Environment Effects Act 1978
Planning and Environment Act 1987

EES INQUIRY
GREATER GEELONG PLANNING SCHEME:
AMENDMENT C150 AND PP673/2007

STOCKLAND WATERWAYS AND RESIDENTIAL DEVELOPMENT
POINT LONSDALE

REPORT OF THE PANEL

Panel:

Kathryn Mitchell
William O’Neil
Peter Sheehan
Catherine Wilson

October 2008
EES INQUIRY

and

GREATER GEELONG PLANNING SCHEME:
AMENDMENT C150 AND PP673/2007
STOCKLAND WATERWAYS AND RESIDENTIAL DEVELOPMENT

REPORT OF THE PANEL

Kathryn Mitchell, Chair

William O’Neil, Member

Peter Sheehan, Member

Catherine Wilson, Member

October 2008
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EXECUTIVE SUMMARY

The proposed Point Lonsdale Waterway and Residential Development is located on 194.6 hectares of land, of which 81.5 hectares is zoned as Residential 1. The site is within the City of Greater Geelong at the entrance to the Point Lonsdale township. The proponent is Stockland Development Pty Ltd.

The proposal is for a diverse mixed use residential subdivision, to be built over 10 to 12 years comprising:

- 598 residences, mostly on single lots;
- 170 independent living units in a Retirement Village;
- a 120 bed Aged Care Facility;
- a multi purposes community facility of approximately 500 square metres;
- a local convenience shop; and
- a child care centre (potentially).

Residential amenity and environmental sustainability would be supported by:

- A tidally flushed canal lake system connected to the ocean (17.89 hectares);
- Restoration and development of a 56 hectare conservation reserve of wetlands and indigenous vegetation for transfer to the City of Greater Geelong;
- Water sensitive urban design to reduce urban and stormwater run-off and to maintain water quality in the canal system;
- A network of local recreation parks (13.7 hectares);
- Controls on infrastructure, building and landscape design and construction to enhance local amenity and integration with Point Lonsdale township; and
- A network of walking paths and bike trails (18 kilometres).

The key feature of the proposal is the one-way tidally-driven canal waterway, connected to the ocean via Lakers Cutting and Swan Bay. The intention is to extensively redesign the current landform in a series of development stages. Filling obtained from the higher sand dune areas would be used to reconstruct the water body and to raise the planned residential areas. It is intended to establish and maintain estuarine and woodland habitat suitable for bird life and the appearance of a natural landscape. The proponent would progressively regenerate the land to the north of the Residential 1 Zone as a conservation reserve and transfer title to the City of Greater Geelong once the development is complete. There would be effective integration into the existing Point Lonsdale township through road linkages, paths and the waterways.

This Panel report has been prepared for the Minister for Planning and the City of Greater
Geelong to provide findings on:

- Amendment C150 to the Greater Geelong Planning Scheme;
- Planning Permit Application PP673/2007; and
- The Environmental Effects Statement for the Point Lonsdale Waterways and Residential Development.

In undertaking its work, the Panel appointed by the Minister for Planning to consider the above has:

- Read the material provided in relation to the above;
- Held 18 days of public hearings (both in Geelong and Melbourne), during which time it heard from both the City of Greater Geelong and the Borough of Queenscliffe, the proponent, various Government authorities and agencies, community groups and individuals; and
- Received and considered an extensive amount of additional material, and a range of evidence and submissions in support or against the proposal.

In providing its key findings, the Panel has concluded that:

(i) The EES for the site provides the basis for approval of the development, and should be accepted, subject to the Panel’s further recommendations;
(ii) Amendment C150 to the Greater Geelong Planning Scheme can be adopted, subject to modifications;
(iii) Planning Permit PP673/2007 should issue, subject to amended conditions; and
(iv) The issues relative to the EPBC Act are satisfactorily addressed and do not provide grounds to prevent the project from proceeding.

Overall, the development of the site is expected to provide a net community benefit for the locality and the Bellarine Peninsula region in that it will:

- Provide additional housing in an area that has few opportunities for new development;
- Add to housing choice and diversity;
- Provide additional community services and facilities for both the new and existing communities;
- Make use of land already zoned for residential purposes;
- Utilise semi-degraded land in an efficient and best practice manner;
- Create a new public land conservation reserve;
- Retain, or satisfactorily re-establish, conservation values; and
- Provide economic benefits through generation of employment and an increased
local economy.

In reaching its findings the Panel acknowledges the complexity of the matters before it and the sensitive environment in which the land is situated. A range of views were put to the Panel that strongly opposed the development and the Panel appreciates that there is concern in the local (including non-permanent) Point Lonsdale and Queenscliff communities. In saying this, there were many submissions of support for the proposal from residents who saw this proposal as an opportunity to regenerate the site.

The site has indigenous cultural values which are in the process of separate consideration. It has been subject to major disturbance including shell grit mining, leaving saline ponds and overburden mounds which now have wetland conservation value. Some areas have vegetation similar to that which would occur naturally whilst others are dominated by pasture grasses and environmental weeds.

The Panel accepts that the hydrological and environmental issues have considerable merit (and indeed have led to several recommendations). It does not accept the view that the proposal would have such a detrimental impact on the economic and social fabric of Point Lonsdale that it should be abandoned.

The hydrology of the site and the effective operation of the waterway tidal flushing system weighed heavily on the Panel. It has concluded that in combination, the achievement of the water quality objectives, the flushing objectives, the best practice targets for stormwater quality and the physical design of lake system leave only a minimal and manageable risk that algal blooms will originate from the project site.

The Panel considered the implications of climate change and sea level rise in great detail. The relevant Councils and Government Departments did not disagree with the proponent’s expert advice that the proposal can be adequately protected. Numerous other submittors consider that the risk is unacceptable. The Draft Victorian Coastal Strategy proposes a maximum sea level rise of 0.8 metres by 2100 as a planning guideline. The Panel accepts that with a co-incident tidal storm surge and overland flood, the peak water level might reach 2.35m AHD in Point Lonsdale, implying that substantial low-lying parts of the existing township will require protective embankments. If embankments are raised, as the proponent argues will have to happen, the predicted peak water level might be restricted to 1.65m AHD and, on this basis, the proposal is for a minimum floor level of 1.8 AHD for dwellings in the development.
The Panel does not agree that it would be prudent to add to the number of houses that may require protection and therefore recommends a minimum floor level for residential and commercial building of 2.35 metres AHD. If the Government sets a sea-level rise guideline of more than 0.8 metres this recommendation would need to be revised by the differential.

The site contains saline wetlands of considerable conservation value, even if artificially created, and it lies within a complex of wetland conservation reserves. Two bird species that require protection under the Flora and Fauna Guarantee Act 1988 and the Commonwealth’s Environment Protection and Biodiversity Conservation Act 1999 (Red-necked Stint and the Common Greenshank) were found at the site its habitat could potentially be suitable for several others, including the Orange-bellied Parrot and the Little Egret. The Panel concludes that the site does not provide significant or limiting habitat for any of these species, they will not be significantly impacted and that satisfactory alternatives will be maintained or re-developed through the measures set out in the Environmental Management Framework.

No flora of National Significance were identified on the site but it does contain ten species of State significance and 76 of Regional Significance. An Effective Net Gain compensation of 30 hectares of native re-vegetation, including a seven hectare external offset site, is recommended.

The Panel is confident that the proposal can convert an unmanaged and unprotected site to a residential area with a high level of amenity whilst adequately protecting its biodiversity value. The new environment will complement the existing Point Lonsdale township and add to its residential ambience. Overall, development of the site for residential and community purposes will provide a net community benefit for the locality because it will:

- Provide additional housing in an area that has few opportunities for new development;
- Add to housing choice and diversity;
- Provide additional community services and facilities for both the new and existing communities;
- Make the best use of land already zoned for residential purposes;
- Utilise semi-degraded land in an efficient and best practice manner;
- Provide economic benefits through generation of employment and an increased local economy; and
- Create a new conservation area for residents of Point Lonsdale and Queenscliffe.

The Panel recommends approval of this proposal subject to the various modifications to the Planning Scheme Amendment and to the permit.
PART 1: BACKGROUND
1. INTRODUCTION

1.1 The Panel

A Panel was appointed by the Minister for Planning on 2 May 2008 under the provisions of Sections 153 and 155 of the Planning and Environment Act 1987 to consider Amendment C150 to the Greater Geelong Planning Scheme, Planning Permit Application PP673/2007, and submissions made in response. The same members were appointed under Section 9 of the Environment Effects Act 1978 to hold an Inquiry into the environmental effects of the Point Lonsdale Residential Development proposal, in accordance with Terms of Reference dated 2 May 2008. For ease of reference, the joint Panel and Inquiry will be referred to as the Panel, and it comprises:

- Kathryn Mitchell: Chair
- William O’Neil: Member
- Peter Sheehan: Member
- Catherine Wilson: Member

The proponent for this project is Stockland Development Pty Ltd (Stockland) and the Planning Authority is the City of Greater Geelong (the Council).

The subject site is located on the entry edge of Point Lonsdale and it comprises 194.6 hectares of land adjoining the Bellarine Highway at Lonsdale Lakes, west of Fellows Road and north of Shell Road. The land is zoned mostly Residential 1, but there is some Farming, Rural Conservation and Business 4 Zone. The proposal is for a residential subdivision of approximately 600 lots with integrated waterways, a retirement village (approximately 170 units), an aged care facility, a multi purpose community centre, a convenience shop, public open space and habitat land protected for conservation purposes.

The proposal has three main components. Firstly Amendment C150 seeks to:

- Introduce a new Development Plan Overlay Schedule and apply it to the site; and
- Replace the Schedule to the Farming zone to allow the creation of a 35 hectares lot and allow the lot to be used as a dwelling.

The amendment is accompanied by two draft agreements under section 173 of the Planning and Environment Act 1987.
Secondly, planning permit application 673/2007 is for a staged multi-lot subdivision and associated earthworks, removal of native vegetation, and creation of access to a road in a Road Zone 1.

Thirdly, the Inquiry component provides for consideration of the EES for the proposal, in accordance with Terms of Reference, which note that the project needs approval under the Commonwealth’s *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act). The controlling provisions under this Act are:

- Sections 16 and 17B (Wetlands of international importance);
- Sections 18 and 18A (Listed threatened species and communities); and
- Sections 20 and 20A (Listed migratory species).

The Australian Government has accredited the EES process as the required assessment process under the EPBC Act to assess the matters relevant to the Commonwealth Government’s decision whether to approve the project.

### 1.2 Terms of Reference

The Minister for Planning issued Terms of Reference for the Panel on 2 May 2008 (Appendix 1). The Terms of Reference provided background information on the proposal and then outlined its tasks at point 2 and notes that the Panel is required:

i. To inquire into and make findings regarding the potential environmental effects (impacts) of the proposed project, including impacts on relevant matters under the EPBC Act.

ii. To recommend any modifications to the project, including in relation to siting and design, as well as environmental mitigation and management measures, that would be needed to achieve acceptable environmental outcomes, within the context of applicable legislation and policy.

iii. To recommend whether the project should proceed in light of its expected effects, assuming the measures under (ii) were implemented.

The Panel is required to provide advice in the form of a single consolidated report to the Minister for Planning within eight weeks of its last hearing day, to respond to its obligations as a Panel under the *Planning and Environment Act* 1987, an Inquiry under the *Environment Effects Act* 1998 and its obligations in respect of the *Environment Protection and Biodiversity Conservation Act* 1999.
1.3 Submissions and Hearings

The Minister for Planning authorised Council to proceed with exhibition of Amendment C150 on 29 October 2007 on the basis that it combined exhibition of the amendment with the concurrent planning permit application and the EES. These were jointly exhibited over an eight week period, from 29 November 2007 to 29 January 2008. A total of 228 submissions (plus one late submission) were received by Planning Panels Victoria.

A Directions Hearing was held in relation to these matters on Thursday 22 May 2008 at the offices of the City of Greater Geelong. The Panel then held a public hearing in relation to the proposal over 18 days at both Geelong and Melbourne, during which time the following parties were represented and/or heard:

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<th>Represented By</th>
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<tr>
<td>Stockland Development Pty Ltd</td>
<td>Stuart Morris QC, with Juliet Forsythe, instructed by Deacons, who called evidence from:</td>
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<td>- Nick Withers, Golder Associates</td>
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<td>- Marino Evangelisti, Emerson Stewart</td>
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<td>- Geoff Bott, Endemic Pty Ltd</td>
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<td>- Brett Lane, Brett Lane and Associates</td>
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<td>- Doug Goad, Golder Associates</td>
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<td>- Scott Chidgey, CEE Consultants</td>
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<td>- Barry Murphy, MDG Landscape Architects</td>
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<td>- Allan Wyatt, ERM Australia</td>
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<td>- Scott Ballis, Atomic 3D Pty Ltd</td>
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<td>- Shayne Linke, Contour Consultants</td>
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<td>- Matthew Lee, Essential Economics</td>
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<td>- Oona Nicholson, ERM Australia</td>
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<td>- Gerald Byrne, Vantree Pty Ltd</td>
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<td>- Ruth Davies, Maunsell Australia</td>
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<td>- Stephen Hunt, Cardno Grogan Richards</td>
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<td>- Stuart McGurn, Fulcrum Consultants</td>
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<td>- Maxine Cooper, Urbis</td>
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<td>City of Greater Geelong</td>
<td>Peter Smith, Coordinator Strategic Implementation</td>
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<td>Melissa McBride, Coordinator Statutory Planning</td>
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<td>Bree Thorn, Strategic Planner</td>
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<td>Bruce Humphreys, Environmental Planner</td>
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<td>Roger Harrison, Forward Planning Engineer</td>
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<td>Borough of Queenscliffe</td>
<td>Terry Montebello, Maddocks</td>
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<td>Natalie Luketic, Maddocks</td>
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<td>Submittor</td>
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<tr>
<td>Department of Sustainability and Environment</td>
<td>• Natalie Walker, Manager, Planning and Environment</td>
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<td>• Geoff Brooks, Senior Environmental Planner, South West Region</td>
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<td>Department of Planning and Community Development</td>
<td>• Margo Kozicki, Senior Environmental Assessment Officer</td>
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<td>• Mandy Elliot, Senior Environmental Assessment Officer</td>
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<td>Point Lonsdale Coastal Spaces</td>
<td>• Jason Kane of Counsel, (with assistance from Bryan Keon Cohen QC and David Mitchell), who called evidence from:</td>
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<td>- David Provis, Cardno</td>
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<td>Geelong Environment Council</td>
<td>• Joan Lindros, President</td>
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<td>Barwon Water</td>
<td>• Rhys Bennett, Planning Engineer</td>
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<td>• Joan Kenwood, President</td>
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<td>• Christine Johnson, Secretary</td>
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<td>Swan Bay Integrated Catchment Management</td>
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<td>Swan Bay Environment Association</td>
<td>• Felicity Thyer</td>
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<td>Bird Observation and Conservation Australia</td>
<td>• Don Saunders</td>
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<td>Point Lonsdale Civic Association</td>
<td>• Roland Orchard, President</td>
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<td>Community Submitters</td>
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<td>• Jennifer Robin</td>
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The Panel thanks submitters for their contribution to the Panel and hearing process.

In its consideration of submissions, the Council noted the key issues in relation to the proposal (Council report 25 March 2008) as follows:

- Strategic and statutory planning issues;
- Consistency with policy and strategies;
- Waterway system;
- Wetland impacts;
- Rising sea levels;
- Native vegetation, landscaping and weed issues;
- Fauna impacts;
- Landscape and soils;
- Aboriginal cultural heritage;
- Social and health impacts;
- Local infrastructure and amenity impacts;
- Character and integration with existing towns;
- Construction phase amenity impacts; and
- Ongoing management/environmental management plan/risk.

In its submission to the Panel, Council identified a number of issues raised in the supporting submissions as follows:

- Re-establishment of wetlands and public open space will complement the existing recreational opportunities;
- Introduction of lake system will allow fresh water to circulate through the site;
- The proposed aged care facility, retirement village and community centre will benefit the community;
- The development will provide a considerable amount of jobs;
- Additional residents will help local clubs and sporting organisations, including the CFA;
- The development will clean up the area and if the proposed management plan is implemented these values will be restored and maintained; and
- The development will allow for improved access for Lonsdale Lakes residents and for emergency vehicles.
While most community submitters who attended the hearing opposed the proposal, there were some who came along to offer their support to the proposal.

1.4 Approach to Report

As mentioned, the Panel has prepared a single report that meets its obligations in respect to its roles under the various legislation. In providing its response, the Panel has segmented this report in three key ways.

- **Part 1: Background** - This provides information about the Panel and its processes, a description of the proposal, the relevant State and Commonwealth legislation and planning control (*Chapters 1 to 3*).

- **Part 2: Analysis of Effects and Impacts** - These sections of the report take the key issues addressed in the EES and raised in submission and discuss them in summary form as they relate to land use planning; geomorphology and geotechnical; site contamination; hydrology; aquatic ecology (terrestrial, estuarine and marine); climate change and potential sea-level rise; cultural heritage; economics and tourism; social impacts; landscape and visual; transport; infrastructure services network; and project implementation. In each of these chapters, the Panel has provided a description of the subject matter, a summary of issues and the Panel response and findings and, where applicable, its recommendations (*Chapters 4 to 16*).

- **Part 3: Conclusions and Recommendations** - These sections provide the response (in the form of conclusions) of the Panel in terms of its obligations under the *Environment Effects Act* 1978, the *EPBC Act* 1999, and the *Planning and Environment Act* 1987 (*Chapters 17 to 19*) Recommendations are then provided in Chapter 20.
2. THE PROPOSAL

Residential development was first envisaged on the site in the mid to late 1980s. The site was zoned in 1987 to facilitate development that became known as the Lonsdale Lakes Estate. Construction of the existing Lonsdale Lakes Estate commenced in the late 1980s with approximately 130 of an anticipated 620 lots and a number of water features created. The EES states that this water system still exists on the eastern portion of the site, but is incomplete.

Construction of the Lonsdale Lakes Estate ceased in the early 1990s. A number of significant matters were left unresolved, “including completion of the proposed lake system, the provision of open space committed, and large areas of the site that were left disturbed and required rehabilitation”.

The existing proposal was preceded by a Stockland proposal and accompanying draft amendment for a development referred to as the Point Lonsdale Residential and Golf Course Development. This proposal included a golf course and urban development outside the existing residential zone boundary. Draft EES Guidelines were produced by the Victorian Department of Sustainability and Environment (DSE) in November 2003 and placed on public exhibition until 22 December 2003. As a result of this process, initial EES Assessment Guidelines were issued in February 2004 and these were subsequently modified in February 2005. On 8 May 2006 the (then) Minister for Planning decided not to authorise the exhibition of the required amendment as he determined that the proposal’s outward expansion (beyond the Residential 1 Zone) was inconsistent with the Government’s Coastal Spaces Policy.

Stockland’s current development proposal, referred to as the ‘Point Lonsdale Residential and Waterways Proposal’, no longer includes a golf course and all residential development is contained within existing Residential 1 zoned land. In line with these changes, the EES Guidelines for the project were revised by DSE in consultation with the Commonwealth Department of Environment and Water Resources and reissued in December 2006.

2.1 The Subject Site and Surrounds

The proposed development site for the Point Lonsdale Residential and Waterways Proposal comprises 194.6 hectares including 81 hectares of residentially zoned land, with the site being located approximately 30 kilometres east of Geelong and 105 kilometres from Melbourne. It is located on the Bellarine Peninsula, which includes
the settlements of Leopold, Drysdale, Portarlington, Indented Head, St Leonard’s, Wallington, Ocean Grove, Point Lonsdale, Queenscliff and Barwon Heads.

Figure 1: Site Location

![Site Location Map]

Source: EES Nov 2007, Chapter 1 (p.3)

The EES states that the site is:

“…surrounded by a mixture of rural and residential land, conservation and wildlife reserves including Swan Bay to the east, Lake Connewarre State Game Reserve and Ocean Grove Nature Reserve to the west, and Lake Victoria and the Lonsdale Lakes State Nature Reserve to the west. The surrounding area supports a number of
environmentally significant aspects, including Swan Bay that forms part of the Port Phillip Heads Marine National park, and the Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site.”

Approximately five kilometres to the east of the site is central Queenscliff, while central Point Lonsdale is approximately 1.5 kilometres to the south-east. The southern edge of the site is two kilometres from Bass Strait and surf beaches, while the more sheltered Lonsdale Bay is less than a kilometre to the east.

The site is located “at the entrance to the existing Point Lonsdale township”, with the south-eastern portion of the site directly abutting the existing Lonsdale Lakes Estate (see above). The site is bound to the north by the Bellarine Railway.

Known as Lakers Cutting, a small man-made tidal inlet off Swan Bay adjoins the north-eastern corner of the site, and is hydraulically connected to the site via a series of artificial channels and culverts. Lake Victoria is located to the south of the site directly south of Shell Road, and an overflow structure is located between Lake Victoria and the site.

2.2 Alternative Development Proposals

As part of the EES process, Stockland identified two development options for the site that they believed were feasible from an economic, environmental and social perspective. These two options “seek to fulfil Stockland’s project objectives and respond to the site’s environmental opportunities and constraints.” Both of these options are designed to retain all residential development south of the Bellarine Highway within existing residentially zoned land, while development to the north of the Highway is restricted to the construction of the lakeways system through to Lakers Cutting. A third option was the “No Project Scenario”.

(i) No Project Scenario

This scenario is essentially the land being retained in its existing zoning and continuing to be used in its current capacity. The EES states that this scenario is neither a sustainable outcome for the site or a feasible alternative for Stockland, as it would:

- Create uncertainty regarding the long-term preservation of significant flora and fauna habitats of the site;
- Create uncertainty regarding the long term sustainability of the existing lakes and water bodies; and
• Mean that commitments made to residents of the existing Lakes Estate would not be met.

(ii) **Option A: Residential development with main lake system in western portion of site**

Option A proposed a residential development “incorporating an expansive lake in the western (rural) section of the site and open space areas.” This development option envisaged accommodating approximately 630 dwellings in the form of detached dwellings, apartments and townhouses, as well as a retirement village for approximately 170 independent living units in the north east corner of the site.

The EES sets out that the key design elements of Option A include:

- **Residential Precinct** – this option maximises urban development and lot density within the existing residential zone boundary. This option includes larger development pods as well as more intensive development immediately adjacent to the existing Lonsdale Lakes Development;
- **Lakes Precinct** – enclosed water bodies with major wetland and lakes system located in the western section of the site. A grassed overland flow path through the development will accommodate flows from Lake Victoria into Lakers Cutting. The western lakes are also required under this development scenario in order to provide fill for the residential pods;
- **Key areas of Open Space** located adjacent to the main entrance boulevard; and
- **No community hub** is proposed.

(iii) **Option B: Integrated residential and waterways development**

Option B (which is discussed in more detail below) proposes a “residential, rural and open space development incorporating extensive waterways and public open spaces”. This option envisages accommodating 598 dwellings in the form of detached dwellings, apartments and townhouses, and a retirement village (170 independent living units) and 120 bed aged care facility.

The EES sets out that the key design elements of Option B include:

- **An area of residential development** integrated with its green surrounds including the Moonah Conservation area to the north and the revegetated waterways to the south;
- **The orientation** (north-south) of the street network creates excellent solar access for the lots and excellent views to the waterways;
- **A community hub** including a community facility building is located within close proximity to the Bellarine Highway, improving access to both residents at the
development and members of the broader Point Lonsdale community. The community hub will also contain a small retail centre (maximum floor space 80sqm);
• South of this street is proposed a variety of residential development, over looking the central lake;
• The waterways connection to Lakers Cutting will flow through the rural land north of the Bellarine Highway;
• Public Open Space - A large lake and associated wetlands and public open space to the west of the residential development; and
• Farmland – Located to the north of the Moonah woodlands.

Overall, Stockland considered that both development options were feasible outcomes to consider for the development of the site. However, Option B was selected as Stockland found that in terms of environmental, economic and social considerations, it offered the most sustainable outcome for the site. While Options A and B performed equally on a number of criteria, the former did not meet a number of criteria in relation to balancing waterways and landmass and would have required the importation of fill from offsite.

The Panel accepts the position put by the proponent, and the only option under consideration through this Panel process is Option B.

2.3 What is Proposed?
As reflected in the exhibited “Illustrative Masterplan” (the Masterplan), the proposed development/subdivision creates 528 standard residential lots of varying sizes. In addition, four integrated housing lots are proposed that in combination could support up to 70 medium density dwellings. Further planning approval will be required for the development of these medium density sites.

The exhibited proposal incorporates a single super lot for the purpose of a retirement living precinct that could support up to 170 independent living units, subject to further planning approval. Based on the above, the exhibited proposal provides for 768 dwellings. It includes a site for a 120 bed aged care facility (also subject of future planning approval), extensive areas of public open space in conservation reserves, parklands and waterways, and a small community hub. The key features of the proposed project are set out in Section 1.4 of the EES as follows:

Urban Development
• Residential development on the eastern portion of the site to the south of the Bellarine Highway;
• A retirement village providing a range of living and care options located on a large section of the north-eastern residential area;
• An aged care facility adjoining the retirement living precinct in the north east corner of the site; and
• A rural lot along the side of the Bellarine Highway, maintaining a rural edge to the development.

**Conservation Outcomes**

• A conservation reserve of approximately 56 ha comprising Moonah and brackish sedge land will be enhanced and protected for natural habitat values;
• A tidally flushed lake system integrated within the residential development and connected to Lakers Cutting to the north-east of the site (18 ha); and
• A major wetland and indigenous woodland in the western portion of the site that will provide for water management associated with the lake system and an environmental open space area for passive recreation.

**Open Space Linkages**

• The main central lake that will be a significant focal point, with associated community hub for outdoor recreation, as well as some neighbourhood-scale retail;
• A network of local parks throughout the residential development providing for a range of recreational and conservation opportunities; and
• A network of walking paths and bicycle trails providing connections throughout the project site and into Point Lonsdale.

The EES notes that the proposed development will have a number of “identifiable urban character precincts” (as shown in Figure 2) including:

• Moonah Precinct;
• North Lake Precinct;
• South Lake Precinct;
• East Lake Precinct; and
• Lakers Precinct.
Figure 2: Site Precinct Plan

Source: EES Nov 2007, Chapter 5 (p.10)

The Moonah precinct would be located in the centre of the site, bound on its southern side by an arm of the waterway running parallel to Shell Road. The EES states that “the overall intent for this precinct is to promote an urban and built form that is integrated within the existing natural vegetated environment”. A park is proposed in the centre of this precinct.

