

STRATEGIC REGIONAL BACKGROUND REPORT

EAST GIPPSLAND & WELLINGTON SHIRES

COASTAL TOWNS DESIGN FRAMEWORK VOLUME 1

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Department of
Sustainability
and Environment



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COASTAL TOWNS DESIGN FRAMEWORK

STRATEGIC REGIONAL BACKGROUND REPORT

This final report, Volume 1 of the Coastal Towns Design Framework project, reviews the activity, policy and resource influences on the future of 19 coastal towns in East Gippsland and Wellington Shires. This research has assisted the preparation of Urban Design Frameworks for these towns, which are intended to guide their development over the next 15 – 20 years.

The establishment of this project was initiated jointly by the Department of Sustainability and Environment, East Gippsland Shire Council, Wellington Shire Council and the Gippsland Coastal Board.

This project is the result of the combined contributions of:

- The communities of the 19 coastal towns in East Gippsland and Wellington Shires.
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1. INTRODUCTION

Meinhardt Infrastructure & Environment Pty Ltd heads a planning consortium that has been engaged by the East Gippsland and Wellington Shire Councils, in association with the Department of Sustainability and Environment and the Gippsland Coastal Board to prepare a Coastal Towns Design Framework for 19 towns within East Gippsland and Wellington Shires.

The project team comprises Meinhardt Infrastructure & Environment Pty Ltd, Urban Initiatives Pty Ltd, Urban Futures Consulting, Saturn Corporate Resources Pty Ltd and Ecology Australia Pty Ltd.

What is an Urban Design Framework (UDF)?

An Urban Design Framework provides strategic guidance for the future development of urban areas (which can range from specific sites to small townships and metropolitan suburbs). It establishes an integrated design vision that involves the generation of ideas and the preparation of realistic design concepts based on community consultation, research and analysis. The vision is realised through tools such as planning scheme changes, capital works projects and guidelines for private development.

In preparing a UDF it is critical to:

- Adopt a long term view (15-25 years);
- Identify strategic goals and actions;
- Examine social, cultural and economic opportunities as they affect physical form; and
- Examine and identify synergies with neighbouring towns and the region.

Project Objectives

The objective of the Coastal Towns Design Framework Project is:

“To provide a sustainable vision for the future form, image and function of these settlements and give greater certainty to the local communities and investors about what is possible and appropriate in terms of future development.”

Particular project objectives are:

- Assist the implementation of the Victorian Coastal Strategy and the Integrated Coastal Planning for Gippsland Coastal Action Plan.
- The preparation of objectives, strategies, policies and plans to support the vision for each town.
- The provision of detailed design guidance and planning provisions for the settlements and development pressure areas.
- The identification of priority actions and an implementation program that respond to identified needs.

2. PROJECT SCOPE AND APPROACH

The Coastal Towns Design Framework project is aimed at providing guidance on the location, type and extent of future development along the coast of the Wellington and East Gippsland Shires, with specific emphasis on nominated settlements. The project covers approximately 40% of the Victorian coastline from the NSW/Victorian border in the east and almost to Wilsons Promontory in the west (refer Figure 1 Regional Context Plan). The individual towns for which a UDF is being prepared¹ are:

| Wellington Shire | East Gippsland Shire |
|---|---|
| <ul style="list-style-type: none"> Robertsons Beach Manns Beach McLoughlins Beach Woodside Beach Seaspray The Honeysuckles Golden Beach/Paradise Beach Loch Sport | <ul style="list-style-type: none"> Paynesville Raymond Island Eagle Point Metung Nungurner Lakes Entrance Lake Tyers Beach Marlo Bemm River Mallacoota Gipsy Point |

The project is part of a suite of studies being undertaken in the region, including the Coastal Spaces Initiative, which aims to improve strategic planning for sustainable development in coastal Victoria. The Initiative includes the Coastal Spaces Landscape Assessment Study (September 2006), which is a key strategy document commissioned by the Department of Sustainability and Environment. The study focuses on the coastal areas of Gippsland (Bass Coast to the NSW border), the Bellarine Peninsula and the coast west of Warrnambool to the South Australian border. The project identifies and maps individual landscape characteristics within these coastal regions, identifies significant landscapes and provides an implementation framework to assist local government and other agencies in managing development impacts within coastal landscapes.

The Coastal Spaces Initiative also includes the Recreational Nodes Study, work on Coastal Acid Sulphate Soils, the Geelong Corridor Strategy and Bellarine Strategic Plan, Urban Design Frameworks for South Gippsland, as well as the Urban Design Frameworks in this project.

Each project will be informed by complementary work from other projects, as appropriate, including the Domestic Waste Water Management Plan in the Gippsland region, the Tourism Strategy in East Gippsland Shire and the Subdivision Strategy in Wellington Shire.

¹The UDF for Raymond Island is being completed separately to the balance of the settlements.

There are a number of regional studies that will also inform the development of the coastal towns in this project, including the Integrated Coastal Planning for Gippsland Coastal Action Plan (CAP), Gippsland Lakes CAP and Gippsland Estuaries CAP. The Integrated Coastal Planning for Gippsland CAP provides for an integrated approach to coastal planning policy and management in Gippsland and will help ensure that coastal development occurs in a sustainable manner. The Gippsland Lakes CAP recognises that the region faces increasing development pressures and seeks to provide for and direct development that respects environmental values. The Gippsland Estuaries CAP aims to develop a strategic framework that will support planning and management processes for estuaries across Gippsland, whilst providing for the protection and enhancement of significant features (environmental, economic, social and cultural) of Gippsland's estuaries.

The final output from the Coastal Towns Design Framework project comprises three volumes: Volume 1 contains the Strategic Regional Background Report; Volume 2 contains the Between Settlements Strategic Framework; and Volume 3 contains the 19 individual Urban Design Frameworks.

This report (Volume 1) provides a regional context for the Wellington and East Gippsland municipalities and addresses broad social, environmental and economic issues relevant to these Shires and the Gippsland area as a whole. It provides an overview of some of the characteristics of the coastal settlements included in the project scope.²

Report Structure

The Strategic Regional Background Report provides background on the project, a profile of the Wellington and East Gippsland municipalities and an overview of coastal pressures in Section 2. In Section 3 a summary of State, regional and local policy influences is provided. Section 4 examines demographic characteristics and social change in the region. An overview of the economic performance of the region and factors that may influence future economic activity is provided in Section 5. Section 6 describes the environmental values of the region and factors that are posing threats or likely to influence environmental change. The key regional factors that will influence strategic approaches to the future of the coastal settlements under investigation are summarised in Section 7.

² This report was initially prepared in 2005 as a pre-cursor to the detailed studies of the individual towns. It has been updated to reflect some of the subsequent information collected.

2.1 DESCRIPTION OF REGION / MUNICIPALITIES

The Gippsland Region (see Figure 1) is located to the east of Melbourne in the State of Victoria and is a particularly diverse area, comprising numerous landscapes ranging from snow fields to rainforests, inland lakes and ocean beaches.

The Princes Highway runs through the centre of Gippsland and the region. The South Gippsland Highway provides access to the south western portion of the region and intersects the Princes Highway at Sale. The region includes six municipalities: Baw Baw, Bass Coast, East Gippsland, Latrobe, South Gippsland and Wellington.

Brief profiles of the East Gippsland and Wellington municipalities are provided in Table 1.2.

Table 1.2 Shire Profiles

| | Wellington Shire | East Gippsland Shire |
|-----------------------------------|---|---|
| Location | Approximately 200 kilometres from Melbourne | Between 280 and 550 kilometres from Melbourne |
| Area | 10,924 km ² | 21,051 km ² |
| Population (2001) | 39,158 people Slight decrease projected to 2021 with continued trend toward ageing. | 37,792 people Moderate growth projected to 2011 with continued trend toward ageing. |
| Main Towns | Sale, Maffra, Heyfield, Rosedale, Stratford, Yarram, Port Albert and Loch Sport | Bairnsdale, Lakes Entrance, Orbost, Paynesville, Omeo and Mallacoota |
| Key Environmental Features | Gippsland Lakes Ninety Mile Beach Corner Inlet National Parks (Alpine, Tarra-Bulga, Gippsland Lakes Coastal, Nooramunga Ramsar wetlands | Mallacoota Inlet, Snowy River Lake Tyers Gippsland Lakes Ninety Mile Beach National Parks (Alpine, Alfred, Coopracambra, Croajingolong, Errinundra, Gippsland Lakes Coastal, Lind, Nooramunga Marine & Coastal, Beware Reef Marine Sanctuary, Cape Conran Coastal) Ramsar wetlands |
| Key Industries | Agriculture, Forestry, Fishing, Energy, Defence | Agriculture, Horticulture, Forestry, Fishing, Energy, Tourism |

2.2 OVERVIEW OF REGIONAL AND COASTAL PRESSURES

East Gippsland and Wellington Shires are relatively remote from capital cities and contain small populations. The eastern Bass Strait coast and the Gippsland Lakes foreshore are important elements of each Shire and coastal towns attract a significant proportion of the population. Significant numbers of people have migrated to the coast and Gippsland Lakes from other areas and as the “seachange” phenomenon grows in popularity, development pressures have increased in some of the towns in these Shires.

Even small increases in population can exact significant pressure on existing services, which do not always successfully cater for existing populations and modern lifestyles. Similarly, newcomers can exert demands for additional ‘urban’ infrastructure usually available in larger towns. In addition, the unique coastal environment is prone to degradation if development is not carefully managed and issues such as wastewater management are of great importance.

The economic state of regional coastal communities is an issue affecting the way these towns function and many commercial enterprises do not prove viable given the relatively small permanent populations and highly seasonal tourist influx. As a result, employment opportunities are limited in both number and variety and younger people in particular often leave regional areas in search of work and tertiary education.

Many of the baby boomers moving to coastal towns are retired or semi-retired and although they may bring capital with them that supports the local retail and service industries, they generally do not contribute to the local economy in terms of broad commercial investment.

The social and economic aspects of regional coastal development are further investigated in Sections 3 and 4.

3. POLICY CONTEXT

3.1 STATE AND REGIONAL POLICY

The key State policy relating to the 19 coastal settlements included in the study is the **Victorian Coastal Strategy (VCS)**, which covers the entire Victorian coast and supports the *Coastal Management Act 1995*.

The VCS consists of a range of objectives and actions relating to: marine and estuarine environments; the natural onshore environment; people on the coast; access to the coast; the built environment and coastal infrastructure; and coastal dependent industry.

The VCS is based on four hierarchical principles to guide decision making in relation to coastal activities. They are:

- Provide for the protection of significant environmental features – protecting flora and fauna diversity and cultural assets.
- Ensure the sustainable use of natural coastal resources – intergenerational equity.
- Undertake integrated planning and provide direction for the future – triple bottom line, long term view.
- With the satisfaction of these principles, facilitate suitable development on the coast within existing modified and resilient environments – provides community benefit and is coastal dependent.

The VCS provides for the protection, conservation, restoration and rehabilitation of the natural environment and appropriate community management ensuring the sustainable use of the coast. Access to the coast and opportunities for water-based activities are vital and the VCS aims to minimise impacts between users.

Built form and the provision of infrastructure have the potential to detrimentally impact upon the character of the coast and such development is to be managed sensitively. The VCS also addresses the sustainable development of coastal dependent industries, including tourism.

Some key policies and directions contained in the VCS relevant to this project are:

Coastal Land

- Protect and improve biological diversity, coastal habitats and flora and fauna.
- Identify significant natural values on freehold land and conserve them through planning scheme mechanisms.
- Integrate catchment and coastal management.

