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PART A STRUCTURE PLAN

1.0 Introduction

1.1 Purpose of the Structure Plan

The Indented Head Structure Plan is a strategic framework for the future planning and development of the township.

The purpose of the Structure Plan is to:

- identify the key strategic planning issues facing the township, including community aspirations and needs;
- articulate the preferred future planning directions for the township, including the location of Settlement Boundaries; and
- identify appropriate planning controls which will protect and enhance the distinctive elements of the township, biodiversity and landscape features.

1.2 How will this plan be used?

The Structure Plan is to be used by the City of Greater Geelong to determine the application of local planning policies, planning zones and overlays. It will guide Council's consideration of proposed rezonings and applications for planning permits. Council will also use the Structure Plan to determine the future provision of infrastructure and services in the township.

Implementation of the Structure Plan for Indented Head will provide certainty for residents and landowners regarding the future planning direction for the township until the year 2020. The take-up of land and redevelopment will be reviewed every five years and if considered appropriate a full review of the Structure Plan should be undertaken.

1.3 Plan Components

The Indented Head Structure Plan contains three parts, **Part A** "*Structure Plan*", **Part B** "*Implementation & Review*" and **Part C** "*Background Report*".

Part A contains the Structure Plan which sets out principles and directions developed in response to the key influences identified in the Background Report, for the following themes:

- Urban Growth
- Infrastructure
- Settlement and Housing
- Natural Environment
- Economic Development and Employment
- Rural Areas

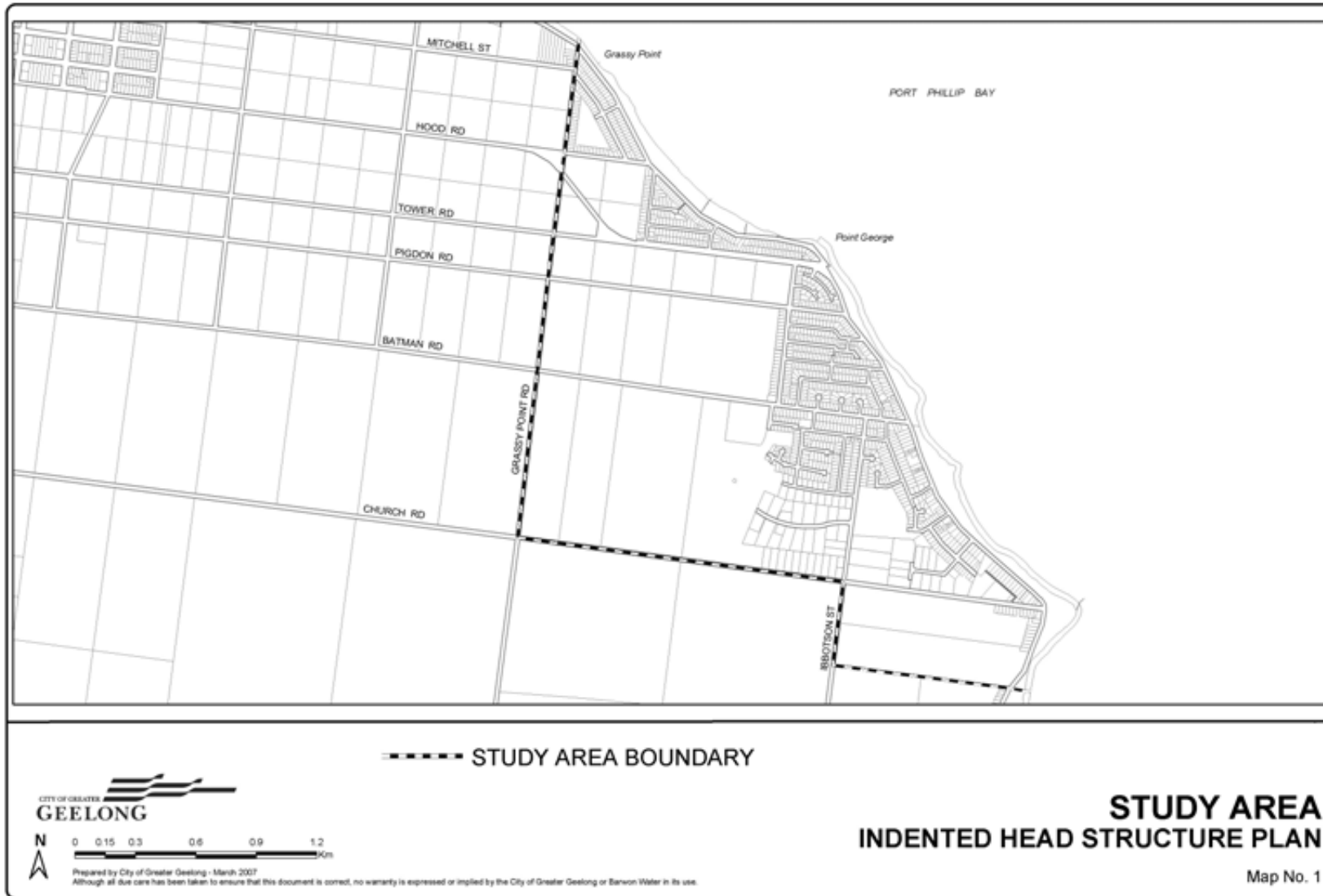
Part B contains the Implementation Program for the Structure Plan. It establishes development principles and recommendations for the application of overlay controls, identifies the need for any further strategic work, and nominates the circumstances for the review of the Structure Plan.

Part C provides the foundation of, and contextual information for the Structure Plan. It identifies the issues, opportunities and constraints facing the township, in the following categories:

- Policy Context
- Natural and Urban Environment
- Demographics & Social Profile
- Township Facilities and Services
- Transport and Physical Infrastructure
- Township Growth and Residential Lot Supply

1.4 The Study Area

The Structure Plan will apply to the township of Indented Head and its immediate surrounds, identified on Map 1. The Study Area extends beyond the existing urban area of Indented Head to enable consideration of the role and future use of land within the rural interface on the periphery of the existing urban zones.



2.0 Key Influences

The Background Report identifies and discusses, in detail, key issues, opportunities and constraints, which assisted in determining the key directions developed within the Structure Plan.

2.1 Policy Context

- Indented Head is not a location designated for extensive residential or rural residential growth within Council's Municipal Strategic Statement;
- There is a need to nominate a clear Settlement Boundary for the township and provide for a compact urban form;
- Sensitive environmental assets and landscape features within the Study Area should be preserved, protected and enhanced;
- Strong State and Local Planning Policy provide directions for:
 - the protection of coastal environments;
 - the protection of rural environments and agricultural activities;
 - enhancement of building design and built form in the township, including the application of a range of policy and statutory controls;
- Opportunities exist for the enhancement of open space areas, recreational facilities and linkages;
- Retail development should be consistent with the established retail hierarchy and provision should be made for appropriate incremental growth;
- Community facilities should be provided commensurate with community needs and sustainability of service provision.

2.2 Natural and Urban Environment

- Significant landscape and biodiversity features, including remnant vegetation, require protection and enhancement.
- The need to appropriately manage the environment and landscape to conserve and protect Aboriginal cultural heritage values;
- Climate change and resultant sea level rises could have significant impacts on low lying coastal townships and surrounding areas;
- Support the on-going management of significant landscape and environmental assets by public land managers;
- The opportunity to enhance key views and vistas;
- The opportunity to control the form of development along the foreshore-coastal urban edge through the application of a Design and Development Overlay;
- The need for further strategic assessment to support the introduction of additional biodiversity planning controls, and design and/or landscape planning controls over the area;
- Ensure new subdivisions and developments respond to key landscape settings, environmental assets and existing township character.

2.3 Demographics and Social Profile

- The high proportion of older residents, and other residents, who live alone and may need to receive significantly higher levels of community and social services;
- There are high dwelling vacancy rates during the off season and a seasonal influx of large numbers of non-permanent residents and holiday-makers;
- There is a low labour force participation rate and, consequently, low income rates per household;
- Employment categories and journey to work data indicates that the majority of Indented Head residents who are in the workforce, are employed outside the township;
- Indented Head is an area of high socio-economic disadvantage;
- The residents of the township rely almost entirely on private cars for transport;
- There is an increasing need for the provision of a greater range of housing choices.

2.4 Township Facilities and Services

- The township relies upon Portarlinton and St Leonards for most of its basic services;
- The Indented Head community relies on community, health and social services provided on a region-wide basis;
- The opportunity to support the establishment of a community meeting place in the Indented Head Community (Boat Club) Hall, which may be able to accommodate visiting community and social services in the future;
- The opportunity to support recommendations of previous studies to enhance open space and recreation areas, and to improve and further develop linkages between existing and future recreational facilities.
- The opportunity to pursue a land swap between Council and a developer at Batman Road, Indented Head to provide a substantial linear parcel of open space, incorporating protection of areas of significant vegetation;
- The opportunity for further investigation to determine the future use/role of the Coach Road recreation reserve;
- Tourism is a significant component of the local economy and opportunities exist to support and improve tourist accommodation options, tourism activities and uses to lengthen the tourism visitation period, and improvements of facilities and access to the foreshore, waterways and environmental areas;
- Aquaculture is likely to be a growth industry in the area and has the potential to provide local employment opportunities for the residents of Indented Head.

2.5 Infrastructure

- Urban stormwater runoff poses a substantial threat to sensitive environments and sub-catchments and further studies need to be undertaken to identify mitigation measures;
- Augmentation to the reticulated water supply and sewerage systems servicing Indented Head may be required to cater for future development;
- Opportunities exist for the use of recycled water in proximity to the Portarlinton Water Reclamation Plant;
- The number of stormwater outfalls to Port Phillip Bay should be limited;
- Water conservation and stormwater re-use measures should be incorporated into new developments;
- There are physical constraints to the provision of stormwater drainage infrastructure on low lying coastal land;
- Any improvements required to road, footpath and stormwater drainage infrastructure within the township are to be funded by Special Rates and Charges Schemes;
- The funding of future infrastructure can be assisted by the preparation of a Developer Contributions Plan;
- There are limited public transport services linking Indented Head to other centres, and within the township itself;
- There is a need to improve the limited pedestrian and bicycle linkages throughout the township and within open space areas.
- There is a need to examine collector roads, such as, Ibbotson Street, within the township, to determine if any traffic safety devices or measures are required.

2.6 Township Growth and Residential Lot Supply

- There has been a historically slow take-up of land in the township;
- A substantial residential lot supply is available within the existing Settlement Boundary at Indented Head;
- Opportunities exist to consolidate short term residential growth within the existing residential areas.

3.0 The Plan

3.1 Vision

The vision for the Indented Head township was derived from the Bellarine Peninsula Strategic Plan and reads as follows:

*“The peace and quiet of **Indented Head** is the most valued aspect of the township. The small and cohesive community is its most important and valued resource. Our vision for this small and idyllic hamlet is to improve the environment, to ensure better amenities for community and visitors, while retaining our most valued small community and peaceful way of life.”*

The Structure Plan establishes planning principles and directions consistent with achieving this vision.

3.2 Role of the Township

The traditional role of Indented Head has been that of a seaside holiday village and retirement centre, serving a small permanent population. The town is not identified as a growth location within Council’s Urban Growth or Rural Residential strategies for residential or rural residential development, or as a location for major commercial or business activity.

The sensitive coastal, environmental and rural settings of the township and associated State and Local Planning Policies preclude extensive township growth. Local services and facilities are limited to the provision of daily needs and requirements, although Portarlington provides some support services for the north-eastern part of the Bellarine Peninsula, including Indented Head and St Leonards.

3.3 Principles and Directions

The structure plan identifies principles (objectives) and directions (strategies) relating to the key planning themes:

- Urban Growth
- Infrastructure
- Settlement and Housing
- Natural Environment
- Economic Development and Employment
- Rural Areas

3.3.1 Urban Growth

The existing residential lot supply in the township is sufficient to meet anticipated housing demand over the next 24 to 35 years. Given the identified key influences, including sensitive environmental settings and State and Local Government directions to maintain a compact urban form, it is appropriate to define a Settlement Boundary.

The nominated Settlement Boundary for Indented Head coincides with the existing "Limit to Urban to Expansion".

The nominated Settlement Boundary at Indented Head has been delineated to provide distinct urban, rural and environmental interfaces as follows:

- The southern boundary at Indented Head is located between the existing residential zoned properties and the Salt Lagoon Wildlife Reserve, to provide continued protection of the ephemeral edge of the lagoon and a 'rural break' between Indented Head and St Leonards.
- The land to the west of the existing township should remain rural, consistent with adopted policies which advocate containment of settlements and the retention of the Bellarine Peninsula as a predominantly rural area with clearly defined township and landscaped areas.
- The northern and eastern boundaries are fixed by the Port Phillip Bay foreshore reserve.

Principles

- To protect the unique character of Indented Head as a small coastal village located within a sensitive environmental and significant landscape setting.
- To maintain a compact urban form and avoid linear sprawl of the township.
- To direct future residential expansion away from sensitive environmental areas.
- To ensure all new urban development is undertaken in a sustainable manner, having regard to matters, such as, water conservation, stormwater reuse and energy conservation.

Directions

- Ensure that urban development does not occur outside the defined Settlement Boundaries shown on the accompanying Indented Head Structure Plan Map;
- Encourage appropriate infill residential development in residential zones where drainage and servicing issues can be resolved;
- Ensure urban development does not encroach on to, or have adverse effects on, significant environmental features.

3.3.2 Infrastructure

Although the Settlement Boundary generally coincides with the existing “Limit to Urban Expansion” at Indented Head, there is a need for some improvements to infrastructure, such as, roads, footpaths, drainage, water and sewerage, servicing the township.

The Bellarine Peninsula Leisure and Recreation Needs Study 2005 includes a number of recommendations about the enhancement of, and improvement to, existing leisure, recreation and open space areas within the township. These recommendations are consistent with the Structure Plan’s identification of the needs of the community and, if implemented, would be of significant benefit as better linkages and improved recreational opportunities would be provided for all sections of the community.

A strategy for improving community and social services within the township is outlined in the Bellarine Peninsula Community Service Plan 2006-2016. The actions included in the Service Plan are consistent with the needs of the community identified in the Structure Plan. In particular, the establishment of a community meeting place in Indented Head may provide a venue to accommodate visiting community support services in the future, as well as enhancing the sense of community in the township.

Funding of infrastructure is increasingly based on user pays principles, which is accepted as a legitimate means of providing the necessary capital for new infrastructure and maintenance of existing infrastructure.

It is Council policy to make maximum use of special rates and charges schemes under the provisions of the Local Government Act 1989. These schemes are applied in existing developed or subdivided areas which lack necessary urban infrastructure, such as, sealed roads, footpaths, kerb and channel, and drainage.

A common factor of such schemes is that where property owners benefit from the works, they contribute to the cost. Council has formulated a policy, known as the Comprehensive Infrastructure Funding Policy (CIFP) to guide levels of landowner and Council contributions toward the cost of works.

To provide equitable assistance with infrastructure funding in the municipality, the City of Greater Geelong has resolved to implement Development Contributions Plans (DCPs) in appropriate locations. A DCP is a statutory tool used to impose levies on the proponents of new developments, to obtain fair and reasonable contributions towards specified, pre-scheduled infrastructure, including facilities and works.

Council may prepare a DCP for Indented Head to assist in the meeting of costs of providing infrastructure necessary to support future growth and development in the township. However, further investigation is required to determine any infrastructure needs and the financial contributions required to provide the infrastructure.

Principles

- To encourage the provision of a range of social and community services commensurate with the size and role of the township.
- To provide an improved transport and movement network, including pedestrian and cyclist linkages, throughout the township and linking with surrounding settlements.
- To provide adequate levels of public open space, both within the existing and proposed residential areas, to cater for the passive and active recreation needs of the community.
- To provide appropriate infrastructure, such as, drainage, water supply, reticulated sewerage, electricity, natural gas, and telecommunications in newly developing areas.
- To ensure new development adequately addresses stormwater drainage, including downstream storage and management requirements, and incorporates water sensitive urban design principles.

Directions

- Support the establishment of a community meeting place in Indented Head within the Community (Boat Club) Hall.
- Support the actions of public land managers to undertake the ongoing upgrading of open space, leisure and recreation areas including provision of pedestrian/bicycle linkages.
- Support the development of an ongoing program to construct footpaths along key pedestrian routes in the township.
- Review the Indented Head Stormwater Reuse Pilot Study to determine its effectiveness in reducing impacts of stormwater discharge on the coastline.

3.3.3 Settlement and Housing

It is expected that over the next ten years, there will be a continual increase in the number of older persons residing within the township. It will be necessary to provide a range and style of housing that will be suitable for those residents. Furthermore, such housing should be located close to existing commercial, social and other relevant services and facilities which meet the daily needs of those residents.

Further consolidation of residential development in the urban areas should occur as existing housing stock is redeveloped. This will provide increased opportunities for sustainable service provision, including improvements to public transport services and enhancement of a sense of community within the township.

It will be important to preserve the residential character of the township, whose attributes include an open coastal setting, modest scale buildings and landscape features. Features of particular importance are the residential areas along the foreshore/coastal edge which form an intrinsic part of the character of Indented Head.

The Implementation and Review section of the Structure Plan provides a number of principles relating to urban form and character within the township, including future subdivision development principles and the development, as appropriate, of additional planning scheme controls.

Principles

- To ensure that future housing development provides for a variety of housing sizes and types, and complements the character of Indented Head.
- To promote sustainable development principles in new residential subdivisions and infill development and provide water sensitive urban design and stormwater treatment and re-use to minimise impacts on environmentally sensitive land, open space and receiving waters.
- To achieve a high standard of urban design that integrates with the coastal character of the township and protects and enhances environmentally sensitive areas, such as, the Salt Lagoon Wildlife Reserve.
- To provide for the substitution of drinking water used for non-drinking purposes with reused and recycled water.

Directions

- Encourage development which respects the coastal landscape setting of Indented Head, by providing reasonable sharing of views of the coast and foreshore, and by promoting contemporary design that reflects the existing scale, setbacks and spacing, forms and materials of buildings in the locality.
- Apply overlay controls to the foreshore frontage/coastal edge to ensure that residential development complements the streetscape character and coastal interface.
- Encourage housing development which is consistent with the preferred character identified in the City of Greater Geelong Residential Character Study 2001.
- Encourage development which allows for the protection of significant vegetation and/or planting around buildings and which has minimal impact on roadside vegetation.
- Encourage incremental infill medium density housing throughout the Residential 1 zoned areas, subject to neighbourhood character considerations.
- Encourage urban development to accord with the Subdivision and Development Principles identified in the Indented Head Structure Plan.

3.3.4 Environment

The landscape features of the area surrounding Indented Head have two important roles, firstly providing intrinsic habitat and biodiversity values to the local and wider environment, and secondly establishing the identity of the township and community.

Areas of environmental and landscape value often have Aboriginal cultural heritage significance, particularly the coastal area, so it is essential to appropriately protect and manage these areas in manner that is respectful to the indigenous community. The designation of a Settlement Boundary that excludes key environmental features from urban development will assist in the protection of these areas.

The Structure Plan supports the continued application of the Environmental Significance Overlay to the Salt Lagoon Wildlife Reserve, and the Vegetation Protection Overlay to significant roadsides and linear reserves, to ensure the permanent protection of all identified environmental values.

Communities on the Bellarine Peninsula, particularly those of Indented Head, strongly support the protection of the Bellarine Hills landscape. The community values this landscape as it is intrinsic to the character of the township, and the Hills provide a natural backdrop to the settlement, as well as providing a series of outstanding coastal and hinterland views.

The Department of Sustainability and Environment Coastal Spaces Recommendations Report (April 2006) proposes the application of Significant Landscape Overlays over the Bellarine Hills. This Structure Plan strongly supports the introduction of this Overlay to assist in limiting the establishment of structures and landscaping treatments which may obstruct the expansive views to Indented Head from Murradoc Hill. However, as the proposed Overlay areas are beyond the Study Area, the introduction of these controls should form part of the wider implementation of the Coastal Spaces project.

Public land managers, such as, the Bellarine Bayside Foreshore Committee of Management, Parks Victoria and the City of Greater Geelong, manage other key landscape features on the Bellarine Peninsula in the vicinity of Indented Head. These land managers will ensure the long-term protection of the significant environmental values of these areas through their sensitive on-going maintenance while providing, where appropriate, community access to, and good linkages across, public land.

Increased development in the township has the potential to impact adversely upon the quantity and quality of stormwater runoff into waterways and Port Phillip Bay. It is recommended that further investigation be undertaken by Council to quantify the extent of drainage problems and identify and undertake appropriate mitigation measures. Subdivision Development Principles are identified in the Implementation and Review section of the Structure Plan, which encourage appropriate stormwater treatment and re-use, as well as restricting downstream stormwater flows to pre-development levels.

The Implementation and Review Section, Part B of the Structure Plan recommends that future work to be undertaken should include the further investigation of sites of significant vegetation within the townships and, where appropriate, the application of additional Overlay controls to ensure the long term enhancement and protection of the natural environment.

Principles

- To protect the landscape character of the township and the ecological sensitivity of the surrounding environment.
- To ensure environmentally sensitive areas, appropriate buffers and identified ecological networks are protected from development.
- To ensure the existing and future landscape and neighbourhood character is adequately protected and enhanced with additional landscaping appropriate to the location of the township.
- To provide a sense of identity and place for Indented Head through the upgrading of the gateways to the township.

Directions

- Actively support public land managers in the on-going management, enhancement and sensitive development of the foreshore reserve and the Salt Lagoon Wildlife Reserve;
- Provide for the protection of Aboriginal cultural heritage values;
- Encourage retention and enhancement of existing vegetation on private land, roadsides and reserves using indigenous species;
- Ensure that development adjacent to Areas of Significant Landscape, Environment & Recreation value shown on the Structure Plan is undertaken in a manner which complements and does not impact adversely upon these features;
- Ensure subdivision development meets the stormwater and landscaping principles outlined in the Subdivision and Development Principles;
- Protect and enhance key vistas and view lines to the coast and environmental features as identified in the attached Indented Head Structure Plan Map.
- Support the introduction of planning scheme controls over the Bellarine Hills landscape to protect the scenic qualities of these features.
- Support the introduction of planning scheme controls over biodiversity sites and networks to protect existing values and future enhancement of these values.
- Provide key landscaping and planting at the key gateways to the township, e.g. Hood Road and The Esplanade.
- Investigate the closure of McDonald Street as a through route to protect significant roadside vegetation.
- Ensure that the future subdivision of the 'Sea Breeze Estate' incorporates areas of significant vegetation and creek/wetland areas into the open space system.

3.3.5 Economic Development and Employment

At this stage, demand does not warrant additional retail development in Indented Head. However, expansion of the existing general store should be facilitated to ensure that the store can meet the resident population's daily shopping needs.

Aquaculture is likely to be a growth industry in the area and has the potential to provide local employment opportunities for the residents of Indented Head. In addition, high value agricultural enterprises may be able to establish in the locality to take advantage of the availability of recycled water from the Portarlington Water Reclamation Plant.

The policies of the Greater Geelong Planning Scheme do not encourage the provision of land for industrial or service business uses within Indented Head. In accordance with directions included within State and Local Planning Policies and strategies, the Indented Head community will continue to rely on the supply of industrial zoned land in Portarlington, Drysdale and Ocean Grove, for industrial and service business facilities.

Furthermore, the existing land use zonings allow residential properties to be used for small scale home businesses provided such uses meet the relevant Council guidelines.

Principles

- To provide for a retail facility at Indented Head to serve the resident population's daily shopping needs.
- To provide opportunities for local employment by encouraging high value agriculture and aquaculture in the locality.

Directions

- Support the expansion of the existing retail premises at 313 The Esplanade, Indented Head to cater for the daily needs of the community;
- Support the aquaculture activities in Port Phillip Bay and land based operations in the locality;
- Support the establishment of sustainable high value agricultural activities in the locality to take advantage of recycled water from the Portarlington Water Reclamation Plant;
- Make no provision for land to be rezoned for service business or industrial uses within Indented Head.

3.3.6 Rural Areas

A key tenet of Council's Urban Growth and Rural Land Use Strategies is to retain the Bellarine Peninsula as a predominantly rural area, with distinctly defined townships.

The definition of a Settlement Boundary for Indented Head largely coinciding with the existing "Limit to Urban Expansion" will ensure the retention of the rural areas and thus avoid the ad-hoc rezoning of rural land for residential purposes. Retention of the existing Settlement Boundary at Indented Head is supported in a manner which complements the rural landscape setting.

The Portarlington/Indented Head (21.34) policy under the Municipal Strategic Statement clearly encourages the maintaining of the rural buffer between Indented Head and Portarlington. Development in the area would significantly fragment this rural buffer and represent a contradiction of the policy.

Investigation of the application of the Restructure Overlay on the area between Indented Head and Portarlington to achieve more appropriate rural lot sizes via the consolidation of titles should be undertaken.

Those properties located to the north of the Salt Lagoon Wildlife Reserve, which are zoned Rural are outside the Settlement Boundary. Due to its significant environmental and landscape values this area is considered unsuitable for urban development. It is essential to retain this land for rural purposes, with its landscape-scenic qualities, to protect the ecological values of the Lagoon and maintain the non-urban break between Indented Head and St Leonards.

In accordance with State and Local Planning policies and strategies, the Structure Plan does not support the provision of additional land for rural living development.