The North Lake precinct is proposed along the northern edge of the site, being bound by the Moonah precinct on the west, the Bellarine Highway on the north, the main entry road on the east and the central lake to the south. It will be traversed by a section of the waterway.

The South Lake precinct would be located on the south-eastern portion of the site, and is described by the EES as being an “important part of the linkage to the existing Lonsdale Lakes development area and indeed the remainder of Point Lonsdale”. It would be bounded by Shell Road and the existing Lonsdale Lakes on the south west. The
precinct will contain a range of allotment sizes, as well as a multi-unit site on the western edge.

The East Lake precinct would be located on the eastern edge of the site, being bound by the Bellarine Highway on the north, privately owned land to the east, the waterways to the south and the main north-south neighbourhood connector to the west.

The Lakers precinct is proposed for the land north of the Bellarine Highway. It has interfaces to the Bellarine Highway, Queenscliff-Portarlington Road and Fellows Road. It would have “large vegetated setbacks to maintain the vegetated character upon approach to the Point Lonsdale township.”

At the commencement of the hearing the proponent advised that it sought to modify the exhibited Masterplan to include a Child Care Centre in the southern portion of the site adjacent to Shell Road.

In response to evidence and submissions, two other additions to the Masterplan were recommended by the proponent during the course of the hearing including:

- Two Bus Stops (one adjacent to the Aged Care Facility on the Bellarine Highway, the other adjacent to the newly proposed Child Care Centre); and
- Inclusion of an annotation that reads “bicycle/pedestrian path to beach to be constructed” adjacent to Shell Road.

The above highlighted additions are reflected in a revised Masterplan which is contained in Section 6.0 of the Revised Schedule to the Development Plan Overlay (Refer Appendix 4). The Panel notes that no party to the hearing objected to the proposed modifications.

2.4 Timing and Staging

Section 5.13 of the EES sets out that all earthworks, civil works and construction of the lake and waterways system will be undertaken in a number of stages. Each stage of the lake works will “include both the bulk earthworks to form the lake profile, and the civil and landscaping works to create the lake edges”. The earthworks and development program is expected to be undertaken in stages over a 10-12 year period, “depending on market trends”. An indicative timeline is set out in Table 1.
Table 1 Indicative Timeframe for Construction Activities

<table>
<thead>
<tr>
<th>Development period</th>
<th>Construction activities</th>
</tr>
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| 2009 – 2012        | • Earthworks and related civil works to construct:  
|                    | 1. the eastern part of the site lake system, its connection to Lakers Cutting, and the new connection from Lake Victoria at Shell Road;  
|                    | 2. residential pods 1-11;  
|                    | 3. Retirement Village and Aged Care Facility; and  
|                    | 4. western part of site lake system  
|                    | • Subdivision for Stages 1-6 and display village development;  
|                    | • Civil/infrastructure construction and landscaping works; and  
|                    | • Rehabilitation of eastern and central part of land north of Moonah for agricultural purposes. |
| 2013 – 2016        | • Earthworks and related civil works to complete residential pods 10-11, and the western part of site lake system;  
|                    | • Earthworks and related civil works to construct:  
|                    | 1. residential pods 12-14; and  
|                    | 2. conservation area in west of site.  
|                    | • Subdivision for stages 7-11;  
|                    | • Civil/infrastructure construction and landscaping works; and  
|                    | • Rehabilitation of the western part of land north of Moonah for agricultural purposes. |
| 2017 – 2019        | • Earthworks and related civil works to complete residential pods 13-14;  
|                    | • Subdivision for Stages 12-14; and  
|                    | • Civil/infrastructure construction and landscaping works. |
3. **LEGISLATIVE AND POLICY FRAMEWORK**

The following is an overview of the various State and Commonwealth legislation and policy affecting the project, as well as the approval processes and planning controls.

### 3.1 State Legislation

**(i) Planning and Environment Act 1987**

The *Planning and Environment Act* 1987 provides a system of control for the use and development of land in Victoria. The Act is administered across Victoria via planning schemes created under this Act, and which set out specific detail on the types of uses and development that are permitted within each municipal area.

Municipal planning schemes are the subordinate legislative instruments through which development is controlled and land use zones are defined. The planning schemes define land uses which are permitted as-of-right, those which are permitted with a Planning Permit and those which are prohibited in the various zonings.

As discussed below, an amendment to the Greater Geelong Planning Scheme and a combined Planning Permit Application under the *Planning and Environment Act* are being sought concurrently with the EES process.

**(ii) Environment Effects Act 1978**

The *Environment Effects Act* 1978 applies to works “reasonably considered to have or be capable of having a significant effect on the environment”. The then Minister for Planning decided in September 2003 that the proposal should be the subject of an environmental impact assessment under the provisions of this Act, which requires the preparation of an Environment Effects Statement (EES).

**(iii) Environment Protection Act 1970**

The Environment Protection Act has the purpose of “creating a legislative framework for the protection of the environment in Victoria having regard to the principles of environment protection”. The Act is administered by the Environment Protection Authority, and includes a range of instruments for protecting the environment. Principal among these are State Environment Protection Policies, which incorporate environmental sustainability principles and provide the broad framework for protecting the environment.
(iv) **Coastal Management Act 1995**

The Coastal Management Act provides a coordinated approach to approvals for the use and development of Coastal land in Victoria. Construction works are proposed on Coastal Crown land as part of the development.

(v) **Flora and Fauna Guarantee Act 1988 (FFG Act)**

The main objectives of this Act are to conserve the State of Victoria’s flora and fauna, to manage potential threats, to ensure that any human use of flora and fauna is sustainable and to make certain that the diversity of Victoria’s flora and fauna is maintained at its present level. The Act highlights its key role as the main piece of Victorian legislation that deals with the conservation of threatened species.

A number of strategies and policies apply under the FFG Act, including the State Biodiversity Strategy and the Victorian Native Vegetation Management Framework.

(vi) **Heritage Act 1995**

This Act establishes a framework for heritage protection in Victoria. It provides protection for a wide range of cultural heritage places and objects. Consent is required to disturb heritage sites as part of the proposed development.

(vii) **Aboriginal Heritage Act 2006**

The Aboriginal Heritage Act 2006 replaced the Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth) and the Archaeological and Aboriginal Relics Preservation Act 1972 (Victoria). Key features of the Act include:

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

Consents are required to excavate or disturb Aboriginal archaeological sites as part of the proposed development.
3.2 State Government Policy

(i) SEPP (Groundwaters of Victoria), 1997

The SEPP (Groundwaters of Victoria) aims to maintain and, where necessary, improve groundwater quality to a standard that protects existing and potential beneficial uses of groundwaters. The SEPP provides objectives for groundwater protection throughout Victoria. Water indicators and objectives are nominated in the Australian Water Quality Guidelines 1992. Exceeding objectives for a nominated indicator in effect defines pollution.

(ii) Victoria’s Biodiversity Strategy, 1999

The National Strategy for Biodiversity Conservation is implemented at a State level by the Victorian Biodiversity Strategy 1999. The emphasis of the strategy is on:

- Systematic prevention or reduction of the causes of biodiversity decline or loss;
- Ecologically sustainable management of public lands and waters by government agencies, in association with resource-based industries;
- Cooperative management of biodiversity on private land, in partnership with landholders, the community, Catchment Management Authorities and local government;
- Community involvement; and
- The reporting framework for monitoring progress.

(iii) Native Vegetation Management Framework, 2002

The Native Vegetation Management: A Framework for Action was released in 2002, and is the State Government’s strategy to protect, enhance and revegetate Victoria’s native vegetation. It was developed to implement the objectives of Victoria’s Biodiversity Strategy and the National Strategy for the Conservation of Australia’s Biological Diversity. The Framework’s main goal is “to achieve a reversal, across the entire landscape of the long-term decline in the extent and quality of native vegetation, leading to a net gain.”

(iv) Victorian Coastal Strategy, 2002 (and revisions)

The Victorian Coastal Strategy 2002 provides an overall vision for the Victorian coast. The Strategy aims to ensure the protection of significant environmental features, provide clear direction for the future use of the coast including the marine environment, identify suitable development areas and opportunities on the coast and ensure the sustainable use of natural resources. The Strategy recognises the
varied and competing pressures for the use of coastal and marine areas and provides the framework for decision-making under the Coastal Management Act.

A draft Victorian Coastal Strategy was released for public comment in 2007. This is the third VCS released in 10 years. The draft states that while many of the same coastal issues persist, there are also a number of new challenges emerging on the coast, with the main one being climate change. In response, the revised VCS includes:

- Stronger directions and a precautionary approach to climate change;
- Greater emphasis on marine planning and management;
- Stronger principles for planning, including the recommendations of Coastal Spaces (2006);
- Initiatives to strengthen Victoria’s coastal management capacity, including better recognition of, and support for, Local Government; and
- Guidance for resolving on-going and historically difficult issues such as coastal dependent uses and old and inappropriate subdivisions.

At the time of submission of this report, the final strategy has not been released.

(v) Victorian Greenhouse Strategy, 2002

The Victorian Greenhouse Strategy was released in 2002 and details the actions the Government is taking in response to climate change on three fronts:

- Reduction of greenhouse gas emissions;
- Sequestering of carbon through enhancement of greenhouse sinks; and
- Development and implementation of strategies to adapt to climate change.

The Strategy outlines the action Government must take to reduce greenhouse gas emissions from their own operations, including: reducing building energy consumption; increasing the use of electricity from renewable sources; reducing vehicle fleet related greenhouse gas emissions; offsetting vehicle fuel emissions through tree plantings; and incorporation of high levels of energy efficiency in all major project developments.

(vi) Corangamite Regional Catchment Management Strategy (CCMA), 2003

The proposed project is located within the responsibility of the Corangamite Catchment Management Authority. The Corangamite CMA implemented programs for floodplain management, land management, biodiversity and soil erosion within this region.
The EES states that the proposal attempts to address the key threats in the Geelong and Environs sub-region as identified in the Strategy, being:

- Remnant native vegetation from new urban development; and
- Wetlands, estuaries and the coastline from development pressures and water flow and quality regimes.

(vii) **SEPP (Waters of Victoria), 2003**

The SEPP (Waters of Victoria) applies to all surface waters in the State. Clause 5 of the SEPP states that the purpose of the Policy is to help achieve sustainable surface waters by:

- *Setting out the environmental values and beneficial uses of water that Victorians want, and the environmental quality required to protect them; and*
- *Setting, within a 10 year timeframe, goals for protection agencies, businesses and communities and means by which they can be met.*

The SEPP defines environmental quality objectives and indicators that must be met to protect beneficial uses. It also outlines actions to manage activities that impact on water environments.

(viii) **Victoria’s Environmental Sustainability Framework, 2005**

Victoria’s *Environmental Sustainability Framework* was released in April 2005 and aims to make environmental sustainability a consideration in everything Victorians do by taking “a long term perspective and holistic approach to improving the environment.” It sets out a vision for Victoria to become a sustainable state within one generation by setting three strategic directions, including:

- Maintaining and restoring our natural assets;
- Using our resources more efficiently; and
- Reducing our everyday environmental impacts.

(ix) **Our Environment Our Future – Sustainability Action Statement, 2006**

*Our Environment Our Future* is a $200 million package of 150 “priority sustainability initiatives to secure a sustainable state for future generations of Victorians.” It identifies five areas for immediate action:

- Responding to the challenge of climate change;
• Maintaining and restoring our natural assets;
• Using our resources more efficiently;
• Reducing our everyday environmental impacts; and
• Government leadership.

(x) **State Environment Protection Policy for the Prevention and Management of Contaminated Land, 2002**

This policy aims to ensure that that land is maintained, and where necessary enhanced through management and clean up, to maximize the beneficial uses of the land environment. The policy identifies different land use categories and the beneficial uses be protected for each land use category.

The SEPP requires that the National Environment Protection Measure (Assessment of Site Contamination) 1999 be used to assess site contamination. The SEPP also requires that where land is to be proposed to be used for a sensitive use then the responsible authority may require a certificate of environmental audit issued by an auditor appointed under the *Environment Protection Act* 1970.

(xi) **Industrial Waste Management Policy (Waste Acid Sulfate Soils), 1999**

This Policy sets out the management regime and responsibilities required for disposal and reuse of waste acid sulfate soils. It embodies the acknowledged policy preference for on site treatment and management of the soils over off-site disposal.

(xii) **Draft Best Practice Guidelines for the Assessment and Management of Acid Sulfate Soils in Victoria, 2008**

These guidelines provide a comprehensive structured risk management approach for managing acid sulfate soils and promote best practice management to minimise the adverse impacts.

### 3.3 Commonwealth Legislation

The *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act) is administered by the Commonwealth Department of the Environment, Water, Heritage and the Arts. EPBC Act requires that an environmental approval be obtained from the Minister administering the Act before taking any action that has/will have/is likely to have a significant impact on matters of national environmental significance relevant to various sections of this Act.
In September 2003, the then Commonwealth Minister for Environment and Heritage determined that the proposed development was a ‘controlled action’ under the EPBC Act and that approval was required under Part 9 of the Act before it could proceed.

The Minister’s instrument of decision identified the following relevant controlling provisions of the Act:

- Sections 16 and 17B (Wetlands of international importance);
- Sections 18 and 18A (Listed threatened species and communities); and
- Sections 20 and 20A (Listed migratory species).

As outlined above, the Australian Government has accredited the EES process as the required assessment process under the EPBC Act to assess the matters relevant to the Commonwealth Government’s decision whether to approve the project.

3.4 Planning and Approvals Process

(i) Environmental Impact Assessment Process

The environmental impact assessment process is being undertaken under the provisions of the Environment Effects Act 1978 at the state level, and at the Commonwealth level under the Environment Protection and Biodiversity Conservation Act 1999. As outlined earlier, in September 2003 the then Minister for Planning decided the proposal should be the subject of an environmental impact assessment under the provisions of the Environment Effects Act. This required the preparation of an Environment Effects Statement, which was exhibited for 8 weeks together with the Planning Scheme Amendment and Planning Permit Application. The Panel will report to the Victorian Minister for Planning prior to the preparation of the Minister’s Assessment.

(ii) Planning and Environment Act 1987

Land use planning in Victoria is administered through the Planning and Environment Act, which enables local government to develop planning schemes to regulate land use and development. As outlined above, an amendment to the Greater Geelong Planning Scheme and a combined Planning Permit Application under the Planning and Environment Act are being sought concurrently with the EES process.

The EES states that should the amendment be approved, planning permits can be granted for “earthworks, subdivision, development and the removal of native vegetation”. The Development Plan Overlay will establish the planning control framework that
will guide these Planning Permits. A range of matters, including the transfer of land and waterways to the Council, will be provided using Section 173 Agreements.

(iii) Other approvals

Coastal Management Act 1995

Construction works are proposed on coastal Crown land requiring the consent of the Department of Sustainability and Environment under the Coastal Management Act 1995. Upon receiving an application for CMA consent, DSE has 28 days to make a decision on the proposed works.

Aboriginal Heritage Act 2006

Consents are required under the Aboriginal Heritage Act 2006 to evacuate or disturb Aboriginal archaeological sites as part of the proposed development. The EES states that relevant consents “beyond the sub-surface testing program” will be applied for after the Minister for Planning makes his decision on the EES.

Heritage Act 1995

Consent is required under the Heritage Act 1995 to disturb heritage sites as part of the proposed development. According to the EES, relevant consents will be applied for once the Minister’s decision has been made on the EES.
PART 2: ANALYSIS OF EFFECTS AND IMPACTS
4. LAND USE PLANNING

Land Use Planning is included as Chapter 6 of the EES and is based on three reports prepared by Contour Consultants Pty Ltd as follows:

- Strategic Assessment Report (Contour, 2007a) provided in Technical Appendix 2 to the EES;
- Town Planning and Urban Context Report (Contour, 2007b); and
- Clause 56 Assessment Report (Contour, 2007c).

The EES notes that the Town Planning and Urban Context Report and the Clause 56 Assessment Report were prepared specifically in support of the amendment and permit for the proposed development. The Panel notes that while these additional reports were not included in the EES documentation package, they were exhibited concurrently with the permit application and amendment.

Mr Shayne Linke, of Contour Consultants Australia presented town planning evidence at the hearing, which provides an overview of planning policy as well as an overview of the planning history applicable to the site and surrounds. It outlines the planning assessment process inclusive of various options considered to progress the proposed development in acknowledgment that the existing zoning of the land does not need to change to allow the development. It includes a response to the strategic assessment guidelines and a response to submissions. Mr Linke recommends a modification to the exhibited Development Plan in response to the proponent’s post exhibition desire to include a future child minding centre in the proposal. His statement contains a strategic assessment summary of the proposal against both the 2002 and draft 2007 Victorian Coastal Strategy. It concludes with a summary of possible further amendments to the Greater Geelong Planning Scheme that may result if the proposed development is approved and proceeds.

In response to the Direction of the Panel, the proponent called additional town planning evidence in the form of a ‘peer expert evidence review’ which was provided by Mr Stuart McGurn of Fulcrum Town Planners.

Mr McGurn’s evidence statement was structured around answering the following three questions:

- Does the proposal suitably respond to and utilise the planning framework of the Greater Geelong Planning Scheme?;
- What are the particular town planning matters raised in submissions to the amendment proposal?; and
• Does the proposal result in a net community benefit?

At the conclusion of his evidence statement, two changes to the structure/content of the exhibited Development Plan Overlay are recommended.

The Panel highlights that Mr Montebello, acting for the Borough of Queenscliffe provides, in written and verbal submissions, a significant contribution to the evolving discussion on the structure of the proposed land use planning controls. Other parties/submitters commented on the planning controls, including the Point Lonsdale Coastal Spaces Group, although no other planning evidence was called.

4.1 Description and Key Issues

The Land Use Planning chapter of the EES describes the existing zone and overlay regime applying to the site, as well as the proposed amendment and permit application and Section 173 Agreements. The strategic planning assessment notes the key planning considerations include the following:

• Objectives of planning in Victoria as set out in Section 4 (1) of the Planning and Environment Act 1987;
• Relevant planning controls and policies of the Greater Geelong Planning Scheme, including the State and Local Planning Policy Frameworks (inclusive of the Municipal Strategic Statement);
• Victorian Coastal Strategy 2002; and
• Planning policy implications of the Queenscliffe Planning Scheme.

The strategic planning assessment considers the development in the context of the following issues:

• Urban settlement and growth;
• Coastal development;
• Environment;
• Housing;
• Economic development;
• Community development;
• Agriculture and rural land;
• Declared highways, railways and tramways and integrated transport;
• Water supply, sewerage and drainage; and
• Design and built form.

By way of summary, the Land Use Planning chapter concludes that the proposal:
• has responded to and is consistent with the various policies and objectives of the State and Local Planning Policy Frameworks of the Greater Geelong Planning Scheme;
• maintains a tight urban limit for the town and facilitates environmentally sustainable use and land development;
• maintains the non-urban breaks between townships;
• involves the transfer of significant native vegetation and waterways to public ownership which will prevent any further expansion post development;
• responds to market demand for new dwellings in the area, with a range of lot sizes and densities consistent with current housing policies seeking urban consolidation; and
• will not impact on valuable agricultural land and will retain the rural land in the north/west section of the site for non urban purposes.

The EES concludes “that appropriate implementation mechanisms have been identified through the proposed Planning Scheme Amendment, draft planning permit and Section 173 Agreements to ensure the commitments made in the EES as part of the proposed Point Lonsdale Residential and Waterways Project are formalised and implemented by Stockland”.

Submissions to the proposal raise a number of strategic and statutory land use planning issues. The Panel considers the key issues in relation to land use planning include:

(i) Site History and Appropriateness of the Residential 1 Zoning;
(ii) Consistency with the State Planning Policy Framework;
(iii) Consistency with the Local Planning Policy Framework;
(iv) Consistency with other adopted Council Strategies;
(v) Density of the Proposed Development;
(vi) Aged Care Facility;
(vii) Integration with the Point Lonsdale Township;
(viii) Non-urban Break;
(ix) Structure Planning for the Broader Point Lonsdale Area; and
(x) Structure of the Proposed Planning Controls.

4.2 Panel Response
(i) Site History and Appropriateness of the Residential 1 Zoning

The subject land, on the south side of the Bellarine Highway, is included in two zones, the Residential 1 zone (approximately 81.5 ha) and the Farming Zone (approximately 93.7 ha). These zones have been in place for approximately 20 years (although it is noted that the zone names have changed over time), and was
facilitated via approval of Amendment 176 by the Geelong Regional Commission (GRC) in August 1987 and approval by the Minister for Planning and Urban Growth of a subsequent minor revision via Amendment R60 in December 1990. These early amendments sought primarily to facilitate the development of approximately 620 dwellings in a waterway based development and the transfer of a significant tract of open space tied to a Section 173 agreement.

The Panel was advised that both these amendments were supported by analysis of local, regional and coastal planning policies. A review of the GRC’s Responsible Officer Report dated September 1986 makes it clear that in its consideration of Amendment 176, the GRC sought the views of the then Shire of Bellarine, Borough of Queenscliffe, Geelong and District Water Board, Rural Water Commission, Road Construction Authority, Department of Conservation Forests and Lands, Ministry for Planning and Environment, Victorian Archaeology Survey and environmental interest groups including the Geelong Environment Council and the Geelong Field Naturalists Society. The Panel was advised that neither Amendment 176 nor Amendment R60 attracted submissions in opposition to the rezonings or the proposed development.

Development of the initial stages of the Lonsdale Lakes Estate commenced in the early 1990s resulting in the construction of approximately 130 lots and approximately 30% of the canal waterway system. In its opening submission, Stockland highlighted a number of impacts that have resulted as a direct consequence of the Lonsdale Lakes Estate development stalling. They included, but were not limited to, the following:

- the existing water bodies on, and surrounding the site are only partially connected;
- numerous embankments and culverts are dispersed throughout the site;
- water levels and quality varies;
- the land is subject to flooding from Lake Victoria in extreme events;
- there is a lack of a tidal regime; and evaporation during dry periods results in a dried lake system (in part);
- weeds and vermin are a major environmental concern; and
- the proposal to transfer open space to Council at no cost has not occurred.

Stockland, as the proponent of the current proposal, contends that the development concept now advanced will positively address the negative impacts resulting from failure to realise the previously abandoned development. The Panel observes that 81.5ha of undeveloped residentially zoned land of the current proposal represent approximately 75% of the land zoned for Residential purposes via Amendments 176 and R60.
A number of submissions expressed the view that the existing Residential 1 zoning applying to part of the site is inappropriate (for reasons including climate change impacts, flora and fauna issues, and it location adjacent to a Ramsar site). In response, Geelong City Council highlighted that:

Council is obliged to consider an application on its own merits and against the relevant planning provisions which apply at the time of receipt. Current policy direction also provides very little support to reduce existing areas of residential land. The EES process will ensure that environmental issues are fully addressed.

The Borough of Queenscliffe noted in their submission that:

... given the zoning of the land, Council is broadly accepting that some level of development consistent with the zoning is inevitable.

The proponent argued that it cannot be ignored that a significant portion of the site is zoned Residential 1 and stated:

The underlying zoning of the land creates a presumption in favour of residential development of the land. This case is therefore not about whether or not more people should be allowed to reside in Pt Lonsdale. The question for the Panel is not whether the site should be developed for residential living, but in what form. If the Panel accepts that basic proposition, then the question becomes whether or not the design of the project and management measurements described in the EES adequately respond the environmental constraints of the site and provide an outcome that delivers a net community benefit and sustainable development.

The proponent reinforced these views in closing submissions, and said:

In considering this application it is impossible to ignore the zoning of the land for residential purposes. Why is this factor important?

- The zoning of land is a fundamental plank of our planning system: it is the principal planning tool to create certainty of outcomes and to define the spatial pattern of land uses.
- Purchasers rely upon the zoning of land; Stockland relied it upon when it purchased the land in 2002; it would be unfair to treat the land as if it does not have its residential zoning.
- The residential zoning in this case was the consequence of a considered and public process. The circumstances of the site, including its hydrology, are not substantially different now to the time of zoning. The zoning has, and continues to have, moral
legitimacy.

- The Minister for Planning recently endorsed the residential zoning as defining the town boundary: see letters 19 May 2005 and 8 May 2006; see, also, Cl 15.08-2 of the planning scheme.
- The proposed development gives effect to the purpose of the Residential 1 zone.

In relation to the above reference to correspondence, the Panel notes that the Hon. Rob Hulls MP (then Minister for Planning) wrote to the Mayor of Council on 8 May 2006 in relation to his refusal of Authorisation Request A354. This correspondence, while rejecting Stockland’s previous proposal for the site which involved the extension of the Residential 1 zone, stated:

I encourage your Council to continue to work with Stockland to identify new opportunities for development of this area within the current zoning provisions.

Council’s closing submission reinforced its position as articulated in opening:

The City submits that the use of the main site (between Shell Road and Bellarine Highway) for residential purposes is already supported by the Residential 1 zoning of the land. The site was first zoned to Reserved Residential in 1987 as part of Amendment RL176 by the former Geelong Regional Commission. This decision was made on the basis of a comprehensive report by GRC officers and consultation with agencies and the local community at that time.

However, despite its Residential zoning the proposal must still address the State and Local planning policies that apply to the site today.

The Panel considers that the land’s development history and its part Residential 1 zoning are important considerations in the assessment of the proposal. The Panel notes that the rezoning of the land to facilitate residential development via Amendments 176 and R60 followed a strategic planning process. Further, the Panel agrees with Council’s submission that “it is obliged to consider this application on it own merits and against the relevant planning provisions which apply at the time of receipt”. In relation to this it is undeniable that 81.5ha of the site is zoned Residential 1 and that a key purpose of the Residential 1 zone is “to provide for residential development at a range of densities with a variety of dwellings”.