People on the Coast

- Actively seek opportunities to carry out improvement works along the coast that provide safe, family friendly beaches (eg. access tracks, disabled access, car parks and amenities).
- Identify and manage ongoing and emerging public risks along the coast with emphasis on issues such as dangerous and unstable cliffs, changed climatic conditions and enhanced erosion and maintenance of coastal infrastructure (eg. seawalls, breakwaters).

- Crown land camping grounds – improve user amenity and ensure accessibility to sites and facilities by all prospective users.
- Tourism activities and development – provide for quality development, diversity of experience, encourage nature based tourism, give priority to tourism ventures that relate to the coastal context.

Coastal Access

- Regional boating infrastructure plans will address safety, tide and weather constraints.
- Manage vehicle access and rationalise foreshore parking.
- Encourage alternatives to car circulation around townships.
- Improve access for all levels of mobility.

Built Environment

- Protect the character of coastal settlements.
- Manage growth through defined township boundaries.
- Prevent development proliferation outside of existing settlements.
- Manage development in visually prominent and sensitive areas.
- Maximise the use of community facilities on the foreshore.

The **Victorian Coast Report 2004** reports on the implementation of the Victorian Coastal Strategy 2002 and states that 81% of the actions proposed in the VCS have been completed, are underway or are ongoing. Many of these relate to areas in Wellington and East Gippsland Shires.

The **Integrated Coastal Planning for Gippsland – Coastal Action Plan** provides a coastal policy to assist local government in the region to achieve integrated decision making and consistent planning outcomes. The Coastal Action Plan also supports the concept of ‘activity nodes’ (being defined existing settlements) as a focus for new development and the preservation of areas between settlements for non-urban use. The scale and intensity of development in smaller coastal townships should be limited based on an assessment of the infrastructure, environmental and physical capacity of the settlement.

In terms of policies for the region, the **Gippsland Lakes Coastal Action Plan (CAP)** was developed to address the increasing degradation of the Gippsland Lakes system and identify priorities for the planning and management of the area.

The Gippsland Lakes CAP outlines immediate management actions; research; further development of the planning framework; and improved coordination of activities. Recommendations included in the CAP relate to: sewerage provision; foreshore protection; and tourism and recreational development. Overall, the CAP also emphasises the importance of generally containing development within existing settlements to preserve the environmental values of the Gippsland Lakes area.

The separate **Gippsland Boating CAP** includes more detail on the provision and management of boating facilities across the region. A strategic approach to improving access for boating based activities and development plans for boating infrastructure are provided. Improvement to facilities in several of the towns in the study area are proposed.

Victoria’s Tourism Industry Strategic Plan 2002-2006 seeks to increase awareness of regional Victoria destinations, maximise the economic and social benefits and

increase visitation, yield, dispersal and market share. Integration of tourism activity into local communities is sought though a balance must be found between regional community lifestyle requirements and tourism development and activities.

The study area is part of the Gippsland tourism region, which extends east from Phillip Island and includes the Latrobe Valley, and the southern parts of Victoria's alpine areas, including the Baw Baw Plateau. Key tourism destinations in the region include: Wilson's Promontory, the Gippsland Lakes, the towns of Bairnsdale, Inverloch, Lakes Entrance, Sale, Traralgon and Wonthaggi and the 'villages' of Mallacoota, Metung, Omeo, Paynesville, Port Albert and Yarragon.

The **Gippsland Regional Tourism Development Plan 2004-2007** (GRTDP) provides a tourism development strategy for the region. The two top priorities identified in the GRTDP are the development of infrastructure for the Gippsland Lakes to be Victoria's year round boating destination and the development of Mallacoota as a bluewater boating and nature based tourism destination.

Nature-based tourism is to be encouraged throughout the region, including experiences such as adventure, fishing and touring.

The GTRDP is supported by the **Victorian Tourism Infrastructure Development Strategy**, which is designed to implement key projects. The Gippsland Lakes and Mallacoota initiatives are both Statewide priority projects.

Finally, the **State Environment Protection Policy (SEPP) (Waters of Victoria)** provides a statutory framework for the protection of Victoria's water environments as required by the Environment Protection Act 1970 and ensures that the catchments, rivers and coasts of Victoria are managed in an integrated manner to avoid detrimental impacts on the quality of the fresh and marine water environments.

3.2 PLANNING POLICY

3.2.1 State Planning Policy Framework

The State Planning Policy Framework (SPPF) is applicable across the state of Victoria and is included in the planning scheme for each municipality. The SPPF includes State level planning policy to be integrated in the local planning process. The key issues addressed in the SPPF relate to: settlement; environment; housing; economic development; and infrastructure.

The SPPF is summarised below in terms of relevance to development and urban design for the coastal settlements in East Gippsland and Wellington Shires and the broader issues of the region.

Settlement

A sufficient supply of land is required to accommodate projected population growth and associated uses. The consolidation of existing urban areas is encouraged and sustainable and liveable urban areas are to be established with consideration given to land capability and environmental impacts.

Environment

Specific objectives for coastal areas relate to the protection and enhancement of the natural ecosystems and landscapes of the coastal and marine environment and sustainable development. Coastal planning and management principles are to be upheld in accordance with the Victorian Coastal Strategy 2002. Wetland conservation is a key objective relevant to this region. Policies relating to the conservation of native

flora and fauna require planning and responsible authorities to achieve a Net Gain in relation to native vegetation removal.³ Similarly, planning and responsible authorities must ensure that changes in land use or development do not adversely affect habitat values of wetlands and wetland wildlife habitats designated under the Ramsar Convention or the JAMBA and CAMBA Agreements.⁴

Housing

Residential development must provide access to physical and community infrastructure and include a range of lot sizes with opportunities for medium density housing. Rural living and rural residential zoning must not impact on high quality agricultural land, waterways or other natural resources.

Economic Development

Tourism and agriculture are both key aspects of economic development relevant to regional Victoria. Well designed and sited tourist facilities such as resorts or bed and breakfasts and attractions should be accessible and capitalise upon the cultural and natural assets of the area. Productive agricultural land is to be protected and the permanent removal of this land from the State's agricultural base must not be undertaken without consideration of economic impacts.

Infrastructure

Land use and transport planning must be integrated to complement existing infrastructure and minimise environmental impacts. Health and education facilities are to be provided in accordance with demographic trends within local and regional communities. Water supply, sewerage and drainage services are to meet community needs with minimal impact on the environment.

Particular Uses and Development

There are additional provisions relating to design and built form. High quality urban design and architecture should reflect local character, enhance liveability and contribute to the public realm. Views should be protected and new development must respect heritage values.

3.2.2 Wellington Planning Scheme

Municipal Strategic Statement

The Municipal Strategic Statement (MSS) in the Wellington Planning Scheme provides strategic direction for land use and development within the Shire.

The economy and lifestyle available in the Shire are closely linked to the Shire's unique natural environment. These assets provide the base for agricultural production and resource development and also opportunities for many value adding activities that are derived from a healthy and diverse natural environment. The protection and sustainable development of the Shire's natural resources are important principles in guiding future development.

The Wellington Corporate Plan 2003 – 2006 includes a vision for the municipality that is detailed in the Wellington Planning Scheme MSS (Clause 21-03):

³ See Victoria's Native Vegetation Management – A Framework for Action (Department of Natural Resources and Environment 2002)

⁴ In relation to the study area see: Corner Inlet Ramsar Site, Strategic Management Plan, Parks Victoria (2002), Department of Natural Resources and Environment; Gippsland Lakes Ramsar Site, Strategic Management Plan, Parks Victoria (2003), Department of Natural Resources and Environment; Management of Victoria's Ramsar Wetlands, Strategic Directions Statement, Parks Victoria (2002), Department of Natural Resources and Environment.

“Wellington will continue its development as a vibrant progressive community enjoying quality lifestyle opportunities and strong economic, environmental and social diversity.”

The Plan also includes the following statements:

“We aim to encourage economic growth based on value adding existing industries, natural resources and agricultural diversity and will seek to attract new sustainable industries.”

and:

“We will develop land use policies that protect and enhance the Shire’s natural and built heritage.”

The MSS also includes a Strategic Framework Land Use Plan for the Shire, which summarises specific land use outcomes desired in key parts of the Shire.

The MSS details strategic directions in relation to Settlements (Clause 21.04), the Environment (Clause 21.05) and Economic Development (Clause 21.06). Some of the strategies that are particularly relevant to the Coastal Towns Design Framework are summarised below.

Settlement

Urban development is to be consolidated within existing settlements as much as possible and coastal townships should not be expanded until adequate effluent disposal systems are in place. In this circumstance development is to be confined within existing zone boundaries. The restructuring of old and inappropriate coastal subdivisions is to be facilitated. Coastal parks adjacent to urban areas are to be protected. The environmental impacts from townships are to be reduced through the provision of adequate effluent and storm water discharge systems. Tourist developments are to provide adequate infrastructure to treat discharges and minimise environmental impacts. Specific strategies are provided for some of the settlements included in the scope of this project, ie Loch Sport, Seaspray, The Honeysuckles and Golden Beach / Paradise Beach.

Environment

The lakes, waterways and National Parks of Wellington Shire are key State and local assets. As a consequence the management of stormwater and effluent within settlements is a major issue in catchment protection and the existence of algal blooms in the Gippsland Lakes is a significant environmental problem for the Shire. Other environmental strategies relate to the protection of flora and fauna and indigenous vegetation, maintenance of biological diversity, protection of wetlands, restriction of development in flood prone areas and protection of land from wildfire.

Economic Development

Agriculture and the oil and gas and timber industries provide significant employment throughout the Shire, however the service, tourism and fishing / boating industries are of greater importance to coastal settlement residents. There is a need for an overall diversification of the regional economy and there is unlimited potential for increased tourism, particularly cultural and eco-tourism. Tourism should be further developed around the Shire’s natural environment, heritage and agricultural resources. Urban tourism development should be concentrated in established centres but sites elsewhere, along the coast or lakes foreshore will be assessed on the basis of their environmental capability and suitability.

Local Policy

There is little local policy that directly influences development in coastal areas.

The Heritage Policy seeks to protect and ensure community respect for sites and places of heritage significance. It is noted that there are few identified sites within the project area settlements to which a Heritage Overlay applies.

The Small Rural Lots Policy generally discourages small lot subdivision in rural areas, unless such development is compatible with surrounding uses.

3.2.3 East Gippsland Planning Scheme

Municipal Strategic Statement

The Municipal Strategic Statement (MSS) in the East Gippsland Planning Scheme provides strategic direction for land use and development within the Shire.

A regional assessment of East Gippsland identified key issues relating to environmental, social and economic challenges. These include: water quality of lakes and rivers; impact of expanding settlements on landscape amenity; control of environmental weeds and pest animals; inappropriate subdivision of rural land; potential for significant expansion of the tourism industry; high unemployment rates and low average incomes; and ongoing requirements for community services, cultural and recreational facilities.

The vision for East Gippsland Shire is:

“East Gippsland in 2010 will be recognised throughout Australia and beyond as a region combining outstanding environmental quality with a vibrant and expanding economy, whilst providing a rewarding lifestyle, employment and educational opportunities and community supports for both its residents and visitors.”

The MSS also includes a Strategic Framework Land Use Plan for the Shire, which identifies development opportunities for various townships; these are detailed in the respective Settlement Papers.

There are a number of key objectives addressed in the MSS and strategies that are particularly relevant to the Coastal Towns Design Framework are summarised below.

Recreation, leisure and cultural development: upgrade public facilities and parks; provide multi-purpose community venues; and develop joint approaches with Wellington Shire to provide regional services and facilities.

Housing: encourage the building and construction sector to provide a range of housing types and styles including higher density dwellings in town centres, to provide choice for consumers to suit their preferences, stage of lifecycle, resources and desired living environments.

Services for young people: encourage provision of new informal recreational and social facilities for young people including skate/blade and BMX facilities.

