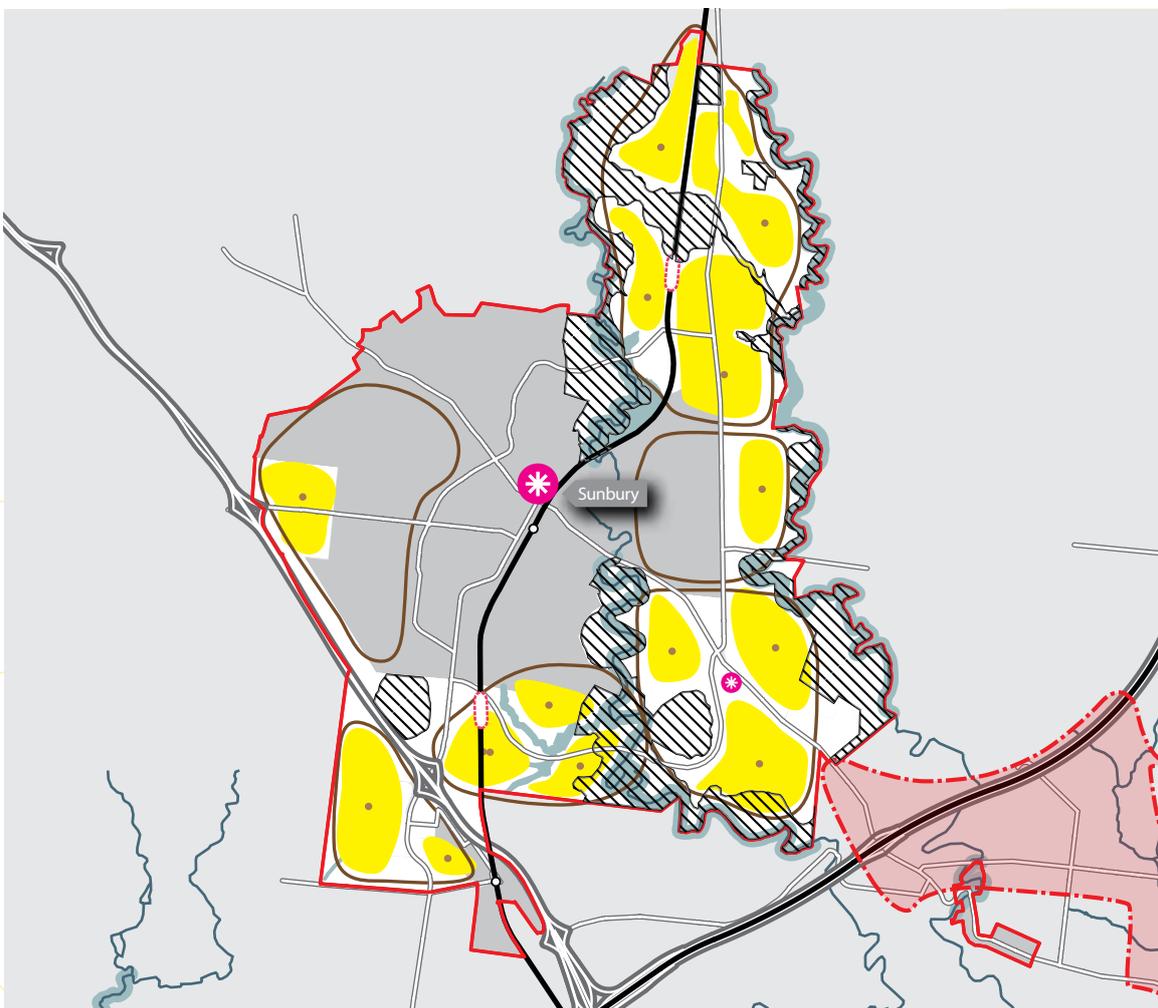
A number of natural and man-made features define a series of distinct urban precincts across Sunbury.

Jacksons and Emu Creeks form an impressive landscape feature which will define the character of neighbourhoods along this spine.

Jacksons Creek poses a barrier to movements from new urban growth to its east, and the established parts of Sunbury, including the Town Centre to its west. Consideration will need

Sunbury Community Concept Plan

-  Central Activity Area
-  Principal Town Centre
-  Major Town Centre
-  Train Station
-  Future Station
-  Opportunity for future Rail Station
-  Urban Growth Boundary
-  Existing Urban Area
-  Area Outside UGB
-  Investigation Area: link to airport
-  Constrained Land
-  Local Neighbourhood
-  New Residential Districts





to be given to creating connections across this creek, to enable the residents of the new Growth Corridor to access the facilities within the established part of Sunbury. In particular, a local creek crossing in the southern part of Sunbury would provide access for residents of Sunbury East to Vineyard Road and to the proposed new rail station identified in this area and a crossing in the northern part of Sunbury would provide a link for new residents on Lancefield Road to access the town centre.

The new residential precincts in south, east and north Sunbury will be supported by new Local Town Centres which provide for local needs and create a focal point for these neighbourhoods.

Each of these communities will have a strong sense of place, based around the attractive natural landscape, particularly in the form of hills, creeks and plateaus that Sunbury is built upon.

7.4.3 Regional Community, Health and Education Services and Facilities

Sunbury's town centre contains civic and community facilities and services that serve its broader regional catchment to its north and west, which makes it unique amongst Growth Corridors.

Demand for new services will increase as the population grows.

Victoria University owns a campus at Sunbury, although it provides no educational courses from this facility at present, and is undecided about the long term future of the campus. A new site more suited to post compulsory education provision with a focus on Vocational Education and Training (VET) qualifications and Higher Education courses is expected to be needed in Sunbury as it expands.

However, the provision model may be one that works well within the context of a town centre and a new campus based facility may not be required. Opportunities to provide this type of facility should be explored, ideally within Sunbury Town Centre, which has good access to rail services.

Western Health opened a new day hospital in Sunbury in early 2011 which provides a range of services including renal dialysis. This service provides an alternative to hospital-based services for many day procedures and outpa-

tient visits. It is co-located with the Sunbury Community Health Centre, which provides primary health care services including counselling, dental, mental health and drug and alcohol. Primary care services are mainly provided by general practitioners. The area is serviced by a number of GP practices and by regionally based hospitals, aged care and mental health services. Planning for the upgrade and expansion of ambulance services is occurring within the context of the state-wide service context.

Additional residential aged care capacity will be required to provide for an expanding and ageing population in Sunbury.



7.5 EMPLOYMENT

The employment provision rate in Sunbury is currently relatively low when compared to metropolitan Melbourne - the township has 0.37 jobs per resident worker.

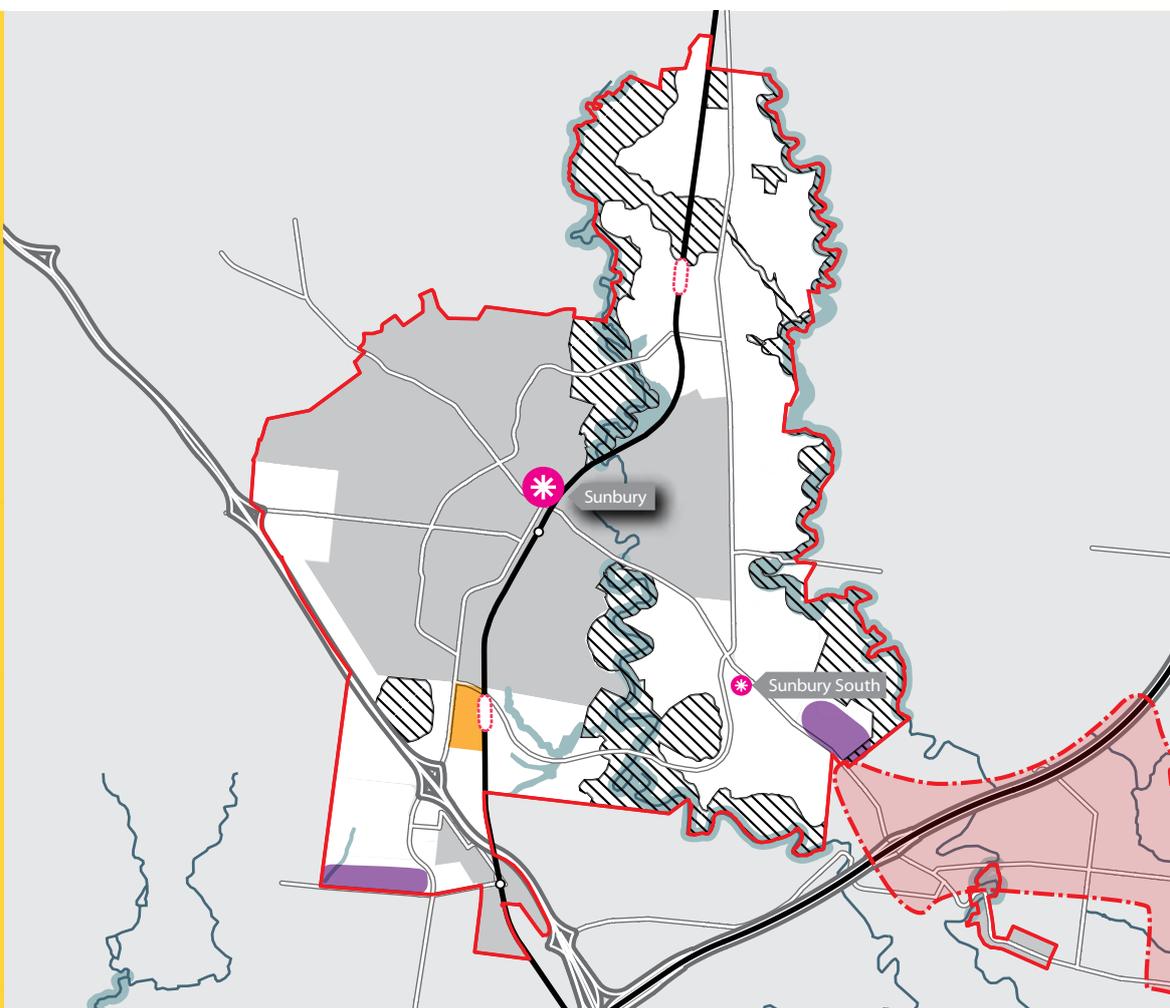
Because of Sunbury's size and proximity to major employment areas in Hume and Melbourne Airport, even when it is fully built out it is unlikely to provide a metropolitan employment market. The Growth Corridor Plan for Sunbury and Diggers Rest therefore aims to ensure that provision is made for local popu-

lation driven employment such as retail, civic and service industries, and that transport access is provided to metropolitan employment markets in the north and west of Melbourne, and at Melbourne Airport.

In total, the Sunbury/Diggers Rest Growth Corridor Plan has the capacity to provide between 10,000 and 15,000 new jobs on its full development although more jobs will be supported if this can be achieved.

Sunbury Employment Concept Plan

-  Central Activity Area
-  Principal Town Centre
-  Major Town Centre
-  Train Station
-  Future Station
-  Opportunity for future Rail Station
-  Urban Growth Boundary
-  Existing Urban Area
-  Area Outside UGB
-  Investigation Area: link to airport
-  Constrained Land
-  Industrial
-  Business with Residential



7.5.1 Employment

The Sunbury Township currently provides 0.37 jobs per resident which is relatively low when compared to metropolitan Melbourne. This low provision rate is due to its historical designation as a satellite town and its proximity to major employment areas in Hume and the Melbourne Airport. Given these factors, Sunbury is unlikely to be a location that attracts a large share of the metropolitan employment market, even at its full development.

The Sunbury/Diggers Rest Corridor Plan aims to provide opportunities for both local population driven employment, as well as creating opportunities for the town to play a more regional role. The Plan also seeks to improve access for residents to metropolitan employment markets in the north and west of Melbourne.

The Sunbury/Diggers Rest Corridor Plan provides in the order of 10,000-15,000 new jobs. These are expected to be heavily represented by household service based sectors such as retail, health care, education and service industries. These jobs would be provided within the designated industrial and business precincts, within town centres and local community hubs. Whilst the job provision will be primarily located within these designated precincts, flexibility should be maintained to enable new business/employment opportunities within Sunbury to be pursued. This may include the potential for higher education and health facilities within the Township, which are key employment generators.

