MELBOURNE GEELONG INTERCONNECTION

Social Impact Assessment

Prepared for:

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Revision History

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1 Introduction

1.1 PROJECT CONTEXT

The Victorian Government has established long-term plans for saving and rationalising water resources within the state. Our Water Our Future (DSE 2004) sets out initiatives for water conservation aimed at every sector of the community. One of the aims of this plan is to:

- manage the water allocation to find the right balance between its economic, environmental and social values.

The Central Region Sustainable Water Strategy (CRSWS) released by the Department of Sustainability and Environment (DSEa 2006), recognised that Geelong and its surrounding region faces a long-term water supply shortfall. A number of options to address this regional water shortfall are identified in the CRSWS, including:

- a Melbourne–Geelong interconnection to provide additional water to Geelong.

Barwon Water has investigated a range of projects and actions in response to the CRSWS, as a part of their Water Supply and Demand Strategy (Barwon Water 2007). These include a Melbourne–Geelong interconnection, local desalination, aquifer storage and recovery, and West Barwon supply augmentation. Through the strategic options analysis a Melbourne–Geelong interconnection was identified as the preferred option, based on an assessment of the following criteria; timing, cost, volume, reliability and risk, environment and stakeholder impacts.

In 2007 the Victorian government committed to the implementation the Melbourne–Geelong Interconnection Project (the project), via the Next Stage of the Plan (DSE 2007), as one of five key new projects to expand the state water grid. The water grid will provide capability to pipe water around the state, including potable water generated at the Wonthaggi Desalination Plant.

1.2 BARWON WATER SERVICE AREA

Barwon Water provides water and sewerage services to more than 270,000 customers on 122,000 properties spread over 8100 km^2 (Barwon Water 2009a). The service area stretches from Little River and the Bellarine Peninsula in the east to Colac in the west and from Meredith and Cressy in the north to Apollo Bay on Victoria's south-west coast. It incorporates the City of Geelong, Victoria's largest regional centre.

The last decade has seen a progressive decline in average stream flows in Barwon Water's catchments. Together with ongoing population growth, this means that supplies from regional surface and groundwater sources will need to be supplemented with water from this project as a matter of priority.

1.3 PURPOSE AND OBJECTIVES

The purpose of this assessment is to develop an understanding of the social impacts likely to arise during the construction and operation of the project. The report has been developed to support a referral under the *Environment Effects Act 1978* and contributes to the assessment of the cumulative impacts of the project. Under the Ministers guidelines (DSE 2006b), a combination of the following social criteria may trigger a referral under the Act:

- potential extensive or major effects on social or economic well-being due to direct or indirect displacement of non-residential land use activities
- potential for extensive displacement of residences or severance of residential access to community resources due to infrastructure development
- potential significant effects on the amenity of a substantial number of residents, due to extensive or major, long-term changes in visual, noise and traffic conditions
- potential extensive or major effects on Aboriginal cultural heritage
- potential extensive or major effects on cultural heritage places listed on the Heritage Register or the Archaeological Inventory under the *Heritage Act 1995*.

The objectives of this social impact assessment are to:

- describe the existing social environment in the region through review of demographic and land use data, as well as policies relating to the investigation area
- identify potential impacts associated with the construction and operation of the project
- develop mitigation measures to avoid, reduce and mitigate any adverse impacts.

1.4 ASSESSMENT METHODOLOGY

The methodology adopted for this social impact assessment is as follows:

- desktop assessment
  - review of relevant state and local policy
  - review of the local population profile and Australian Bureau of Statistics census data
  - identification of key community infrastructure and assets, including through aerial photography interpretation
- consultation with the project Agency Reference Group (which includes representation of the two local councils)
- analysis of enquiries recorded in the project consultation database (Consultation Manager)
- comparative review of social impacts assessments for recent water infrastructure projects in Victoria (e.g. Victorian Desalination Plant (Maunsell 2008) and Anglesea Borefields (GHD 2008))
- develop management techniques and measures to mitigate adverse social impacts.

The investigation area for this social impact assessment is the two municipalities which the project passes through; the Wyndham City Council (WCC) and the City of Greater Geelong (CoGG).

1.5 LIMITATIONS

Community consultation undertaken for the project has focussed on the landowners potentially affected by the creation of an easement. Broader community members have been consulted through indirect means only, such as community bulletins issued by Barwon Water on the corporations' website and limited community mail-outs. Barwon Water recently held a stall at the Lara CFA Christmas Market which generated some general enquiries and interest from the community regarding the project.

Accordingly, social impacts identified in this assessment, as relevant to the broader community, have been determined through knowledge of the project and experience with similar water infrastructure projects. Surveys and community forums commonly used to identify and evaluate the extent of social impacts, are outside the scope of this assessment. Barwon Water plans to implement a broader community consultation strategy in the near future, and this may result in additional social impacts being identified.

2 Project description

2.1 SCOPE

The aim of the project is to provide security for the greater Geelong region's water supply. The pipeline has been designed to transfer potable water from Melbourne Water's Cowies Hill Reservoir to Barwon Water's Lovely Banks Basins. The pipeline will connect Geelong to Melbourne's water system by the end of 2011. The pipeline will ultimately have the capacity to deliver up to 16,000 million litres of water a year for the greater Geelong area, equivalent to half the current usage.

2.2 LOCATION

The project is located to the west of Melbourne, with the proposed pipeline commencing north-west of Werribee at Cowies Hill Reservoir, Tarneit and then heads in a general south-west direction, through the Werribee Plains, where it would terminate in the northern Geelong suburbs, at the Lovely Banks Basin. The project will traverse two municipalities, the WCC and the CoGG (see Appendix A, Locality Map).

2.3 KEY INFRASTRUCTURE

Key components of the project are the main pipeline, a surge tank and new facilities at the Cowies Hill Reservoir.

The underground pipeline is approximately 56.4 km in length, with a nominal diameter of 800 mm. The preferred pipeline alignment follows a 220 kV overhead power line easement, local road reserves and dissects some private, freehold land (see Appendix A). The pipeline will be installed via open cut trenching methods, including at all watercourses. While the pipe itself is installed underground, above ground air valves and scour valves are required at regular intervals for functionality, as are small asset marker sign posts.

A surge tank will be located on a freehold property located adjacent to the linear easement and east of Edgars Road. The proposed surge tank is approximately 8 m in diameter and 6 m in height. The exact location of the surge tank is yet to be finalised.

Cowies Hill Reservoir is an existing and operational Melbourne Water owned asset. New infrastructure is required at the reservoir site to facilitate the project, including:

- pump station, including a building to house the major mechanical and electrical components
- offtake from the existing Melbourne Water system

- disinfection system
- surge control vessels and tanks
- power supply.

All these assets will be located within the existing property boundary of the reservoir site.

Lovely Banks service basin is an existing and operational Barwon Water asset, located in Lovely Banks to the north of Geelong. The pipeline will terminate within this site.

3 Social policy framework

3.1 PLANNING AND SOCIAL POLICY

The *Planning and Environment Act 1987* (the Act) establishes the framework governing use and development of land throughout Victoria. Section 4 of the Act establishes the objectives for planning in Victorian, including to:

- balance the interests of present and future Victorians
- enable land use and development planning to be easily integrated with environmental, social, economic, conservation and resource management policies
- ensure that the effects of the environment are considered and provide for the explicit consideration of social and economic effects when decisions are made about use and development of land.

Accordingly, municipal planning schemes, subordinate legislation to the Act, provide a policy framework with reference to social effects and impacts.

3.2 STATE PLANNING POLICY

3.2.1 State Planning Policy Framework

The following policies from the State Planning Policy Framework (DPCD 2009) are relevant in the consideration of social effects and impacts and the project.

Clause 11, Introduction, goal and principles

Clause 11 establishes the goals and principles of the planning scheme and establishes the state level planning policies that must be considered in decision making. Clause 11.03-6, Social needs, establishes that planning is to recognise social needs and that land use and development planning must support the development and maintenance of communities with adequate and safe physical and social environments for their residents, through the appropriate location of uses and developments and quality of urban design. The clause also introduces the concept of 'net community benefit', that is the underlying rationale for decision making is to balance and integrate the range of policies relevant to issue and seek to deliver a net community benefit.

Clause 15.11, Heritage

The objective of Clause 15.11 is to assist the conservation of places that have natural, environmental, aesthetic, historic, cultural, scientific or social significance or other special value important for scientific and research purposes, as a means of understanding our past, as well as maintaining and enhancing Victoria's image and making a contribution to the economic and cultural growth of the State.

Clause 18.09, Water supply, sewerage and drainage

The objective of Clause 18.09 is to plan for the provision of water supply, sewerage and drainage services that efficiently and effectively meet State and community needs and protect the environment.

3.2.2 Melbourne @ 5 Million

Melbourne @ 5 Million (DPCD 2008) is the Victorian Government's response to the first five-year audit of Melbourne 2030 (Victorian Government 2008) which sets out the Victorian Government's long-term planning framework for managing Melbourne's growth.

Melbourne @ 5 Million outlines the implications of population growth projections for Melbourne, which indicate that the city's population is likely to reach 5 million before 2030. Actively managing this growth and change is an important part of Melbourne's future liveability. The Victorian Government will be focusing on the expansion of the outer Melbourne Urban Growth Boundary (UGB) to accommodate some of the 284,000 new dwellings expected to be built in the growth areas and to maintain housing affordability. Investigations into the proposed expansion of the UGB incorporate the Wyndham growth area, as illustrated in Appendix B.

3.3 LOCAL PLANNING POLICY

Neither the CoGG or WCC have developed specific policies relating to social impact assessments. However, the Local Planning Policy Framework within their respective planning schemes provides local councils tools to identify and facilitate local needs and values. In both the Wyndham (DPCD 2009b) and Greater Geelong (DPCD 2009c) planning schemes the key themes identified in their respective Municipal Strategic Statements (MSS) largely focus on the implications of urban growth and the related infrastructure. Ongoing rapid population growth is common to both municipalities and hence each MSS seeks to ensure that adequate infrastructure is in place to accommodate the influx of people.

The following summarises local planning policy specifically related to social effect and impact described in the Wyndham and Greater Geelong planning schemes.

