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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;
- 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.

Indented Head is not a designated growth area in the Planning Scheme and growth beyond the current settlement boundary has not been planned for. Further reviews of the Structure Plan will not be required unless there is a significant change to local and State Policy in relation to land use planning settlement directions on the Bellarine Peninsula.

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.

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.

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 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 designated growth location for conventional residential or rural residential growth within Council's Municipal Strategic Statement or within the G21 Regional Growth Plan;
- There is a clear Settlement Boundary for the township to provide a compact urban form;
- Sensitive environmental assets and landscape features should be preserved, protected and enhanced;
- Strong State and Local Planning Policy provide directions for:
 - protection of coastal environments;
 - protection of rural environments and agricultural activities;
 - enhancement of building design and built form in the township;
- Opportunities exist for the enhancement of open space areas, recreational facilities and linkages;
- Access to services, facilities and infrastructure is limited within the town and residents rely on neighbouring towns to fulfill these roles.

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 are likely to have significant impacts on the town including erosion;
- Support the on-going management of significant landscape and environmental assets by public land managers;
- The opportunity to enhance key views and vistas;
- 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 working residents 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 community relies on community, health and social services provided on a region-wide basis;
- The town is poorly serviced by public transport.
- 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 develop a place making plan for the foreshore area in consultation with the local community;
- The pursuit of a land swap between Council and a developer at Batman Road, to provide a substantial linear parcel of open space, incorporating protection of areas of significant vegetation and natural floodway;
- The opportunity to investigate the sale of Council owned land in Coach Road which is deemed surplus to need.
- Tourism is a significant component of the local economy and opportunities exist to support and improve tourist accommodation options, tourism activities, increasing the visitation period and improving facilities, access to the foreshore;
- Aquaculture is likely to be a growth industry in the area and has the potential to provide local employment opportunities.

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;
- The number of storm water outfalls to Port Phillip should be limited;
- Water conservation and storm water re-use measures should be incorporated into new subdivisions and developments;
- There are physical constraints to the provision of storm water drainage infrastructure on low lying coastal land;
- Any improvements required to road, footpath and storm water drainage infrastructure within the township are to be funded by Special Rates and Charges Schemes;
- Funding of future infrastructure can be assisted by the preparation of a Developer Contributions Plan;
- Public transport services linking Indented Head to other centres, and within the township itself are limited;
- Improvements are needed to pedestrian and bicycle infrastructure 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;
- An adequate 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 is taken from the Bellarine Peninsula Strategic Plan 2006 - 2016:

*“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.”*

3.2 Role of the Township

Traditionally Indented Head has been a seaside holiday village and retirement centre, serving a small permanent population. The town is not identified as a growth location within Council’s policies, 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 only.

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

3.4 Urban Growth

The existing residential lot supply in the township is sufficient to meet anticipated housing demand over the next 10 to 17 years (depending on higher or lower take-up based on average yearly building data), this calculation does not consider the contribution of medium density housing to lot supply within the township. Take up rates in the town have been traditionally slower than other settlements on the Bellarine Peninsula.

The nominated Settlement Boundary aims to provide a unique setting for the township with consideration to:

- The Salt Lagoon Wildlife Reserve, and the need to provide continued protection of the ephemeral edge of the lagoon and a 'rural break' between Indented Head and St Leonards.
- Adopted policies which advocate for the containment of settlements and the retention of the Bellarine Peninsula as a predominantly rural area with clearly defined township and landscaped areas.
- The Port Phillip foreshore reserve.
- Increasing levels of coastal vulnerability due to the impacts of climate change.

Future Growth

There has been some interest in expanding the settlement boundary to the east for the purpose of residential development. This proposal is not supported on the following grounds:

- The town is not identified for growth and has limited access to services, facilities and infrastructure.
- The current lot supply for the town and more broadly the Bellarine Peninsula is adequate.
- There is an existing seafood industry use in close proximity which is earmarked for major expansion and residential encroachment could compromise this use and cause future conflicts and amenity issues.
- Vehicle access to the site is limited to Ibbotson Street (currently unsealed) with McDonald Street not considered appropriate for access due to the presence of significant vegetation.
- Connectivity back into the township is limited.

Given Indented Head is not identified for growth and has limited services further population growth beyond which is anticipated within the current settlement boundary has not been planned for and is therefore not supported.

Principles

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

Directions

- Ensure urban development does not occur outside the defined Settlement Boundary shown Indented Head Structure Plan Map;
- Encourage appropriate infill residential development where drainage and servicing issues can be resolved;
- Ensure urban development does not encroach on to, or have adverse effects on, significant environmental features.
- Consider the impacts of sea level rise and coastal vulnerability as part of any future development and infrastructure provision.

3.5 Infrastructure

There is a need to continually upgrade and improve infrastructure, such as, roads, footpaths, drainage, water and sewerage servicing within the township.

Roads

The community has identified a number of road upgrades including intersection treatments, sealing, traffic calming, signage, truck diversion and on-street parking. These improvements are included on Councils 'Request for Service' register which inform infrastructure audits and annual works programs.

Footpaths

There are significant gaps in the footpath network in the town. A Walkability Study has identified strategic routes which should be delivered as a priority. Special rates and charges schemes will be the likely mechanism to deliver the infrastructure in accordance with Council's 'Comprehensive Infrastructure Funding Policy'. Under this regime sections of The Esplanade have recently been constructed.

Cycling

The Principle Bike Network outlined in the G21 Transport Strategy and the Geelong Cycle Strategy identified the following key routes:

- Tower Road and The Esplanade – line marking and signage required is a 'medium' priority
- Hood Road
- Ibbotson Street – between Batman Road and McDonald Street, to accommodate on-road bicycle route to improve connectivity to the township.
- Batman Road - provide connectivity between The Esplanade and Seascape Drive.
- McDonald Street - provide connectivity between Ibbotson Street and The Esplanade and to foreshore.

These upgrades form part of a program of works for future funding consideration. Council recently formed the Cycling Infrastructure Advisory Committee which will assist Council in delivering cycling infrastructure across the municipality.

Stormwater

There are a number of stormwater outlets entering Port Phillip. Impacts from urban runoff should be minimised where possible and storm water management and re-use should be integrated into all development and subdivision proposals. Regular infrastructure audits should be carried out and required upgrades undertaken as part of annual works programs. Stormwater discharge should be a consideration as part of any infrastructure provision or future planning for the foreshore and adjacent areas.

Community and Recreation

The Bellarine Peninsula Leisure and Recreation Needs Study included a number of recommendations about the enhancement of, and improvement to, existing leisure, recreation and open space areas within the township. Council is currently developing the 'Greater Geelong Open Space Strategy' which will inform open space planning for the foreseeable future.

It is acknowledged that Indented Head is almost wholly reliant on the foreshore for open space opportunities which comes under substantial pressure during the summer months. There is a small new reserve with a playground in the Secret by the Bay estate (Grieve Ave) but no further opportunities for passive open space development in the town, besides the Sea Breeze estate. Council would require 10% of land for open space as part of any new subdivisions.

An area of open space has been nominated as part of the Sea Breeze Estate. Council and the developer are in the process of a land swap which would see the council reserve which is more suitable for development 'swapped' for the developers land which is low lying and part of a natural drainage course and contains significant remnant vegetation with high environmental and biodiversity values, including a large stand of remnant Red Gums with substantial hollows. A management plan will be prepared for the open space area once the land swap is finalised. This plan should consider incorporating some nature-based play opportunities and walking trails. It should also look at appropriate zone and overlay controls.

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 during the development of the Open Space Study failed to identify a suitable public use option for the site. Council is investigating offering this land for sale as it is deemed surplus to need. Any land sale would be subject to Council's 'Sale, Exchange, Transfer and Use of Council Land Policy'.

A Community Hall has now been established under the management of Bellarine Bayside. It is a key community asset; however significant upgrades are still required. Its refurbishment is a priority and is likely to be staged and dependent on adequate funding arrangements.

Place Making Project

The Ministerially approved *Northern Bellarine Foreshore Master Plan 2013* identifies a number of land management considerations and projects for the foreshore precinct. A priority project for Bellarine Bayside is to undertake a place making project for the main activity node. This project aims to enhance the sense of place and develop key management recommendations (consistent with the Activity and Recreation node policy and guidelines) in consultation with the local community.

This project will be led by Bellarine Bayside as the asset manager. Council will be a key stakeholder in the project and will need to work in partnership with Bellarine Bayside.

Contribution Schemes

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.

Principles

- Provide a range of social and community services commensurate with the size and role of the township.
- Improve transport and movement networks, including pedestrian and cycle linkages throughout and linking to the town.
- 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.
- Provide appropriate infrastructure, such as, drainage, water supply, reticulated sewerage, electricity, natural gas, and telecommunications in developing areas.
- Ensure new development adequately addresses storm water drainage, including downstream storage and management requirements, and incorporates integrated water design principles.