7.5.2 Town Centres

The existing Sunbury Principal Town Centre is focussed around the Sunbury Train Station and accommodates a range of retail, services, entertainment/leisure, office and civic functions. It will continue to play an important role in the wider region and will be a primary source of local jobs for Sunbury residents given its access to the rail system and ability to accommodate some additional development.

The planned town centre network for Sunbury seeks to reinforce the principal role of the Sunbury Town Centre and improve the distribution of sub-regional scale retail services within the Township. To achieve this, the Corridor Plan provides for a Major Town Centre on Sunbury-Bulla Road to support the adjoining employment precinct and the residential population, particularly in the northern and southern sections of the expanded Sunbury Township.



A series of smaller town centres will also be delivered within Sunbury and Diggers Rest to support the needs of the local communities. These will be determined through the PSP process, however there are opportunities to deliver local town centres along the Sunbury railway line and in locations adjoining the existing urban area which would benefit from local retail provision

7.5.3 Employment Precincts

The Sunbury/Diggers Rest Corridor Plan makes provision for an additional 100 hectares (gross) of industrial land and 110 hectares (gross) of land for business and other purposes.

The industrial precinct is located on the eastern side of Sunbury-Bulla Road adjoining the existing quarry. This location provides for arterial road access to the Sunbury Town Centre and the Melbourne Airport. The land is relatively unconstrained and un-fragmented which provides the opportunity for a master planned approach to development of the land for industry.

The Corridor Plan nominates a business precinct to the south of the existing Township with access from Vineyard Road. This location provides opportunity for transit oriented development (surrounding the potential train station) including office and business services, which will provide additional jobs for Sunbury and

Diggers Rest residents beyond those accommodated in the Town Centres.

This area is expected to be a location for employment generating uses that would directly benefit from access to high capacity public transport and which would have synergy with a local town centre, likely to be positioned next to the railway line. It is also expected that there will be a mix of residential types and densities within and beyond the immediate catchment of the potential train station.

7.6 TRANSPORT

7.6.1 Public Transport

Urban development in Sunbury will be supported by the existing rail line to Sunbury, which is currently being electrified. This will effectively double the level of service available to Sunbury residents.

Planning for rail services and station development, including multi-modal integration, will support Principal and Major Town Centres, as well as strategically located park and ride facilities.

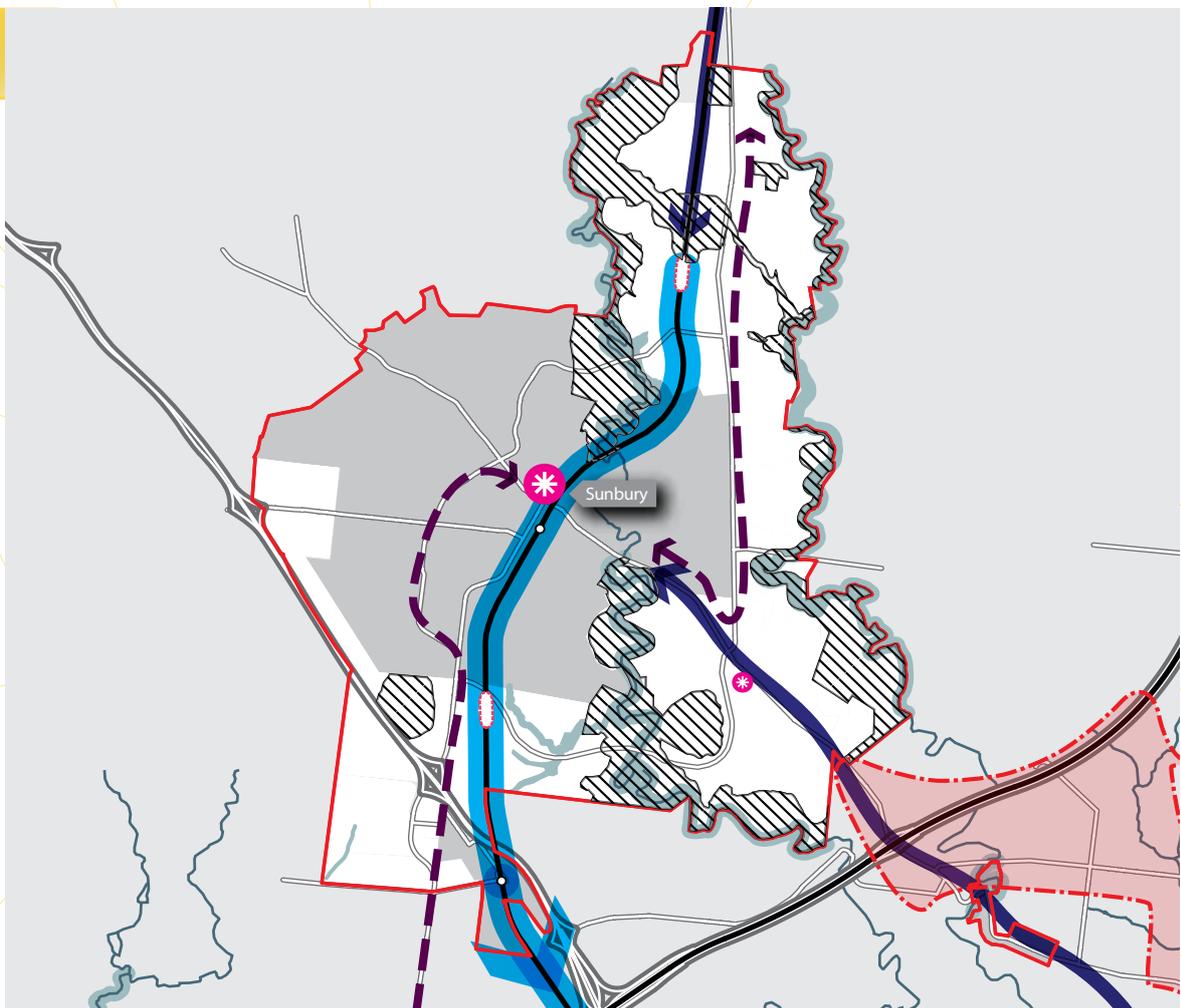
Planning of the PPTN is to connect the Sunbury population with the train station, and to Sunbury and other Town Centres.

The PPTN is planned to connect in future to Melbourne Airport and Broadmeadows, and to the Melton corridor. The PPTN is likely to be provided by an arterial road based SmartBus type service.

Planning for a network of potential local bus routes will be refined in PSPs.

Sunbury Public Transport Concept Plan

-  Central Activity Area
-  Principal Town Centre
-  Major Town Centre
-  Train Station
-  Future Station
-  Opportunity for future Rail Station
-  Urban Growth Boundary
-  Existing Urban Area
-  Area Outside UGB
-  Investigation Area: link to airport
-  Business
-  Business with Residential
-  Metropolitan Demand
-  Regional Demand
-  Subregional Demand
-  Other Major Demand



7.6.2 Arterial Road Networks

Sunbury is well located with respect to Metropolitan Melbourne, including proximity to Melbourne Airport, Broadmeadows and the wider Melbourne North Growth Corridor.

However, parts of the freeway and arterial road network experience congestion, including the Calder Freeway and Bulla Road.

The Growth Corridor Plan identifies an area of investigation for connection options between Sunbury and Craigieburn, which include a Bulla Bypass, as well as the possibility to utilize the OMR and an extended Tullamarine Freeway to provide the link.

Possible future crossings of Jacksons Creek are also being investigated but remain in the early stages of consideration at this stage and will be considered in more detail once PSPs are commenced and demand can be better understood.

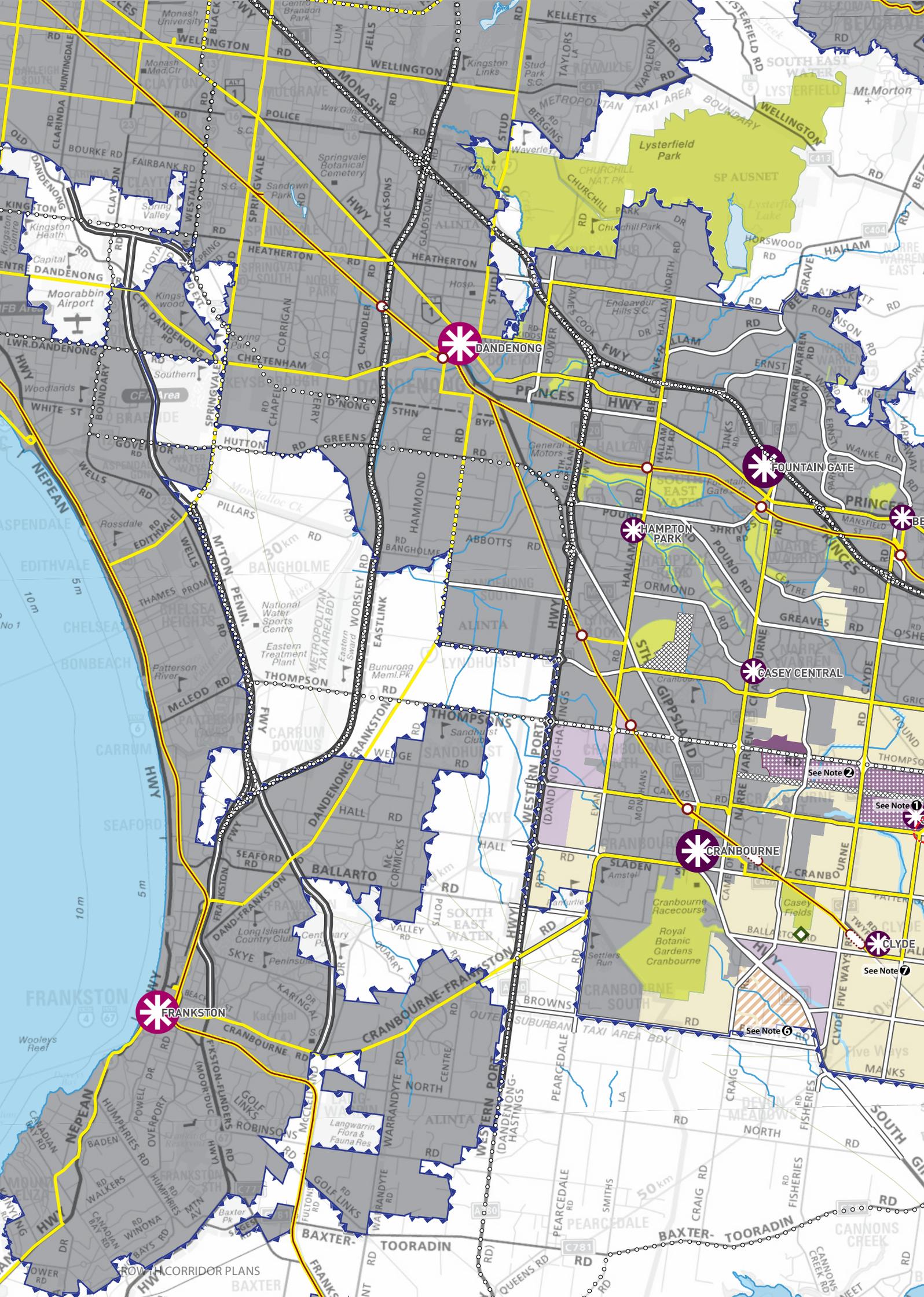
There are opportunities to improve local connectivity within Sunbury. This includes the continuation of Elizabeth Drive through to Racecourse Road and Vineyard Road will improve local connectivity on the west side of Sunbury to the Calder Freeway

7.7 OTHER INFRASTRUCTURE

The Sunbury wastewater treatment plant currently produces Class B recycled water for agricultural use, but will need to be upgraded to serve the new Growth corridor. Western Water is investigating the potential to produce Class A recycled water in future. The existing plant includes internal buffers which, along with the Jacksons Creek corridor, are expected to provide appropriate buffers to the residential uses identified on the eastern side of Jacksons Creek.