The Panel highlights that there has been a number of opportunities to review the site’s current zoning. These have included the major review of the Geelong Planning Scheme during the initial introduction of the City of Greater Geelong new format planning scheme (2000) and the more recent Amendment C129 review. These opportunities have not been pursued by Council, agencies, or other parties.
The Panel notes the proposal must adequately respond to current State and Local planning policies and comply with provisions and controls such as those outlined in Clause 56 and Clause 65. It is satisfied that the combined process has adequately provided the opportunity for these considerations to be assessed. The environmental issues are dealt with in later chapters of this report.

(ii) Consistency with the State Planning Policy Framework (SPPF)

The Strategic Planning Assessment Report (Contour, June 2007) included as Technical Appendix 2 to the EES provides a detailed assessment of the proposal against both State and Local Planning Policy under 17 theme based headings that this framework reflects. The assessment concludes that “overall, the proposal is directly consistent with the range of planning controls and policies applying to the land and will assist with achieving the objectives and strategies of the Geelong Planning Scheme”.

The substance of this finding is carried forward into the conclusion of the land use planning chapter of the EES which states “the proposal has responded to and is consistent with the various policies and objectives of the State and Local Planning Policy Frameworks of the Greater Geelong Planning Scheme”.

The planning evidence of both Mr Linke and Mr McGurn support these findings of the EES. In this regard, it is Mr Linke’s opinion that “overall the proposal has a high level of consistency with the strategic outcomes of the Greater Geelong Planning Scheme, and overall I am satisfied that the proposal responds well to the relevant planning policy framework that applies to the subject land and the proposed development”. Mr McGurn concurs with the strategic analysis put forward in the Explanatory Report accompanying the proposal.

Council’s opening submission noted that it was satisfied that the amendment and planning permit application are supported by the SPPF. By way of summary the Panel highlights the following areas where Council considers compliance is afforded:

- The proposal maintains the non-urban breaks between townships, consistent with Clause 14.01 (Urban Settlement and Growth) and Clause 15.08 (Coastal Areas);
- In relation to the objectives of clause 14.01 that seek to ensure a sufficient supply of land for residential development, and the facilitation of orderly development, the proposal will provide a substantial supply of lots for the Bellarine Peninsula and the application of the Development Plan Overlay will ensure that any future proposals reflect the Masterplan for the site which will
result in logical and orderly development;

- The proposed waterways seek to introduce a more natural hydrological regime to the site which should in turn benefit the whole catchment. This will assist with the protection and restoration of waterways as encouraged by Clause 15.01;

- In relation to Clause 15.02 (Floodplain Management), it is considered that Amendment C150 and its supporting reports adequately address flooding and drainage issues. Stockland submits that all housing and infrastructure will be clear of peak flood level with sufficient clearance to accommodate predicted sea level rises associated with global warming;

- In relation to Clause 15.08 (Coastal Areas), this policy seeks to provide protection for significant environmental features, ensure sustainable use of resources and undertake integrated planning. If these principles are addressed, the policy requires that development on the coast be facilitated within existing modified and resilient environments where the demand for services is evident. Consolidating development with the adjoining settlement of Point Lonsdale and not in a linear form along the coast is consistent with Clause 15.08 and the Victorian Coastal Strategy 2002. It is considered that Amendment C150 meets the principles of protecting environmental features and directing development to modified areas, given the site’s history as a shell grit mine;

- The proposal seeks to protect native flora and fauna where possible as directed by Clause 15.09 (Conservation of Native Flora and Fauna), by including new conservation areas and following the net gain requirements for native vegetation, however, there is likely to be an impact on flora and fauna as documented in the EES;

- The proposal provides for a diverse and integrated network of public open space as encouraged by Clause 15.10;

- The proposal provides for an integrated transport network for vehicles, bicycles and pedestrians, as directed by state policies for integrated transport at Clause 18.01; and

- The proposal seeks to implement high quality urban design that is responsive to the environment and creates an attractive new residential and waterways development, as encouraged by Clause 19.03 – design and built form. The amendment will not create any additional areas of urban zoned land, but rather provides for a residential and waterways development in a manner that seeks to protect the environmental values of the site. The proposal includes the transfer of land to public ownership to protect significant flora and fauna habitat and provides a strong edge to the Point Lonsdale township. The necessary infrastructure required for the development will be provided and the proposed subdivision design is responsive to local character.
The Panel supports Council’s conclusions in relation to its interpretation of the SPPF as outlined above, however it notes there are additional considerations in respect to the SPPF where parties challenge the proposal’s compliance. In this regard the Panel highlights that in its distillation of the closing submissions on behalf of the Point Lonsdale Coastal Spaces Group (PLCSG), it has identified four key areas where this group considers the proposal is inconsistent with elements of the SPPF. They include:

- The lack of protection of natural resources and the maintenance of ecological process and genetic diversity called for in Section 4 (1) of the Planning and Environment Act, 1987;
- The proposal’s “superficial analysis of net community benefit and sustainable development” called for in Clause 11.02 (Goal) of the SPPF;
- The lack of the proposal’s response to the strategy of ensuring development in coastal areas is sensitively sited and designed (Clause 15.08); and
- The proposal's inadequate response to the objective of protection and conservation of biodiversity, including native vegetation retention and compliance with the implementation measures outlined in Victoria’s Native Vegetation Management Framework (Clause 15.09).

The submission on behalf of the Geelong Environment Council (GEC) advances the view that the proposal is inconsistent with the above mentioned elements of the SPPF. In addition, the GEC submits that the proposal does not adequately respond to the following principles of land use and development planning articulated in Clause 11.03-1 and 11.03-2:

- Prevention of pollution, to land, water and air;
- Protection of environmentally sensitive areas and natural resources;
- Adoption of a best practice environmental management and risk management approach which aims to avoid or minimise environmental degradation and hazards;
- Prevention of environmental problems created by siting incompatible land uses close together;
- Help to protect the health of ecological systems and the biodiversity they support (including ecosystems, habitats, species and genetic diversity); and
- Protect and maintain areas of environmental significance.

The GEC considers that the proposal does not adequately respond to “providing for the protection of significant environmental features and the sustainable use of natural coastal areas” as called for in Clause 15.08-2 in reference to the hierarchy of principles set out in the Victorian Coastal Strategy 2002.
Council’s closing submission acknowledges “that the proposal is not entirely consistent with all policies in the scheme”, and further “Council is still of the opinion that the proposal is generally consistent with the State Planning Policy Framework and adopted State Government policies including the Victorian Coastal Strategy and the Coastal Spaces policy”.

In support of this conclusion Council observed the evidence of Mr Linke and Mr McGurn, and the questioning by the Panel and other parties has ensured a high level of scrutiny of the planning scheme policies that apply to the proposal. The Panel agrees with this observation.

The Panel concludes that is satisfied that the EES has adequately considered relevant aspects of the SPPF. In respect to the proposal’s compliance with such policy, the Panel is satisfied that it receives significant support, and as advanced by Council, the proposal is generally consistent with the SPPF.

In reaching this finding the Panel acknowledges that there are some elements of the SPPF, particularly relating to the Environment where the proposal’s consistency with policy is challenged. These matters are further addressed later in this report.

(iii) Consistency with the Local Planning Policy Framework (LPPF)

In the Panel’s assessment of the SPPF, it highlights that the Strategic Planning Assessment Report (Contour, June 2007) provides a detailed assessment of the proposal against both State and Local Planning Policy under 17 theme based headings that this framework reflects. As noted previously, the EES states “the proposal has responded to and is consistent with the various policies and objectives of the State and Local Planning Policy Frameworks of the Greater Geelong Planning Scheme”.

Council’s opening submission noted that the Town Planning and Urban Context Report (June 2007) submitted with the application addresses local planning issues in detail, and submitted that it was satisfied that the amendment and planning permit application are supported by the LPPF. By way of summary the Panel highlights the following areas where Council considers compliance is afforded:

- The proposal is consistent with Clause 21.07 (Strategic Directions) and Clause 21.08 (Urban Growth) particularly as the residential components of the development are limited to land zoned Residential 1. The proposal seeks to maintain a non-urban break between Point Lonsdale and the surrounding townships along the Bellarine coastline (including Ocean Grove/Barwon Heads and Queenscliff) by using waterways and significant native vegetation as natural boundaries to determine the edge of Point Lonsdale. This is
consistent with Clause 21.08 (Urban Growth) that encourages using natural boundaries to determine the urban edge of settlements;

- The proposal will result in significant environmental improvements to the site, including environmentally sustainable lakes and water bodies, protection of remnant vegetation and remediation of parts of the land known to contain contaminants. This is consistent with Clause 21.10 (Environmental Management) that encourages the protection of Geelong’s natural environment;

- The development is considered to be consistent with Clause 21.31 (Coastal Areas) particularly as it does not impact on any undeveloped coastline and maintains, and arguably strengthens, the non-urban break between Point Lonsdale and Ocean Grove;

- The proposal will result in significant environmental improvements to the site, including environmentally sustainable lakes and water bodies, protection of remnant vegetation and remediation of parts of the land known to contain contaminants. This is consistent with Clause 21.11 (Protection of Catchments, Waterways and Ground Water), that seeks to protect and where possible restore catchments, waterways and water bodies; and with Clause 21.14 that encourages the conservation of native flora and fauna;

- The proposal upgrades regional drainage infrastructure and accommodates the 1 in 100 year flood event, consistent with Clause 21.12 (Flood Management);

- The proposal will result in significant environmental improvements to the site, including environmentally sustainable lakes and water bodies, protection of remnant vegetation and remediation of parts of the land known to contain contaminants. This is consistent with Clause 21.14 (Conservation of native flora and fauna);

- The proposal provides an extensive public open space network, including conservation areas, lake system, local and neighbourhood parks and a walking and bicycle network. This is consistent with Clause 21.15 (Open Space) that encourages the provision of a network of open spaces that enhances amenity and environmental integrity of the City and provides new open spaces to respond to the community’s physical and social recreation requirements;

- By injecting significant capital investment into the economy and creating significant employment both during construction and providing ongoing jobs in the region, the proposal builds on the competitive strengths of Geelong identified in Clause 21.19 (Economic Development);

- By not impacting on valuable agricultural land and retaining the rural land in the north/west section of the site for non-urban purposes, the proposal is consistent with Clause 21.24 (Agriculture and rural land); and

- The proposal ensures that the subdivision design and layout responds to the
coastal character of the area by maintaining the undulating character, retaining stands of coastal vegetation, adopting informal roadways and integrating the housing with landscaping. This is consistent with Clause 21.30 (Design and Built Form).

Consistent with the Panel’s assessment of Council’s response to the SPPF, the Panel finds that Council’s interpretation of the proposal’s response to these aspects of the LPPF is broadly supportable.

The Panel however highlights that there are additional considerations in respect to the LPPF where parties challenge the proposal’s compliance. In this regard the Panel highlights the following extracts of the PLCSG submission that they consider are examples where the proposal is inconsistent with the LPPF:

- In respect to Clause 21.10 (Environmental Management) Council has not been faithful to: “its commitment to the principles of Ecologically Sustainable Development (ESD) and to the intergenerational and precautionary principles of the Inter-governmental Agreement on the Environment”; and
- “The destruction of high quality vegetation and habitat is contrary to policy, particularly the local policy framework that places a very high emphasis upon the protection of the natural environment. See for example: Clauses 21.10 (Environmental Management), Clause 21.11 (Protection of Catchments, Waterways and Groundwater); Clause 21.13 (Coastal areas); Clause 21.14 (Conservation of Native Flora and Fauna); and Clause 21.17 (Energy Efficiency).”

The GEC highlights additional LPPF references that it considers are relevant and which the project is inconsistent:

- “Areas of environmental sensitivity, including flora, fauna, wetlands and coastal areas will be protected” (Clause 21.05 - Planning Principles);
- “Urban development will be restricted in catchments which drain into sensitive ecosystems such as Swan Bay, Lake Victoria, and Lake Connewarre so that urban run-off does not have a negative impact on these environments” (Clause 21.05 - Planning Principles);
- “To retain and conserve existing wetlands as valuable environmental, social and economic resource for current and future generations” (Clause 21.11 – Protection of Catchments, Waterways and Groundwater);
- “To ensure that there is no further preventable decline in the viability of any rare or threatened species and associated habitats” (Clause 21.14 – Conservation of Native Flora and Fauna);
- “To identify and maintain the City’s biodiversity” (Clause 21.14 – Conservation of Native Flora and Fauna); and
• “To ensure the maintenance and further establishment of natural linkages between areas of existing remnant vegetation” (Clause 21.14 – Conservation of Native Flora and Fauna)

Having highlighted the above, the Panel again notes that in Council’s closing submission it acknowledges “that the proposal is not entirely consistent with all policies in the scheme” and in specific reference to the LPPF it concludes:

Having heard the evidence during the hearing Council is still of the opinion that the Strategic Assessment demonstrates how the proposal responds to Local Planning Policy within the Greater Geelong Planning Scheme in particular the Municipal Strategic Statement.

The Panel is satisfied that the proposal receives significant support from the LPPF, as advocated by Council and the proponent. Having noted this, the Panel acknowledges there are elements of LPPF, particularly relating to the Environment where the proposal’s compliance with policy is challenged. These matters are further addressed later in this report.

(iv) Consistency with Adopted Council Strategies

A number of submissions objected to the proposed development on the grounds that the proposal was inconsistent with one or a number of adopted Council Strategies including:

• The Bellarine Peninsula Strategic Plan 2006 – 2016;
• The City of Greater Geelong Environmental Management Strategy (2006 - 2011); and
• The City of Greater Geelong Environmental Wetland Strategy (2006)

The Panel notes that none of these documents currently form part of the City of Greater Geelong Planning Scheme. Neither are they incorporated documents nor listed as reference documents in Scheme. Having noted this, they are all listed as References in Council’s revised MSS which will be determined in Council’s consideration of Amendment C129.

In highlighting the above, the Panel considers it important to stress the role of reference documents in Planning Schemes and the weight they should be afforded in decision making. The Incorporated and Reference Documents Practice Note (August 2000) provides the following guidance:
Reference documents provide background information to assist in understanding the context within which a particular policy or provision has been framed. A variety of different types of document may perform this role. They may be wide ranging in their content and contain information not directly relevant to specific decisions under the planning scheme.

Reference documents can be used in a number of ways. They can be used as a basis for preparing the Municipal Strategic Statement (MSS), local planning policies or requirements in the planning scheme, or can be mentioned in the planning scheme as a source of useful background information.

Reference documents have only a limited role in decision-making as they are not part of the planning scheme. They do not have the status of incorporated documents or carry the same weight. (Panel emphasis)

In this regard the Panel notes that reference documents cannot be relied upon as de facto planning controls as they sit outside the planning scheme. If Council intended that these documents have a statutory function then they could have chosen that they be included as Incorporated Documents, an option not pursued. Having provided this context the three strategies, and submissions in relation to them, are now discussed.

**Bellarine Peninsula Strategic Plan**

The Bellarine Peninsula Strategic Plan 2006 - 2016 was prepared in consultation with the communities on the Bellarine Peninsula as a means to represent the views and visions of the different communities on the Peninsula. Council noted in its opening submission that the Plan “should not be viewed as official Council or State Government policy for the Bellarine”. The Strategic Planning Assessment Report prepared by Contour Planning acknowledges that while the Plan does not form part of the Planning Scheme, it has been adopted by Council to provide guidance and inform development on the Bellarine Peninsula. The Panel considers that the Contour’s Strategic Planning Assessment Report provides a useful summary of the Plan.

Council’s submission to the Panel highlighted how it believes the proposal relates/responds to the 7 Key Objectives of Plan. With respect to maintaining the current integrity of Point Lonsdale (Key Objective 1) Council notes that the proposal “limits all residential subdivision to within the current township boundary of Point Lonsdale as defined by the Residential 1 zone. The designated growth area referred to is assumed to be the Stockland site.”
In relation to retaining the existing ‘green wedge’ and rural vistas (Key Objective 2) and controlling the location and scale of development within specified town boundaries (Key Objective 3), Council highlights that “the C150 proposal is consistent with the overall objective of maintaining a green wedge by retaining the large 35 hectare rural lot and associated conservation areas and wetlands as the western edge to the development. This will help “lock in” the non urban break between the townships of Point Lonsdale and Ocean Grove; and medium density housing is proposed as part of the Stockland development and this is considered to be within the town boundary.”

Key Objective 4 seeks to improve children’s services to include, but not confined to, creation of additional crèche and kindergarten facilities. Council’s submission highlights that “The City of Greater Geelong and Stockland social planners consulted with the Borough of Queenscliffe on the proposed make up of the Community Hub that forms part of the proposal. Potentially it could be used for children’s services as it is intended to be designed as a flexible space. It is noted that the expert planning evidence to be presented by Mr Shayne Linke includes a new proposal for a child care facility on Shell Road.”

In respect to the Plan’s objective of retaining public open space areas (Key Objective 5) Council’s submission notes that “the proposal adds significantly to the supply of public open space for Point Lonsdale (an additional 86 hectares).”

Key Objectives 6 and 7 seek to improve public transport, bike paths, and walking tracks. In response to these objectives, Council noted that “the proposal allows for public transport to access the new residential estate and the permit requires bus stops and shelters at Shell Rd and Bellarine Hwy and the proposal makes significant additions to the path network with an additional 18 km of bike and pedestrian paths.”

Having reviewed the Bellarine Peninsula Strategic Plan 2006 – 2016, and submissions made in respect to it, the Panel is satisfied that the proposal is generally consistent with the objectives of the Plan.

**CoGG’s Environmental Management Strategy (2006-2011)**

Submissions from the GEC and others state that the development is not consistent with the City of Greater Geelong Environment Management Strategy 2006-2011. Council’s submission highlighted sections of the strategy that its Environment Unit consider are applicable to the consideration of the proposal. They include objectives and actions under the headings of Coastal and Marine and Waterways and Wetlands as follows:

**Coastal and Marine**
Objective 7: To protect the Port Phillip Bay (western shoreline) & Bellarine Peninsula Ramsar sites.

Waterways & Wetlands
Objective 1: To ensure the long-term protection & rehabilitation of the City’s waterways and wetlands.
Objective 4: To ensure no net loss in the extent of wetlands of each existing type.
Objective 5: To protect connectivity between major wetlands through adequate protection of significant wetland chains.

Actions:
4. Investigate the expansion of the Port Phillip Bay (western shoreline) & Bellarine Peninsula Ramsar site boundaries.
6. Investigate the protection, through the Planning Scheme, of the chain of wetlands between Ocean Grove and Pt Lonsdale that have been identified as environmentally significant and having complimentary values to the Port Phillip Bay (western shoreline) and Bellarine Peninsula Ramsar site.
8. Establish as Council policy that no waterways and wetlands are drained or disturbed as part of any development or works.

In respect to these objectives and actions, Council’s opening submission notes that:

The Geelong Environment Council is correct in its observation that the proposal is contrary to certain sections of Council’s EMS. In terms of Action 6 the intent behind that action relates to the wetland areas east of Bonnyvale Road in Ocean Grove through to and including Lake Victoria.

Council’s closing submission does not shy away from this issue. It acknowledges that “the proposal is not entirely consistent with all policies in the scheme” specifically noting that “it not consistent with aspects of the CoGG Wetland Strategy and Environmental Management Strategy.”

In respect to Council’s response to Action 6, Mr Mitchell (and others) contest this explanation/position of Council on the grounds that it “is inconsistent given that the provision refers to the chain of wetland being environmentally significant in the context of the Ramsar site, which would mean the chain providing a connection with the Swan Bay Ramsar site and necessarily include the proposed development site and Lakers Cutting”. The Panel agrees with Mr Mitchell in this regard.

Council’s submission also highlights that the 2006–2011 Environmental Management Strategy contains the Precautionary Principle which it states “is somewhat relevant here” and further that “the proponent has prepared an EES that will need to be further
tested through the Independent Panel process to determine if the above Precautionary Principle is being met”. The Precautionary Principle reads as follows:

If there are threats of serious or irreversible environmental damage the lack of scientific certainty of the effects should not be a reason for postponing measures to prevent environmental degradation or prevent immediate mitigation actions. The onus of proof is on the proponent and assumes the lack of certainty regarding the potential impact as grounds for caution rather than proceeding with an action.

In regard to this matter the PLCSG highlights that in addition to the Precautionary Principle being mentioned in the Scheme (at Clause 21.10), the EPBC Act “requires the Minister to consider the principle in making decisions. The Precautionary Principle dictates that decision makers should take a more precautionary approach now so that present decision minimises the exposure of risk and liability for future generations”.

The proponent advised that this principle is referenced in Section 1C of the Environment Protection Act 1970, and in closing highlighted that that the principle is not “be cautious in decision-making”. In highlighting this, the proponent referred the Panel to Section 1C (2) of the Act which states:

Decision making should be guided by:

(a) a careful evaluation to avoid serious or irreversible damage to the environment where ever practicable; and

(b) an assessment of the risk-weighed consequences of various options.

The proponent highlighted that the EES has utilised the Precautionary Principle in the assessment of the project referring to Chapter 3, section 3.4.5 under the heading of Dealing with Uncertainty with respect to its risk assessment of hydrological modelling, contamination assessment, ecological features and socio-economic assessment. In this context, the Panel is satisfied that the EES has had appropriate regard to the Precautionary Principle.

In conclusion, the Panel agrees with Council and others that there are some inconsistencies which must be considered in the context of balancing competing objectives, having regard to the limited status of the document in a statutory planning context.
**CoGG’s Wetland Strategy (2006)**

Submissions from the GEC and others advance that the development is not consistent with the *City of Greater Geelong Wetlands Strategy (2006)*. Council’s response to this reads as follows:

In respect to the City’s Wetland Strategy 2006 the GEC is correct in that the proposal is contrary to a number of sections. The Vision states “It is the City of Greater Geelong’s vision that: Wetlands be protected, enhanced and managed sustainably to ensure their diversity, their high biological values, their conservation significance and their ecosystem service functions are maintained and restored.”

Under Targets, these include:
1. No further reduction in the number and area of wetlands based on wetlands identified in the DSE wetlands database. The subject site is identified in the DSE wetlands database & comprises two types of wetland, permanent saline and semi-saline salt flats.

**Strategic Objective 1: Wetland protection through the Planning Scheme**

As part of the new wetland overlays being developed by Council implementing the Strategy, the subject site may eventually have an Environmental Significance Overlay (ESO) over the wetland areas.

**Strategic Objective 2: Integration of wetland protection into major Urban Sustainable Development proposals**

Within the Goals of this section it states “The protection and enhancement of wetlands will be incorporated into the objectives in the City’s strategic plans and management programs”.

Within the Approach section it lists:
1. Plan for growth in the City of Greater Geelong with consideration for the impacts on specific wetlands and their values as well as for wetland conservation across the whole municipality.
2. Participate in strategic land use and infrastructure development, augmentation and replacement decisions and provide a wetlands protection perspective.
3. Include wetlands as a specific environmental component of triple bottom line assessments, including impact assessments associated with strategic decisions.

As per the Panel’s conclusions in relation to Council’s 2006-2011 Environment Management Strategy, the Panel agrees that the proposal is inconsistent with various
aspects of Council’s adopted Wetland Strategy and therefore it must consider this in the context of balancing competing objectives, having regard to the limited status of the document in a statutory planning context.

(v) Density of the Proposed Development

A number of submissions objected to the scale and density of the residential component of the proposed development. The key thrust of these is encapsulated in the following extract from the closing submission of the PLCSG:

This is not a case where the proponent can simply argue that since the site is residentially zoned, the Panel should support a residential development of this intensity in this location.

An intense and complex residential development of this scale is not what the Planning Scheme calls for. What the Planning Scheme calls for is a developmental proposal that integrates into this setting in a very sensitive manner.

As highlighted in Council’s opening submission, those objecting to the density of the development generally considered the number of proposed dwellings and an aged care facility is too great, and should be reduced to retain the existing waterways with appropriate environmental setbacks and to limit the effect on the social infrastructure of the surrounding communities. Others consider the average lot size proposed (at around 450 to 500 square metres) and additional smaller medium density lots is not consistent with the average lot size for the existing Point Lonsdale township. It was submitted that the small lots will limit ability to plant vegetation which will compromise the existing residential character of neighbouring areas.

The evidence of Mr Linke responded to these submissions as follows:

The proposal seeks approval for subdivision of the land into 528 standard residential lots of a size that is not out of keeping with the pattern of recent development generally occurring in the area. As part of the proposal, it is envisaged that four integrated housing lots will be created yielding a potential 70 additional dwellings for which further town planning permits will be required. Furthermore, a single superlot is to be created which is planned to provide for up to 170 independent living units as part of a retirement living precinct. In overall terms, taking into account an overall yield of around 768 dwellings, an average density of just under 15 lots per hectare (of developable land area) is planned. This level of development density coupled with the substantial public realm areas proposed, is supported by the intentions of the Planning Scheme, is in keeping with the pattern of development expected for new developing areas, and will maintain the character and amenity of the broader locality in planning terms.
The Panel notes that Clause 21.08 (Urban Growth) of the Greater Geelong Planning Scheme states that the preferred density of development in new residential growth areas is 15 dwellings per hectare. Further, Table 2 to the Clause titled “Residential Lot Supply Project September 1995 – Vacant Residential Lots 15 lots/ha yield” identifies Point Lonsdale as having potential to yield 746 lots from its undeveloped broad hectare residential zoned land. It is uncontested that this yield relates to the subject site.

Mr McGurn considered the issue of density and design of the proposed subdivision layout, and it is his opinion that:

Having regard to the significant constraints of accommodation tidal water flows, flood management and preservation of vegetation (amongst other environmental issues), the proposed subdivision layout has been skilfully designed. In addition to managing environmental issues the subdivision is:

- Well connected to the existing township and road network;
- Provides for a high proportion of lots which have been orientated for appropriate solar access;
- Provides ready access to public open space for residents;
- Provides diversity in lot sizes ranging between 225 and 768 metres squared as well as provision for lots for multi unit residential development and retirement living;
- Affords legible circulation throughout the site;
- Provides opportunities for cycling and walking throughout the site; and
- Provides vistas to public open space and waterways.

In responding to submissions on this issue Council noted:

Clause 21.08 of the local section of the Greater Geelong Planning Scheme sets a target of 15 dwellings per hectare for new residential areas and on this basis the overall density for the development is broadly consistent with local planning policy.

The proposed lot layout with a mix of lot sizes accords with CoGG’s directions for providing a variety of housing opportunity. Loss of landscaping opportunity within smaller sites is off-set to some degree by landscaping opportunities adjacent to the waterways and within road reserves.