3.3.1 Wyndham local planning policy

Clause 21.04-3, Land use planning objectives

This clause identifies factors that must be considered to achieve cost-effective urban growth whilst balancing the city and country aspects of the municipality. This includes:

- the better identification, recognition and protection of ecological, landscape and cultural heritage features and the promotion of waterways as significant features of the municipality
- productive use of rural land, ensuring compatibility with land care values and effective separation from urban purposes.

The Wyndham Strategic Framework Plan has been developed to respond to these factors and is illustrated graphically in Appendix B.

Clause 21.05, Objectives and strategies

Clause 21.05 establishes a range of objectives for the Wyndham and various strategies to achieve these objectives. Relevant objectives include:

- the cost-effective and orderly management of urban growth, balancing the city and country aspects of the municipality
- the generation of sufficient job opportunities to meet the needs of a growing population and which develop greater sustainability in employment for Wyndham and the region
- access to a range of leisure and recreational opportunities which meet the needs of the population and which can be provided cost-effectively
- productive use of rural land, ensuring compatibility with land care values and effective separation from urban purposes
- protection and enhancement of significant areas and features of the built and natural environment, and maintenance of environmental and heritage values.

The clause includes a series of maps illustrating current assets within the WCC as well as future development areas to support the achievement of these objectives (refer to Appendix B).

Clause 22.12, Heritage conservation policy

The objectives of this clause include to:

- recognise, conserve and enhance places in Wyndham identified as having architectural, cultural, natural or historic significance
- encourage the retention of cultural heritage places and ensure that these places are recognised and accorded appropriate protection.

3.3.2 Greater Geelong local planning policy

Clause 21.08, Urban growth

One of the objectives of this clause is to ensure that development occurs in a manner that maximises the efficient and effective provision of infrastructure and services. The clause also recognises that Geelong's population will grow by up to 71,000 people by 2020.

Clause 21.16, Cultural heritage

The cultural significance of Geelong is as the major place of settlement in south-western Victoria drawing settlers from diverse backgrounds, culminating in a mixture of nationalities, customs, culture and architecture. An objective of this clause is to conserve and enhance individual places and areas of post-contact cultural heritage significance.

Geelong is located within the traditional territory of the Wada Wurrung and Wathaurung aboriginal clan groups. Council seeks to ensure that Aboriginal heritage interests are addressed in the early stages of development planning, so as to minimise the possibility of damaging sites and to contribute to the identification, protection and management of Aboriginal cultural heritage values.

Clause 21.24, Agriculture and rural land

It is one of Council's fundamental objectives to protect the agricultural land resource base of the municipality. Objectives of this clause include to protect the city's agricultural resource base for future generations and to retain agricultural land in productive units.

Clause 21.31, Lara

Lara is a satellite township of Geelong and its strategic location between Geelong and Melbourne on major transport lines makes it an attractive and popular location for people commuting to both Geelong and Melbourne. An attraction of Lara is its character as a rural township surrounded by farmland and with spacious residential allotments, established street trees, gardens and wide residential streets. Urban growth is to be balanced against the physical constraints around the township. An objective of this clause is to maintain the character of Lara as a rural township. The Lara structure plan is illustrated graphically and included in Appendix B.

4 Community profile

4.1 POPULATION PROFILE—WYNDHAM CITY COUNCIL

The WCC is located on the western fringe of metropolitan Melbourne, midway between Melbourne and Geelong. The WCC is a mix of residential and rural areas (mainly vegetable growing and grazing), with substantial industrial, technology and commercial areas. The population is currently centred around Werribee and Hoppers Crossing, with a total population of 112,696 (id consulting 2009a).

Couples with children account for more than 50% of the family structures in the city. Single dwellings are the dominant form of housing, accounting for over 80% of the housing type, with medium density development comprising just under 10% of the housing form (id consulting 2009a).

The Wyndham population is expected to increase to 201,685 by 2016, at an average annual growth rate of 5.66 per cent. This is based on an increase of almost 30,000 households. Substantial residential expansion, driven by a lack of available green field sites in nearby municipalities and increased housing demands from young families and couples, is a key catalyst for this population increase (id consulting, 2009b).

4.2 POPULATION PROFILE—CITY OF GREATER GEELONG

The CoGG is located in south-western Victoria, 75 km south-west of Melbourne. The CoGG is a combination of rural, residential, resort, industrial and commercial area. Geelong is the largest regional city in Victoria and the leading commercial centre for south-western Victoria. The population of the city has grown from 173,000 in 1991 to an estimated population of at 211,841 by 2008 (id consulting 2009c).

Couples with children account for 43% of the family structures in the CoGG and couples without children 38%. Single dwellings provide the majority of housing type (74%) while medium density development accounts for 12% of the total housing form (id consulting 2009d).

The CoGG population is expected to increase to 237,580 by 2016, at an average annual growth rate of 1.44 per cent. This is based on an increase of just over 15,000 households during the period. Nearly all areas within the CoGG are expected to increase in population with the largest increases in population expected in Armstrong Creek, Bellarine/South Barwon, Highton and Lara.

With the progressive residential development of the city, the large size of the municipality, the availability of land for development and the broad range of land uses, areas have developed different roles within the housing market. This variety of function and role of the small areas in the CoGG means that population outcomes

differ significantly across the municipality. Of significance to the project area, the population centre of Lara has had significant residential development in recent years and is still attractive to couples and families seeking new housing opportunities (id consulting 2009e).

4.3 COMMUNITY FACILITIES

The study area supports a range of community assets, infrastructure and residential areas. A desktop review has been conducted to identify sensitive receptors in proximity to the pipeline alignment. Table 4.1 summarises sensitive receptors/community facilities identified within 1 km of the alignment, given construction impacts will extend along the local road network.

Table 4.1 Sensitive receptors within 1 km of pipeline alignment

Receptor	Section 1 (11 km in length)—Cowies Hill Reservoir, Tarneit to Werribee River	Section 2 (34 km in length)—Werribee River to Hovell Creek	Section 3 (11 km in length)—Hovell Creek to Lovely Banks Reservoir
Dwellings*	363	62	595
Urban/ residential areas	Tarneit (with current and future expansion under proposed changes to urban growth boundary)	Little River	Lovely Banks Lara
Open space and recreational facilities	Cobbledicks Ford Reserve	You Yangs Regional Park	Ted Wilson Trail
	Eynesbury Station	Hovell Creek Duck Ponds	Sutcliffe Reserve
	Kimgara Park Equestrian Centre		Elcho Park recreational reserve and golf course
	Advance Paint Ball Playing Fields		
	Goddard Street sports ground		
	Camelot Park		
Community facilities	Truganania CFA fire station	Mount Rothwell Conservation and Research Centre	Corio Aerodrome
	Jehovah Witness Church (Sayers Road)		
Education facilities	Proposed Tarneit Primary and Secondary Schools	Nil identified	Geelong Baptist College
Major transport corridors	Doherty's Road	Little River–Ripley Road	Geelong Ring Road Bypass
	Tarneit Road	Peak School Road	Tower Hill Drive
	Regional Rail Link (future)	Ballan Road	Bacchus Marsh Road
	Outer Metropolitan Ring Road (future)	Melbourne–Geelong rail reserve	

* *Dwelling numbers estimated from aerial photography captured in early 2009 (Source: Barwon Water).*

5 Potential social impacts and mitigation measures

5.1 SOCIAL IMPACTS OF 'NO PROJECT'

With an expanding population in the Geelong region, uncertainties surrounding continued drought conditions and the implication of climate change, a number of significant negative social impacts would potentially occur if the project did not proceed. These impacts include:

- increased demand on existing potable water sources, when Geelong customers have been on Stage 4 water restrictions since December 2006
- prolonged or possibly even stricter water restrictions until alternative water supply options are identified, investigated and implemented
- potential job losses in the event that water supplies are unable to sustain demand from industrial and commercial customers.

Figure 5.1 illustrates that if Barwon Water continues to experience record low inflows then without the project, even with full Stage 4 restrictions and the delivery of committed augmentation projects, supply will be unable to keep up with demand from 2011/12.

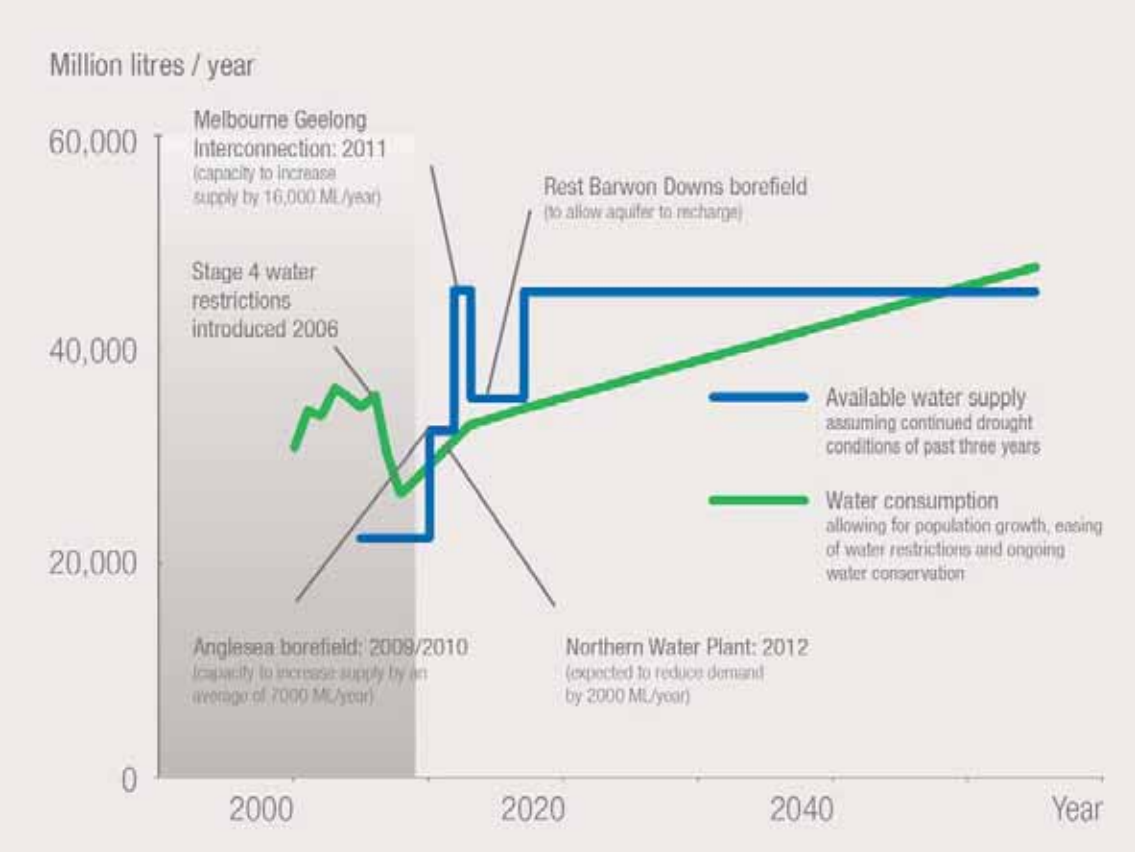

Figure 5.1
GREATER GEELONG SUPPLY SYSTEM DEMAND FORECAST (ASSUMING CONSTRUCTION OF THE PROJECT)
Source: Barwon Water 2009a.