The plan ensures that the existing operational quarry and non-putrescible landfill site within the revised Urban Growth Boundary to the north of Sunbury-Bulla Road is protected from encroachment by sensitive land uses. Industrial uses are identified between the quarry and Sunbury-Bulla Road to achieve this. The development of this industrial area, and the development of land currently zoned Farming Zone adjacent to the quarry, is dependant on the Works Authority being amended by the quarry license holder.

Infrastructure Coordination



GROWTH CORRIDOR PLANS

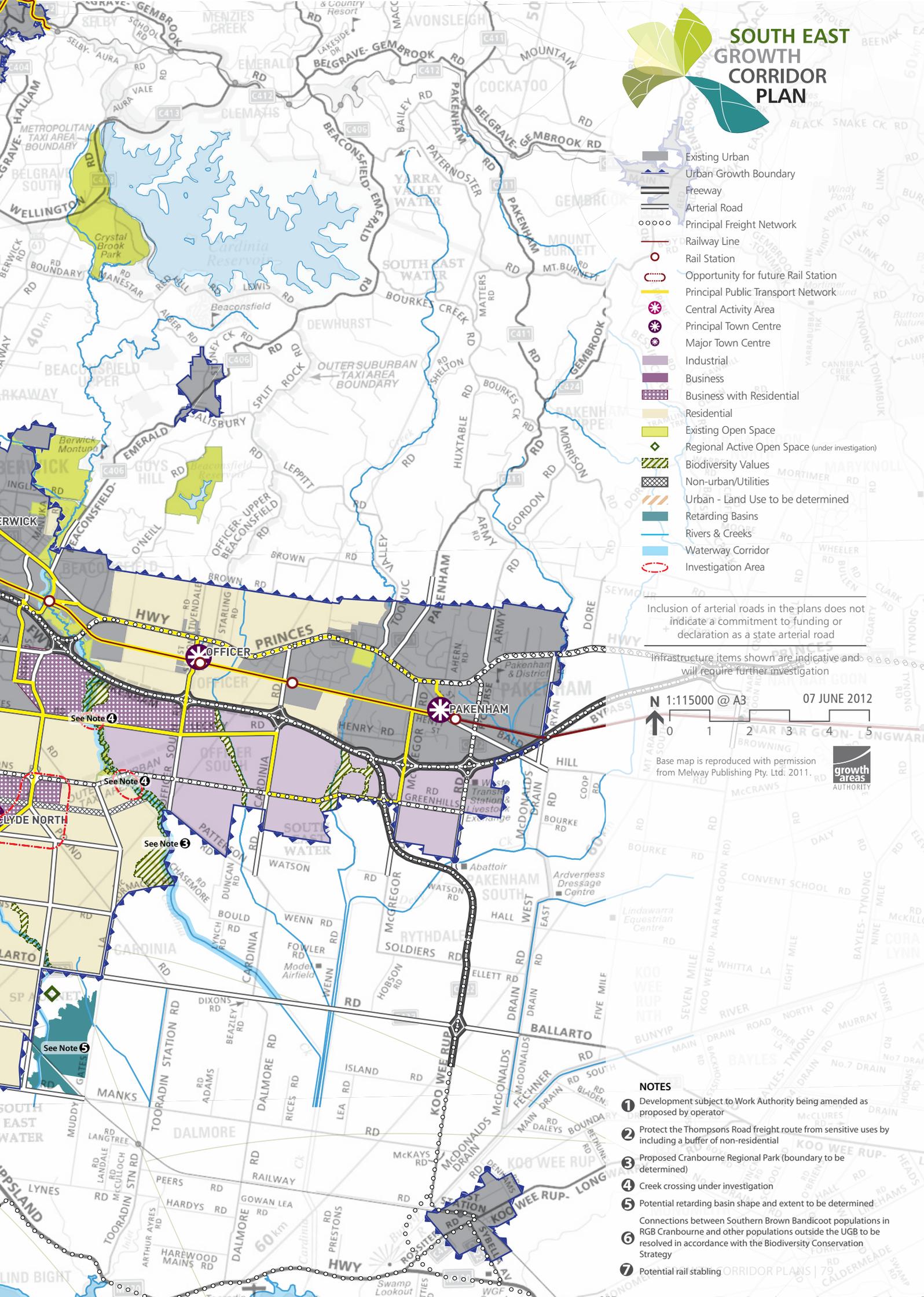
See Note 2

See Note 1

See Note 7

See Note 6

SOUTH EAST GROWTH CORRIDOR PLAN



- Existing Urban
- Urban Growth Boundary
- Freeway
- Arterial Road
- Principal Freight Network
- Railway Line
- Rail Station
- Opportunity for future Rail Station
- Principal Public Transport Network
- Central Activity Area
- Principal Town Centre
- Major Town Centre
- Industrial
- Business
- Business with Residential
- Residential
- Existing Open Space
- Regional Active Open Space (under investigation)
- Biodiversity Values
- Non-urban/Utilities
- Urban - Land Use to be determined
- Retarding Basins
- Rivers & Creeks
- Waterway Corridor
- Investigation Area

Inclusion of arterial roads in the plans does not indicate a commitment to funding or declaration as a state arterial road

Infrastructure items shown are indicative and will require further investigation

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NOTES

- 1 Development subject to Work Authority being amended as proposed by operator
- 2 Protect the Thompsons Road freight route from sensitive uses by including a buffer of non-residential
- 3 Proposed Cranbourne Regional Park (boundary to be determined)
- 4 Creek crossing under investigation
- 5 Potential retarding basin shape and extent to be determined
- 6 Connections between Southern Brown Bandicoot populations in RGB Cranbourne and other populations outside the UGB to be resolved in accordance with the Biodiversity Conservation Strategy
- 7 Potential rail stabling



THE SOUTH EAST Growth Corridor Plan

6.1 CONTEXT

The South East Growth Corridor is located on the outer edge of this broader economic region, and is heavily reliant on the established urban areas for jobs and services. As a result, many residents in this Corridor travel considerable distances to access jobs and services offered in places like Dandenong, Frankston, Knox, Kingston and Mulgrave. The area covered by the Growth Corridor Plans will eventually accommodate a population of 230,000 or more people and has the capacity to provide for at least 86,000 jobs.

Improving the local self-containment of jobs in the South-East Growth Corridor is a key objective of the Corridor Plan.

The wider south-east economic region is substantial in its own right. Its economy is closely linked to the wider metropolitan area with a distinctive focus on manufacturing and technology and it features a high degree of employment self-containment at the sub-metropolitan scale.

Central Dandenong is the CBD of the south east, and it is well connected to the rest of Melbourne by rail and road. It

is also connected to a series of Principal Town Centres and specialised employment precincts across the south east region.

Residents in the South East Growth Corridor will continue to rely upon the broader metropolitan south eastern suburbs for employment and services however over the longer term, the potential exists for the South East Growth Corridor to be re-positioned as central to an emerging sub-regional economic triangle comprising Dandenong, the Casey/Cardinia employment area and the Port of Hastings.

The proposed land use and transport framework will facilitate this outcome, by providing opportunities for greater business investment and better sub-regional transport connectivity.

Facilitating jobs and investment within the region, together with a transport network that links people to those jobs, has been the primary influence shaping this plan.



Development of the South-East Growth Corridor will continue to enhance the region's self-sufficiency, sustainability and distinctiveness by providing a good range of new employment opportunities which are well-connected by appropriate transport links between homes and new and existing jobs. New job opportunities will be provided at Pakenham, Thompsons Road and South Gippsland Highway, as well as in the existing and identified town centres and within new residential communities. Dandenong and the south eastern metropolitan suburbs will also continue to be a major focus for employment, services and facilities provision in the region.

The existing sense of place will be enhanced through the design of precincts enabling residents to enjoy access to a network of waterways, biodiversity corridors and open spaces, as well as providing ready access to vibrant town centres, local services and job opportunities. Opportunities to integrate the waterways, the Royal Botanic Gardens Cranbourne, local hills and views to more distant hills including the Dandenong Ranges, will be maximised.





6.3 LANDSCAPE, ENVIRONMENT AND OPEN SPACE

Melbourne's South East Growth Corridor comprises areas of important biodiversity, drainage, flood mitigation, landscape and cultural heritage values. Significant opportunities exist to create new active and passive recreation areas to address the open space needs of the broader region.

The Corridor Plan recognises the wide range of ecological, cultural, recreational and social values across the South East Growth Corridor.

Combined, these values make up an integrated open space network. This network provides an important natural setting for the entire Growth Corridor. It will make a major contribution to the future amenity and sense of place for future communities.

Residents and visitors will be able to access the open space via a comprehensive trail network that will extend throughout this Growth Corridor.

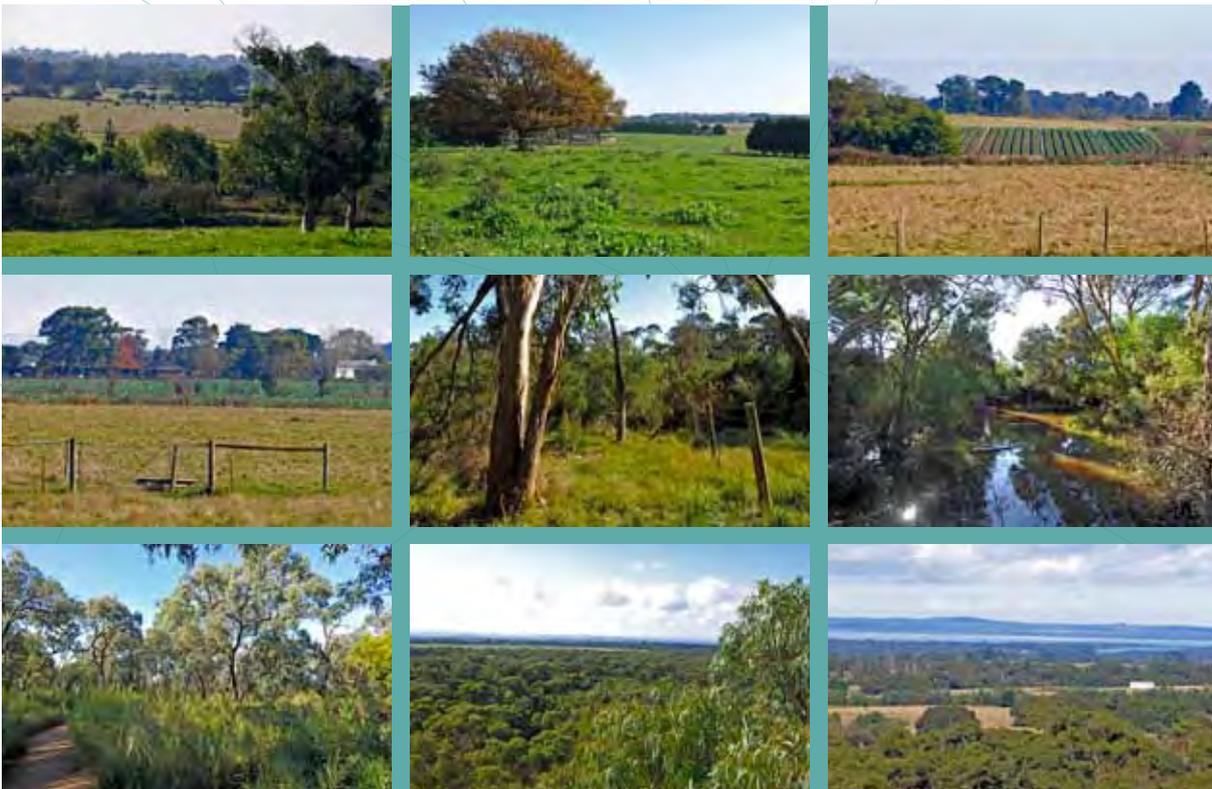
6.3.1 Landscape

Key landscape elements that require particular attention include:

- > Retention of distant views to the Dandenong Ranges to the north;

- > Utilisation of the natural drainage system that flows into the Western Port to create a network of open spaces which connect different parts of the Corridor in both visual and landscape terms. Cardinia Creek, Clyde Creek, Gum Scrub Creek and Toomuc Creek are particularly important in this regard; and

- > Retention of the rural character of the areas adjoining the UGB. The areas adjoining the UGB support a range of agricultural, hobby farms and equestrian industries, which add considerably to the character and amenity of Melbourne's south east. The planning and design of activities along this interface need to ensure that urban activities within the UGB do not adversely impact on the functions or amenity of these rural edges.