Council provided an analysis of how the proposed lot densities compares to those in surrounding developed areas. It concluded that the Lonsdale Lakes area has a net lot yield of 10.75 lots per hectare and the Hollywood Estate has a net lot yield of 11.66 lots per hectare.
The Panel is satisfied that the proposed density of residential development is consistent with local planning policy articulated in the Scheme. The proposed yield of 14.84 lots per hectare net, 9.42ha gross, is not considered out of character with surrounding settlement densities and adequately responds to the yield target specified at Clause 21.08. The Panel notes that the design of the development reserves approximately 30ha of the residential zoned land for waterway and integrated local open space provision. This represents approximately 37% of the zoned residential land parcel and in the view of the Panel, represents a positive attribute of the proposal. The Panel notes that the design and density proposed has been assessed against the objectives and standards of Clause 56 with the finding of this assessment being largely uncontested. The Panel agrees with Mr McGurn that the subdivision design contains many positive attributes and features.

Therefore, subject to the design to adequately addressing other policy imperatives discussed elsewhere in this report, the Panel is satisfied that the residential density proposed is supportable.

(vi) Aged Care

While a number of submittors applauded the proponents inclusion of provision for an aged care facility as part of the Masterplan, others expressed concern that it may not be constructed and is purely being used as a ‘carrot’ in consideration of the application. The proponent highlights that the allotment set aside for a 120 bed aged care facility aims to provide a level of accommodation that will allow for the changing health and accommodations needs of the local population over time.

The proponent reaffirmed its commitment to this element of the Masterplan during the hearing, while noting that it would not be the owner/operator of the proposed facility. It tendered correspondence from the CEO of Arcare which formally expresses their interest in the development of the Aged Care facility.

In relation to the aged care facility, Mr Linke states:

The Master Plan that accompanies and forms part of the DPO sets aside the land required for the aged care facility and denotes it in clear terms. I have no reason to believe that such a facility will not be constructed as part of the overall development of the land or that its location is likely to give rise to any planning problems. The Master Plan provides for a level of certainty about the future intentions for the land and to the extent that there is any departure from that concept contemplated by the owners, any change to the Master Plan will have to involve a further amendment to the Planning Scheme.
The original submission of the Borough of Queenscliffe noted the inclusion of a retirement living precinct in the development will have a positive impact for residents wanting to stay within the existing locality. The Borough supported this, and submitted that its delivery and timing should be required via a S173 Agreement.

In response to the Borough’s submission, Council acknowledged that “that there is a community benefit for having land set aside for an aged care facility and as such, this land use will continue to be required on any development plan approved under the Development Plan Overlay. It is submitted however, that the aged care facility is not prudent to the overall support of the subdivision and therefore its delivery and timing should not be restricted via a S173 Agreement”. The Panel supports this submission and rejects the need for delivery and timing of the Aged Care Facility to be tied to a Section 173 Agreement.

(vii) Integration with Point Lonsdale Township

A number of submissions opposed the development on the grounds that it did not adequately integrate with the Point Lonsdale township, and in response, Mr Linke said:

The subject land occupies a position at the edge of the existing township, bordering the remainder of the Lonsdale Lakes development. The land falls within the existing township boundary for Point Lonsdale and represents vacant residential zoned land that has been earmarked for further township development for a period of at least 20 years.

I do not regard the location of the site is isolated or suffering from adverse conditions in terms of its positioning relative to the remainder of the township. The land and its future development offer the opportunity to create an environment and amenity that appeals to a lifestyle that many will find attractive and convenient. Reliance will be placed on services and facilities within the town centre and other facilities in the broader region, however this need is no different to many other parts of Point Lonsdale and Queenscliff that exhibit similar locational and demographic characteristics.

The traffic evidence of Mr Hunt highlighted that direct links to Point Lonsdale township are provided along the Shell Road/Lawrence Road corridor. He considers this connection is expected to provide satisfactory linkage between the site and the existing township for vehicular traffic. Mr Hunt highlighted that the remaining opportunities for vehicular connections (Silver Ridge Road and Peterho Boulevard) have been utilised in the proposed subdivision layout in order to maximise connectivity.
The Panel notes that road, cycle, pedestrian paths and intersections upgrades are included as conditions of the Development Plan and Permit. The Panel is satisfied that the subject land currently adjoins the urban fabric of Point Lonsdale and its development as proposed by the Masterplan will facilitate adequate pedestrian, bicycle, public transport and vehicular accessibility to Point Lonsdale and existing urban amenities. This issue is further discussed in Section 14.2 of this report.

(viii) **Non Urban Break**

A number of objecting submissions consider the development represents an incursion into the non-urban break between Point Lonsdale and Ocean Grove.

Council’s response to these submissions was that whilst the proposal will introduce new development to the western side of Point Lonsdale, “there will be still some 3.5 kilometres of Farming zoned land between the two townships and therefore a distinct “green” delineation or wedge will be maintained”. (Note: This position of Council is similarly reflected in their previously highlighted comments in relation to the proposals compliance with the SPPF, LPPF and the Bellarine Peninsula Strategic Plan).

Mr Linke agrees with Council’s position and notes:

> The subject land and its intended subdivision and development for residential purposes ought to be regarded as being situated within the existing urban area of the Point Lonsdale settlement. The existing urban area, developed or undeveloped, is defined by the existing urban zoning applicable to the land, which in this particular case is Residential 1. The principle of encouraging development on existing zoned urban land is supported by planning policy at both State and local levels.

> In terms of any concern about threatening the “non-urban break” between townships, the proposal does not allow for the expansion of the Point Lonsdale township beyond what is contemplated by the existing planning controls. Further, I also note that the proposal will not impact on any valuable agricultural land. The proposal does not perpetuate any lineal urban sprawl along the coast and in essence, utilises a natural boundary to demarcate the urban edge of Point Lonsdale.

The Panel agrees with this evidence and the articulated position of Council. It does not place any great weight on the ‘fingernail’ symbol that is used to reference the limit to urban expansion on the Strategic Framework Plan at Clause 21.07. The Panel is satisfied with Council’s response that this symbol is a diagrammatical representation and not unlike that which occurs for many other settlements reflected on the plan. Further the Panel notes that the ultimate transfer into Council
ownership of the proposed conservation area to the north west of the Residential 1 Zone will assist in entrenching the urban break for future generations.

(ix) Structure Planning for the Point Lonsdale Area

A number of submissions objected to the proposal on the grounds that the Structure Planning process for Point Lonsdale was yet to be finalised. In response, Council’s opening submission to the Panel noted:

There are currently no structure plans or clauses in the Greater Geelong Planning Scheme specifically relating to Point Lonsdale. However, the development is on land already zoned Residential 1 and as such does not require a Structure Plan to justify the Amendment. A Structure Plan for Point Lonsdale is currently being prepared in cooperation with the Borough of Queenscliffe and DPCD. This will provide further direction for land in the vicinity of Stockland’s residentially zoned land holding.

In response, Mr Linke said:

The proposed Amendment and accompanying EES will only aid and assist the structure planning of the town. It is my view, given the complexities of the Lonsdale Lakes project, no structure planning process would have delved into the environmental and other complex development issues that are required to be resolved in order for a properly informed decision to be made about the development potential of the land. The combined EES and Amendment process allows for the future use and development of the land to be determined in the context of a holistic approach to land use planning and development, underpinned by sustainability principles.

The structure planning for Point Lonsdale should take account of and ultimately be informed by the findings of this Panel and the outcome of the Amendment and EES. That way, a decision about the existing urban zoning of the land can be resolved. In the absence of the Amendment and EES in this case, the structure planning process for Point Lonsdale, as all encompassing as it may be, would not have been able to sustain the level of rigour demonstrated by this project to date.

The Panel agrees with the submission of Council and the evidence of Mr Linke and highlights that the structure planning issue, while noted in some objecting submissions, was not advanced as a key determinate factor for consideration. The Panel is of the opinion that there would be little, if anything, gained from deferring consideration of this matter until the current structure planning exercise for Point Lonsdale is complete.

(x) Structure of Proposed Planning Controls
As outlined in the evidence of Mr Linke, extensive discussion occurred between the former Department of Sustainability and Environment (now Department of Planning and Community Development as it affects this process), the City of Greater Geelong and the proponent in relation to the most appropriate planning process to facilitate an assessment and transparent implementation of the proposal. In all, five different scenarios were reviewed to determine the process that would best suit all stakeholders. Having considered the merit of each option, it was resolved to advance a combined request to amend the Planning Scheme and consider a planning permit concurrently with the exhibition of the EES.

The Panel considers that the combined exhibition process has been appropriate, and has facilitated consideration of planning issues in a holistic manner. The technical detail raised via consideration of the EES has informed the decision making process, and has allowed the involvement of the public in one consultation process where all applicable issues have been able to be expressed and considered.

In respect to the choice of planning controls advanced, objections were received in regard to the use of the Development Plan Overlay. The submission on behalf of the PLCSG advanced the opinion that the application of the Development Plan Overlay to the site was inappropriate for the following reasons:

- The DPO enables a Development Plan to be amended to the satisfaction of Council;
- Any change to Development Plan will affect third party rights;
- The DPO does not permit third parties to be involved in the process of amending the Development Plan;
- Mr Byrne’s evidence was that Canal Estates were inherently risky;
- The history of site is that no guarantee proposal will be finished to completion; and
- Circumstances may change on the site – Swan Bay/Sill may silt up, habitat quality, change in climate change projection.

Council however is satisfied that the DPO is the appropriate control to ensure the proposal develops in a fully integrated and comprehensive manner, and stated:

The Amendment is required to introduce a new DPO over the site to ensure that the new residential and open space system proposed for the land is planned and developed in a fully integrated and comprehensive manner. The Amendment makes proper use of the Victorian Planning Provisions by using the DPO to provide an extra layer of control for future use and development of the site. The DPO also locks in a development concept plan and specific requirements into the Planning Scheme that any future developer would need to comply with.
It is acknowledged that any future proposals that are consistent with the DPO will not be subject to third party involvement, however, certain uses developments will require a planning permit and will be assessed by Council officers against the Development Plan and the other provisions of the Planning Scheme.

In respect to the planning controls, the Borough of Queenscliffe advanced that “the structure of the controls is generally sound” and a Development Plan Overlay is appropriate. While highlighting these opinions, the Borough noted that the extent of the area proposed to be affected by the DPO should be reduced and the Schedule to the overlay should be modified.

The above submissions are supported by the Panel, who agrees that application of a Development Plan Overlay accompanied by an appropriately structured schedule that locks in the development concept via a Development Plan, which is in turn tied to a planning permit, provides an appropriate and comprehensive framework for planning and environmental issues to be addressed. The Panel considers that such a framework will enable Council to maintain control over the future use and development of the site and provides a high and adequate degree of certainty to the community regarding the development outcome.

Having reached this conclusion, the Panel notes that it is not satisfied with the drafting of the exhibited controls. The Panel advised early in the hearing process of its concerns relating to the distribution and positioning of Masterplans, Staging Plans, the Project Environmental Management Plan, Construction Management Plans and accompanying planning controls between the schedule of the exhibited DPO, the draft Development Plan and Draft Planning Permit. The Panel expressed its concerns that the exhibited controls lacked transparency and certainty.

These concerns were acknowledged by Council, the Borough of Queenscliffe and the proponent and as a result, several iterations of the controls were debated throughout the hearing. Ultimately consensus was reached between these parties regarding structural adjustments to the proposed planning controls. The agreed modifications to the Development Plan Overlay that are supported by the Panel include:

- Removal of the Development Plan Overlay from areas north east of the Bellarine Highway other than the area required for the waterway link to Lakers Cutting. This will ensure adequate opportunity for future third party review of any proposal to develop this part of the subject site;
- Introduce a new clause in the Development Plan Overlay (Requirements before a permit is granted) to conditionally enable a permit to be granted prior to the approval of a Development Plan so that the consideration of the Development Plan Overlay and permit can continue simultaneously;
• Modify conditions and requirements on permits to specify that a planning permit must include conditions relating to the following:
  - The subdivision and development of the land must not commence until a Development Plan has been approved under Schedule 14 of clause 43.04.
  - Compliance with Building and Landscape Design Guidelines.
  - Preparation and approval of a Project Environmental Management Plan, and Earthworks, Landscape, Stormwater, and Waterways Plans all being generally in accordance with Master Plans forming part of the approved Development Plan as well as a Construction Management Plan and Native Vegetation Offset Plan.
  - A requirement to enter into a Conservation and Open Space Areas Agreement and an Infrastructure Agreement pursuant to Section 173 of the Planning and Environment Act 1987.
  - The Schedule to Development Plan Overlay should be modified to require the Responsible Authority to consider whether the proposal is generally consistent with the purpose of the zone and whether the use or development is generally in accordance with any approved development plan.

• Modify the Requirements for the Development Plan as specified in the Schedule to the Development Plan Overlay to remove references relating to meeting objectives and in their place require the Development Plan to include: an Environmental Management Framework; Building and Landscape Design Guidelines; and a Masterplans for Earthworks, Landscape, Stormwater Drainage, and Waterways that are generally in accordance with the approved EES for the land and the Minister’s Assessment. In addition to these overarching requirements, the DPO should also specify that the Building and Landscape Design Guidelines must have regard to relevant guidelines in the Building Siting and Design Guidelines – Point Lonsdale Coastal Area – Borough of Queenscliffe and the Waterway Master Plan must be designed in accordance with best practice principles and be to the satisfaction of the Responsible Authority and the relevant Floodplain Management Authority;

• Modify the Decision Guidelines of the Schedule to the Development Plan Overlay to remove reference to “consistency with objectives set out in this schedule” and in its place specify that the Responsible Authority must consider as appropriate, the EES and Technical Reports Vol 1 -14 as well as the Minister’s assessment of the EES;

• Include a new provision of the Schedule requiring the Responsible Authority to consult with the Borough of Queenscliffe Council and the Department of Sustainability and Environment before approving the Development Plan; and

• Include the updated Masterplan in the Schedule.
The agreed modifications to the Permit that are supported by the Panel include:

- Remove reference to “Prior to works commencing” and replace with “before a plan of subdivision is certified” under the heading Amended Plans;
- Include a provision relating to Staging that specifies subdivision may be carried out in stages and that an Overall Staging Plan must be submitted and approved by the Responsible Authority before commencement of works that includes the staging of the subdivision, including provision of public open space and community facilities, all off site road and intersection works, earthworks and the waterways. A provision should be included that requires the submission of a plan, to the satisfaction of the Responsible Authority, showing the manner in which the development of the land will be completed if the next stage is the final stage, and requirements that the owner of the land will enter into a Section 173 agreement providing appropriate security that such works will be carried out if the development of the land ceases at the end of the stage;
- Remove requirements for the submission of the Environmental Management Framework from the Permit and in its place require the submission, to the satisfaction of the Responsible Authority, of a Project Environment Management Plan prior to works commencing. (Note that the Environment Management Framework becomes a Requirement of the Development Plan.); and
- Remove requirements for the preparation of Master Plans for Earthworks, Landscape, Stormwater Drainage and Waterways and in their place require preparation of Plans that that must be generally in accordance with the Master Plans that form part of the approved Development Plan.

It is the Panel’s opinion that the above recommended structural adjustments to the Development Plan Overly and draft Permit, combined with the recommended removal of the Development Plan to the majority of subject land to the north east of the Bellarine Highway, have resulted in a more transparent and robust suite of controls that will maximise Council’s control over the project once approved. The Panel has confidence that this restructured suite of controls will facilitate the project in an orderly, secure and manageable fashion consistent with the intent of the VPPs and relevant planning legislative requirements.

In forming the above conclusion, the Panel concurs with Council, who said:

Council officers believe the revisions to both the Development Plan Overly Schedule and the DPO Map (to limit DPO on northern side of Hwy to waterways only), and the Planning Permit Conditions improve and tighten the package of planning controls that could apply if the development were to proceed. Council officers recommend the new documents to the Panel.
The Panel notes that the Borough of Queenscliffe and DSE both support the re-drafted controls. In this regard the Borough noted in closing submission that “the amended planning controls provide comfort that what is being proposed, is as identified in the EES”.

While significant structural modifications have been made, the Panel finds that the changes proposed to the planning controls as outlined above substantively do not modify the content nor the substance of planning matters addressed in the EES or proposed amendment. The Panel acknowledges the revised structure of the controls was substantially advanced and facilitated through the input of the Borough of Queenscliffe through Mr Montebello and Ms Walker.

4.3 Findings and Recommendations

The Panel is satisfied that the EES has adequately documented and assessed relevant land use planning matters including the proposal’s compliance with current State and Local Planning Policy Framework. In relation to this policy framework, the Panel finds that the proposal is generally consistent with State Planning Policy and the strategic intent articulated in the Local Planning Policy of the Greater Geelong Planning Scheme. In reaching this finding, the Panel acknowledges that there are some elements of policy, particularly relating to environmental considerations where the proposal’s consistency is challenged. These matters are considered later in this report.

The Panel highlights that it is not satisfied with the structure of the exhibited planning controls. Having noted this, the Panel considers that the revised planning control framework that has resulted from the detailed examination afforded from the hearing process, is workable and will maximise Council’s control over the project. The Panel highlights that the proposed modifications are primarily of a ‘structural’ nature. It is the Panel’s opinion that the revised planning control framework is more transparent and robust and will enable the project to proceed in an orderly, secure and manageable fashion consistent with the intent of the VPPs and relevant planning legislative requirements.

The Panel’s conclusions and recommendations in relation to the exhibited Planning Scheme Amendment and Permit are presented in Chapter 19.
5. GEOMORPHOLOGY AND GEOTECHNICAL

5.1 Description and Key Issues

This chapter deals with issues directly related to the geomorphology of the site and the technical capacity of the geological substrate to support the proposed engineering works. The Panel’s consideration of these matters is based Chapter 7 of the EES, the Geotechnical Assessment prepared by Golder Associates and provided as Technical Appendix 3 to the EES as well the expert witness statement of Mr Neville Rosengren which emphasises the value of the site as a significant geological and landform feature. The consideration of issues related to groundwater levels and salinity are dealt with separately in Chapters 6 (Site Contamination) and Chapter 7 (Hydrology).

The Golder assessment provides an analysis of the geotechnical subsurface conditions and an impact assessment of the proposed works. The assessment has addressed the requirements of the relevant Australian Standards, Codes and engineering standards accepted in Victoria and recommends any necessary mitigation, management and monitoring measures.

The key issues in relation to geomorphology and geotechnical include:

(i) Geomorphologic Significance; and
(ii) Geotechnical Capability.

5.2 Panel Response

(i) Geomorphologic Significance

The basic geology of the site is composed of swamp and aeolian deposits. The swamp deposits are sands and silt lying in east west zones across the southern two thirds of the site. The aeolian deposits are low dunes of wind blown sands separating the swamp deposits.

The present site morphology is highly disturbed by the shell grit mining, the road and railway track embankments and the artificial lakes excavated during the earlier uncompleted development. There are a range of intricate channels constructed to link Lake Victoria to the on-site Lakes and to Lakers Cutting. Portions of the landform in the western half of the site are below sea level, some containing pooled water.
Mr Rosengren, who was retained by the PLCSG, showed an extensive knowledge of the geology and geomorphology of coastal Victoria and he explained in detail to the Panel that, despite the disturbance, the site has high geo-science value. He describes the site as having High Regional Significance in displaying and interpreting the geological and landform history of the Bellarine Peninsula and the southern region of Port Phillip Bay. The arrangement and composition of the dunes illustrates how in earlier times, sea levels have been both higher and lower, and climates both colder and drier than at present. He is concerned that mining the northern dune to provide filling for the low lying areas will remove that evidence. He acknowledged that the significance rating was his personal, though expert opinion as there was no standard classification of significance for geomorphologic features. He acknowledged that the features he was describing did extend beyond the boundaries of the site.

The Golder review did not find any reference to the site as having particular Geological or Geo-morphological Significance among the several studies commissioned by the previous Ministry for Planning and Environment to identify such areas within Port Phillip and Corio Bays. Mr Morris pointed out that one of these, “Areas of Geological & Geomorphologic Significance on the Coast of Port Phillip Bay”, was prepared by Mr Rosengren. In that report (prepared in 1988) Mr Rosengren identified eleven areas of significance between Point Lonsdale and Swan Bay but none of these included the development site. Mr Rosengren said that this was because that study was confined to areas closer to the coast.

(ii) Geotechnical Capability

The documentation describes the examination of soil profiles and subsurface conditions across the site using boreholes and “cone penetration” tests and test pits. Ten separate areas were identified for investigation according to their current condition. The potential planned earthworks and the potential for adverse impact in each is discussed in detail in Technical Appendix 3 to the EES.

The proposed development will involve extensive excavation of both the dune areas and the swamps to provide fill for the residential areas and to construct the lake system. This would include the filling in of most of the water-bodies remaining from the shell grit mining and those remaining from a previous incomplete development.

The EES documentation includes an examination of the capacity of the soils and geological structures to cope with the adverse impacts that could potentially arise as follows:
During construction:
- Unstable borrow pit and bund edges could result in the discharge of sediments and/or turbid water to the waterway system;
- Pumping of water from the borrow pits could lower local water tables and affect retained native vegetation;
- Exposed working areas could erode until revegetated or otherwise stabilised; and
- Excavation, transport and placement of fill material could generate dust.

Post construction:
- Beach edges and near vertical lake edges can erode and cause sedimentation and turbidity in the waterways.

In summary the EES concludes that the identified geotechnical risks are low to medium and can be managed through implementation of best practice environmental management including prevention and mitigation.

Mitigation measures include:
- Implementation of stormwater and sediment controls in accordance with the requirements of the EPA’s Environmental Guidelines for Major Construction Sites (Publication 480);
- The detailed design will address provision of appropriate retaining walls and edge treatments for water bodies, stormwater management and dust suppression measures, effective drainage diversion works for surface water, sediment traps and re-establishment of protective vegetation. Borrow pits will be located, where possible, beyond the groundwater influence zones of vegetation preservation areas;
- Subsequent to the detailed design, the project environmental management plan, the construction environmental management plan and the contractor Work Method Statements will establish the technical specifications necessary to control impacts; and
- Ongoing Management Plans will establish the monitoring regimes and contingency arrangements to ensure that the mitigation measures are successful.

5.3 Findings and Recommendations

The removal or contouring of the dune areas within the site will reduce its value as a demonstration of some coast-related geomorphologic processes. This value has however already been compromised by the embankment constructions and the shell grit excavations including the dumping of overburden. Further there are other
examples of the same processes within the locality. The Panel therefore considers that the reduction in geomorphologic demonstration value is minor.

Noting that potential acid sulphate soil and saline groundwater issues are addressed elsewhere in this report, the Panel considers that there has been sufficient evaluation of the geotechnical capacity of the site to conclude that potential deleterious impacts are minor and can be managed successfully.

In conclusion, the Panel finds that, as other local examples are available, the geomorphologic values of the area will not be unduly compromised by the development. Geotechnical issues can be successfully addressed during the detailed design process and through implementation of the EPA’s Environmental Guidelines for Major Construction Sites and in the Project Environmental Management Framework and consequent management and operational plans.

The Panel makes no specific recommendations in relation to this issue.
6. SITE CONTAMINATION

The site contamination assessment is contained in Chapter 8 of the EES and is based on the assessment prepared by Golder Associates and presented in Technical Appendix 4. As part of this site assessment Golder assessed the site for actual and potential acid sulfate soils (also referred to as acid sulphate soils).

Mr Nick Withers, of Golder Associates, briefly addressed these issues in his expert witness statement and during his presentation to the Panel.

As there was some evidence of some low level contamination and potential acid sulfate soils found during initial assessments of the site, the proponent proposes to engage an EPA accredited Auditor to conduct a Statutory Audit of the site and to manage contamination and acid sulfate soils through its Environmental Management Framework.

6.1 Description and Key Issues

The EES provided a range of information in relation to site contamination, including:

- Legislation and policy framework;
- Existing site contamination and acid sulfate soils;
- An impact assessment; and
- Management and mitigation measures

The predominant activity on the site with the potential to cause contamination has been the shell grit mining. More recently, on the south side of the Bellarine Highway there has been potato cultivation, disposal of demolition and solid inert waste and use of the land as a race track. The area north of the Bellarine Highway was used for the maintenance and fuelling of the shell grit mining equipment and is currently used the fabrication of metal goods. This area has several workshops and reportedly has or had several underground fuel tanks.

Golder Associates carried out a preliminary contaminated land site assessment in 2002 followed in 2003 by a more detailed broad site and targeted assessment of areas of interest such as the industrial area north of the Bellarine Highway. The assessment work included the drilling of soil bore holes, trenches in the industrial area, a test pit and electromagnetic surveys in the former race track area and laboratory testing of soils and groundwater.
Golder’s assessment which segregates the site into different areas based on former activities, was intended to provide sufficient information for the EES and to provide sufficient information to determine if further investigation would be required if the proposal is to proceed. Golder’s assessment follows the preliminary investigation process and partly satisfies further investigation stages outlined in the National Environment Protection Measure (Assessment of Site Contamination) 1999 (NEPM).

As the site is in a low lying coastal area and because of its geomorphology, Golders assessed the site for acid sulfate soils and soils high in metal sulfides that once exposed to oxygen have the potential to generate sulfuric acid. These soils can adversely impact on aquatic communities as a result of run-off, agricultural practices and engineering works such as roads and concrete and steel constructions.