Infrastructure for development: improve linkages between towns and major tourist attractions; maintain the public airports in East Gippsland (Bairnsdale, Marlo and Mallacoota); and encourage industry to locate in appropriate areas and identify new sites for industry.

Rural industries: ensure that high quality agricultural land is protected from inappropriate subdivision or development; and support the existing offshore fishing industry and encourage its expansion on an ecologically sustainable basis.

Tourism and ‘lifestyle’ living: develop a range of walks and bicycle trails and improve the network of scenic drives and link with accommodation facilities; ensure effective

management of visitor impact on river frontages used extensively for recreation, particularly fishing and boating and encourage provision of tourism facilities (eg, toilets, picnic facilities) in appropriate locations; encourage development of a range of tourist accommodation options in the region, which embrace good design and vary in type and scale; encourage development of East Gippsland as a retirement destination, with complementary recreational and personal services, 'lifestyle' industries and other niche market opportunities targeting active retirees.

Attracting new businesses needing a clean environment: use East Gippsland's 'clean' environment to competitive advantage by identifying and attracting to the region industries requiring a high level of environmental quality.

Water quality: ensure relevant SEPP policies inform planning decisions; reduce sewage effluent from riverside and coastal townships; ensure that public toilets on foreshore or river frontage land are sewered where feasible, or use other appropriate technologies; and reduce sediment inputs by sealing and/or landscaping large unsealed gravel foreshore car parking areas, eg, Mallacoota Inlet wharf area.

Coastal management: review Crown foreshore occupation and tenure arrangements to ensure the most appropriate use of public coastal land; direct major developments in coastal areas to existing settlements and provide in these nodes for a broad range of recreation activities and access for large numbers of people; consider anticipated climate change in coastal planning; provide appropriate public access to foreshore Crown land at designated locations; and encourage shared or multiple use of sites and facilities on public coastal land to contain environmental impacts.

Habitat protection and biodiversity conservation: implement the regional vegetation plan; and when considering proposals for new uses or developments on land adjacent to National Parks, State Forests, Coastal Parks or other Crown Land, take into account the possible impacts upon these areas, as well as the potential for private land to complement opportunities available in the public sphere.

Urban centres: the urban centres of the Shire are to remain commercially viable and continue to provide appropriate services for residents and visitors; retail and commercial development should be consolidated within township centres; streetscapes upgraded with consistent design themes; pedestrian networks improved; and medium-rise residential or commercial development permitted on appropriate sites.

Design of new development: encourage adoption of high standards of design in all new developments in the Shire, with special emphasis on urban areas, coastal and lakeside areas and other localities of high landscape quality, and land adjacent to parks and reserves.

In addition to the broad objectives for the municipality, the MSS includes strategies for sub-regions; the study area falls within the Lakes and Coastal sub-region.

The Lakes and Coastal sub-region of East Gippsland has the highest population density of the Shire and the main commercial, retail and tourist centres are located along this coastal fringe. The eleven East Gippsland settlements subject to the Coastal Towns Design Framework are all located within this sub-region.

The relevant key strategies for this sub-region are listed below:

- protecting landscapes and coastal values, particularly in coastal / lakes areas;
- encouraging population growth and development on fully serviced residential land in the major towns;
- supporting provision of reticulated sewerage in unserviced towns;
- ensuring land availability for further development of the tourism and service industry;

- reinforcing the role of Bairnsdale as the main commercial, retail and service centre for East Gippsland, while upgrading and revitalising business centres in other towns to serve local and district level needs; and
- recognising the need to provide for an ageing population, including encouragement of new services and seeking resources to improved provision and maintenance of relevant Shire infrastructure (eg, footpaths).

Local Policy

There is a Significant Landscapes Policy included in the East Gippsland Planning Scheme which applies to all of the settlements due to their location within significant regional landscapes. The Policy aims to protect and enhance significant regional landscapes and to ensure that development is consistent with maintaining the particular values that determine the character and importance of each area. Therefore, any development applications in these areas will be assessed with regard to potential impacts on the landscape.

A Tourist, Commercial or Industrial Developments in Non-urban Areas Policy also exists, which provides for activities that complement agricultural / pastoral or resource-based enterprises and which must respond to the environment with no significant impacts on amenity.

The Small Lot Subdivisions in Rural Zones Policy allows for smaller lots where appropriate, but not in areas which would result in an adverse impact on agricultural productivity or where there exist significant physical constraints or where adequate servicing would not be feasible.

There are no policies relating directly to design, which may represent a policy gap. There is also fifteen existing Design and Development Overlays. Three of these relate to some of the smaller settlements in the study area (DDO1 Shaving Point Residential Area, Metung and DDO3 Streetscape, Marine Parade, Marlo and DDO9 Residential Areas, Mallacoota) and a further five relate to Lakes Entrance and Paynesville (Lakes Entrance: DDO5 - Kalimna Subdivision and Development Controls; DDO6 - Kalimna Access Controls; DDO7 – Highway Corridors and DDO10 - 66 Creighton Street and 250 Albatross Road, Kalimna. Paynesville: DDO2 – Constructed Waterways, Paynesville). There is an opportunity to adopt additional siting and design guidelines.

4. SOCIAL FACTORS ANALYSIS

4.1 DEMOGRAPHIC INFORMATION

4.1.1 Existing population

Wellington

The Wellington Shire at the time of the 2001 Census contained 39,158 persons.

Over the ten years to 2001:

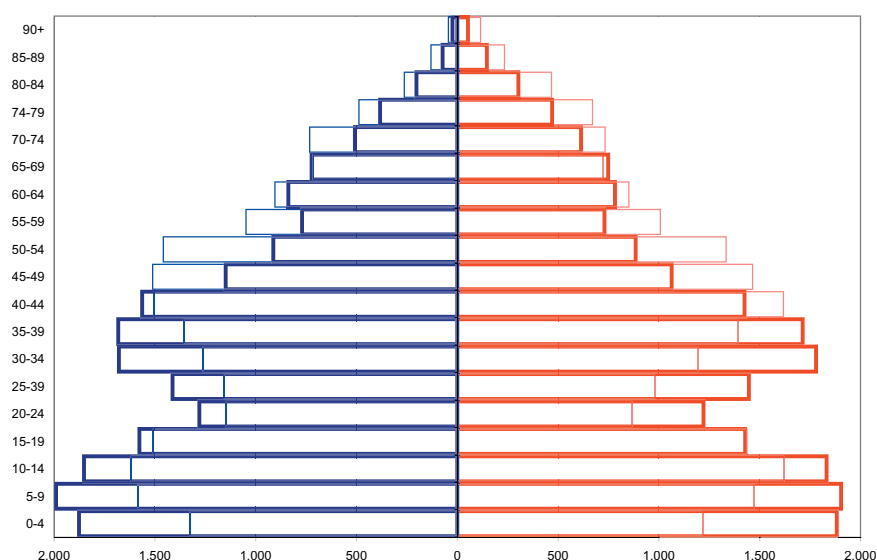
- The Shire experienced a loss of population of 1,765 persons.
- Wellington Shire had an annual rate of population change of -0.4 per cent.
- Population growth in regional Victoria averaged 0.4 per cent.

The population loss in the Shire was largely driven by the loss of persons aged between 0 and 39 years.

However, this was offset by growth in the number of persons aged between 45 years and 79 years, largely through in-migration, which was concentrated in the 50 to 54 year old age group.

There has been a considerable ageing of the population in the ten years to 2001, as illustrated in Chart 4.1. This ageing is likely to increase the pressure on social services and health services within the Shire without providing a corresponding boost to the local economy.

Chart 4.1 Population by age 1991 and 2001 Wellington Shire



Source: ABS Census Time Series Profiles Wellington Shire 2001

A further issue of concern is the declining share of population in the 20 to 40 year age group which are the prime periods for natural growth through births and this narrowing will exacerbate the ageing of the population.

East Gippsland

The 2001 Census of Population and Housing assessed the population of the East Gippsland Shire to be 37,792 persons.

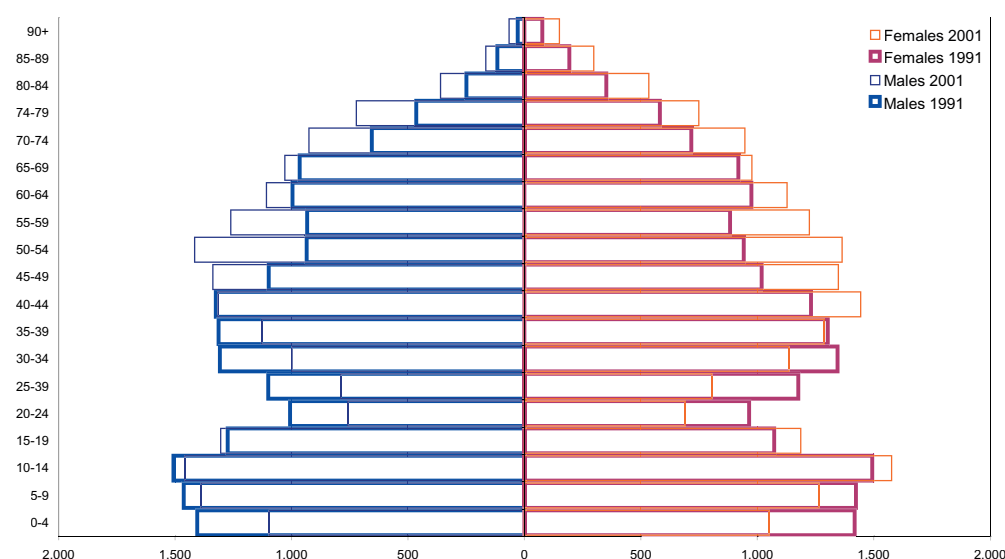
- Over the ten years to 2001 East Gippsland's population increased by 1,563 persons.
- The average annual rate of growth was 0.4 per cent, the same rate of growth for Regional Victoria.
- In the five years from 1996 there was little growth with a 0.2 per cent reduction in total males, offset by a similar increase in the number of females.

This growth has been accompanied by a substantial change in the composition of the population.

The median age rose from 35 years in 1991 to 41 years in 2001. This was due to the natural ageing process as well as considerable in-migration of older persons aged 40 plus. In addition, there is a trend for persons aged between 20 and 24 years to leave the area, often seeking work or education opportunities.

The loss of population in the 20-39 year age group exacerbates the ageing process as these are the child bearing years and subsequently the natural birth rate will fall. These trends are illustrated on Chart 4.2, by both the shape of the population pyramid for each year but also by the change between the years.

Chart 4.2 Population by age 1991 and 2001 East Gippsland Shire



Source: ABS Census Time Series Profiles East Gippsland Shire 2001

4.1.2 Combined Shires – East Gippsland Statistical District

In the 10 years to 2001 the combined Shires' population was stable but the composition of growth changed strongly, with the overall impact being a considerable ageing of the population due to in-migration of older age groups and out migration in the younger 15-24 year old age group. Table 4.3 details these changes.

Table 4.3 Population change by broad age group East Gippsland and Wellington Shires 1991 to 2001

| Age Group | Males | Females | Persons |
|-------------|-------|---------|---------|
| 0-14 years | -1.7% | -1.9% | -1.8% |
| 15-24 years | -1.0% | -1.1% | -1.0% |
| 25-44 years | -1.7% | -1.4% | -1.5% |
| 45-54 years | 3.4% | 3.5% | 3.4% |
| 55-64 years | 2.0% | 2.3% | 2.1% |
| 65+ years | 2.5% | 2.5% | 2.5% |
| TOTAL | 0.0% | 0.1% | 0.0% |
| | | | |

Source: ABS Census Time Series Profiles 2001

4.1.3 Population Change in the Project Area

In the period 1991 to 2001 most of the settlements included within the project scope recorded substantially higher population growth rates than the Shire averages as detailed in Table 4.4. Average annual growth rates of over 6 percent per annum were recorded in far east Gippsland (with the population almost doubling in some towns in the ten year period), around the Gippsland Lakes growth was commonly 2 percent per annum. Care is needed with the interpretation of this data as there were some Collector District boundary variations between 1991 and 2001 and a number of the smaller settlements are part of much larger Collector Districts that incorporated extensive non-urban areas (eg Gipsy Point).