Directions

- 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 a principle pedestrian footpath and bicycle network.
- Use special rates and charges schemes to assist the delivery of identified infrastructure.
- Investigate measures to improve storm water discharges into Port Phillip.
- Incorporate Integrated Water Cycle Management and Water Sensitive Urban Design principles into new development.

- Ensure new developments have no adverse flood impacts on existing development or the broader catchment.
- Pursue a land swap in the Sea Breeze Estate to ensure the protection of significant vegetation and carry out a management plan for the site.
- Participate in the Indented Head Place Making Project subject to a formal request from the asset manager and budget and work plan approval.
- Investigate the sale of the Coach Road open space subject to Council's Sale, Exchange, Transfer and Use of Council Land policy.
- Support the upgrade of the Community Hall as a priority project.

3.6 Settlement and Housing

Indented Head will continue to have a high proportion of older persons. Greater housing diversity including smaller unit type developments will improve the housing choices available for all residents.

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.

Development needs to have regard to the towns coastal setting, coastal hazard vulnerability, existing infrastructure capabilities, landscape features and the low key character of the township.

Principles

- Ensure future housing developments provides for a variety of house sizes and types, and complements the character of Indented Head.
- Achieve a high standard of urban design that integrates with the coastal character of the township.
- Consider the impacts of climate change on new development.

Directions

- Encourage development which respects the coastal landscape setting of Indented Head, by providing reasonable sharing of views of the coast and foreshore where they have been identified and promoting contemporary design that reflects the existing scale, setbacks and spacing, forms and materials of buildings in the locality.
- Encourage development which allows for the protection of significant vegetation and/or planting around buildings and which has minimal impact on roadside vegetation.
- Promote integrated water management, water sensitive urban design, energy efficiency and other Environmentally Sustainable Design principles into developments.

- Encourage incremental infill medium density housing throughout the General Residential 2 zoned areas, subject to neighbourhood character considerations.
- Ensure new development undertakes a coastal vulnerability assessment where potential impacts from climate change have been identified.

3.7 Environment

The landscape surrounding Indented Head provides intrinsic habitat, biodiversity and cultural values to the local and wider environment as well as establishing a clear identity for the township. Areas of significance have been considered in the designation of the settlement boundary.

Foreshore

Bellarine Bayside and the Department of Environment, Land, Water & Planning (DELWP) have undertaken extensive beach renourishment works. Sand stabilisation works have also included sand fencing.

As previously noted storm water entering the Bay has potential environmental impacts. Any future road works or development proposals should consider how storm water assets can be upgraded or improved. This includes consolidating the number of outlets and better utilising existing basins and drains to reduce flooding in the area during heavy rain events.

Vegetation

As part of the development of the Sea Breeze Estate, Council is negotiating to swap a piece of largely vacant council owned 3.9ha land zoned Residential 2 with a 13.6ha portion of land within the Estate that has significant vegetation and ecological values. This would ensure the ongoing protection and management of the vegetation. A management plan will be prepared to look at the future use and management of the land including appropriate zone and overlay controls.

The City is currently developing an 'Urban Forest Strategy' to increase tree cover across the municipality. Urban trees provide environmental as well as recreation, health and amenity benefits. It has previously been noted Indented Head would benefit from increased street tree coverage and would benefit greatly from any planting regime resulting from the implementation of the Urban Forest Strategy.

Climate Change

Impacts on the Indented Head foreshore and infrastructure as a result of climate change will continue to be an issue. Coastal action plans will help guide the management of existing assets along the coast. New development will be required to undertake coastal hazard vulnerability assessments for a possible sea level rise of 0.8 metres by 2100 taking into consideration the effects of tides, storm surges, coastal processes and local conditions such as topography and geology.

Indented Head has a high level of coastal hazard vulnerability in relation to the impacts of climate change and associated sea level rises. The low lying nature of the coastline in this area makes it more exposed to wave impact making erosion a significant issue. Council should continue to look at predictive mapping and hazard and risk findings in order to develop options in relation to coastal vulnerability. Council will need to continue to carry out risk and mitigation assessments to guide the prioritisation and implementation of management actions.

Stormwater

Increased development in the township has the potential to impact adversely upon the quantity and quality of stormwater runoff into waterways and Port Phillip. 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 and development should provide best practice integrated water management and water sensitive urban design principles. Large scale subdivision development should be accompanied by flood mapping showing existing conditions and a flood impact report showing how the proposed development will have no adverse impacts on existing development or environmental values.

Principles

- Protect the landscape character of the township and the ecological sensitivity of the surrounding environment.
- Ensure environmentally sensitive area and identified ecological networks, including appropriate buffers, are protected from development.
- Provide a sense of identity and place for Indented Head.
- Consider the impacts of climate change on the environment.
- Ensure new development minimizes impacts on the environment.

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 and provide additional street trees;
- 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;
- Protect and enhance key vistas and view lines to the coast and environmental features as identified in the attached Indented Head Structure Plan Map.
- Improve the storm water quality and quantity entering into Port Phillip.
- Ensure Environmentally Sustainable Design principles are incorporated into new developments.
- 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.
- Pursue a land swap in the Sea Breeze Estate to ensure the protection of significant vegetation and carry out a management plan for the site.
- Monitor the impacts of climate change and carry out risk and mitigation assessments to guide the prioritisation and implementation of management actions.

3.8 Economic Development and Employment

Retail

Additional retail space is not currently required in Indented Head. There is opportunity to expand the existing general store if required to meet the resident population's daily shopping needs.

Industry

Aquaculture is likely to be a growth industry in the area and has the potential to provide local employment opportunities. Jade Tiger Abalone currently operates the largest abalone farm in Australia from Indented Head and it is looking to expand its operations which will deliver additional local employment and economic benefits.

Expansion of the facility to the west will require the clearing of significant vegetation. The vegetation is representative of the Otway Plains Bioregion EVC. Any vegetation removal should be carried out in accordance with the 'Permitted clearing of native vegetation Biodiversity assessment guidelines (DEPI, 2013) or any subsequent requirements resulting from the 2015 Native vegetation review.

Any expansion will also need to address potential off-site amenity impacts including:

- Noise and light emissions;
- Access and parking;
- Discharge pipe management
- Landscaping and other visual buffers
- Relevant EPA requirements

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.

Current policies do not encourage the provision of land for industrial or service business uses within Indented Head. The Indented Head community will continue to rely on commercial zoned land in Portarlington, Drysdale and Ocean Grove, for industrial and service business facilities.

Tourism

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. Council has recently prepared a policy for tourism in rural areas which provides greater direction around tourism related activities on the Bellarine Peninsula.

Principles

- Support a retail facility at Indented Head to serve the resident population's daily shopping needs;
- Provide opportunities for local employment by encouraging high value agriculture and aquaculture industries;
- Support the development of the local tourism industry.

Directions

- Support the aquaculture activities in Port Phillip 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 commercial or industrial uses within Indented Head;
- Introduce a tourism policy for rural areas into the planning scheme.

3.9 Rural Areas

Current policy is to retain the Bellarine Peninsula as a predominantly rural area, with distinctly defined and separated townships. Maintaining the existing settlement boundary provides for a compact urban form and the protection of rural land which has both productive and landscape values.

Agricultural uses should be supported on Farming Zoned land where they don't have a detrimental impact on the environmental and landscape values of the area.

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.

The introduction of policy around tourism and non-rural uses in rural areas should provide greater direction for these uses.

Principles

- To preserve the surrounding rural landscape and setting of Indented Head.
- To encourage farming and the productive use of land.

Directions

- Retain the land outside the Settlement Boundary in the Farming Zone;
- Ensure that land use activities within the Farming Zone 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;
- Direct rural residential growth to locations within the municipality designated in the Municipal Framework Plan.
- Introduce a tourism policy for rural areas into the planning scheme.