The trigger levels set in the NEPM for human health and ecological values and other relevant standards were used to evaluate the site assessment data. The results are summarized as follows:

- From the broad assessment, where samples from 55 bore holes from across the site were analysed, 13 soil samples exceeded the NEPM Interim Urban Ecological investigation levels (EILs) for arsenic but were all less than the human health based investigation levels (HILs) for those chemicals of interest that were tested for.
- There are isolated occurrences of solid inert waste such as concrete, bricks and plastic buried in the former race track.
- Five samples from the two trenches and 10 boreholes in the industrial area north of the Bellarine Highway had arsenic levels above EIL but below HIL. One sample had a zinc level marginally above EIL.
- Groundwater was sampled from four locations in the industrial area north of the Bellarine Highway and compared to the NEPM and/or the ANZECC criteria for Ecosystem Protection, Recreation Waters, Irrigation and Stock Watering. Nearly all results were below detection levels for dissolved metals and a suite of organic compounds and those that could be detected were well below criterion levels.
- Organochlorine and organophosphates pesticide residues (Dieldrin) were detectable in the soils in the area formerly used for potato cultivation but at levels well below the NEPM human health based standard.
- The potential for acid sulfate soils was tested in twenty eight targeted locations in the swamp deposit areas. 101 subsoil samples were tested in the field with 47 of these undergoing additional laboratory testing. The results indicate no evidence of acid sulfate soils currently present. However there is potential for them to develop in several locations if exposed to oxygen as they have insufficient natural buffering capacity.
Golder’s conclude that the overall risk to the environment (from acid sulfate soils) is low as according to the EES: “appropriate management during construction will ensure that operation of the site will not require ongoing management of solid inert waste, asbestos and contaminated/acid sulphate soil issues, and has decided to subject the entire site to a Statutory Audit and is in the process of appointing an Auditor”.

At the hearing Stockland indicated that it proposes to bury acid sulfate soils in the west end of the site if found. Mr Withers indicated in response to a question by the City of Greater Geelong, that an estimate of the quantity of potential acid sulfate soil that will be required to be excavated and buried will be determined once more detailed further investigations of acid sulfate soils on a finer grid are completed.

The EES further addresses the management of acid sulfate soil and contamination in its Project Implementation Section where it outlines the management of environmental issues associated with the construction and ongoing maintenance of the proposed development, the main vehicles being an Environmental Management Framework, a Project Environmental Management Plan and contractor Project Environmental Management Plans. It is proposed that the management of acid sulfate soils will principally be addressed in the Project Environmental Management Plan where its commitments include avoiding the disturbance of acid sulfate soils where possible and managing any acid soils to the satisfaction of an independent auditor.

The submission from DSE expressed concern that the EES has not adequately responded to Clause 15.08-2 of the Greater Geelong Planning Scheme which requires that planning for coastal areas should avoid disturbance of coastal acid sulfate soils, rather than seeking to minimise risk by the application of lime as required. However at the hearing Mr Brooks that while DSE prefers that possible acid sulfate not be disturbed the analysis indicates that, as the levels are low, acid sulfate soils are “not a show stopper”.

The Swan Bay Integrated Catchment Committee, the Queenscliffe Community Association and other submitters raised the issue of possible acid sulfate soils and/or possible site contamination from past practices on the site, however very little comment was made about these issues during the hearing.

The City of Greater Geelong considers that the EES information and response satisfies its requirements.

The key issues in relation to site contamination include:

(i) Acid Sulfate Soils; and
(ii) Management of Site Contamination.

6.2 Panel Response

(i) Acid Sulfate Soils

From the assessments to date no actual acid sulfate soils have been found but much of the site has soils that once exposed during construction and development, have the potential to generate sulfuric acid and mobilize toxic quantities of metals such as arsenic. However it was found that there is a natural buffering capacity, because of high calcium carbonate deposits, to prevent net acid generation over a large portion of the site and therefore would not require treatment to prevent acid generation. Treatment and on-site burial of those soils that do not have adequate buffering, accords with best practice environmental management.

(ii) Management of site contamination

The results from the site assessments to date indicate that, as a result of past practices, there are pockets of low level contamination at the site, namely some buried inert waste, some low level arsenic and dieldrin contamination, potentially some asbestos buried in with the demolition, and solid inert waste.

The commitment made by Stockland to subject the entire site to a statutory audit and to manage these issues in the Project Environmental Management Plan provides the Panel with reassurance that these issues will be properly managed.

6.3 Findings and Recommendations

The Panel agrees that further investigation of site soil contamination and acid sulfate soils is required and supports the proposal to engage an EPA accredited independent auditor to provide a certificate of environmental audit that complies with Part IXD of the Environment Protection Act 1970 to provide surety that the site has been cleaned up to an acceptable standard.

The Panel is satisfied that acid sulfate soils can be adequately managed, as outlined in the EES, through a Coastal Acid Sulfate Soils Management Plan (CASSMP), which is to include monitoring of waterways and groundwater, and developed to the satisfaction of the responsible authority.

The Panel has no specific recommendations to make in relation to Site Contamination.
7. HYDROLOGY AND WATER QUALITY

The hydrology and water quality assessment is contained in Chapter 9 of the EES and is based on an assessment by Golder Associates and Ecological Engineering. That assessment is included at Technical Appendix 5 Volumes 1-4 of the EES and a peer review by Parsons Brinckerhoff which is contained in Technical Appendix 6 of the EES, which in summary contains:

- a review of the key legislation and policies;
- the methodology for the research and field monitoring used to characterise the existing hydrological conditions;
- modelling undertaken to predict the conditions under the proposed development;
- the goals of the design of proposed on-site lake system and results of modelling to confirm the design goals can be achieved; and
- an indicative construction sequence and mitigations measures to minimise potential impacts arising from the development.

Subsequent to the exhibition of the EES, Golder Associates prepared several supplementary reports. Golder’s “Assessment of the Potential Impacts of Shallow and Saline Groundwater in Sands on infrastructure, Point Lonsdale Residential and Waterways Project”, was provided to the Panel on 30 May 2008 and “Tideflex® Study and Summary” with “Summary of Reviewed Tideflex Documents, Stockland, Point Lonsdale” (3 June 2008) was attached to the evidence statement of Mr Nick Withers. Tideflex valves are proposed to be used on the development’s culverts to control flows.

At the hearing the proponent called the following expert witnesses:

- Mr Nick Withers of Golder Associates, representing the collective work undertaken by Golder Associates, presented hydrology and water quality evidence as well as climate change evidence which is discussed in Chapter 9 of this report;
- Mr Marino Evangelisti of Emmerson Stewart (previously with Parsons Brinckerhoff) presented evidence on hydrology, particularly the tidal flushing system;
- Mr Geoff Bott, Endemic Pty Ltd (previously with Parsons Brinckerhoff) presented evidence on water quality; and
- Mr Gerald Byrne of Vantree Pty Ltd responded to questions about hydrology.

Messrs Withers, Evangelisti and Bott made consecutive presentations and responded
to questions of the Panel and other parties. An expert witness statement was provided by Mr Ralph Roob of Stockland which includes a report titled *The status of sedimentation in the southern area of Swan Bay, “The Sill” and Laker’s Cutting*, (July 2008) and a letter from Dr Wayne Stephenson Senior Lecturer in Geography; University of Melbourne. In addition:

- Mr Neil Craigie provided expert evidence on surface water management implications of the Stockland development for J McMahon and Sons and appeared before the Panel to respond questions on surface water management, waterway and stormwater management;
- Dr David Provis of Cardno Lawson Treloar Pty Ltd was retained by the Point Lonsdale Coastal Spaces Group to provide expert evidence on the flushing system, flooding and flood modelling and water quality; and
- Mr Andrew Longmore provided expert evidence on water quality, in particular nutrient recycling and marine and estuarine systems. Mr Longmore qualified that he lives in Point Lonsdale and works in Queenscliff.

There were numerous submissions that raised water quality issues (mainly against the proposal), while a few raised issues about the site’s hydrology. A number of submitters spoke to these issues during the hearing.

### 7.1 Description and Key Issues

The EES provided a range of information in relation to hydrology and water quality, including:

- Legislation and policy framework;
- Performance goals, the key one being that water discharging from the on-site lakes system should not impact the baseline water quality and sediment in Lakers Cutting and ultimately Swan Bay. Other performance goals include compliance with State Environment Protection Policy (Waters of Victoria) (SEPP (WoV)) including during construction and post development, and to use monitoring data and water quality objectives as a management tool to undertake actions to protect beneficial uses. Also provided in the Technical Appendix is a draft Water Management and Hydraulic Monitoring Plan which is to be included in the Project Environmental Management Plan;
- Field monitoring methodologies for surface and groundwater as well as Laker’s Cutting sediments;
- Descriptions of models and the modelling (including limitations) used to understand the current groundwater and surface water systems;
- Descriptions of the on-site lakes, Lake Victoria, Lakers Cutting and Swan Bay water bodies and their current hydraulic connectivity;
• Description of the groundwater behaviour and flood conditions on the site based on modelling undertaken by Sinclair Knight Merz, then Water Technology and updated by Golder Associates;
• Baseline groundwater and water quality results in the current on-site lakes, Lakers Cutting and Lake Victoria and assessed against policy;
• A brief description of options considered for the lake design system;
• A description of proposed tidal flushing and stormwater bio-retention systems;
• A description of water quality management during construction; and
• Stormwater management and use of reclaimed water.

The EES identifies the key issues arising during the construction phase as:

• Inflows from other areas;
• Water movement through constructed and completed sections of the on-site lakes; and
• Changes in the groundwater depth.

The EES identifies the key issues arising from the operation phase of the on-site lake system as:

• Changes in the groundwater quality from the use of fertilisers;
• Changes in inflow of saline water from Lake Victoria;
• Degree of water circulation;
• Change in the groundwater levels and drainage patterns from changes in the ground surface levels; and
• Impacts of climate change.

The Panel considers the key issues in relation to hydrology and water quality include:

(i) Application of the State Environment Protection Policy (Waters of Victoria);
(ii) Flushing time;
(iii) Potential for eutrophication of the on-site lakes;
(iv) The Lakers Cutting Sill;
(v) Inlet/Outlet Valves;
(vi) Water Quality Monitoring; and
(vii) Urban Stormwater Management.
7.2 Panel Response

(i) Application of the State Environment Protection Policy (Waters of Victoria)

The Proponent submitted data and an evaluation of baseline surface water quality monitoring in Lake Victoria and Lakers Cutting. This data demonstrates that the water quality in Lakers Cutting and Lake Victoria currently exceed default values of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000) as specified for the ‘estuaries and inlets’ segment in the State environment protection policy (Waters of Victoria).

Having regard to the baseline data, the proponent (in Technical Appendix 5 Volume 1 Table 4) proposes water quality objectives to apply to the water bodies on-site and impacted by the development. The report indicates that there has been verbal confirmation from the Environment Protection Authority (EPA) that the segments and beneficial uses listed are appropriate.

The proponent has drafted a Water Quality Hydraulic Monitoring Plan (Technical Appendix 5 Volume 3 Attachment O) that specifies hydraulic performance objectives for the Site Lakes System and includes, but is not limited to, monitoring of:

- Sediments in Lakers Cutting;
- Flow rates and flow volumes at the main inlet and outlet points to the Lake system and at Shell Road;
- Aquatic plant communities; and
- Water quality at various strategic locations and at intervals varying from weekly to 5 yearly depending on the construction and operation cycles.

The proponent proposes to consult with Environment Protection Authority, Department of Sustainability and Environment, Corangamite Catchment Management Authority and City of Greater Geelong prior to finalising the Plan. Furthermore Stockland proposes “that there will be independent auditing of the quality of water quality monitoring data, as part of the process to assess such compliance”.

Many submitters considered that the SEPP (WoV) had been misinterpreted by the proponent and that incorrect and lesser water quality standards contained in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000) had been applied.

Mr Longmore who considers “the proponent has either misunderstood or misinterpreted the State environment protection policy (WoV)”, outlined in his written and verbal evidence that given the connection between Lakers Cutting and Swan Bay, the more
stringent SEPP (WoV) objectives that apply to ‘Aquatic reserves’ should also apply to Lakers Cutting. It is Mr Longmore’s opinion that that Lakers Cutting falls within the ‘inshore’ segment of the SEPP (WoV), Schedule 6 - Waters of Port Phillip Bay and therefore should comply with these more stringent objectives. Mr Longmore reported that he had received advice from EPA which indicated that the Schedule F6 Aquatic Reserve objective should apply. Unlike other segments no quantitative water quality objectives are specified for the ‘Aquatic reserves’ segment. Rather Schedule 6 specifies that for ‘Aquatic reserves’ there is to be ‘no variation from the background water quality’. Furthermore based on the proponents aim to return water to Lakers Cutting with at least as high water quality as that taken from Lakers Cutting, the SEPP (WoV) Schedule 6 Aquatic Reserve objective should apply to the constructed Lake. However Mr Longmore did concede that use of the water quality objectives for estuaries and inlets, in the absence of Schedule 6, is defensible.

The Panel notes that the water quality in Lakers Cutting, which receives inputs from elsewhere, does not currently meet the water quality objectives set out in the SEPP (WoV). The proponent’s objective to return water to Lakers Cutting at a quality which is at least as high as that taken from it complies with SEPP (WoV) and is therefore acceptable given that, in cases where environmental quality objectives cannot be attained (due to natural variation), the SEPP allows for the background level to become the environmental quality objective (clause 11 (2)).

However the Panel considers that to ensure that the highest possible water quality is achieved, and the beneficial uses as defined in the SEPP (WoV) are maintained, it is essential that the objectives and monitoring program in Water Quality and Hydraulic Monitoring Plan are finalised to the satisfaction of the various authorities. The Panel supports the proponent’s intention for water quality data be independently audited to ensure compliance.

(ii) Flushing Time

There was much debate during the hearing process about the performance of the Site Lake System and the time it will take for water to travel the 4.5 kilometres between the inlet and outlet to the system.

The Panel notes that the conceptual modelling undertaken by Golder Associates of the Site Lake System under a range of conditions came to the conclusion that that even under the driest conditions and “worst-case tidal conditions the proposed lake will get flushed at least 36 times in a year even if no rainfall and no outflow from Lake Victoria were to occur (an average of once each 10 days approximately). The longest duration between two flushings was simulated to be 14 days”. 
Based on the modelling, the Proponent has proposed a design hydraulic detention time (i.e. flushing time) of 20 days not to be exceeded more than 20% of the time and to monitor the Lake System to ensure that this objective is achieved either through the passive system developed during the detailed design phase, or if necessary through later modifications which could include pumping.

The competing evidence by Dr Provis indicated that he had not been convinced that the Site Lake System could be passive and it would require mechanical pumping to achieve the goal set for flushing time. He used a different model based on a different approach (e-folding) but reportedly the same inputs, to predict that the flushing time in the constructed channels may be closer to 130 days in which case there would provide ample time for both toxic and non toxic algal blooms to develop.

The Golder Associates modelling, which underwent a number of iterations, was modified as a result of the Parsons Brinckerhoff peer review and was subjected to intense scrutiny during the EES process whereas modelling undertaken by Dr Provis was not subjected to the same level of scrutiny.

Golder Associates and Dr Provis met in an effort to arrive at some level of consensus in relation to the modelling and most importantly the flushing time, but agreement could not be achieved.

The Panel found that this apparently irreconcilable difference between the models and their outcomes challenging and unhelpful. Ultimately the actual flushing times, regardless of the models and their outcomes, need to be adequate to ensure that the water quality in the Site Lake System is not conducive to algal blooms and does not compromise the water quality in Lakers Cutting and Swan Bay. Achievement of this is therefore reliant on the flushing time objective and its achievement through the passive system proposed or through a modified passive system with greater inflows or different bathymetry, or the use of pumping.

Other expert witnesses, including Messrs Craigie, Evangelisti and Byrne confirmed that there is sufficient flexibility to modify the system should it be required. In closing Mr Morris stated that “it needs to be stressed that if the flushing system does not perform as expected there are remedial measures that are available.”

Based on the information before it the Panel is satisfied that the system proposed has the design capability and flexibility to achieve required flushing rates.
(iii) Potential for Algal Blooms and Eutrophication of the On Site Lakes

As part of the EES, Golder Associates assessed the potential for algal blooms within the Site Lake System. It is noted that if algal bloom eventuate they have the potential to cause toxic conditions, odours, deoxygenated water, and fish kills. The assessment considered the factors – light, temperature, nutrients inflow rate/hydraulic detention time and mixing and stratification – that influence algal growth. Golder Associates concluded that stratification and mixing would be addressed by the shape and bathymetry of the Lake System, however there will be temperature conditions within the Site Lake System that could support an algal bloom. Further, if the Lake System received an increased nutrient load during warmer weather such as that associated with a conventional stormwater system, then it could be possible for algal bloom to develop even within the proposed 20 day flushing time. It was argued that management of nutrient loading through water sensitive design including bioretention basins, rain gardens and swales will reduce the nutrient load into the Site Lake System so that the 20 day flushing objective will provide sufficient water movement to ensure a “relative high level of protection against the risk of algal blooms”.

Mr Longmore argued that Golder’s use of a “Freshwater Pond” model in a marine/saline Lake System is incorrect and potentially misleading and that a “cross-check of the Pond model with two others both suggested the potential for eutrophication.” Mr Bott expanded on and defended the modelling in his expert witness statement with:

The Pond model was appraised during the Parsons Brinkerhoff’s review of the EES however experience has shown that rather than depending upon the outputs from a single stochastic model it is preferable to use a multiple evidence approach. Accordingly the Vollenweider empirical eutrophication model was used to cross-check a number of scenarios, including sensitivity of the system to changes in tidal flushing. It was from this analysis that PB recommended additional Tideflex tubes be installed to provide additional tidal flushing to mitigate potential water quality impacts within the Site Lake. This recommendation was adopted and the original lake design modified to reflect this.

Mr Longmore considers that the use by Golder Associates of 15,000 cells/mL as an indicator of algal blooms is too high, as the various phytoplankton grow at different rates; and said “it is therefore not possible to be confident that a flushing rate of 20 days would be sufficient to prevent algal blooms. Furthermore plant growth in marine waters is more likely to be limited by nitrogen than phosphorous and this may lead to a four fold increase in nutrient load discharged from the proposed development.”

In the EES, the proponent provides best practice targets for the annual reduction in
the loads of Total Suspended Solids (TSS), Total Nitrogen (TN) and Total Phosphorous (TP) and compares these to the loads that would be achieved without the use of bio-retention systems. The modelling indicates that these targets could be bettered and could achieve reductions of up to 89% for TSS, 45% for TN and 74% for TP. The proponent recognises that algal growth is not only dependent on TSS, TN and TP but also on other factors such as the biotic component and the physical conditions as mentioned above. Risks identified that could cause algal blooms within the Site Lake System include algal blooms in Swan Bay, subsequently in Lakers Cutting and ultimately the Site Lake System. This is considered unlikely, based on no history of blooms, the high flushing between Lakers Cutting and Swan Bay and the ecology of the Cutting. However if conditions conducive to algal blooms do occur then Mr Evangelisti proposed that possible solutions to remEDIATE the water quality include increasing the number of Tideflex valves, and modifying the bathymetry by filling or excavating as required.

Mr Bott indicates in his evidence some level of concern or perhaps prudence regarding nutrients when he recommends “the Landscape Master Plan (Draft Planning Permit 673/2007) also incorporate a Nutrient and Irrigation Management Plan (NIMP) which lays out the annual water usage and fertilizer (nitrogen and phosphorus) loading associated with treatments outlined in the Landscape Master Plan. The NIMP should provide details of any proposed soil amendments composition and phosphorus retention capacity of imported fill and soil and plant testing schedules to be employed to ensure these regimes are retained.”

The Panel considers that in combination - the achievement of the water quality objectives, the flushing objectives and the best practices targets for stormwater quality together with the physical design of Lake System - will provide a minimum and manageable risk that algal blooms will originate from the project site. However as a safeguard and to ensure proper controls, the Panel supports Mr Bott’s recommendation that a nutrient and irrigation management plan be incorporated into the Landscape Master Plan (refer Recommendation in Section 7.3).

(iv) The Lakers Cutting Sill

Technical Appendix 5 Volume 1 explains that the sill acts as bar between Lakers Cutting and Swan Bay that is sometimes exposed during low tides. It limits the water inflow and outflow between the two and could eventually silt up. The Technical Appendix acknowledges that, while the sill is considered outside the control of the development project, if the flows over it were to reduce “it would be detrimental for the tidal flushing of the Site Lake System.” In response to questioning by Mr Kane, Mr Withers indicated that he was of the opinion that the sill may need to be dredged sometime in the future, a view shared by Mr Bott.
Based on the Panel’s concerns (and those of others including Mr Longmore) about siltation of the sill, a supplementary expert witness statement was prepared by Mr Roob of Stockland which included a report titled *The status of sedimentation in the southern area of Swan Bay, “The Sill” and Laker’s Cutting, (July 2008)* and a letter from Dr Wayne Stephenson Senior Lecturer in Geography (University of Melbourne). In Dr Stephenson’s view that “*on balance none of the above sources (marine or river derived sediments) are likely to supply sand of a size large enough to shallow the sill to a point where the hydraulic connection between Laker’s Cutting and Swan Bay is lost*”. The conclusion of the report and letter is that the “*hydrodynamics and sediment transport conditions currently effecting “The Sill” are not conducive to sedimentation*”.

Mr Byrne gave further support to the views of Mr Roob and Dr Stephenson saying that while Swan Bay will continue to fill up with sediment at the same rate as it has been over the last 40 years, he considers the development will promote movement and reduce detritus build up and he didn’t see a need to excavate or dredge. Sea level rise will increase movement over the sill and therefore there was less likely to be siltation in the future.

Based on the evidence put before it, the Panel is satisfied that the sill will continue to provide satisfactory connectivity between Lakers Cutting and Swan Bay and appreciates the work undertaken by Mr Roob on the additional examination of the hydrodynamics between these two water bodies.

**(v) Inlet/Outlet Channels and Valves**

The maintenance of an adequate one way flow through the entry and exit to the Site’s Lake is crucial in achieving sufficient flushing of the system. Traditionally flap valves have been used to direct flow and prevent backflow however the proponent proposes to use a series of Tideflex valves which are elastomer duckbill shaped values. Reduced maintenance requirement is one of the key considerations for proposing Tideflex valves over conventional flap values. Information about Tideflex was provided in the Technical Appendix to the EES and during the hearing additional technical information about these values was provided. The Panel was also directed to the product’s website.

Golder Associates undertook modelling under a range of conditions to simulate the use of these valves. Mr Byrne and Mr Craigie supported the use of Tideflex in preference to traditional flap valves, particularly as they require less maintenance.

Dr Provis was dubious about the use of Tideflex, and believed it is the wrong tool. He argued that there would be insufficient head pressure from Lakers Cutting to
open the valves and achieve the flushing objectives proposed.

In Technical Appendix 5 Golder Associates recognise that while modelling showed that Tideflex could achieve the desired performance pressure, there could be an issue and states that “it would be prudent as part of detailed design, to conduct trials to verify/confirm their characteristics”. Mr Withers said that if Tideflex were found unsuitable, then flap valves could be used and modelling indicates they would achieve the desired performance objectives.

The potential for any such valves to become blocked and rendered ineffective by marine growth was raised by submitters, particularly Mr Andrew Helps. The proponent accepted that continual monitoring and maintenance would be required to prevent this and other possibilities such as vandalism.

After having reviewed the information supplied, the Panel considers that Tideflex valves appear to have significant performance benefits over traditional flap valves and supports the proposed further work including trials to assess their suitability.

In addition to the inlet and outlet valves from Lakers Cutting there is also hydraulic connectivity between the site and Lake Victoria which can during wet periods cause water to overflow from Lake Victoria and the site.

Mr Naughton, for J McMahon and Sons, submitted that “work is needed to prevent tidal backflow from Lonsdale Lakes from entering Lake Victoria. Support by J Mc Mahon & Sons for this approach is conditional upon an acceptance by the Corangamite CMA that there be approval to the lowered flood levels (0.90 metres) on not only the Stockland land but also on the land of the submitter the J Mc Mahon & Sons and nearby land. There would be benefits for the existing development in the Santa Monica Boulevard/ Emily Close subdivision where there is significant existing threat of flooding under present conditions.” It considered that the work should be implemented as part of the Stockland project and “at the cost of Stockland”. It was further suggested that the culverts under Shell Road should be designed to provide for future duplication of the Shell Road.

In support of this position, it was Mr Craigie’s opinion that:

- the opportunity to lower flood levels in Lake Victoria is a critical benefit offered by the Stockland proposal;
- given the identified flood threat that is posed to the existing residential areas of Point Lonsdale in the Emily Street/Santa Monica Boulevard estate, this opportunity is one that the responsible authorities must accept and implement at the earliest possible time.
The Engineering Services Group from Geelong Council described the current drainage system between Lake Victoria and Lakers Cutting as “dysfunctional”, and indicated support for the proposed changes to improve water flows between the site and Lake Victoria.

At the hearing Mr Morris said that the proponent is happy to do the design work and cover the cost of engineering subject to the CCMA and Council approval of the flood level.

The Panel is satisfied that the work Stockland has agreed to undertake (and pay for) will improve the hydraulic connectivity between the site and Lake Victoria and will reduce the risk of flooding for the housing in the in the Emily Street/Santa Monica Boulevard estate. In relation to providing for future duplication of the Shell Road in the design of the culverts this needs to be discussed with VicRoads prior to the finalising the design.

(vi) Water Quality Monitoring

Mr Longmore raised concerns about a number of aspects related to water quality monitoring both in terms of the quality of the data for monitoring already undertaken and that proposed. Mr Longmore considered that the monitoring proposed is inadequate. In addition the Point Lonsdale Coastal Spaces Group proposed that conditions in the planning permit relating to water quality monitoring be strengthened.

As an opening observation, the Panel believes that there has been some misunderstanding and confusion about the monitoring proposed. One in five year monitoring is to update the baseline water quality to take into account changes in the catchment inflows in Lake Victoria and Lakers Cutting. The main water quality monitoring program is set out in the Technical Appendix 5 Attachment O, Draft Water Quality Management and Hydraulic Monitoring Plan and includes weekly, monthly, and quarterly monitoring depending on the development stage of the project as well protocols for decision making for the protection of receiving bodies in response to exceedances of baseline screening criteria. Furthermore at the hearing Stockland confirmed that it proposes “that there will be independent auditing of the quality of water quality monitoring data, as part of the process to assess such compliance”.

Overall, the Panel is satisfied that following consultation and input from the various authorities, the final Water Quality Management and Hydraulic Monitoring Plan will ensure that there is adequate scrutiny and response measures to maintain required water quality levels in the Site Lakes and environs.
(viii) **Urban Stormwater Management**

It is proposed to treat stormwater on-site by integrating Water Sensitive Urban Design (WSUD) features including harvesting stormwater with rainwater tanks (to be used for toilet flushing and outdoor use), and incorporating swales, rain gardens and bioretention trenches into the streetscape for both the residential and commercial areas. It is proposed as part of the development to retrofit the existing Lonsdale Lakes development with bioretention systems to further reduce the pollutant load to the Site Lake System. Best practice stormwater treatment objectives and a species list for planting have been proposed. The proponent’s modelling to simulate the likely nutrient and suspended solids inputs to the Site Lake System via stormwater runoff from the urban areas of the proposed development indicate that best practice stormwater treatment objectives can be achieved using water sensitive urban design elements proposed.