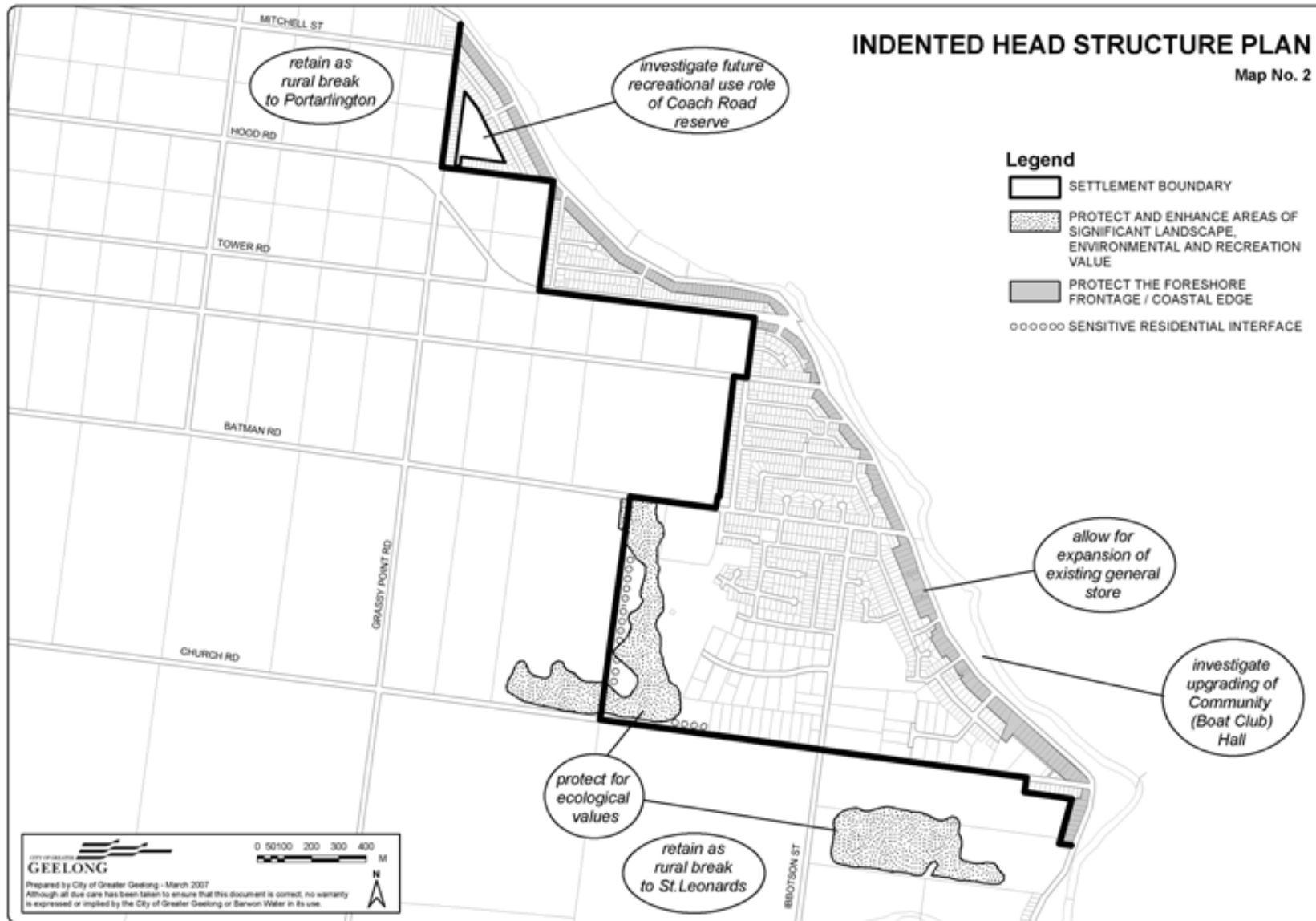
Principles

- To preserve the surrounding rural landscape and setting of Indented Head.

Directions

- Retain the land outside the Settlement Boundary in the Rural Zones;
- Ensure that land use activities within Rural Zones retain an agricultural focus and preserve the rural, environmental and landscape qualities;
- Protect the 'right to farm' for landowners and utilise land for rural activities which maintain sustainable farming practices;
- Ensure any land use activities within Rural Zones do not compromise opportunities for longer term urban growth;
- Direct rural residential growth to locations within the municipality designated in the Rural Residential Strategy.

The above principles and directions for each of the key themes are summarised on the Structure Plan Map 2.



PART B IMPLEMENTATION AND REVIEW

1.0 Implementation of the Indented Head Structure Plan

This Structure Plan provides a framework for land use planning and development in Indented Head over the next ten years with identified policies and strategies to provide a basis for future decision-making.

The Implementation and Review Section identifies Review provisions and key Planning Scheme alterations, or supporting strategic work, necessary to attain the principles and directions identified in the Structure Plan including:

- Introduction of Planning Policy;
- Application of Zones and Overlays;
- Further strategic work required to support additional planning controls;
- Other Actions critical to attaining key principles and directions.

| Implementation and Review Plan | |
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| Using policy and the exercise of discretion | Apply a Planning Policy reflecting the directions and principles of Part A of the Indented Head Structure Plan, incorporating the Structure Plan as a reference document. |
| Applying Zones and Overlays | <ul style="list-style-type: none"> ▪ Apply the Design and Development Overlay to those properties fronting the foreshore and coastal edge based on the principles identified in the Structure Plan. ▪ Apply the Mixed Use Zone with an appropriate schedule, to land at 313 The Esplanade, Indented Head, to allow for the expansion of the Indented Head General Store. ▪ Apply the Environmental Significance Overlay or the Vegetation Protection Overlay to areas of significance identified in Council's Biodiversity Strategy and Wetland Strategy. |
| Undertaking further strategic work | <ul style="list-style-type: none"> ▪ Investigate the application of the Restructure Overlay to the rural zoned land between Indented Head and Portarlinton to achieve more appropriate rural lot sizes via the consolidation of titles. ▪ Investigate the preparation of a DCP for Indented Head to assist in the meeting of costs of providing infrastructure necessary to support |

| Implementation and Review Plan | |
|---------------------------------------|---|
| | <p>future growth and development in the township, including determining infrastructure needs and the financial contributions required to provide the infrastructure.</p> <ul style="list-style-type: none"> ▪ Review the Indented Head Structure Plan every five years to assess lot supply, additional urban growth needs and associated community infrastructure and services. |
| Other Actions | <ul style="list-style-type: none"> ▪ Undertake a review of the Indented Head Stormwater Re-use Pilot Study to determine its effectiveness in reducing impacts of stormwater discharge on the coastline. ▪ Undertake a further assessment of biodiversity assets within the township including the possible closure of McDonald Street as a through traffic route to enable protection of significant roadside vegetation. ▪ Investigate the need for any traffic calming devices or measures in Ibbotson Street. |

2.0 Development of Overlay Controls

2.1 Design and Development Overlay: Foreshore Frontage/Coastal Edge

A Design & Development Overlay (DDO) is to be applied to those properties facing the foreshore and coastal edge (refer to Map 3).

The purpose of the DDO is to establish urban design criteria for the erection of dwellings, dwelling extensions and outbuildings, which complement the streetscape character and coastal interface.

The DDO is to be developed around the following objectives:

- To ensure that new development is, and extensions to existing buildings are, compatible with the existing scale and bulk of buildings in the surrounding streetscape and coastal setting;
- To ensure that new development reflects the rhythm of existing building spacing and provides for visual permeability when viewed from the coastline and from the street;
- To encourage building forms to, and use of materials that, complement the coastal landscape setting;

- To encourage and promote development which employs sustainable design principles.
- To provide for the retention and re-establishment of vegetation to enhance the screening of development from adjoining properties and public areas.
- To provide for the reasonable sharing of views of Port Phillip Bay and the coastal shoreline.

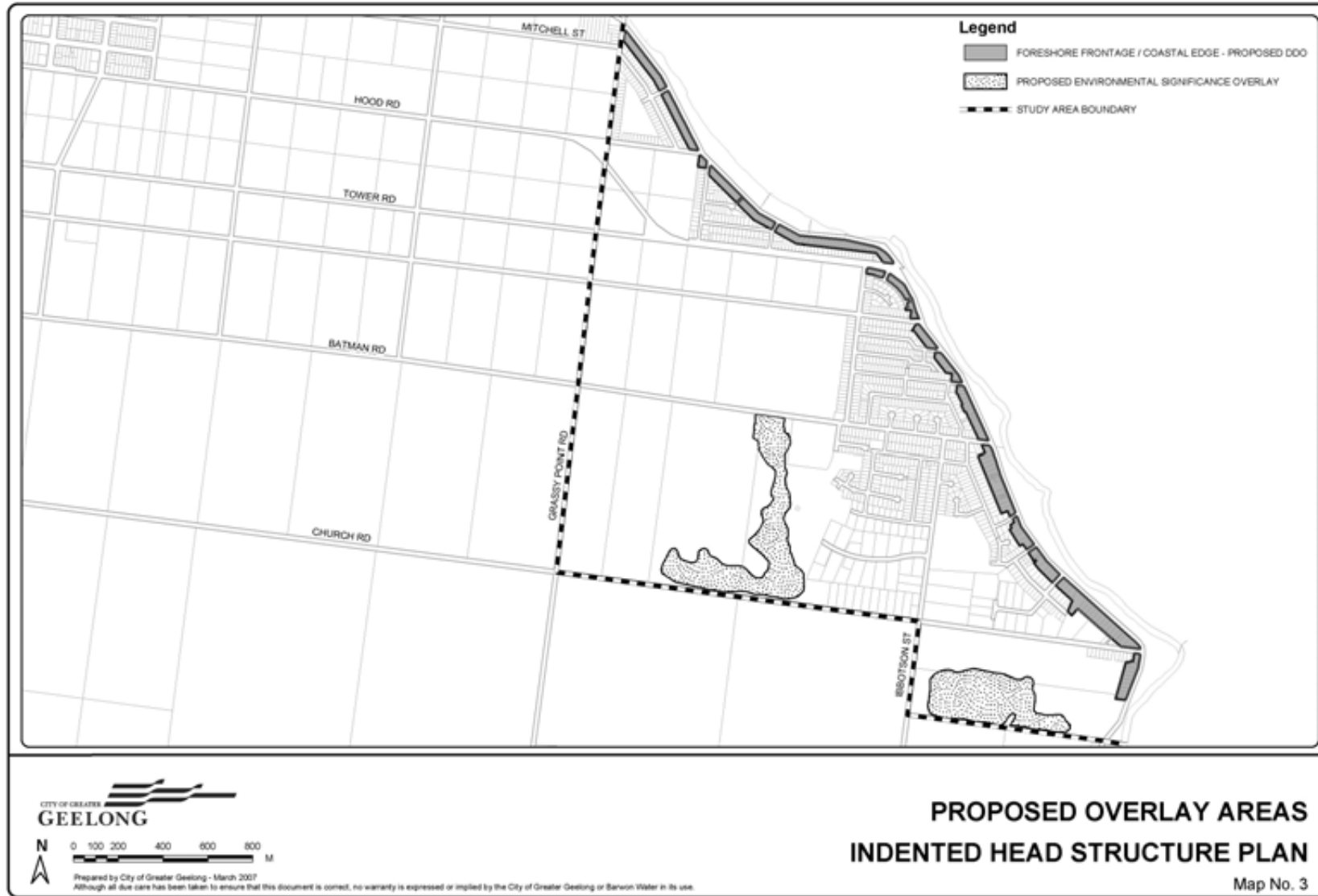
It is proposed that a planning permit will not be required to construct or extend a building provided all of the following requirements (or similar requirements) are met:

- The height of any part of the building, excluding any television antenna, chimney or flue, is less than 7.5 metres in height above natural ground level;
- One side boundary is clear of buildings for at least 2.0 metres, except in the situation where a dwelling exists on site and the dwelling extension or building does not reduce the established side setbacks.

Note: The intent of this clause for new developments is that one side boundary should be clear of buildings (in this case limited to dwellings, garages, carports and outbuildings) for at least 2.0 metres. Where a dwelling exists on a site it is intended that a permit will not be required where any dwelling extension or outbuilding maintains or increases the established side setbacks. This does not apply where an existing building is rebuilt.

Decision guidelines are to include:

- Whether the proposed development accords with the preferred character of the area and achieves the design objectives and responses of the City of Greater Geelong Residential Character Study (August 2001): Character Precinct Brochure for Indented Head / St Leonards Precinct 1;
- The need to ensure the design and siting of buildings exceeding 7.5 metres in height will not dominate the foreshore reserve, coastal edge and the streetscape, and will not impact on long distance views;
- The need to ensure the design and siting of buildings exceeding 7.5 metres in height will allow for the reasonable sharing of view(s) having regard to the extent of available view(s) and the significance of the view(s) from the affected properties;
- Whether the proposed development has appropriate regard to:
 - the impact on the streetscape and vegetation character;
 - the rhythm of existing building spacing; and
 - the visual permeability of the existing built form;
 - when viewed from the foreshore reserve, the coast and the street;
- Whether the siting, height, scale, materials and form of proposed buildings will complement the coastal landscape setting.
- The use of appropriate materials, articulation and roof forms which complement the coastal landscape setting.



3.0 Subdivision and Development Principles

In addition to the existing ResCode provisions contained in Clause 56 of the Greater Geelong Planning Scheme, the following principles are to apply to future subdivision and development within the township:

Open Space:

- Provide an adequate area of useable open space, at least of ten per cent (10%) of the land, which is able to be connected to the existing and future open space networks;
- Incorporate landscape features such as ridgelines, significant indigenous and or exotic vegetation, established shelterbelt planting, and creek/wetland corridors into the open space system. Consider the usability of these public open spaces when making decisions on whether to accept these as the open space contribution;
- Require lots to front on to parks and other areas of open space;
- Design future public open space to incorporate and enhance significant indigenous and or exotic vegetation.

Street layout and permeability:

- Connect new roads into the existing town road system by continuing the adjoining street pattern, where appropriate;
- Design new development which provides for extension of the street system into new areas in the future;
- Avoid cul-de-sacs and other street layouts with isolated forms of development that discourage permeability;
- Provide for direct pedestrian access and access for people with limited mobility.

Density:

- Develop lot sizes consistent with the established areas of Indented Head while allowing for some diversity in size including smaller lots in proximity to the foreshore.

Streetscape:

- Design streetscapes which reflect the established streetscape character of Indented Head.
- Streetscape planting design which includes canopy tree planting should be utilised to reduce urban form & visual impact on the recognised landscape character types.
- In subdivisions of more than three lots, require specification of design guidelines for future dwellings and landscaping to reflect the established and the preferred future character of Indented Head as described in the City of Greater Geelong Residential Character Brochures, responding to the characteristics of the particular site, and employing environmentally sustainable design principles.

Water sensitive urban design:

- In larger subdivisions a detailed stormwater management plan is required to ensure there is no decrease in the quality of stormwater runoff entering a receiving waterway, there is no decrease in run-off water quality and that existing downstream flows are restricted to pre-development levels to prevent detrimental impacts on sensitive environments, including Port Phillip Bay and the Salt Lagoon Wildlife Reserve and any future nature reserves.
- Require provision of 'water sensitive urban design' solutions to treat or contain stormwater on site consistent with the 'Urban Stormwater - Best Practice Environmental Management Guidelines' prepared by the Victorian Stormwater Committee, the Melbourne Water WSUD Engineering Procedures Guidelines 2005, Royal Lifesaving Society Safety Guidelines and Melbourne Water Guidelines for Development in Flood Prone Areas 2003.
- Developments shall incorporate stormwater reuse as part of the overall design.
- The proposed stormwater quality treatment measures shall be reviewed using the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) Program to determine compliance with the water quality objectives.
- Council's adopted Storm Water Quality Management Plan should direct the general principles for development in particular catchments.
- Stormwater management systems as part of subdivision design must meet the requirements of Australian Rainfall and Run-off (ARR) to cater for design storms and higher intensity storms with excess overland flows. Public safety and amenity must be primary considerations, and Water Sensitive Urban Design principles should be incorporated where appropriate.
- Subdivision design should incorporate as appropriate the principles and design methodology of "Urban Stormwater - Best Practice Environmental Management Guidelines" prepared by the Victorian Stormwater Committee.

Environmentally Sustainable Development:

- Conditions shall be placed on permits for new development and subdivisions to require the applicant to enter into a Section 173 Agreement to ensure that all new buildings are fitted with solar hot water systems, AAA rated water appliances, and a rain water tank that is to be directly connected to the toilet flushing system.

Native Vegetation:

- Require impacts on native vegetation from future subdivisions to be assessed under the three step approach outlined in *Victoria's Native Vegetation Management – A Framework for Action (Department of Natural Resources 2002)* and any relevant overlay controls.
- Where native vegetation exists on road reserves abutting the perimeter of the subject site, the subdivision layout should ensure that that access to lots is provided from internal roads.

4.0 Review of Structure Plan

The take-up of land and redevelopment within Indented Head needs to be regularly monitored and it is appropriate that a basic review of development and residential lot supply within the township be undertaken every five years.

If such a review reveals that the residential lot supply has fallen to a rate of less than 10 years (using accepted lot supply analysis criteria), a full review of the Structure Plan should be undertaken. This review would need to examine whether further growth of the town is appropriate, and if so provide directions for growth and community needs, and whether an ultimate Settlement Boundary should be set.

PART C BACKGROUND REPORT

1.0 Introduction

1.1 Background

Land use and development in Indented Head has thus far been guided by the Portarlington/Indented Head Structure Plan prepared by the Geelong Regional Commission and adopted by the City of Greater Geelong in August, 1993. The 1993 Structure Plan has ensured that development of the township has been undertaken in a coordinated manner. It is timely to undertake a comprehensive review of the Structure Plan in order to provide guidance for future land use and development.

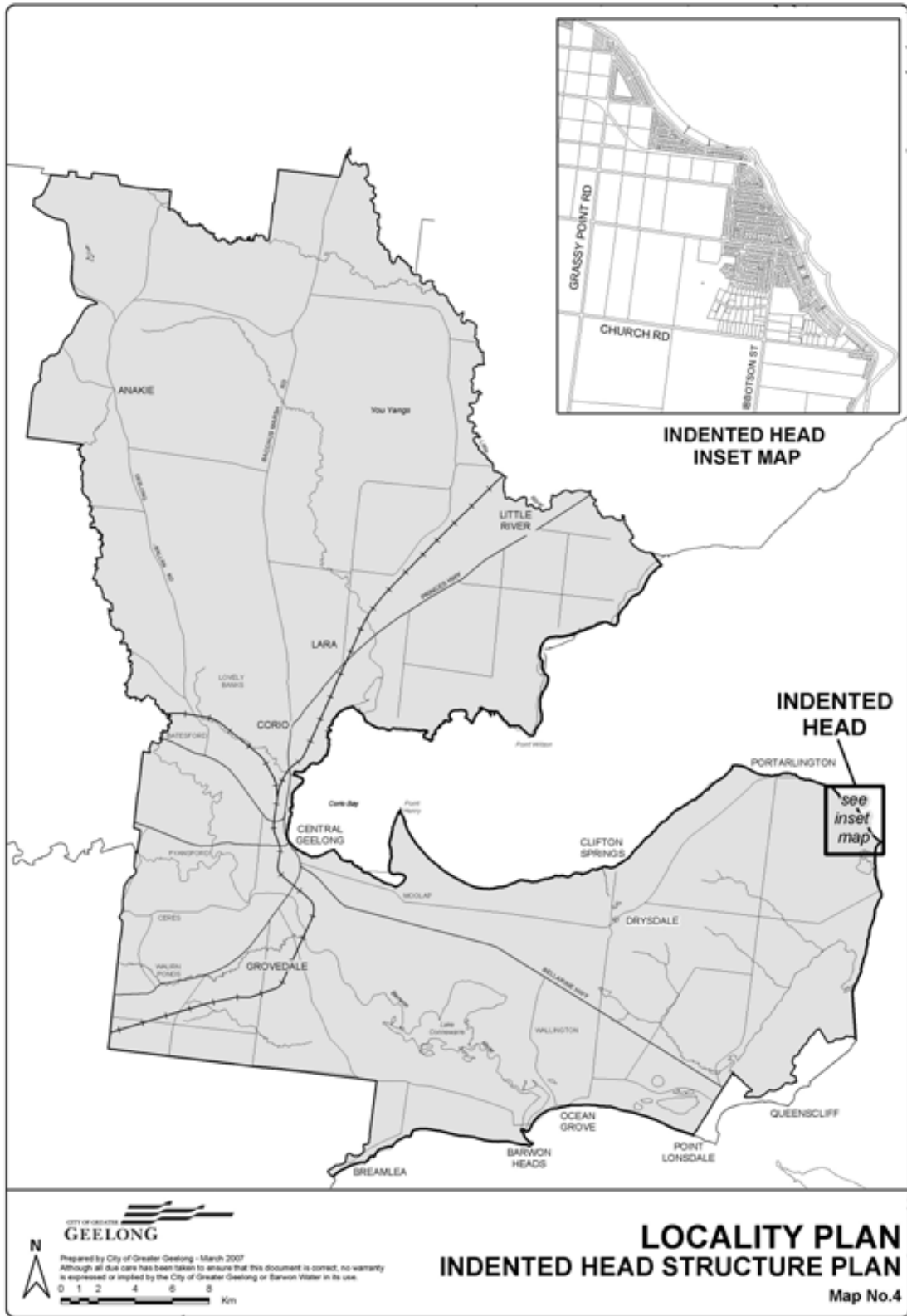
The purpose of this Structure Plan is to identify the key strategic planning issues and opportunities facing the township and articulate the preferred future directions, including the location of settlement boundaries, future residential and commercial growth and future community service provision, as well as identifying appropriate planning controls.

1.2 Location

Indented Head is situated on the north-eastern shore of the Bellarine Peninsula, approximately 31 kilometres east of Geelong. The location of the township in relation to the rest of the municipality and within the Bellarine Peninsula is indicated on Map 4 and Map 5.

Indented Head is a small urban and tourist settlement, located six kilometres to the south-east of Portarlington. It lies between Portarlington and St Leonards, with the foreshore reserve stretching along the township's eastern shore to Port Phillip Bay. The Indented Head township is dispersed and elongated along the coast between Grassy Point and the Salt Lagoon Wildlife Reserve, a distance of over three kilometres.

The southern boundary of Indented Head is formed by a significant nature reserve, the Salt Lagoon Wildlife Reserve. To the west of the established township, lie the flat agricultural pastures of the eastern Bellarine Peninsula.





1.3 Role of the Township

Indented Head's primary role has traditionally been as a seaside holiday village, serving a small permanent population.

The township has traditionally served various roles on the Bellarine Peninsula:

- It has been and will continue to be a popular destination for holiday makers and perform important resort roles. During holiday periods the population of the area becomes dominated by holiday makers, 'day-tripper' visitors and those making use of holiday homes.
- It is a popular retirement centre and elderly persons comprise a large proportion of the permanent population.

Indented Head is not identified as a growth location within Council's Urban Growth or Rural Residential strategies for conventional residential or rural living development.

1.4 Indigenous Heritage

Indented Head holds significant values and associations with Aboriginal history. According to Clark's 1990 synthesis of Aboriginal social organisation in Victoria in the 1800s, the pre-European Aboriginal inhabitants of the Indented Head area were from the *Wada wurrung* language group, whose territory included the coastline from the Werribee River to Painkalac Creek at Aireys Inlet. The *Wada wurrung* included at least 25 different clans – family units associated with specific locations.

It is thought that the clan who occupied the eastern end of the Bellarine Peninsula were the *Bengalat balug*. The Barwon River is believed to have been the south-western boundary with the adjoining clan, who may have belonged to the *Wada wurrung balug*, who were associated with the Geelong area.

The documentary evidence for the *Bengalat balug* is poor, although it is known that the main location for clan was Indented Head. Their clan name *Bengalat* means people from *Bengala*, the Aboriginal name for Indented Head.

'The Wathaurong people are part of the greater Kulin nation surrounding Port Phillip and Western Port Bays. The Wathaurong area stretches south of Geelong toward Lorne, north toward Ballarat and then south east to the Werribee River'.

Council has entered into a formal arrangement through a protocol with the Wathaurong Aboriginal Co-operative to assist in identifying, conserving and protecting places of Aboriginal cultural heritage. The protocol establishes a number of trigger points where Council is required to take into account the requirements of Commonwealth and State legislation and the views of the Community in providing for the conservation and enhancement of places, sites and objects of Aboriginal cultural heritage.

Protection of Aboriginal sites is formalised through the State *Archaeological and Aboriginal Relics Preservation Act 1972* and the Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*. However, new legislation to protect Victorian Aboriginal cultural heritage is due to come into effect on 28 May, 2007. The *Aboriginal Heritage Act 2006* aims to replace the current Aboriginal cultural heritage regime in Victoria with a consistent and effective process. Under the new Act, the State will have sole responsibility for Victoria's Aboriginal cultural heritage instead of the current combination of State and Federal legislation.

Key features of the *Aboriginal Heritage Act 2006* include:

- the creation of the Aboriginal Heritage Council, with membership of traditional owners who will advise on the protection of Aboriginal heritage;
- the use of cultural heritage management plans for certain development plans or activities;
- the ability for registered Aboriginal parties to evaluate management plans, advise on permit applications, enter into cultural heritage agreements and negotiate the repatriation of Aboriginal human remains; and
- alternative dispute resolution procedures.

Council will continue to maintain a relationship with the Wathaurong Aboriginal Co-operative in regard to proposed developments that may impact on Aboriginal cultural heritage, in accordance with both the established protocol and State and Commonwealth legislation.