Table 4.4 Population Change Project Area Settlements 1991 to 2001

| Settlement | 1991 | 2001 | Avge Growth pa |
|--|------|------|----------------|
| Mallacoota | 559 | 1043 | 6.4 % |
| Gipsy Point | 151 | 264 | 5.7 % |
| Bemm River | 91 | 170 | 6.4 % |
| Marlo | 57 | 325 | 19.0 % |
| Lake Tyers Beach | 340 | 527 | 4.5 % |
| Lakes Entrance | 4606 | 5502 | 1.8 % |
| Metung | 423 | 516 | 2.0 % |
| Nungurner | 387 | 519 | 3.0 % |
| Eagle Point | 377 | 371 | - 0.2 % |
| Paynesville | 2390 | 2865 | 1.8 % |
| Loch Sport | 704 | 959 | 3.1 % |
| Golden Beach/Paradise Beach | 491 | 605 | 2.1 % |
| Seaspray, The Honeysuckles | 230 | 225 | - 0.2 % |
| Woodside Beach | N A | 320 | N A |
| McLoughlins Beach, Manns Beach, Robertsons Beach | N A | 570 | N A |

Source: ABS Census Time Series Profiles 2001

The analysis also demonstrates that the coastal towns have generally been the location of most population growth in the region. For example, the coastal towns within East Gippsland included in the project recorded an increase of 2,721 persons in 1991 – 2001, compared to the increase for the whole Shire of 1,583. persons in that period. The coastal towns in Wellington generally recorded notable population growth in 1991 – 2002 compared to a decline in population for the Shire overall in that period.

In terms of the major urban centres of the region, between 1991 and 2001, the population in Sale declined by 1,004 persons, the population in Yarram declined by 217 persons, the population of Maffra increased by 37 persons, the population in Bairnsdale declined by 103 persons and the population of Orbost declined by 418 persons.

By comparison, between 1991 and 2001 the following population changes occurred in the major centres along the coast: Loch Sport increased by 255 persons, Paynesville increased by 475 persons, Lakes Entrance increased by 896 persons and Mallacoota increased by 484 persons.

4.1.4 Future Trends

The State Department of Sustainability and the Environment (DSE) have developed a set of projections, based on the estimated resident population, for all Local Government Areas throughout the State. These projections include some allowances for the likely impacts of industry development but are based on a business as usual scenario.

Wellington

Over the 30 years from 2001 to 2031 the DSE projections suggest no change in total population in Wellington Shire over the period, but indicate a strong continuation of the ageing of the local population. The share of persons aged 60 plus will rise to 40.7 per cent in 2031 from 18.5 cent in 2001. While there may be some internal migration which places development pressure on the coastal communities, this is unlikely to be significant.

East Gippsland

For East Gippsland Shire to 2031, the DSE projects growth of 8,078 persons, which is equivalent to an annual growth rate of 0.62 per cent. This is quite a strong growth rate for a remote region.

The growth will be largely in the older age groups. By 2031 the share of persons aged 60 plus is projected to rise from a relatively high 25.1 per cent to 49.8 per cent. This change will see a substantial lessening in the share of population of working age and this may create long-term difficulties for the area. The in-migration driven population growth is likely to centre on those areas providing a combination of coastal location, interesting topographical features and access to facilities and services. Hence the areas of Lakes Entrance, parts of Paynesville, Eagle Point, Metung, Nungurner and Lake Tyers Beach are likely to absorb a high proportion of the growth. As the 75 plus age group gets larger over the forecast period, Bairnsdale is likely to attract stronger growth as aged persons seek proximity to health and other services.

Combined Municipalities

The DSE projected annual average growth rate for the combined municipalities is 0.33 per cent over the 30 years to 2031. The estimated resident population will increase from 80,901 persons in 2001 to 88,963 persons in 2031. The share of persons aged 60 plus is projected to rise from 21.7 per cent to 45.6 per cent. For Regional Victoria

as a whole the 60 years plus age group is projected to increase from 19.5 per cent of the regional population (2001) to 35.9 per cent (2031). Table 4.5 details the major elements of projected population change to 2031 for each municipality.

Table 4.5 Estimated Resident Population Projections, East Gippsland and Wellington Shires 2001 to 2031

| Area | 2001 | 2031 | Change | % per annum | Aged 60+ 2001 | Aged 60+ 2031 |
|-----------------------|--------|--------|--------|-------------|---------------|---------------|
| Wellington | 41,462 | 41,446 | -16 | 0.00 | 7,681 | 16,850 |
| East Gippsland | 39,439 | 47,517 | 8,078 | 0.62 | 9,883 | 23,673 |
| Combined | 80,901 | 88,963 | 8,062 | 0.33 | 17,564 | 40,523 |

Source: DSE, Victoria in Future 2004

The locational impacts of the projected population growth is likely to be greatest in those places that are attractive for retirees. Responding to job opportunities and economic growth is less likely to be a driver of household choice for migrants to the region in relation to residential location. As important regional centres, Bairnsdale and Sale will continue to expand, but a significant share of growth outside of these centres in the more attractive and accessible coastal towns can be anticipated.

4.2 SOCIAL CHANGE

4.2.1 Household Size

Wellington

Over the ten years to 2001, the average household size in the Shire declined by 1.2 per cent per annum, a trend in common with the rest of the State. The total number of dwelling units rose 1,400 over this period, equivalent to an average annual growth of 0.8 percent per annum, despite an overall population decline. These changes are detailed in Table 4.6.

Table 4.6 Household size and dwelling unit numbers Wellington Shire 1991 to 2001

| Wellington Shire | 1991 | 1996 | 2001 | Change 91/01 |
|------------------------|--------|--------|--------|--------------|
| Average household size | 2.84 | 2.65 | 2.52 | - 1.2 % pa |
| Dwelling units | 17,273 | 18,116 | 18,673 | + 0.8 % pa |

Source: ABS Census Time Series Profiles

Despite no increase in population being projected to 2031, DSE estimates that the household size will have fallen to 2.15 persons per household by 2031 with an increase of 3,150 households.

This trend combined with an ageing population, could suggest initially that smaller houses may be demanded and that urban areas could sustain higher densities. However, this intuitive assessment is somewhat contradicted by the recent trends towards larger stand alone dwellings in most areas of the State.

East Gippsland

Between 1991 and 2001 in East Gippsland Shire dwelling units numbers rose by 2,912 units; an increase of 1.6 per cent per annum which is well in excess of the population growth rate. Average household size continued to fall over this period by 1.0 per cent per annum. These changes are detailed in Table 4.7.

The DSE estimates that average household size will have fallen to 2.0 persons in 2031 with an increase of 7,124 households over the 30 year period.

Table 4.7 Household size and dwelling unit numbers East Gippsland Shire 1991 to 2001

| East Gippsland Shire | 1991 | 1996 | 2001 | Change 91/01 |
|------------------------|--------|--------|--------|--------------|
| Average household size | 2.62 | 2.48 | 2.36 | - 1.0 % pa |
| Dwelling units | 16,444 | 18,487 | 19,356 | + 1.6 % pa |

Source: ABS Census Time Series Profiles

4.2.2 Social Change in the Project Area

Throughout the settlements in the Project Area new dwelling construction generally grew more rapidly than new household formation in the 1991 – 2001 period as detailed in Table 4.8. New household formation rates were similar but slightly lower than average annual population growth rates, but dwelling construction in more accessible locations was seen to grow at rates that were 2 to 3 times the rate of household formation reflecting the ‘holiday house’ function of many of the dwellings in these settlements. Higher dwelling average annual growth rates were recorded in the East Gippsland coastal towns than in the Wellington coastal towns in 1991 – 2001. Household size change in this period varied considerably throughout the settlements with some settlements recording a growth in household size, eg Mallacoota, Lake Tyers Beach and others, where perhaps stronger retirement based attraction exists, recording a decline similar to the overall Shire trends, eg Paynesville, Lakes Entrance. Care is also needed with the interpretation of these data as detailed for Table 4.4.

Table 4.8 Dwelling & Household Change Project Area Settlements 1991 to 2001

| Settlement | 1991 | | 2001 | | Annual Growth to 2001 | |
|---|-----------|------------|-----------|------------|-----------------------|------------|
| | Dwellings | Households | Dwellings | Households | Dwellings | Households |
| Mallacoota | 380 | 238 | 680 | 425 | 6.0 % | 6.0 % |
| Gipsy Point | 65 | 40 | 116 | 67 | 6.0 % | 5.3 % |
| Bemm River | 77 | 31 | 149 | 67 | 6.8 % | 8.0 % |
| Marlo | 30 | 26 | 268 | 136 | 24.5 % | 18.0 % |
| Lake Tyers Beach | 277 | 136 | 367 | 200 | 2.9 % | 3.9 % |
| Lakes Entrance | 2322 | 1772 | 2893 | 2073 | 2.2 % | 1.6 % |
| Metung | 332 | 193 | 423 | 214 | 2.5 % | 1.0 % |
| Nungurner | 249 | 167 | 359 | 227 | 3.7 % | 3.1 % |
| Eagle Point | 196 | 136 | 213 | 157 | 0.8 % | 1.4 % |
| Paynesville | 1400 | 989 | 1835 | 1324 | 2.7 % | 3.0 % |
| Loch Sport | 1195 | 321 | 1396 | 345 | 1.6 % | 0.7 % |
| Golden Beach/ Paradise Beach | 608 | 283 | 679 | 256 | 1.1 % | - 1.0 % |
| Seaspray, The Honeysuckles | 272 | 100 | 276 | 64 | 0.1 % | - 13.5 % |
| Woodside Beach | N A | N A | 135 | 106 | N A | N A |
| McLoughlins Beach, Manns Beach, Robertsons Beach | N A | N A | 469 | 218 | N A | N A |

Source: ABS Census Time Series Profiles 2001

4.2.3 Seachange ⁵

The coastal areas of Victoria and indeed, all of Australia, are attracting significant numbers of people leaving urban areas, seeking a 'seachange'. Many of these people are retirees of the baby boomer generation who pursue a less stressful lifestyle on the coast and have relocated primarily from Melbourne, regional towns or from farms in the hinterland areas. It is worth noting the seachange seekers favour coastal locations that combine interesting topography and the coast. This landscape driven growth factor has and will continue to favour the East Gippsland region.

These persons often have sold their homes in the larger centres and moved to lower cost areas often to reduce mortgage commitments or to free up capital. This particular in-migration of people accounts for some of the ageing of the population previously described.

⁵ References for this section include: Barr N.(2005), The Changing Social Landscape of Rural Victoria, Department of Primary Industries; McGranahan D.A. (1999), Natural Amenities Drive Rural Population Change, Economic Research Service, US Department of Agriculture; Burnley I & Murphy P (2004), Sea Change, University of NSW; Salt B (2001), The Big Shift.

Some of the change may comprise people who have taken the opportunity to relocate from larger settlements and use flexible work practices and technologies, which allow people to work remotely using the internet and associated technologies. Others may aspire to operate a small local/regional business or seek local, often part time employment to maintain some income generation. In the context of this region, a smaller proportion who choose to settle in coastal locations may commute to the larger regional centres, eg Sale, Bairnsdale, Lakes Entrance for employment.