6.3.2 Biodiversity

This Growth Corridor has significant biodiversity values associated with its major creek lines. Habitat exists for fauna species including Growling Grass Frog, and Southern Brown Bandicoot. These species are not reliant on extant native vegetation and utilise a generally highly degraded rural landscape.

The existing landscape provides habitat and permeability for the Southern Brown Bandicoot through scattered patches of habitat throughout the Growth Corridor. The most significant of these areas is the Royal Botanic Gardens Cranbourne which supports high quality habitat and an important population of Southern Brown Bandicoot.

Scattered threatened flora species exist throughout the Growth

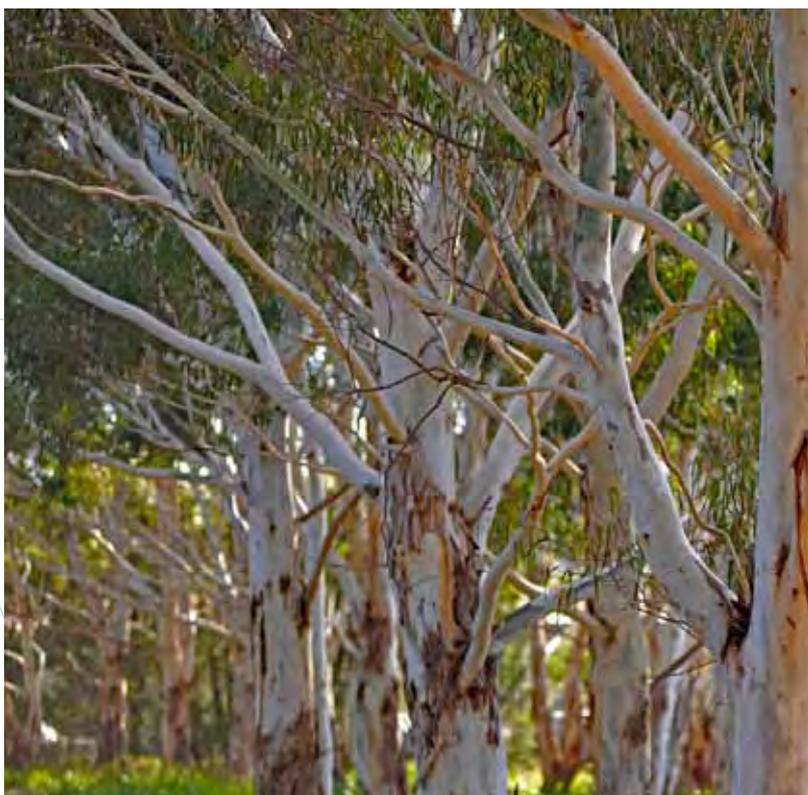
Corridor and in particular along the southern end of the railway line and along Manks Road.

The following biodiversity values are recognised by the South East Growth Corridor Plan:

- > Cardinia Creek Corridor. Areas for Growling Grass Frog protection have been identified along Cardinia Creek. Some of these areas are likely to be included in the area identified for the Cranbourne Regional Park;
- > Clyde Creek Corridor. Areas for Growling Grass Frog protection have been identified along Clyde Creek Corridor generally downstream of Tucker Road and extend east to the Muddy Gates Drain West Branch;
- > Habitat for the southern brown bandicoot at the Royal Botanic Gardens, Cranbourne and nearby areas. Options

for the connection between bandicoot populations in RGB Cranbourne and other populations outside the UGB will be resolved in accordance with the Biodiversity Conservation Strategy); and

- > Clyde-Tooradin Grasslands on the Railway Line – Public Use Zone Transport. The southern end of the South East (Cranbourne) railway line is to be established as a conservation area in order to protect and manage Maroon Leek Orchid and Swamp Everlasting. In determining the boundary of the conservation area consideration has been given to the need to provide rail services in future. A Conservation Management Plan will be developed for the management of the conservation area.





6.3.3 Drainage

The South East Growth Corridor includes parts of four major catchments:

- > the Mornington Peninsula catchment;
- > the Dandenong catchment;
- > the Cardinia Creek catchment; and
- > the Dalmore catchment.

Major local waterways include Cardinia Creek, Clyde Creek and the Western Contour Drain. These waterways, numerous smaller tributaries and wetland areas include areas of cultural heritage, and provide habitat for significant native flora, native frog and fish species, and other fauna.

Waterways in this Growth Corridor ultimately discharge to Western Port, an internationally recognised Ramsar⁴ wetland. Ramsar wetlands require a high level of control over the quality and quantity of surface water discharge.

Significant areas of Southern Casey are prone to shallow sheet flooding.

To address local flooding, and protect the downstream Koo Wee Rup Flood Protection District and the Western Port Bay Ramsar site, more flood storage areas will be required to service development in this corridor than in other Growth Corridors. A regional retarding basin of approximately 250ha is proposed by Melbourne Water beyond the south east corner of the Urban Growth Boundary to provide some of the flood storage capacity required.

The retarding basin is proposed to be located north of Manks Road, between the Western Contour Drain and Muddy Gates Lane. This will control the quantity and quality of stormwater flows into the Western Port Bay, and its delivery is vital to enable the development of the recently expanded Growth Corridor.

The retarding basin is required to help manage the increase in stormwater flows resulting from the new urban development. It will be designed to temporarily store then gradually release the increased flows to protect downstream properties from flooding. The retarding basin also has the potential to be used for other beneficial purposes such as improving water quality and the provision of active and passive open space

This regional asset may also be able to provide additional environmental or recreational benefits. Opportunities will exist for the facility to contribute to the broader biodiversity value of the region. For instance, the wetlands within the basin might contribute to the habitat for a variety of migratory birds associated with the Ramsar wetlands to the south, as well as provide habitat for the Growling Grass Frog.

6.3.4 Regional Parks and Open Space

A network of waterways, biodiversity corridors and open spaces will extend across the South East Growth Corridor.

This network will comprise land which has been set aside for a range of purposes, including biodiversity protection, drainage, flood mitigation, active and passive recreation, landscape and cultural heritage protection. The major open space nodes within this network include:

- > The Royal Botanic Gardens Cranbourne;
- > The Casey Fields sporting precinct;
- > The Cranbourne regional parkland identified along Cardinia Creek; and
- > The proposed regional flood retarding basin and wetlands along the south-east edge of the UGB.

Key open space linkages within



⁴ Ramsar wetlands are wetlands of international importance listed under the Convention on Wetlands also known as the Ramsar Convention. The Convention was signed in 1971 at a meeting in the town of Ramsar, in Iran. The aim of the convention is to halt the worldwide loss of wetlands and to conserve those that remain.

this network include Clyde and Cardinia Creeks and the associated Growling Grass Frog corridors, and modified local drainage networks within local neighbourhoods.

This open space network will ensure that the specific environmental functions are protected and enhanced, whilst also ensuring that the features provide value to the community by providing a recreation function, and linking nodes with linear trails.

Open space nodes will be connected by a series of trails focused particularly along the creeks. Some of these will form

part of the MTN (and shown on the Growth Corridor Plan), and others will form local trails to be provided through PSPs.

Specific initiatives within this network include the following:

Cardinia Creek Regional Park

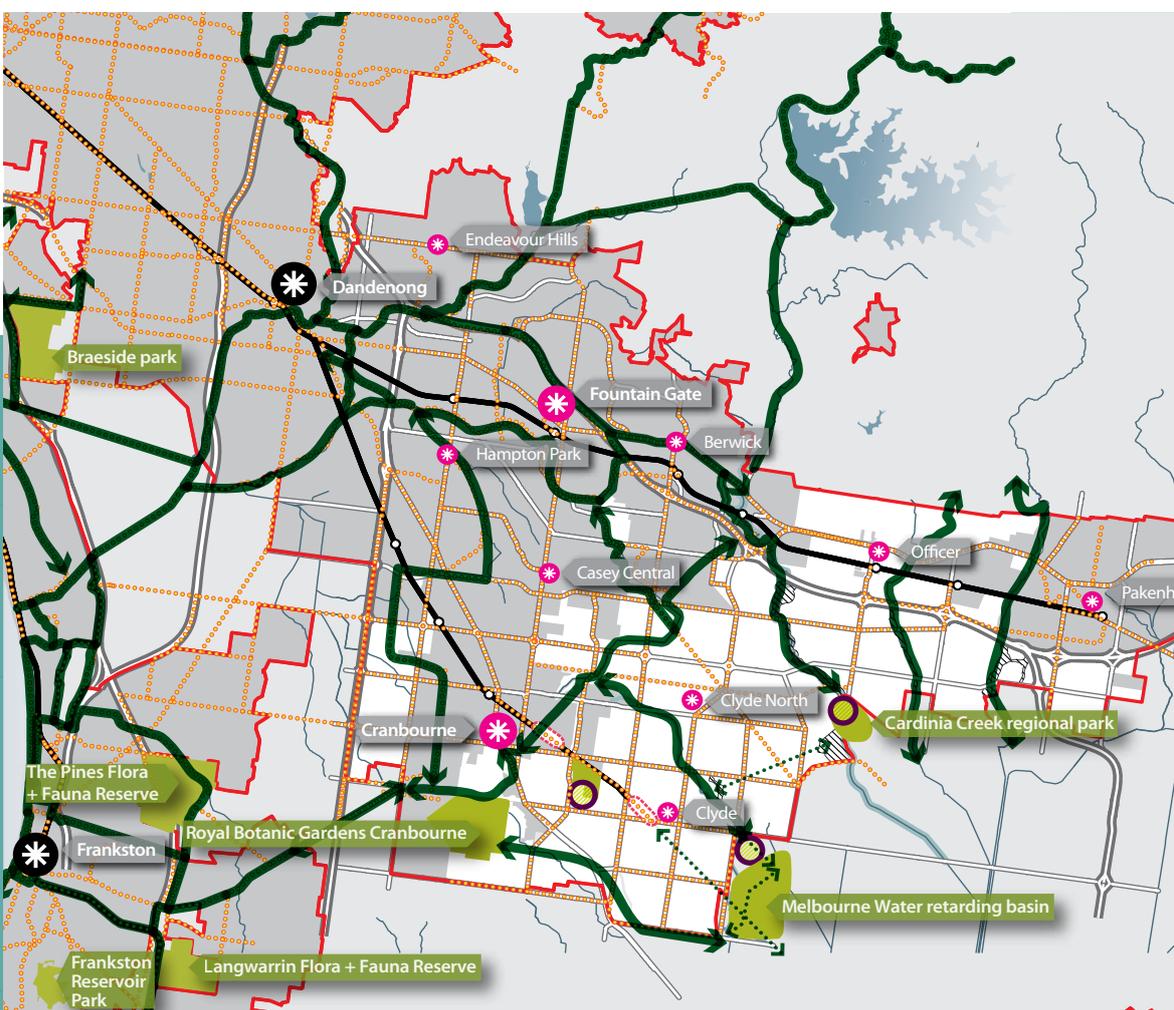
A new regional park is identified along Cardinia Creek, generally south of Thompsons Road. The location of this regional park is subject to investigation. The location of the Thompsons Road crossing of Cardinia Creek (under investigation by VicRoads) may form the northern boundary of the park.

6.3.5 Regional active open space

There is likely to be a need for additional regional active open space within the South East Growth Corridor. Short term opportunities exist to extend the existing Casey Fields facility, which the City of Casey is currently exploring. Additional opportunities might exist to provide new regional active open space outside the Urban Growth Boundary to the north west of the proposed Melbourne Water retarding basin.