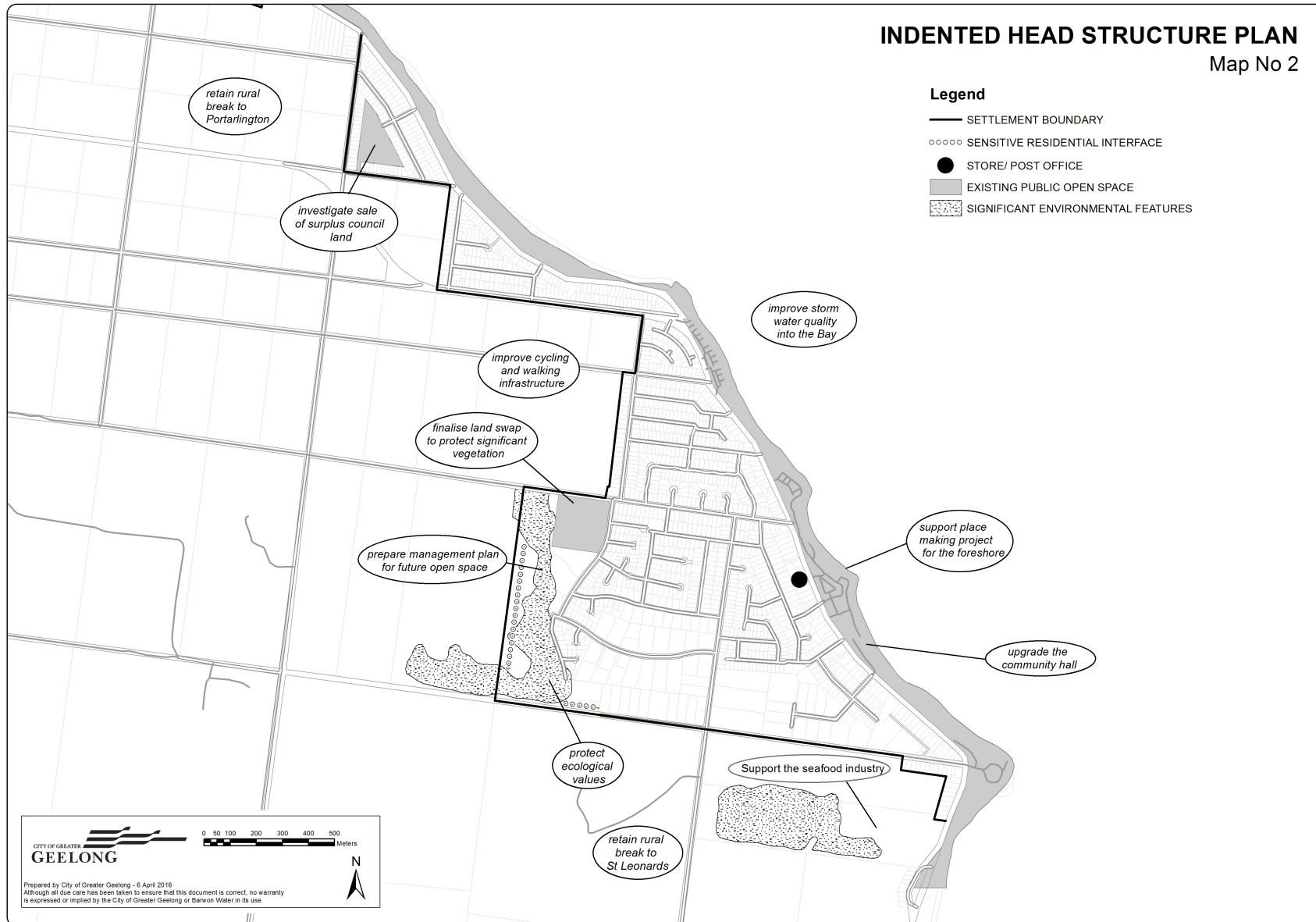
The above principles and directions for each of the key themes are summarised on the Structure Plan Map 2.

INDENTED HEAD STRUCTURE PLAN

Map No 2

Legend

- SETTLEMENT BOUNDARY
- ○ ○ ○ SENSITIVE RESIDENTIAL INTERFACE
- STORE/ POST OFFICE
- EXISTING PUBLIC OPEN SPACE
- ▨ SIGNIFICANT ENVIRONMENTAL FEATURES



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 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:

Implementation and Review Plan	
Using policy and the exercise of discretion	Update the Bellarine Peninsula 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	Apply appropriate zone and overlay controls to the Batman Road land swap area to protect the vegetation and ecological values of the site.
Undertaking further strategic Work	Support a Place Making Project for the key activity node on the foreshore led by Bellarine Bayside.
Other Actions	<ul style="list-style-type: none">• Investigate the need for any traffic calming devices or measures in Ibbotson Street.• Deliver the Principle Bike and Pedestrian networks.• Finalise the land swap to protect significant vegetation in Sea Breeze Estate.• Investigate the sale of land at Coach Road which is deemed surplus to need.

2.0 Review of Structure Plan

Indented Head is not a designated growth area. Land supply is adequate for the short to medium term and growth beyond the existing settlement boundary has not been planned for. Further reviews of the Structure Plan will not be required unless there is a significant change to local and State Policy in relation to land use planning settlement directions on the Bellarine Peninsula.

PART C BACKGROUND REPORT

1.0 Introduction

1.1 Background

The 2007 Structure Plan for Indented Head built on the directions and principles set out in the 1993 Plan which both included maintaining Indented Head as a distinct coastal township in a rural landscape. They also set out preferred future directions, including the location of a settlement boundary, 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. See map 3 below.

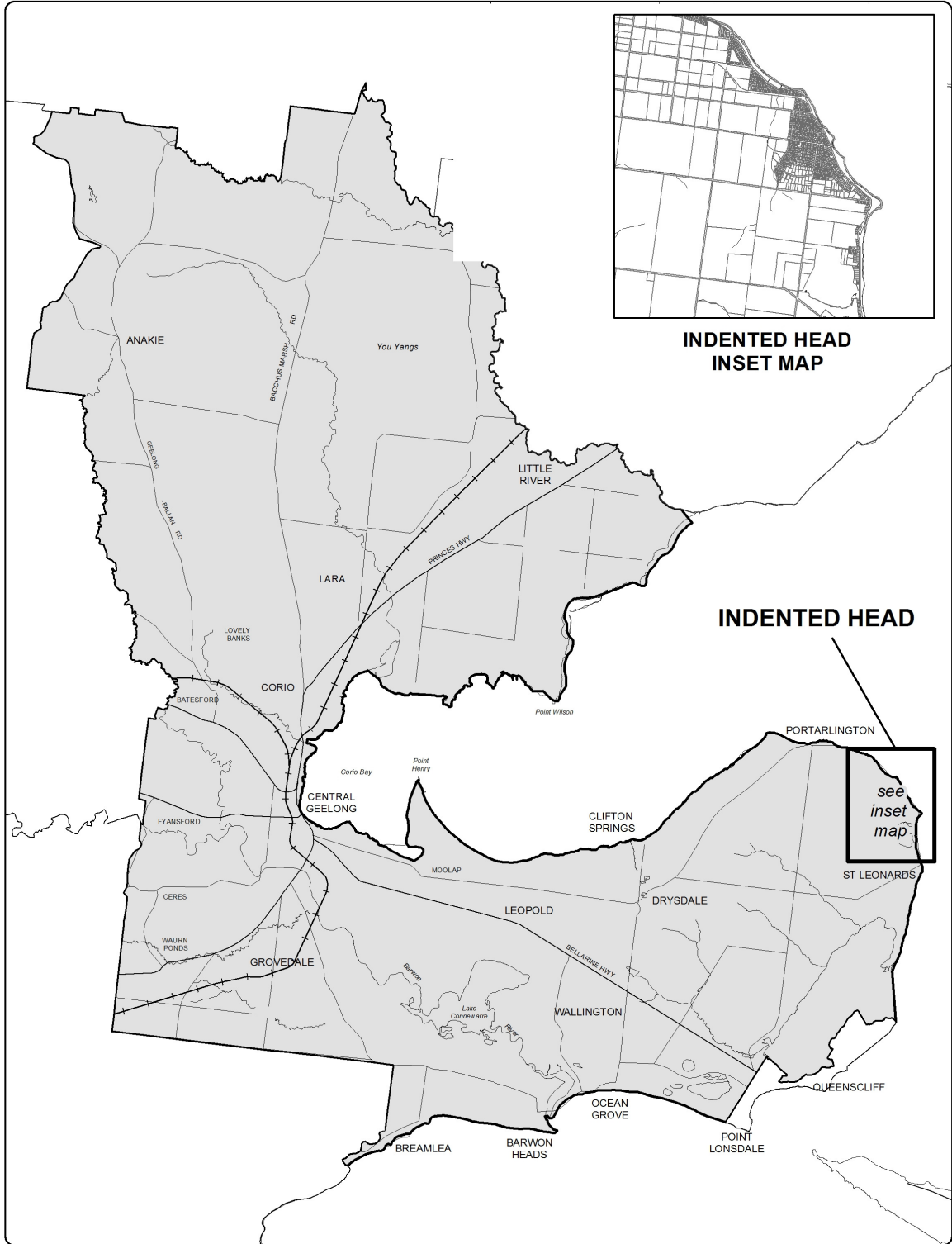
Indented Head is a small urban and tourist settlement, located six kilometres to the south-east of Portarlington. It lies between Portarlington and St Leonards, with the foreshore reserve stretching along the township's eastern shore to Port Phillip. The Indented Head township is dispersed and elongated 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 is a seaside holiday village, serving a small permanent population.

It is a popular destination for holiday makers and during holiday periods the population is dominated by holiday makers, short trip visitors and those making use of holiday homes. It is also popular with retirees, who make up a large portion of the permanent population.