East Gippsland and Wellington Shires are relatively remote locations with small populations. The coast is an important element of each Shire and coastal towns attract a significant proportion of the population. DSE research indicates that East Gippsland's migration flows are sourced primarily from Melbourne, whereas new arrivals in Wellington are mostly from nearby municipalities within the Gippsland region. Within the study area the towns around and near the Gippsland Lakes (plus Mallacoota) generally increased in population between 1991 and 2001 with population declines outside of those areas

Examination of the change in the ratio of unoccupied dwellings to total dwellings between the Census periods is useful in assessing migration for retirement. In Wellington Shire, this ratio was little changed rising from 19.0 per cent in 1991 to 20.0 per cent in 2001. While the coastal areas of the Shire attract many holiday home owners there seems to have been little growth in this segment of the market. The tendency for older persons to move into their holiday homes may partly explain the relative stability in this statistic. Nevertheless, this ratio is considerably higher than the Regional Victorian average of 14.3 per cent in 2001.

In East Gippsland this ratio of unoccupied dwellings to total dwellings rose from 18.7 per cent in 1991 to 20.1 per cent in 2001. This may reflect the area's attraction as a recreational area as the ratio is almost a third higher than the Regional Victorian average of 14.3 per cent in 2001.

As the seachange phenomenon has grown, development pressures have increased in some coastal towns in the region with high levels of demand for vacant land and redevelopment sought for prime foreshore real estate or sites with high quality views. This demand may extend into attractive rural land around the towns, often in the form of rural-residential estates on former farming land with water views or appealing landscapes.

Coastal character is also often perceived to be degraded by new development and the projected population growth for East Gippsland will need to be accommodated in appropriate built form.

Even small increases in population can exact significant pressure on existing services, which do not always successfully cater for existing populations and modern lifestyles. Similarly, demands for improved infrastructure are exerted to support lifestyle or recreation expectations.

In addition, the unique coastal environment is prone to degradation if development is not carefully managed and issues such as wastewater management are of great importance.

The regional coastal communities often have undiversified economies with many barely viable commercial enterprises due to the relatively small permanent populations and highly seasonal tourist influx. As a result, employment opportunities are limited in both number and variety and younger people in particular often leave regional areas in search of work and or education and training.

Many of the baby boomers moving to coastal towns are retired or semi-retired and although they may bring capital with them that supports the local retail and service

industries, they generally do not contribute to the local economy in terms of broad commercial investment.

The ageing of these communities is exacerbated by in-migration from older age groups and regional coastal towns face a future characterised by significant pressure on aged care services, or alternatively, an out-migration of people as they reach old age or decide that their seachange dream and actual needs are not coincident.

4.2.4 Melbourne Expansion (2030)

The State Government's 'Melbourne 2030' strategic plan for growth directs significant development along the southeast corridor, which leads to the Gippsland Region. With an increased population in this area, there is a greater likelihood that people will holiday further to the east in Gippsland and there is potential for a flow-on effect if retirees can settle near their families. The Gippsland coastal area may also be seen as a lower cost and less developed alternative as land prices rise and people pressures intensify in the traditional Melbourne recreation areas to the east – the Mornington Peninsula and Phillip Island.

This change is partially reflected in the DSE population projections as the migration component of the projections reflects the proximity of Eastern Gippsland to the outer eastern and southern suburbs of Melbourne. The pressure for increased tourism will provide some employment in the area but the main driver of change in the regions will be the ageing population and the need for associated services.

5. ECONOMIC ANALYSIS

5.1 BUSINESS AND EMPLOYMENT

Wellington

Employment Rates

The job market in the Wellington Shire is considerably weaker than that of Regional Victoria. A useful indicator of employment health is the ratio of employed persons per 1,000 residents, in 2001 this ratio was 401.5 for the Shire compared to 420.8 for Regional Victoria and 448.3 for all of Victoria. The low employment ratio partially reflects the older population of the Wellington Shire.

The local job market did not grow as strongly as the Victorian average over the 10 years to 2001 and no major industries have been attracted to the area in recent years. This job market weakness reflects:

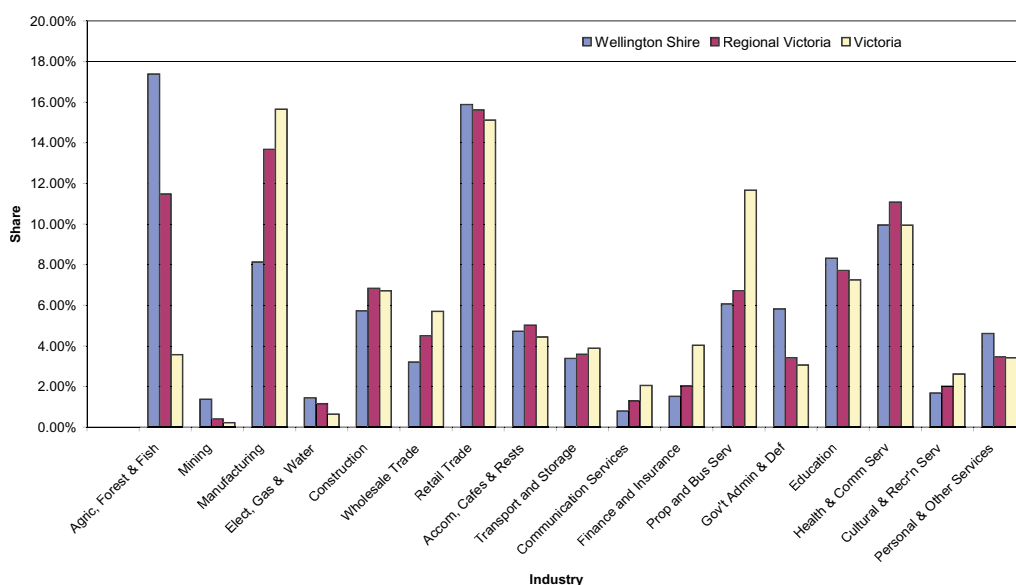
- the slowdown as well as increased efficiencies in the oil and gas exploration industry;
- the shift of personnel from the East Sale RAAF base; and
- rising agricultural productivity.

In the period since 1991, the Census indicates the local unemployment rate fell from 11.8 per cent in 1991 to 7.8 per cent in 2001, but this can be largely explained by the fall in participation rates from 63.1 per cent to a low 58.8 per cent. More recent projections suggest the unemployment rate as of June 2004 was 6.0 per cent (DEWRSB, June 2004). This data does not indicate any significant growth in the local economy.

Key Industries

The profile of jobs by industry is shown in Chart 5.1, which compares the structure of the Wellington economy with that of Regional Victoria and Victoria.

Chart 5.1 Employment by Industry Wellington Shire, Regional Victoria and Victoria, 2001



Source: ABS Working Population Profile Wellington Shire 2001

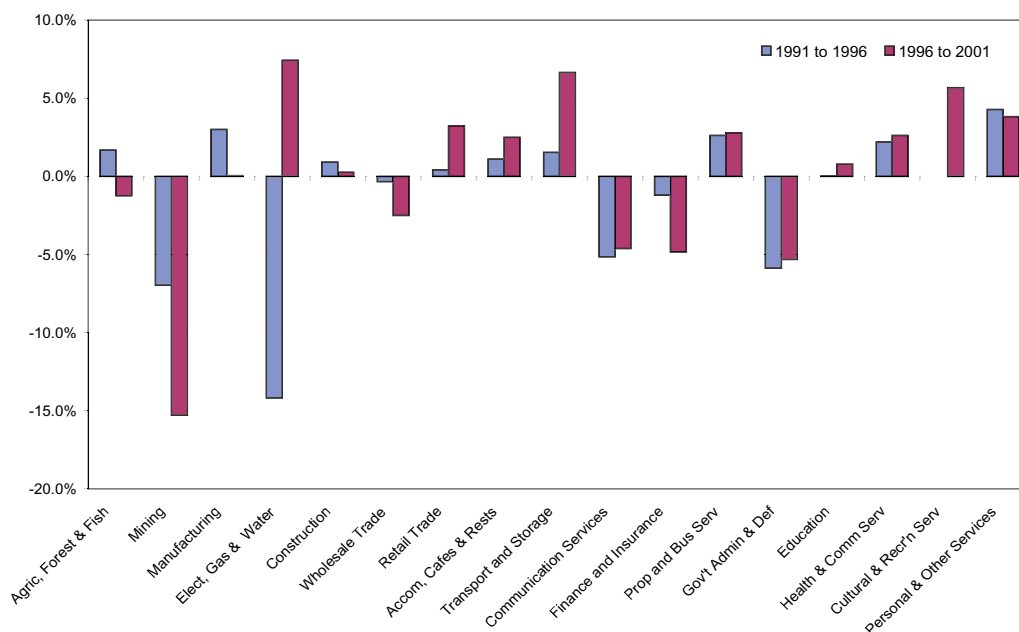
The 2001 Census estimated there were 14,648 jobs provided within the Shire. The key employing industries are:

- Agriculture, Forestry and Fishing (17.4 per cent of jobs);
- Retail Trade (15.9 per cent); and
- Health and Community Services (10.0 per cent).

Clearly the Wellington Shire has a high dependency on the Agriculture, Forestry and Fishing, Mining and Government Administration and Defence sectors compared to Regional Victoria. Education also represents a slight strength for the Shire. The main types of agricultural production are dairying and livestock production with some crop production.

The ABS Time Series Profiles details the number of employed residents by industry between 1991, 1996 and 2001. Chart 5.2 illustrates these changes.

Chart 5.2 Change in the numbers employed by Industry of Wellington residents, 1991 to 1996 and 1996 to 2001



Source: ABS Census of Population and Housing Time Series Profile, Wellington Shire, 2001

The most significant change was a fall in mining industry employment and there was also a strong decline in employment in the Electricity, Gas and Water sector, largely due to restructuring in the Latrobe Valley in the five years to 1996. There was a persistent fall in employment in the Communication Services, Finance and Insurance and Government Administration and Defence sectors.

Industry Sector Prospects

Oil and gas have been a major growth source in the region in the past 30 years, but as the reserves are depleted and production efficiencies increase, employment levels have fallen. The gas reserves of the Gippsland basin are extensive however, and should underpin local demand for the next 30 years. As such, the longer term production outlook is strong. (NIEIR, EWP, December 2004).

Dairying is important in Wellington with a 40 per cent share of the livestock product output for the East Gippsland Statistical Division. Focussed around Maffra, the long term outlook for dairying is good due to industry restructuring and the opening of new export markets.

There has been strong growth in the services sectors nationally over the past few decades. In Wellington Shire these sectors tend to have relatively weak links to the local economy and have not been associated with strong growth.

The expected influx of older persons over the next 30 years may strengthen demand for some services (health and personal services particularly) but are not expected to enhance the sustainability of the local economy.

East Gippsland

Employment Rates

Employment conditions in the East Gippsland area are relatively weak. In 2001, the ratio of employed persons to 1,000 residents was only 378.3, while the average for Regional Victoria in 2001 was 420.8. The low employment ratio partially reflects the older population of the East Gippsland Shire.

In 2001, the median age of the Shire's residents was 41 years while the equivalent figure for Regional Victoria was only 36 years and the Victorian average was 35 years.