5.2 SOCIAL IMPACTS PRIOR TO CONSTRUCTION

During the design development phase, social impacts are commonly associated with easement acquisition activities on any private land along the alignment, as well as for the future surge tank, as described in Table 5.1.

Table 5.1 Summary of social impacts prior to construction

Impact type	Social impact description	Stakeholder affected
Easement acquisition	Concern, anxiety and/or stress regarding determination of final alignment	Private landowners along pipeline alignment
	Concern, anxiety and/or stress regarding location of pipeline appurtenances e.g. surge tank, air valves, scour valves, signage	Private landowners along pipeline alignment
	Concern, anxiety and/or stress regarding acquisition process and negotiation for compensation	Private landowners along pipeline alignment, affected private landowner of surge tank property
	Concern, anxiety and/or stress regarding affect on future property value due to easement restricting future development of land	Private landowners along pipeline alignment, affected private landowner of surge tank property

5.3 SOCIAL IMPACTS DURING CONSTRUCTION

Construction of the pipeline, the pipeline appurtenances (e.g. surge tank, air valves, scour valves, signage) and upgrades at Cowies Hill reservoir will have positive and negative impacts. The majority of these impacts will be temporary in nature. Social impacts during construction are summarised in Table 5.2.

Table 5.2 Summary of social impacts during construction

Impact type	Social impact description	Stakeholder affected
Increased demand for jobs, goods and services	Job creation	Construction workers in Melbourne, greater Geelong and Wyndham area
	Demand for goods and services	Businesses in the area
	Local profitability	Pipeline construction contractor, businesses in the area
Amenity impacts on rural–residential lifestyle and local character	Noise, dust, traffic, visual impacts	Residents and business in the vicinity of the construction works area
	Disruption to farming, market gardening and other rural related activities	Private landowners along pipeline alignment
Traffic affecting local travel times, amenity and access to community facilities	Lane closures and traffic diversions to facilitate construction activities	Residents and business in the vicinity of the construction works area and other motorists utilising local road network
	Severance from community facilities, including recreational facilities (e.g. Elcho Reserve)	Recreational and community facilities users
Dust affecting wellbeing of community	Dust generated by construction activities may increase need for cleaning for residents close to construction works area	Residents and business in the vicinity of the construction works area
Public health and safety impacts	Exposure to safety hazards (e.g. open trenches, construction machinery and vehicles) on public and private property	Private landowners along pipeline alignment, motorists, recreational users of public land
Disruption to public services	Unintended disruption to services (water, gas, electricity, telecommunications) due to accidental damage to assets	Residents and businesses in the region
Damage or destruction of cultural heritage	Unintended damage or destruction of Aboriginal cultural heritage sites due to accidental damage to known sites or to previously unknown sites	Wathaurung Aboriginal Corporation, Wathaurung Aboriginal Co-operative, Bunurong Land Council Aboriginal Corporation, Boon Wurrung Foundation Ltd, Wandoon Estate Aboriginal Corporation, Wurundjeri Tribe Land Compensation and Cultural Heritage Council, Aboriginal Affairs Victoria, general community
	Damage or destruction of historic cultural heritage sites (Cobbledicks Ford and drystone walls)	Heritage Victoria, Local council, general community
Social cohesion	Potential social disharmony should different stakeholders adopt strongly polarised views of the project	Local and regional stakeholders
	Potential social disharmony between neighbours where changes	Private landowners along and adjacent to pipeline alignment

Impact type	Social impact description	Stakeholder affected
	in the alignment are proposed	

5.4 SOCIAL IMPACTS DURING OPERATION

Social impacts during operation are mostly beneficial, due to increased water security for greater Geelong; however, some negative impacts would occur. Potential social impacts during operation are summarised in Table 5.4.

Table 5.3 Summary of social impacts during operation

Impact type	Social impact description	Stakeholder affected
Water security	Up to 16 billion litres per annum additional water supply for greater Geelong, increasing water security	Residents, industry and business in the greater Geelong region
	Loss of 16 billion litres per annum from the available Melbourne metropolitan water supply	Residents, industry and business in the Melbourne region
Changes to rural residential lifestyle and community character	Impacts on ability to subdivide and develop land due to established easement (especially within future urban growth boundary)	Landowners along pipeline alignment
	Loss of available rural productive land via easement restrictions	Landowners along pipeline alignment
	Visual impact of above ground air valve, scour valves and pipeline safety signage	Landowners along pipeline alignment
	Visual impact of surge tank	Affected landowner and nearby residents
	Poor rehabilitation or inadequate maintenance of the easement affecting land use options and visual amenity	Landowners along pipeline alignment
Noise affecting health and wellbeing of community	Undue noise generated from surge tanks and new pump stations	Landowners in vicinity of the new infrastructure

5.5 CONSULTATION DATABASE

Barwon Water is implementing a community engagement plan for the project. Most recently, consultation has focussed on the landowners likely to be directly affected by easement creation; however, dissemination of information regarding the project has occurred throughout the broader community. In order to capture community concerns and issues throughout the life of the project, a consultation database—Consultation Manager—is being utilised by the project team.

Data extracted (on 20 November 2009) from Consultation Manager, has been utilised to generate Table 5.4, which illustrates the number of enquiries, complaints or concerns regarding the project, based on ‘issues’ raised, recorded since project inception.

Table 5.4 Issues raised by community since project inception

Issue	Number of enquirers (individual or groups)	Total number of enquiries
Landholder compensation	54	62
Construction works	50	55
Construction reinstatement	36	38
General project overview	27	35
Timing	26	29
Property access	18	24
Environmental	11	15
Water tapping	11	16
Other	13	13
Project cost	5	7
Cultural heritage	2	2
Water cost/rates	2	2
Fluoridation	1	1
Shared infrastructure	2	2
Total	**123**	**230**

The key community concerns as communicated to Barwon Water to date are compensation for easement acquisition, management of construction activities and reinstatement of land at completion of construction.

5.6 OPPORTUNITIES AND MITIGATION MEASURES

5.6.1 Easement acquisition

During the route selection process, a key objective was to minimise easement acquisition from private landowners. Accordingly, while the pipeline traverses rural land, the majority of the alignment will either be located within the existing SP Ausnet high voltage power easement (25 km) or within the local road network (25 km). A total of 137 individual landowners will be affected by the new pipeline easement, including sections located within the SP Ausnet easement and wholly new easement. Approximately 6 km of alignment will be subject to a wholly new easement.

Consultation with all affected landowners is one-on-one and being delivered by an experienced landowner engagement service provider. The landowner engagement specialists were engaged to serve notification to landowners in accordance with the *Land Acquisition and Compensation Act 1986* and the *Water Act 1989* prior to field investigations, so that all affected landowners had prior knowledge of the project implications. Landowner requests will be accommodated, where practicable, and appropriate compensation provided to affected landowners.

A small parcel of land is also to be acquired to support the proposed surge tank. The preferred site for the surge tank is located adjacent to the overhead powerline easement and setback approximately 350 m east of Edgars Road. As the exact location of the surge tank is yet to be determined, consultation with affected landowner has yet to occur for this aspect of the project. While the landowner is aware of the proposed pipeline, they would be unaware for the need for this above ground structure. It is

recommended that the affected landowner be consulted as soon as practicable, to minimise any potential distress or anxiety this issue may cause.

Consultants and contractors will be required to operate under strict protocols to minimise disturbance to landowners. During the design phase, a property access protocol has been developed so that all project team members are aware of their obligations. It is recommended that the construction contractor be required to develop and implement a similar protocol.

5.6.2 Demand for jobs, goods and services

It is estimated that up to 60 people will be employed in the design phase and up to 200 people during construction. This excludes Barwon Water staff. These employment opportunities are likely to be filled from specialist design and construction contractors outside of the local Geelong area (Note: KBR has already been appointed as the lead design consultant).

However, there is likely to be some opportunities for local contractors to be engaged during the construction phase for less specialist tasks. Similarly, local suppliers may be able to provide goods and services such as clean fill, hire of small scale construction equipment etc during construction. The lead construction contractor should be encouraged to source labour, goods and services from the local community, wherever practicable.

As the project area is a maximum 1 hour drive from Melbourne CBD, it is assumed that all construction personnel would retain their existing housing situations and not require temporary accommodation. Accordingly, increased demand for local accommodation services during construction is likely to be minimal, unless an interstate company is awarded the construction contract.

Local food businesses are likely to experience an increase in demand from the construction workforce throughout the construction phase; as would petrol stations and other similar providers of consumable goods.

5.6.3 Changes to the rural/residential lifestyle and character

Disruption to rural/residential land

As previously described, the pipeline alignment has been selected to take advantage of co-locating within an existing infrastructure easement (i.e. existing overhead power line easement) and local roads, to minimise landowner/occupier disruption. This approach has also minimised the loss of productive rural land in the area due to a new permanent easement being required.

Once established, the permanent easement will restrict the land uses and activities permissible through the reserved area. The impact on landowners already affected by the power line easement is likely to be minimal, as land use and activities are already restricted. Where a new easement is required through currently unencumbered land, restrictions regarding what can be built over the easement and the types of activities permitted on the easement will apply.