**INDENTED HEAD
INSET MAP**

INDENTED HEAD

see
inset
map

**CITY OF GREATER
GEELONG**

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**LOCALITY PLAN
INDENTED HEAD STRUCTURE PLAN**

Map No 3

1.4 Aboriginal Cultural Heritage

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.

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. Batman Park contains evidence of Aboriginal cultural heritage, including shell middens, subsurface cultural deposits, artefact scatters and Aboriginal historical references (Batman Park, Incorporated Plan, 2015).

The *Aboriginal Heritage Act 2006* provides protection for all Aboriginal places, objects and human remains in Victoria regardless of their inclusion in the Victorian Aboriginal Heritage Register or land tenure. The Act provides clear guidance to planners and developers about when and how Aboriginal cultural heritage management issues need to be considered. It also requires that the discovery of Aboriginal cultural heritage places or objects on any public or private land in Victoria be reported to the Office of Aboriginal Affairs Victoria.

A Cultural Heritage Management Plan (CHMP) may be required as part of a development depending on the class of activity to be carried out (high impact) and if the location is within an area of Aboriginal cultural sensitivity such as Indented Head which is located on the coast and has a number of waterways/water bodies. Aboriginal sites and artefacts include mounds, middens, quarries, scarred trees, burials and various types of tools.

Council will continue to maintain a relationship with the Wathaurung Aboriginal Corporation who are the Registered Aboriginal Party (RAP) for this area in regard to proposed developments that may impact on Aboriginal cultural heritage, in accordance with both the established protocol and State and Commonwealth legislation.

Karreenga Action Plan 2013-2017

The Karreenga Aboriginal Action Plan articulates the steps towards developing partnerships between Aboriginal and non Aboriginal Australians in the City of Greater Geelong. The Plan addresses:

- Cultural recognition and respect;
- Aboriginal cultural heritage awareness;
- Development in arts and culture;
- Family and community support; and
- Employment opportunities

1.5 European History

Recorded European visitation of Port Phillip 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 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.

A stone cairn also marks the place in Batman Park where John Batman came ashore to camp in 1835 before moving on to the head of the bay which was the site that would become Melbourne. There Batman signed his contentious treaty for land surrounding Melbourne, including Geelong and the Bellarine Peninsula.

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 holiday makers 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.

2.0 Policy Context

2.1 Key Strategies and Local Strategic Studies

2.1.1 Coastal

Victorian Coastal Strategy, 2014

The Victorian Coastal Strategy 2014 (VCS) sets a long term vision and framework for how we plan and manage the coast, guided by the Hierarchy of Principles, policies and actions. The Strategy also identifies five key issues that need to be addressed if our coast is to continue to provide benefits to all Victorians into the future.

Central Regional Coastal Plan, 2015.

The Central coastal region extends from Breamlea to Inverloch encompassing over 990km of coastline. The Plan interprets the desired outcomes, policies and actions of the Victorian Coastal Strategy 2014 at a regional level. The Central Coastal Board has identified eight key areas of focus.

City of Greater Geelong Climate Adaptation Strategy 2011

The Adaptation Strategy aims to prepare Council and the broader Greater Geelong community for climate change impacts. It is designed to foster an understanding of how climate change is likely to affect the region and to assist Council in prioritising short and long term adaptation actions.

Council's strategic objectives for adaptation are to:

- Lead the City of Greater Geelong community in adapting appropriately to climate change.
- Build awareness and understanding of climate change across Council and within the community.
- Acknowledge the links between climate change and other challenges and opportunities for the City of Greater Geelong.
- Plan for decisions that remain viable under the widest possible range of climate futures.
- Use lessons from the results of past decisions to inform better decisions in the future.
- Link with others to drive understanding of and action on climate change adaptation.
- Implement solutions that:
 - a) are cost effective
 - b) are transparent and defensible
 - c) recognise the needs of vulnerable groups
 - d) ensure equitable outcomes.

Future Coasts program

The Future Coasts Program is led by the Victorian Government. Climate change projections forecast that sea levels are likely to rise over the coming century. In Victoria this may result in increased risks to coastal areas from storm surges, flooding and erosion.

The Future Coasts Program has identified areas within Indented Head, particularly along the foreshore area that may be affected by sea level rise and storm surges.

Bellarine Peninsula- Corio Bay Local Coastal Hazard Assessment 2nd Pass Assessment Final Draft Report, April 2014

The Bellarine Peninsula – Corio Bay LCHA study area includes the entire Bellarine Peninsula and the northern side of Corio Bay, from Point Wilson in the north, to Breamlea in the south. The key aim of this study is to provide a comprehensive understanding of the extent of coastal hazards and the impacts on the coastal environments within the study area. This was done by addressing coastal, estuarine/riverine and climate-change challenges by defining the possible magnitudes and extents of the hazards in a considered and robust manner. This provides information for local land managers regarding their sections of the coast, and provides a basis to identify additional studies to be carried out in the future. This will ensure councils and land managers are prepared for future hazard and climate-change related challenges, and to inform strategic planning and decision making.

Compartment 6: Point Edwards to Portarlington

The St. Leonards coast is likely to be subject to erosion and inundation. The key inundation hazard area is at Salt Lake. There is a narrow section of shoreline between the lake and the coast, this is likely to overwash in a 1% AEP event with 0.0 m SLR via low sections in the road. In the higher sea-level rise scenarios, the shoreline is below the storm-tide level. It is recommended that risk and mitigation studies are undertaken in the near future for here.

There is an area of risk north of Salt Lake seaward of the Abalone farm along the Esplanade. The strip of foreshore between the coast and the road is very narrow. It is recommended that this area is also monitored regularly to alert to any significant changes in erosion that may require a more urgent management response.

From Indented Head to Portarlington the coast becomes more exposed to wave impact, thus, erosion issues are more significant. The combination of the erosion and inundation hazards here means the active management of this section of coast will be vital in the coming years. It is recommended that this area is closely monitored for any significant changes in the erosion that may require an immediate management response. It is also recommended that risk and mitigation studies are undertaken in the near future.

Victorian Climate Change Adaptation Plan, 2013

Victoria's first Climate Change Adaptation Plan sets out how the Victorian Government is managing the risks of a changing climate to our assets, essential infrastructure and services such as our waterways, our transport systems, and our healthcare and emergency response systems.

Northern Bellarine Foreshore Plan 2012

The Bellarine Bayside Foreshore Committee of Management (BBFCM) are the committee of management for the foreshore area of the Northern Bellarine between Portarlington and St Leonards.

The Foreshore Plan includes a vision, the goals, objectives and actions that will give effect to the vision, and a business plan outlining the work program and budget to implement the first three years of the Plan. The Foreshore Plan will guide development on the Northern Bellarine over the next 15-20 years.

Northern Bellarine Foreshore Master Plan 2013

The Northern Bellarine Foreshore Master Plan maps out the projects and improvements to deliver the vision for the foreshore outlined in the Northern Bellarine Foreshore Plan 2012.

The vision seeks to create a foreshore that is attractive and cared for, reflecting the distinctive character of the towns of Portarlington, Indented Head and St Leonards.

The Master Plan has been prepared for the BBFCM which is responsible for managing the 17 kilometres of foreshore and 200 hectares of land which make up the northern Bellarine foreshore.

The Master Plan will specifically guide the work of BBFCM over the next three years, after which time it will be reviewed. In relation to Indented Head the Master Plan identifies:

- Coastal trail works
- Rehabilitation and re-vegetation
- Indented head foreshore place making project
- Access to community facilities
- Refurbish community hall

Bellarine Peninsula - Corio Bay Local Coastal Hazard Assessment, 2014

The Bellarine Peninsula – Corio Bay LCHA study area includes the entire Bellarine Peninsula and the northern side of Corio Bay, from Point Wilson in the north, to Breamlea in the south. The key aim of this study is to provide a comprehensive understanding of the extent of coastal hazards and the impacts on the coastal environments within the study area.

It is intended that this study will inform subsequent risk and mitigation assessments, which will guide the prioritisation and implementation of management actions. This will ensure best use of existing coastal management budgets, and also provide information to gain external funding where possible.

2.1.2 Environment

City of Greater Geelong Environment Management Strategy 2014-2017 (EMS)

The purpose of the Environment Management Strategy 2014-2017 is to demonstrate how the City of Greater Geelong will work to improve the environment and wellbeing of the community over the next three years and beyond. It is the key document for guiding Council planning, decision-making and activities that impact on the Greater Geelong environment.

The EMS identifies the key drivers of environmental change and threats that the EMS must plan for and contend with. They are:

- Climate Change
- Population Growth
- Lifestyle- Consumption and Ecological Footprint
- Economic Model- unsustainable growth

City of Greater Geelong Biodiversity Strategy

The vision of this strategy is 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”.