1.5 European History

Recorded European visitation of Port Phillip Bay dates back to February 1802 when Lieutenant John Murray spent over three weeks exploring its features. Lieutenant Murray was soon followed by Matthew Flinders who mistook Port Phillip Bay for Western Port. Flinders landed and made camp at the place now known as Indented Head, six kilometres south-east of Portarlington. He gave the site its European name after observing the cleft in the coastline. The landing of Matthew Flinders at Indented Head in 1802 is commemorated by a stone cairn.

He moved further northwest along the Bellarine Peninsula, in the vicinity of Portarlington. Flinders crossed Port Phillip Bay again to investigate the You Yangs, later returning to Indented Head.

In early 1803 the 'Cumberland' entered Port Phillip Bay with the Surveyor-General Charles Grimes, to survey the coast for potential settlement. They landed at Portarlington and headed westward on foot to Point Henry.

Later in 1803, the 'Ocean' and the 'Calcutta' arrived at Sorrento, laden with convicts including William Buckley, settlers and marines. The settlement was abandoned apparently due to the poor quality of the soil, but not before William Buckley had escaped from the Sorrento settlement. He went on to live with the Wathaurong for the next 32 years, during which time there was little European exploration.

In 1835, Buckley learned of three white men camped at Indented Head, part of John Batman's Port Phillip exploration party. The party had landed on the 'Rebecca' on 29 May 1835, and went on to explore the area. A stone cairn marks the place in Batman Park, Indented Head where John Batman and his fellow Tasmanian adventurers came ashore to camp in 1835 before moving on to the head of the bay which they earmarked as the site of a town that was to become Melbourne. There Batman signed his famous treaty with Aborigines for land surrounding Melbourne, including Geelong and the Bellarine Peninsula. He then returned to the site of today's Indented Head township and there signed papers in exchange for the same land with local Wathaurong people.

Early European settlement of the Bellarine Peninsula spread from the west and the landing place at Point Henry. The area was originally occupied by large pastoral runs, the most famous of which was the Derwent Run, a large cattle run extending from Bellarine to Point Lonsdale and west toward Paywit, operated by several prominent Geelong settlers including Dr Alexander Thompson.

As European settlement in the area intensified, only the well established squatter runs remained. Thomas Sproat held the 'Bellarine Hills' run of 1,280 acres between 1842 and 1852 and the Misses' Newcombe and Drysdale's 'Bellarine' run was approximately 1,920 acres. As the various land Acts were introduced in the 1840s and 1850s, squatting runs began to be dissolved and were replaced by smaller farming allotments purchased by 'Selectors'.

An outstanding historical sight is the paddlewheel of the bay steamer "Ozone" which appears above the waterline at Indented Head, where it was scuttled offshore in 1925 to form a breakwater. The "Ozone" was the largest paddle steamer which once brought holidaymakers from Melbourne to the holiday resorts on the Bellarine Peninsula and then returned them to Melbourne.

Land around the town of Indented Head was farmed for wheat for many years and other townships grew long before it. There was foreshore camping there before the 1920s, and by 1951 Indented Head was a small seaside resort with a store, a telegraph office, the Batman Park camping area and two private camping areas. Despite superb views and access to the bay and the Port Phillip Bay Heads, Indented Head has grown very little in the past 30 years.

2.0 Policy Context

Indented Head is situated within the municipality of the City of Greater Geelong and is affected by various policies and strategies formulated by the State Government and Council. The following policies have specific relevance to Indented Head, and have guided the development of this Structure Plan.

2.1 Key Strategies and Local Strategic Studies

2.1.1 Coastal

Victorian Coastal Strategy 2002 (Victorian Coastal Council)

This Strategy was developed under the provisions of the Coastal Management Act 1995, and it applies to the sea, seabed (to state limit) and land and inland waters within the coastal catchment (land that drains to a water course or estuary).

It seeks to provide for the long term planning of the Victorian coast, based on Ecologically Sustainable Development principles, to protect significant environmental features, to provide clear direction for future sustainable use of the coast's natural resources and to identify suitable development opportunities. The strategy provides direction for activities on private land adjacent to, and within, the critical views of the foreshore.

A hierarchy of principles for coastal planning is set under "Suitable development on the coast" (p21). According to these principles, appropriate coastal development:

- enhances protection and rehabilitation of the natural environment and biodiversity;
- results in increased public benefit;
- is sensitively designed and sited;
- is setback from the coast as far as practicable;
- facilitates multiple uses of sites and existing infrastructure;
- facilitates improvements of sites or existing development; and
- is consistent with requirements of coastal planning strategies and plans, and relevant planning schemes.

Specific objectives and actions are grouped under six major themes including:

- Marine and estuarine environments – objectives and actions include: protecting and improving the condition of estuarine and marine biological diversity, such as, coastal and estuarine wetlands, by implementing stormwater management plans; protecting and improving intertidal habitat, flora and fauna; and reducing the impact of effluent discharges.
- Natural onshore environment – objectives and actions include: restricting development on or disturbance to sites of biological diversity significance; improving the long term management or conservation status of freehold land using tools, such as, voluntary conservation covenants; achieving no 'net loss' of native vegetation; and using planning schemes to identify and protect areas of significant conservation value.

- People on the coast – objectives and actions include, protecting Aboriginal places and sites, improving management and standards of accommodation on coastal Crown land, and managing coastal related tourism by seeking “to maximise the quality of experience, encourage a diversity of experience for all market segments, encourage greater economic yield through enhanced product development and facilitate the application of best practice in all aspects of the industry” (p33).
- Access – objectives and actions include, reducing impact of traffic on the coastal environment by rationalising and/or improving access roads, foreshore parking areas, pedestrian and bike path provision, and protecting scenic values along coastal roads.
- Built Environment – objectives and actions provide direction for the scale of use and development, improving design outcomes and protecting sensitive sites. Key actions include:
 - Use of the Municipal Strategic Statement to identify the special nature and character of the coast and the role of townships;
 - Protection of undisturbed areas between settlements through mechanisms such as, local policy and overlays to control the siting and design of structures;
 - Management of township growth through settlement boundaries;
 - Ensuring planning schemes are the primary tool used to avoid proliferation of development outside existing settlements and in the vicinity of free standing major visitor centres or resorts (i.e. separate unrelated activities); and
 - Coastal development pressure being directed away from sensitive areas and managed within existing settlements (activity nodes) and recreation nodes, to: minimise impact on coast and protect sensitive areas; contain development to limited locations; and manage development pressures. For townships experiencing population growth, and high use and regional visitation, this means protecting areas of environmental significance and preserving areas between settlements in non-urban use.
- Protecting scenic landscapes through innovative coastal design and the application of ‘Landscape Setting Types for the Victorian Coast’ and ‘Siting and Design Guidelines for Structures on the Victorian Coast’ (refer below).
- Coastal dependent industry – objectives and actions include allowing appropriate port development, providing appropriate local port infrastructure, improving facilities for tourism and promoting a sustainable aquaculture industry.

Landscape Setting Types for the Victorian Coast May 1998

This document aims to provide an understanding of the coastal landscape by identifying significant features and characteristics of various sections of the coast. The Indented Head area is within the “Rural flat and Undulating with features” setting type along the coast between Geelong and Swan Bay. (p16).

The land form tends to be generally flat and undulating with pasture and small to medium sized towns. Swan Bay and the surrounding Bellarine Hills form a major feature in this area. This setting type is identified as being under pressure from an expanding urban Geelong with many townships becoming dormitory suburbs. Consolidated development is favoured to minimise landscape impacts.

Siting and Design Guidelines for Structures on the Victorian Coast May 1998

The Victorian Coastal Council prepared this document to provide specific guidelines for appropriate building siting and design treatments along the coast to respond to landscape, environmental and view considerations.

The Guidelines are presented in three categories, as follows:

- *Functional Guidelines*

“These deal with utilitarian aspects of development and seek to ensure the efficient use of the limited resources of the coast.”

- *Cultural and Aesthetic Guidelines*

“These deal with cultural issues and the appearance of structures, but include other facilities such as carparks and the way they relate physically and visually to their surroundings.”

- *Ecological Guidelines*

“These deal with the impact of development on coastal ecosystems.”

Coastal Spaces Recommendations Report (DSE April 2006)

The Coastal Spaces Recommendations Report forms part of the Coastal Spaces Initiative, a joint project between the Victorian Coastal Council and the Department of Sustainability & Environment instigated to assist coastal municipal councils to protect the character of coastal townships and the open spaces between towns along the coast.

The aim of Coastal Spaces is to:

- Improve and clarify strategic planning for sustainable development in coastal Victoria.
- Improve the application of planning and environment tools in coastal areas and develop new tools as appropriate.
- Build the capacity of local government and others to apply Government policy for the Coast.

After consultation with targeted public authorities and bodies, and community groups, the Coastal Spaces Inception Report (released May 2005), the Coastal Spaces Recommendations Report was released in April 2006.

In summary, the Recommendations Report contains the following key recommendations:

- “R1. Reaffirm the Government’s commitment to direct urban development to existing settlements. Continue to promote a network of regional and local settlements. New settlements on the coast should only be considered if genuine need is identified through a strategic assessment consistent with the Victorian Coastal Strategy.
- R2. Establish settlement boundaries implemented through planning schemes.

- R3. Protect non-urban coastal landscapes by implementing the Coastal Spaces Landscape Assessment Study and applying the new rural zones.
- R4. Target priority for infrastructure and innovative solutions in environmental hotspots where the provisions for potable water and reticulated sewerage services are not present.
- R5. Encourage tourism investment and products that are sensitive to coastal settings and meets regional needs. Tourism proposals outside settlements must be of high quality, well designed and sited, add value to the coastal experience and be distinguishable from residential proposals.
- R6. Establish clear planning policy that discourages disturbance of Coastal Acid Sulphate Soils.
- R7. Establish a more comprehensive approach to asset management on public land through an effective levels of service framework.
- R8. Promote on-going regional coordination and communication mechanisms to maximise knowledge transfer and practice around coastal change management and planning.”

Coastal Spaces recognises that climate change is expected to have implications for Victoria’s coastal areas. With increasing pressure for residential and other developments in coastal regions, there is a pressing need to fully consider the risks related to climate change as part of the planning assessment process.

Notwithstanding the need for more detailed information to assess the impacts of climate change, it should be standard practice to adopt a Precautionary Principle approach when planning for areas likely to be vulnerable to climate change effects, such as estuaries, sandy shorelines and other low lying sites. (The Precautionary Principle advocates taking action now despite a level of uncertainty, to minimise future risks. This principle may lead to a decision not to take action or proceed with a proposal because of a high level of uncertainty about beneficial outcomes).

“Whilst the existing Victorian Coastal Strategy 2002 advocates that development should be well set back from the coastline, a conscious change is required to ensure that future subdivision and development approvals actually achieve this, and more importantly, are located away from low lying coastal areas.”

Coastal Spaces Landscape Assessment Study – State Overview Report (September 2006)

The Coastal Spaces Landscape Assessment Study is a comprehensive assessment of visual and scenic amenity along the Victorian coast, and its focus is the identification of the visually significant landscapes of Victoria's non-urban coastline. This Study will assist authorities to identify and develop appropriate measures to manage future growth and change along the coast.

This Study provides a thorough assessment of landscape characteristics and identification of visually significant landscapes on the Victorian coastline from the South Australian border to Warrnambool, Bellarine Peninsula, and the Bass Coast region to the New South Wales border. The Report excludes the following areas of coastline - Corio Bay, Port Phillip Bay, and Westernport Bay. Landscape assessment has already been

undertaken for the Great Ocean Road region as part of the Great Ocean Road region Landscape Assessment Study 2004.

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 Landscape Assessment Study:

- “Maps and provides an assessment of the existing distinctive landscape elements, features, characteristics, character, quality and extent of the landscape within specific coastal areas, and their value or importance;
- Assesses the adequacy of current strategies and measures aimed at protecting landscapes along the Victorian coast and immediate hinterland; and
- Identifies landscape types in all coastal regions and, where appropriate, provides planning scheme provisions for retaining and/or respecting landscape values (e.g. policy or overlay).”

The study identifies four Landscape Character Types and Areas for the Bellarine Peninsula. Indented Head is located in the following Landscape Character Type Area which is described as follows:

- *“Landscape Character Area 1.1: Bay Slopes and Flats*

This Character Area is low-sloping and occasionally gently undulating, with open expansive views east to Port Phillip Bay and Swan Bay. Open paddocks are dissected by exotic conifer windbreaks and native vegetation in roadside reserves which contain views in parts. At the coastal edge, the landform is very flat with low-energy beaches, salt lakes and some minor cliffs no more than five metres high at Indented Head. Swan Bay is a significant natural feature on the eastern edge of approximately half the Character Area, while to the north, coastal townships including St Leonards and Indented Head extend inland for some distance on the flats. Further inland there is a low density of built elements with homesteads and farm sheds often exposed in large paddocks.”

In relation to the Bellarine Peninsula, the Coastal Spaces Landscape Assessment Study identifies the Bellarine Hills, and the coastline between Clifton Springs and Portarlington as Areas of Regional Significance, valued for the prominent rural skyline and extensive panoramic views. It is proposed that the Study recommendations will be implemented through planning scheme controls to ensure that structures and landscaping treatments will not obstruct the expansive views of the Bellarine Hills.

It is recommended that the Significant Landscape Overlay (SLO) be applied to the significant landscape areas identified by this study, and that the SLO maps and schedules as prepared be included in the relevant local planning schemes.

There are five landscapes on the Bellarine Peninsula that have been recommended for SLO coverage. One of these affects the Indented Head area:

- Murradoc Hill

Corio Bay Coastal Action Plan April 2005

Coastal Action Plans play a key role in the implementation of the Victorian Coastal Strategy (VCS) and are developed in accordance with the *Coastal Management Act* 1995. The purpose of a Coastal Action Plan (CAP) is to enable the broader principles and priorities of the VCS to be further developed and applied at a regional or local level.

The CAP sets out the strategic direction for the region and brings together Commonwealth, State, regional and local policy into a coastal and marine regional context. It provides a framework to support and integrate existing local CAPs and guide the development of regional and local policies and strategies, and on-ground works programs.

The City of Greater Geelong and the Central Coastal Board have undertaken the preparation of a CAP for Corio Bay and part of the Port Phillip Bay coastal foreshore areas. As with the VCS, the Corio Bay Coastal Action Plan is referenced in the Coastal Areas policies within the State and Local Planning Policy Framework of the Greater Geelong Planning Scheme, to guide the planning authority when considering use and development proposals in coastal areas.

Indented Head is within one precinct identified by the Corio Bay CAP, Precinct Two – Indented Head. Precinct One – St Leonards lies outside the Study Area, however, the recommendations for that precinct include protecting the environmental values of the Salt Lagoon Wildlife Reserve on the southern fringe of the Study Area.

Precinct Two – Indented Head, extends from to the northern boundary of the Salt Lagoon Wildlife Reserve to the rural break between Indented Head and Portarlington.

The vision for Indented Head outlined within the CAP is:

“Indented Head is highly valued by permanent and seasonal residents as a small seaside township where development is generally low key ... The conservation, heritage and amenity values of the foreshore area are appreciated by the residents and have been improved through the consolidation of camping areas and regeneration works.”

A number of Issues and Objectives for each precinct and associated Strategic Directions, Decision Guidelines and Implementation Actions are identified in the CAP.

The principal objectives of the CAP, to be achieved within this Precinct, are:

- To restrict urban development to areas identified in the Greater Geelong Planning Scheme.
- To maintain local – low key development focus.
- To reduce stormwater discharge impacts on the coastline.
- To monitor the natural coastal processes of erosion and accretion.
- To minimise the impacts of rising groundwater and potential rise in sea level (without adversely impacting on natural processes).
- To encourage the revegetation of foreshore and hinterland reserves with indigenous species.

Bellarine Bayside Foreshore Committee of Management Landscape Management Plan (1998) (Sharp Planning and Design)

Bellarine Bayside Foreshore Committee of Management (Bellarine Bayside) is the statutory manager of 30 square kilometres of foreshore, Crown Lands and Crown Assets between Point Richards, west of Portarlington, and Edwards Point, south of St Leonards.

Bellarine Bayside manages the Portarlington and Indented Head foreshore, but it does not manage the Portarlington Pier which comes under the control of Parks Victoria. The Committee of Management has adopted the following objectives:

- Ensure the sustainable use of natural resources;
- Ensure the protection of natural and cultural features;
- Provide a clear & consistent direction for coastal management; and;
- Identify appropriate infrastructure and development opportunities.

These objectives are to be achieved through the implementation of the Bellarine Bayside Landscape Management Plan, prepared in 1998. This plan highlights issues facing the foreshore and provides recommendations for future land uses, landscape treatments and management initiatives. Bellarine Bayside is in the process of reviewing this plan.

The Landscape Management Plan responds to four guiding principles – sustain, protect, direct, develop – reflecting the objectives for Victoria’s coast, expressed in the Victorian Coastal Strategy. Guidelines are outlined in the plan for managing access, erosion and revegetation of the twelve management zones identified within the Bellarine Bayside region.

Bellarine Bayside, in its Landscape Management Plan, has divided the areas it manages in Indented Head into three zones. It has adopted specific uses and development objectives for each zone, as follows:

- **Grassy Point East:** This zone covers an extensive low lying section of the foreshore with a north easterly aspect to the bay, dominated by narrow strip residential development. The zone should continue to function as an open space foreshore reserve and be managed for natural and recreation values.
- **Ozone Foreshore:** This zone includes all of the Indented Head section of the foreshore traditionally used for caravan and camping – Batman Reserve, Anderson Reserve and Taylor Reserve. Management of the zone for its recreation values, including holiday accommodation will be continued.
- **Indented Head:** Manage for natural and recreation values with a parkland focus. This zone should continue to function as a major day visitor picnic area, as a preferred swimming beach, and as an important boat launching site along the foreshore. All existing facilities should be upgraded as funding permits.

2.1.2 Environment

Corangamite Regional Catchment Strategy 2003-2008 Corangamite Catchment Management Authority

The Corangamite Catchment Management Authority (CCMA) was established in July 1997 under the framework of the *Catchment and Land Protection Act 1994*, with the aim of creating a whole of catchment approach to natural resource management. It encompasses the roles of the former Corangamite Catchment and Land Protection Board and community based advisory groups such as the Corangamite Salinity Plan Implementation Group.

Each catchment management authority has a primary goal to ensure the protection of and restoration of land and water resources, the sustainable development of natural resources-based industries and the conservation of natural and cultural heritage.

Part of its role is to implement a Regional Catchment Strategy to guide the management of land and water resources within the region.

The Regional Catchment Strategy 2003-2008 provides long-term directions for managing the future of land, water resources, biodiversity and seascape of the Region, and the foundation for investment decisions to ensure improved natural resource outcomes. The RCS:

- “Sets broad goals for 20 years;
- Assesses threats to environmental, economic and social values;
- Sets preliminary targets for the condition of assets;
- Identifies opportunities for improving natural resource management processes over the next five years;
- Recommends substantially new processes for planning at the local level;
- Through an Investment Framework and fully costed Investment Plan, it provides a means for making investment decisions - as of 2003, the RCS will form the basis for distributing funding for natural resource management in the Region; and
- Sets guidelines for the monitoring and evaluation of progress.”

Decision making by the planning authority must have regard to this strategy, as required by the State and Local Planning Policy Framework of the Greater Geelong Planning Scheme in Clauses 15.01 and 21.11 Protection of catchments, waterways and groundwater.

City of Greater Geelong Environment Management Strategy 2006-2011

In 1997 the City commenced the preparation of its first Environmental Management Strategy (EMS) and following an extensive public consultation process it was adopted by Council in February 1999. A recommendation of the original Strategy was that a review should be undertaken five years after its adoption by Council.

This significant strategy set a new direction for Council and resulted in the commissioning of several important projects including the introduction of the new waste management system; preparation and implementation of the Stormwater Quality Management Plan; preparation of the Biodiversity Strategy and development of the State of the Environment Report.

The EMS 2006-2011 is one of the City's key strategies and aims to actively promote sustainability in all the actions and activities undertaken by the City. It plays an integral role in both the planning and day to day operational roles of the City as well as other stakeholders.

The overall objectives of the Strategy are:

- The protection and rehabilitation of areas of significant biodiversity value.
- The management of the City's waterways and water dependant ecosystems.
- The sustainable management and administration of new development.
- The improvement to air quality and minimisation of carbon based energy consumption.
- The conservation of Geelong's potable water supply and the maximisation of water conservation and stormwater reuse.
- The reduction of waste generation and disposal and the associated increase in reuse and recycling of resources.
- The sustainable management of marine biodiversity.
- The integrated management of the City's coastal resources and wetland ecosystems.
- The preventative and proactive management of the potential risks from the effects of climate change in the City's inland, coastal and estuarine areas.

The Environment Management Strategy establishes Council's methodology for the assessment of current and emerging environmental issues over the next five years, and addresses ten environmental areas, as follows:

Our Organisational Environment comprising-

- Education and Partnerships
- Planning, Policy and Programs

Our Natural Environment comprising-

- Biodiversity Management
- Sustainable Agriculture
- Coastal and Marine
- Waterways and Wetlands

Our Built Environment comprising-

- Air Quality
- Resource Use
- Waste, Recycling and Reuse
- Urban Settlements

A set of objectives and targets has been established for each of the ten broad environmental areas. These can be monitored to measure the performance of Council and the community in meeting the agreed targets.

One of the key features of the Environment Management Strategy 2006-2011 is the development of Council's new environmental and sustainability policy framework. This Framework contains Council's definition of sustainability and a series of sustainability principles, an Environmental Management Policy and Action Plan. It will provide clear direction to the community, developers and Government regarding the City's approach to sustainable development and sound environmental management.

The Primary Sustainability Principles for Geelong included in the Sustainability Framework include:

Environmental protection

The City of Greater Geelong will:

- Recognise the importance of the diversity of Geelong's biodiversity and acknowledge the need to protect, restore and enhance the diversity and resilience of our natural systems.
- Use all natural resources sustainably and dispose of any wastes responsibly.

Economic prosperity

The City of Greater Geelong will:

- Establish and foster a strong vibrant economic base without compromising the current condition of the environment and our quality of life or the ability of future generations to grow and prosper in a healthy environment.
- Encourage access to facilities, services, goods and other people in ways that minimise impacts on the environment.

Social Needs

The City of Greater Geelong will:

- Protect human health and amenity through safe, clean and attractive environments and quality health services focused on prevention as well as cure.
- Empower all sections of the community to participate in decision-making and consider the social and community impacts of decisions.

City of Greater Geelong Biodiversity Strategy 2003

The Environmental Management Strategy required Council to develop, as a priority action, a series of detailed strategies to address specific environmental issues. Those priorities included the preparation of a detailed Biodiversity Strategy to implement measures to ensure the conservation and protection of biodiversity.

This Strategy was prepared over a two year period and then adopted in May 2003. It details the context, background and status of biodiversity in Geelong and refers specifically to the biodiversity commitments binding Council, including International, National and State agreements and legislation.

This strategy has a vision for the City to be a place *“within which biodiversity plays an important role, where the right of future generations to healthy, complete and vibrant biodiversity is entrenched, and to be a City that actively protects its biological wealth and prioritises long term responsibility over short-term gains.”*

A number of Strategic Objectives are identified in order to ensure the long term protection and enhancement of biodiversity in Geelong. These strategic objectives include:

- Primary Biodiversity Conservation – protection of formal conservation areas, waterways, coastal areas and wetlands and threatened indigenous vegetation recognising the importance of ecological systems, corridors and links.
- Secondary Biodiversity Conservation – the role that general open space and protection of native and some exotic vegetation may play in the enhancement and protection of biodiversity, linkage functions and greenhouse reduction opportunities.
- Biodiversity planning and legal protection – The need for appropriate planning controls, incentives, zoning and policies to safe-guard biodiversity.

While the Biodiversity Strategy is a major achievement of Council, it must be noted that it may not identify all areas of biodiversity significance in the Indented Head area.

City of Greater Geelong Stormwater Quality Management Plan 2003

The Stormwater Quality Management Plan has been developed to improve the environmental management of urban stormwater runoff within the municipality. It provides a framework for integrating best practice stormwater management into Council's planning and infrastructure programs.

This Plan identified a number of drainage sub-catchments within the municipality, including the Portarlinton sub-catchment which comprises the north-eastern tip of the Bellarine Peninsula. This sub-catchment is predominantly rural, but it does contain the urban areas of Indented Head, Portarlinton and St. Leonards, which are located along the coastline.

The environmental values of the Portarlinton sub-catchment are described as:

“a large, predominantly rural subcatchment that comprises the north eastern portion of the Bellarine Peninsula, which drains into the Very Highly valued receiving environment of Port Phillip. The High marine and foreshore habitat value in this subcatchment is primarily associated with Salt Lagoon, as it provides salt marsh, scrubland and lagoon habitat to a wide range of taxa and communities. The Very High property and tourism values reflect the Very High recreational and visual and landscape amenity associated with the foreshore region.”

Portarlinton sub-catchment threats

Threats to water quality, use and reuse can be classed as High - Moderate - Low to Moderate and Lowest. The threats in the Portarlinton sub-catchment are set out below:

- High Level Threats
 - Residential land use run-off
- Moderate Level Threats
 - Land and Infrastructure Development
 - Building site run-off
 - Agriculture
- Low to Moderate Threats
 - Commercial land use run-off
 - Septic tank and sewage leakage
 - Golf Course and Open Space run-off
- Lowest Level Threats
 - Major road run-off
 - Unsealed roads run-off
 - Unstable and degraded waterways
 - Extractive Industries
 - Caravan Park run-off

Residential land use run-off in the Portarlinton sub-catchment is considered to represent a risk to recreational, visual and landscape amenity, and may have a detrimental impact on tourism values.