The impact of the permanent easement restriction is likely to be of most concern to owners of land within the Melbourne UGB (see UGB map, Appendix B) and in areas designated for future rural residential expansion around Lara (see Lara structure plan, Appendix B), where possibilities for subdivision to increase housing density may be restricted.

Early and ongoing engagement with landowners should fully describe these restrictions to reduce landowner anxiety and concern.

During the construction phase, landowners within and adjacent to the pipeline alignment are likely to experience some level of disruption to the use of their land from the work activities. These temporary disruptions could include the removal of fences, restricted access within properties and creating construction vehicle access points and routes. A property access agreement is to be prepared with each affected landowner prior to construction activities commencing.

Dust

Construction activities are likely to have a temporary impact on the rural/residential character of the study area due to noise, dust and traffic generation. Issues and mitigation measures regarding traffic are discussed in Section 5.6.4.

Dust is a highly visible outcome of construction activities and typically generates community complaints during any major construction project. Dust generation affects local communities by contributing to a general sense of loss of amenity within the community during the construction period and can have a visual impact within the local setting, particular on roads through vehicle movement.

The construction contractor will be required to implement measures to first avoid dust generation, wherever practicable, and establish appropriate dust suppression measures. Such measures may include the use of water trucks, designated haulage roads, restricted speed limits and prompt stabilisation of cleared areas to mitigate dust impacts. Regularly dust monitoring is a useful strategy.

Noise

The most significant noise source during construction is expected to be from rock breaking, drilling, machinery use, vehicle use and general construction personnel activities. To minimise impacts on the surrounding community, appropriate noise management and mitigation techniques will need to be established by the construction contractor. Such techniques should be in accordance with the EPA Publication 1294, Noise Control Guidelines.

Night time noise construction is likely to be limited during the project works; however, where unavoidable, appropriate notification to nearby residents should occur. Selection of appropriate noise management techniques for the less densely populated areas of the project, needs to mindful of the very low background noise in such areas.

Noise expected during operation will be generated from the pump station at Cowies Hill. Noise level investigations have been completed at Cowies Hill, which concluded that since the pump station will operate 24 hours per day, the critical noise limit is the night noise limit of 41 dBA. Both pump station buildings will be lined with high acoustical absorption materials and acoustically rated to prevent excess noise impact to surrounding land uses. The actual noise impacts are to be verified during detailed design.

The results of these assessments should be communicated to nearby residents to allay any concerns regarding this matter. As part of routine operations, Barwon Water should evaluate the need for noise monitoring once the pump station is operational, particularly given the expanding residential development surrounding the Cowies Hill reservoir.

Visual impact

Pipeline construction via open cut trenching methods invariable requires removal of vegetation, topsoil and subsoil. The pipeline construction corridor would be reinstated after construction, where possible to pre-existing conditions. If vegetation is removed and cannot be reinstated successfully, there would be residual visual impacts. A change in grass colour may be evident in areas of pasture, potentially devaluing the appearance and enjoyment of the land, as well as ease of access. Visual impacts may be further compounded if the backfilled trenches settle after construction is completed.

All disturbed land is to be progressively reinstated. Application of appropriate soil reinstatement techniques is important way to reduce the risk of unsatisfactory reinstatement. The environmental management plan (EMP) should include minimum requirements for the management of soil during construction and reinstatement and the completion of works. The property access agreements negotiated with each landowner prior to the commencement of construction should also included commitments regarding reinstatement and revegetation where necessary.

The most significant above ground structure associated with the project is the surge tank. As the location of the surge tank is yet to be determined, the visual impacts of this structure are not known. However, the surge tank can be designed with a low profile; this is particularly important in what is essentially a flat landscape. The design of the surge tank should also consider shape and colour to blend with the local environment. The landowners requests should be accommodated were practicable, regarding the final location of this asset.

5.6.4 Traffic

Temporary traffic impacts during construction will occur, including:

- increased traffic and road use by vehicles and machinery during the construction period
- partial and full closure of roads to install pipe within road reserves
- use of road reserves for stockpiling and storage.

As a construction contractor is yet to be appointed to the project, the scope of these impacts is unclear. It is recommended that the construction contractor investigate as a priority the volume of traffic generation associated with construction activities and construction related traffic and the impact this is likely to have on traffic movement and flows for the local community. The outcome of this investigation should clearly identify the scope of road closures and establishment of appropriate site compounds and storage areas, with a view to minimise disruption to the local road network. The outcomes of these investigations should be clearly communicated to the affected communities.

As part of these investigations, the construction contractor should consult directly with local emergency services, including the Country Fire Authority, to ensure that emergency access on the local road network during the construction period is appropriately maintained in the event of an emergency.

Where full road closures are unavoidable, the closure should be carefully planned to avoid severing or disrupting access to community facilities. Construction vehicle access into and around Elcho Recreational Reserve will require close consideration to both limit the construction period and minimise loss of access to the reserve by the community.

Constructor contractors will be required to comply with the relevant road authorities requirements regarding traffic management, including obtaining consents to occupy road reserves, preparing traffic management plans and issuing notices of road closures, to minimise impacts on the community, in accordance with the *Road Management Act 2004*.

5.6.5 Public health and safety

All construction activities present a level of risk to public health and safety. The main construction contractor would be required to develop a project wide occupational health and safety plan and/or operate in accordance with a recognised occupational health and safety management system (e.g. OH&S: 18001).

All construction personnel should be encouraged to consider both staff and public safety when undertaking any work. Tools such as Job Safety Analysis risk based assessments, are commonly used by the construction industry to ensure all staff considered safety as a critical element of their day-to-day job.

5.6.6 Cultural heritage

An archaeological consultant has been engaged to provide advice on the management of cultural heritage matters. With regards to Aboriginal cultural heritage, a key project commitment is open and ongoing consultation with the Registered Aboriginal Parties in the project area and the preparation of an Aboriginal cultural heritage management plan (CHMP). The CHMP will prescribe measures to avoid and minimise impacts on Aboriginal places and the actions to be taken in the event that an Aboriginal place is discovered during the construction phase.

An historic heritage assessment of the project area is also to be completed. Key historic heritage items that will be impacted by the project are the Cobbledicks Ford Crossing and the various drystone walls that line property boundaries in the project area. Both of assets are readily visible elements of the historic character of the region. To mitigate impacts, the drystone walls and ford crossing should be reconstructed at the completion of works, except where the permanent easement is located. Appropriate management techniques for cultural heritage are to be included in the EMP for the project.

5.6.7 Social cohesion

Barwon Water established an Agency Reference Group (ARG) in early 2009 consisting of representatives from a range of statutory stakeholders, including the CoGG and WCC. The key aim of the ARG is to allow regular agency input and communication between the key agencies involved with the project to facilitate an efficient statutory approval process through the delivery phase. The ARG provides a forum for these stakeholders to raise issues and discuss sometimes contradictory positions regarding the project. The ARG plays an important role in establishing regional stakeholder views and reduces the risk of extremely divergent views on the project developing.

Some community groups (e.g. Plug the Pipe and Lara Pipeline Community Action Group) may hold negative attitude towards the project, particularly with regard to the cost of the water and access to water. Social tension may develop between these groups and other sections of the community that support the project. Barwon Water has developed a Community Engagement Plan (Barwon Water 2009) for the project. Implementation of this plan would assist in informing and consulting with potentially divergent community stakeholders groups as the project progresses and minimise risk of social tensions developing between opposing community groups.

6 Conclusion

6.1 SUMMARY OF COMMITMENTS AND RECOMMENDATIONS

The following summarises the key commitments and recommendations to mitigate adverse social impacts associated with the project:

- minimise easement acquisition through aligning pipeline with existing infrastructure and/or road network
- adherence by Barwon Water staff and agents to property access protocols; construction contractor to develop similar.
- landowner affected by surge tank to be consulted as soon as practicable
- early and ongoing engagement with landowners affected by permanent easement including fully describing future land use and development restrictions
- encourage construction contractor to source labour, goods and services from the local community, wherever practicable
- develop a property access agreement with each affected landowner prior to construction activities commencing; as a minimum to address management of construction activities and site reinstatement
- verify noise impacts of Cowies Hill pump station during detailed design; communicate the results to nearby residents, prior to construction, to allay any concerns
- design surge tank with a low profile; consider shape and colour in design to blend with the local environment
- prepare Aboriginal CHMP and historic heritage assessment
- implement Barwon Water's Community Engagement Plan
- construction contractor to:
  - develop and implement measures to first avoid dust generation, wherever practicable, and establish appropriate dust suppression measures
  - develop and implement appropriate noise management and mitigation techniques in accordance with the EPA Publication 1294, Noise Control Guidelines
  - progressively reinstate all disturbed land; EMP to include minimum requirements for the management of soil during construction and reinstatement and the completion of works

– investigate volume of traffic generation associated with construction activities and construction related traffic and the impact this is likely to have on traffic movement and flows for the local community; develop traffic management actions based on these investigations; comply with the requirements of the *Road Management Act 2004*.

6.2 CONCLUSION

This social impact assessment has determined that the project is likely to result in a number of adverse social effects. While many of these will be temporary in nature (e.g. disruption to local traffic network, dust generation, disruption to local land use), more permanent effects will occur where easements are to be placed on currently unencumbered land. Based on community feedback provided to Barwon Water to date, the key stakeholder concerns regarding the project are easement acquisition and compensation, disruption during construction and appropriate reinstatement at completion of works.

These negative impacts are balanced by the positive effect of the project delivering water security to the greater Geelong region.

Application of the recommended mitigation measures would mitigate the adverse social impacts for the directly and indirectly affected stakeholders. In addition, appropriate mitigation of social impacts provides benefits to the project by improving stakeholder relationships and reducing risks of obstruction actions/delaying tactics by the community during the construction phase, thereby reducing risk of delays and increased costs to the project.

With the application of appropriate management and mitigation techniques, it is considered that on balance, the project will achieve a net community benefit.