South East Integrated Open Space Concept Plan

- Central Activity Area
- Principal Town Centre
- Major Town Centre
- Train Station
- Future Station
- Opportunity for future Rail Station
- Urban Growth Boundary
- Existing Urban Area
- Area Outside UGB
- Regional Open Space (not all publicly accessible)
- Potential Regional Active Open Space
- Potential Bicycle Network
- Principal Bicycle Network Links
- Metropolitan Trail Network
- Metropolitan Trail Network Links
- Landscape Values





6.4 CREATING COMMUNITIES

6.4.1 Regional self-containment

Central to creating liveable communities in the south east is the need to create a more self-contained region which offers more jobs and facilities and better, high quality, public transport and road connections.

The regional focus for higher order services and facilities, and a significant number of jobs, will be

central Dandenong. Over time, a substantial number of jobs will also be provided in the Pakenham employment corridor, as well as the planned employment precincts at Minta Farm, along Thompsons Road, the South Gippsland Highway and within both existing and planned town centres.

The South East Growth Corridor Plan creates opportunities for investment across a wide range of precincts to maximize the region's potential for the creation and diversification of local job opportunities.

6.4.2 Residential Districts within the Growth Corridor

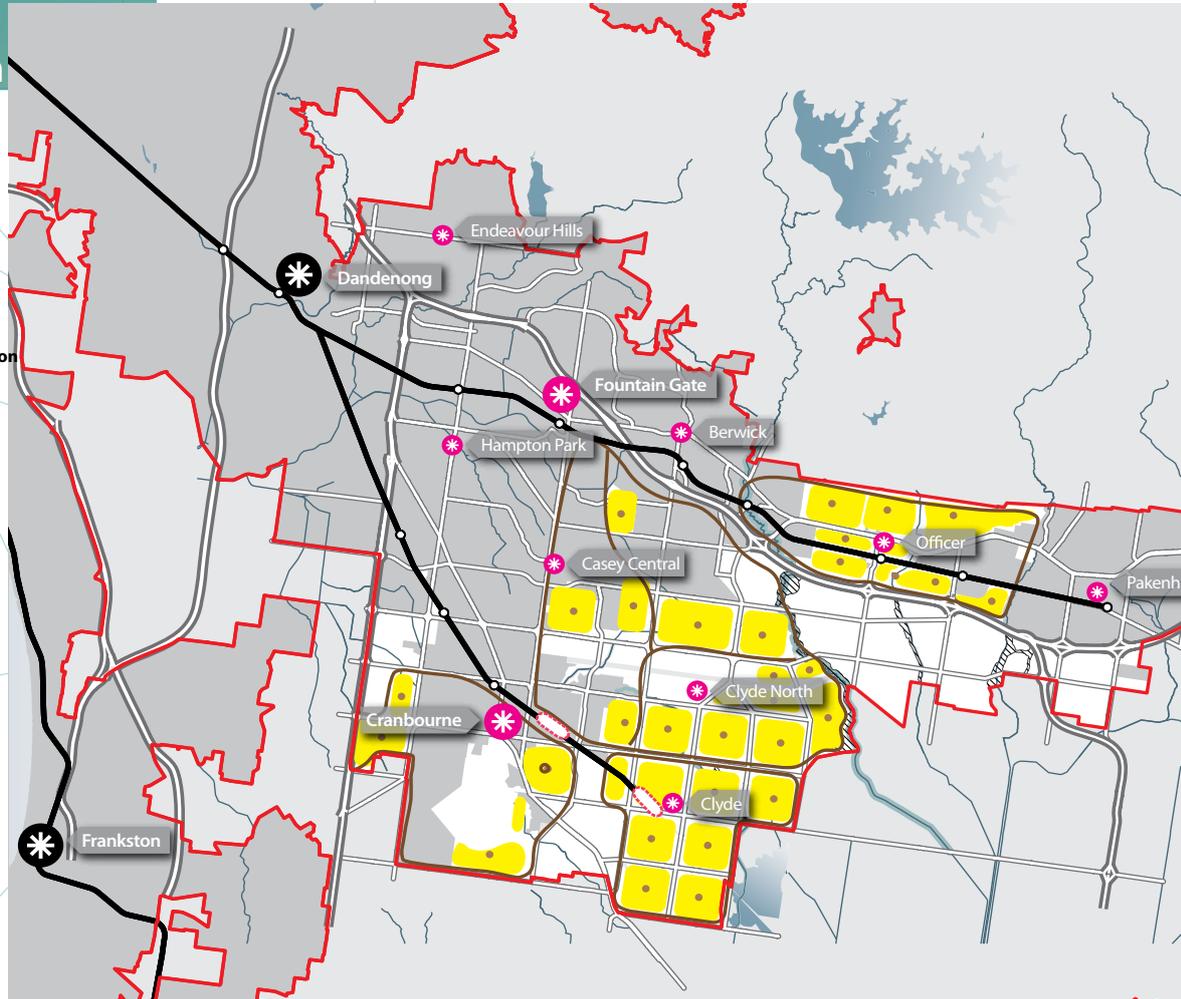
Two new residential districts are identified in the new Growth Corridor, focused on new Major Town Centres at Clyde and Clyde North.

Each of these districts is of a sufficient size to support a Major Town Centre within it, and each can provide a mix of jobs and housing types/densities.

Connections between districts will be provided by a grid of arterial roads and extended public transport networks.

South East Community Concept Plan

-  Central Activity Area
-  Principal Town Centre
-  Major Town Centre
-  Train Station
-  Future Station
-  Opportunity for future Rail Station
-  Urban Growth Boundary
-  Existing Urban Area
-  Area Outside UGB
-  Constrained Land
-  Local Neighbourhood
-  New Residential Districts



6.4.3 Character and Identity

The sense of place for each of these communities will be created from natural features, particularly the creeks, ridgelines, and views to highpoints such as the Dandenong Ranges and Royal Botanic Gardens Cranbourne.

The town centre at Clyde North is near Clyde Creek, and can be designed to integrate this waterway into the character of the town.

Creeks and waterways will also provide alternative connections between communities via the MTN.

Opportunities exist to ensure that



some of the arterial road routes are designed to have a strong boulevard character. This will potentially require such routes to have a wider cross section to allow for tree planting and wider medians. Thompsons Road is a key route for consideration of such treatment.

6.4.4 Regional Community, Health and Education Services and Facilities

The major campus based post compulsory education providers in the South East are Monash University's Berwick and Peninsula (Frankston) campuses, and Chisholm Institute at Berwick, Dandenong, Cranbourne and Frankston.

It is anticipated that the expected growth in demand for campus based Higher Education and Vocational Education and Training (VET) can largely be met from existing campuses. However, additional TAFE services, with a focus on VET qualifications and Higher Education feeder courses, could be considered in Cardinia to help ensure locally relevant provision of post compulsory education services.

Primary, secondary and tertiary health services, both hospital and community based, are provided by a combination of state and commonwealth government and private providers. Primary care services are generally provided by general practitioners. Tertiary mental health services are provided at a range of locations by Southern Health and a range of non government organisations. Southern Health is the major provider of services in Melbourne's south-east and operates six hospital campuses and a range of community based services delivering a range of primary health care services. Monash Medical Centre at

Clayton and Moorabbin provides specialist services. The Kingston Centre provides specialist aged care, mental health and sub acute services. People living in the South East Growth Corridor also access the Alfred Hospital and other inner metropolitan specialist hospitals for tertiary and state-wide health services.

Dandenong Hospital provides a range of acute services including mental health and primary care. Casey Hospital, at Berwick, provides a range of acute health services. Cranbourne Integrated Care Centre provides a range of day, outreach and aged care assessment services.

A number of services and sites in the South East Growth Corridor are currently being expanded. Master planning is underway at Casey Hospital for the growth and development of acute health services to meet future demand. A major expansion of children's services is planned at the Clayton site. A GP Super Clinic which is intended to integrate a range of primary care services is being established in Berwick. Planning for the upgrade and expansion of ambulance services is occurring within the context of the state-wide service network.

Additional residential aged care capacity will be required to provide for an expanding and ageing population in Melbourne's south-east.

Strategic planning will take account of interface communities on the metro rural fringe, consider the need for health and medical precincts in major centres and include a focus on the potential for co-location of services.

More comprehensive and specialist education, health and community facilities would normally be located in the higher order town centres, which include Pakenham, Officer, Cranbourne/ Cranbourne East and Clyde.



6.5 EMPLOYMENT

The South East Growth Corridor will continue to have a strong relationship to the Dandenong Central Activities Area (CAA) and other major employment destinations in the broader south east metropolitan area. This will continue to drive the need for improved transport connections between the Growth Corridor and major job locations.

However, over time, the South East Growth Corridor will aim

to achieve greater local job self containment. In total, the South East Growth Corridor Plan area is expected to accommodate between 86,000 and 110,000 new jobs, across a range of employment sectors and locations.

This will be achieved in a variety of ways, ranging from home based businesses and jobs in Local Town Centres through to employment in large town centres and industrial precincts.

6.5.1 Town Centres

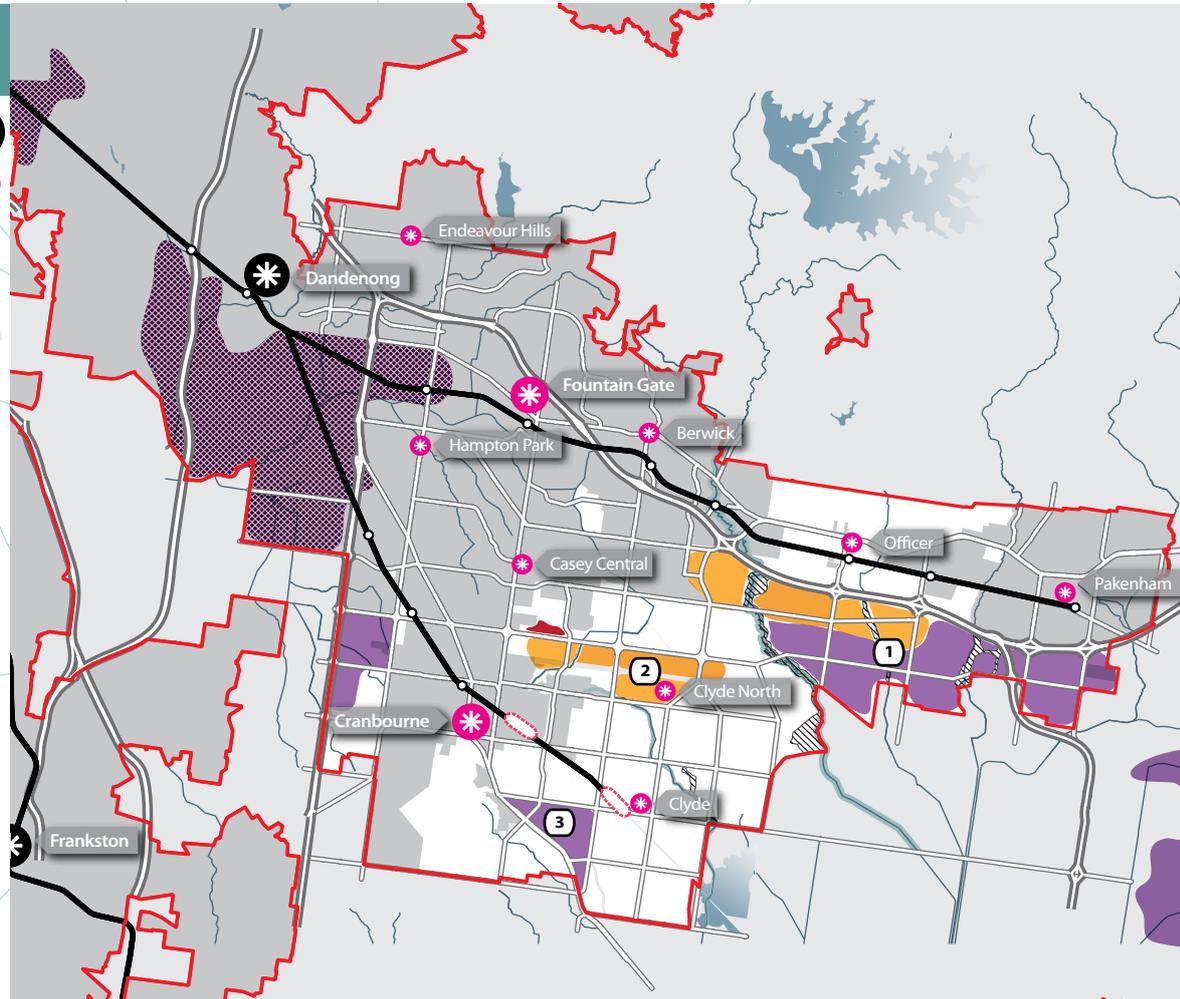
A wider range of businesses and job opportunities will emerge over time in Dandenong CAA along with the Principal Town Centres identified at Cranbourne and Fountain Gate and the Major Town Centres identified at Pakenham, Officer, Berwick and Casey Central.