Stormwater run-off from urban settlements can generate a range of pollutants, including elevated sediment, nutrient and litter loads. Impervious surfaces and formalised (piped) drainage systems deliver pollutants efficiently to the receiving environment.

A range of strategies can be implemented to manage existing residential land use runoff across the sub-catchments. Education and awareness programs, such as educational literature distribution, media releases, signage along major waterways and consultation with Landcare groups, are key tools to improve residents' awareness of stormwater issues and management techniques.

Increasing on-site water retention via rainwater storage and infiltration measures can reduce the mobility of stormwater pollutants, while structural treatment measures, such as, artificial wetlands, gross pollutant traps and screening devices may be suitable at key locations within the drainage system.

A number of opportunities were identified in the plan, where demand could be supplied by the capture and storage of stormwater for reuse, including:

Residential Demand Opportunities:

- Roof water can be collected from residential properties, stored in rainwater tanks, treated appropriately (depending upon water quality and the proposed end use) for garden irrigation, toilet flushing, bathroom and laundry uses.
- Collection and treatment of stormwater, for example, in gross pollutant traps, to be stored in wetlands or urban lakes and used on open space areas, which can replace the present use of potable water drawn from the urban reticulation system, although stormwater may require further treatment depending on its quality and intended use.

Open Space Irrigation Demand Opportunities:

- Collection of treated stormwater (such as via a gross pollutant trap), for storage in urban lakes or wetlands and reuse on open space and to irrigate agricultural areas within the municipality (water may require further treatment depending on the quality of the water and end use);

Key reuse opportunities requiring further consideration prior to adoption and implementation, include the following:

- The collection of roof water using rainwater tanks for garden watering should be encouraged via the Greater Geelong Planning Scheme. ... This is considered one of the City of Greater Geelong's better opportunities for reuse because of the large demand gardening watering places on potable reticulated water at present and the high quality of water that would otherwise enter the stormwater drainage system.
- The treatment and collection of stormwater for irrigation of public open space has great potential within the City of Greater Geelong. There is a demand for good quality water for irrigation within the municipality, particularly for golf courses.
- New developments should include water reuse such as the collection of stormwater in lakes and wetlands for subsequent reuse on gardens and open spaces. This should be encouraged via the Greater Geelong Planning Scheme.

2.1.3 Urban Growth and Land Use Planning

Melbourne 2030

Melbourne 2030 is the State Government's planning strategy for metropolitan Melbourne and its surrounding region for the next thirty years. A key direction of the strategy is to develop Metropolitan Melbourne and the surrounding regional cities as a network of cities providing a choice of places to live, establish businesses and find employment.

This objective is to be achieved through implementation of the following strategies:

- "Planning and supporting regional centres of Geelong, Ballarat, Bendigo and the towns of the Latrobe Valley that are close to Metropolitan Melbourne as viable alternative urban locations to Metropolitan Melbourne.

- Ensuring that infrastructure services are in place so that Geelong, Ballarat, Bendigo and the towns of the Latrobe Valley and their surrounding regions are able to take advantage of opportunities for growth that will accrue from improved linkages to Metropolitan Melbourne.
- Encouraging planning for regional areas and cities that:
 - Delivers an adequate supply of land for housing and industry to meet forecast growth.
 - Ensures that new development is supported by strong transport links that provide an appropriate choice of travel.
 - Limits the impact of urban development on non-urban areas and supports development in those areas that can accommodate growth.
 - Protects conservation and heritage values and the surrounding natural resource base.
 - Develops and reinforces the distinctive roles and character of each city.
 - Fosters the development of towns around the regional cities that are on regional transport routes.
- To control development in rural areas to protect agriculture and avoid inappropriate rural residential development by:
 - Reducing the proportion of new housing development provided in rural areas and encouraging the consolidation in existing settlements where investment in physical and community infrastructure and services has already been made.
 - Ensuring planning for rural living avoids or significantly reduces adverse economic, social and environmental impacts by:
 - Maintaining the long-term sustainable use and management of existing natural resource attributes in activities such as agricultural production.
 - Protecting existing landscape values and environmental qualities such as water quality, native vegetation, biodiversity and habitat.
 - Minimising or avoiding property servicing costs carried by local and State governments.
 - Discouraging development of isolated small lots in rural zones from use for rural living or other incompatible uses.
 - Encouraging consolidation of existing isolated small lots in rural zones.”

City, Coast, Country: City of Greater Geelong Urban Growth Strategy 1996

The Urban Growth Strategy, undertaken in 1996, identified the most suitable directions for urban development in order to accommodate Geelong’s expected population growth to the year 2020.

Indented Head is not included as targeted growth area in the Strategy, which is reflected in Council’s Municipal Strategic Statement, Clause 21.08 Urban Growth, in the Greater Geelong Planning Scheme.

The Strategy identifies the following locations for future growth:

- Armstrong Creek/Mount Duneed (primary growth corridor)
- Wandana Heights
- Urban Geelong (consolidation)
- Lara
- Leopold
- Ocean Grove
- Drysdale/Clifton Springs.

A key element of the Strategy is its direction to consolidate existing urban areas and to provide for compact urban forms, especially in coastal townships.

Rural Residential Strategy 1994

This Strategy identifies preferred locations within the municipality for rural residential development, to ensure that valuable agricultural land is retained and that the designation of rural residential nodes takes into account localised infrastructure constraints.

It continues the theme of past planning policies and practices in the Geelong region which have consistently addressed the demand for rural residential land use since the early 1970's.

Since 1983 rural residential development has been guided by a comprehensive and effective set of planning policies seeking to concentrate development at selected locations. This development has been related to the availability of basic services and community infrastructure. It has also aimed to avoid environmentally sensitive or physically unsuitable land, to ensure areas of urban growth potential were not jeopardised, and to apply relevant zoning as the statutory control mechanism.

Selected locations for rural residential development on the Bellarine Peninsula are Wallington and Drysdale / Clifton Springs. Capacity exists for further development within these nodes.

Indented Head was not designated in this Strategy as a preferred location for future rural living growth.

City of Greater Geelong Rural Land Use Strategy 1997

Council initiated the preparation of this Strategy to recognise the role and contribution of the rural areas to the regional economy and to ensure the conservation of environmentally sensitive areas. It provides a set of implementation tools combining progressive methods of planning and land management to ensure a productive and sustainable rural resource base now and in the future.

The aims of the Strategy are:

- to protect the agricultural and environmental resource base of Greater Geelong's rural area for future generations;
- to enhance the role and contribution of Greater Geelong's rural area to the regional economy;
- to secure the economic value of agricultural and productive uses of rural land; and
- to protect future opportunities for economic returns to sustain the community.

It identified the importance which the community places on the rural areas of the municipality, paying specific attention to its productive capability, habitat value and to its contribution to the scenic qualities of the region. The vision statement for the Bellarine Peninsula, encapsulated within the Strategy, reads as follows:

"The Bellarine Peninsula will feature an attractive rural landscape which reflects sustainable farming and land management practices, a commitment made by the whole community to protecting biodiversity and continued robust natural systems, and will benefit from a positive and responsive land use and planning approach. These factors will contribute towards efficient and sustained productivity levels."

Three broad landforms exist within the region and are distinguishable through soil type, contour and climate. The Strategy describes the Bellarine Peninsula landform as:

"The Bellarine Peninsula is a gently to moderately undulating plain with the majority of soils consisting of grey-brown sedimentary sandy loams overlying a mottled to medium to heavy textured clay. The Bellarine Hills are a significant variation through being heavy black self mulching clay loams well suited to intensive crop production. Climate patterns are temperate. Average annual rainfall is 680 mm (Drysdale) with the growing season commencing with the autumn break in April and continuing through until late November, early December. The coastal location provides a frost free environment which is significant for potato and grape crops."

According to the Strategy, the agricultural quality of land to surrounding Indented Head consists of coastal sands and is classified as generally unsuited to agriculture.

Draft Rural Land Use Strategy 2006

In mid 2006, Council engaged Parsons Brinckerhoff to develop the 2006 Rural Land Use Strategy in partnership with Council officers. This project represents a major review of the 1996 Rural Land Use Strategy.

The purpose of the draft Rural Land Use Strategy is to establish a new policy regime for appropriately regulating rural land use and development in the context of changing agricultural practices and continued rural land development pressures.

It identifies key directions in relation to the application of the State Government's new Rural Zones and planning policies for the rural areas, including policies for animal keeping and training, dwellings and subdivisions, and tourism development in rural areas.

A number of key issues and findings are identified in the Strategy, including:

- Rural land has values and opportunities over and above agricultural values.
- Importance of protecting opportunities for agricultural activities that can contribute to the regional economy.
- Recognising the value of the rural areas and the farming landscape to the liveability of Geelong, wellbeing of the community and the ability to attract tourists and visitors.

The vision for the Bellarine Peninsula outlined in the Strategy is to maintain it as an agricultural/farming area as these activities contribute to the unique landscape and character of this area, the regional agricultural economy, the liveability of Geelong, community wellbeing and the ability to attract tourists and visitors to the municipality.

In regard to the new Rural Zones, the draft Rural Land Use Strategy 2006 recommends the application of the Rural Conservation Zone (RCZ) over the land currently zoned rural on the Bellarine Peninsula, including the rural land within the Study Area. It is considered that Rural Conservation is the most appropriate zone for the Peninsula as it is the only zone which has purposes providing for both agricultural uses and landscape protection. The basis of the application of this zone is to recognise the Peninsula's unique blend of farming, landscape and environmental values.

G21 Geelong Region Plan – a sustainable growth strategy

The Geelong Region Alliance (G21) comprises the municipalities of Greater Geelong, Colac-Otway, Golden Plains, Queenscliff and Surf Coast, and a range of agencies and organisations which recognise the benefits of coordinated planning and development activities throughout the region.

G21 is preparing the Geelong Region Plan in conjunction with the Department of Sustainability and Environment (DSE), Department of Victorian Communities, and the Department of Innovation, Industry and Regional Development.

The purpose of the Plan is to:

- provide a long term land use strategy for sustainable development in the region to 2051;
- identify regional infrastructure requirements;
- provide a framework for the management of population growth and related economic, social and environmental change; and
- develop implementation strategies and monitoring programs.

A three stage process is being undertaken to develop the Geelong Region Plan:

Stage 1 – Regional Context

Stage 2 – Regional Analysis and Issues

Stage 3 – Formulation of the Plan

The *Regional Context* report, released in October 2005, provides a context analysis examining 'inter-regional' relationships rather than issues 'within' the region. It presents key information in a summary form, including:

- an overview of the region;
- past and present indicators and information relevant to the preparation of a land use strategy; and
- an outlook in relation to key trends relevant to the preparation of a land use strategy.

Report Two, *Understanding the Region & Challenges for the Future*, expands upon the *Regional Context*. As with the first report, it comprises background data and research identifying Challenges and Opportunities facing the Region over the next 40 to 50 years.

The draft G21 Geelong Region Plan is based on extensive research (6 major evidence documents) and consultation (35 events, community survey involving 1000 people) and is currently undergoing stakeholder review. Research has found that whilst there has been growth in regional performance over the last 10 years, there are significant challenges to the social, environment and economic fabric of the Region.

These challenges are:

- Population is growing strongly, changing and will be significantly older than the rest of Australia
- The Region's \$8.14 billion economy is under pressure due to globalisation.
- There is significant community social disadvantage and a large variation between the Region's "advantaged" and "disadvantaged".
- The Region's education levels are lower than the average for Victoria and Australia in all but the trades (TAFE).
- Current and forecast growth is placing pressure on the natural and built environment.
- The region rates lower than average in most health related indicators.

The Plan aims to respond to these challenges with directions, policies, actions and projects. These initiatives are divided into five response areas:

- 1) Protect and enhance our environment
- 2) Transform our cities and towns
- 3) Strengthen our communities
- 4) Refocus our economy
- 5) Make it happen

Each response area includes four or five directions and each direction features up to ten policies, each with a number of actions. These detailed policies and actions are the main focus of the current stakeholder review. In addition to the policies and actions presented under each direction, the Plan recommends 12 Key Initiatives - priority project programs to directly address the major challenges identified in the Plan.

The Key Initiatives are crucial to the sustainability of the region over the medium to long term and will require an unprecedented level of collaboration and funding. In addition to the Key Initiatives, the Plan identifies a range of associated projects that will assist in addressing the challenges facing the region.

It is anticipated that the Plan will go to public review in April 2007 and the final Plan will be published and released in the second half of 2007.

Geelong 2010 – A Preferred Future

Geelong 2010 – A Preferred Future is one of the most significant strategic planning initiatives undertaken by the City. It presents major directions and goals envisioned by a broad cross section of the Geelong community. The document is not a traditional development or economic strategy for Geelong as it does not contain recommendations or actions to be taken to achieve the vision.

Geelong 2010 articulates a vision for the Geelong community of the future, which will develop an innovative culture and a prosperous city, able sustain high quality living environments. The document promotes ecologically sustainable development, achievement of the highest standards of planning and urban design and strategies for the management of the built and natural environments.

A focus of the City's strategic planning work is to achieve the 2010 vision, and to prepare and implement the Indented Head Structure Plan is a part of this overall planning direction.

Portarlington/Indented Head Structure Plan 1993

The current Portarlington/Indented Head Structure Plan was adopted in 1993, to guide the development of the townships for a period of ten years. It describes Portarlington and Indented Head as "pleasant, unhurried byside towns".

Portarlington will continue functioning as a centre for tourists and visitors, and Indented Head will retain its resort role. Neither Portarlington nor Indented Head have been identified for urban or rural residential growth beyond the limit to expansion indicated on the Structure Plan.

Infrastructure provision and environmental factors provide both opportunities and constraints to development in the area. According to the Structure Plan, "the majority of the eastern section of the study area is primarily low lying coastal lands. The low lying nature of the area will affect future growth if the predicted Greenhouse effect occurs. In particular, the low lying area of Point Richards and Salt Lake (near St Leonards) may experience some change in the line of the coast."

Objectives of the Structure Plan include:

- Ensuring future residential development contains a mix of housing to cater for the elderly and holiday-makers and tourists.
- Maintaining a rural buffer between the two townships.
- Continue with the development of Portarlington's existing shopping precinct as the area's centre of retail and commercial development.

- Enhancing the low-key resort appeal of Portarlington/Indented Head for year round tourists.
- The protection of appropriately zoned land for industrial development.

Draft Medium Density Housing Strategy

The draft Strategy recommends that the Indented Head township should be an Incremental Housing Diversity Area. It recommends that the policy for Incremental Housing Diversity Areas should be to:

- Enable the evolution of Incremental Change Areas to include the incremental use and development of medium density housing, whilst respecting the preferred neighbourhood character as defined by the Greater Geelong Residential Character Guidelines – 2001
- Direct medium density housing to sites located within 400 metres of one or more:
 - Neighbourhood shopping centre;
 - Community facilities, including schools, community centres;
 - Active open space, including active walking trails (but not areas of environmental sensitivity);
 - Public transport stops.
- Preference will be given to sites where a greater number of the above mentioned facilities or services are provided in proximity to the subject site.
- In ... locations which are not within convenient walking distance of public transport and neighbourhood activity centres, encourage lower density housing forms with a predominance of single dwellings on average sized lots.

2.1.4 Community Development

Bellarine Peninsula Strategic Plan 2006-2016

The Bellarine Peninsula Strategic Planning Project 2006-2016 aims to respond to aspirations of local communities, and to manage the range of pressures evident on the Peninsula in a proactive and sustainable manner. This project builds upon existing plans for the Peninsula and its townships, and it involved detailed consultation and communication with all sections of the community having an interest in the Peninsula, to provide a strong framework for future planning necessary for the provision of services and infrastructure.

The Bellarine Peninsula Strategic Plan produced:

- A snapshot of current land use in the townships and rural areas of the Bellarine Peninsula;
- Current and projected population characteristics;
- A social service plan for each township and for the entire Peninsula;
- Unique visions for each township on the Bellarine Peninsula; and
- An integrated vision for a healthy and sustainable community on the Bellarine Peninsula.

Indented Head Community Vision 2006 – 2016

A Community Vision 2006-2016, was formulated by the Indented Head community after a public meeting and two weekends of distributing surveys to residents. While the response to the survey represented only 10.85 per cent of Indented Head households, it can be taken as a representative view of the community.

The Indented Head Community Vision 2006 – 2016, incorporated in the Bellarine Peninsula Strategic Plan, is:

“The peace and quiet of Indented Head is the most valued aspect of the township. The small and cohesive community is its most important and valued resource.

Our vision for this small and idyllic hamlet is to improve the environment, to ensure better amenities for community and visitors, while retaining our most valued small community and peaceful way of life.”

Key findings of the BPSP relating to social infrastructure needs are further considered in Section 5.1.1 of Part C of this Structure Plan.

2.1.5 Economic and Infrastructure

Geelong Economic Development Strategy 2005-2010

The Geelong Economic Development Strategy provides a framework for Council's economic development activities by identifying priority actions for the next five years. The Strategy encourages the pursuit of activities which will maximise the Region's competitive advantages, and encourage investment and secure employment opportunities for the future.

The following six Strategic Growth Sectors have been identified in the Strategy:

- Knowledge, Innovation and Research
- Advanced Manufacturing
- Health
- Tourism
- Small, Micro And Home Based Business
- Food and Horticulture

It outlines prioritised actions and objectives for each Sector including:

- Recognising there is future capacity for the growth of the seafood industry through the State Government's Aquaculture Fisheries Reserves.
- Promoting the ongoing development of Geelong' seafood and aquaculture industry.

Geelong Retail Strategy 2006

Council commissioned Essential Economics Pty Ltd, in association with Planisphere, to prepare the City of Greater Geelong Retail Strategy 2006 (*Geelong Retail Strategy 2006*) to guide ongoing development of the retail sector and retail activity centres in the City and to provide a framework to guide the assessment of future retail development proposals over the next 10 to 15 years. This strategy was adopted by Council on 13 June, 2006 and supersedes the previous retail strategy prepared in 1998.

The 1998 Greater Geelong Retail Strategy has guided the evolution of the network of retail centres in Geelong and provided a policy basis for the assessment of retail development proposals in the City. In 2001 Council undertook a review of the Retail Strategy which considered a range of new retailing trends and provided an updated Retail Development Framework to guide the assessment of new retail proposals.

By 2021, the population of the City of Greater Geelong is forecast to increase to approximately 246,000. Based on this forecast, scope exists for the addition of up to 154,000 square metres of retail floor space within the municipality, over the ensuing 15 years. In addition, the retail sector is a vital employment generator and currently the largest employing sector within the region, accounting for some 12,700 jobs in the municipality.

The Retail Strategy provides directions for the development and planning of retail uses within the municipality. It was formulated having regard to population growth, socio-economic and demographic characteristics, retailing trends and growth in new residential areas. A foundation of the Strategy is to support the established retail hierarchy and provide for a viable and accessible retail sector.

There may also be potential for an improved level of tourism retailing in some of the smaller centres in popular tourist areas, such as, those on the Bellarine Peninsula.

The new Strategy reaffirms the directions and objectives of the existing 1998 document as it relates to retailing and commercial uses within the township of Indented Head.

Bellarine Peninsula Tourism – Strategic Tourism Plan 2005 – 2008

This Plan has the role of establishing the role of Bellarine Peninsula Tourism in representing the tourism industry, providing advice and setting a strategic direction by achieving a range of goals including:

- Coordination and representation
- Visitor services – including improved tourism signage and developing adequate visitor amenities
- Industry development
- Industry research
- Communication
- Marketing

- Product development – encouraging development of new tourism attractions and accommodation, touring routes and support infrastructure
- Maintaining partnerships

Bellarine Peninsula Strategic Plan Community Vision – Tourism

The plan notes that the tourism industry is vital to the Bellarine Peninsula as it drives the local economy and provides social opportunities. Tourism issues and strategies identified include:

- Planning – ensure planning on the Bellarine Peninsula maintains the qualities of the Peninsula that visitors find attractive and communities value, whilst allowing scope for development that complements and strengthens the local tourism industry. Actions and strategies include limiting urban development to designated urban boundaries, protecting rural amenity and ensuring that planning policies are not at odds with tourism;
- Transport – improve transport services on the Bellarine Peninsula for the benefit of tourists and tourism operators;
- Advertising, Marketing and Promotions – tourism operators and tourism associations should work cooperatively to actively promote and market the Bellarine Peninsula as a tourism destination. A “Bellarine brand” should be created to increase public awareness of, and visitation to, the Peninsula;
- Seasonality – to smooth demand for Bellarine as a tourist destination by improving trading in traditional off peak seasons and midweek and encouraging new conference facilities;
- Environment – ensure the tourism industry understands the importance of the natural and built environment and its protection to tourism on the Peninsula;
- Community – promote the positives of tourism to the community to foster support and to achieve mutually beneficial outcomes for the community and visitors.

Geelong Otway Tourism Strategic Business Plan 2004 – 2007

The Business Plan focuses on strategies to create a sustainable industry and visitor experience, address the seasonal nature of visitation and long term tourism industry viability, increasing visitor expenditure and length of stay.

It identified a number of tourism trends for the region including:

- Tourism growth in the region is strong despite stagnant domestic market growth
- employment growth in accommodation businesses
- Improvements in length of stay and off peak visitations
- ‘Going to beach’ remains strong activity with some shifts to commercial and indoor activities (eating out, shopping, etc)
- it is seen as a ‘holiday’ area as opposed to a day trip destination

- Increased use of visitor information centres
- An over supply of some accommodation styles
- increasing demand for experiential and educational holidays
- Visitor satisfaction is eroded due to overcrowding over the summer period

Geelong Seafood Industry Strategy 2003 (City of Greater Geelong)

The Geelong Region is home to a comprehensive range of seafood-related activities including, wild catch, aquaculture, processing, retailing, research and development, education, training and tourism. Approximately 470 people are employed in this industry which contributes at least \$70 million in regional turnover into the local economy.

Port Phillip Bay is one of Australia's largest mussel growing areas (sea based aquaculture) with some fifteen (15) active mussel farms. Seaweed, sea urchins and sea cucumbers are also harvested from Corio Bay and the Bellarine Peninsula. There are also four land based aquaculture operations located in the Region dedicated to abalone and barramundi farming.

The Geelong Seafood Industry's Vision is to "*Position Geelong as the Seafood Capital of Victoria*". This vision has a set of five supporting objectives on the themes of infrastructure, industry, tertiary education, food, aquaculture, tourism and recreation.

A key objective is to develop the Geelong Region as the base for aquaculture activities in Victoria. The aquaculture industry currently provides a considerable proportion of product both in Australia and overseas. As wild catch yields become unsustainable there will be a greater reliance on aquaculture in the future. Therefore, Geelong should ensure it is at the forefront of aquaculture technologies and activities.

Geelong Transport Strategy December 2003

The Geelong Transport Strategy was prepared to provide a clear direction for the development and management of existing and emerging transport issues in the city over the next decade.

Specific transportation measures for the Bellarine Peninsula are recommended in the Strategy, including construction of a regional public transport interchange in Drysdale to enable the linking of services to Geelong with services between the townships on the Peninsula. It is proposed to review the routes and timetables of bus services to eastern Bellarine Peninsula townships, such as, Indented Head to determine if improved services can be provided.

The Strategy recommends that Council consider the transport network and design of road layouts when proposals for new residential subdivisions are presented, to provide for the safe passage of buses, cars, other motor vehicles, and bicycles within subdivisions, and, most importantly, for the safe movement of pedestrians.

2.1.6 Open Space and Recreation

City of Greater Geelong Study of Open Space Networks 2001

This Study analysed the existing open space within the municipality and it aims to identify links between open space areas, and future uses for open space to maximise their accessibility to, and benefits for, the community.

Indented Head is located within the Peninsula Zone, which includes all of the land on the Bellarine Peninsula, east of Moolap. The Study noted that connectivity between the small villages dotted along the foreshore is limited, creating a sense of isolation between each settlement in this Zone. This sense of “isolation” has become part of the character of each township, together with a strong connection to the foreshore and the sea. An appreciation of this landscape setting directs the strategy for open space provision/opportunities within this region.

“The townships located along the coast are integral to the region’s landscape character. To further enhance their contribution, individual and recognisable themes could be established for each town. In association, links between towns should be provided which do not compromise the village character of each of the settlements.”

Many tourist destinations are located within this region. Improved, but not gentrified, civic spaces and facilities, e.g. toilets, should be provided, to encourage visitors to stop within the townships.

Actions recommended for the Peninsula Zone include:

- “Protect important views as areas of significant landscape ... through local policy and/or overlay controls.
- Protect areas of landscape importance, notably ...the hill tops of Mt Bellarine ... through local policy and/or overlay controls.
- Retain the Council policy of urban containment to protect the rural and coastal landscape.
- Promote opportunities for sensitive private recreation facilities that can enhance the experience of these perceived open spaces of the rural landscape (e.g. wineries, host farms, fruit picking, horse riding etc.)”

The recommended actions for the Portarlington, Indented Head and St Leonards sub-zone include:

- “Complete a high quality Linear and Linkage route around the coastline between the three towns and onward to the west to Clifton Springs, Leopold and Geelong and southward to Point Lonsdale and Queenscliff.
- Enhance the coastal reserve between the three towns so to improve its secondary role for Landscape and Amenity and Conservation and Habitat purposes. Provision of adequate stopping points, service facilities and the like should occur in association with this general upgrading.
- Develop Linear and Linkage routes to the inner, rural areas and farming country of the Bellarine Peninsula.