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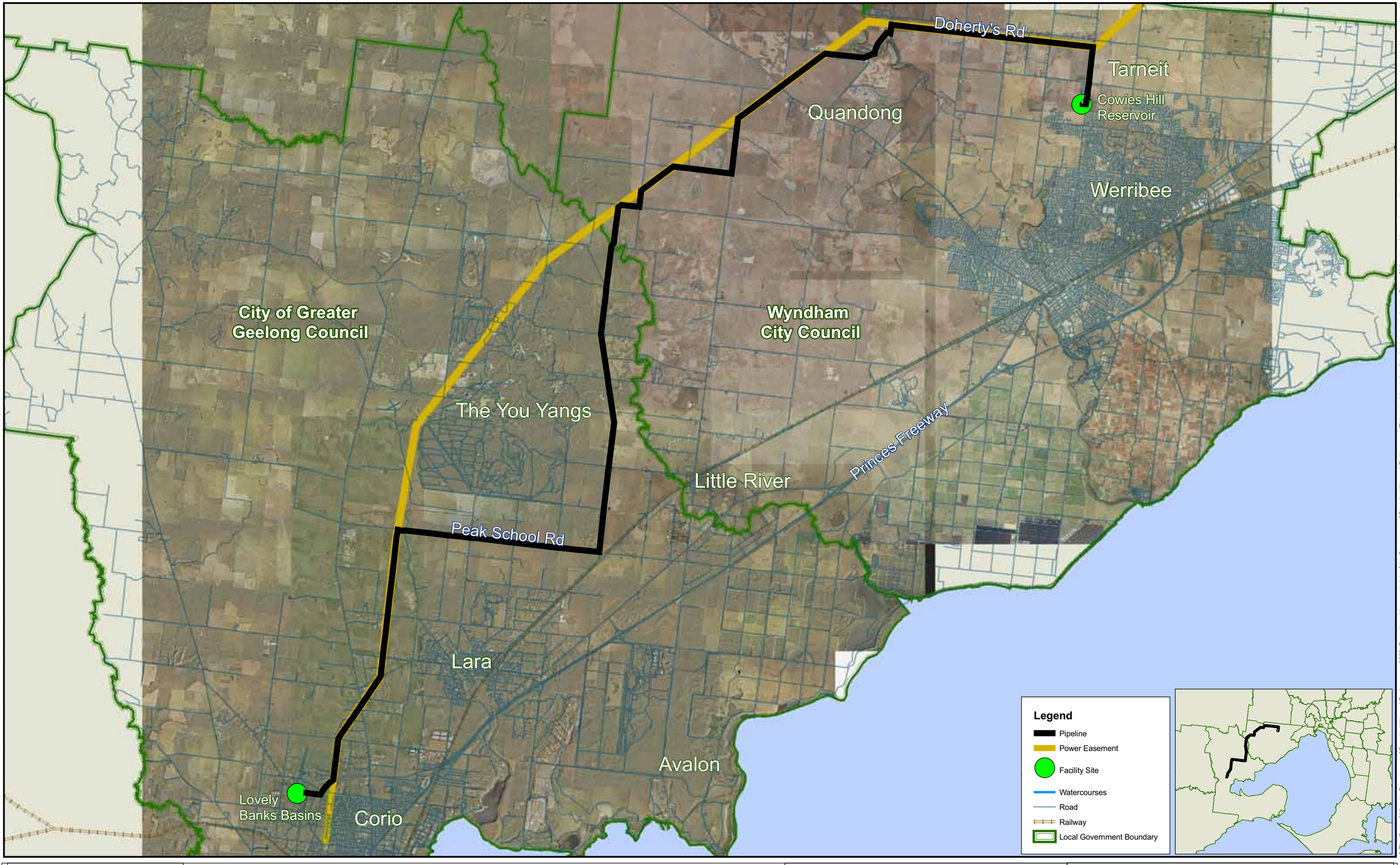
Appendix A

LOCALITY MAP



Barwon Water

N

0 5 10 km

1:130,000 @ A3

SOURCE : Barwon Water, Vicmap, SP AusNet

GIS FILE	PROJECTION	DATE
O:\G&I\GIS\MEG831_BarwonWater\Data_Control\Maps\MXD\Issued\MEG830-G-MAP-018-D.mxd	GDA 94 ZONE 55	23 November, 2009

Kellogg, Brown & Root Pty Ltd
KBR
Kellogg, Brown & Root Pty Ltd ABN 91 007 660 317
Level 3, 441 St Kilda Rd, Melbourne 3004
Prepared by Eric McCowan