Victorian Climate Change Adaption Plan, 2013 and Progress Report 2014

These reports set out how the Government is managing climate risks to our natural assets, essential infrastructure and services such as our waterways, transport systems, healthcare and emergency response systems. It shows that to be most effective, climate change adaptation requires government, businesses and the community to work together.

Corangamite Regional Catchment Strategy 2013-2019

The Corangamite Regional Catchment Strategy 2013–2019 provides a vision for the integrated management of natural resources in the Corangamite region. It is a blueprint for catchment health in the future and builds on the achievements and lessons from the past.

This RCS has been prepared under the provisions of the Catchment and Land Protection Act 1994 (Vic.). It has been developed in accordance with the requirements of Commonwealth and State legislation and policies relating to biodiversity, land and water resources. The content of the RCS has been informed by guidelines from the Victorian Catchment Management Council and the Department of Environment and Primary Industries. 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 at Clauses 14.02 Water and 21.05 Natural Environment.

2.1.3 Urban Growth and Land Use Planning

Rural Land Use Strategy

This Strategy establishes a policy regime for appropriately regulating rural land use and development in the context of changing agricultural practices and continued rural land development pressures.

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 Strategy's vision for the Peninsula (including Indented Head) 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.

G21 Regional Growth Plan

The G21 Regional Growth Plan (Growth Plan) manages growth and land use pressures to 2050. It pulls together the strategic land use and growth planning already done across the region including the G21 Geelong Region Plan and builds on this to identify where future residential and employment growth will occur. It also identifies the key infrastructure required to manage and support this growth.

The Growth Plan reinforces the role of Structure Plans as the key policy document to provide more detailed growth planning for townships, including Indented Head.

G21 Regional Growth Plan- Implementation Plan

The G21 Regional Growth Plan provides a strategic land use and growth framework to manage population growth of the region to 500,000 by 2050. The Implementation Plan aims to build on the work of the Growth Plan by:

- identifying the critical infrastructure required to support housing and employment growth;
- providing land supply data and incentives for achieving adequate and diverse housing options;
- identifying key considerations for the planning of longer term growth areas;

The Implementation Plan seeks to do this in the context of the G21 Vision and the Growth Plan's principles and recommended directions.

2.1.4 Community Development

Bellarine Peninsula Strategic Plan 2006-2016

The Bellarine Peninsula Strategic Plan is a broad community plan for the Bellarine Peninsula. The Plan includes a vision and actions for the Bellarine and each of its towns. The report includes a Community Service Plan and directions for tourism and rural areas.

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:

- Provide a Community Access / Community Information Board in vicinity of the local shop.
- Assist the Indented Head community's application for a volunteer support grant.
- 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.
- Explore models of cooperation for provision of facilities on the Indented Head foreshore.
- 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.

Progress Audit - Bellarine Peninsula Strategic Plan 2006-2016

A progress audit of the BPSP – the *Bellarine Peninsula Strategic Plan Five Year Progress Audit* has been undertaken. The Audit shows the completion of the Structure Plan and funding for the community hall were two completed key projects.

Greater Geelong Social Infrastructure Plan 2015

This Plan delivers a framework for Council's investment into social infrastructure. It provides an evidence based framework and guide for the future planning, provision and investment in Council owned social infrastructure for the next 10-20 years including setting priorities and recommendations for future social infrastructure development based on strong evidence and analysis.

Municipal Early Years Plan 2013-2017

The plan focuses primarily on children aged from birth up to 8 years, along with the various family and community environments that influence children's lives.

The MEYP is designed to improve the co-ordination and integration of services and activities through strengthening networks and partnerships amongst agencies supporting families and children.

Greater Geelong Public Art Strategy 2015

The Public Art Strategy has been developed in recognition that the City of Greater Geelong has a long history and a strong ongoing commitment to commissioning artworks for public spaces across the Municipality.

The Strategy provides a framework and guidelines around delivering public art in the municipality.

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

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.

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. It identifies issues and strategies.

Tourism Greater Geelong and The Bellarine Strategic Plan 2014-2017

Tourism Greater Geelong and The Bellarine was founded in January 2014. It is a regional tourism organisation encompassing the region from Werribee to Armstrong Creek including Geelong, the Bellarine Peninsula, Queenscliff and the Moorabool Valley. They have key objectives under the headings of:

- Promotion
- Development
- Partnerships
- Governance

2.1.6 Open Space and Recreation

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.

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.
- The open space area off Coach Road and Pike Street (on the western edge of the town) is undeveloped and under-utilised. 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.
- In consultation with Bellarine Bayside, Council should install a designated Bocce/Petanque playing area on the Indented Head foreshore.
- In partnership with Bellarine Bayside, ensure foreshore walking tracks provide adequate pedestrian access across existing stormwater drain outlets

Cycling into the Future 2013-23

The Victorian Government's cycling strategy, Cycling into the Future 2013-23, recognises the important role that cycling plays in our state – as part of the transport system, as an enjoyable recreation activity, a healthy form of exercise and a tourism draw card.

It aims to make it easier for people to get out on their bikes and safer for people who already ride. It will improve the well-being of all Victorians, create better places to live, support a stronger economy and generate jobs and contribute to a healthier environment..

G21 Integrated Public Transport Strategy

The strategy includes a number of outcomes related to improving road and rail infrastructure, freight transport, integrated public transport and improved amenity associated with walking and cycling and alternative transport modes.

Actions under public transport include:

- improving the effectiveness and coverage of public transport related services;
- developing land use and spatial planning approaches to facilitate access to transport services.
- developing a Regional Public Transport Policy to provide for integration of networks and encourage best practice.

2.1-7 Major Planning Scheme Amendments

Amendment C300 Implementation of the new Residential Zones

Amendment C300 to the Greater Geelong Planning Scheme implemented the new suite of residential zones released by the State Government in July 2013. The amendment applied all three new residential zones (Residential Growth Zone, General Residential Zone and Neighbourhood Residential Zone) having regard to Council's established strategic planning policy, principally directed by the Housing Diversity Strategy.

All residential areas in Indented Head are zoned Residential 2 Zone.

Amendment C274 Batman Park Heritage Overlay

Amendment C274 proposes to introduce a heritage overlay to Batman Park in accordance with the recommendations in the 'Batman Park and Boat Sheds, The Esplanade, Indented Head, Heritage Review, August 2013'. It will include the deletion of the four individual Heritage Places within Batman Park and the listing of all of Batman Park as a Heritage Place.

The proposal was adopted by Council in May 2015.

2.2 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 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;
- There is a need to improve footpath and bicycle infrastructure in the town.
- Community facilities should be provided commensurate with community needs and sustainability of service provision.
- There is a need to protect, enhance and promote the cultural heritage of the town.
- Tourism and agriculture make an important economic contribution to the town and the Bellarine Peninsula generally and should be supported.
- Opportunities exist to promote arts and culture in the township.
- Climate change is an important consideration when looking at infrastructure provision and management and asset protection in the town.

3.0 Natural and Urban Environment

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.

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.

Port Phillip and the foreshore form the eastern edge of the township. It provides a connection to the sea, and significant scenic, recreational and environmental values for the township. Storm water runoff from urban areas is a major issue in relation to water quality in the Bay.

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 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.

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.

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.

3.2 Climate Change

The impacts of climate change are already being experienced, generating a new series of risks for organisations and the community. Climate change is a complex problem that requires a new integrated

and collaborative risk management approach. Indented Head will likely be affected by climate change including storm surges and sea level rise.

Coastal Hazard Assessments will be required as part of certain development applications. This may result in the need to limit development in some locations, raise the future floor levels of buildings and design drainage systems to take into account the impacts of connecting to existing drainage systems.

Council will need to undertake more work to identify vital triggers for when it may be necessary to determine a future course of action for parts of the township affected by climate change including the 'do nothing, retreat, protect' approach.

3.3 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 area is shown on Map 4.

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 need for further strategic assessment to support the introduction of additional biodiversity planning controls, design and/or landscape planning controls in the area;
- Ensure storm water impacts are reduced through appropriate design and management.
- 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, 920 persons lived in Indented Head in 2011.

4.2 Estimated Population in 2014

Table 1 – Indented Head Permanent Population Estimate at June 2014

Total population at 2011 Census	920
Number of Occupied Dwellings at 2011 Census	403
Average Household Size in Indented Head 2011 census	2.1
Dwelling approvals issued since Census 2011 to June 2014	130
Additional Permanent Dwellings 2011-2014 (New Dwellings (130) X Occupancy Rate (39.2%))	24
Additional Population 2011-2014 (Permanently Occupied Dwellings (24) X Average Household Size (2.1))	50
Estimated Permanent population at June 2014 (Population at Census 2011 + Additional Population 2014)	970

(Note figures are rounded)

4.3 Peak Population 2013

Indented Head is a popular coastal holiday home and tourist destination, which experiences high dwelling vacancy rates during the off-season. The 2011 Census data indicates a vacancy rate of 60.8% on census night.