- Protect the landscape, amenity and village character of each of the towns through policies of urban consolidation.
- Acquire additional areas for Informal Parks ... in association with subdivision development in Indented Head.
- Enhance high quality Informal Parks in or close to the centre of each township for visitor use ...and investigate a location for such a site in Indented Head.
- Pursue the further theme development of existing coastal parks at Indented Head and St Leonards focussing on the Batman and Buckley stories and sponsor the development of special events surrounding these.
- Develop foreshore parks in accordance with approved landscape management plans of the Bellarine Bayside Foreshore Committee of Management.”

City of Greater Geelong Bellarine Peninsula Recreation & Leisure Needs Study 2005

This Study was undertaken on behalf of the City of Greater Geelong to investigate and determine the recreation, open space and leisure needs of the current and future Peninsula communities, and to provide a broad direction on future resource allocation for the area. It recognises the Bellarine Peninsula as one of the fastest growing areas within the City of Greater Geelong.

At Indented Head, the foreshore is the traditional focus of open space provision and recreational opportunities, similar to other small coastal townships in this area. Generally this has adequately provided for community needs, however, the influx of recreational campers for the peak, Christmas/Summer holiday period may limit resident access to foreshore areas normally used for their informal recreation.

Indented Head does not have any active sports reserves, however, facilities for these purposes in Portarlington and St Leonards are considered to adequately service the current needs of this region.

The Study makes various recommendations in relation to open spaces and their features, and linkages throughout the townships, such as, improvements and/or additions to existing recreation facilities and pedestrian links.

2.2 Planning Scheme Provisions

Many of the strategies and guidelines detailed above form part of the Greater Geelong Planning Scheme, and are included as reference documents to guide the exercise of discretion when considering applications for uses and/or development within Indented Head.

The key State and Local Planning Policies, together with the zone/overlay provisions are summarised in Tables 1, 2 and 3.

Table 1 - State and Local Planning Policies

State Planning Policy Framework

| Clause | Key objectives and provisions | Implications for study area |
|---|---|---|
| 12.03: Melbourne 2030 – Networks with regional centres. | Establishes broad policy directions relating to urban planning for regional centres including Geelong. | Limited – Provides general direction for planning of rural and urban areas, to ensure an adequate and appropriate supply of residential land that does not negatively impact on the established rural areas. |
| 14.01: Settlement | Establishes general principles and objectives for urban settlement including provision of urban land supply and using Structure Plans for the orderly development of urban areas. | Development of Structure Plans must be consistent with State Environment Protection policies, the strategic and physical context of the location, respond to neighbourhood character and encourage consolidation of existing urban areas, provide for liveable and sustainable communities and efficient provision of infrastructure. |
| 15: Environment | Seeks to respect and respond to catchments and waterways, flooding, air and soil conditions, flora and fauna and coastal locations. | Requires development of coastal areas to be consistent with the principles of the Victorian Coastal Strategy and Coastal Management Act and the Catchment and Land Protection Act 1994. |
| 16: Housing | Establishes objectives for subdivision and residential development including the application of ResCode via Clauses 54 - 56. Development of rural living and rural residential areas restricted by application of Ministerial Direction No 6. | Any residential standards should not replicate ResCode provisions. Recommendations relating to future residential and rural residential development must be consistent with state policy. |

State Planning Policy Framework Continued...

| Clause | Key objectives and provisions | Implications for study area |
|-----------------------------|---|--|
| 17: Economic Development | Establishes a framework for the development of activity centres, protection of productive agricultural land and development of appropriate tourism opportunities. | Any recommendations relating to the further development of the retail area must be consistent with the broader municipal/regional retail hierarchy. Provides opportunity to establish objectives and policy relating to improvements to town centres and development of tourism based facilities commensurate with the scale and role of the town. |
| 18: Infrastructure | Establishes objectives for the provision of physical and community infrastructure. | Infrastructure provision must be efficient, sustainable and relate to key needs. |
| 19.03 Design and built form | Establishes a framework for ensuring high quality urban design and architecture. | Urban design and architecture must reflect the characteristics, aspirations and cultural identity. Provides opportunity to investigate and strengthen local policy and controls as appropriate – any policy provisions should avoid repetition of existing policy framework. |

Local Planning Policy Framework

| Clause | Key objectives and provisions | Implications for study area |
|-----------------------------|--|---|
| 21.05: Planning Principles | Establishes a number of land use and development principles which underpin Council's strategic directions, arising from Council's vision and City Plan 2001. | Key implications for the study area include directions to maintain a non-urban breaks between settlements, encourage urban consolidation with defined urban forms, direct rural residential development to preferred nodes, population growth to be accommodated in existing zones and designated growth locations, protect environmental features including catchments and preserve landscape values, protect rural land, provide for efficient and sustainable infrastructure, provide for commercial and retail facilities appropriate to the needs of local populations, foster a sense of identity and community in built form and design. |
| 21.07: Strategic Directions | This section contains a framework plan for the municipality which identifies growth areas, existing and preferred conditions. | Indented Head is not identified as a growth area, however, the limits to growth are not precisely defined. |
| 21.08: Urban Growth | Establishes a reference to the 1996 Urban Growth Strategy and identifies key growth areas. | Indented Head is not identified as a growth area. Key objectives of the policy are to maintain non-urban breaks between settlements, protection of rural areas and environmental features, encourage higher densities in existing urban areas and provide for efficient and effective infrastructure provision. |

Local Planning Policy Framework Continued...

| Clause | Key objectives and provisions | Implications for study area |
|--|---|---|
| 21.09: Rural Residential Development | Designates nodes for rural residential development and appropriate supply of rural living opportunities within the municipality. | Indented Head is not a designated area for rural residential development. |
| 21.10: Environmental Management | Establishes principles for effective management of the environment to assist in its protection. | Provides a commitment to develop townships and the City as a whole in accordance with Environmental Sustainable Development principles. |
| 21.11: Protection of Catchments, Waterways and Groundwater | Establishes a number of principles relating to land and waterway management to ensure adequate protection. | Requires development and planning assessments to take into consideration impacts of uses and development on catchments and waterways. |
| 21.13: Coastal Areas | Builds upon the State policy relating to the Environment and establishes broad principles relating to urban development and forms on the coast. | Encourages development on the coast which is compact and which preserves the visual landscape and environmental qualities of the location and context. Provides opportunity to establish planning controls to address issues of building height, views from the coast and view sharing. |
| 21.14: Conservation of Native Flora and Fauna | Establishes principles for effective protection of flora and fauna. | Encourages revegetation of land within townships, both on private and public land. Requires new development to minimise vegetation removal. |

Local Planning Policy Framework Continued...

| Clause | Key objectives and provisions | Implications for study area |
|--------------------------------------|--|---|
| 21.15: Open Space | Establishes directions for the efficient and effective provision of open space areas. | Promotes a linked open space network, which meets the community's needs and enhances the amenity of the municipality. |
| 21.16: Cultural Heritage | Seeks the retention and protection of places of identified heritage and cultural significance. | Promotes conservation and enhancement of identified places which does not undermine their significance but which contributes to it. |
| 21.17: Energy Efficiency | Establishes principles for energy conservation. | Promotes dwelling and subdivision design that incorporates energy efficient design principles, encourages efficient infrastructure use and urban form. |
| 21.18: Housing | Builds upon State Planning policy relating to Housing. | Promotes the protection and improvement of the urban character of townships and the provision of housing stock which caters for the range of housing needs in the community. Includes reference to the Residential Character Study. |
| 21.19: Economic Development | Builds upon the State Planning Policy relating to Economic Development. | Promotes a diverse range of economic opportunities. |
| 21.20: Commercial and Retail Centres | Establishes a range of principles which support the existing retail hierarchy. | Encourages retail proposals which embody the concept of net community benefit and population influences. Promotes high standards or urban design in retail centres. |

Local Planning Policy Framework Continued...

| Clause | Key objectives and provisions | Implications for study area |
|-----------------------------------|---|--|
| 21.22: Industry | Establishes directions to build on the existing industrial base and which consolidates and promotes existing industry. | Does not include designation of outlying townships for industrial uses and expansion. |
| 21.23: Tourism | Establishes principles relating to Geelong's tourism opportunities. | Promote tourism opportunities which build on existing assets and protect sensitive environments, such as the coast and beaches. Promotes tourism features which integrate with other activity centres and facilities, through urban design and linkages. |
| 21.24: Agriculture and Rural Land | Establishes principles to retain Geelong's agricultural and environmental recourse base. | Directs urban growth and rural residential growth to specific locations. |
| 21.26: Integrated Transport | Establishes directions relating to provision of a range of transport modes. | Promotes a linked, efficient transport system which is sustainable and meets the community's needs. |
| 21.30: Design and Built Form | Builds upon State Planning Policy relating to Design and Built Form and further promotes urban design and architecture which reflects the community characteristics, aspirations and cultural identity. | Provides opportunity to develop siting and design guidelines for a variety of land use types. Encourages incorporation of urban design principles and actions in the review of Township Structure Plans. |

Table 2 - Zones

| Zones | |
|---|---|
| <i>Residential 1 Zone (R1Z)</i> | The majority of the urban land in Indented Head is zoned R1Z. The purpose of this zone is to provide for residential development at a range of densities with a variety of dwellings. |
| <i>Rural Zone (RUZ)</i> | The majority of the land beyond the western edge of Indented Head is zoned RUZ. The purpose of this zone is to provide for the sustainable use of land for extensive animal husbandry and crop raising. |
| <i>Public Conservation and Resource Zone (PCRZ)</i> | The Port Phillip Bay surrounds between Indented Head and Portarlington are zoned PCRZ. The purpose of this zone is to protect and conserve the natural environment and natural processes for their historic, scientific, landscape, habitat or cultural values, to provide facilities which assist in public education and interpretation of the natural environment with minimal degradation of the natural environment or natural processes and to provide for appropriate resource based uses. |
| <i>Public Park and Recreation Zone (PPRZ)</i> | A large tract of land following the coast and some parks in Indented Head are zoned PPRZ. The purpose of this zone is to recognise areas for public recreation and open space, protect and conserve areas of significance where appropriate and to provide for commercial uses where appropriate. |

Table 3 - Overlays

| Overlays | |
|---|---|
| <i>Heritage Overlay (HO)</i> | <p>There are no identified heritage precincts within the township, however, Heritage Overlays apply to four sites in Indented Head. The purpose of this overlay is to conserve and enhance heritage places or places of natural or cultural significance.</p> <ul style="list-style-type: none"> ▪ HO1600 Batman Park, The Esplanade, Indented Head ▪ HO1601 Anderson’s Reserve, The Esplanade, Indented Head ▪ HO1602 Ozone Monument, The Esplanade, Indented Head ▪ HO262 Batman Memorial, The Esplanade, Indented Head |
| <i>Schedule 14 to the Design and Development Overlay (DDO14) – Dwellings Over 7.5 metres</i> | <p>This overlay applies to all residential areas within the City of Greater Geelong. This overlay aims to ensure new dwellings and extensions are compatible with the existing scale and character of adjoining dwellings and aims to ensure that the height and visual bulk of dwellings are acceptable in the neighbourhood setting. A planning permit is required to construct or extend a dwelling over 7.5 metres. This is an interim overlay which will expire on 30 June 2007.</p> |
| <i>Schedule 1 to the Vegetation Protection Overlay (VPO1) – Significant roadsides and linear reserves</i> | <p>This overlay applies to Church Road east of Grassy Point Road and McDonald Street at Indented Head and aims to protect areas of significant indigenous vegetation, maintain habitat corridors for indigenous flora and fauna, and ensure that any development minimises the loss of indigenous vegetation.</p> |

2.3 Key Influences

- Indented Head is not a location designated for extensive residential or rural residential growth within Council's Municipal Strategic Statement;
- There is a need to nominate a clear Settlement Boundary for the township and provide for a compact urban form;
- Sensitive environmental assets and landscape features within the Study Area should be preserved, protected and enhanced;
- Strong State and Local Planning Policies provide directions for:
 - the protection of coastal environments;
 - the protection of rural environments and agricultural activities;
 - enhancement of design and built form of the township, including the application of a range of policy and statutory controls;
- Opportunities exist for the enhancement of open space, recreational facilities and linkages;
- Retail development should be consistent with the established retail hierarchy and provision should be made for appropriate incremental growth;
- Community facilities should be provided commensurate with community needs and sustainability of service provision.

3.0 Natural and Urban Environment

Indented Head's character is defined by its key landscape attributes: Port Phillip Bay, the foreshore, rural hinterlands and reserves. The values of these key attributes are significant for the local and wider environment, and are intrinsic to the identity of the township and the community.

3.1 Natural Environment

The Bellarine Peninsula is an uplifted landmass bounded by the Barrabool Fault to the north and the Bellarine Fault along the east. It forms the southern and western boundary of the Port Phillip Sunkland. The surface geology of the Bellarine Peninsula consists primarily of sand sheets overlaying Miocene sands and clays, and the hills in the centre of the Peninsula are the oldest sand sheet, formed in the Tertiary age. Parts of the Tertiary sand sheets have weathered to form a gently rolling plain which has been covered by more recent sands of a variable depth.

Landforms on the Bellarine Peninsula vary from large areas of shallow lakes and low-lying estuary, Lake Connewarre and Reedy Lake, to the uplifted Tertiary Plain in the centre of the Peninsula and the well weathered basalt hills between Drysdale and Portarlington.

The area from Swan Bay to the edge of Geelong, including Indented Head, is classified in the Landscape Setting Types for the Victorian Coast – May 1998 as 'Rural Flat and Undulating with Features'. Cliffs vary from high to low beyond which the land is gently undulating with pasture and contains small to medium sized towns. The cliffs along the coast at Clifton Springs (to the west of Portarlington) are most unstable and slumping is apparent throughout areas within this setting type.

Special considerations for this landscape setting type include:

- The siting of development near cliffs needs to be avoided, given their unstable nature; and
- Development should be concentrated to negate visual clutter across landscape (VCC 1998).

3.1.1 Key Environmental Features

Significant natural features form two of the edges of the township. The first is Port Phillip Bay and the foreshore to the east and the second is the Salt Lagoon and its wetlands to the south. These features are illustrated on Map 6 – Significant Landscape and Environmental Features.

Port Phillip Bay and the foreshore form the entire **eastern** edge of the township, and provide a natural barrier to development. These features form not only a focus and connection to the sea, but also provide significant scenic, recreational and environmental values for the township. The Port Phillip Bay foreshore is included within the Corio Bay Coastal Action Plan, administered under the Coastal Management Act 1995, which provides objectives and direction on issues affecting the area and objectives for future management and development of the foreshore.

Salt Lagoon Wildlife Reserve which contains a shallow, highly saline, sub-coastal lagoon surrounded by salt marsh vegetation with an associated salt meadow, is located to the **south** of the township. The lagoon is part of the Swan Bay system of wetlands and marine environments, and is recognised for the diversity of bird species that visit or nest in the salt marsh vegetation. According to the Parks Victoria publication *Fauna of the Bellarine Peninsula* (Technical Series No. 10),

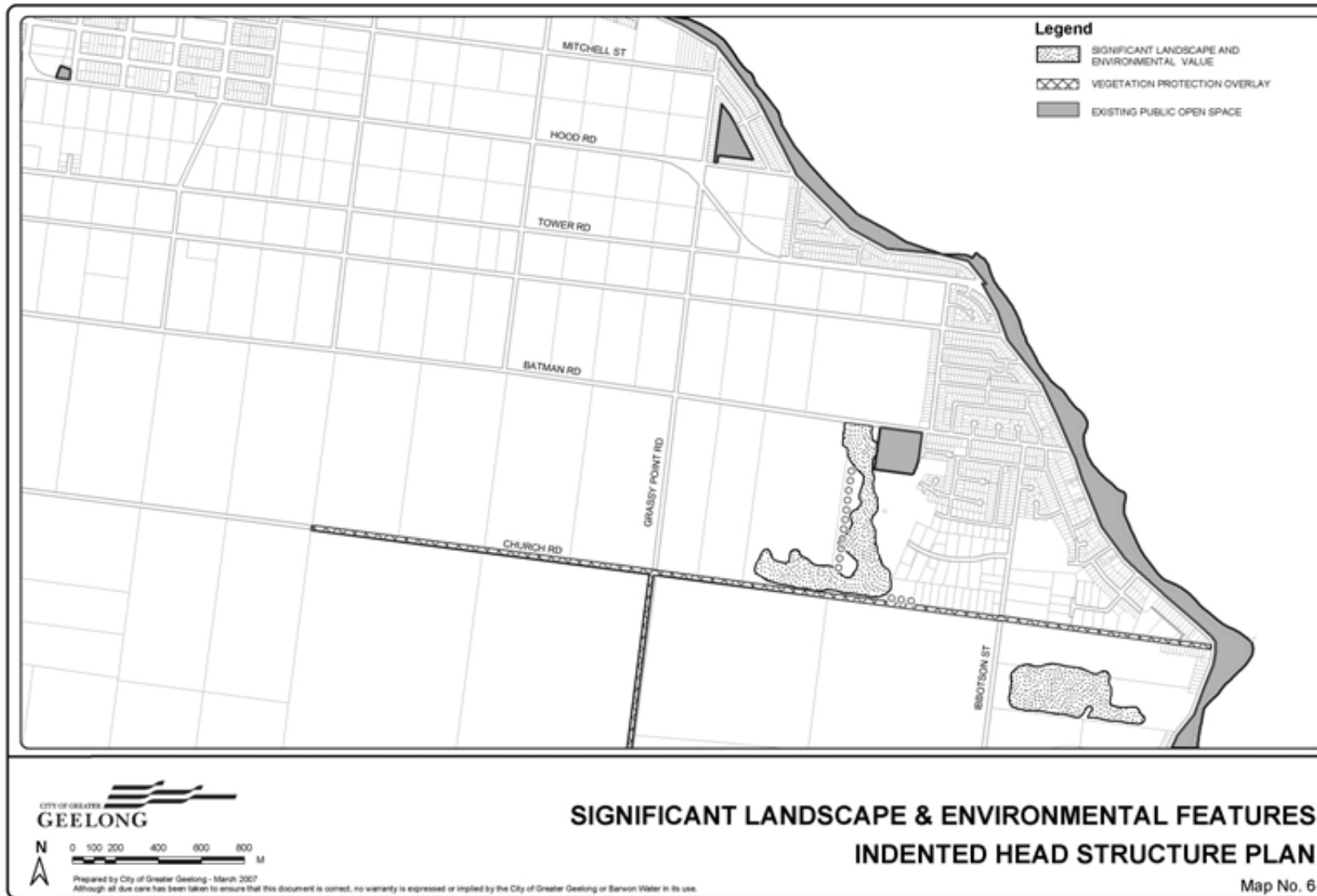
“41 species of waterbirds have been recorded from the lagoon, with dabbling waterfowl and waders being the dominant waterbirds. The lagoon supports 16 species of waterbirds in numbers which are significant at national, state or regional levels, have special conservation status, or are listed in international treaties. It contains potential habitat for Orange-bellied Parrots, and is of national significance for Common Greenshanks”.

Salt Lagoon Wildlife Reserve is surrounded by undeveloped land to the north and west, with urban development on its eastern and southern fringes. Further to the south lies the township of St Leonards.

The flat, agricultural pastures of the eastern Bellarine Peninsula extend to the **western** edge of Indented Head, with dense shelterbelts and remnant roadside and creek vegetation. This landscape feature contributes significantly to the township's identity as a small coastal village surrounded by rural land, a characteristic it shares with other smaller townships on the Bellarine Peninsula.

Vegetation within Indented Head is groomed parkland type consisting of exotic species, such as, Cypress and Pines. Further to the north the vegetation consists more of indigenous species, such as, Tea Tree and Moonah, although Cypress windbreaks exist in some parts. Close to Grassy Point the vegetation becomes sparse with little tree or shrub layers. Remnant Tea Tree scrubland of local significance exists along Ibbotson Street and Coastal Moonah woodland along the foreshore is protected under the Flora and Fauna Guarantee Act. The land on the western fringe of the township between Church Road and Batman Road, known as the 'Sea Breeze Estate', contains an extensive area of old remnant River Red gums and associated native woodland species.

These landscape features, which have considerable areas of vegetation, contribute to the character of the township, and create an atmosphere of open space adjacent to the established residential area.



3.1.2 Climate Change

The 20th century was the warmest the world has seen in 1,800 years. A warming climate will lead to changes in many aspects of the climate system, including precipitation, wind patterns, and the frequency and severity of extreme weather events. These changes will have wide ranging effects on natural ecosystems and on Victoria's economy.

Small changes in average climatic conditions are expected to generate a larger number of extreme events. The number of days over 35° Celsius and longer and more intense droughts will increase in frequency due to climate change. Extreme weather events may lead to increased injuries or deaths, property and environmental damage.

Rising sea levels combined with higher temperatures and changes to wind and storm patterns are expected to increase the potential for erosion and damage to coastal infrastructure, and intensify pressure on biodiversity assets.

Climate change is expected to produce more intense low pressure systems off Victoria's coast causing a greater number of extreme storm events and storm surges. Particular parts of Victoria's coast are more vulnerable to storm surge events, with low lying, sandy shorelines and low lying areas adjacent to estuaries and waterways at most risk.

"Whilst limited information is available on the likely impacts of climate change specific to the Victorian coast, current estimates indicate sea levels will rise up to 55cm by 2070. Storm surges and potential estuarine flooding in storm conditions will result in further effective increase in areas affected by flooding. Not all areas of the coast are the same and therefore the level of risk and likely patterns of impact and change will vary."

Existing settlement and the trend towards development in coastal areas, resulting from population and economic growth, are likely to lead to greater community risk and insurance exposure to current and future hazards.

The built environment is vulnerable to climate change, it is likely to affect design and performance, including structural standards, cooling and heating demand and drainage. Likely increases in the intensity of the heaviest rainfall events would lead to increased flash flooding, and in low-lying coastal areas there will be an increased risk of storm surge inundation.

3.1.3 Indigenous Heritage

The natural environment of Indented Head contains significant values and provides associations with Aboriginal history, emphasising the need to protect and preserve these areas.

In the 1940's, a number of Aboriginal stone artefact scatters were located around Indented Head, including two sites now registered by Aboriginal Affairs Victoria (AAV). It is believed that one of the sites has been destroyed by housing development. Two Aboriginal shell middens are known on cliff tops on the south side of Indented Head.

Obligations for the protection of Aboriginal sites are set out in the State *Archaeological and Aboriginal Relics Preservation Act 1972* and the Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*.

Council has entered into a formal arrangement through a protocol with the Wathaurong Aboriginal Co-operative to assist the "community" to identify, conserve and protect places of Aboriginal cultural value from any form of development that may detrimentally impact on sites. This protocol provides the basis for the management, protection and enhancement of culturally significant Aboriginal sites.

The protocol sets out a number of trigger points where Council is required to take into account the requirements of Commonwealth and State legislation and the views of the Community to provide for the conservation and enhancement of places, sites and objects of Aboriginal cultural heritage.

3.1.4 Key Views and Vistas

The key views and vistas found throughout the township enhance the coastal meets rural character of Indented Head. The following views and vistas were identified:

- The foreshore reserve and Port Phillip Bay from The Esplanade.
- The panoramic view from Murradoc Hill in Drysdale.

3.1.5 Management of Particular Natural Environmental Issues

The management of the natural environment in Indented Head is complex due to the variety of natural features in the town and the diverse agency involvement. Principally, there exists a single lead agency responsible for each specific feature or area, appointed either through Commonwealth or State legislation, who undertake their activities in accordance with formal strategies and management plans. These lead agencies work in partnership with other groups and agencies, such as, Bellarine Landcare, "Friends of" groups, to manage and protect these areas.

The groups and government agencies involved in Indented Head includes, but is not limited to, the following:

- Wathaurong Aboriginal Co-operative;
- Parks Victoria;
- Bellarine Bayside Foreshore Committee of Management (Bellarine Bayside);
- Corangamite Catchment Management Authority (CCMA);
- Swan Bay Integrated Catchment Management Committee;
- City of Greater Geelong; and
- Central Coastal Board.

In accordance with the established protocol between Council and the Wathaurong Aboriginal Co-operative, Council will continue to maintain a relationship with the Co-operative in regard to proposed developments that may impact on Aboriginal cultural heritage values, in conjunction with ongoing compliance with State and Commonwealth legislation.