Mr Craigie considered that “stormwater quality management strategy outlined in the EES reports appears to satisfactorily address all stormwater quality issues for the development, primarily through the use of bioretention systems”. However Dr Provis was sceptical about the ability of the plants to survive in the saline conditions. He did concede that through detailed design and over planting, it is possible to provide effective on-site stormwater although he considered management could be an issue. Mr Evangelista’s experience in WSUD support the use of the sophisticated modelling in designing the treatment system and over planting to maximise plant survival. Mr Murphy confirmed that WSUD plantings at Point Cook, which he said is a more hostile environment than that at the proponent’s site, had been successful.

The Panel considers that the proposed stormwater treatment system through the use of WSUD complies with the best practice management standards required under Clause 56.07 of the Planning Provisions.

### 7.3 Findings and Recommendations

The Panel is satisfied that the EES has adequately considered relevant hydraulic and water quality matters. Further it is satisfied that the proposed management and mitigation measures, together with the inclusions recommended below, are an appropriate response to ensure that water quality is maintained to acceptable levels.

The Panel makes the following recommendation in relation to hydrology and water quality:

*(i) Amend Planning Permit Condition 7e) to read:*
e) Landscaping and vegetation management for open space areas including ecological management requirements for conservation areas and a plan for the management of nutrients and irrigation.

(ii) Amend Planning Permit Condition 38 to include the following additional requirement:

c) Culverts under Shell Road shall be designed to accommodate its future duplication and to maintain consistency of flood levels on both sides of the road at 0.9m AHD (1% AEP flood level).
8. **FLORA AND FAUNA**

Flora and Fauna is included in Chapter 10, Terrestrial Ecology, and Chapter 11, Marine Ecology, of the EES. The Terrestrial Ecology chapter in the EES is based on Technical Appendix 7 which includes an assessment of the flora and fauna report by Biosis, including an ecological management plan for the site, plus a peer review of the flora and fauna assessment undertaken by Brett Lane and Associates. The Marine Ecology chapter is based on an assessment by CEE Consultants Pty Ltd which is provided as Technical Appendix 9 of the EES.

Mr Brett Lane of Brett Lane and Associates presented flora and fauna evidence at the hearing and as did Mr Carr of Ecology Australia, on behalf of the Point Lonsdale Coastal Spaces Group. Evidence provided by Mr Rosengren and the letter from Dr Charles Meredith of Biosis to Deacons, acting for Stockland, about the Ramsar Convention listing criteria is also relevant to this chapter.

Numerous submissions including those from Geelong Environment Council, Bird Observation and Conservation Australia, Central Coastal Board, Swan Bay Integrated Catchment Management Committee, Swan Bay Environment Association Inc, Mr John Murray, Point Lonsdale Civic Association Inc. and Queenscliffe Community Association Inc. provided very useful information.

8.1 **Description and Key Issues**

The EES provided a large quantity of detailed information about the flora and fauna of the site and its environs, including:

- Legislation and policy framework;
- Identification of significant flora and fauna of both the terrestrial and marine ecology based on literature and database searches as well as field surveys of the site;
- Assessments of the proposed development on significant flora and fauna consistent with the legislative requirements;
- A proposed Ecological Management Plan with primary management objectives to improve the retained remnant native vegetation and to maintain suitable habitat for the orange-bellied parrot. It includes measures for both the construction and operational phases of the development; and
- Monitoring programs for the vegetation condition and water quality.
The Panel considers that the key issues in relation to biodiversity conservation relates to the original site conditions and future potential.

The key issues in relation to flora include:

(i) Flora of National Significance (EPBC listed species);
(ii) Flora of State Significance;
(iii) Flora of Regional Significance;
(iv) Ecological Vegetation Classes;
(v) Offset Strategies;
(vi) Habitat Hectare Balance;
(vii) Flora of National Significance (EPBC listed species);

The key issues in relation to fauna include:

(i) EPBC Act Listed Species;
(ii) State Flora and Fauna Guarantee Listed Fauna Species; and
(iii) Introduced Fauna.

8.2 Panel Response – Biodiversity Conservation

Pre-1770 vegetation mapping predicts that the original vegetation site comprised a central area of saline wetland of Coastal Salt-marsh and Brackish Sedge-land encircled by Coastal Alkaline Scrub.

Mr Rosengren provided evidence that the topography of the project site formed as a series of shorelines that advanced and retreated during relatively recent millennia. It is likely that there was no defined waterway draining the area.

Since European occupation, the site has been subject to several major environmental disturbances but has retained or regained significant wetland conservation values. The Panel heard from Mr Phipps that his family has lived in the area for five generations and that the site was originally cleared for dairying. He said there was never water lying in what is now wetland.

Subsequent to the dairy farm there was a motor cycle speedway during the 1930s. Shell grit mining commenced in the 1950s and continued until 1987. The mining consisted of removal of overburden and dredging of the underlying sand and shell beds, leaving shallow ponds of varying depth in some areas and overburden mounds in others. This has created the various current wetland habitats, including Lakers Cutting.
These wetlands are replenished by saline groundwater and by fresh-water runoff from the adjacent catchment. The lack of effective drainage means that water is lost primarily by evaporation and in consequence, pond water levels and salinity can fluctuate widely each year. Some ponds become hyper-saline and some dry completely. It follows that only the few species that can tolerate particularly harsh conditions have been able to recolonise some areas. Various submitters value these wetlands not only from the species and associations they support, but also from its location between two wetland conservation reserves of international significance.

The remainder of vegetation complex is characterised by species adapted to the particular local water regime i.e. varying degrees of salinity, ground water depth and fluctuations in available fresh water. It includes many weeds.

The report by Biosis in Technical Appendix 10 to the EES describes the present condition of the vegetation as follows:

*The condition of remnant vegetation within the site is variable. Where the original soil surface is intact the vegetation is generally in good condition. However, much of the site has been subject to shell grit mining, clearing for agriculture and dumping of fill. Where this disturbed land is subject to inundation and/or high salinity levels, areas have been colonised by salt-tolerant native species and weeds are either absent or only present with low cover. Colonisation of this recently formed landscape has produced vegetation communities similar to the EVCs that would occur naturally in similar physical environments. Disturbed areas where salinity levels are low are often dominated by pasture grasses and other environmental weeds and support predominantly introduced vegetation.*

The proponent contends that the environmental values are at present degraded in various ways and that the proposed development would provide an overall conservation benefit. Expert opinion is that left to itself, the current artificially created wetlands will eventually silt up. No alternative future such as purchase and management for conservation purpose has been proposed.

It is therefore clear to the Panel that the key issue for biodiversity conservation is the relative value of the current freehold site, if left in its current essentially unmanaged condition, compared to a future in which a significant proportion of the area is reserved and managed for conservation purposes.

The project’s primary conservation proposal is to permanently reserve 56 hectares of the land as Environmental Open Space. There is to be a further 32 hectares available as Public Open Space including the lake and canals. About 56 hectares will be
developed for residential and associated purposes while 51 hectares is to remain as rural land, albeit after excavation of fill material. That means that over 30% of the area would be reserved and managed primarily for conservation, a new tidal waterway connecting the adjacent wetlands would be created and, it is argued, the native vegetation losses would be adequately offset. Another claimed benefit is the introduction of a more natural tidal regime which will assist in the long-term protection of conservation values. In its submission, DSE (incorporating the views of Parks Victoria), generally supports the proponent’s contention on conservation values.

The management intention for the conservation reserve is to retain significant native vegetation and faunal habitat and to re-establish native vegetation including a wetland area. Once established the management function is proposed to be handed over the City of Greater Geelong. In addition a variety of edge treatments and a shallow-graded cross-section profile within the tidal canal waterway is expected to provide habitat opportunities for waterbirds. According to the EES documentation:

- The waterway and revegetated areas in the western area of the site will create habitat links to adjacent property to provide expansive coastal salt-mash habitat.
- In addition to the areas of existing native vegetation that will be retained as part of the proposed development project, environmental open space will also be provided through revegetated areas. These areas will comprise revegetated salt-marsh, brackish grassland and Moonah woodland surrounding the western lake and stretching along the majority of the southern boundary.

The proponent contends this will provide as good or better continuity of habitat between the adjacent Ramsar classified wetland of Swan Bay to the east and the Lonsdale Lakes State Nature Reserve to the west, than currently exists.

However submitters, including the Point Lonsdale Coastal Spaces Group, the Geelong Environment Council and Bird Observation and Conservation Australia argue that the presence of the housing and associated disturbance will negate any such possibility. They emphasise the significance of the current habitat connection for migratory birds and to Australia’s treaty obligations in this regard.

8.3 Panel Response – Flora

Biosis undertook botanical field surveys on behalf of the proponent during 2002 and 2003 to record, by sample survey, the vascular flora and to establish the presence or potential presence of any Nationally, State or regionally significant species. Ecological Vegetation Classes (EVCs) were identified and mapped and their condition assessed using the DSE “Habitat hectare” method.
A total of 252 vascular plant species were recorded on the project site comprising 116 native and 136 introduced species. The Victorian Flora Information System (FIS) also records a further 207 native species, including six of State Significance, and 40 more introduced species that could possibly also be on the site.

(i) **Flora of National Significance**

Biosis did not identify any species of National Significance within the site although the Commonwealth’s Protected Matters Search Tool (PMST) suggests that habitat for three such species may exist. These are:

- Maroon Leek Orchid *Prasophyllum frenchii*;
- River Swamp Wallaby Grass *Amphibromus fluitans*; and
- Clover Glycine *Glycine latrobeana*.

The first of these is listed under the FFG Act as Endangered with the others Vulnerable. The nearest occurrence for the Maroon-Leek Orchid was recorded in the 1930s at Anglesea, 40 km to the south-west of the site with more contemporary records about 70 km to the north-west. The saline nature of virtually all of the remnant native vegetation suggests that no suitable habitat remains for this species on site.

Habitat suitable for the other two Vulnerable species would be limited by soil salinity and in both cases the development site is near the limit of their geographic range. The River Swamp Wallaby Grass occurs mainly in north-central Victoria and the Clover Glycine occurs widely from South Australia to Tasmania including western and north-eastern Victoria.

(ii) **Flora of State Significance**

The 10 species of State significance identified on site and the proponent’s assessment of the impact of development and potential mitigation measures is set out as follows:
### Table 2: Recorded Flora Species of State Significance

<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Potential Impact</th>
<th>Potential mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow Sea Lavender <em>Limonium australis</em></td>
<td>Rare</td>
<td>Low: occurs only in native vegetation to be retained</td>
<td>Not required</td>
</tr>
<tr>
<td>Tasman grass Wrack <em>Zostera tasmanica</em></td>
<td>Rare</td>
<td>Low: occurs only outside development footprint</td>
<td>Not required</td>
</tr>
<tr>
<td>Coastal Cranesbill <em>Geranium sp nov 23</em></td>
<td>Vulnerable</td>
<td>Low: occurs only in one location within native vegetation to be retained</td>
<td>Seed collection and replanting</td>
</tr>
<tr>
<td>Rare Bitter-bush <em>Adriana quadripartita</em> (glabrous form)</td>
<td>Endangered</td>
<td>Low: Occur only outside development footprint although present occurrences are within introduced vegetation and unlikely to be self-sustaining</td>
<td>Seed collection and replanting incl landscape planting</td>
</tr>
<tr>
<td>and Coastal Bitter-bush <em>Adriana quadripartita</em> (pubescent form)</td>
<td>Vulnerable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dune Poa <em>Poa poiformis var ramifer</em></td>
<td>Rare</td>
<td>Medium: Potential loss of some populations within development footprint</td>
<td>Landscape planting</td>
</tr>
<tr>
<td>Coast Wirilda <em>Acacia retinoides var uncinifolia</em></td>
<td>Rare</td>
<td>Medium: Potential loss of some populations within development footprint</td>
<td>Landscape planting</td>
</tr>
<tr>
<td>Salt Lawrencia <em>Lawrencia spicata</em></td>
<td>Rare</td>
<td>Medium: Potential loss of some populations within development footprint</td>
<td>Re-establishment in protected areas. Establishing self-sustaining populations will be difficult but their presence in disturbed sites demonstrates the colonising capacity of these four species.</td>
</tr>
<tr>
<td>Tiny Arrowgrass <em>Triglochin minutissimum</em></td>
<td>Rare</td>
<td>Medium: Potential loss of some populations within development footprint</td>
<td></td>
</tr>
<tr>
<td>Prickly Arrowgrass <em>Triglochin mucronatum</em></td>
<td>Rare</td>
<td>Medium: Potential loss of some populations within development footprint</td>
<td></td>
</tr>
<tr>
<td>Coast Twin-leaf <em>Zygophyllum billardieri</em></td>
<td>Rare</td>
<td>Low: Loss of one population within footprint</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 illustrates analysis that there would be a medium impact on five of the species of State conservation significance. The proposed mitigation measures are
included in the draft Environmental Management Framework (EMF). DSE supports this approach on the basis that the EMF will include monitoring, response and reporting requirements.

The evidence provided by Mr Carr of Ecology Australia acknowledged that the Biosis floristic list is comprehensive but states that 13 rather than 11 species are now recorded as of State Significance. The two additional species were not named, nor are they readily apparent within the Ecology Australia survey reports. Ecology Australia argue but provide no detail, that further taxonomic studies and reviews of conservation status are current and may result in some species being upgraded to National significance.

Ecology Australia commented that the translocation of identified occurrences of significant species as a means of conservation is rarely successful. It concludes, although without much explanation, that the Biosis analysis of significant species is deficient:

> Overall the section on significant species is poorly documented and discussed. The reader gains scant appreciation of the role these populations have on a local and bioregional context, or the threats posed to them. Rare populations of plant species are highly vulnerable to stochastic events and there will be considerable loss of rare and threatened sub-populations with the proposed development area.

(iii) Flora of Regional Significance

The species recorded by Biosis include 76 of Regional Significance. No specific conservation measures are proposed for any of these in the EES. The Panel believes that where practicable, the re-vegetation and amenity plantings set out the EMF should preferentially utilise species of Regional as well as State Significance.

(iv) Ecological Vegetation Classes

When grouped into classes, the current vegetation consists of a complex and dynamic pattern with species combinations occupying particular ecological niches according to specific adaptive capacity. The precision of mapping and description depends on the intensity of survey. At a broad scale, the whole may be described as a complex of Coastal Salt-marsh, Coastal Alkaline Scrub and Grassy Woodland EVCs. With closer examination, further subdivision becomes practicable but alignment with the standard EVCs as identified in the DSE Native Vegetation Framework (NVF) becomes more complicated. This is partly due to the complexity of the patterns and also to the unusual species combinations which have been able to colonise the post-disturbance habitats. It is not surprising that there are differences
in classification and emphasis within the botanical analyses that have been provided by the proponent and submitters. There is a substantial difference of opinion about the conservation value of the occurrence of one EVC (Saline Aquatic Meadow) as at this site, it occurs only in the artificial wetlands created by the shell grit mining.

The detailed mapping undertaken by Biosis concludes that a total of 73 hectares of the site has a sufficient native species occurrence (>25% coverage) to be classified as native vegetation. It is allocated to eight of the standard Ecological Vegetation Classes of which five occur within the intensive development area. The EVCs are described as follows, together with the Biosis estimate of the area of occurrence and the impact of the proposed development:

- **Coastal Salt-marsh** (EVC 9) and **Seasonally Inundated Sub-saline Herbland (EVC 196)** occur together over 8.6 hectares scattered throughout the site in saltpans and around the fringes of the wetland ponds. The various patches are of high to very high conservation significance including a total of 1.0 "habitat hectares" within the development area. (The "habitat hectare" score for a native vegetation remnant is calculated under the Native Vegetation Framework as an adjustment to the mapped area to allow for its condition. i.e. degree of weed invasion etc.) The Coastal Salt-marsh ranges in structure from a low succulent herb-land to shrub-land, rush-land or sedge-land occurring in regular patterns extending from seaward to landward. It is classified as Vulnerable in the NVF and is virtually weed free. Seven small patches of EVC 196 occur within the Coastal Salt-marsh. It is classified as Rare in the NVF, being primarily comprised of salt-marsh species associated with inland rather than coastal salt-marshes. It is characterised by Wilsonia as a prominent genus and the only other known Victorian location is at Lake Connewarre. In view of their intimate mixture, these two EVCs are taken together in the consideration of offset requirements.

- **Brackish Sedgealn (EVC 13/934)** which is Endangered in the NVF, covers 4.13 hectares on the landward side of some salt-marshes. It occurs where there is infrequent inundation by brackish/saline water and is dominated by either Chaffy Saw Sedge or Sea Rush with the latter closer to the salt-marsh. It is virtually weed free due to the dense cover and high tolerance of salinity. The recorded occurrences are of high to very high conservation significance including a total of 0.45 habitat hectares within the development area.

- **Coast Tussock Grassland** (EVC 163) occurs on 8.41 hectares of the upper salt-marsh zones where inundation is rare. It forms a closed sedge-land or open tussock grassland dominated by Prickly Spear Grass. It occurs frequently on the raised bank areas surrounding the water courses and ranges from being
relatively intact to having some weeds. It is classified as Vulnerable in the NVF. The recorded occurrences range from medium to very high conservation significance including a total of 1.24 habitat hectares within the development area.

- **Coastal Alkaline Scrub (Calcarenite Dune Woodland) (EVC 858)** comprises 15.37 hectares of woodland dominated by Moonah. It is scattered within the site on alkaline sand dunes and swales. The tree canopy is usually dense over an open understorey of Sea-berry Saltbush and Bower Spinach and the weed Smilax. This EVC has a limited distribution in Victoria and is listed as an Endangered/Threatened community under the FFG Act. The recorded occurrences are of high to very high conservation significance including a total of 1.94 habitat hectares within the development area.

- **Saline Aquatic Meadow (EVC 842/843)/Saline Lake Mosaic (EVC 717)** occurs on 32.4 hectares of the site in the ephemeral pools of brackish to saline water created by the shell grit mining. The entire occurrence lies within the development area. The recolonising vegetation is dominated by Long-fruit Tassel which form an aquatic herb-land that can survive seasonal drying-out. It is almost entirely weed free and is regarded as floristically equivalent to the occurrences of this EVC complex occurring naturally elsewhere. These are uncommon and listed as Vulnerable in the NVF. The 32.4 ha area potentially impacted by the proposal cannot be adjusted to habitat hectares as the NVF does not, at least as yet, contain a benchmark to facilitate the calculation.

- **Coastal Dune Scrub Mosaic (EVC 1)** which occupies 3.4 hectares on the prominent ridge in the northern portion of the site, is not impacted by the proposed development. The dominant species are Coast Tea-tree and Coast Wattle which, with some shrubs like Coastal beard heath, form a dense canopy above a variety of ground cover including Bower spinach, Coastal sword sedge, Small leaf Clematis and, usually, many introduced weeds. It is classified as Depleted in the Native Vegetation Framework (NVF).

- **Damp Sands Herb-rich Woodland (EVC 3)** which occupies a total of 0.91 hectares on the northern ridge and in a narrow strip along Shell Road is not impacted by the development. It is an open woodland of Silver Banksia which probably once also contained Coast Manna Gum and Drooping Shoo- oak. The understorey is typically Coast Tussock grass along with other indigenous herbs and creepers. It is classified as Vulnerable in the NVF.

The evidence provided by Ecology Australia provides an alternative EVC
classification based on surveys in 2005 and 2007 by Ecology Australia. It identifies 11 rather than 8 EVCs; with the difference being that the Brackish Sedge-land is further subdivided into Brackish Wetland, Brackish Herb-land, Brackish Sedge-land and Brackish Aquatic herb-land. Ecology Australia comments however that “These differences are unlikely to affect the assessment of conservation significance of the site or habitat hectare condition scores of most EVCs.”

Ecology Australia goes on to describe the assessment of the conservation value of the Saline Aquatic Meadow and the inability to provide an offset for its removal as a major shortcoming of the EES.

(v) Offset Strategies

The offset strategies identified by the proponent (including some consideration of the Saline Aquatic Meadow, if that is required) are as follows:

- The reservation and conservation management of the areas of native vegetation identified for retention.

- The use of all excess habitat hectares generated within the site and an external offset site as a negotiated outcome with DSE to compensate for loss of the Saline Aquatic Meadow. According to the EES documentation,

  *Stockland is in the process of securing an external offset site within the Otway Plain Bioregion, relatively close to the development site. The site covers approximately seven hectares and supports Coastal Salt-marsh and Brackish Sedge-land of very high conservation significance. The offset potential for this site exceeds the deficit of 0.99 habitat hectares of very high conservation significance Coastal Salt-marsh associated with the development.*

  With the addition of the offset potential of the external site, the proposed development has the potential capacity to achieve a Net Gain consistent with the “like for like” requirements for all assessable EVCs impacted by the development. With regard to the loss of Saline Lake Mosaic, negotiations continue with DSE with respect to a net gain that would be achieved. These discussions include Stockland agreeing to forego the right to trade or otherwise utilise any habitat hectare credits that arise (including gains from any applicable offsite external offset site) for a period of 10 years.

- The revegetation and conservation management of about 30 further hectares of land, largely in the western part of the site.
(vi) Habitat Hectare Balance

The Biosis report provides an assessment of the condition of the occurrences of the four EVCs within the development area for which evaluation benchmarks are available. They have then applied the DSE Native Vegetation Management Framework to calculate an offset requirement to compensate for their removal.

The proponent argues that, as no evaluation Benchmark is available, the Saline Aquatic Meadow that has developed on the shell grit mined areas does not technically require an offset. Further it is clearly not a natural occurrence.

Mr Lane referred to DSE advice (from Russell Costello, pers. comm.) that vegetation recolonising artificial land surfaces does not require offsetting under the NVF.

As stated earlier, Ecology Australia strongly disputes the contention that the loss of the Saline Aquatic Meadow is acceptable. They argue that it is of High Conservation Significance, being Rare in the Otway Plains Bioregion, and that a “like for like” offset is unlikely or impossible. The fact that it has developed as a result of disturbance and was not originally present is regarded as irrelevant. In any case, its current value as bird habitat requires its retention (this latter point is discussed in the Fauna section following).

The calculations of offset requirements under the Framework are complex and do not require inclusion here. They are set out in detail in the EES documentation and endorsed in the peer review provided by Brett Lane and Associates.

The overall net gain calculation arrived at, based on the implementation of the proponent’s strategies, can be summarized as follows. Post-development and reservation there would be, within the site:

- An excess of 1.67 habitat hectares of very high conservation significance;
- An excess of 0.37 habitat hectares of high conservation significance;
- An excess of 0.48 habitat hectares of medium conservation significance; and
- A deficit of 0.99 habitat hectares of Coastal Salt-marsh of very high conservation significance.

The proponent’s calculations and offset proposals appear to be generally accepted by the DSE submission in the following terms:

- The department observes that the material prepared for the EES, Amendment and Permit Application addressing native vegetation have been prepared to an appropriate
standard to enable approval decisions regarding removal of native vegetation of very High Conservation Significance to be made in accordance with the framework.

- The department favours an outcome which is seen to reverse the site’s historical processes which threaten remnant and recolonising native vegetation.
- The native vegetation offset proposal comprise the long term protection of 31.24 hectares of identified native vegetation within open space reserves on site, and reference to seven hectares of native vegetation, Coastal Salt-marsh (EVC9) and Brackish Sedge-land (EVC 13), at an as yet undisclosed off-site location. The department has considered the on-site offset proposals but not the off-site area. Nevertheless the department’s knowledge of the presence and distribution of such EVCs locally provides confidence as to the practicality of the proposal.
- The Environmental Management Framework should ultimately include, or have a direct link to, the native vegetation offset plan to be approved and implemented in accordance with the conditions in the draft planning permit.
- The department is satisfied that, taken together, the proposed native vegetation offsets satisfy the Framework’s requirements.

(vii) Native Re-Vegetation Potential

The plan to undertake some 30 hectares of native re-vegetation is composed as follows:

- Coastal Salt-marsh 6.1 ha
- Brackish Sedge-land 11.4 ha
- Coastal Alkaline Scrub 5.9 ha
- Coastal Tussock Grassland 6.4 ha
- Damp sands Herb-rich Woodland 0.6 ha

The plan’s likely success is strongly questioned by Ecology Australia which said “Revegetation of the scale and complexity proposed, and involving at least four EVCs with different sub-communities, has no precedent in Victoria to our knowledge and there are numerous technical difficulties and constraints”.

DSE similarly has some reservations, and said: “Given the embryonic stage in the body of practice in restoring tidal influence to salt dependent vegetation communities, the site EMF should provide for active ongoing monitoring, adaptive response and reporting of the associated management approaches.”

On the other hand it was observed by the proponent that substantial natural revegetation has taken place on the site over the years without any management intervention. Mr Lane described the natural regeneration of Salt-marsh on the recently created Sand Island east of Queenscliff. Mr Saunders, from the Bird
Observation and Conservation Australia gave an opinion that Coastal Salt-marsh can feasibly be re-established if suitable habitat is made available. Mr Carr agreed that Coastal Salt-marsh, at least in terms of fauna habitat, has developed without deliberate assistance on other tidal areas at artificially created locations such as the Western Sewage Treatment at Werribee and the Cheetham salt works.

(viii) **Implications for Retained Native Vegetation**

*Alterations to water tables*

The EES explains that the extent and distribution of the EVCs in the project area is determined by the depth to groundwater and its salinity and the extent of their associated seasonal variations in a subtle balance. Modifications of the particular regimes caused by the project earthworks could potentially cause significant change to the native vegetation which is intended to be retained. The Biosis analysis draws attention to the potential for these changes to detrimentally affect the Coastal Alkaline Scrub and in particular the Moonah which is to be protected under the FFG Act. It suggests that Moonah, while it can tolerate periodic inundation, also requires periodic fresh water and sufficient soil above the groundwater to allow for aerobic respiration. Salinity levels and freshwater availability are not expected to change post development but the groundwater levels may be slightly higher and have a lesser range of fluctuation. Biosis therefore acknowledges that the regime may be less suitable for the Moonah than at present but consider that it will still be within its existing environmental tolerances. This conclusion is based on observations of Moonah growing elsewhere on a wider range of site conditions than occurs here. The proponent has included a requirement in the EMF to ensure monitoring and remedial action if necessary. Ecology Australia considers that this is no more than unproven speculation and that, should it prove incorrect, remedial action will be impossible.