Key Industries

The census profile of jobs by industry in the East Gippsland Shire in 2001 indicated the largest share of jobs was in:

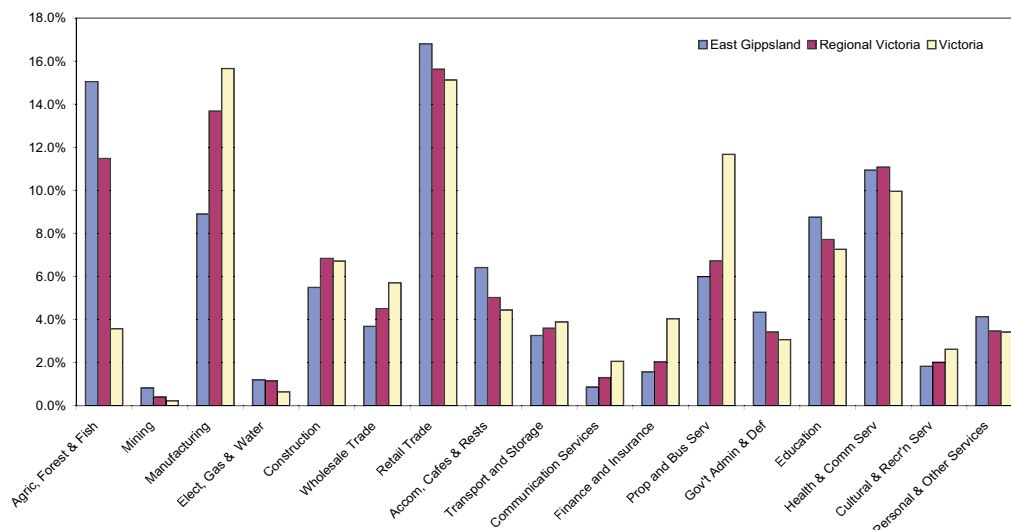
- The retail sector - 16.8 per cent of employed persons;
- Agriculture Forestry and Fishing - 15.0 per cent; and
- Health and Community Services - 10.9 per cent.

In each of these sectors, the share of employment is significantly larger than the Victorian average. Other sectors where East Gippsland is relatively over represented include:

- Tourism related sectors of Accommodation, Cafes and Restaurants - 6.4 per cent;
- Personal and Other Services - 4.1 per cent;
- Education - 8.8 per cent; and
- Government Administration and Defence - 4.3 per cent.

Chart 5.3 illustrates the industry shares of jobs in the East Gippsland and compares this profile to those of Regional Victoria and Victoria. Local manufacturing employment (8.9 per cent) is under-represented compared to the other areas.

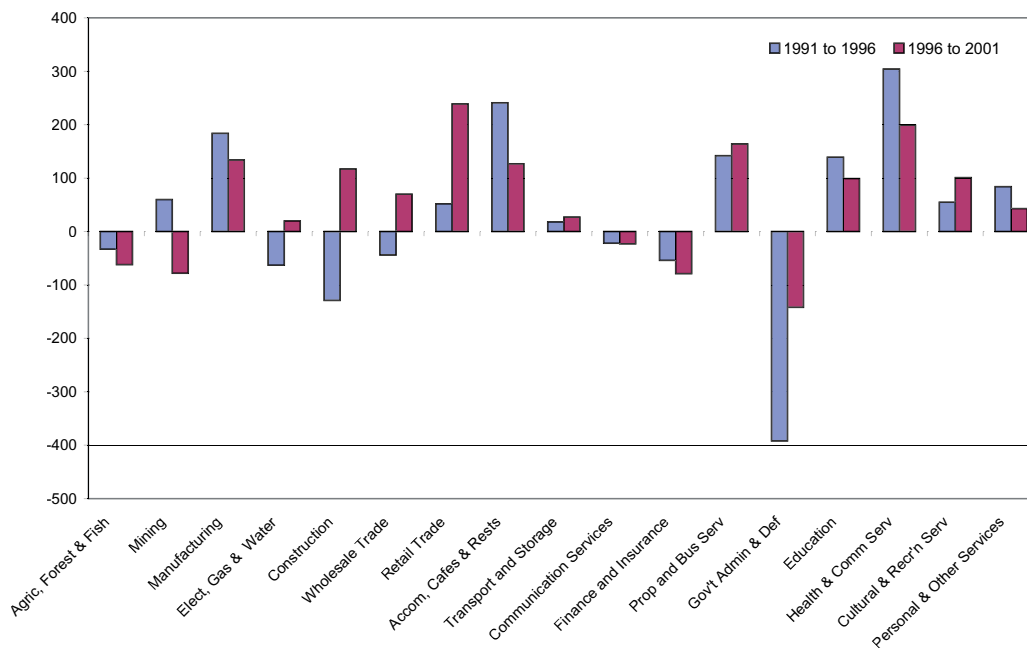
Chart 5.3 Employment by Industry East Gippsland Shire, Regional Victoria and Victoria, 2001



Source: ABS Working Population Profile East Gippsland Shire 2001

The changes in employment of local residents by industry in East Gippsland are illustrated in Chart 5.4. The most significant change was the loss of 534 employed persons in the Government Administration and Defence sector. Although this was effectively offset by a similar increase in Health and Community sector employment (503).

Chart 5.4 Change in the numbers employed by Industry of East Gippsland residents, 1991 to 1996 and 1996 to 2001



Source: ABS Census of Population and Housing Time Series Profile, East Gippsland Shire, 2001

Other significant loss sectors were Finance and Insurance (-133) and Agriculture, Forestry and Fishing (-95). However, many sectors exhibited strong growth including Accommodation, Cafes and Restaurants (368), Property and Business Services (306), Manufacturing (318) and Retail Trade (291).

Over the ten year period to 2001 the total number of employed persons rose by 1,498 at an average growth rate of 0.7 per cent per annum. The growth in manufacturing reflects the emerging strength of the horticultural sectors in the area.

Industry Sector Prospects

East Gippsland's principal contribution to agricultural production for the East Gippsland Statistical Division is the value of livestock slaughterings which constitute 25 per cent (\$102.7 million) of the total agricultural production for this Statistical Division. Crop production (particularly vegetables) is also important to the local economy. The outlook for both these types of production is strong.

Forestry (hardwood timber production) is a key employment sector and the Shire is one of Victoria's prime timber regions. While short term reductions in harvesting are expected, regrowth timber should provide for sustainable levels of activity but employment growth is unlikely.

5.2 PROPERTY VALUES

Table 5.5 provides a comparison of median house price increases from 1994 to 2004 for eight rural coastal municipalities. Wellington Shire's median price rise was the lowest of this group while East Gippsland was the fourth lowest. This relative stability in housing prices in Wellington and East Gippsland Shires is indicative of the low levels of population growth but also reflects an increase in the total housing stock.

The more significant increases apparent in Bass Coast and Surf Coast Shires indicates the popularity of these locations, which is largely due to their proximity to Melbourne.

Table 5.5: Median house prices selected Shires 1994 and 2003

| Area | 1994 value | 2004 value | Annual change |
|------------------------------|------------|------------|---------------|
| Wellington Shire | \$73,500 | \$150,000 | 7.39% |
| East Gippsland Shire | \$82,000 | \$185,000 | 8.48% |
| South Gippsland Shire | \$80,000 | \$182,000 | 8.57% |
| Bass Coast Shire | \$75,000 | \$223,000 | 11.51% |
| Surf Coast Shire | \$134,000 | \$375,000 | 10.84% |
| Colac-Otway Shire | \$86,000 | \$190,000 | 8.25% |
| Moyne Shire | \$84,000 | \$190,000 | 8.50% |
| Glenelg Shire | \$73,000 | \$158,000 | 8.03% |

Within the study area median house prices have generally grown at a higher annual rate than the respective municipal changes, particularly in the last five years. Mallacoota and Metung have recorded significantly higher rates of price increase in this period.

5.3 TOURISM ACTIVITY

Gippsland Region

Based on Tourism Victoria research data the Gippsland Tourist Region in the year to June 2004 attracted an estimated 1,922,000 domestic overnight visitors (5,431,000 nights) and 2,459,000 day visitors. The overnight visitors were predominantly from Melbourne (57 per cent), although 17 per cent were from interstate locations. Additionally a further 60,818 international overnight visitors stayed in the region in 2004.

Between June 1999 and June 2004:

- Domestic overnight visitation grew at an average of 3.2 per cent annually.
- Domestic visitor nights grew at an average of 1.0 per cent annually.
- International overnight visitation grew at an average of 0.1 per cent annually.
- Domestic day trip visitation fell by an average of 3.3 per cent annually.

In this period the region has increased its market share of domestic regional Victorian visitation but has lost ground in relation to its share of international visitors to regional Victoria.

In 2003 in the Gippsland region, domestic overnight visitors spent \$81 per night and \$220 per visit, day trip visitors averaged \$78 per day trip and international visitors averaged \$665 per visit. Tourist accommodation revenue per room occupied for the region was however, over 18 per cent less than the regional Victorian average (June 2004).

Gippsland is primarily a holiday destination with 57 per cent of domestic overnight visitors coming from Melbourne and a further 26 per cent from other parts of regional Victoria. The seasonality of tourism in Gippsland is similar to although slightly greater than, elsewhere in regional Victoria with 59 per cent of domestic overnight visitation occurring from December to May. The strong attraction of the natural environment of the region is reflected in 27 per cent of domestic overnight stays being in a caravan or camp site (cf 18 per cent for regional Victoria).

Nature based and adventure tourism opportunities incorporating the extensive national parks, water based activities and alpine areas are the major strength of the region. Boating interest in the region has grown rapidly in recent years with a 44 per cent increase in registered motor boats recorded for the Gippsland region between 1998 and 2004. Food and wine is of growing importance in the region and there is potential seen to expand the touring and backpacker markets.

Wellington

Tourism is not a major sector of the local economy and the Accommodation, Cafes and Restaurants sector employed 4.5 per cent of local residents which is slightly below the State average of 5.0 per cent. Since 1991 the share of Wellington residents employed in this sector has increased from 3.9 per cent.

The Shire borders the Gippsland Lakes and includes the villages of the Ninety Mile Beach as well as some spectacular high country, however all of these features are relatively underdeveloped as tourist assets.

The Port of Sale development will provide a marina and gateway to Lake Wellington and will be a focus for the local tourist industry, however the Ninety Mile Beach provides primarily for fishing but has limited attraction for beach-based tourism as there is little effective surf along this coast.

In 2003-04 the average room occupancy rate for accommodation establishments with over 15 rooms in Wellington Shire was 42.5 per cent compared to the regional Victorian average of 45.8 per cent and average nights were 1.6 compared to 1.7.

Although the natural attractions of the area are significant, the strong growth associated with other seaside areas within Victoria has not occurred.

East Gippsland

The East Gippsland Shire is associated with the Gippsland Lakes, a prime tourism asset of the State, as well as a wide range of natural attractions including the Buchan caves, the Coopacambra, Croajingolong and Alpine National Parks, as well as the Snowy River Parks and holiday destinations such as Lakes Entrance. The area has been well marketed by the Lakes and Wilderness Tourism Association and its predecessor bodies.

The Accommodation, Cafes and Restaurants sector provides 6.4 per cent of the local jobs compared to a Regional Victorian average of 5.0 per cent. Tourism areas typically have a high ratio of jobs in the retail sector (16.8 per cent compared to 15.6 per cent for Regional Victoria).

However, there are relatively few persons employed in the Cultural and Recreation Services field. This could slightly reduce the long term potential for the growth of tourism in the area, as a simple reliance on natural attractions is not sufficient in the emerging competitive markets which are focused on providing an experience and not just a holiday.

In the five years to 2003 overnight visitation to the East Gippsland area declined at an annual rate of 3.7 per cent to 660,000 and day visitation also fell. In 2003-04 establishments with 15 or more rooms experienced an occupancy rate of 44.6 per cent, which is below the Regional Victorian average of 47.2 per cent. Visitors to the area stayed for an average of 1.5 nights, compared to the regional Victorian average of 1.7 nights.

The long term health of the Gippsland Lakes is a key factor influencing the tourism industry in East Gippsland as they are one of the prime attractions for visitors who undertake various water-based activities.