Two new Major Town Centres are identified in the Growth Corridor Plan at Clyde, adjacent to a new rail station along the extended Cranbourne rail line, and at Clyde North, on the PPTN which links Cranbourne to Officer and beyond.

South East

Employment Concept Plan

- Central Activity Area
- Principal Town Centre
- Major Town Centre
- Train Station
- Future Station
- Opportunity for future Rail Station
- Urban Growth Boundary
- Existing Urban Area
- Area Outside UGB
- Constrained Land
- Industrial
- Existing industrial
- Business
- Business with Residential
- Officer-Pakenham Employment Corridor
- Thompsons Road Employment Corridor
- South Gippsland Highway Industrial Node



6.5.2 Employment Precincts

The South East Growth Corridor Plan makes provision for:

- > 2,370 (gross) hectares of industrial land;
- > 1,290 (gross) hectares of business land; and
- > Around 60 (gross) hectares of additional land could also be provided, for a range of local industrial and commercial activities across residential PSPs. These will be identified as required through the PSP process.

Officer-Pakenham Industrial/Business Corridor

This corridor has good freight and public transport connections, and will be an attractive location for a wide range of advanced manufacturing and commercial enterprises, as well as the more traditional manufacturing, warehouse and logistics, commercial and some high density residential uses.

It has direct freight access to the metropolitan area and the Port of Hastings via the South Gippsland Highway, Western Port Highway.

It will be anchored by high amenity business parks planned at Cardinia Road to the east and Minta Farm to the west, and will be well serviced by the PPTN identified to connect to the Officer Town Centre and rail line, and the broader south-eastern metropolitan area.

Thompsons Road Business Corridor

This corridor will have excellent freight access to the metropolitan area and the Port of Hastings. It will be serviced by a high amenity business precinct and Major Town Centre identified at Clyde North, and will be readily accessible to the PPTN by a series of north-south public transport connections.

Around 520 (gross) hectares of business land is identified along Thompsons Road including around the Clyde North Town Centre. Along with employment uses, this Precinct allows some residential development and a mix of business services, service industry and associated uses. Detailed planning will investigate the type of employment and industrial land uses that are appropriate, some of which will be influenced by the presence or proximity to physical and man-made constraints, such as the transmission easement. The Thompsons Road freight route will be protected from sensitive uses by including a buffer of non-residential land uses.

South Gippsland Highway Industrial Node

A new 250ha (gross) industrial precinct is identified along the South Gippsland Highway. This precinct will also enjoy excellent freight access to the metropolitan area and the Port of Hastings the South Gippsland Highway and Western Port Highway. It will be serviced by a new railway station, and Major Town Centre at Clyde.



6.6 TRANSPORT

6.6.1 Public Transport

Urban development in the South East Growth Corridor will be supported by the two metropolitan rail lines to Cranbourne and Pakenham. Planning will provide for rail services and station development, to include multi-modal integration, to support Principal and Major Town Centres as well as strategically located park and ride facilities.

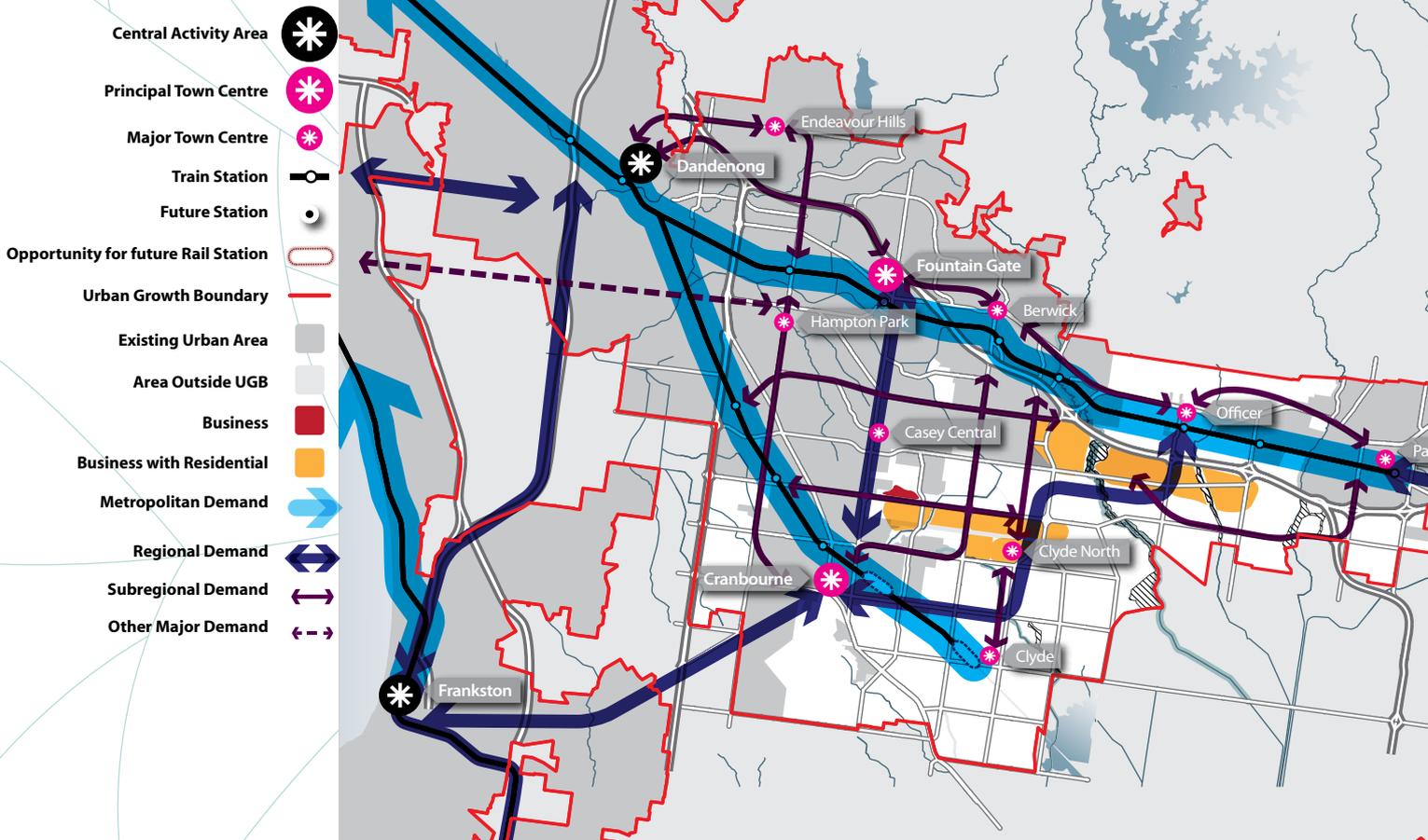
The identified PPTN will provide a basis for a potential future strategic bus network linking rail stations along and between the Cranbourne and Pakenham rail lines, as well as connecting the Major Town Centres and the large employment areas.

Parts of the arterial road network along the PPTN can be designed to accommodate potential higher capacity public transport network such as busways in the future. The connection from Cranbourne to Officer has potential for this higher capacity service for example.

The planning for the PPTN will extend beyond the Growth Corridor, linking to Dandenong South, Frankston and a range of jobs and services in the southern metropolitan region.

In addition, planning for a network of potential local bus routes will be provided across the area, and these routes will be planned as part of PSPs. For example, it is envisaged that major east – west routes such as Thompsons Road (which is a part of the PFN), may also provide for local bus services.

South East Public Transport Concept Plan



6.6.2 Arterial Road Networks

The Growth Corridor Plan proposes the development over time of additions to the grid of north-south and east-west roads, to provide critical linkages between communities, and to housing, jobs and services.

Planning for development of the grid will take into account the need for:

- > Links between Cranbourne and town centres at Officer and Pakenham;
- > North-south public transport routes;
- > Crossings of Cardinia Creek.





6.6.3 Planning for Freight

Planning for the freight network in the south east will aim to enable freight connections between the current freight facilities south of Dandenong, the Port of Hastings, and the Pakenham employment corridor.

Parts of the road network will be planned to carry freight as a key function, including:

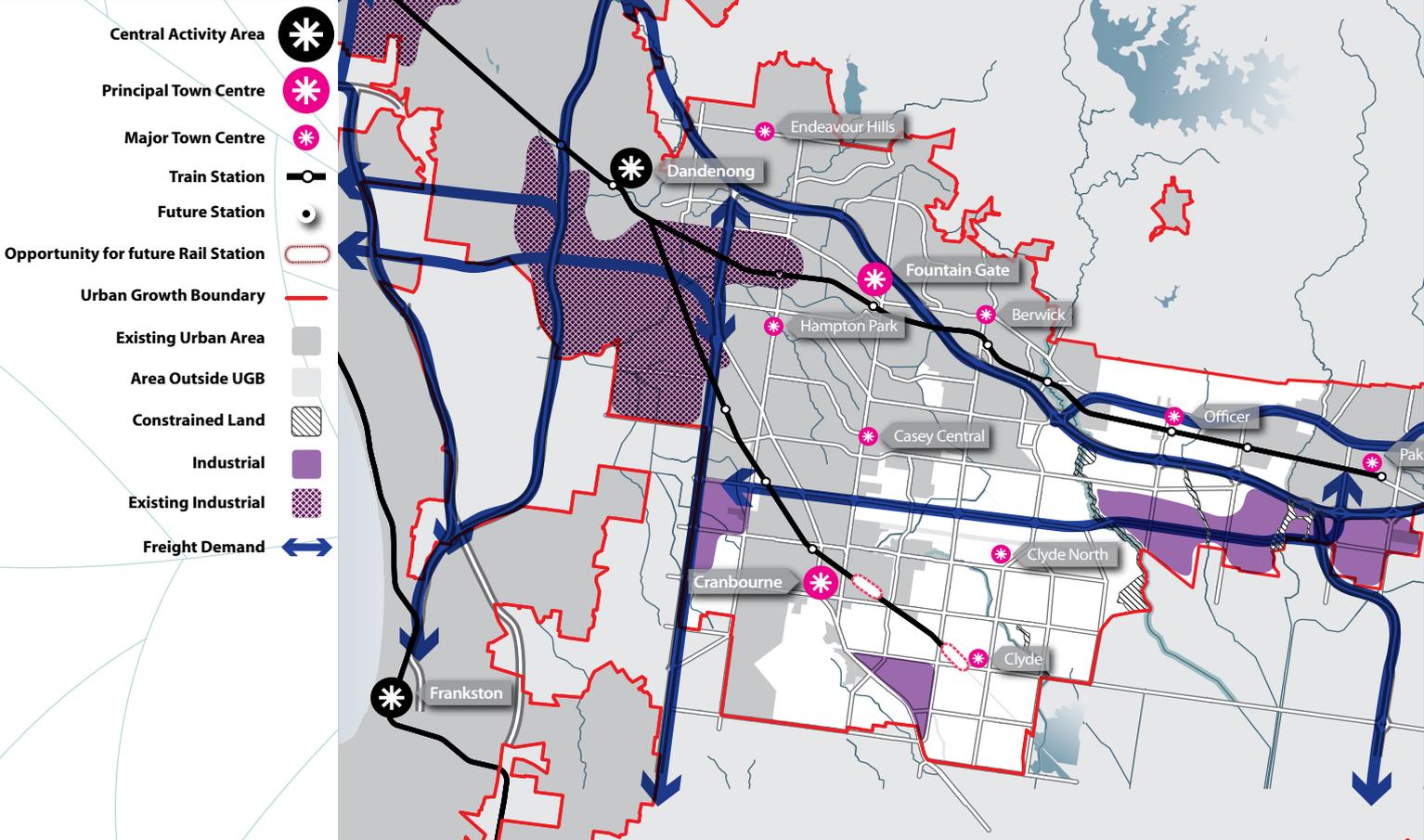
- > The Princes Freeway;
- > The Western Port Highway;
- > Eastlink;
- > The Mornington Peninsula Freeway; and
- > Thompsons Road.