The estimated peak overnight population for the township over the Christmas school holiday period from December 2013 to January 2014 is 5999 people. This figure is illustrated in Table 2 below and provides a snapshot of the distribution of tourist/holiday maker accommodation.

Table 2 – Peak Overnight Population 2013

Permanent Population in 2012	Population Holiday Homes	Population Caravan Parks or Camping Sites	Population Hotels, Motels, Units & B&Bs	Peak Overnight Population
1101	3643	1250	5	5999

(Source: Geelong Economic Indicators Bulletin 2013)

The significant numbers of tourists and holiday makers, who visit Indented Head and the Bellarine Peninsula each summer have a positive impact on the local economy.

4.4 Age Structure

Census data provides information on the demographics of the townships including age distribution. In 2011, persons in the over 60 age bracket formed 38.4% per cent of the population. The median age of people in Indented Head (Urban Centre) was 52 years compared with the Victorian and Australian median of 37 years.

Table 3 – Age Structure

Age	No	%
0-4 years	52	5.6
5-9 years	43	4.7
10-14 years	53	5.8
15-19 years	32	3.5
20-24 years	25	2.7
25-29 years	27	2.9
30-34 years	45	4.9
35-39 years	49	5.3
40-44 years	57	6.2
45-49 years	48	5.2
50-54 years	56	6.1
55-59 years	80	8.7
60-64 years	94	10.2
65-69 years	89	9.7
70-74 years	72	7.8
75-79 years	38	4.1
80-84 years	36	3.9
85 years +	25	2.7

(Source: Census 2011)

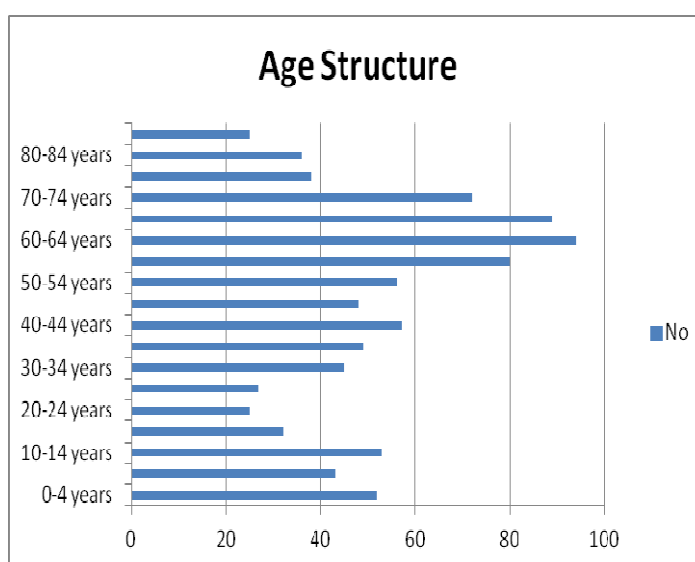


Figure 1 – Age Structure

4.5 Dwellings & Household Size

The number of private dwellings in Indented Head at the 2011 Census was 1033, with 403 being occupied and 624 unoccupied. This equates to an estimated vacancy rate of 60.8 which reflects the holiday maker/holiday home role of the town.

Of the *Occupied Private Dwellings* within Indented Head in 2011, 49.6% were recorded as being fully owned and 22.9% being purchased. The level of home ownership in Indented Head is higher when compared to the Geelong municipality where 36.2% of homes were owned fully. 22.4% of occupied housing stock in the town was privately rented.

The average household size in Indented Head is 2.1 persons, with the 2011 Census revealing that 64.1% of the households were family households. This average household size is slightly lower than the average for the rest of the municipality at 2.4 persons. Single person households accounted for 33.7% which is slightly higher than the Geelong average of 30.6%.

Of occupied private dwellings in Indented Head 95.2% were separate houses, 2.5% were semi-detached, townhouses etc and 2.2% were flats, units or apartments.

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.

4.6 Labour Force & Income

The ABS Census data identifies 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. In 2011, 349 people in Indented Head were in the labour force. Of these:

- 54.4% were employed full-time
- 30.7% were employed part-time
- 7.7% were unemployed

This compares to 55.8% employed full time, 32.6% employed part-time and 5.6% unemployed in Greater Geelong Local Government Areas. The median age of people employed full time is 44 and part time is 49, in comparison to the Greater Geelong LGA where the median age of people employed full time is 41 and part time is 40. This suggests there are a higher number of older people still participating within the work force within Indented Head.

There were 920 people resident in Indented Head according to the 2011 census, 148 of these people were under 15 years of age and 349 indicated they were in the work force. This suggests there are 423 (46%) people retired or not looking for work.

A review of the industry categories for those persons employed in Indented Head reveals that in 2011 the most prominent category:

- Professionals 19.9%
- Technicians and Trades Workers 17.1%
- Clerical and Administrative Workers 14.9%
- Sales Workers 10.6%
- Managers 10.2%.

The major industries of employment were:

- Tertiary Education 5.3%
- Road Freight Transport 4.4%
- School Education 4.4%
- Cafes, Restaurants and Takeaway Food Services 3.1%
- Residential Building Construction 2.5%.

The median personal income for people aged 15 years and over in Indented Head was \$424, compared with \$517 in Greater Geelong and \$561 in Victoria.

4.7 Journey to Work

The data collected by the ABS in 2011 showed the dominant mode of travel to work for residents of Indented Head is the private car, either as driver or as passenger 73.5%. Other modes included bus 1.9%, truck 1.2% and bicycle 1.2%. Of occupied dwellings 91% had a vehicle garaged or parked at their address.

This data along with public transport data indicates there is a high reliance on private cars for transportation.

4.8 Socio-Economic Index

The ABS produces a Socio Economic Index for the Areas which considers Advantage/Disadvantage and takes into account variable relating to income, education, occupation, wealth and living conditions. This data rates Indented Head as relatively disadvantaged with a SEFIA score of 946.9 (7th most disadvantaged suburb in CoGG). The rating for the municipality was 992.9.

Australian Early Development Index 2012 (AEDI) measures childhood development across five domains: physical health and wellbeing, social competence, emotional maturity, language and cognitive skills, and communication skills and general knowledge. Indented Head have 37% of children identified as developmentally vulnerable in one or more domains of the AEDI compared with 18.8% of the City of Greater Geelong community. Therefore enhancing local access to early years and parenting support services is particularly important to achieve as soon as possible.

4.9 Population Projection 2026

The projected population of Indented Head for 2026 is 1180-1239 persons, calculated by applying the average growth rate of 1.86 per cent, determined by id forecast (table 4) and using census and dwelling approval data (table 5).

Table 4 – St Leonards/Indented Head Projected Population (id forecast)

Year	2011	2016	2021	2026	2031
Persons	3089	3475	3787	4071	4311

The population of Indented Head in 2011 was 920 which is 29% of the combined population used by id Forecast. Using this percentage the population for Indented Head at 2026 would be 1180. Using census and dwelling approval data the following population projections have been calculated below:

Table 5 – Population Projections 2026

Total population at 2011 Census	920
Number of Dwellings at 2011 Census	1027 (403 occupied)
Average Household Size in Indented Head	2.1
Dwelling occupancy rate based on 2011 census	39.2%
Average No. of dwelling approvals per year (dwelling approvals 2011-2014)	32.5
No. of additional dwellings between 2011 and 2026 (15x32.5)	487
No. of occupied dwellings 1027+487x39.2%	590
Estimated Population in 2026 based on total No. of dwellings x Average Household Size (2.1)	1239

Table 6 – St Leonards / Indented Head Estimated Population 2026 – Critical Age Cohorts (id forecast)

Group	Age	Number of Persons/ Percentage of Projected Population
Early Years	0 – 4 years	165 persons / 4.1%
	5 – 9 years	183 persons / 4.5%
Youth	10 – 14 years	192 persons / 4.7%
	15 – 24 years	296 persons / 7.3%
Older Years	65 plus	863 persons / 21.1%
	80 plus	133 persons / 3.3%

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. Access to public or alternate private vehicular transport will also be important to ensure access to regional services.

. 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

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 and Meals on Wheels.

5.1 Local Community Services and Facilities

The key local facilities within the town are (also shown on Map 4):

- 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.

Education Facilities

Maternal and Child Health Centres are located in Drysdale, Clifton Springs, and Portarlington.

There are no early childhood or education services located in Indented Head. Families with young children from Indented Head must travel either to Portarlington (7kms) or Drysdale (16.5kms) to access early childhood services and schools, and/or St Leonards (4 kms) for the closest primary school.

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.

Community Centre

The former Boat Club has been refurbished and is now used as a community hall. It is also available to hire and has a capacity of up to 80 people. The hall is a key piece of community infrastructure and in need of upgrading including the removal of asbestos.