The relative remoteness and peacefulness and the natural attractions of the region are extremely important in terms of tourism. The area's development potential may be limited if increased visitor volumes are not well managed, as the perception of crowding in certain areas can adversely affect the tourist's experience.

5.4 INFRASTRUCTURE

The availability of infrastructure, particularly water and sewerage and the likelihood of improvements in the foreseeable future are important factors in relation to the growth potential of the towns and areas included in this project. Three separate Water Boards are responsible for reticulated water and sewerage in the Gippsland region. TXU is responsible for retail electricity distribution. Reticulated gas is generally not available although the installation of natural gas mains from Bairnsdale to Paynesville is planned to be completed by mid 2006, with street reticulation to be completed before mid 2008.

The infrastructure that is available to each of the coastal towns varies markedly. The smaller hamlets don't generally have reticulated water or sewer and rely on tank collection of water and on site disposal of waste. Electrical supply is provided to each of the townships, but the reliability of supply does vary.




The existing infrastructure services available at each of the subject townships in Table 5.6.

Table 5.6: Current major infrastructure status of coastal towns

| Town | Sewerage Infrastructure ¹ | Water Reticulation Infrastructure ¹ | Electrical Source ² |
|-------------------------------|--|---|--------------------------------|
| Robertsons Beach | Onsite disposal | None | Foster SS |
| Manns Beach | Onsite disposal | None | Foster SS |
| McLoughlins Beach | Onsite disposal | None | Foster SS |
| Woodside Beach | Onsite disposal | None | Foster SS |
| Seaspray | Onsite disposal | Reticulated water | Sale SS |
| The Honeysuckles | Onsite disposal | None | Sale SS |
| Golden Beach / Paradise Beach | Onsite disposal | None | Sale SS |
| Loch Sport | Onsite disposal | None | Sale SS |
| Eagle Point | Reticulated sewer to Paynesville treatment | Reticulated water | Bairnsdale SS |
| Paynesville | Reticulated sewer to Paynesville treatment | Reticulated water | Bairnsdale SS |
| Metung | Reticulated sewer within town and proposed for Tambo Bluff | Reticulated water within town and proposed for Tambo Bluff | Bairnsdale SS |
| Nungurner | Onsite disposal | None, except for small area serviced by extension to Metung network | Bairnsdale SS |
| Lakes Entrance | Reticulated sewer to Lakes Entrance treatment | Reticulated water | Bairnsdale SS |
| Lake Tyers | Reticulated sewer to Lakes Entrance treatment | Reticulated water | Bairnsdale SS |
| Marlo | Reticulated sewer to Orbost treatment | Reticulated water | Newmerella SS |
| Bemm River | Onsite disposal | Reticulated water | Newmerella SS |
| Gipsy Point | Onsite disposal | None | Cann River SS |
| Mallacoota | Reticulated sewer | Reticulated water | Cann River SS |

Note:

1. Responsible Water Board

| | |
|---|-----------------------|
|  | South Gippsland Water |
|  | Gippsland Water |
|  | East Gippsland Water |

2. Significant level of interruptions to electrical supply noted at Newmerella SS and higher at Sale SS.

The likely future change in the provision of services is shown in Table 5.7.

Table 5.7: Planned infrastructure improvements to coastal towns

| Town | Services Change |
|-------------------------------|---|
| Robertsons Beach | No changes proposed, reticulated sewer and water unlikely |
| Manns Beach | No changes proposed, reticulated sewer and water unlikely |
| McLoughlins Beach | No changes proposed, reticulated sewer and water unlikely |
| Woodside Beach | No changes proposed, reticulated sewer and water unlikely |
| Seaspray | Reticulated sewer proposed |
| The Honeysuckles | Reticulated sewer and water to be investigated as part of Seaspray project |
| Golden Beach / Paradise Beach | Waste disposal options under investigation |
| Loch Sport | No changes proposed but groundwater quality deterioration may influence sewer and water proposals |
| Eagle Point | No changes proposed |
| Paynesville | Expansion according to demand |
| Metung | Reticulated sewer and water proposals being developed for Tambo Bluff |
| Nungurner | No changes proposed, extension of reticulated sewer and water unlikely |
| Lakes Entrance | Expansion according to demand |
| Lake Tyers | No changes proposed |
| Marlo | No changes proposed |
| Bemm River | No changes proposed, reticulated sewer unlikely |
| Gipsy Point | No changes proposed, reticulated sewer and water unlikely |
| Mallacoota | No changes proposed, but current water supply and suitable areas for waste water re-use may limit development |

Mobile phone coverage of the coastal towns within the Wellington Shire is limited to the CDMA network, with the exception of Seaspray that does have some GSM network coverage. The East Gippsland coastal towns have GSM coverage except for Bemm River.

Many of the towns in the study area have considerable lengths of unsealed roads, little formal drainage systems and public facilities that are placed under heavy demand in peak holiday periods.

Infrastructure strategies in the Wellington Planning Scheme include ensuring that cost effective infrastructure is provided for present and future development of the Shire's towns. Innovative forms of service provision are also encouraged where demonstrated to be environmentally sustainable.

5.5 PETROL PRICING

It is likely that oil prices will continue to rise as world supply growth is not keeping up with demand growth, which is primarily being generated by China and India. As a result, higher petrol prices are to be expected throughout the developed world. However, it is important to note that relative to inflation, petrol is currently cheaper than

it was 30 years ago during the first oil price shock of the early 1970s and it is probable that increased prices will be absorbed by society and not significantly affect car use.

In addition, as petrol becomes more expensive, other forms of power such as electricity theoretically become cheaper and this may prompt further development of other types of transport such as the fast rail link. Living in regional Victoria does involve a heavier reliance on private vehicle use, however it is considered that the cost of petrol will not become a determining factor in terms of people's lifestyle choice. A significant rise in petrol price may however, affect the ability to travel of retirees on limited incomes.

5.6 ACCESSIBILITY IMPROVEMENTS

There exist a range of proposed road and railway upgrades which will significantly improve access to the Gippsland region.

The Priority Transport System Improvements Map in the East Gippsland Planning Scheme identifies the reinstatement of passenger railway services to Bairnsdale (existing), the duplication of the Princes Highway to Bairnsdale and an increase in passing lanes on the Princes Highway between Lakes Entrance and Mallacoota.

Other upgrades either proposed or mooted by VicRoads, which if implemented would enhance accessibility of the region include:

- Princes Highway – Pakenham By-pass.
- Upgrading of the South Gippsland Highway between Lang Lang and Sale.
- Investigation of Princes Highway duplication, Traralgon to Sale.
- Improvements to Bairnsdale-Bruthen-Nowa Nowa by-pass of Lakes Entrance.

6. ENVIRONMENTAL ISSUES

6.1 OVERVIEW

The study area stretches from Corner Inlet (just north-east of Wilson's Promontory) to Gipsy Point/Mallacoota, in the far east of the State, a distance that covers approximately 40% of the Victorian coastline (areas within around 5 kilometres of the coast are considered).

The climate of the region is temperate, with patterns of precipitation and temperature influenced by geography, topography, altitude and proximity to the coast. The plains and coastal areas are subject to mild temperatures. The coastal region receives between 600-800mm rainfall per year on average and has an average annual temperature range between 6°C (min.) and 26°C (max.).

This region supports very high levels of diversity of native plants and animals, not only due to the length of coastline included, but also because much of the coastline is relatively undisturbed, with large areas of contiguous vegetation. There are 47 Ecological Vegetation Classes that occur within this area, many of which are considered to be severely depleted elsewhere in Victoria. There are 1,900 flora species known from the area, and around 600 fauna species; represented by over 80 mammal, 300 bird, 40 reptile, 20 frog and 100 fish species.

This area covers two terrestrial bioregions: the Gippsland Plain (from Corner Inlet to Lakes Entrance) and the East Gippsland Lowlands (between Lakes Entrance and Mallacoota). It also includes one marine bioregion (Twofold Shelf), which includes the bays, inlets, estuaries and open coast of the region.

The Gippsland Plain bioregion within this area includes lowland coastal and alluvial plains, which are generally characterised by flat to gently undulating terrain. The coastline is varied and includes sandy beaches backed by dunes and cliffs, and shallow inlets with extensive mud and sand flats. The indigenous vegetation includes lowland forests, grasslands and grassy woodlands, heathlands, shrublands, freshwater and coastal wetlands, mangrove scrubs, saltmarshes, dune scrubs and coastal tussock grasslands.

The East Gippsland Lowlands bioregion is characterised by gently undulating terraces flanked by coastal plains, dunefields and inlets. The vegetation is dominated by forest ecosystems, but Banksia and heathy woodlands, heathlands, rainforest and riparian scrub vegetation are all common around the coastal areas. The diversity of plants (and animals) in the coastal areas of the far east of the State is partly due to the extensive retention of native vegetation when compared with all other regions of Victoria.

6.2 KEY CONSERVATION AREAS

6.2.1 National Parks

There are two National Parks in the region: Croajingolong and The Lakes National Parks. There are also four Marine National Parks: Cape Howe, Point Hicks, Corner Inlet, and Ninety Mile Beach. A suite of other Marine Reserves and Coastal Parks also occur: the Nooramunga Marine and Coastal Park and Gippsland Lakes Coastal Park, Ninety Mile Beach Coastal Reserve, Cape Conran Coastal Park, Lake Tyers Regional Park, Nyerimilang Heritage Park and the Beware Reef Marine Sanctuary. These Parks cover different ecosystems and a range of habitat types and often possess high species diversity.

For example, at Croajingolong National Park, 52 mammal species, 26 reptile species

and 306 species of birds have been recorded. The high levels of bird diversity represents about half of Victoria's and a third of Australia's total bird species. Six owl species live in the forests of Croajingolong National Park.

The Park is significant for some faunal species whose distribution reaches its most southerly extent, such as the Green and Golden Bell Frog and the Diamond Python. Threatened species found in the park include the Ground Parrot, Eastern Bristlebird, Smoky Mouse, Grey-headed Flying Fox, and the Australian Fur Seal. Not surprisingly, this park is one of the most significant conservation reserves in Victoria, and is one of the State's three Biosphere Reserves.

6.2.2 Ramsar Sites

Two sites within the region are listed under the Ramsar convention as wetlands of international importance: Corner Inlet Ramsar Site and Gippsland Lakes Ramsar Site.

Corner Inlet Ramsar Site

The Corner Inlet Ramsar site is the most southerly marine embayment and tidal mudflat system of mainland Australia. The mainland coast and several sandy islands within the inlet are covered with mangroves and salt marshes (both of which are communities of limited distribution within Victoria), sandy beaches and very extensive intertidal mudflats. The area contains the only extensive bed of the Broad-leafed Seagrass *Posidonia australis* in Victoria.

The barrier islands of Corner Inlet are of national botanical significance (as a result of their past submergences), and national geomorphologic significance as an example of barrier island formation.

Corner Inlet Ramsar site is of international zoological significance for its migratory wader population. Thirty-two wader species have been recorded in the Inlet. The area regularly supports an estimated 35,000 waders (migratory and non-migratory), which represents 25% of the total known Victorian wader population. Corner Inlet also has the largest wader population in Victoria, the second largest population of waders in the southern half of Australia and the most diverse range of species in the southern half of Australia.

It is estimated that nearly 50% of the overwintering migratory waders in Victoria occur in Corner Inlet. The Little Tern (endangered in Victoria) and Fairy Tern (vulnerable in Victoria) breed at Corner Inlet. It is thought that the area may contain over 15% of the world population of the Eastern Curlew.

Gippsland Lakes Ramsar Site

The Gippsland Lakes are also listed as a Ramsar site. The Gippsland Lakes are a group of coastal lagoons separated from the sea by a broad sandy barrier fronted on the seaward side by the Ninety Mile Beach. The main lakes: Wellington, Victoria and King, cover an area of 340 square kilometres and have a shoreline of 320 kilometres.