The rail freight network in the south-east comprises rail corridors, including the

Dandenong-Pakenham corridor, Dandenong-Lyndhurst-Cranbourne corridor and the Frankston-Hastings Port rail line. The key future rail development is the proposed Lyndhurst-Hastings Port rail line.

A notable existing rail terminal is the Hanson's Westall quarry terminal. Important proposed rail terminals include the: Hastings Port intermodal terminal and the South-east Intermodal Freight Terminal at Lyndhurst and/or Greens Road Dandenong

South East Freight Concept Plan



6.7 OTHER INFRASTRUCTURE

South East Water (SEW) is currently preparing an Integrated Water Management Strategy for its service region. One of the key issues to be addressed by this Strategy is whether a new Sewage Treatment Plant (STP) will be constructed to service urban growth in the South East Growth Corridor. The decision regarding the need or otherwise for a new STP in this region will depend on whether there is sufficient use

for non-potable recycled water across the region.

In the event that there is insufficient demand for non-potable water in the region, then it is likely that the Eastern Treatment Plant, which already provides non-potable recycled water, will be relied upon to meet the sewage treatment requirements of this Growth Corridor.

Alternatively if sufficient future demand for non-potable recycled water can be confirmed, then a new STP will be considered as part of its Strategy. SEW has suggested that a new STP might be co-located with Melbourne Water's retarding basin, but investigations will continue. Consideration needs to be given to two areas with adverse amenity potential are included in the Growth Corridor, and need to be planned carefully:

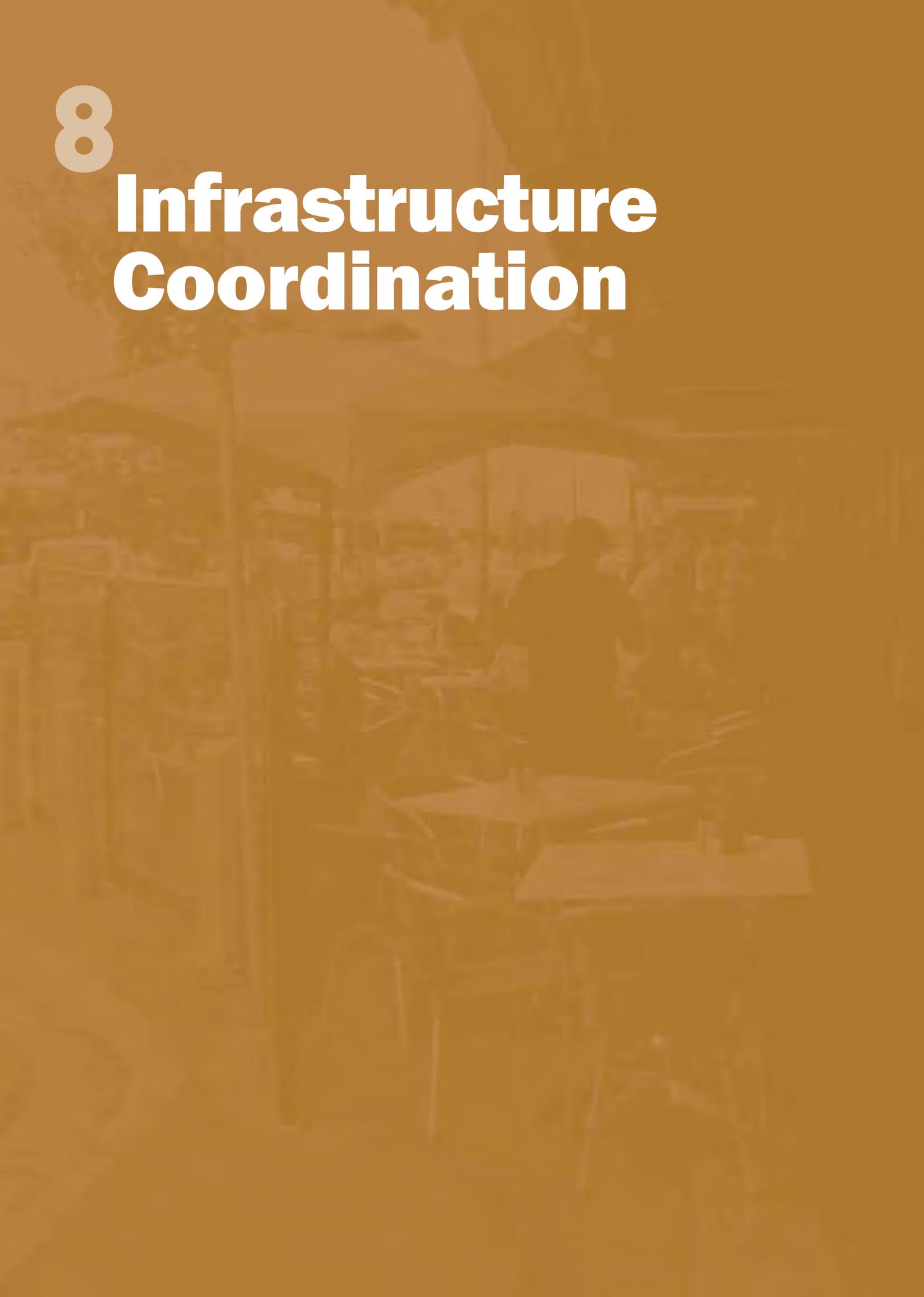
The major quarry in the South East Growth Corridor lies to the south of Thompsons Road, and to the west of Berwick-Cranbourne Road. This quarry is currently zoned Special Use Zone, and land within a 500m buffer of the quarry is zoned Farming Zone. However, the operator of this quarry has indicated a willingness to close it down to enable urban development on the quarry site and on surrounding parcels. The Growth Corridor Plan identifies urban uses on the quarry site and on surrounding parcels, but it should be noted that this redevelopment is subject to the current works authority being extinguished.

An area further west along Thompson Road currently contains a poultry farm, a natural resource distribution centre and an abattoir. The owners of each of these facilities and associated land have indicated a willingness to close down operations. This needs to be coordinated to avoid uses that have ceased continuing to be constrained by neighbouring uses. The Growth Corridor Plan identifies business (with some broader uses) in this area, to enable this redevelopment to occur. This will be planned in more detail in a PSP.



8

Infrastructure Coordination





Infrastructure Coordination

Growth Corridor Plans will guide development within Melbourne's growth areas for the next 30 to 40 years.

The Growth Corridor Plans set up a spatial framework for future development in the Growth Areas. They identify the location of areas suitable for development and those that should be preserved; they indicate the principal land uses proposed for development areas and the location of major employment and service hubs, and identify the regional scale transport and other infrastructure networks that will be required, over time, to provide for the development of each Growth Corridor.

The Growth Corridor Plans outline the Principles that will guide more detailed land use and infrastructure planning. Because of the timeframes involved, the Corridor Plans need to be broad enough to allow for significant changes in things such as:

- > Population and employment growth rates and market conditions;
- > The structure of the economy;
- > Emerging development types and densities;
- > Demographic trends, including changing household structures and preferences;
- > Emerging community, health & education service delivery strategies;
- > Government and council funding capacity & priorities.

The Plans provide a long-term overarching framework to enable subsequent more detailed development plans and infrastructure investment programs to be delivered.

The rate of urban development within Melbourne's growth areas will largely be a response to market preferences and demands.

Melbourne's growth areas play an important role in meeting the wider economic and housing needs of metropolitan Melbourne.

For instance, over time, Melbourne's growth areas are expected to increasingly be the primary source of land for manufacturing and logistics uses. Similarly, the growth areas will continue to accommodate a very significant share of new housing growth across Metropolitan Melbourne.

As such, it is essential that the program for facilitating urban development in Melbourne's growth areas is flexible and responsive to market expectations. The detailed planning for precincts will remain ahead of demand, so that there is an ability to cope with upturns in demand and sufficient lead time exists for the planning, delivery and funding of supporting infrastructure.

Precinct Structure Plans are the primary vehicle for determining the local infrastructure requirements needed to service local communities.

Precinct Structure Plans will be prepared for all developable land within the growth areas. Plans will be prepared for residential neighbourhoods as well as larger town centres and employment areas. At the PSP scale it is possible to identify more definitively the need for, proposed location, timing and funding options for a wider range of infrastructure. Each PSP will incorporate a detailed 'precinct infrastructure plan' (PIP) which outlines the infrastructure required to support urban development within the precinct.

Development contributions plans (DCPs) are also prepared in conjunction with the PSPs and identify and fund the key local infrastructure such as local roads, open spaces and community facilities. The scope and cost of DCPs has increased substantially over the past decade, and achieving a balance between cost of infrastructure and housing affordability is an ongoing challenge.

Infrastructure in Growth Areas will be funded and delivered through a variety of mechanisms.

Infrastructure in Growth Areas is of a number of types and scales and its delivery broadly falls into the following stages:

- > Facilitative' infrastructure – this is infrastructure that is required to enable development to proceed. It includes infrastructure such as water supply and sewer mains, the basic road network which provides access to arterial roads, etc.
- > 'Development-linked' infrastructure – this is the infrastructure that is closely related to the rate of development, so as to serve basic needs of the new community. It includes local community infrastructure, schools, road based public transport services and land for local open space and sporting fields, etc.
- > Enhanced 'population linked' infrastructure – this is infrastructure that follows development as populations build up and demand grows for a range of enhanced urban and social services. It includes infrastructure such as arterial road upgrades, major public transport infrastructure, regional open space and some types of major community, health and education facilities.

The 'facilitative' and 'development linked' infrastructure types are typically funded and delivered by developers and local Councils either via direct provision of works by developers, or through development contributions plans (DCPs), or by utility service companies funded from their customer base (with bring-forward funding provided by developers in some cases).

The major State responsibility in the earlier years of new urban communities is the provision of schools.

There is less certainty in the timing of provision of 'enhanced' infrastructure as funding depends on development rates and the emerging needs of growth area communities. The forward planning of enhanced infrastructure in growth areas by State and Local government requires prioritising the needs of the growth areas in the wider context of the broader municipal or metropolitan area.

The majority of the 'enhanced' infrastructure is funded by Local, State and Federal Governments through their normal forward planning and budget processes.

This prioritisation is typically informed by population forecasts, urban development data, community needs analysis, transport modelling etc. Both State and local governments typically prepare specific infrastructure (e.g. transport, open space) or service (community services, health, education) strategies to determine funding priorities and delivery programs.

The introduction of the Growth Area Infrastructure Contribution (GAIC) provides an additional source of funding for both 'development linked' and 'enhanced' infrastructure provision by the State Government. The GAIC was introduced in mid 2010 and the Government will allocate GAIC revenues to deliver infrastructure in growth areas over time. Whilst it will take time for revenues to build up to significant levels to support infrastructure delivery in growth areas, opportunities exist

for the Government to negotiate 'works in kind' agreements with landowners to help facilitate the early delivery of infrastructure related to the GAIC.

The Growth Corridor Plans, Precinct Structure Plans and Urban Development Program (UDP) provide a valuable context and source of information to enable this infrastructure planning and prioritisation to occur.