*Weed invasion*

Exotic weeds and pasture grasses are widespread on all the drier areas of the current site and, while the proponent has undertaken significant control works, much remains to be done to restore conservation status.

Particular concern is raised in submissions that shallow tidal canals will provide ideal habitat for Rice Grass (*Spartina townsendii/S.anglica*). This weed is particularly adapted to colonising intertidal mudflats and can completely block estuarine systems and is known to occur nearby at Lake Connewarre. A draft Action Statement to control this weed has been prepared under the FFG Act.
Rice Grass’ invasion potential is acknowledged by the proponent and advice was provided by Mr Lane that environmentally acceptable control is possible using Roundup type herbicides. Herbicide spraying is acknowledged as the practicable control measure in the draft FFG Action statement. Future management of the conservation reserve under the proposed Environmental Management Plan can be expected to require monitoring and appropriate control measures for this and other environmental weeds to a level not currently implemented.

**Off-site flora impacts**

The EES documentation includes an evaluation of the ecological status of Lakers Cutting as it will be both the source and the outfall of the proposed canal system. It is a shallow saline wetland created by shell grit mining and is separated from the adjacent Swan Bay only by a sand/silt sill that is sometimes exposed at low tides. The Biosis report describes sea-grass communities of *Zostera, Heterozostera* and *Ruppia* species mixed with various algal assemblages. Lakers Cutting’s ecological values are broadly similar to Swan Bay and Biosis suggests that it was excluded from the adjacent National Park and Ramsar classified Wetland of International Significance solely on the basis of its popularity for recreational fishing. Biosis consider that similar marine flora is widely distributed in Swan Bay and other sheltered bays in Victoria and that its colonisation of the artificially created in Lakers Cutting demonstrates its resilience.

The Ecology Australia survey of the wider Lonsdale Lakes Complex also documents the ecological values and considers them rare.

The Point Lonsdale Coastal Spaces Group, Geelong Environmental Council and other submitters consider that together with the whole of the development site and the Lonsdale Lakes Wetland Reserves, Lakers Cutting should be included in an extension of the adjacent Ramsar site. They are concerned about any possible deleterious impact on Lakers Cutting and Swan Bay ecosystems as a result of the development causing detriment to water quality, whether though entry of polluted runoff or from inadequate flushing of the tidal canals. The flushing efficiency of the canal system and the potential for such occurrence is discussed in the Hydrology section of this report.
8.4 Panel Response – Fauna

(i) EPBC Act Listed Species

The EPBC Act listed species are discussed in Chapter 18, as part of the discussion on Matters of Commonwealth Interest.

(ii) State Flora and Fauna Guarantee Listed Fauna Species

The Panel received a great deal of data and submissions emphasising the fauna habitat value of the development site. The principal specific fauna survey information is provided by Biosis and documented in the EES. Data from wildlife enthusiasts, although not presented as expert evidence, was also very useful. Some of the authoritative data are difficult to apply confidently to the site because they were undertaken for other and wider purposes, although as Ecology Australia point out, collection of specific data can be difficult on private property. Nevertheless, taken together, the data and submissions certainly demonstrate that the site is centrally located within an extensive wetland complex of very high value for avifauna.

Biosis recorded a total of 75 terrestrial vertebrate species occurring on the site in its 2007 field surveys (four mammals: one native, three introduced; 65 birds: 56 native, nine introduced; two indigenous reptiles and four native frog species). It notes that an additional 20 species were recorded on the site in a 2003 survey by Practical Ecology.

The data from other sources and the submissions, while not contesting the Biosis data, generally argue that the analysis under-rates its ecological significance.

The Atlas of Victorian Wildlife database contains recent records of 28 species of State Conservation Significance within 5 kilometres of the site. Although not observed during the surveys, Biosis consider that 22 of these might possibly find suitable habitat on the site. Except for the Orange-bellied Parrot, which is discussed below, they all have a wide distribution in Australia and none are dependent on this site for survival. Four of the remainder are species of Albatross and Petrel for which the site offers no suitable habitat. The last is the brush-tailed Phascogale which is considered extinct on the Bellarine Peninsula.

The Little Egret, which is FFG listed as Endangered in Victoria, was observed on site during the Biosis field surveys. It is a highly mobile and nomadic species and the site is not considered by Biosis to provide habitat of critical importance.
**Orange Bellied Parrot**

The Orange-bellied Parrot is listed as Endangered under the EPBC Act and the Victorian FFG Act. The total remaining population is tiny, estimated at less than 200 birds. The species migrates annually from the Tasmanian west coast to small occurrences of suitable habitat along the south-eastern mainland coast. The particularly important habitat is the Coastal Salt-marsh which supports food species such as Beaded Glasswort and Austral Seablite. Coastal Tussock Grassland may also be used and some non-native pasture and disturbed areas are also used if they carry some favoured herbaceous weeds. Coastal Alkaline Scrub and Coastal Dune Scrub provide roosting habitat.

Orange-bellied parrots utilise this type of habitat on the Bellarine Peninsula every winter, including some close to the development site. It has not been recorded on site but Biosis conclude that it may well visit occasionally as suitable feeding and roosting habitat exists.

Brett Lane & Associates observe that, as colonising vegetation on a disturbed site, the Salt-marsh here is not comparable with “the more intact and extensive original salt-marshes and associated saline areas around the shores of Lake Connewarre and Swan Bay where Orange-bellied Parrot occurs more consistently.” It regards the lack of recorded occurrence of Orange-bellied Parrot on site as indicating that the habitat is not particularly suitable. The Panel was shown a salt-marsh in the north-western corner which has been fenced out of the adjoining farmland by the proponent to facilitate its rehabilitation. The proponent believes that further Coastal Salt-marsh can be established along the margins of the new canals. The current Scrub roosting habitat is intended to remain and be extended and there are commitments to design and construct the waterway canals to promote Salt-marsh habitat and to extend the areas of Coastal Alkaline Scrub. A discussion of the capacity of the likely success of the Coastal Alkaline Scrub (Moonah) and the Salt-marsh retention and re-establishment is contained in the earlier Flora sections of this chapter.

Submitters acknowledge the regeneration capacity of Coastal Salt-marsh and the ability of Orange-bellied parrot to utilise non-natural habitat, for example at the Western Treatment plant and the Queenscliff Golf Course. The development is nevertheless considered unlikely to provide a satisfactory alternative to the current potential of the area because of the likely increase in disturbance and predation through increased human presence with associated dogs, cats, traffic noise and lights. The proponent accepts this possibility but argue that the threats can be managed and measures including prohibition of cats and strategic exclusion fencing are proposed.
The Panel considers it unlikely that the Orange-bellied Parrot would suffer a significant impact, and any minor deleterious impact at the site will be mitigated if the measures set out in the EMF are implemented.

In summary, the Panel considers that the site does not provide significant or limiting habitat for any species requiring protection under the FFG Act.

(iii) Introduced Fauna

Biosis recorded the presence of rabbits, foxes and dogs on the site and observes that, although not recorded in the surveys, feral cats are also undoubtedly present.

8.5 Findings and Recommendations

In relation to the flora and fauna assessment the Panel is satisfied that the EES has adequately considered all relevant matters.

The Panel finds that overall the proposal to reserve 56 hectares of the land as Environmental Open Space and a further 32 hectares, including the lake and canals, as Public Open Space will provide an improved and more secure conservation future than leaving the site in its current condition. This conclusion is based on the intentions set out in the Environmental Management Framework and other plans to retain significant native vegetation and faunal habitat and to re-establish native vegetation including a wetland area. The variety of edge treatments and a shallow-graded cross-section profiles intended within the tidal canal waterway is expected to provide habitat opportunities for waterbirds.

With respect to the various species found at the site, or could potentially inhabit the site, that require protection under the FFG Act the Panel considers that the site does not provide significant or limiting habitat for any of these species. Four species which require special consideration include the Coastal Alkaline Scrub, Coastal Salt-marsh the Little Egret and the Orange Bellied Parrot.

- Coastal Alkaline Scrub (EVC 858), which comprises 15.37 hectares of woodland is dominated by Moonah including a total of 1.94 habitat hectares within the development area and is FFG listed as an Endangered/Threatened community. The losses from the development will be adequately offset. While the future groundwater regime may be slightly higher and have less fluctuation than at present and be somewhat less suitable for the Moonah than at present, the Panel accepts that any change will be within the environmental tolerances of the Moonah, provided there is a requirement in
the EMF to ensure monitoring and remedial action if necessary.

- Coastal Salt-marsh is classified as Rare and Vulnerable in the NVF and occurs in patches on the site. There is however sufficient practical observation of the natural re-colonisation of disturbed sites by Coastal Salt-marsh to conclude that it can be successful re-established as part of the Environmental Management Framework. Nevertheless the Framework must provide for active ongoing monitoring, adaptive response and reporting of the revegetation works.

- The Little Egret which is FFG listed as Endangered in Victoria and has been observed on site is a highly mobile and nomadic species, however the site is not considered to provide habitat of critical importance.

- The Orange-bellied Parrot which is FFG listed as Critically Endangered has not been observed on site. It is not considered likely to suffer a significant impact and any minor deleterious impact will be mitigated if the measures set out in the EMF are implemented.

Therefore the proposal is considered to satisfy the State Policy Planning Framework and the Objectives for Biodiversity Conservation of the Environment Effects Act 1978 in that the impact on significant native vegetation and habitat values (communities or species) including Coastal Salt-marsh, Coastal Alkaline Scrub and Coast Tea-Tree is generally avoided. There is low risk of adverse impact on migratory water birds. It is considered that the proposal is capable of satisfying the requirements of the Commonwealth EPBC Act and the relevant international treaties (see Chapter 18).

The Panel considers that adequate Effective Net Gain compensation is provided where native vegetation losses are unavoidable. This conclusion is based on implementation of the Native Vegetation Framework according to the requirements of DSE and is supported by its submission that: “taken together, the proposed native vegetation offsets satisfy the Framework’s requirements.”

However the 31.4 hectares of Saline Aquatic Meadow which has developed on the shell grit mined areas does not technically require an offset under the Native Vegetation Framework as there is no evaluation benchmark. Nevertheless, while it is not a natural occurrence, it has important conservation values. It lies entirely within the development area and no “like for like” compensation is practicable. DSE recommends that an external offset site of approximately seven hectares, already identified in consultation with the proponent, be secured. Further any excess habitat hectares be used to compensate for loss of the Saline Aquatic Meadow and a condition that, for a period of 10 years, the proponent may not trade or otherwise utilise any habitat hectare credits. The Panel notes an inconsistency here in that, if
the available habitat hectare credits are accepted as compensation for loss of the saline aquatic meadow, there are then none available for later trade or other utilisation. The Panel’s requirements are spelt out in the recommendations below.

The Panel recognises that Rice Grass (Spartina townsendii/S.anglica) which could inhabit the shallow tidal canals requires active management through monitoring and contingency planning to prevent invasion. The draft FFG Act Action Statement, “Introduction and spread of Spartina to Victorian Estuarine Environments” provides guidance.

Likewise feral and domestic animal species, if not controlled through active management including a ban on cats in the development and strategic fencing, pose a threat to measures to encourage wildlife to the conservation area. The Panel supports the permit condition to ban cat ownership by property owners and other proposed education and control measures.

Based on the planned operation of the tidal channel waterway and the stormwater treatment plans, no adverse effect on biodiversity values of Lakers Cutting or Swan Bay is anticipated (the flushing efficiency of the canal system is discussed in the Hydrology section of this report).

The Panel makes the following recommendations in relation to flora and fauna:

(i) **Update the Environment Management Framework to include the following modifications:**

   **Section 13.4, 2.0 Environmental Control Measures, Design – include the following requirements;**
   - Preferentially select species of Regional and State Significance in re-vegetation and amenity plantings.
   - Establish and implement a specific monitoring program and contingency plan, if required, to prevent invasion of the waterways by Rice Grass (Spartina spp).

(ii) **Amend Planning Permit Condition 24 to read:**

   24. **The Native Vegetation Offset Plan must provide for the:**
   a) Additional provision and maintenance, off-site, of at least seven hectares of Coastal Salt-marsh and Brackish Sedge-land; and
   b) Application of all excess habitat hectares as compensation for loss of the Saline Aquatic Meadow (and therefore not be available for trade).

   and must include details of the following:
c) Means of calculating......

9. CLIMATE CHANGE AND SEA LEVEL RISE

An initial assessment of climate change and sea level rise impacts is contained in the Hydrology section, Chapter 9, of the EES and is based on the Groundwater and Surface Water Effects Assessment prepared by Golder Associates (August 2007) which is provided as Technical Report Chapter 5 Volume 1 to the EES.

The Draft Victorian Coastal Strategy which was released in November 2007 envisages a maximum sea level rise of 0.8 metres by 2100. This is higher than the previously projected 0.6 metre rise upon which the initial EES analysis was based. In response to the draft Victorian Coastal Strategy, the Panel directed the proponent to provide “clear evidence and supporting material to demonstrate the efficacy of your position on the issues of climate change and sea level rise and for submittors to present any competing evidence to enable the Panel to fairly evaluate this matter”.

In view of this Stockland, commissioned Golder Associates to:

1. Assess how the current design Option B for the current climate would perform under the climate of year 2100 with sea level rises of 0.4 metres, 0.6 metres and 0.8 metres; and
2. Assess how the water level regime of the existing Lonsdale Lake and Lake Victoria will change under the future climate year of 2100 with the projected sea level rise with a particular emphasis on the projected rise of 0.8 metres.

The Supplementary Report on Effects of Climate Change on Water Level in Lake Victoria, Site Lakes & Lakers Cutting, (2 June 2008), was provided to the Panel prior to the hearing.

Mr Withers of Golder Associates, as part of the hydrology presentation, outlined the modelling results of the potential site impact of various sea level rise scenarios coincident with storm surges and floods for the year 2100 and provided responses to issues raised by submittors in his expert witness statement.

Mr Byrne, of Vantree Pty Ltd, was engaged to review the relevant sections of the EES and supporting technical material, and to provide an expert opinion on issues associated with the sea level rise scenarios, including the robustness of the design of the flushing system and the probabilities in relation to storm surges. Mr Byrne appeared at the hearing to respond to questioning.
Mr Craigie, an expert witness on hydrology and Dr Provis a hydrology and water quality expert, provided opinion on how the site will perform under future sea level rise and storm surges.

There were numerous submissions that raised issues related to climate change and sea level rise and these matters were widely discussed by many submitters during the hearing.

9.1 Description and Key Issues

The supplementary report presents modelling results for potential sea level rise under the standard Intergovernmental Panel on Climate Change (IPCC) scenario groups which are essentially:

- A worst case scenario where there is very rapid global economic growth, increased population (until the middle of the century) and rapid introduction of new and more efficient fossil fuel based technologies;
- An intermediate scenario where there is less reliance on fossil fuels; and
- A best case scenario where the emphasis is on the introduction of clean technologies and social sustainability.

Submissions on climate change raised numerous issues which can be summarised as:

- The need to consider sea level rise projections in draft Victorian Coastal Strategy 2007 and other documents;
- The impacts of climate change on the currently developed areas of Point Lonsdale with or without this development;
- The risks and uncertainty related to potential impacts;
- The risk that the development will increase the flooding risk of the site under climate change projections;
- The adequacy of water supply to Point Lonsdale as a result of projected increased drought conditions; and
- The cost burden of inundation as a result of climate change impacts.

The key issues in relation to climate change and sea level rise include:

(i) Expected sea level rise and groundwater levels;
(ii) Impact on rainfall and evaporation;
(iii) 2100 worst case scenario; and
(iv) Floor levels.
9.2 Panel Response

At present there is no policy directive about the level of sea level rise that needs to be planned for, but the draft Victorian Coastal Strategy of 2007 recommends that for planning purposes, allowance should be made for a range of approximately 0.4 to 0.8 metres along the whole Victorian coast.

During the course of the hearing, some submittors requested that the hearing be adjourned until the release of the revised Victorian Coastal Strategy (at that stage due for release mid September). The Panel declined to adjourn and gave a ruling that if the Strategy was released while it was writing its report, it would review the Strategy to ensure that it was taken into account as relevant. At the time of submission of this Panel report, the release of the final report has not occurred.

In order to assess the implications of any sea level rise, the additional impact of a coincident tidal storm surge and an overland flood and the potential for these to be affected by climate change have to be considered. Such predictions are inevitably complex and uncertain and, with the exception of some work undertaken by CSIRO, there is very limited predictive modelling at the local level to provide guidance. There is as yet no standardised modelling approach to undertake the task.

(i) Expected Sea Level Rise and Groundwater Levels

The Panel has reviewed the work prepared by Golder Associates which predicts a maximum water level (worst case) of 2.35 metres Australian Height Datum (AHD) by the year 2100 based projections of a maximum 1 in 100 year flood recurrence interval, coupled with a sea level rise of up to 0.8 metres and associated tidal storm surge.

Various predictions from a range of other sources were put to the Panel by submittors. On one hand the Geelong Environment Council and others regarded that a much greater increase than 0.8 metres could well occur. Ms Lindros from the GEC referred to an article in the Guardian Weekly of 8 February 2008, which was based on information from the National Academy of Sciences. It indicated that, as it is possible that Greenland ice sheet will soon begin melting, global sea levels could rise by 7 metres. Ms Lindros referred to recent statements by Mr Barrie Pittock, an Australian climate researcher that sea levels will rise by “1 metre by 2100 and maybe several times that, possibly 1-3 metre by 2100 with the Artic sea ice melting sooner than expected”.

Other submittors cautioned that in the absence of clear policy direction on sea level rise, the Panel should recommend against the proposal. The Point Lonsdale Coastal
Spaces Group postulated that sea levels “will not stop rising in 2100”.

On the other hand Mr Byrne considered planning for a 0.8 metre sea level rise is unjustified, based primarily on doubt that Point Lonsdale will be subjected to the same level of sea level rise as that anticipated elsewhere.

Data from Australia-wide long term tidal gauge records taken from the Australian Mean Sea Level Survey 2006 (National Tide Centre, Bureau of Meteorology) were presented. It shows that average sea levels rose nationally by about 1.2mm per year during the 20th century. However the recorded data from Point Lonsdale was classified as an outlier in that analysis, and excluded from the determination because the Point Lonsdale gauge has actually recorded an average sea level decrease of 1.6mm per year over its 42 years of records. Whether the Point Lonsdale observations are real, perhaps due to some tectonic changes that have caused the land to rise, or whether gauge is faulty, is unknown. Apart from pointing out this anomaly, the proponent did not rely on the Point Lonsdale tide gauge data nor account for it in its sea level rise modelling.

Mr Morris explained that, for the purpose of this project, neither Golder nor Stockland has adopted any particular scenario for future climate. Rather the development design is safely conservative to accommodate a sea level rise of up to 0.8 metres. He said that the project “has been designed to accommodate rising sea levels, and it can be further adapted in the future should the need arise. That is, the development has been planned to accommodate rising sea levels should they eventuate”.

Mr Morris pointed out that if there is a 0.8m sea-level rise, a significant area of the present Point Lonsdale township would be inundated. He therefore contends that inevitably “the authorities will protect Point Lonsdale by raising embankments.”

Mr Brooks of DSE recommended that the Panel take a precautionary approach and assess the proposal based on its ability to accommodate the upper level in the Draft Victorian Coastal Strategy of 0.8 metre sea level rise.

Mr Keon Cohen accepted that an “0.8m anticipated sea level rise should apply to the site as a minimum” however in light of the deferral of a concurrent matter relating to a Ministerial call-in at Port Fairy pending the release of the finalised Victorian Coastal Strategy, he requested that this Panel should take similar action. The Panel noted Mr Keon Cohen’s request and responded that policy development is dynamic process with new and policy revisions a constant and taking this into consideration, did not feel that delaying the hearing and reporting was warranted.

The Panel is of the view that while the Victorian Coastal Strategy guideline for
planning is yet to be finalised, it is prudent to give the weight of its consideration to the upper end of projected sea level rise, that being a 0.8 metres by the end of the century. However, should the imminent Victorian Coastal Strategy propose an upper level sea level rise above that, the higher would be factored into the Panel’s recommendations.

In addition to coast line retreat, sea level rise will cause the groundwater to rise possibly by the same amount. The exact magnitude will be influenced by topography and hydraulic connectivity. Golder undertook modelling to estimate groundwater depths under a range of sea level rise scenarios using rainfall and evaporation for an historically dry year, and for an historically wet year under “no development” and option B scenarios. It predicts some increase in mean groundwater levels in the coastal plain around the area of Lake Victoria and Lakers Cutting, but within the proposed residential area this is limited due to the changes in the run off characteristics of the catchment.

(ii) Climate Change Impact on Rainfall and Evaporation

The supplementary report includes potential changes in rainfall pattern and evaporation associated with climate change. It forecasts that for each of the three IPCC standard scenarios for 2100, the only month that Point Lonsdale might experience greater rainfall than is currently the case is March (between 3.8% - 15.6% higher), with six months of the year predicted to be significantly drier and evaporation higher. It then links evaporation directly to temperature increases to predict that there would be less run-off in the Lake Victoria Catchment.

The Panel queried Golder’s approach to this calculation as there is some research data that shows contrary to expectation, evaporation has actually been decreasing while temperatures had been increasing. Mr Morris, in his closing address, advised that Golders had reviewed the nominated research and concluded that allowing for evaporation decreases would have negligible impact on the modelling results.

The Panel accepts that Golder, using a methodology claimed to be similar to that used by CSIRO to assess climate change impacts in Gippsland, has made a commendable attempt to predict the effect climate change will have on the future run off patterns. While there is some uncertainty about these predictions they do provide the Panel with trends for 2100, compared with 1990, to indicate there will on average be less run off, except for March.
(iii) **2100 Worst Case Scenario**

The CSIRO is predicting an increase in the frequency and severity of storm surges with climate change so that, by 2070, a current “one in 100 year” event could occur around every five years.

Golder has used Western Channel Pile data from the 100 year storm surge (i.e. a combination of high tide, low pressure and wind) that occurred in 1934 to model the effects of a storm surge on the Lake Victoria Catchment. During this 20 hour storm, the tides reached a peak of 1.41m AHD. Golder coupled this with a possible 0.8 metre sea level rise to simulate a worst case scenario. In this modelling Golder did not change the size of the tidal channel inlet culverts, but did assume that by 2100, the Bellarine Highway, Fellows Road and Shell Road will all have been raised so that they are not overtopped by the rising sea water. This seems a reasonable assumption as, with or without the development, there will be a need to protect the current housing from sea level rise. The modelling predicts that most of the current residential area bounded by Fellows Road, Shell Road and the coast will be flooded and there may be some minor flooding of the Stockland’s site roadways. The site’s western conservation area is likely to be inundated but the residential area would not.

Mr Withers informed the Panel that post development and with raised roads, the only way water can get onto the site, even assuming an 0.8m sea level rise and storm surge, is via the tidal channel inlet valves and these can be adjusted to modify the inflows. Mr Craigie and Dr Provis were more cautious, indicating that there may be a requirement for pumping for a short period, in which case there would be adequate warning that this would required.

Table 3 overleaf, adapted from Mr Withers’ powerpoint presentation, summarises the possible future water levels in comparison to the present under a worst case scenario, with and without the development.

This table shows that in the worst case scenario (high tides, sea level rise of 0.8 metres and a tide storm surge) the peak water level in the project site is predicted projected to be 1.65m AHD in 2100, provided embankments are built up to prevent overflow from Lakers Cutting. If this does not occur the peak water level could be 2.35 metres.

Various submitters baulked at the prospect that the site would only be protected if the road embankments are raised, and pointed to the scenario where there would be extensive flooding of the site under the worse case scenario if they are not. They
argued that the lots would need to be at around 2.5m AHD to avoid flooding and, if this level became a condition of permit, there would be adverse visual impacts.

Table 3: Possible Peak Water Levels (Worst Case Scenario)

<table>
<thead>
<tr>
<th>Development scenario</th>
<th>No Development</th>
<th>Option B Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catchment inflow</td>
<td>1 in 100 year rainfall</td>
<td>1 in 100 year rainfall</td>
</tr>
<tr>
<td>Astronomical Tide</td>
<td>Maximum high tide</td>
<td>Maximum high tide</td>
</tr>
<tr>
<td>Storm Surge</td>
<td>Maximum predicted</td>
<td>Maximum predicted</td>
</tr>
<tr>
<td>Land Precinct</td>
<td>Lakers Cutting</td>
<td>Lonsdale Lakes</td>
</tr>
<tr>
<td>Present Climate and Mean Sea Level</td>
<td>1.45 0.75 0.80</td>
<td>Lakers Cutting</td>
</tr>
<tr>
<td>Possible 2100 Climate and 0.8 m rise in mean sea level</td>
<td>2.35 1.10 1.15</td>
<td>Lonsdale Lakes</td>
</tr>
<tr>
<td>Minimum lot level 1.8 m AHD</td>
<td></td>
<td>Lake Victoria</td>
</tr>
<tr>
<td>Minimum road level 1.5m AHD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The City of Greater Geelong Engineering Services section in written comments provided to the Panel confirms “that irrespective of whether the “Option B Development” proceeds or there is “no development”, some form of “Option B Waterway and Drainage System” will need to be built. There is no “do nothing” option.” No further details of what might be required were provided. The need for protection irrespective of the development was a view shared by Mr Craigie.