The Lakes are fed by a number of river systems, which include the LaTrobe, Avon, Mitchell, Nicholson and Tambo Rivers. The system is linked to the sea by an artificial entrance near the eastern end at Lakes Entrance. The barrier formations, dunes and dunes lakes, relict entrances, channels and tidal delta islands are of major importance in illustrating the evolution of the barrier systems of the Gippsland Lakes (ie, The Mitchell River Delta is a site of International Geological / Geomorphologic Significance as an example of an eroded digitate delta).

The permanence of the main lakes and the relatively regular flooding of the adjacent

wetlands mean that this wetland system is an important drought refuge for many waterfowl. The Lakes and their associated swamps and morasses regularly support an estimated 40,000 to 50,000 ducks, swans, coots and other waterfowl.

Lake Reeve is a site of international zoological significance. It attracts up to 12,000 migratory waders and is one of the five most important areas for waders in Victoria. The lake has supported the largest concentration of Red Knot recorded in Victoria, as well as significant numbers of Sharp-tailed Sandpiper and Curlew Sandpiper.

In low lying areas which are periodically inundated, the vegetation is a wet scrub type dominated by Swamp Paperbark, which occurs as dense thickets up to 10 metres tall. This wet scrub is fringed on the lakeside by Common Reed. In the more saline parts of the swamps around the lakes there is salt marsh vegetation of Glasswort with Shore Rush, Saw-sedge and Sea Grass.

6.3 MAJOR THREATS

A significant threat to the Gippsland Lakes and surrounds is the intrusion of saline marine water. This leads to depletion of shoreline vegetation such as the Common Reed, leading to shoreline erosion and thus accelerated deposition in lakes; increased stress from wind-borne salt on vegetation near to the shoreline and above the water level; wetland habitat degradation and loss through vegetation change, with a consequent loss of wetland fauna.

The increasing problem of salinity has particularly affected the low-lying land and fringing wetlands around Lake Wellington. Some 10,000 hectares of land are affected. The shift to saline conditions has restricted the available habitat for a number of bird species (eg, the endangered Little Tern) and caused a loss of breeding habitat for fish (ie, through loss of Sea Grass), leading to fluctuations and declines in estuarine fish populations. Other factors contributing to shoreline erosion include trampling by cattle grazing on river banks, access by anglers, and scouring by boat wash.

Generally, factors affecting the ecological character in the Lakes region include: alteration to the Lakes Entrance ocean outlet, with consequent alteration of the salinity regime and gradient of the lakes; reduction of flooding frequencies and flooding duration for the major tributary rivers through water storage developments and water extraction.

This highly valued section of the Victorian coastline and the adjacent hinterland is subject to similar pressures associated with residential and general development that threaten the remainder of the coast. Particular threats to this region include:

- spread of introduced Cord Grass;
- dieback of Seagrass beds (approximately 20-25% of Broad-leafed Seagrass present in 1976 had disappeared by 1984);
- changes to water quality due to high nutrient input from catchment run-off;
- oil spillages from either offshore drilling, accident or the disposal of ships' waste;
- exposure or disturbance of acid sulfate soils;
- clearing and fragmentation of habitat to make way for development (housing, infrastructure and commercial facilities);
- inappropriate land drainage;
- recreational pressures including loss of shorebird breeding habitat from more intense use of beaches;
- depletion of the fishing resources in some estuarine and lake areas due to the

demands of commercial and recreational fishers;

- disturbance to wildlife (particularly waterbirds and waders) from noise and light (at night) pollution and human intrusion; and
- inappropriate fire regimes in native vegetation caused by wildfires of human origin.

6.4 CHANGE FACTORS

The world's climate is changing and Australia's average temperatures have increased 0.8°C since 1900. It has been concluded by the Intergovernmental Panel on Climate Change (IPCC) that the activities of humans are interfering with the climate.

Carbon dioxide emissions caused by burning fossil fuels for electricity and transportation, as well as land clearing, in addition to the release of methane and nitrous oxide are the key contributors to climate change. Increased levels of these greenhouse gases are warming the lower part of the Earth's atmosphere. The rate of climate change may be slowed through the reduction of greenhouse gas emissions, however some level of climate change in the future is inevitable.

Climate change can affect precipitation, wind patterns and the frequency and severity of extreme weather events. Regional climate change projections for Victoria have been prepared by the CSIRO and predict that by 2070: the State will be 0.7-5.0°C warmer than it was in 1990; extreme maximum temperatures will be up to three times more likely in some areas; frequency of frosts and rainfall will both decrease; extreme rainfall events may increase; sea level rise of 7 to 55 cm (0.8 to 8.0 cm per decade) and weather conditions conducive to bushfire will increase.

CSIRO projections have been developed for the Gippsland region with subtle differences identified between East and West Gippsland. In general, the future climate of the area is expected to be warmer and drier than it is presently and winds are likely to intensify in coastal regions.

Potential impacts of climate change include: reduced agricultural production due to higher temperatures and rainfall decreases affecting grazing and horticulture; rainfall and evaporation changes affecting the Mitchell, Tambo and Snowy Rivers and the water quality of the Gippsland Lakes and wetlands; threats to marine biodiversity and estuarine ecosystems due to changes to salinity, sea-level rise and loss of vegetation on the coastal fringe; and potential human health impacts and effects on structural design and energy demand.

Sea-level rise is of particular concern to low-lying settlements, such as those located along the Ninety Mile Beach, which would be threatened by even a small increase in the water level. Land subsidence associated with the extraction of oil, gas and water from the Gippsland basin has the potential to affect coastal erosion processes, salinity levels in the Gippsland Lakes and flooding/tidal impacts in low lying areas. While research indicates that potential subsidence is significant the extent and magnitude of such impacts are not well understood and as a long term issue, monitoring and analysis of risk are continuing.

7. CONCLUSIONS

7.1 KEY REGIONAL ISSUES

Policy

The policy framework for the region identifies the following key strategic directions that are particularly relevant to coastal settlements:

- Protection of the coastal environment, landscape and character, including Ramsar wetlands and the water quality of the Gippsland Lakes.
- Manage development within defined township boundaries and prevent a proliferation of development outside of settlements.
- Facilitate development within settlements according to the infrastructure, environmental and physical capacity of each settlement.
- Provision of boating facilities and opportunities for water-based activities.
- Encouragement and appropriate management of coastal dependent industry.
- Further development of the tourism industry, focused on nature-based activities.

Potential gaps in planning policy include satisfactory management of development design, defining settlement edges, tourism development outside of settlements and links between the ageing population of the region and infrastructure/service provision.

Social Factors

In terms of demographic change, the region is set to age significantly with reasonably strong population growth to take place in East Gippsland Shire, primarily through immigration of older persons. Household sizes will continue to decrease and therefore the number of dwellings will increase accordingly.

Coastal areas have generally recorded significant growth rates compared to low growth or population declines in most other settlements in the region.

The 'sea change' phenomenon is likely to continue, contributing to the ageing of the population and having a somewhat adverse effect on the economies of coastal communities, while placing pressure on existing resources. Towns with higher quality amenity and setting can be expected to be subjected to greater growth pressures.

Economic Factors

The economic profile of the region indicates the key industries are Agriculture, Forestry and Fishing, Retail Trade and Health and Community Services. Wellington has strengths in the dairy industry and a reasonable outlook in the Oil and Gas sector. Forestry is important for East Gippsland and tourism related sectors (eg, Accommodation, Cafes and Restaurants) are also relatively strong. The substantial seasonal fluctuation of tourist visitation constrains economic development and creates management issues.

Wellington Shire is set for a continuation of stable economic growth and agricultural production should increase but not provide a boost to employment. The tourism industry is relatively underdeveloped but the natural assets of the municipality – lakes, oceans, alpine areas and parks provide opportunities for niche activities with an environmental focus. The key change for Wellington will be the increased provision of services to support the ageing of the population.

East Gippsland Shire has enjoyed some growth in its economy and population over recent years and the future is likely to see continued growth of tourism related sectors particularly in the major centres on the Gippsland Lakes and the wilderness coast areas in the far east. Forestry and agriculture will remain important components of the local economy and manufacturing employment growth may continue as some infrastructure constraints have been removed in recent years (eg, the building of the Bairnsdale gas powered electricity generator).

There is significant variation in the servicing infrastructure available to the towns in the study area. Reticulated sewerage is not provided in all of the project towns in Wellington Shire and with the exception of Seaspray, they do not have reticulated water. Actions to improve this situation have been initiated. In contrast, five of the larger towns in the East Gippsland portion of the study area have reticulated water and sewerage. The lack of these services is a significant constraint on future development where not currently provided.

Other infrastructure needs to cope with a growing population, recreation and tourism demand, particularly improvements to roads, drainage and boating infrastructure are considerable.

The ageing of the population will also be a key feature of the region's future and will require a restructuring of community services and facilities in the coming years.

The Environment

The region is of environmental significance and includes large areas of relatively undisturbed coastline, supporting high levels of biodiversity. Impacts on the environment associated with population increases, development, recreation and water-based activities need to be carefully managed to ensure the environment is not further degraded. Native fauna habitat within and around settlement areas requires particular protection.

Extensive areas of the coast in the region contain dense stands of native vegetation, which often surrounds and extends into settlements. Many of the settlements in this project are vulnerable to the threat of wildfire.

Climate change is a broader environmental issue which may significantly affect some of the towns, particularly in Wellington Shire, through sea-level rise. Storm surge impacts may be considerable along the fragile and low lying Ninety Mile Beach coastline. Future planning of these towns must be undertaken in this context.

7.2 SUMMARY AND DIRECTIONS

In summary, at a strategic level, the Urban Design Frameworks for each of the settlements must provide for development that will suit the projected population profile (ie, ageing), conserve and enhance environmental values, recognise the broader regional economic development prospects, provide and manage boating opportunities and in the case of East Gippsland, support and provide for tourism-related uses, particularly those operating year round.

The review of the regional issues identifies that the population and housing growth in the region has been focused in coastal areas. Given the analysis of policy, economic growth prospects, social change and environmental attributes the major coastal towns of the region – Lakes Entrance, Paynesville, Loch Sport and Mallacoota are expected to be the locations of the majority of future development demand. As the major urban centres, these towns generally contain the significant service and social infrastructure required to support this growth (the lack of reticulated water and sewerage at Loch Sport is a notable exception). The detailed investigations of the settlements in this

project will assess the capacity and capability of these towns to accommodate future demands.

At the other end of the scale, policy and environmental considerations heavily constrain future development in locations where no waste disposal infrastructure exists or where sensitive wetlands or similar environments are dominant in their setting. Settlements generally within this group include: Robertsons Beach, Manns Beach, McLoughlins Beach, Woodside Beach, Bemm River and Gipsy Point.

The balance of the settlements subject to this investigation are likely to play a middle tier role in relation to future coastal development. Some contain considerable areas of developable land but are constrained by a lack of services at present, others require a detailed assessment of their environmental capability or strategic role in relation to other centres to identify the appropriate level of future growth.

The subsequent detailed investigation of these settlements and areas surrounding them as part of the further stages of this project will enable the role and function of each town to be defined more precisely. The following table provides a preliminary identification of the role and function of the settlements within this project based on this regional analysis.

| | |
|--|---|
| High attraction for growth | Lakes Entrance, Paynesville, Loch Sport, Mallacoota |
| High constraints on growth | Robertsons Beach, Manns Beach, McLoughlins Beach, Woodside Beach, Nungurner, Bemm River, Gipsy Point |
| Potential for growth requires detailed assessment | Seaspray, The Honeysuckles, Golden Beach / Paradise Beach, Eagle Point, Metung, Lake Tyers Beach, Marlo |