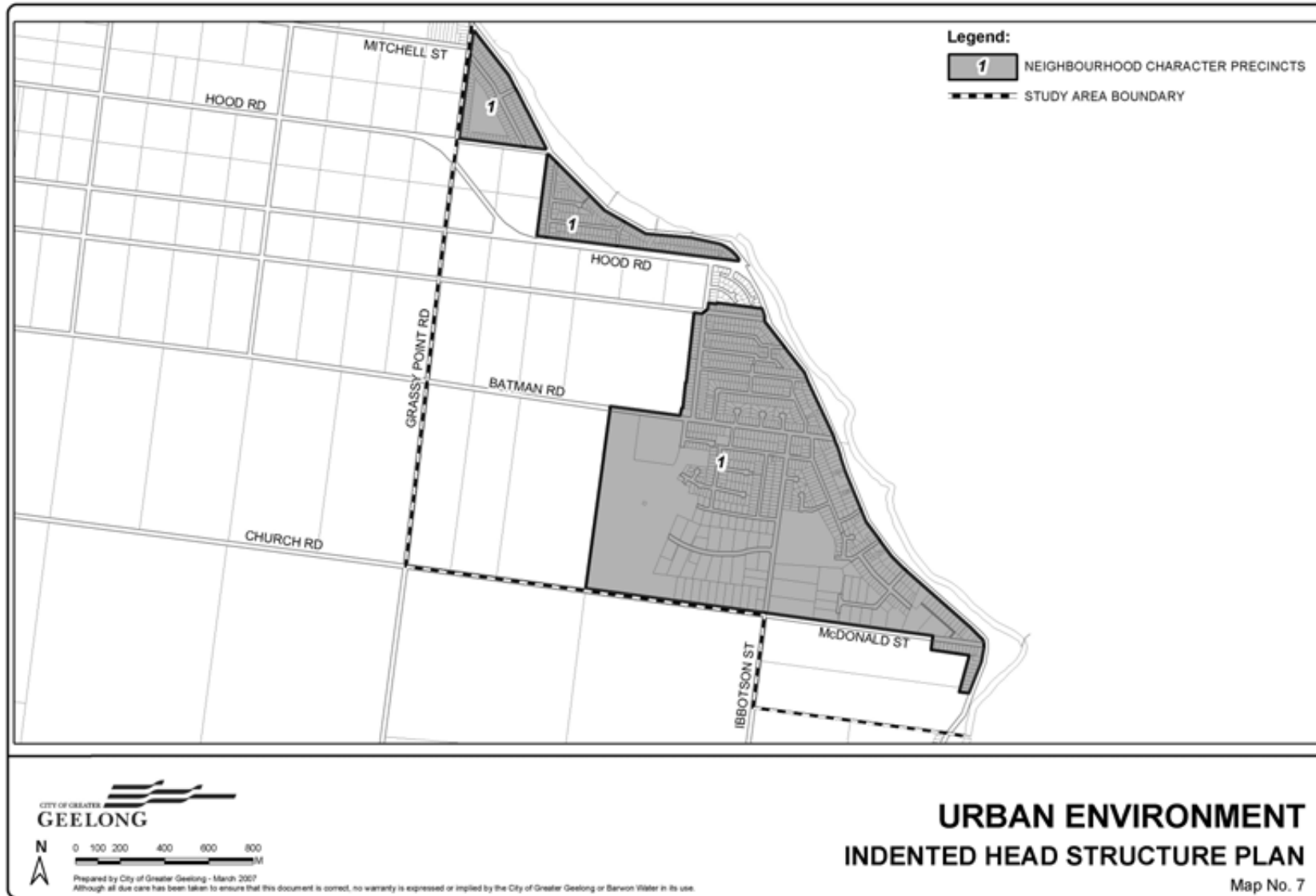
The Bellarine Bayside Foreshore Committee of Management Inc. (Bellarine Bayside) is responsible for the management of the foreshore reserve. Bellarine Bayside manages the foreshore reserve subject to the specifications of its 1998 Landscape Management Plan, which is currently under review. In accordance with the existing plan, the majority of the foreshore reserve is to be retained for its present uses, and the plan ensures the on-going management and preservation of the foreshore reserve for recreational, scenic and environmental values.

Another foreshore area which may be subject to future improvement is the current watercraft launching facilities which are considered by many to be inadequate during peak seasons. Bellarine Bayside has indicated that there is a need to improve the launching facilities and car parking areas to provide for safety requirements and the current and future anticipated demand.

The City of Greater Geelong's Health Services Unit is responsible for the coordination of a *Mosquito Management Program*, which is a combination of ongoing monitoring and treatment of mosquito breeding sites. Council has recognised that Indented Head is often impacted by mosquito activity due to the environmental attributes in and around the township. Through the Management Program sites which are being monitored and treated in around Indented Head, include the Salt Lagoon Wildlife Reserve.

3.2 Urban Environment

The urban environment of Indented Head is dominated by housing, which is located along each of the main approaches to the township. The extent of the Urban Environment is illustrated on Map 7.



3.2.1 Streetscapes and Residential Character

The City of Greater Geelong, in consultation with local communities has prepared a Residential Character Study, which includes “Vision Statements, Preferred Character Statements and Design Guidelines” for each area within the municipality.

The Residential Character Study establishes a combined ‘Vision Statement’ for the townships of Indented Head and St Leonards, which emphasises the importance of the strong seaside character and the “seaside meets countryside” atmosphere. Indented Head is located within the Indented Head/St Leonards Precinct One identified within the Study.

This area is described within the Study as follows:

Precinct One

“The area has a distinctive seaside character due to the architectural styles and spacious settings. The housing styles are predominantly low scale, with occasional two storey and timber and fibro are the dominant materials. Low pitched, single pitched or skillion roofs are used almost exclusively, and the generous setbacks add to the open feel of the area. The scale of development along the foreshore is commonly two storey, and requires particular waterfront guidelines to ensure development is compatible with the surrounding area, and with the vision for St Leonards”.

This Study is included as a reference document within the Greater Geelong Planning Scheme. Residential developments which require planning approval, such as, multiple dwellings and dwellings exceeding 7.5 metres in height from natural ground level, must be assessed against the guidelines contained with the Residential Character Brochure for the relevant character precinct.

3.2.2 Recommended Improvements of Planning Scheme Controls for Residential Areas

A number of strategic documents have been prepared by both Council and the State Government, which identify the need to develop planning scheme controls in residential areas on the foreshore frontage/coastal edge in Indented Head. The following section outlines these areas and details the studies and findings:

The Esplanade: Foreshore Frontage/Coastal Edge

To maintain the modest scale, open seaside identity of the township, the Study recognises the importance of controlling the scale of residential development facing the foreshore. Dwellings along The Esplanade are predominantly one to two storeys in height, with sufficient open space for planting of vegetation. It was noted, however, the building materials and styles vary in form and quality.

The *Siting and Design Guidelines for Structures on the Victorian Coast* (May 1998), outline the impact that built form has upon the coastal and foreshore areas. These guidelines emphasise the importance of protecting coastal and foreshore areas from inappropriate development. The intention of the guidelines is to *increase our awareness of this landscape* and to improve design standards and excellence for the whole of the coastline.

Whilst the emphasis of the guidelines is on use and development directly on the coastline and within foreshore areas, their clear objective is to provide direction for all coastal planning. Issues identified within the guidelines of relevance to built form along the coastal and foreshore edges in Indented Head are:

- Unattractive and shabby buildings due to poor quality design and lack of maintenance.
- Buildings which are visually incompatible with their natural and/or built surroundings.
- Buildings which obscure, wholly or partially, views of the seascape.

The section of the Functional Guidelines relating to Urban Infill, states that “New development in existing settlements should respond to their context and be of an appropriate scale and form”.

A strategic rationale exists for the development of urban design controls to be applied to residential development facing the foreshore/coastal edge, with the intention of providing an appropriate scale and form of buildings.

This rationale is based on the following:

- the Coastal Strategy objectives;
- the Siting and Design Guidelines;
- the Corio Bay Coastal Action Plan;
- the importance and role of the relationship between the foreshore, coastal edge and established urban form, to the creation of a strong township character and identity; and
- comments arising from community consultation relating to the aspirations and cultural identity of the affected communities.

The general principles and strategies for such controls are detailed under Part B Implementation and Review.

3.2.3 Subdivision Opportunities and Design Principles

Concerns were raised by the community, through the preparation of the Structure Plan, relating to the design of recent subdivisions in the township and the need for future developments to better reflect the character of existing residential areas.

Another key issue raised was the provision of public open space within future subdivisions. The provisions of the Subdivision Act 1988 enable Councils to require a Public Open Space contribution in new subdivisions of a maximum of five per cent (5%) of the land area (if land is required), or five per cent (5%) of the land value (if payment is required). Alternatively, a combination of land and payment can be required, up to a maximum of five per cent (5 %) of the site value of the land.

Cash contributions can be used to purchase public open space elsewhere or used to fund upgrades of existing open space and facilities in the township. Through the preparation of the Study of Open Space Networks 2001, it was considered that an increase in this contribution to ten per cent (10%) would be beneficial in Indented Head, to fund the improvement of existing parklands, reserves and facilities.

Urban stormwater runoff is one of the threats to the sub-catchment in which Indented Head is located. A number of government agencies and management authorities have expressed concerns about stormwater runoff from subdivisions discharging into sensitive areas including, Port Phillip Bay and the Salt Lagoon Wildlife Reserve. It is important that the development of future subdivisions does not detrimentally impact on stormwater flows (quality and quantity) into and through these areas.

The general principles for future subdivisions are detailed under Part B Implementation and Review.

3.4 Key Influences

- Significant landscape and biodiversity features, including remnant vegetation, require enhancement and protection;
- The need to appropriately manage the environment and landscape to conserve and protect Aboriginal cultural heritage values;
- Climate change and resultant sea level rises could have significant impacts on low lying coastal townships and surrounding areas;
- Support the on-going management of significant landscape and environmental assets by public land managers;
- The opportunity to enhance key views and vistas;
- The opportunity to control the form of development along the foreshore-coastal urban edge through the introduction of a Design and Development Overlay;
- The need for further strategic assessment to support the introduction of additional biodiversity planning controls, design and/or landscape planning controls in the area;
- Ensure that new subdivisions respond to key landscape settings, environmental assets and existing township character.

4.0 Demographics and Social Profile

4.1 Past Population Growth

According to the Australian Bureau of Statistics census data, 597 persons lived in Indented Head in 2001.

In the twenty years between 1981 and 2001, the population of Indented Head increased by 176 persons, from 421 to 597, equivalent to an annual growth rate of 1.8 per cent. The largest increases in population occurred during the two census periods between 1981 and 1986, and between 1996 and 2001. There was, however, a population decrease of 98 in the period between 1991 and 1996.

4.2 Estimated Population in 2006

Indented Head's estimated population at June 2006 was 686 persons, a figure illustrated in Table 4. The estimated total was determined by calculating the number of dwelling approvals since the 2001 census, the average household size for the township, together with the dwelling occupancy rate in 2001. As the dwelling occupancy rate in Indented Head has fluctuated over the past twenty years, an estimate of the occupancy rate in 2006 cannot be calculated.

Table 4 – Indented Head Permanent Population Estimate at June 2006

| | |
|--|--------------------------|
| Total population at 2001 Census | 597 |
| Number of Occupied Dwellings at 2001 Census | 301 |
| Average Household Size in Indented Head (Total Population at 2001 Census (597) ÷ Number of Occupied Dwellings (301)) | 1.98 |
| Dwelling approvals issued since Census 2001 to June 2006 | 125 |
| Additional Permanent Dwellings 2001-2006 (New Dwellings (125) X Occupancy Rate (35.9%)) | 45 |
| Additional Population 2001-2006 (Permanently Occupied Dwellings (45) X Average Household Size (1.98)) | 89 |
| Estimated Permanent population at June 2006 (Population at Census 2001 + Additional Population 2001-2006) | 686 (597+ 89) |

(Note figures are rounded)

4.3 Peak Population 2005

Indented Head is a popular coastal holiday home and tourist destination, which experiences high dwelling vacancy rates during the off-season. In the twenty year period between 1981 and 2001, the dwelling vacancy rate in Indented Head has fluctuated between 69.5 per cent in 1981 and 64.1 per cent in 2001. The lowest dwelling vacancy rate of 62.9 per cent for Indented Head was recorded in 1986.

The significant numbers of tourists and holiday makers, who visit Indented Head each summer, have a considerable effect upon the resident population of the township. Holiday makers and tourists are important to the local economy and they should be encouraged to continue to visit Indented Head and other parts of the Bellarine Peninsula. The many day visitors are also important for the township and have a positive effect on local economies and attractions.

The estimated peak overnight population for the township in 2005/2006 and a snapshot of the distribution of tourist/holiday maker accommodation is illustrated in Table 5 below:

Table 5 –Peak Overnight Population 2005/2006 (Dec 2005-Jan 2006)

| Permanent Population in 2005 | Population Holiday Homes | Population Caravan Parks or Camping Sites | Population Hotels, Motels, Units & B&Bs | Peak Overnight Population |
|------------------------------|--------------------------|---|---|---------------------------|
| 787 | 3,440 | 1,270 | 0 | 5,497 |

(Source: Geelong Economic Indicators Bulletin 2005/2006)

4.4 Age Structure

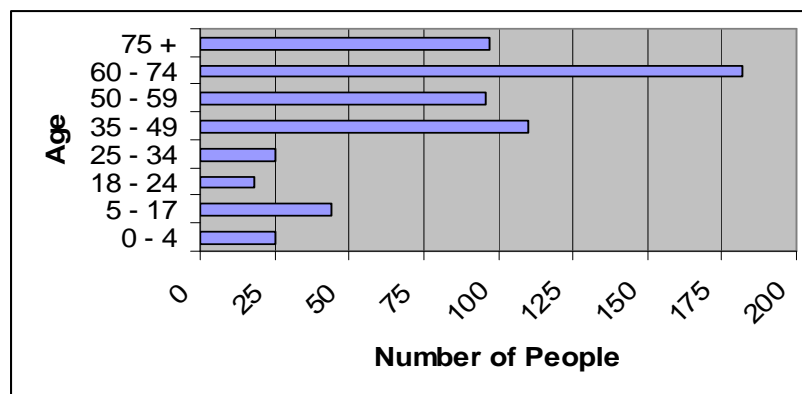
Census data provides information on the demographics of the townships including age distribution. In 2001, persons in the over 60 age bracket formed 46.73 per cent of the population of Indented Head and the percentage is significantly higher than that for the whole of the City, where the over 60 age group forms 19 per cent of the population.

In Indented Head, the next most significant age group was that of persons between the ages of 35 and 49, which represented 18.43 per cent of the population. It was followed by persons in the 50 to 59 age group who formed 16.08 per cent of the population.

The persons in the 0 to 24 years age group formed 14.6 per cent of the population of Indented Head, which is much lower than the 34.2 percentage figure for the whole of the City.

Figure 1 below illustrates the age structure of the Indented Head population.

Figure 1 – Age Structure of Indented Head (2001)



The data shows that persons in the older age groups form the greater part of the population of Indented Head. From an examination of the labour force statistics (see Section 4.6), it can be assumed that the majority of the older residents of Indented Head are retired or semi-retired.

4.5 Dwellings & Household Size

The number of private dwellings in Indented Head at the 2001 Census was 838, with 301 being occupied and 537 unoccupied. This equates to an estimated vacancy rate of 64 per cent for the township, reflecting its traditional role as a holiday maker/holiday home destination.

Of the *Occupied Private Dwellings* within Indented Head in 2001, 71.1 per cent were recorded as being fully owned and only 12.3 per cent being purchased (mortgaged). The remainder of the occupied housing stock in the township was privately rented (9.3 per cent) and 6.9 per cent of occupiers did not state their tenancy arrangements. No occupied dwellings were recorded in the category “rented – government” indicating that public rental housing is unlikely to be available in Indented Head.

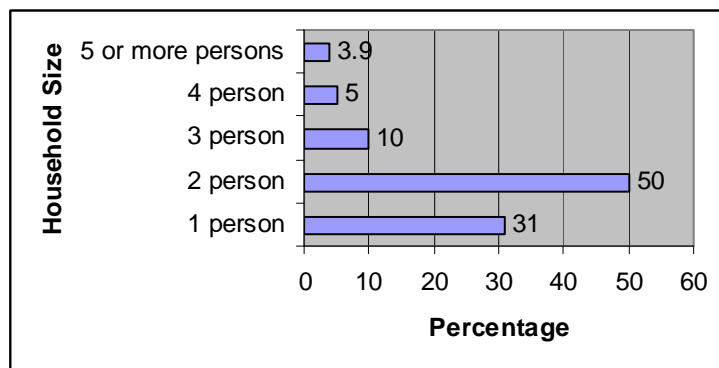
According to the 2001 Census, the average household size in Indented Head is 1.98 persons, being slightly lower than the average household size of 2.27 persons for the municipality.

Approximately 28.9 per cent of the Indented Head population reside in sole person households which is higher than the proportion evident across the municipality, where 26 per cent of households consist of single persons. It is significant that 53.75 per cent of the sole person households in Indented Head are occupied by persons aged over 65.

Two person residences comprise 46.8 per cent of households and only 17.6 per cent of households have three or more residents.

These statistics indicate that Indented Head has small household sizes and a low proportion of young family groups, suggesting that community services may have to focus on supporting elderly residents who wish to remain independent and live in their own homes.

Figure 2 – Indented Head Household Size (2001)



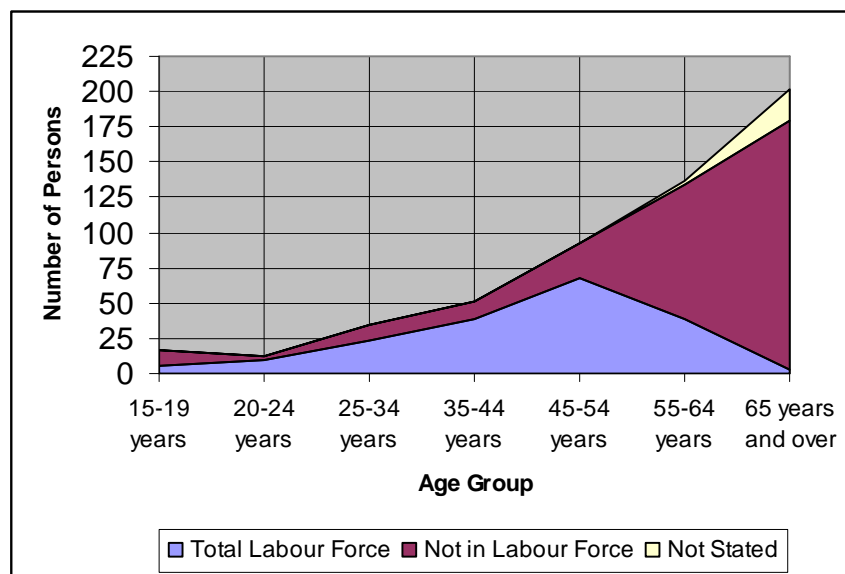
4.6 Labour Force & Income

The Australian Bureau of Statistics classifies the “labour force” as consisting of persons aged 15 years and over who are employed, or those who do not have a job but are actively looking for work. According to the Bureau, persons not in the labour force include people below the age specified for measuring the economically active population (15 years) and older people who have retired from the workforce.

Labour Force Participation Statistics for 2001 revealed that only 36.2 per cent of the population of Indented Head was in the Labour Force, and this was the second lowest rate for any centre on the Bellarine Peninsula, and it was significantly lower than the participation rate of 60.4 per cent for the whole of the Barwon-South Western District. Indented Head's unemployment rate of 15.1 per cent in 2001 was the second highest of any centre on the Peninsula.

As only 8.7 per cent of Indented Head's population is under the age of 15 years (this group is not included in labour force statistics), and 80.7 per cent of the population over the age of 55 years are recorded as not participating in the labour force, it can be assumed that a significant proportion of the township's population is fully retired.

Figure 3 – Indented Head Labour Force Participation (2001)



A review of the industry categories for employed residents of Indented Head reveals that in 2001 the most prominent category was *Retail Trade* (15.47%), followed by the *Health & Community Services* (13.69%), *Wholesale Trade* (11.9%), and *Cultural and Recreational Services* (9.5%) categories.

Household Income Data reveals that 43.2 per cent of households in Indented Head are in the lowest income quartile and that only 5.7 per cent are in the highest quartile. (Note: household income includes cash income received from employment, cash income received from assets loaned to others in return for payment, and regular cash transfers received from government or other sources).

4.7 Journey to Work

ABS Statistics for 2001 demonstrate that the private car is the dominant mode of travel to work for those residents of Indented Head who are in the labour force. These Statistics include both drivers and passengers, and the Statistics also demonstrate that only four per cent of the Indented Head workforce walks to work.

It can be concluded from these statistics that the majority of Indented Head residents who are in the workforce, work outside the township, and that they must use private vehicles to travel to work.

4.8 Socio-Economic Index

The ABS produces a “Socio Economic Index for Areas” which considers Advantage/Disadvantage and takes into account variables relating to income, education, occupation, wealth and living conditions. This data classifies Indented Head as a ‘disadvantaged’ area.¹

Further evidence of disadvantage is found in the Jesuit Social Services Research of 1999. When measured against ten social and economic indicators, the Portarlinton postcode area, including Indented Head, ranked among the top seven per cent (7%) of most disadvantaged communities in Victoria.

A number of community needs studies have been undertaken on the Bellarine Peninsula. The Bellarine Community Health Inc, *Specific Community Needs Analysis 2001*, identified older people and youth as the two groups the greatest needs in the eastern Bellarine Peninsula. This study concluded that older people required more medical and support services at home, whereas younger people required social opportunities, recreational and “preventative strategies”.

The City of Greater Geelong’s, *Let’s Rave about the Bellarine Peninsula: Youth Needs Study 2001/2002*, found that the major issues facing young people were their feelings of isolation and a lack of a sense of belonging to the community, and that young people most frequently mentioned “boredom” as the major issue confronting them.

One potential factor that is not considered in the socio economic data presented in this section is the issue of people who are “asset rich and cash poor”. This phenomenon is becoming more evident in townships on the Bellarine Peninsula, where many of the large elderly population (of all townships) own highly valuable developed real estate which increases in value consistently, but they have relatively low weekly incomes.

Community Health research revealed that residents of Portarlinton/Indented Head/St Leonards are not accessing health services at a rate that is proportional to the percentage of the Bellarine Peninsula residents that live in this area. There is the potential that this low level of access is linked to the fact that people living in this area are relatively more disadvantaged than people residing in other areas on the Peninsula.

Recent research into the needs of older residents in the City of Greater Geelong found that people living in Portarlinton, Indented Head, and St Leonards were being admitted to hospital for Ambulatory Care Sensitive Conditions (ACSCs) on more occasions than people living in other areas on the Bellarine Peninsula, the City of Greater Geelong, and the Barwon-South Western Region.

¹ ABS Socio Economic Index for Areas 2001.

The research seems to indicate that the residents of these townships do not access community based services at an early enough stage of their illnesses. It is a problem that may be caused by lack of public transport, by the lack of adequate income resources, by isolation within their homes (especially of the elderly), or by an unreasonable fear of the results and consequences of early consultations.

4.9 Population Projection 2016

The projected population of Indented Head for 2016 is 933 persons, calculated by applying the growth rate of 1.80 per cent, determined by the ABS.

Table 6 – Indented Head Projected Population (Growth Rate 2004-2022 @ 1.43%)

| Year | 2004 | 2008 | 2012 | 2016 | 2022 |
|---------|------|------|------|------|------|
| Persons | 774 | 840 | 886 | 933 | 999 |

These figures are based on a population of 774 persons in 2004, whereas it is estimated, based on dwelling approvals issued between 2001 and 2006, that the total number of persons in 2006 is 686.

Table 7 illustrates the estimated numbers of the critical age cohorts of the Indented Head population in 2016. These figures were used in the development of the draft Bellarine Peninsula Community Service Plan 2006-2016.

Table 7 – Indented Head Estimated Population 2016 – Critical Age Cohorts

| Group | Age | Number of Persons/ Percentage of Projected Population |
|-------------|---------------|---|
| Early Years | 0 – 4 years | 24 persons / 2.6% |
| | 5 – 9 years | 19 persons / 2.0% |
| | 10 – 14 years | 13 persons / 1.4% |
| Youth | 15 – 24 years | 40 persons / 4.3% |
| | 65 plus | 382 persons / 41% |
| Older Years | 80 plus | 126 persons / 13.5% |

The population projections indicate that the township will continue to have a large proportion of older residents. Therefore, providers of community and health services will have to focus on supporting elderly residents.

Additionally, there may be a need for the provision of a greater range of housing choices, such as, medium density housing and housing on smaller lots to meet the needs of the aged population.

4.10 Key Influences

- The high proportion of older residents and other residents who live alone and may need to receive significantly higher levels of community health and social services;
- There is a high dwelling vacancy rate during the off season and a seasonal influx of large numbers of non-permanent residents and holiday-makers;
- There is a low labour force participation rate and, consequently, low income rates per household;
- Employment categories and journey to work data indicates that the majority of Indented Head residents who are in the workforce, are employed outside the township;
- Indented Head is an area of high socio-economic disadvantage;
- The residents of the township rely almost entirely upon private cars for transport;
- There is an increasing need for the provision of a greater range of housing choices.

5.0 Township Facilities & Services

The local services and facilities provided within a township are central to bringing people together and engendering a sense of community.

Indented Head relies upon Portarlington and St Leonards for most of its basic services and recreation facilities. The majority of the community and social services are provided on a regional-wide basis and are generally accessible to residents of Indented Head.

Commonwealth, State and Local Governments provide, health, social and community services are provided to the population but many are based in the larger towns on the Bellarine Peninsula or in Geelong and are provided on a regional-wide basis. These include Children's and Aged Care Services, Home Help, Youth Services, Meals on Wheels and the Mobile Library.

5.1 Local Community Services and Facilities

The following list of the key local facilities available within the township of Indented Head, also shown on Map 8:

- Community (Boat Club) Hall
- General Store/Postal Agency

Health Services

The Bellarine Community Health Service provides a wide range of services to residents of the Bellarine Peninsula, including medical, nursing and home-based allied health, youth, maternal and child health and adult day programs, such as, socialisation, respite and rehabilitation. Bellarine Community Health is based at the Queenscliff Community Health Centre in Point Lonsdale, and a wider range of services is provided at this centre than at the other community health centres on the Peninsula.

The Community Health Centres at Portarlington, Ocean Grove, and Drysdale have a "service centre" role. Primary care nursing is available for advice and referral, and a general practitioner visits these centres one morning per week but the Service is not able to provide other medical or dental services. These centres provide allied health appointments and health related group activities. In addition, co-located services, such as, Maternal and Child Health services provided by Council, are based at these centres and visiting staff from regional health and community service providers attend the Centres.