TITLE

Barwon Water Interconnection

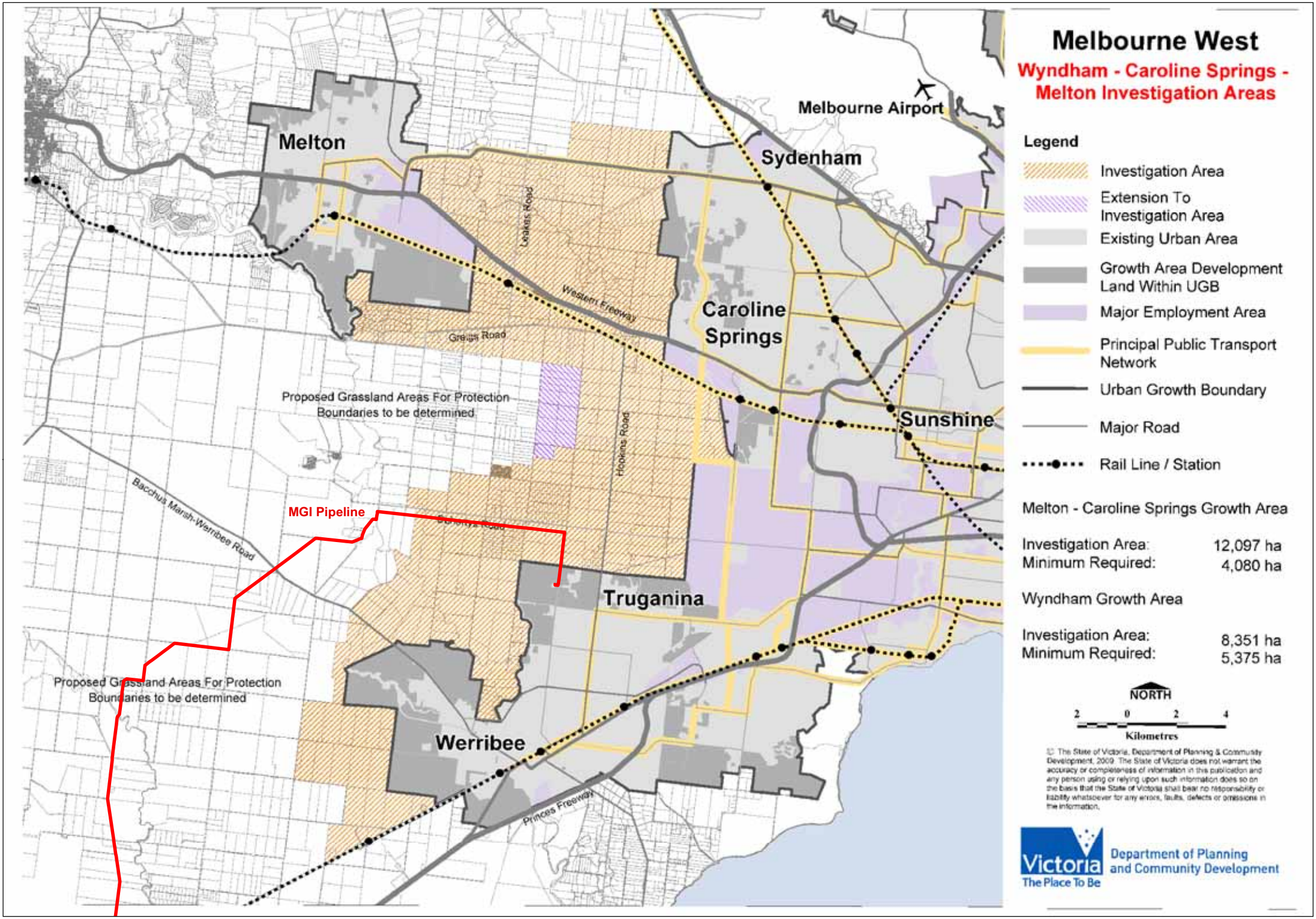
Alignment Map

FIGURE No. 1 **PROJECT No. MEG831**

Map No. **MEG831-G-MAP-018-D** REVISION D

Appendix B

STATE AND LOCAL STRATEGIC PLANS


Melbourne West
Wyndham - Caroline Springs - Melton Investigation Areas
Legend
Investigation Area
Extension To Investigation Area
Existing Urban Area
Growth Area Development Land Within UGB
Major Employment Area
Principal Public Transport Network
Urban Growth Boundary
Major Road
Rail Line / Station
Melton - Caroline Springs Growth Area
Investigation Area: 12,097 ha
Minimum Required: 4,080 ha
Wyndham Growth Area
Investigation Area: 8,351 ha
Minimum Required: 5,375 ha
NORTH
2 0 2 4
Kilometres
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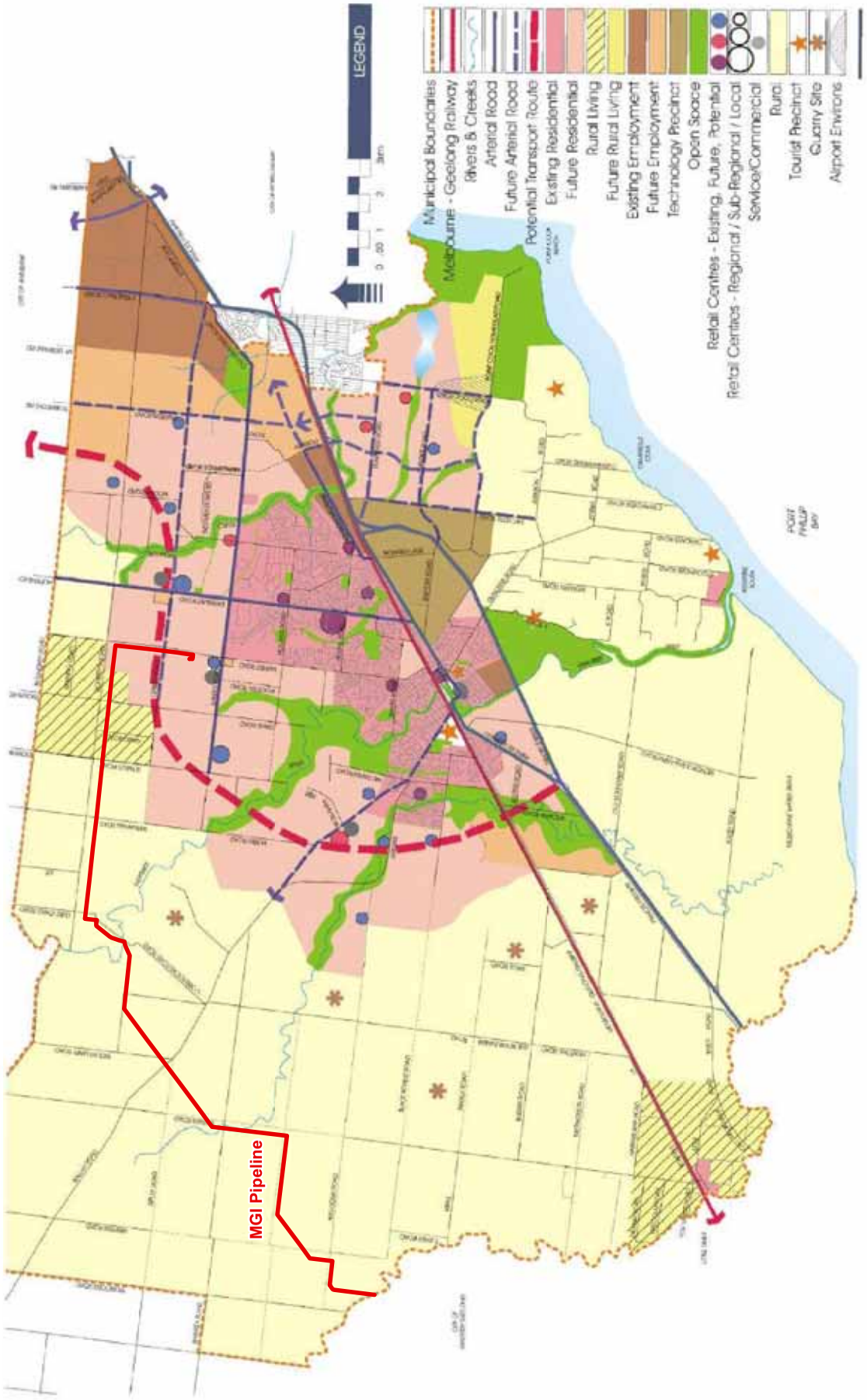
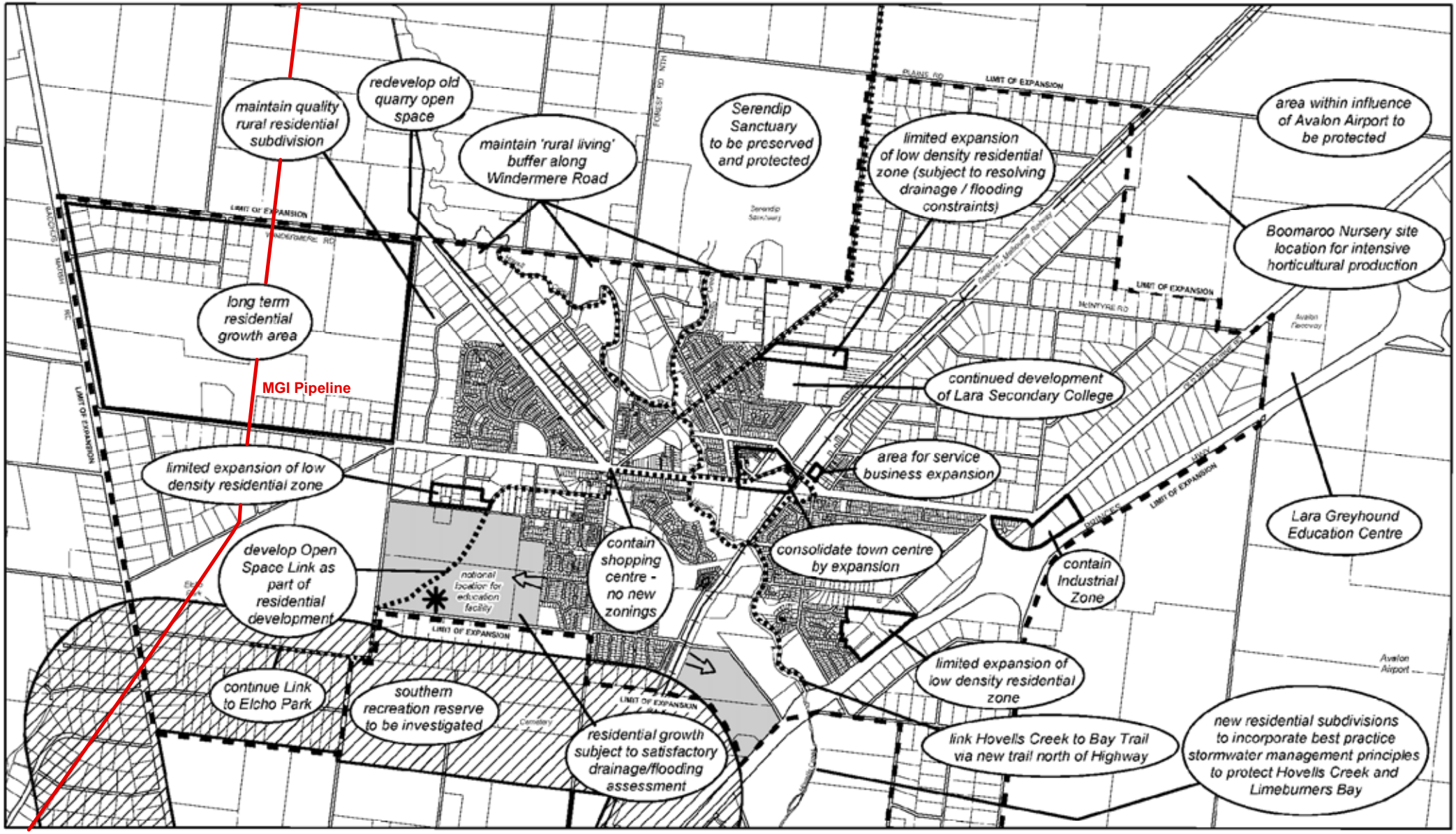
Victoria The Place To Be
Department of Planning and Community Development
Melton
Melbourne Airport
Sydenham
Caroline Springs
Sunshine
Truganina
Werribee
Leakes Road
Western Freeway
Greigs Road
Hopkins Road
Bacchus Marsh-Werribee Road
Princes Freeway
MGI Pipeline
Proposed Grassland Areas For Protection Boundaries to be determined
Proposed Grassland Areas For Protection Boundaries to be determined