Emergency Services

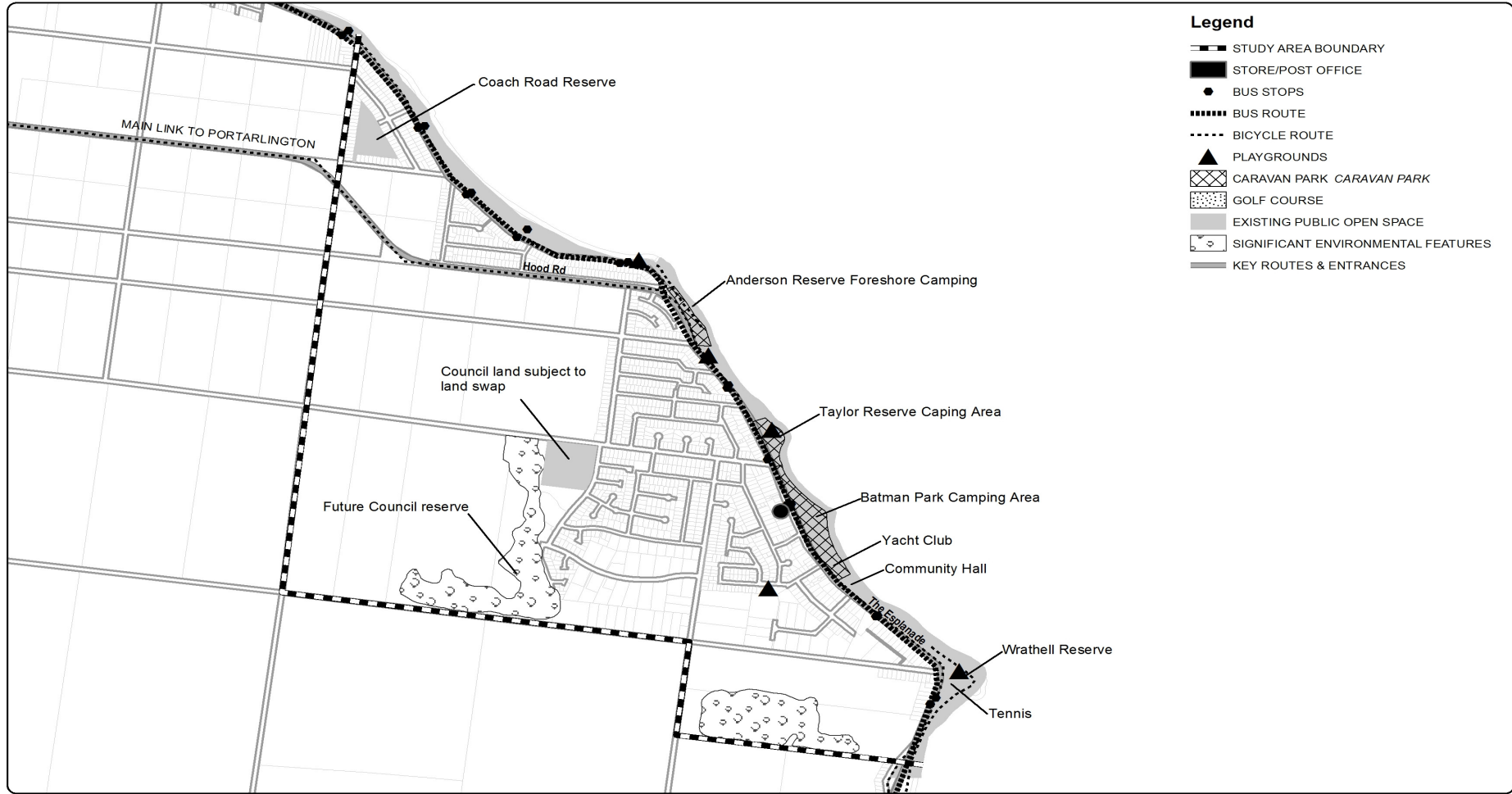
Emergency services such as police and ambulance are provided to Indented Head on a region wide basis. The recently completed twenty-four hour police station in Ocean Grove serves the Peninsula townships, including Indented Head, in conjunction with the 16 hour stations in Portarlington, Drysdale and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

Rural Ambulance Victoria (RAV) services Indented Head from Drysdale and a new station at Leopold which opened in 2014 .

The St Leonards/Indented Head located in St Leonards is CFA volunteer brigade. 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.

The CFA has constructed a new fire station in Ocean Grove. This station is staffed by full time fire-fighters and provides 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.



FACILITIES, INFRASTRUCTURE & ENVIRONMENTAL FEATURES

INDENTED HEAD STRUCTURE PLAN



Prepared by City of Greater Geelong - 6 April 2016
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Map No 4

Access to Transport

Council's Community Development Unit has been involved in a number of transport related projects on the Bellarine (Building Better Connections: A Journey, 2013) and this work has highlighted the inadequacy of public transport options and the absence of a petrol station (nearest is Drysdale) and how this impacts on the local community particularly the elderly and their ability to access services. This issue becomes critical when there is a substantial population increase over holiday periods.

A petrol station opened in Portarlington in 2014 which serves the northern Bellarine Peninsula.

5.2 Open Space, Leisure and Recreation Facilities

The focus of open space and recreational opportunities in 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 Master plan 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. A Placemaking Plan developed in conjunction with the City of Greater Geelong and the community will build on the Masterplan guide the use and development of the foreshore and set priorities and responsibilities.

There are no active sports reserves within the township, however, facilities for these purposes are provided in both Portarlington 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 in the north-western part of the town, and the other on Batman Road on the western fringe of the town. Coach Road is being investigated for sale and Batman Road is subject to a land swap.

The community, leisure and recreation facilities within the township are (also shown on Map 4):

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

5.3 Tourism and Holiday Accommodation

Data from Tourism Research Australia shows that Geelong and The Bellarine welcomed approximately 3.9 million visitors in 2012/13, a decrease of 2.8% compared to the previous year. It is estimated that these visitors spent \$619 million in the region during the year.

Domestic Overnight Visitors

Geelong and The Bellarine attracted 858,000 domestic overnight visitors in 2012/13 - a decrease of 11.7% compared to the previous year. Visitors spent over 2.5 million nights in the region - down by 5.6% on 2011/12. The most popular reason for visiting was 'visiting friends and relatives' (46.7%), followed by 'holiday or leisure' (39.4%) and 'business' (9.8%).

It is estimated that domestic overnight visitors spent \$308 million in the area during 2012/13 (an average of \$123 per night).

Domestic Day Visitors

The region welcomed nearly 3 million domestic daytrip visitors in 2012/13 - a slight decrease of 0.3% compared to the previous year. The main purpose of the trip was 'holiday or leisure' (45.5%), followed by 'visiting friends and relatives' (34.0%) and 'business' (11.2%). It is estimated that domestic daytrip visitors spent \$268 million in the region during 2012/13 (an average of \$90 per visitor).

International Overnight Visitors

The region received 41,400 international overnight visitors in 2012/13 - up by 2.1% on the previous year. Visitors spent almost 536,600 nights in the region - down by 27.2% on 2011/12. The UK was the largest source market of visitors (19.2%), followed by New Zealand (12.2%), China (11.5%), USA (6.9%) and Germany (6.6%). It is estimated that international overnight visitors spent \$43 million in the region during 2012/13 (an average of \$81 per night).

Within the region tourists are accommodated in holiday homes (19%), friends (39%) and commercial accommodation (42%). Commercial accommodation capacity within the region comprises Caravan Parks (sites and cabins) 15 per cent, large hotels/apartments 14%, small hotels/apartments 9%, B&B's 2% and backpackers 0.04%. In terms of accommodation supply and demand distribution within Geelong, the supply is 57% and demand 61%.

Indented Head - Accommodation

Tourist and holiday accommodation is focused around the foreshore, shown on Map 4. Bellarine Bayside manages the three seasonal camping grounds.

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.

Great Southern Waters, Jade Tiger Abalone, is the largest Australian abalone farm providing direct delivery of live, frozen and canned abalone to markets in China, Hong Kong and Japan. They employ approximately 30 full-time staff.

As of 2015 GSW plans to invest in a new holding and distribution facility. This will result in an additional 5 full time staff with additional construction jobs.

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 recommendations of previous studies to enhance open space and recreation areas and further develop and improve linkages between existing range of recreational facilities;
- Completing a land swap between Council and the developer at Batman Road, Indented Head to provide protection of areas of with significant vegetation and ecological values;
- The opportunity to further investigate the future sale of the Coach Road recreation reserve;
- The opportunity to assist Bellarine Bayside with the development of a place making plan for the foreshore area in consultation with the local community.
- 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 will be a 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

Potable water is supplied by gravity from the Clifton Springs tank via a series of Pressure Reducing Valves (PRVs) to Indented Head. The Portarlington Basins have been bypassed and decommissioned. The small elevated tank in Tower Road has also been decommissioned and replaced by a pump station in 2014.