Bellarine Community Health provides a 60 bed low care residential aged care facility, Ann Nichol House, in Portarlington, located on a separate site to the Portarlington Community Health Centre. Permanent and respite accommodation is provided for 40 frail aged or disabled persons and 20 people with dementia. Ann Nichol House was originally opened in 1997 as a 30 bed facility and has been upgraded and extended to a 60 bed facility resulting from the closure of Sims Lodge, a 22 bed dementia specific aged care facility located in Point Lonsdale.



Education Facilities

Indented Head does not have a primary school so children from the township and surrounding rural areas must attend either the Portarlinton or St Leonards Government primary schools.

The Bellarine Secondary College has campuses at Drysdale and Ocean Grove, and there are two private secondary schools located at Drysdale, all within 20 kilometres of the township. These schools have sufficient resources to cater for increases in enrolment that may result from the future development of areas identified and zoned for residential purposes on the Bellarine Peninsula.

Council has liaised with DET regarding future educational requirements and the Department has indicated there is no need for schools in Indented Head. The Department's advice is that the schools outside of the township have the capacity, for many years, to cater for the school aged population of Indented Head. Projected numbers for school aged children in the township in 2016 confirms it is not necessary to designate any areas for future educational purposes or to consider any proposals for making land available for educational purposes.

Pre-school/kindergarten facilities are located in Portarlinton, Ocean Grove, Drysdale and Clifton Springs. The Portarlinton Pre-school has recently been upgraded to meet current regulations for pre-schools. Council contributed \$503,000 to the project with an additional \$10,000 being contributed by the Pre-school Committee of Management. In addition, the upgrade increases the number of places at the Pre-school from 25 to 30 children.

Community Centre

Residents of Indented Head have commented that the community urgently needs a meeting place, due to the increase in population generated from new housing developments. The Community Association has suggested that the Community (formerly the Boat Club) Hall located on the foreshore reserve should be upgraded to meet this need.

Support of this aspiration will require a partnership approach between Council, the Bellarine Bayside Foreshore Committee of Management and the community. This approach has been supported in two Council studies to enhance community connection and engagement in the township.

Emergency Services

Emergency services such as police and ambulance are provided to Indented Head on a region wide basis. The recently completed twenty-four hour police station in Ocean Grove serves the Peninsula townships, including Indented Head, in conjunction with the 16 hour stations in Portarlinton, Drysdale and Queenscliff.

Rural Ambulance Victoria (RAV) services Indented Head from the Bellarine Branch at Drysdale. Approximately 250-500 cases are handled per year in Portarlinton and a lesser number in Indented Head with a response time of 10 -15 minutes from Drysdale.

Given the case load and response time which is not ideal, RAV is considering the medium to long term provision of an ambulance service at Portarlington. It is anticipated that this service may be provided in the next five to ten years.

The St Leonards CFA volunteer brigade services Indented Head and the CFA has indicated that the St Leonards station does not comply with current design, operation or site area standards. Options for the replacement of this are being considered by the CFA as it is likely that the station will have to be replaced within the next one to three years.

Due to difficulties in identifying a new site within the St Leonards township meeting the CFA's needs, consideration is being given to relocating the St Leonards brigade to Indented Head.

The CFA has acquired a site to enable the construction of a new fire station in Ocean Grove. This station will be staffed by full time fire-fighters and will provide support to the volunteer stations in the other towns on the Bellarine Peninsula.

The State Emergency Service operates a unit within the Peninsula, co-located with the ambulance branch in Drysdale.

5.1.1 Bellarine Peninsula Community Service Plan (BCSP) 2006-2016

The City's Community Development Department has recently prepared the Bellarine Peninsula Community Service Plan 2006-2016, to provide an integrated Community Service response for the townships and rural areas of the Bellarine Peninsula.

The Plan includes:

- Current and projected populations and their composition for each township and rural areas.
- A summary of current and projected social service provision.
- An understanding and analysis of community needs both now and into the future.
- Action Plans to address identified needs.

To plan for future community services for Indented Head, the draft Bellarine Peninsula Community Service Plan 2006-2016 reviewed previous studies of the area and identified the following:

"Key community service issues:

- Small community valued for its size and peacefulness
- Community transport integral to community health and well being

Identified need for:

- Community meeting place (Boat Club Hall)
- Improved playground equipment
- Confidential health services for young people
- Older persons housing options
- 24 hour emergency health service
- More frequent bus services – circuit bus, community bus

Based on the identified issues and needs, and consideration of the projected population critical age cohorts for 2016 and community consultation, the following recommendations were developed for future community service planning at Indented Head:

- Recommendation 1. Provide a Community Access / Community Information Board in vicinity of the local shop.
- Recommendation 2. Assist the Indented Head community's application for a volunteer support grant.
- Recommendation 3. Work with the Indented Head, Portarlinton and St Leonards communities to seek external funding to develop a virtual Neighbourhood House to improve accessibility to, and use of, existing services and facilities, and to encourage community building.
- Recommendation 4. Explore models of cooperation for provision of facilities on the Indented Head foreshore.
- Recommendation 5. Continue negotiations with the Bellarine Bayside Foreshore Committee of Management regarding joint applications for external funding to improve the Indented Head Community (Boat Club) Hall.

5.2 Open Space, Leisure and Recreation Facilities

The Open Space Networks Study (2001) suggests that Indented Head has limited demand for additional public open space and there is a greater need for community services rather than provision of additional open space.

Like other small coastal townships on the Bellarine Peninsula, the traditional focus of open space and recreational opportunities at Indented Head has been directed towards the foreshore. Generally the foreshore adequately provides for community needs, except during the peak, four to six week Christmas/Summer holiday period when the influx of recreational campers limits resident access to areas normally used for their informal recreation.

Bellarine Bayside Foreshore Committee of Management (Bellarine Bayside), which controls and manages the foreshore reserve, has prepared and adopted a range of strategic landscape plans, to guide the future use and development of the foreshore area, including provision for path improvements, seating, shelter and other infrastructure to support recreational uses. Bellarine Bayside has improved foreshore access at two of the three camping areas at Indented Head and will be undertaking a \$575,000 upgrade at Batman Park during the 2008-2009 financial year. It has further plans for capital works, including the construction of a new toilet block at Wrathell Reserve and relocating a temporary toilet block to the Indented Head Community Hall.

There are no active sports reserves within the township, however, facilities for these purposes are provided in both Portarlinton and St Leonards, which generally meet the needs of the residents of Indented Head.

Small reserves of public open space are located within the residential areas with the large conservation reserves of the Salt Lagoon Wildlife Reserve forming the southern extremity of the town.

There are two undeveloped and under-utilised open space areas in Indented Head, one off Coach Road and Pike Street in the north-western part of the town, and the other on Batman Road on the western fringe of the town.

The following is a list of the community, leisure and recreation facilities within the Indented Head Township, further illustrated on Map 8:

- Tennis Courts
- Yacht Club
- Boat Club
- Foreshore including the jetty, boat ramp, playground, camping and barbeque areas

5.2.1 Identified Improvements to Open Space, Leisure and Recreation Facilities

Previous studies undertaken by, or on behalf of, Council have identified potential improvements in relation to open space, leisure and recreation provision and their linkages within the township. This Structure Plan supports the key actions of those previous studies as detailed below.

Bellarine Peninsula Leisure & Recreation Needs Study 2005

The Bellarine Peninsula Leisure & Recreation Needs Study concluded that Indented Head is adequately serviced by a range of leisure and recreation facilities, but recommended some improvements to existing facilities.

Key actions include:

- In partnership with Bellarine Bayside, support community access to the Boat Club building on the foreshore as a venue for community centre/meeting space. Council support, in particular insurance cover for individual clubs, groups or associations, to facilitate access to this facility should be considered as requested by these groups. Council support may also extend to contributing to building improvements subject to an appropriate lease/community access agreement being negotiated between Bellarine Bayside and the Community Association.
- The open space area off Coach Road and Pike Street (on the western edge of the town) is undeveloped and under-utilised. It is poorly located being surrounded by the rear of residential properties with narrow access points, and does not contain any significant vegetation or have any environmental value. The consultation process failed to identify a suitable public use option for the site. From a strategic perspective, the proposed public open space to be acquired off Batman Road (see below) is better placed to provide an Informal Park option for the Indented Head community. Further investigation is required to determine the future use/role of the Coach Road site.

- Council owns a 3.9 hectare parcel of residentially zoned land on Batman Road. The City has been discussing the future of this parcel with a potential developer in conjunction with residential development of the area between Batman Road and Church Road. Council should actively pursue the opportunity to negotiate a land swap with the developer, to provide a substantial linear parcel of open space incorporating protection of significant vegetation, walking tracks and appropriate park furniture including a playground. This site should be linked throughout the development and connections provided to existing residential areas via a network of footpaths, including a footpath along the southern side of Batman Road through to the foreshore.
- In consultation with Bellarine Bayside, Council should install a designated Bocce/Petanque playing area on the Indented Head foreshore. The most appropriate location is within Wrathell Reserve adjacent to existing BBQ facilities and car parking.
- In partnership with Bellarine Bayside, ensure foreshore walking tracks provide adequate pedestrian access across existing stormwater drain outlets. Further opportunities for joint projects to enhance community recreation options should be explored with Bellarine Bayside on a case-by-case basis.

5.3 Tourism and Holiday Accommodation

The tourism industry within the Geelong Otway Region makes a significant contribution to the local economy and has many positive benefits associated with employment, diversity of cultural experiences and tourism opportunities and expanded infrastructure (improved facilities, upgraded amenities, walking and bicycle tracks, environmental improvements etc).

Across the Region over 1.7 million domestic overnight visitors and 4.8 million day trip visitors are received annually. Tourism contributes \$478 million to the Greater Geelong municipality's economy and provides 4,898 direct equivalent full time (EFT) jobs with a multiplier effect of 14,000 EFT jobs. A significant portion of this expenditure is on food and accommodation and a large portion of visitations are from Geelong (35 per cent of day and overnight visitations) and from Melbourne (58 per cent). A significant proportion of these visitations are to the Bellarine Peninsula.

Within the region tourists are accommodated in holiday homes (19 per cent), friends (39 per cent) and commercial accommodation (42 per cent). Commercial accommodation capacity within the region comprises Caravan Parks (sites and cabins) 15 per cent, large hotels/apartments 14 per cent, small hotels/apartments nine per cent, B&B's two per cent and backpackers 0.04 per cent. In terms of accommodation supply and demand distribution within Geelong, the supply is 57 per cent and demand 61 per cent.

The Geelong Otway Tourism Commercial Accommodation Analysis and Forecast identifies future supply requirements (to 2006) within the Geelong sub region, one large caravan park providing 470 sites (note: a planning permit has recently been granted for a large caravan park on the Bellarine Highway at Marcus Hill, to the north of Ocean Grove), conversion of some caravan sites to cabin sites, one large hotel or equivalent (97 rooms) and five smaller accommodation establishments (5 – 15 rooms each) in coastal population growth areas.

As with the majority of the leisure and recreation facilities, tourist and holiday accommodation is focussed around the foreshore, further illustrated on Map 8.

Bellarine Bayside provides a total of 298 camping and caravan sites, at three locations on the foreshore at Indented Head. The privately owned 'Laze-Away' Caravan Park which had approximately 85 sites was closed in 2003 and subsequently subdivided into residential lots.

5.4 Great Southern Waters Aquaculture

Great Southern Waters aquaculture was founded in 1998 and began development of its current site at The Esplanade, Indented Head in Spring 2001. The site was chosen because of its access to high quality water from Port Phillip Bay whilst being close to major transport and processing hubs.

Since work began on the site in mid 2001, GSW has expanded its farming facility significantly. By late 2006, the farm was expected to be producing over 150 tonnes of Abalone per annum and will have fully developed the site to 10 hectares. The current product range includes live, frozen (IQF), canned and vacuum packed abalone.

GSW is a closed-cycle operation, using its own broodstock to produce greenlip and greenlip-blacklip abalone hybrids. Central to the operation is the constant supply of large volumes of high quality water. GSW has developed a state of the art pump house and reticulated water system. Sea water from pipes half a kilometre out to sea is pumped into the hatchery and returned by gravity flow. The establishment of Great Southern Waters deepens the development of the Geelong region as an aquaculture hub.

Great Southern Waters employs approximately 18 full-time staff, including two scientists, are backed by a dozen casual workers. Sales have begun to Japan, mainland China and Hong Kong and other markets are being researched.

5.5 Key Influences

- The township relies upon Portarlington and St Leonards for most of its basic services;
- The Indented Head community relies on community, health and social services provided on a region-wide basis;
- The opportunity to support the establishment of a community meeting place in the Indented Head Community (Boat Club) Hall, which may be able to accommodate visiting community and social services in the future;
- The opportunity to support recommendations of previous studies to enhance open space and recreation areas and further develop and improve linkages between existing range of recreational facilities;
- The opportunity to pursue a land swap between Council and a developer at Batman Road, Indented Head to provide a substantial linear parcel of open space incorporating protection of areas of significant vegetation;
- The opportunity for further investigation to determine the future use/role of the Coach Road recreation reserve;
- Tourism is a significant component of the local economy and opportunities exist to lengthen the tourism visitation period by supporting and improving tourist accommodation options, tourism activities and uses, including improvements to facilities on, and access to, the foreshore reserve, waterways and environmental features;
- Aquaculture is a possible growth industry in the area and has the potential to provide local employment opportunities for the residents of Indented Head.

6.0 Physical and Transport Infrastructure

6.1 Water Supply

Barwon Water supplies reticulated water, by gravity feed, to the Indented Head area, from the Portarlinton Service Basins, located in Reservoir Road, Drysdale. The majority of Indented Head is supplied by gravity from these basins.

If required, Barwon Water is able to augment the supply to Indented Head by drawing on the supply from a tank in Tower Road, Portarlinton.

Barwon Water intends to improve supplies to Indented Head and St Leonards by constructing, in several stages, a new feeder main to the west of the townships. The next stage of this feeder main is planned for installation in approximately five years and, when completed, will provide improved supplies to Indented Head.

As part of its water quality improvement program, Barwon Water intends to enclose the basins servicing Indented Head. Completion of these works in the next five to ten years will provide protection against water quality degradation.

There may be a need, at some time in the future, to augment the present (or existing) supply and/or to provide new mains, to serve additional urban growth in Indented Head.

6.2 Sewerage

The Indented Head sewerage system forms part of the Bellarine Peninsula's eastern sewerage system, which includes the townships of Portarlinton and St Leonards. It is a conventional sewerage system serviced by a series of gravity sewers, pump stations and rising mains. Seven pumping stations service the sewerage system, collecting flows from residential and commercial properties and transferring them to the Portarlinton Water Reclamation Plant.

The Portarlinton Water Reclamation Plant is situated on 130 hectares of land in Grassy Point Road, St Leonards. It was established in 1982 following investigations by the former Bellarine Sewerage Authority on the most efficient and suitable sewerage system to serve the area. After extensive community consultation, it was decided to construct a lagoon based treatment plant and irrigation scheme. Treated effluent is used to irrigate tree plantations on the treatment plant site and to irrigate private vineyards close to the plant.

Whilst land is available to expand the Portarlinton treatment facility, adequate land is not available to dispose of significant increases in treated water by irrigation. The Portarlinton treatment plant operates under an EPA licence requiring waste water to be recycled on land, i.e. by irrigation. A pipeline connection back to the Geelong system at Clifton Springs may be required in the longer term to alleviate pressure on the Portarlinton system.

Barwon Water currently supplies recycled water to a number of external customers from the Portarlinton Water Reclamation Plant for viticulture and agricultural purposes. Scotchman's Hill vineyard has an existing agreement with Barwon Water for the continued use of recycled water at its nearby vineyards. Potential for greater use of recycled water from the Portarlinton Water Reclamation Plant has recently been investigated with a number of new recycled water customers, including the Portarlinton Golf Club, Newcomb Sand and Soil, and adjacent farmers expressing interest.

The long-term sustainability of the Portarlington WRP is dependant on the responsible use of this recycled water. The volume of recycled water available from the Portarlington WRP is variable and highly weather dependant presenting a challenge for allocating secure volumes to prospective customers. Generally in wet periods more water is available and demand is lower while during dry periods less water is available and demands are greater. Therefore, the volumes and extent of recycled water use vary from year to year. It is important that land needed for water recycling projects is sustained for this purpose into the future.

The existing sewerage system can accommodate development at density of up to 15 dwellings per hectare within the townships' existing limits to urban development, although Barwon Water, when designing its sewerage systems, assumes that Residential 1 zoned land will be subdivided at a yield of 13 lots per hectare.

Barwon Water has advised that development outside the existing urban limits at Indented Head was not considered when the sewerage system was designed over 20 years ago. If such development occurs it would add significant sewage loads, and necessitate major augmentation of the whole system, including the Portarlington Water Reclamation Plant.

Barwon Water is currently finalising an investigation to determine a sewerage strategy, which would accommodate existing and future development within Portarlington and the wider Bellarine Peninsula, over the next 40 years. The *Bellarine Peninsula Sewerage Management Strategy* commenced in August 2005 and was due to be completed by early 2007.

Based on the predicted future development and subsequent increase in sewage flows into the system, it was found that there will be significant capacity and operational issues at all pump stations downstream of the Portarlington Pump Stations No. 1 (PS1), this includes PS4, PS5 and PS6.

The study also determined that the Portarlington Water Reclamation Plant has sufficient treatment capacity to accommodate the future sewage flows (subject to some minor augmentation). Whilst the current demand for recycled water is similar to its availability, it is expected that as the population expands and acceptance within the community together with the current level of interest for the resource, it is expected that expansion of the existing recycled water pipeline network will grow in line with the availability of recycled water.

After detailed evaluation of all growth scenarios, sewerage system capacities and recycled water opportunities on the Bellarine Peninsula, the study concluded that the expansion of the existing Portarlington Water Reclamation Plant and augmentation to the existing conventional sewerage systems would best accommodate current and future development in the area serviced by the eastern Peninsula system, including the Indented Head township.

Therefore, based on the strategic outcomes from the Bellarine Peninsula Sewerage Management Strategy (which has yet to be approved by the board of Barwon Water), Barwon Water plans to undertake the following projects via its Capital Works Investment over the next 10 years, or as development proceeds:

- 2008/09 Installation of Emergency Storage at Portarlington Pump Station No. 1
- 2012/13 Upgrade to Portarlington Pump Station No. 1
- 2012/13 Portarlington Rising Main No.1
- 2012/13 Portarlington WRP. Treatment Upgrade duplication
- 2012/13 Portarlington WRP Re-use Reticulation Upgrade
- 2014/15 Upgrade to Portarlington Pump Station No. 6, including emergency storage
- 2015/16* New pump station west of Portarlington and new rising main to Clifton Springs. This connection could transfer sewage flows from Portarlington WRP to Clifton Springs, or vice versa, depending on the demands on the recycled water scheme at Portarlington WRP.

*Only to be implemented if required. Subject to sewage flows into plant and recycled water demand.

6.3 Natural Gas

Indented Head is now serviced with a reticulated natural gas supply. The Bellarine Peninsula Natural Gas project was managed by TXU which contributed \$9.25 million towards the total cost. The remaining \$1.75 million was contributed by the City of Greater Geelong through a grant from the State Government's Regional Infrastructure Development Fund.

Stage One: The project commenced in July 2002 and Portarlington received a partial supply gas in December 2002 and the town was completely supplied by December 2003.

Stage Two: The extension of the gas supply main to Indented Head and St Leonards was completed in July 2003, and a partial supply was available in December 2003.

Stage Three: The completion of the supply to Indented Head and St Leonards occurred during 2004.

6.4 Stormwater

The Department of Sustainability and Environment (DSE) has identified that the management of urban stormwater is a critical issue for development in Indented Head. There are risks and challenges associated with the potential of increased flow rates, volumes and pollutant loads leaving development sites and ultimately reaching the shores and waters of Port Phillip Bay.

Additionally, DSE notes that existing stormwater outlets and infrastructure in the townships present a range of unresolved environmental, public health, safety, access and visual amenity challenges. The need to improve outlets to Port Phillip Bay has been the subject of ongoing discussion and actions over many years between DSE, Council and the foreshore manager, Bellarine Bayside.

A *Stormwater Quality Management Plan* was adopted by the City of Greater Geelong in March 2003, which identified that Indented Head is located within the Portarlington sub-catchment.

The recognised stormwater threats for this catchment are:

- Residential runoff containing a range of pollutants, including elevated sediment, nutrient and litter loads.
- Elevated sediment loads, due to the clearance and disturbance of soils associated with land and infrastructure development.
- Building site runoff.
- Agriculture Land Use Runoff.

The Management Plan recommended that Council apply a number of techniques to minimise the impacts of stormwater pollution and to protect the values of the receiving environment, including new planning guidelines, community education and the development of sediment and erosion control plans and environmental management plans, to be implemented when planning for the development of new urban areas.

Indented Head is located in a flat low lying coastal area. This type of land is difficult to drain either by open or underground systems due to lack of grade. Performance of the natural drainage pattern in this area is dependant upon or affected by:

- The inability of the soil structure to absorb inflows to basins at sufficient rate to cope with intensified development
- High water table levels, particularly during the wetter months
- The dynamic nature of the bayside beach formations with respect to sand loss and/or beach replenishment at outlet points
- Relative levels of the land with respect to tide levels and subsequent lack of gradient (due to the flatness of the land) in order to ensure piped systems develop sufficient head to drive the required flows.
- Risks associated with disturbance of acid sulphate soils
- Impacts of extreme weather events superimposed on global warming effects in relation to ambient sea levels in the bay, translating to a redefined coastline.

Implications for effective design of drainage systems (*and this includes consideration of the positive effects of incorporating WSUD principles*) can be summarised as:

- Detention systems would need to occupy inordinately large areas to compensate for drainage inlets at relatively high level, and high outlet levels, translating to minimal differences between inlet levels, operating levels of basins and outlet levels.
- Natural seepage rates cannot be relied upon as these are low due to suspected high seasonal water table levels, and frequently shallow permeable soil depths
- Increased frequency or new outlet points to the bay will not be accepted by DSE or Council (*in fact there is substantial ecological argument identified in State Policy to look at rationalising existing outlet sites*)
- The coast must be recognised as both a delicate yet dynamic system and there is considerable risk associated with placing fixed structures in the inter-tidal zone, the beach or the dune system. This risk is particularly evident with stormwater drainage outlets where constant monitoring is necessary to ensure channels or end wall structures are not rendered inoperable by siltation or by structural failure caused by loss of foundation support. The risk also extends to the properties serviced by the drainage system through potential inundation if the system is inoperable.
- Private ownership of much of the catchment area currently subject to surface flows and storage, for which there may be no management regime or easements etc but which nonetheless form a crucial part of the current function of drainage from existing development.
- Engineering Services will not consider pumped systems as a design solution in order to create new residential opportunities. Economically, maintenance commitments and ultimate replacement costs exceed those of gravity systems and, therefore, are neither justifiable nor sustainable.

Indented Head Stormwater Re-use Pilot Study and Advisory Committee

In August 2003, Council in conjunction with the Indented Head Community Association initiated a pilot project to demonstrate and test alternative methods of managing stormwater discharges in developed urban catchments.

The project involved developing engineering principles for the design of stormwater reuse systems focussing on capture, treatment and / or reuse of the more polluted “first flushes” from urban stormwater systems.

It was proposed to undertake a pilot project employing the Indented Head drainage system to demonstrate and assess the effectiveness of this technology as an alternative to the traditional stormwater management practices.

Investigations into particular issues associated with Catchment 74 at Indented Head highlighted the opportunity to establish alternative methods of stormwater management to the traditional approach of discharging it directly into the Port Phillip Bay. Indented Head is also at a point of its development where it seems feasible to “retro-fit” an alternative method for managing existing drainage runoff that will also be capable of managing the runoff when the balance of the catchment is fully developed.

Within Catchment 74, a system is under investigation whereby the initial drainage discharge from an urban catchment, which tends to carry the highest pollutant load, is diverted for treatment and re-use (i.e. "first flush treatment"). Such a system has the dual advantages of treating the pollutant load and harvesting a valuable water resource.

Whilst engineering design principles for maximising the water harvest from a catchment are reasonably well known, investigations have shown an industry wide gap in knowledge relating to the design principles applying to "first flush treatment" systems. Discussions with research scientists within the Urban Water Unit of the CSIRO have confirmed this knowledge gap and raised strong interest in undertaking a pilot study to develop and trial these principles so they can be applied around the country.

In view of the strong and mutual regional interest in reuse of stormwater, it was proposed to form an Advisory Committee to oversee the project. Proposed membership would comprise the surrounding coastal management authorities including municipalities, the Departments of Primary Industry and Sustainable Environment and the funding authorities including Barwon Water, the Corangamite Catchment Management Authority, Environment Protection Authority and the City.