GLOSSARY

Arterial Road	A higher order road providing for moderate to high volumes at relatively high speeds typically used for inter-suburban journeys and linking to freeways.
Beveridge Interstate Freight Terminal (BIFT)	A possible site for a future interstate freight terminal at Beveridge, which would enable the transfer of freight between road and rail.
Boulevard	A road that provides a higher level of amenity through landscaping and tree planting, normally with a central median and wider paths.
Bulky Goods	Restricted Retail and Trade Supplies as identified in the Planning Scheme.
Busways	The separate right of way in which higher frequency bus services run.
Guided Busways	A fixed right of way in which buses are steered along their route by external means. These often run parallel to existing roads.
Central Business District (CBD)	A commercial region in the centre of the city, attracting various types of businesses. In Melbourne this is focussed between Docklands and Spring Street, and Southbank and Victoria Street.
Connector Street	A lower order street providing for low to moderate volumes and moderate speeds linking local streets to arterial roads. These are managed by local councils.
Declared Arterial Road	Declared arterial roads are identified under the Road Management Act 2004 and managed by VicRoads on behalf of the State Government.
Department of Planning and Community Development (DPCD)	The Victorian State Government department responsible for urban planning and building stronger communities.
Department of Sustainability and Environment (DSE)	The Victoria State Government department that leads the Victorian Governments efforts to sustainably manage water resources and catchments, climate change, bushfires, parks and other public land, forest, biodiversity and ecosystem conservation.
Department of Transport (DOT)	The Victorian State Government department responsible for public transport, roads and ports across Victoria.
Ecological Vegetation Class (EVC)	<p>Ecological Vegetation Classes (EVCs) are the basic mapping units used for biodiversity planning and conservation assessment at landscape, regional and broader scales in Victoria.</p> <p>Each EVC represents one or more plant (floristic) communities that occur in similar types of environments. The floristic communities within each EVC tend to show similar ecological responses to environmental factors such as disturbance (e.g. wildfire). As well as representing plant communities, EVCs can be used as a guide to the distribution of individual species and groups of species, including animals and lower plants such as mosses and liverworts. (Commonwealth of Australia and State of Victoria, 1999).</p>
Environmental Protection and Biodiversity Conservation Act 1999 (EPBC)	The Act through which biodiversity conservation is implemented by the Commonwealth. This is administered by the Australian Government Department of Sustainability, Environment, Water, Population and Communities.
Golden Sun Moth (GSM)	<p>The Golden Sun Moth (<i>Synemon plana</i>) is a medium-sized (wingspan 3.1-3.4cm) day flying moth restricted to Victoria, the Australian Capital Territory and adjacent areas of southern New South Wales. The Golden Sun Moth inhabits grassy areas, including native grasslands and grassy woodlands as well as areas of introduced (non-native) grasses and weeds.</p> <p>It was listed as critically endangered under the EPBC Act in December 2002 and as threatened under the Victorian Flora and Fauna Guarantee Act 1988.</p>



Grassy Eucalypt Woodland (GEW)	<p>Grassy Eucalypt Woodland of the Victorian Volcanic Plain is an EPBC Act protected EVC. It is open eucalypt woodland with a predominantly grassy understory. The ecological community exhibits a degree of natural variation in appearance and composition across its range, due to variations in rainfall and landscape features such as changes in elevation, drainage patterns and the presence of rocky outcrops. It is most commonly dominated by River Red Gums (<i>Eucalyptus camaldulensis</i>), but this can become Grey Box (<i>E. macrocarpa</i>) or Yellow Box (<i>E. melliodora</i>) on drier sites, Manna Gum (<i>E. viminalis</i>) or Swamp Gum (<i>E. ovata</i>) on damper sites. In some areas, this community can have an association with or include stony knolls.</p> <p>Grassy Eucalypt Woodland of the Victorian Volcanic Plain is an ecological community that was listed under the EPBC Act on 25 June 2009 as critically endangered.</p>
Growling Grass Frog (GGF)	<p>The Growling Grass Frog or Southern Bell Frog (<i>Litoria raniformis</i>) is a large frog up to 10cm in length, varying from dull olive to bright emerald-green with irregular golden-bronze blotches. It occurs in south-eastern Australia, including South Australia, Victoria, Tasmania, New South Wales and the Australian Capital Territory. The Growling Grass Frog's habitat is permanent or seasonally flooded slow moving waterbodies for breeding, aquatic vegetation for shelter and foraging, and logs and debris for over-wintering. It is sometimes known as the Southern Bell Frog.</p> <p>It was listed as vulnerable under the EPBC Act in July 2000.</p>
Heavy Rail	Railway moving larger passenger volumes at higher speeds i.e metropolitan or V-Line rail services.
Higher Education (HE)	Higher education consists of Diplomas, Advanced Diplomas, Associate Degree Bachelor degree, Graduate Certificates and Diplomas Masters and Doctorates under the Australian Qualifications Framework. Generally, these qualifications are provided by universities. In addition to universities, there are hundreds of other organisations approved to provide particular higher education qualifications. Universities are most likely to occupy major spaces designated for provision of higher education.
Light Rail	A rail system that carries a relatively low number of passengers over relatively short distances, when compared with heavy rail. In Melbourne examples include the off-road sections of tram routes 96 and 109.
Local Bus Service	Bus services providing coverage of urban and suburban areas, typically contained within the suburb, and linking to areas of local activity and other public transport services.
Local Streets	Lower order streets designed to provide local access between connector streets and homes, jobs etc.
Local Town Centre	A small town centre designed to serve a local neighbourhood of up to 10,000 people, that will usually include a few specialty stores and non-retail uses.
Local Trail Network	Trails connecting local communities for recreational purposes. The local trails will be identified during the precinct planning process.
Major Town Centre	A town centre designed to serve a catchment of 20,000 to 60,000 people that accommodates a mix of activities that generate high numbers of trips, including businesses, retail, services and entertainment.

Matters of National Environmental Significance (MNES)	<p>The eight matters of national environmental significance protected under the EPBC Act are:</p> <ul style="list-style-type: none"> world heritage properties national heritage places wetlands of international importance (listed under the Ramsar Convention) listed threatened species and ecological communities migratory species protected under international agreements Commonwealth marine areas the Great Barrier Reef Marine Park nuclear actions (including uranium mines)
Metropolitan Trail Network (MTN)	An off-road trail designed for walking and cycling, that connects regional open space and is managed by Parks Victoria.
Native Vegetation Precinct Plan (NVPP)	A plan, as specified in clause 52.16, that sets out which native vegetation in a precinct will be retained and which will be offset.
Natural Temperate Grassland (NTG)	<p>Natural Temperate Grassland of the Victorian Volcanic Plain is characterised by native grassland of Kangaroo Grass (<i>Themeda triandra</i>), Wallaby Grass (<i>Danthonia</i> spp.) and other perennial tussock-forming grasses interspersed with an array of native herbs and sub-shrubs.</p> <p>Natural Temperate Grassland of the Volcanic Plain is listed as a critically endangered ecological community under the EPBC Act.</p>
Neighbourhood	An area bounded by arterial roads or other major features, containing 6,000 to 10,000 people. Typically a mile square in the standard Melbourne arterial road grid.
Outer Metropolitan Ring/E6 road reservation (OMR/E6)	<p>The Outer Metropolitan Ring / E6 road reservation is being planned to accommodate a high-speed transport link for people and freight in Melbourne's north and west, creating the opportunity for new road and rail transport links through the Werribee, Melton, Tullamarine, Craigieburn / Mickleham and Epping/Thomastown areas to be provided as transport demand warrants.</p> <p>The planning for the transport corridor provides options for an ultimate freeway standard road, capable of up to four lanes in each direction and four railway tracks in the median for interstate freight and high-speed passenger trains between Werribee and Kalkallo and capable of ultimately being a six-lane road elsewhere.</p>
Precinct Infrastructure Plan (PIP)	A document alongside or as part of the precinct structure plan that defines the priority regional and local infrastructure requirements for future planning and investment by council and government agencies.
Precinct Structure Plan (PSP)	A statutory document that describes how a precinct or series of sites within a growth area will be developed over time. A precinct structure plan sets out the broad environmental, social and economic parameters for the use and development of land within the precinct, and when adapted, development rights are triggered on the Urban Growth Zone.
Primary Arterial Road	A large road, typically with 4 – 6 traffic lanes and speed limits of 70 – 80 km/hr. These roads mainly function to provide for moving higher volumes of transport and freight for longer distances. The State Government will often declare these roads and manage them under the Road Management Act.



Primary Health	Frontline, basic or general patient centred health care incorporating curative treatment given by the first contact provider along with promotional, preventive and rehabilitative services provided by multi-disciplinary teams of health-care professionals working collaboratively e.g. general practitioners.
Secondary Health	The provision of general medical and surgical services by a physician or specialist in a community based health setting on referral by a primary care provider.
Tertiary Health	A specialised, consultative, highly technical level of health care over an extended period of time that includes diagnosis and treatment of disease and disability in sophisticated large research and teaching hospitals servicing a large catchment area and referral base. Advanced and complex procedures and treatments are provided at this level by medical specialists including intensive care, advanced diagnostic services and highly specialised personal care services.
Principal Town Centre	A town centre serving a catchment of 100,000 people or more, that accommodate a mix of activities that generate higher numbers of trips, including business, retail, services and entertainment. Generally well served by multiple public transport routes and on the Principal Public Transport Network or capable of being linked to that network.
Principal Public Transport Network (PPTN)	A high-quality public transport network that connects Principal and Major Town Centres, and comprises the existing radial fixed-rail network, extensions to this radial network and new cross-town bus routes.
Ramsar	An international convention on wetlands that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. The convention was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975.
Regional Rail Link (RRL)	The Regional Rail Link is a new rail line from Werribee to Southern Cross via Deer Park. It is designed to carry regional, VLine Trains from the west of Melbourne to the CBD whilst freeing up the existing Werribee line to enable this to carry more trains.
SmartBus Service	A higher frequency bus service with relatively direct routes, often over longer distances between suburbs, and linking to areas of activity and heavy rail services
Southern Brown Bandicoot (SBB)	<p>Southern Brown Bandicoot (<i>Isodon obesulus obesulus</i>) exists across southern Australia and Cape York. It is a medium sized ground dwelling marsupial up to around 1.5kg in weight. It utilises a range of native and exotic vegetation types with a densely vegetated ground layer, and generally occurs within 50km of the coast, although it extends further in land in south west Victoria. Individuals tend to be solitary and generally nocturnal, with a home range of between 0.5ha to 9ha reported.</p> <p>The Southern Brown Bandicoot is a nationally threatened subspecies that was listed as endangered under the EPBC Act in April 2001.</p>
State Arterial Road	See Declared Arterial Road
Strategic Impact Assessment Report (SIAR)	A report that outlines the program approved under the bilateral agreement which identifies a series of processes and mitigation measures that the Victorian Government will use to meet the requirements of the EPBC Act 1999, and thereby to enable the UGB to be expanded via Amendment VC68.
Tertiary education and training	The combination of HE and VET. Institutions can operate in both HE and VET, for example some universities are also TAFEs and many have established Registered Training Organisations, and some TAFEs have approval to provide higher education qualifications. In the private sector, many organisations work across both sectors.

Technical and Further Education (TAFE)	Institutes providing education and skills training for students of all ages and backgrounds, for small and large enterprises and across all industries in Victoria. TAFEs are owned and financed by the State and operate under a structure of autonomous governance.
Urban Growth Boundary (UGB)	A statutory planning management tool used to set clear limits to metropolitan Melbourne's urban development.
Vocational Education Training (VET)	Education and training leading to the award of qualifications under the Australian Qualifications Framework of Certificates I-IV, Diplomas, Advanced Diplomas, and VET Graduate Certificates and Diplomas. The larger part of Government-funded VET is provided TAFE Institutes. VET is also provided by Registered Training Organisations (RTOs) of which there are many thousands in Australia, many with a focus on a particular area of training. TAFEs are the major users of large spaces allocated for VET.
Western Interstate Freight Terminal (WIFT)	A new interstate rail terminal in Melbourne's west to allow the relocation of domestic internodal freight handling for South Dynan. This will reduce the need for some large trucks to travel into the city.