Map 2: Strategic Framework Plan



CITY OF GREATER GEELONG

N

0 0.15 0.3 0.6 0.9 1.2 Km

LIMIT OF EXPANSION

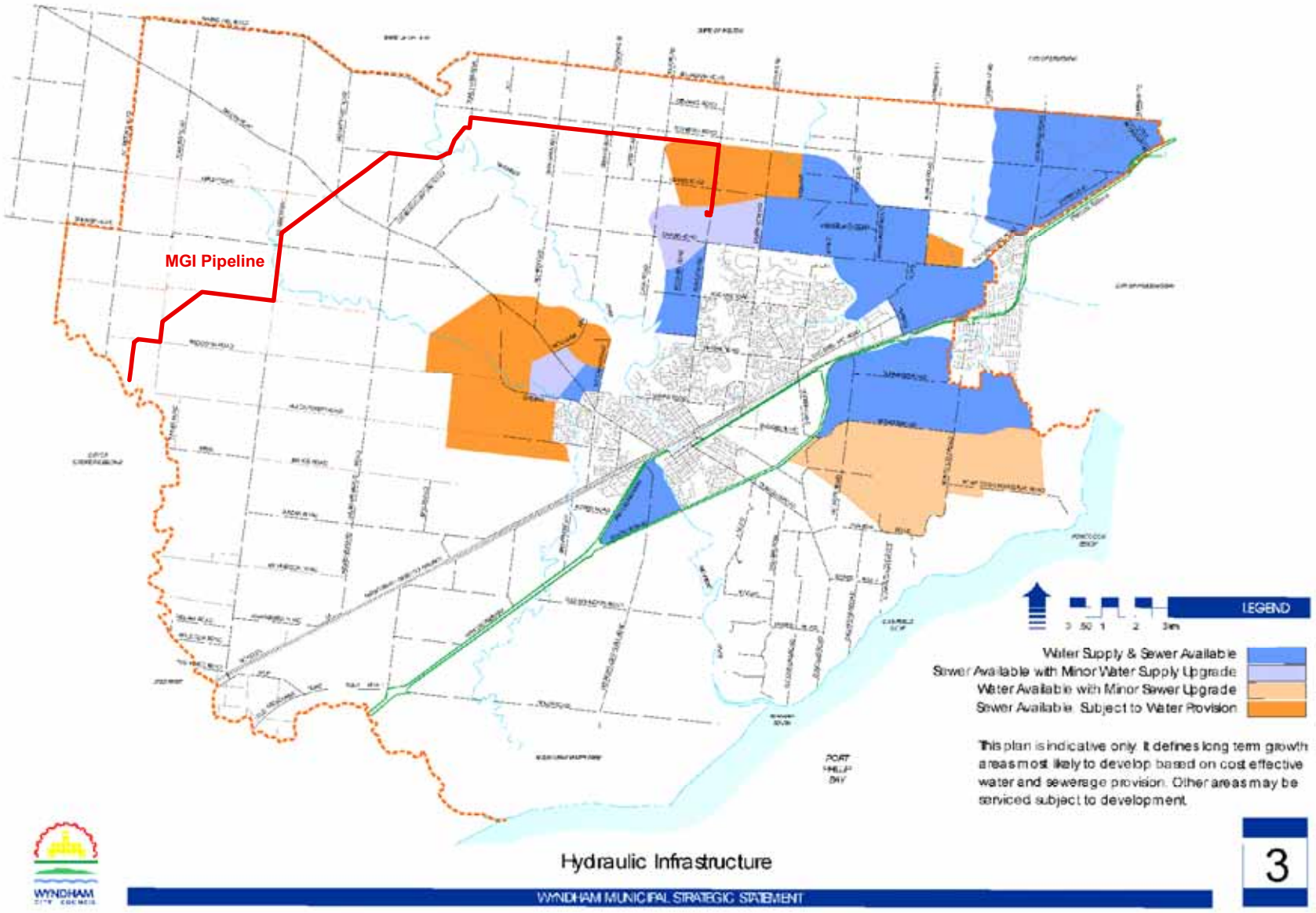
DEVELOP BIKE / PEDESTRIAN TRAIL

DIRECTION OF URBAN GROWTH

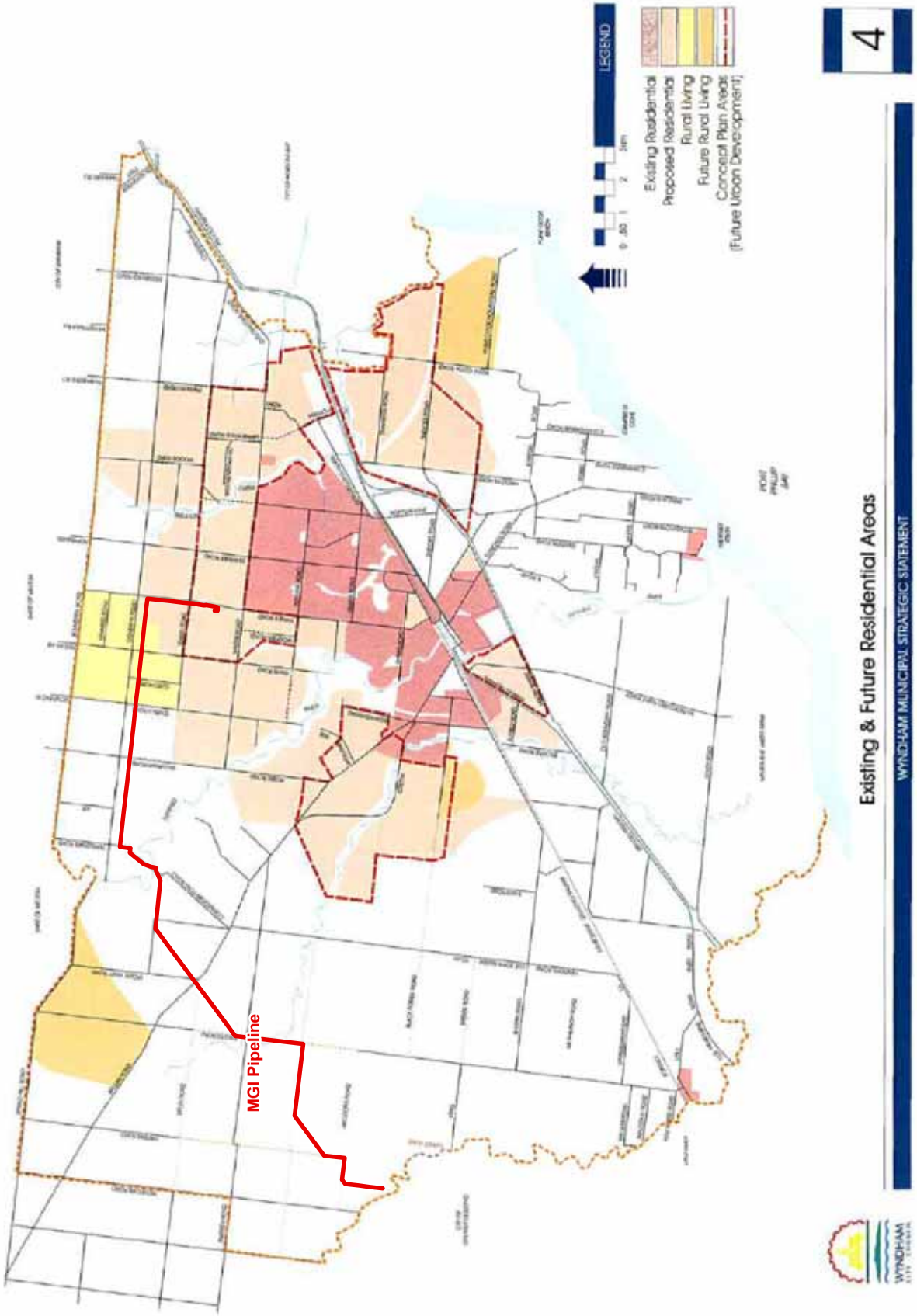
BUFFER TO HEALES RD INDUSTRIAL AREA

STRUCTURE PLAN
LARA STRUCTURE PLAN

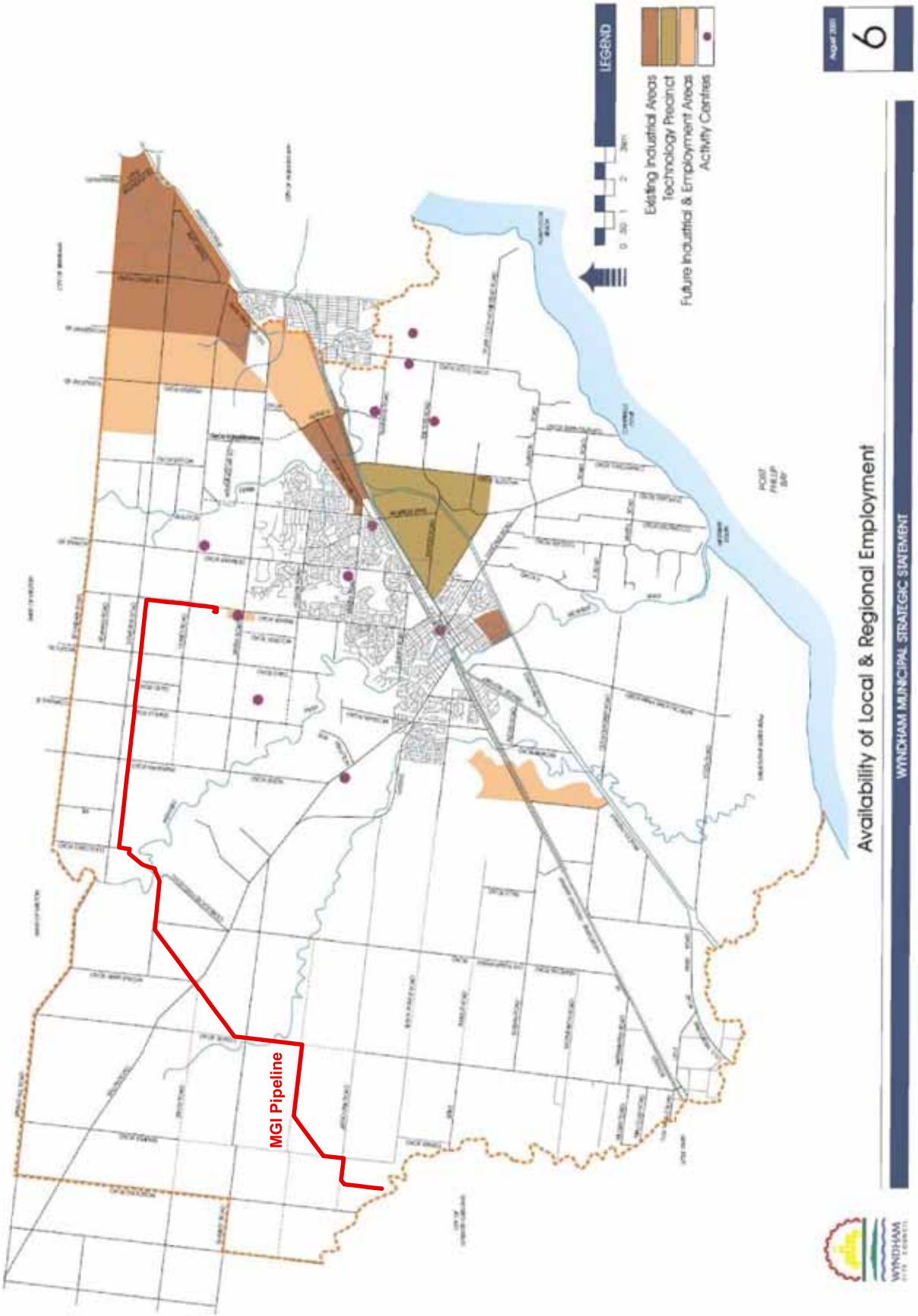