Potable water is gravity fed to Indented Head (and St Leonards) via the 450mm feeder main located in Tower Road. This main is fed from the Portarlington system and therefore the Clifton Springs Tank provides storage for the system. The PRV near the intersection of Tower Road and Queenscliff Road reduces pressure to appropriate levels.

Water supply has been improved to Indented Head and St Leonards by constructing, in several stages, a new feeder main to the west of the townships. Stage 2 of the Indented Head St Leonards FM was completed in 2010 and now provides sufficient feed to Indented Head. Further stages (stages 3 & 4) are scheduled from 2020 however will be consistent with growth, particularly around the St Leonards township.

6.2 Sewerage

Indented Head is serviced by a series of gravity sewers, pump stations and pressure mains. Sewage is then transferred from these stations to a main collector pump station north of St Leonards. This station collects flows from St Leonards, Portarlington and Indented Head and then re-pumps them via a pressure main to the Portarlington Water Reclamation Plant (WRP).

In 2007 Barwon Water undertook a study on the Bellarine Peninsula to determine required upgrades to the sewer system associated with growth to 2045. The report assumed future residential development of these towns. A number of pump stations were identified for upgrades associated with this growth however any upgrades are predominantly required to support growth in St Leonards

The Portarlington Water Reclamation Plant is situated on 130 hectares of land in Grassy Point Road, St Leonards. It supplies recycled water to a number of external customers from the Portarlington Water Reclamation Plant for viticulture and agricultural purposes and the Golf Club.

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.

6.3 Natural Gas

Indented Head has a reticulated natural gas supply.

6.4 Stormwater

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.

The need to improve outlets to Port Phillip has been the subject of ongoing discussion and actions over many years between DSE, Council and the foreshore manager, Bellarine Bayside.

A range of strategies provide directions on how to improve and manage stormwater. These strategies should be supported through to implementation.

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. Transport infrastructure is shown on Map 4.

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.

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	'CHR' right and left turn treatments required.
Portarlington-St Leonards Road (The Esplanade) /Batman Road	'CHR' right and left turn treatments required.
Portarlington-St Leonards Road (The Esplanade) /McDonald Street	'CHR' right and left turn treatments required. (This treatment would only be required if McDonald Street was to be upgraded to provide subdivisional access).

6.6.2 Public Transport

Public transport in Indented Head is limited to bus services to, and from, Geelong via Drysdale/Clifton Springs and St Leonards.

Current bus services to, and from, Geelong operate between the hours of 5.30 am and 8.10 pm Monday to Friday, 7.10 am and 5.25 pm on Saturdays, and limited services on Sundays between 8.20 am and 4.30 pm.

Public Transport Victoria (PTV) has undertaken a review of the existing bus network of Geelong and the Bellarine Peninsula. They expect the proposal for a new bus network be implemented in mid-2015. The proposed bus route 60 will operate between Geelong and St Leonards via Leopold, Clifton Springs/Drysdale, Portarlington and Indented Head. The existing cross peninsula service had extremely poor patronage and is likely to be discontinued. Leopold will be the new interchange point for cross peninsula travel and PTV is looking at the timetable to ensure connection times are minimal.

The Bus service in Indented Head has been rerouted to operate via Henderson Street and Batman Road to provide access to more homes.

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.

Some identified improvements include:

Proposed Pedestrian Treatments

- Improved local roads and footpaths;
- Establish a 'Principle Pedestrian Network' Strategy;
- Improve pedestrian connectivity by providing footpaths to key activity areas within Indented Head;
- Provide safe crossing infrastructure to pedestrians at all intersections along identified key connections between key activity areas;

Proposed Cycling Treatments

- Improve cycling infrastructure between key activity areas within Indented Head;
- Improve information about local cycle routes and facilities;
- Provide safe crossing infrastructure to cyclists at all intersections along identified key bicycle routes, as per Principle Bicycle Network;
- Hood Road;
- The Esplanade;
- Ibbotson Street – improve Ibbotson Street between Batman Road and McDonald Street, to accommodate on-road bicycle route to improve connectivity to the township;
- Batman Road - Provide connectivity between The Esplanade and Seascape Drive;
McDonald Street - Provide connectivity between Ibbotson Street and The Esplanade and to foreshore;

6.7 Key Influences

- The reticulated water supply and sewerage systems servicing Indented Head have been upgraded with future upgrades dependent on growth in the area;
- 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 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;
- 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 Current Supply

Lot supply in Indented Head includes land identified for subdivision which provides for 198 zoned lots and existing vacant residential lots which account for 204 lots giving a total lot supply of 402 lots. There is no additional land identified to be rezoned to residential within the settlement boundary. Map 5 below shows the timing of lots and land available for residential purposes.

Spatial Economics have provided some data in relation to lot supply figures in Indented Head as part of the draft Residential Land Supply Monitoring Project G21 Region (Geelong), 2015.

Table 7 Anticipated Lot Construction Activity – Broad Hectare, 2015

Years	0-2	3-5	6-10	11+	Total Zoned Lots
Lots	48	70	80	-	198

Source: Spatial Economics Pty Ltd 2015

Table 8 Broad Hectare Lot Construction Activity, July 2006 to March 2015

Years	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Lots	-	29	31	52	-	20	39	24	-

Source: Spatial Economics Pty Ltd 2015

Table 9 Minor Infill (vacant lots) Supply by Lot Size Cohort, March 2015

Lot Size	<500	500-800	800-1200	1200-2000	2000-5000	Total
No. of Lots	72	111	12	2	7	204

Source: Spatial Economics Pty Ltd 2015

Map 5 – Residential Lot Supply (source: Spatial Economics)



7.2 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 2005 to 2014.

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 2003/04 are set out in Table 10:

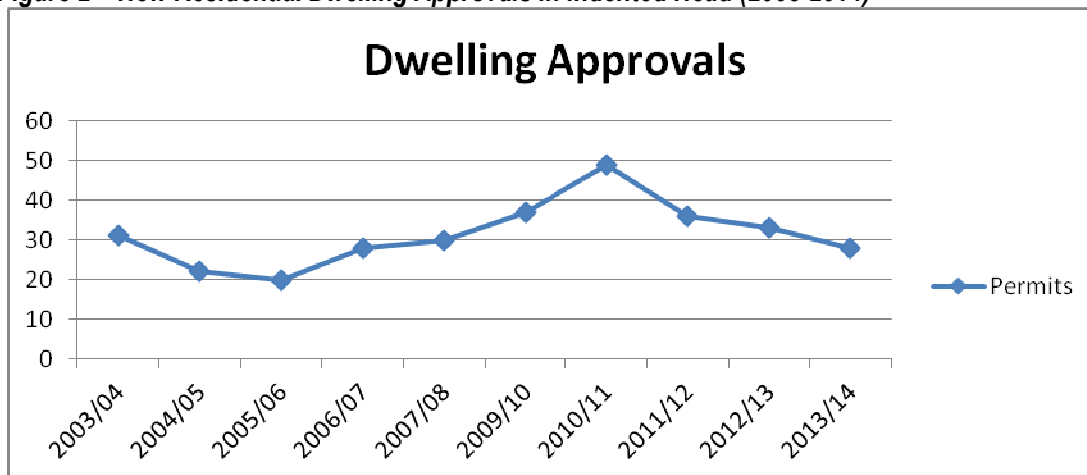
Table 10 – Indented Head New Residential Dwelling Approvals 2003 – 2014

03/04	04/05	05/06	06/07	07/08	09/10	10/11	11/12	03/04	04/05	12/13	13/14
31	22	20	28	30	37	49	36	31	22	33	28

Source: Economic Indicators, CoGG

The Table shows peak development from 2009-2012 (average 40) and lower development from 2004-2007 (23) with an average of 31 dwelling approvals per year.

Figure 2 – New Residential Dwelling Approvals in Indented Head (2003-2014)



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 31 per annum.

Table 11 – Future Supply of Residential 1 Zoned Land in Indented Head

Vacant Residential Lots	198
Vacant Rural Residential Lots	0
Undeveloped Residential Zoned Land (Unsubdivided)	204
Total Zoned Lots	402
Years Supply Zoned Lots (average yield) Demand of lots at Indented Head is based on an average of 3.1 Building Permits per Annum (2003/04 – 2013/14).	13
Years Supply Zoned Lots (higher yield) Demand of lots at Indented Head is based on an average of 4.0 Building Permits per Annum (2003/04 – 2013/14).	10
Years Supply Zoned Lots (lower yield) Demand of lots at Indented Head is based on an average of 2.3 Building Permits per Annum (2003/04 – 2013/14).	17

(Note figures are rounded)

Even when relatively high building approvals are used as a measure, Indented Head has a minimum of 10 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.

7.4 Key Influences

- There has been a historically slow take-up of land in the township;
- An adequate 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.

References

See documents in part C of this Report.