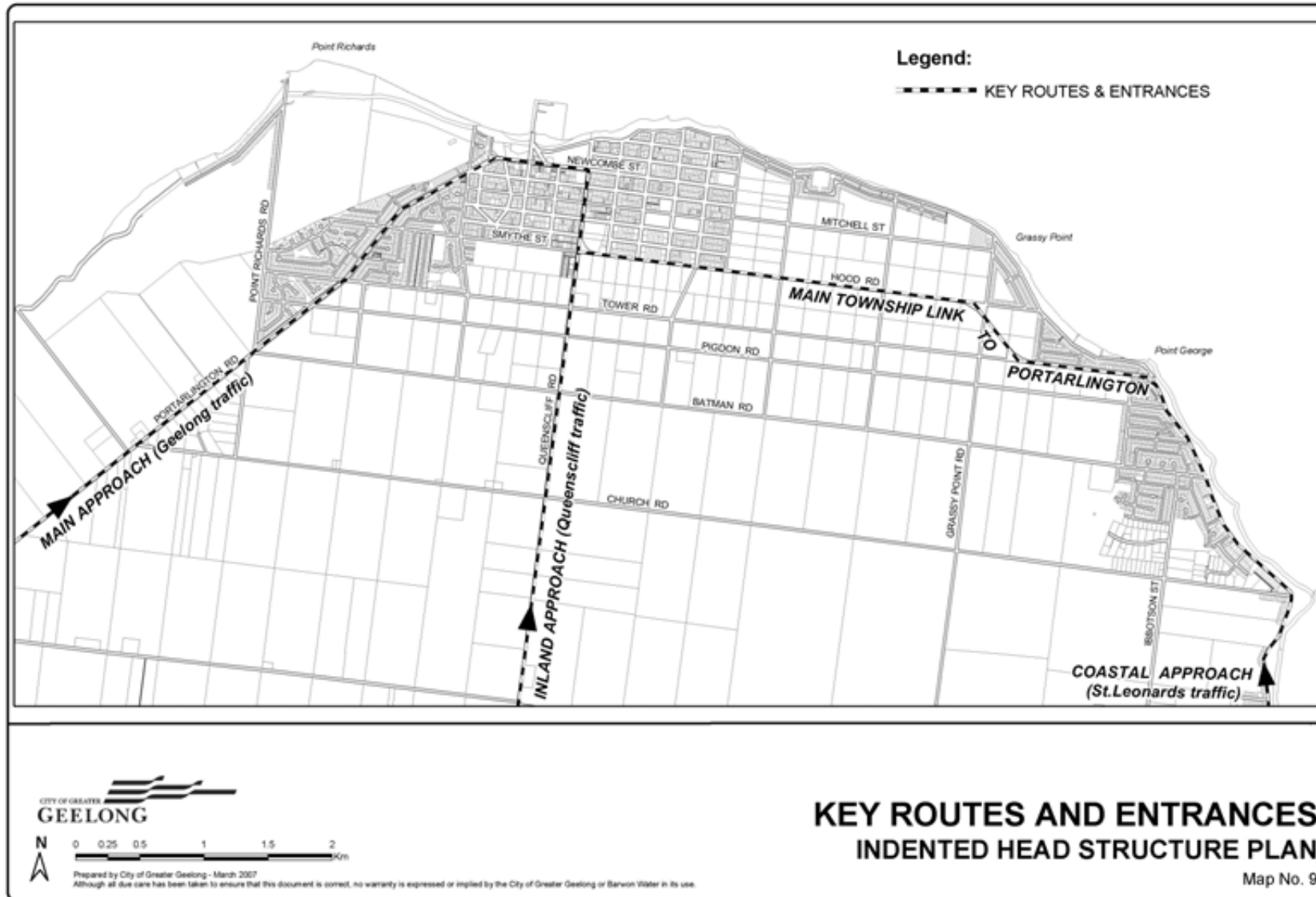
6.5 Electricity

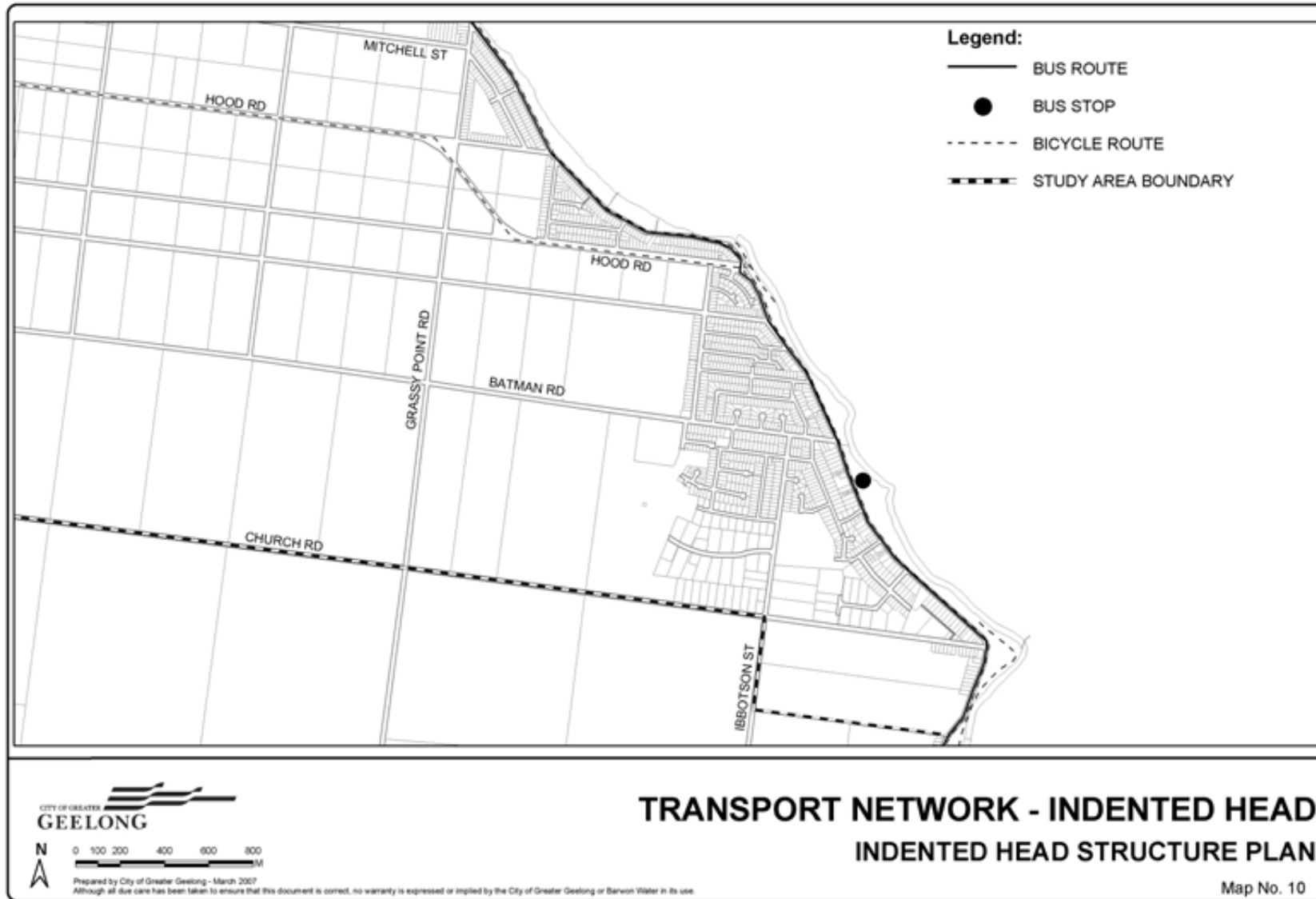
Powercor provides electricity supply to the area through 22,000 volt feeder lines and a network of localised transformers and low voltage lines from the Drysdale Zone substation. All existing power lines are predominantly overhead lines.

Powercor has an on-going ten year plan to upgrade the network to meet expected load growth and to improve reliability of supply throughout the Region. Powercor reviews its plan each year when it considers any changes in expected development of the region or proposed significant developments, such as Structure Plans, for possible inclusion in the plan.

6.6 Transport Infrastructure

The transport network within Indented Head is focussed on road based movements. There is a lack of formal pedestrian paths and linkages between open space areas in the township. The foreshore areas are a focus for pedestrian activity in the township.





6.6.1 Roads

The Geelong-Portarlington Road is the key arterial road providing access to the Indented Head area. This road collects the majority of traffic from Geelong and Melbourne and other townships lying to the west of Indented Head. Geelong-Portarlington Road is classified as a secondary arterial road in the Geelong Transport Strategy and provides direct access to Indented Head via the Portarlington Town Centre.

The Geelong-Portarlington Road is duplicated from Geelong to the Grubb Road/Jetty Road intersection west of Drysdale. Land has been reserved for the road to bypass the Drysdale town centre, and for future duplication from the Grubb Road/Jetty Road intersection to Portarlington. Timing for this duplication will be dependant on a range of factors, including traffic volumes using the road.

Hood Road is the main entry point to Indented Head, providing access from Portarlington to the northern section of the town. It intersects with The Esplanade which links Indented Head to St Leonards and serves as the principal access road into the town from the south.

Currently, VicRoads does not have plans for any *major* upgrades/improvements to the arterial road network within the Indented Head area. However, it will develop proposals to respond to capacity/safety issues as the need arises and these proposals will be submitted to the State Government for inclusion into future roads programs. These proposals would be likely to focus on the intersections of higher volume Council controlled Collector Roads with the Arterial Road Network.

Further development in Indented Head may place pressure on the arterial road network. VicRoads has advised that treatment works will be required at a number of intersections with arterial roads in the township to cater for traffic generated in the development areas.

Three separate areas with a projected yield of 274 lots, 70 lots and 19 lots respectively were been identified in the Portarlington/Indented Head Structure Plan – August 1993.

Some preliminary consideration has been given to the impact on the road network and possible treatments, however, it should be noted that the nature, extent and funding responsibilities for these treatments have yet to be considered in detail:

| Location | Possible Treatment |
|---|--|
| Portarlington-St Leonards Road (Hood Road)/ Henderson Street | Type 'C' right and left turn treatments required. |
| Portarlington-St Leonards Road (The Esplanade) /Batman Road | Type 'C' right and left turn treatments required. |
| Portarlington-St Leonards Road (The Esplanade) /McDonald Street | Type 'C' right and left turn treatments required. (This treatment would only be required if McDonald Street was to be upgraded to provide subdivisional access). |

Traffic volumes on the residential streets in Indented Head are low for most of the year, reflecting the small permanent population and the location of the township at the tip of the Bellarine Peninsula. Comments received from the Indented Head Community Association during the public consultation process indicate anecdotal evidence that Ibbotson Street is becoming increasingly used as a bypass route to access the 'Sea Breeze Estate'.

However, Ibbotson Street is not constructed to a suitable standard for greater traffic volumes and the community is concerned about traffic safety issues. The Community Association has requested that Ibbotson Street be upgraded between Murradoc Road St Leonards and Martin Street with a sealed pavement, bicycle lanes, and traffic calming measures.

6.6.2 Public Transport

Public transport in Indented Head is limited to bus services to, and from, Geelong and a cross-peninsula service from St Leonards to Queenscliff. Both services operate via Drysdale/Clifton Springs and St Leonards.

Bus services to, and from, Geelong operate between the hours of 5.55 am and 8.10 pm Monday to Thursday, between 5.55 am and 10.05 pm on Fridays, between 7.10 am and 6.25 pm on Saturdays, and limited services on Sundays between 7.25 am and 6.15 pm. Some weekday services operate from/to Portarlington only.

The cross peninsula service operates three trips each way Monday to Friday and on Saturdays.

The City of Greater Geelong Transport Strategy 2003 includes proposals to improve public transport services to the townships on the Bellarine Peninsula, including a review of existing services (routes and timetables) and proposed the upgrading of existing bus stops.

6.6.3 Pedestrian and Bicycle Network

There is a lack of formal pedestrian paths and linkages between open space areas in the township. The majority of residential streets in Indented Head do not have formal pedestrian paths, and wide grassy verges, and a lack of kerb and channel are a characteristic of the older parts of the township.

A pedestrian path extends along most of the foreshore, providing a connection from Indented Head to St Leonards.

Intra-township bicycle and pedestrian movements are generally restricted to the grassy verges and roadways, due to the lack of linkages between the existing open space areas and footpaths.

The future provision of footpaths within the township should consider the most appropriate material for the role, level of use, setting, asset life and maintenance requirements.

6.7 Key Influences

- Augmentation to the reticulated water supply and sewerage systems servicing Indented Head may be required to cater for future development;
- Opportunities exist for the use of recycled water in proximity to the Portarlington Water Reclamation Plant;
- Urban stormwater runoff poses a substantial threat to sensitive environments and sub-catchments and further studies need to be undertaken to identify mitigation measures;
- There are physical constraints to the provision of stormwater drainage infrastructure on low lying coastal land;
- The number of stormwater outfalls to Port Phillip Bay should be limited;
- Water conservation and stormwater re-use measures should be incorporated into new developments;
- Any improvements required to road, footpath and stormwater drainage infrastructure within the township are to be funded by Special Rates and Charges Schemes;
- The funding of future infrastructure can be assisted by the preparation of a Developer Contributions Plan;
- There are limited public transport services linking Indented Head to other centres, and within the township itself;
- There is a need to improve the limited pedestrian and bicycle linkages throughout the township and within open space areas;
- There is a need to examine collector roads, such as, Ibbotson Street, within the township, to determine if any traffic safety devices or measures are required.

7.0 Township Growth and Residential Lot Supply

7.1 Township Growth

At Indented Head, development of broad hectare land zoned for residential purposes has historically been slow, considering the time lapsed between those areas being zoned for such purposes and the applications for subdivisions in these areas.

The main subdivision which has occurred in Indented Head is on the western side of Ibbotson Street, land now known as the "Sea Breeze Estate". Prior to subdivision, the total area of this land was approximately 65 hectares. Subdivision commenced in this area in the early 1950s and is still continuing with 27.32 hectares of land yet to be subdivided. A small portion of the south-western corner of the site was rezoned for residential purposes following the removal of the reservation for the Portarlinton/Indented Head Bypass Road in the mid 1990s. The Bypass reservation traversed that corner of the land.

There have been two recent infill re-zonings Indented Head, of the former Harvey Estate Resort Zone and the former Laze Away Caravan Park.

The Harvey Estate site is located on the south-western side of The Esplanade, Indented Head, adjacent to the intersection of Hood Road and The Esplanade. It had an area of 2.643 hectares with frontages to The Esplanade/Hood Road and Pigdon Street.

Under the old format Planning Scheme (prior to July 2000) the subject land was zoned "Resort" which reflects its identification in the 1993 Portarlinton/Indented Head Structure Plan as a "Possible Tourist Accommodation" site. As there is no Resort (or similar) in the Victorian Planning Provisions, the zoning of the land reverted to Rural in the new format planning scheme.

It was re-zoned to Residential 1 pursuant to Amendment C42 which came into operation on 12 June, 2003. Re-zoning of the site was considered to be consistent with Council's policy objectives and strategies for the future development of the Indented Head township.

The land has now been subdivided into 30 lots ranging from 476 square metres to 1104 square metres in area, with an average lot size of 621 square metres and density of 11 lots per hectare.

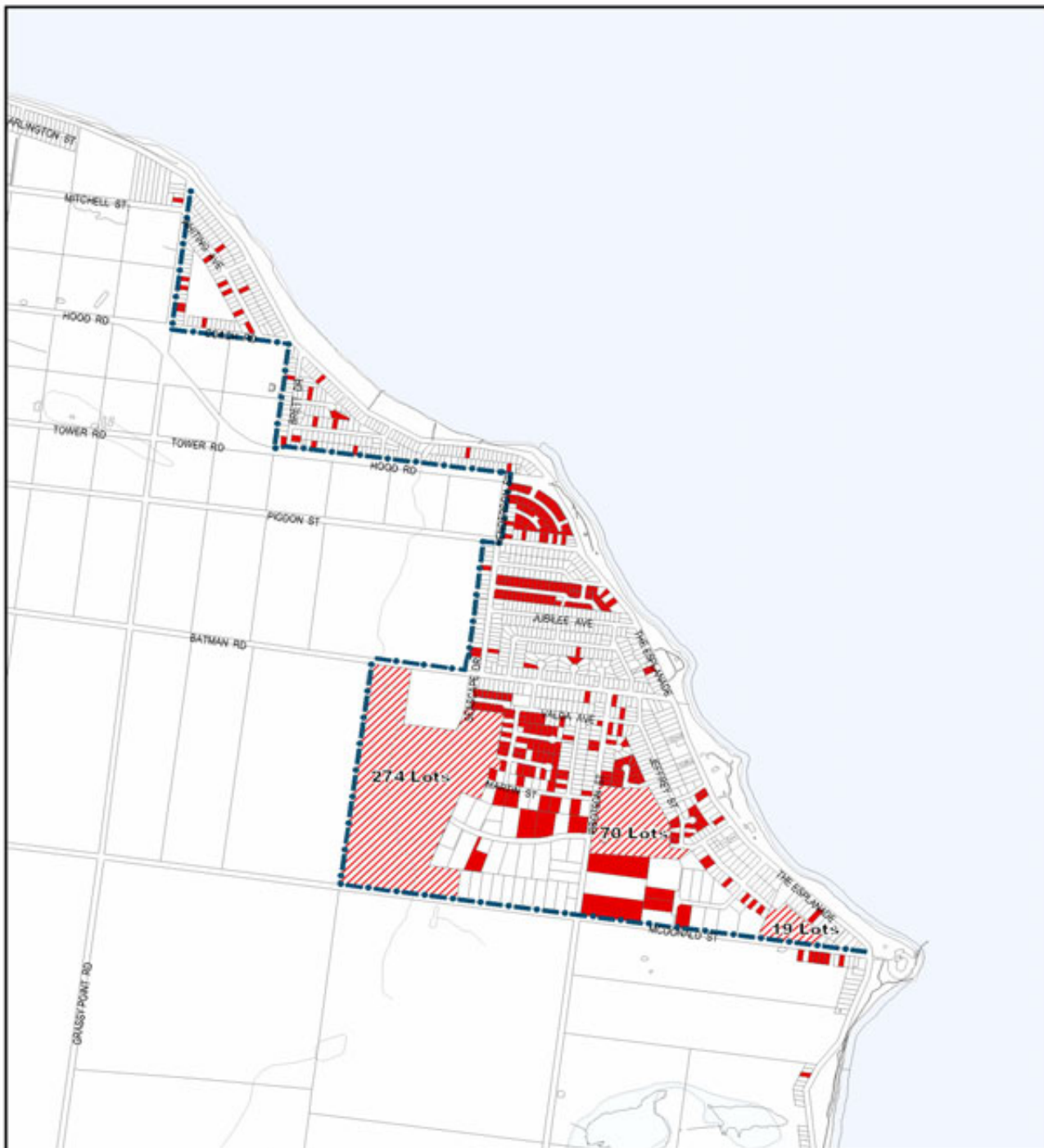
The former Laze Away Caravan Park at 28-38 Walpole Avenue, Indented Head was zoned Special Use 6 – Caravan Park prior to the introduction of the new format planning schemes in 2000. As there is no Special Use – Caravan Park (or similar) in the Victorian Planning Provisions, the zoning of the land reverted to the Residential 1 Zone in the new format planning scheme.

The site has since been subdivided into 56 lots ranging from 300 square metres to 540 square metres in area. The average lot size is 436 square metres and the density of development is approximately 17 lots per hectare.

7.2 Residential Lot Supply

Council has recently completed a *Land Use & Residential Lot Supply Report* for the Bellarine Peninsula (Draft, 2006). The supply and distribution of lots in Indented Head are illustrated on Map 11.

A number of factors were considered in calculating the future lot supply, including the number of vacant lots, potential yield of lots from unsubdivided land and future development areas and the average number of building approvals between 1996 and 2005, which included years of both high and low levels of building activity.



Legend

- Urban Growth Boundary (taken from Portarlington/ Indented Head Structure Plan 1993)

Residential Lot Supply Categories

- Vacant Residential Lots (V)
257 Lots
- Unsubdivided Residential Zoned Land (UR)
70 Lots (approved subdivision plan)
293 Lots (not yield of 10 lots per hectare)

Total Lot Supply
620 Lots (as at July 2005)

Indented Head

Future Residential Lot Supply Map 2005

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Prepared by the City of Greater Geelong - July 2005

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This map attempts to show the future residential lot supply for Indented Head. It is based on areas that are in an existing residential zone or are identified for potential residential development in the Portarlington/ Indented Head Structure Plan (1993). The lot supply is based on an average lot yield of 10 lots per hectare or the yield shown in approved subdivision plans.

Map 5B

The lot supply calculation represents a broad estimation of yields of 10 to 15 dwellings per hectare from future development areas. However, it does not consider the requirements for public open space, drainage reserves, roads, etc, which would reduce the actual yield from these areas.

It is estimated there is a supply of 620 lots zoned "Residential", including vacant and undeveloped lots, within the Indented Head township. The existing Residential 1 zoned land is estimated to provide lot supply longevity of 37 to 45 years, depending on lot yield, based on an average of 17 building approvals per annum being issued in Indented Head.

7.3 Future Growth

In order to determine the number of years of residential growth this lot supply will sustain, it is necessary to calculate the rate of lot take-up, by analysing residential building approvals for Indented Head in the period 1991 to 2005.

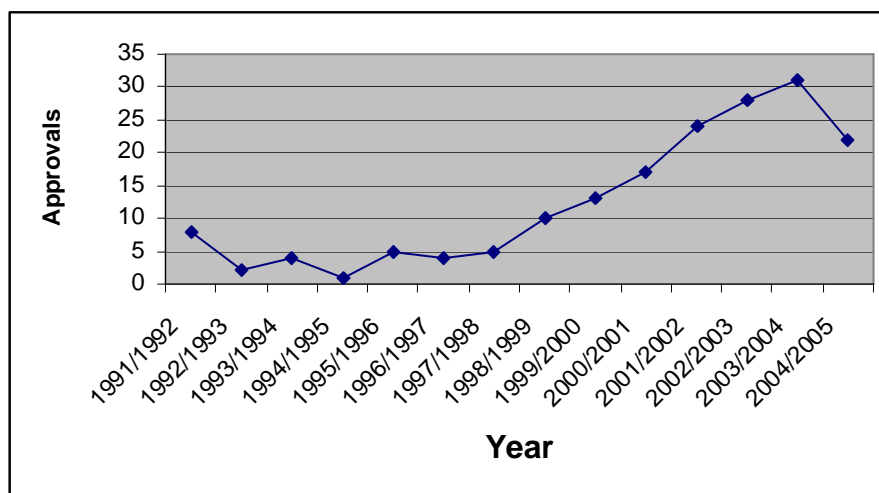
The Geelong Economic Indicators Bulletin reports on new residential dwelling approvals for all suburbs and townships within the municipality. The figures for Indented Head since 1991/1992 are set out in Table 8:

Table 8 – Indented Head New Residential Dwelling Approvals 1991 - 2005

| 1991/1992 | 1992/1993 | 1993/1994 | 1994/1995 | 1995/1996 | 1996/1997 | 1997/1998 |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 8 | 2 | 4 | 1 | 5 | 4 | 5 |
| 1998/1999 | 1999/2000 | 2000/2001 | 2001/2002 | 2002/2003 | 2003/2004 | 2004/2005 |
| 10 | 13 | 17 | 24 | 28 | 31 | 22 |

The Table shows there had been a continued increase in building approvals issued between 1998 and 2004, but that there was a decline in 2004/2005.

Figure 5 – New Residential Dwelling Approvals in Indented Head (1991-2005)



Research for the last financial year indicates that approximately 20 new dwelling approvals were issued in Indented Head between July 2005 and June 2006.

To determine the longevity of lot supply, the take-up of land per year has been based on the average of new dwelling approvals per annum over a specific timeframe (1996-2005), to provide a reliable pattern of development. The period includes years of both high and low building activity, and the figures show that the average number of approvals issued for new dwellings has been 17 per annum.

Table 9 – Future Supply of Residential 1 Zoned Land in Indented Head

| | |
|--|-----------|
| Vacant Residential Lots | 257 |
| Vacant Rural Residential Lots | 0 |
| Undeveloped Residential Zoned Land (Unsubdivided) | 363 |
| Total Zoned Lots | 620 |
| Years Supply Zoned Lots | |
| Demand of lots at Indented Head is based on an average of 17 Building Permits per Annum (1996/1997-2004/2005). | 36 |

(Note figures are rounded)

An assessment of the lot supply in Indented Head, based on the average building approvals per annum in the years between 2001 and 2005, has been calculated to examine the impact of the higher levels of building activity in recent years.

Table 10 – Future Supply of Residential 1 Zoned Land in Indented Head (High Building Activity Rate)

| | |
|--|-----------|
| Vacant Residential Lots | 257 |
| Vacant Rural Residential Lots | 0 |
| Undeveloped Residential Zoned Land (Unsubdivided) | 363 |
| Total Zoned Lots | 620 |
| Years Supply Zoned Lots | |
| The demand of lots at Indented Head is based on an average of 26 Building Permits per Annum (2001/2002 - 2004/2005). | 24 |

(Note figures are rounded)

Even when relatively high building approvals are used as a measure, Indented Head has a minimum of 24 years supply of lots in areas zoned residential. This calculation does not consider the contribution of medium density housing to lot supply within the township, which is a key objective of urban growth and land use policies within the Greater Geelong Planning Scheme.

The direction to not consider rezoning of rural land for residential purposes within the Indented Head township is based on a number of principles, outlined in the following strategies and policies:

- The Urban Growth Strategy
- The Rural Land Use Strategy
- The Victorian Coastal Strategy and the Corio Bay Coastal Action Plan

The key objectives of those documents are to maintain a compact urban form and to avoid linear sprawl, particularly along the coastline. As summarised in Clause 21.08 Urban Growth, of the Greater Geelong Planning Scheme, the following objectives are to be supported when strategic planning is undertaken within the municipality:

- To maintain a compact urban form;
- To maintain non-urban breaks between settlements within Greater Geelong;
- To recognise the amenity of the Bellarine Peninsula and its role in attracting tourists and retirees;
- To ensure the environment is protected from uncontrolled urban sprawl;
- To retain viable agricultural land;
- To maintain the Bellarine Peninsula as a predominantly rural area;
- To account for existing natural and man-made constraints.

7.4 Key Influences

- There has been a historically slow take-up of land in the township;
- A substantial lot supply is available within the existing Settlement Boundary at Indented Head;
- Opportunities exist to consolidate short term residential growth within the existing residential areas.

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