Map No. 15



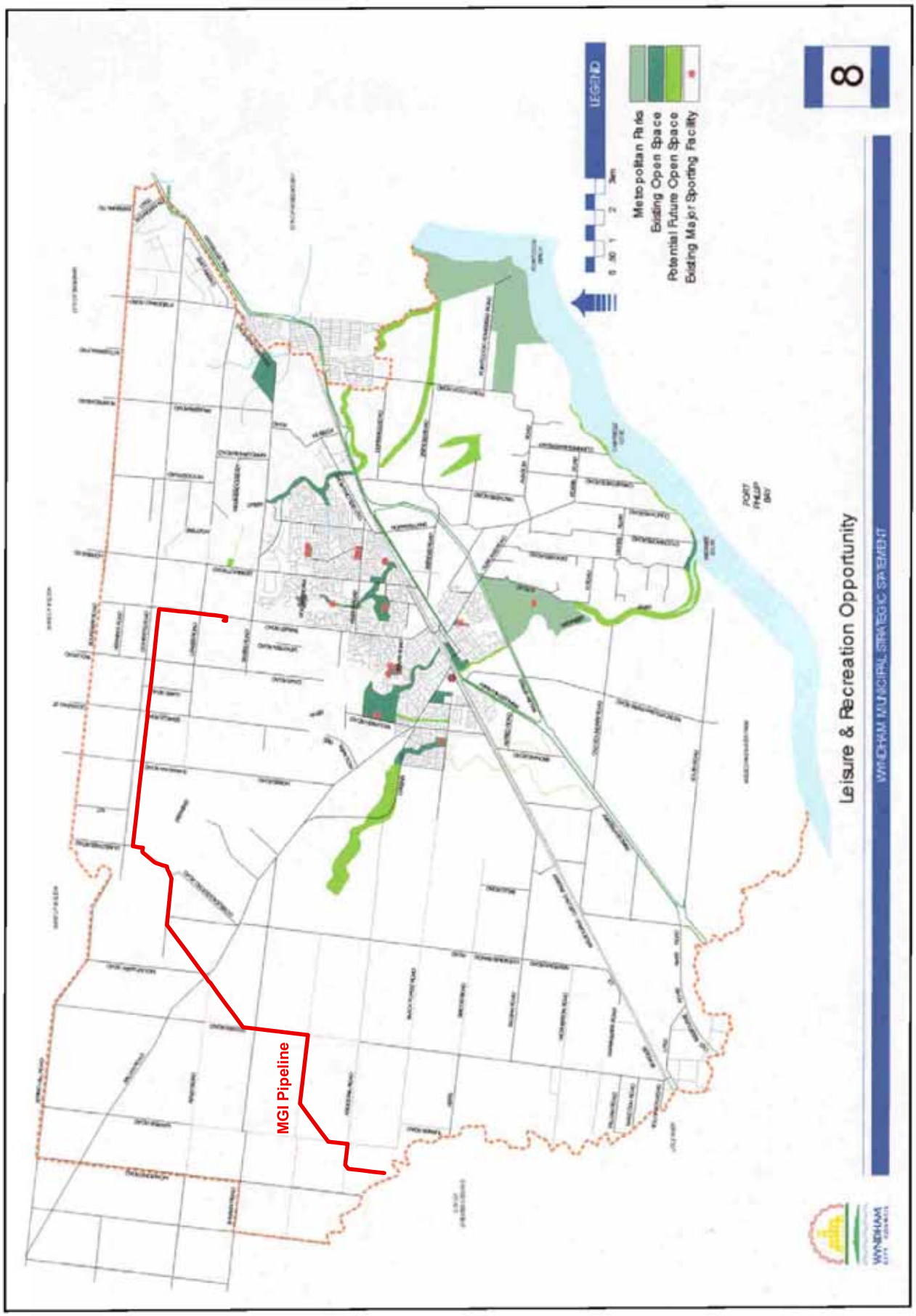
Map 3: Managing Urban Growth



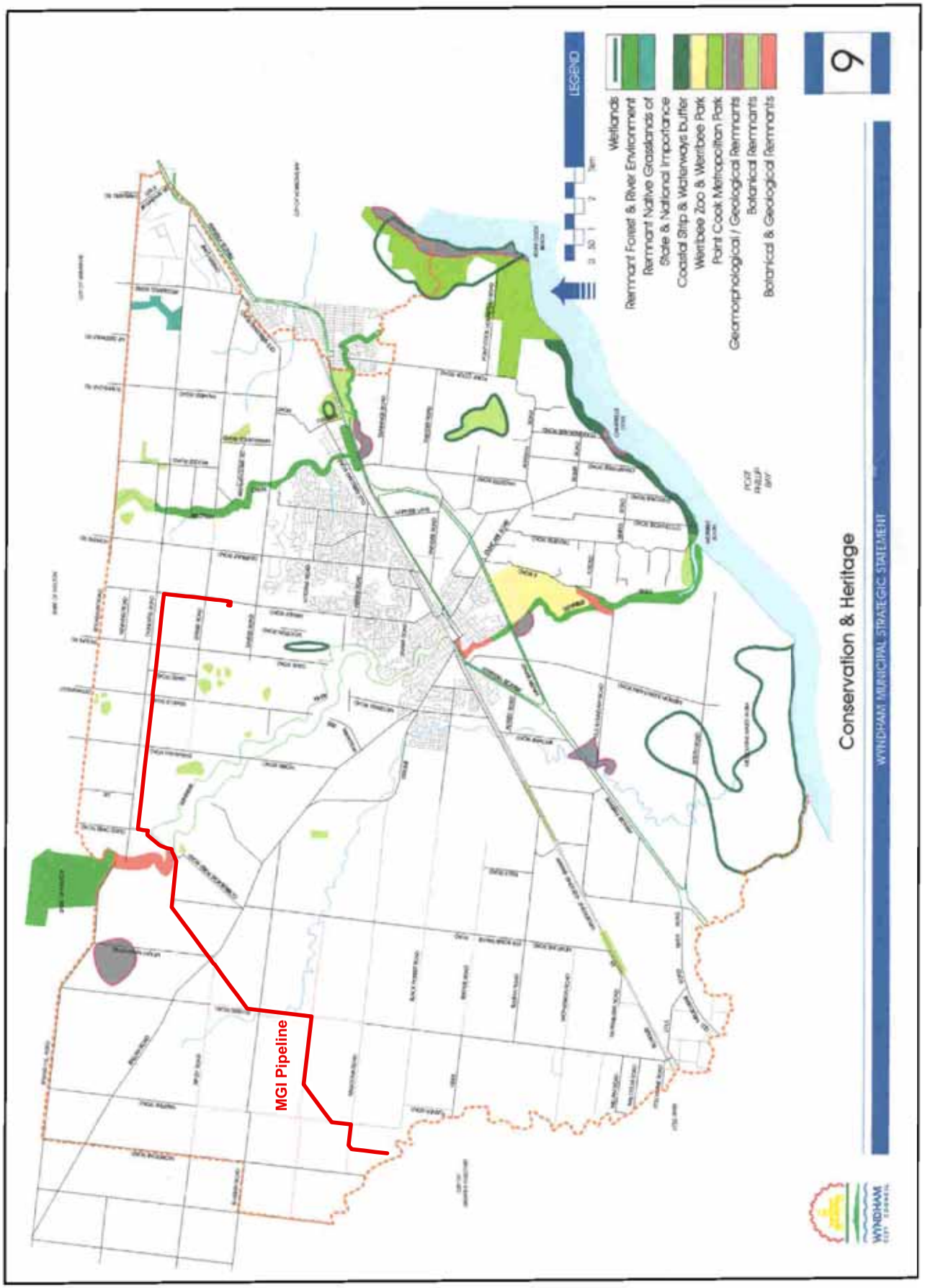
Map 4: Housing Locations



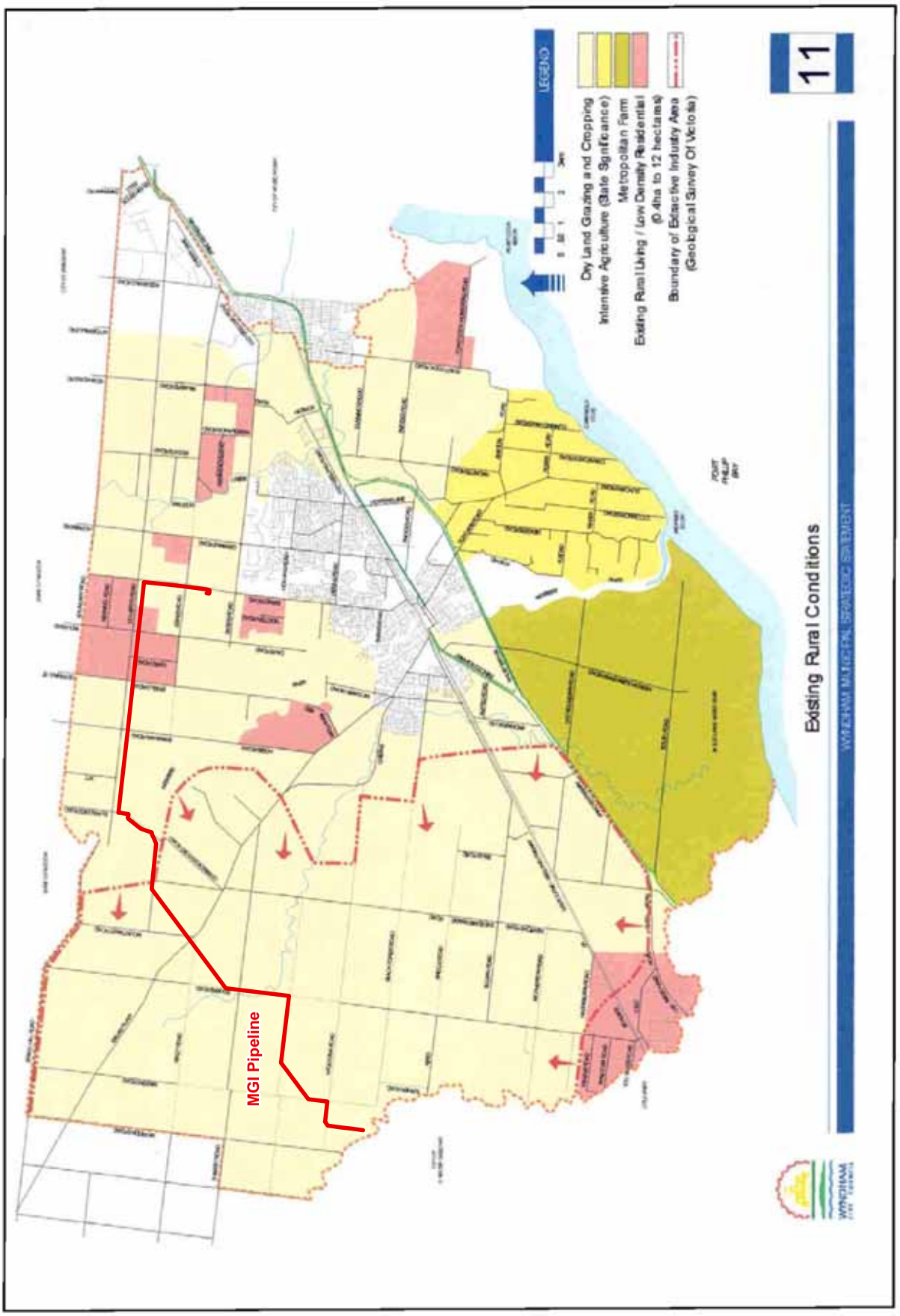
Map 6: Availability of Local and Regional Employment



Map 8: Leisure and Recreation Opportunity



Map 9: Conservation and Heritage



Map 11: Rural and Agriculture