The Panel accepts the likelihood that there will be an increase in storm surges in the future and it tends to agree with Mr Byrne’s opinion that Golder has taken a conservative approach in modelling a scenario where the worst possible events coincide. The Panel recognises that some protective road alignment work is likely to be required to protect the present dwellings and infrastructure in catchment area from flooding regardless of the Stockland development. These works may not be required for some years and the necessity for them can be monitored and planned for. On the other hand, if it can be reasonably avoided, it does not seem sensible to add to the need to raise the embankments by increasing the number of houses that might otherwise be flooded.
(iv) **Floor Levels**

The earthworks associated with the development proposes to alter the levels of the site and to create a waterways system that flushes incoming tidal water from Lakers Cutting through the canal system and out through an adjacent set of culverts. Culverts also connect Lonsdale Lakes to Lake Victoria. Following the earthworks, the proponent’s intentions for site height for the Option B development are:

- The lowest allotment in the residential development is intended to have a level of approximately 1.8m AHD;
- The lowest road level in the residential development is intended to be 1.5m AHD;
- The outside edge of the open space corridor in the residential development is intended to be 1.3m AHD; and
- In the western area of the site, ground levels will be lower such that intermittent inundation of much of this area is intended.

The following table showing the height of proposed allotments by floor height in each of the development “pods” was provided by Stockland at the request of the Panel.

<table>
<thead>
<tr>
<th>Levels Metres AHD</th>
<th>All Pods No of lots</th>
<th>Pod 1 No of lots</th>
<th>Pod 2 No of lots</th>
<th>Pod 3 No of lots</th>
<th>Pod 4 No of lots</th>
<th>Pod 5 No of lots</th>
<th>Pod 6 No of lots</th>
<th>Pod 7 No of lots</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8-2.1</td>
<td>66</td>
<td>18</td>
<td>7</td>
<td>14</td>
<td>20</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2.1-2.4</td>
<td>200</td>
<td>11</td>
<td>32</td>
<td>55</td>
<td>53</td>
<td>13</td>
<td>22</td>
<td>14</td>
</tr>
<tr>
<td>2.4-2.7</td>
<td>192</td>
<td>2</td>
<td>53</td>
<td>48</td>
<td>23</td>
<td>23</td>
<td>22</td>
<td>2.1</td>
</tr>
<tr>
<td>2.7-3.0</td>
<td>54</td>
<td>5</td>
<td>10</td>
<td>9</td>
<td>11</td>
<td>14</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>3.0-3.3</td>
<td>10</td>
<td>1.9</td>
<td>1</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3-3.6</td>
<td>4</td>
<td>0.8</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.6-3.9</td>
<td>1</td>
<td>0.2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.9-4.2</td>
<td>1</td>
<td>0.2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>528</td>
<td>31</td>
<td>101</td>
<td>127</td>
<td>105</td>
<td>61</td>
<td>60</td>
<td>43</td>
</tr>
</tbody>
</table>

It follows from the information in Table 4 that, if a minimum floor level of 2.4 metres is to be specified, the house foundations on about 50% of allotments would need to be raised by a maximum of 600mm (As indicated above, 2.35 metres is the worst case maximum water level assuming the road embankments are not raised).

Mr Morris indicated there is no justification to go to 2.4 metres, but this level or even higher could be accommodated although it would have design implications and there would probably be a need to import fill.
There was further extensive debate at the hearing about the minimum floor levels necessary to avoid climate change impacts inclusive of a freeboard allowance. DSE indicated it is broadly comfortable with the proposed 1.8 metre minimum floor level for dwellings. The Point Lonsdale Coastal Spaces Group submitted that they should not be less than 2.85m AHD i.e. max 2.35 metre water level plus the 500mm standard freeboard allowance currently required by the Corangamite Catchment Management Authority.

The City of Greater Geelong advised the Panel it had not taken a position on minimum floor levels but said that “Council takes some comfort from the comments of Mr Morris that, if the Panel were to recommend higher floor levels of 2.1m or even 2.35m to 2.55m, this could still be accommodated although he believes it is not justified.”

Based on the worst case modelling that has been undertaken (peak water levels at 1.65 metres in the project site if the road and other embankments are raised and 2.35 metres if they are not), the Panel cannot support the proponent’s contention that a minimum floor level floor level of 1.8 metre is sufficient. Equally it cannot agree that the Point Lonsdale Coastal Spaces Group requirement for a minimum of 2.85 metres (including 500mm freeboard) is necessary.

On balance and in view of the proponent’s acknowledgement that the house foundations on the lower allotments can be raised, the Panel considers that a minimum floor level of 2.35 metres for dwellings and commercial buildings would be the most prudent option. This provides a minimum of 600 mm freeboard if the road embankments are raised as expected whilst avoiding the direct flooding of additional houses in Point Lonsdale if they are not. In other words it avoids increasing the number of houses in Point Lonsdale that might be at eventual risk from a 0.8 metre sea level rise by 2100 and from more intense and frequent storm surges. It effectively addresses the CCMA’s 500 mm minimum freeboard requirement. In arriving at this position, the Panel is cognisant that future strategic decisions about the provision of expensive protective infrastructure works will be required along many parts of the coast and priorities about protecting existing settlements may be needed.

Should the Victorian Coastal Strategy revise its upper level sea level rise planning guideline above 0.8 metres then the floor level will need to be revised upwards by the differential.
9.3 Findings and Recommendation

Planning for effects of climate change is a difficult and complex issue, and is one that is emerging as a key consideration in a range of projects. Currently there are few guidelines, there is little policy at either the state or local level and it is difficult to quantify. The Panel accepts that climate change is an extremely important consideration.

However, acceptance of climate change does not mean that every development proposal on low lying land and/or near the coast should be rejected because of what might happen over the longer term.

The key issue is to plan effectively for climate change to ensure that if and when there are changes, those developments have taken the key issues of rising sea levels, storm surges and larger high tides into account.

Just as there has been long term planning for fire and flood impacts, so there should be a measured and considered response to the influence of climate change impacts. In the absence of a clear position (at this stage of the planning process) on impacts on climate change, the Panel has adopted a precautionary approach to ensure that this development proposal is planned to the upper level of any impact (should it occur) of sea level rise and storm surge.

The Panel has assessed that based on the material put before it, it has concluded that if the package of recommendations are adopted, the risk of this development being impacted by climate change is low.

The Panel is appreciative of the additional work that has been undertaken to assess the impacts of climate change and associated sea level rise. The reports prepared for the proponent of necessity is complex because of the intricate range of variables that have had to be considered both in terms of climate change impacts in general, as well as those specifically associated with the site and proposed development. The Panel acknowledges that the report was prepared with very limited guidance in its conduct due to the limited similar work having been undertaken on the Victorian coast line, and it was prepared within a limited time following the Panel’s direction hearing request.

The proponent considers that the “adoption of a 0.8 metre (sea level rise) figure would be very conservative” and that the proponent’s modelling which, based on a worst case “very conservative” scenario, considers residential dwelling a minimum floor level floor level of 1.8m will be protected from storm surge in the event of sea level rise. The Panel considers a minimum floor level floor level of 1.8m is not supportable
because it relies on the raising of embankments.

The Panel makes the following recommendations in relation to Climate Change and Sea Level Rise:

(i) **Replace Planning Permit Condition 22 with the following:**

The floor levels of all residential and commercial buildings must not be less than 2.35m AHD OR, if the Victorian Coastal Strategy adopts a 2100 sea level rise planning guideline of more than 0.8 metres, the floor levels of all residential and commercial buildings must not be less than 2.35m PLUS the differential between 0.8 metres and the revised planning guideline.

(ii) **Delete Planning Permit Condition 63** (The freeboard for all new buildings constructed on the subdivision will be a minimum of 500 mm above the applicable flood level) and renumber remaining permit conditions accordingly.
10. CULTURAL HERITAGE

The discussion of cultural heritage in Chapter 12 of the EES is based on an assessment report prepared by Biosis. That report, and a draft Cultural Heritage Management Plan are included in the EES as Technical Appendix 10. The assessment incorporated the findings of the archaeological surveys and subsurface testing undertaken for the proposed development of the Lonsdale Lakes Estate in 2005. Ms Oona Nicholson of ERM presented evidence on cultural heritage to the Panel.

10.1 Description and Key Issues

The EES states that the proposed development would involve the disturbance of the two large areas of the site considered to have Aboriginal archaeological sensitivity. These are described as the ridges in the south-east corner of the site just north of Shell Road and along the north-west boundary of the site. The proposal would also disturb seven recorded Aboriginal archaeological sites located either within the development footprint or in the north-west dunes that would be excavated to provide fill material for the residential pods.

In addition, the Shell Grit Camp located to the south of the Bellarine Highway would be disturbed and would require a permit from Heritage Victoria. The construction of a drainage channel beneath the Queenscliff railway has the potential to impact on the rail line, which is included in a Heritage Overlay in the Greater Geelong Planning Scheme.

The EES sets out a number of proposed measures which it considers will assist in the effective management of the heritage sites, including:

- Developing a Cultural Heritage Management Plan detailing measures for monitoring for archaeological remains and cultural heritage values during construction;
- Carrying out a program of sub-surface archaeological testing using both shovel probes and mechanical excavator; and
- Monitoring by an archaeologist and members of RAP of any remaining areas determined as having archaeological potential.

In addition, further archaeological investigations will be undertaken prior to development on the site.
The key issues in relation to cultural heritage include:

(i) Completion of Cultural Heritage Management Plan; and
(ii) Interpretation Strategies.

10.2 Panel Response

(i) Completion of Cultural Heritage Management Plan (CHMP)

The Aboriginal Heritage Act 2006 came into operation in May 2007 and established the ability to make the Aboriginal Heritage Regulations 2007. These regulations specify that a Culture Heritage Management Plan (CHMP) may be required, especially if an activity area has cultural heritage sensitivity, or the activity would have a high impact.

The submission from Mr Sutherland and Ms Heyes raised the issue of the CHMP, stating that:

Despite consultation with the Registered Aboriginal (RAP), there is no formal agreement that the site can be disturbed. It is understood that the dunes will be used as backfill in the lakes portion of the development. If the dunes are not able to be disturbed then Stockland may need to source fill material from off-site. Until an agreement with the RAP is concluded a permit should not be granted as the public has a right to consider where alternative fill is to be sourced and what environmental issues are caused by the introduction of non-local soils.

The Council minutes from 25 March 2008 responded to the above by noting that the majority of the land is classified as culturally significant, including the seven registered sites. It pointed out that for land that requires an EES and is known to be culturally significant, the Aboriginal Heritage Act 2006 requires the preparation and approval of a CHMP. They note that this process runs independently of Council and that Section 52(1) of the Act prohibits issue of a permit prior to approval of a CHMP. Council noted that they understood that the applicants were in the process of preparing a CHMP and seeking its approval.

In her submission, Ms Nicolson explained that she is currently undertaking further archaeological testing as part of the process of preparing the CHMP for the site to address matters that were unresolved or required amendment in the draft CHMP included in the EES documentation. The results of this testing will “input into the detailed design phase of the Earthworks Masterplan so as to minimize disturbance to the heritage sites”, and as Mr Morris pointed out in Stockland’s final submission, the
Earthworks plan must comply with the CHMP. This means that the western portion will not be disturbed (i.e. the ridge).

According to Ms Nicolson, the two Aboriginal groups and AAV have approved the methodology of the CHMP process. Further, in their final submission, Stockland stated that while the CHMP recommendations include minimising and avoiding harm to the Aboriginal sites, “the two Aboriginal groups are in agreement to disturb sites as long as enough testing takes place in the CHMP process and appropriate salvage is undertaken.”

(ii) Interpretation Strategies

Point Lonsdale is regarded as an area of high indigenous cultural significance. It was inhabited at the time of European settlement by members of the Bengalta balug of the Wathaurong Tribe, and the area contains a number of sensitive Aboriginal archaeological sites including burials. It is important that any development of this scale is respectful of the culture in the area and assists in its interpretation. To this end, the development could include initiatives such as cultural walks, signs identifying and describing significant native flora and fauna and culturally significant artwork and photographs.

10.3 Findings and Recommendations

The Panel considers that the work undertaken to ensure that Indigenous and Non-Indigenous cultural heritage is appropriate to the project. There are various statutory processes and safeguards in place to ensure that heritage is properly recorded and managed, and assessment and approval of issues relating to cultural heritage are largely under these separate processes.

The Panel is satisfied that when completed and approved, the Cultural Heritage Management Plan will ensure that Indigenous heritage is well understood and managed during the construction of the proposed development. One way of achieving this is to develop an interpretative program, to be used in public spaces as part of an overall urban design, education and public art strategy.

The Panel makes the following recommendation in relation to Cultural Heritage:

(i) Update the Environment Management Framework to include the following modifications:

(ii) Amend Section 13.5 to require the development and implementation of an interpretation program consistent with the Cultural Heritage Management Plan.
11. ECONOMICS AND TOURISM

Economics and Tourism is included as Chapter 13 of the EES and is based on an Economic and Tourism Impact Assessment report prepared by Essential Economics Pty Ltd (September 2007) which is provided as Technical Appendix 11 to the EES.

Mr Matthew Lee, of Essential Economics presented economic evidence at the hearing. His evidence statement was limited to the documentation of responses to a number of issues identified by submittors. Mr Lee supplemented his written evidence with a presentation to the hearing. This presentation concluded with a ‘Summary of Impacts’ table and a number of perceived benefits consistent with those outlined in the EES technical report.

11.1 Description and Key Issues

In relation to Economics and Tourism, the EES describes the existing economic and tourism environment of the Bellarine Peninsula, and identifies potential economic and tourism impacts of the proposed development. The ‘study area’ adopted for the economic assessment includes parts of Geelong, the Bellarine Peninsula and Queenscliff. It includes land and townships that were identified as being potentially affected by the proposed development or likely to have a role in servicing any growth in the residential or visitor population.

Issues outlined and examined under the heading ‘existing conditions’ include:

- Estimated resident population, population trends and forecasts to 2020;
- Household sizes – past trends and forecasts;
- Temporary residents and visitors;
- Number of dwellings;
- Holiday houses;
- House prices;
- Socio-economic characteristics of permanent residents;
- Labour force profile;
- Retail context including documentation of a retail hierarchy; and
- Tourism context.

Having provided the overview of existing conditions, the EES then documents an Impact Assessment that analyses the potential economic and tourism impacts associated with the construction of the development, along with the ongoing impacts associated with the residential and retail components of the development. The
assessment includes consideration of the following potential economic and tourism outcomes:

- Employment and capital investment associated with construction;
- Population and visitation changes as a result of the project;
- Net change to resident and visitor spending flows in the study area;
- Net impact on business in the study area; and
- Net impact on employment levels in the study area.

The key findings of the impact assessment can be summarised as follows:

- The proposed development will have a positive economic and tourism impact on Queenscliff, Point Lonsdale and the wider study area.
- Likely benefits primarily relate to the substantial capital investment of the development and the increased permanent population (approximately 1200 people over ten years) and visitor population (approximately 13% increase in visitor nights).
- Household spending of the permanent development population is likely to be approximately $35 million per year. Of this, it is estimated that approximately $15.5 million will be spent locally within Point Lonsdale and Queenscliff and other retail centres in the study area.
- Additional visitors to the study area, as a result of the development, are likely to inject approximately $3.7 million in retail and non-retail spending per year.
- It is estimated that the proposed convenience store will generate around $0.4 million in sales per annum from residents and visitors. This is sufficient to support the proposed store of approximately 80m².
- Through total expenditure, it is estimated that approximately 32 ongoing full time equivalent jobs will be created in the retail sector, with additional jobs in the non-retail sector within the study area.
- During the construction period it is estimated that approximately 2,360 full-time equivalent jobs will be generated, with an additional 6,390 jobs generated in the wider economy through the operation of employment multipliers.
- The proposed aged care facility, involving the provision of 120 beds, would generate direct employment of 90 nursing and administrative staff, with an additional 80 jobs generated indirectly in the wider region. These indirect jobs would provide support for the local economy as well as the services industry throughout the region.

Having assessed the impacts as outlined above, the EES concluded that the project will result in positive impacts on the study and local areas. Further, the EES concludes that no adverse economic or tourism impacts will occur as a result of the
proposed development and as a consequence, mitigation measures are not required and have not been developed.

The Panel considers the key issues in relation to economics and tourism include:

(i) Estimation of economic and employment effects;
(ii) Impact on town centre development; and
(iii) Effects on tourism.

11.2 Panel Response

(i) Estimation of economic and employment effects

A number of submissions, in indicating support for the proposal, noted likely positive economic effects arising from income generated from both new resident households and associated visitor spending. Additionally, a number of submissions supported the development due to its likely creation of full and part time employment opportunities both during and post construction of the development.

In its assessment of the EES and proposal, Council concluded that the development and associated amendment will facilitate “fair, orderly, economic and sustainable development”. Council accepts that the development will have positive economic effects arising from “employment opportunities both during construction and also in the local and regional area through increased population levels and associated multiplier effects”. The initial written submission on behalf of the Borough of Queenscliffe also advanced the opinion that the proposal “will have immediate positive effects on the economy of the Borough of Queenscliffe”.

Having noted the above, a number of submissions expressed concern that the positive economic effects reported in the EES were over estimated. In this regard Mr Keon Cohen, having been the only person/party to cross examine Mr Lee regarding his economic evidence, concluded in his submission to the Panel that “Mr Lee’s evidence is flawed with errors and his conclusions are unreliable i.e., the economic benefit of the project claimed will not occur to nearly the extent claimed”.

The Panel has identified, by way of summary, the following issues of contention raised by Mr Keon Cohen in respect to Mr Lee’s assessment of economic and employment impacts:

- An error in Mr Lee’s Technical Appendix to the EES in relation to the estimate of increased permanent resident spending within the ‘study area’ on retail and non retail goods - stated as $34.9 million per annum;
• A significant portion of anticipated increased spending by new residents (40% plus) will occur outside the immediate area and therefore should not be brought into account as this economic flow-on would not be unique to this development site;
• A number of longer term dollar impacts were not adjusted for inflation;
• Some economic analyses did not take into account population residing west of Fellows Road;
• Direct and indirect employment projections did not estimate the proportion of jobs that could be captured by local residents; and
• Costs “concerning school or medical imposts, or future dredging of Lakers Cutting” or long term public costs, “such as maintaining the waterway, dredging the sill at Lakers Cutting and erecting a higher Bellarine Highway” were not considered in his assessment of economic costs of the proposal.

The Panel notes that the above list embraces objecting comments by other parties in relation to this issue.

In relation to the concern expressed regarding the error in the Technical Appendix to the EES, Mr Lee accepted that an error was made. Mr Lee agreed with Mr Keon Cohen that the figures attributable to new retail and non-retail spending generated by new ‘permanent residents’ that will be captured within ‘study area’ will be approximately $15.5 million per annum (not $35 million as indicated in the Technical Appendix). Having noted this, the Panel highlights that the error in the Technical Appendix is not carried forward into the final EES documentation. The EES estimate of permanent residential spending ‘in the study area’ (refer Chapter 13, page 20) includes the following:

**Retail Spending**
- $0.4 million per year at the proposed local convenience centre on site
- $3.1 million per year in retail shops at Point Lonsdale and Queenscliff
- $6.3 million per year at other retail centres in the study area

**Non Retail Spending**
- $1.9 million per year within Point Lonsdale and Queenscliff
- $3.8 million per year at other areas within the study area

**Total = $15.5 million per annum ‘in the study area’**

Mr Keon Cohen’s detection of an inconsistency between the technical appendix and the EES is noted by the Panel but its impact is not considered to be substantial. The estimated spending of approximately $15.5 million per annum locally, as implicitly accepted by Mr Keon Cohen, represents a tangible and on-going economic benefit to
the study area. The benefit increases to businesses with Point Lonsdale, Queenscliff and other outlets in the study area, when combined with the estimated $3.7 million that is anticipated to be spent annually by new visitors to the locality as a direct result of the development.

In respect to Mr Keon Cohen’s submission that the estimated new permanent resident annual spend within the broader regional, state and interstate economy (of some $19.4 million) should not be considered a factor ‘in favour’ of this particular development proposal, the Panel agrees. While the quantum of spending outside the region was not challenged, and therefore can be considered as a reasonable estimate, it is clear that this “economic flow-on would not be unique to this development site”.

In respect to concerns raised in submissions regarding the EES’s estimation of retail employment creation in the study area arising from the project, the Panel is satisfied that the approximate projection of 30 ongoing full time equivalent (FTE) jobs is in the order of that which may be achieved.

In relation to Mr Keon Cohen’s concern regarding the lack of analysis regarding job capture by local residents, the Panel observes that it is likely that the on-going jobs that will ultimately be created in the local convenience shop, the aged care and child care facilities will likely be filled by residents in the study area, and if not, by residents residing on the Peninsula, or from those residing within Greater Geelong. The ‘economics’ of travel will be a key determinant. The Panel notes that the jobs that will be created represent a net increase in local job ‘opportunities’. The higher the number filled by locals, the greater the local economic benefit.

The Panel notes that regardless of the number of jobs that filled locally, jobs during construction will generate benefit for local retailers (and, to lesser extent non-retailers such as accommodation providers) through workers daily consumable expenditure.

The Panel is not persuaded by Mr Keon Cohen’s submission that the evidence of Mr Lee was deficient for not assessing the costs “concerning school or medical imposts, or future dredging of Lakers Cutting” or long term public costs, “such as maintaining the waterway, dredging the sill at Lakers Cutting and erecting a higher Bellarine Highway”. These matters have not been identified as being likely outcomes attributable to the development.

In summary on the issue of estimation of economic and employment effects, the Panel is satisfied that the EES has adequately considered relevant matters. The Panel is similarly satisfied that the realisation of the project as proposed will confer
substantial and enduring economic benefits for retailers, non-retail businesses, and residents of Point Lonsdale, Queenscliff and the wider catchment. Such benefits will include an increase of approximately $19 million in annual local expenditure which will be directly attributable to permanent residents of the development and their visitors. In addition, local job opportunities will be created both during and post construction.

(ii) Impact on Town Centre Development

Mr Keon Cohen claims that benefits to local traders would be reduced as the majority of new residents would travel to Ocean Grove to do their substantial shopping and they would not generate demand to support a new supermarket locally. This concern echoes a limited number of other submissions that state the EES is flawed in suggesting that retail expenditure by new permanent residents would represent a benefit to local town centre businesses.

Mr Lee’s response to these submissions is that:

*The EES Report concludes that the effect of the development would be an increase in the residential population equivalent to 1,195 new residents. While this is a substantial increase when compared against the population in the existing urban area (estimated at 4,060 persons), the resulting population would not be expected to lead to a change in the role or function of the existing centres in Point Lonsdale and Queenscliff.*

*The EES Report also identifies a stimulatory effect of approximately +$7.1m in expenditure retained in the local area, including $5m from permanent residents. This additional income would have a beneficial effect in sustaining the local business community, particularly as existing businesses are subject to significant seasonal fluctuations in turnover derived from visitors to the area.*

*In my view an appropriate way of maintaining the role of existing centres is through the adoption of planning policies that control the extent of land zoned for commercial development, or impose conditions on the scale or type of development in these centres.*

The Panel is satisfied with this opinion. The Panel agrees that a large proportion of resident expenditure on weekly household items will be captured by Ocean Grove and to a lesser extent by Queenscliff and Point Lonsdale. The increase in expenditure however will be significant. It is not dictated in planning policy that economic benefits need to be retained within a specified distance of a new development. In the opinion of the Panel, it is an appropriate conclusion of the EES that “the proposed development will have a positive economic and tourism impact on Queenscliff, Point Lonsdale and the wider study area”.

(iii) Effects on Tourism

The Panel notes that a submission was lodged that indicated additional tourism related development in Queenscliff is not supported by the community and therefore the positive economic impact on this sector of the economy projected to occur as a result of the development is not relevant.

This submission is contrary to the community visions articulated in both the Greater Geelong and Queenscliffe Planning Schemes and various community endorsed strategies. In response to this, Mr Lee expressed his opinion that:

*The tourism sector is a critical component of the local economy in the townships of Queenscliff and Point Lonsdale. The effects that have been identified in the EES Report, which include an estimated increase of approximately 53,610 overnight visitors and additional expenditure of $5.8m pa, represent a very significant boost to the local economy.*

The Panel is satisfied with this response and rejects the submission.

11.3 Findings and Recommendations

In relation to the economic and tourism assessment the Panel is satisfied that the EES has adequately considered relevant matters.

The Panel finds that the realisation of the project as proposed will confer substantial and enduring economic benefits for retailers, non-retail businesses, and residents of Point Lonsdale, Queenscliff and the wider catchment. Such benefits will include an increase of approximately $19 million in annual local expenditure which will be directly attributable to permanent residents of the development and their visitors. In addition, local job opportunities will be created both during and post construction.

The Panel considers that the EES appropriately concludes that the proposed development will have a positive economic and tourism impact on Queenscliff, Point Lonsdale and the wider study area. The Panel supports the finding of the EES that mitigation measures are not required to off-set any potential economic effect.

The Panel has no specific recommendations in relation to Economics and Tourism.
12. SOCIAL IMPACTS

The Social Impact Assessment (SIA) is included as Chapter 14 of the EES and was prepared by Maunsell. This assessment is based on the SIA prepared by Urbis JHD which is provided as Technical Appendix 12 of the EES. Ms Ruth Davies of Maunsell presented the social impact evidence at the hearing. Additionally, and in response to a request from Mr Keon Cohen, Ms Maxine Cooper appeared at the hearing to respond to questions about her role in preparing the impact assessment. Ms Cooper was cross-examined by Mr Keon Cohen and did not provide a written evidence statement.

There were numerous submissions that raised issues about social planning and impacts (both in support and against the proposal) and a number of submitters raised similar issues during the hearing.

12.1 Description and Key Issues

The SIA describes the existing social environment of both Queenscliff and Point Lonsdale and identifies potential social impacts that may result from the proposed development. It recommends mitigation measures to ensure the proposal responds to community planning requirements and is consistent with relevant Government policy.

The EES provided a range of information in relation to social impacts, including:

- Legislation and policy framework;
- Phase one research;
- Existing conditions; and
- Mitigation measures.

In considering the proposal, the City of Greater Geelong Council Minutes of 25 March 2008 noted that “the proposal would facilitate a major residential subdivision which will inevitably have some impact on the existing community, social and recreational facilities within the broader catchment of Point Lonsdale, Queenscliff and Ocean Grove.” Council then identified that key social impacts raised in the submissions relate to population increases and change in the demographic profile; impact of social infrastructure on Point Lonsdale and Queenscliff; maintenance of community lifestyle and rate sharing.

Council advised that its Community Development Department provided comments on the proposal prior to exhibition and noted there was no objection to it from a
social planning perspective. The Community Development Department commented further that: “the site has been designed for a walkable and active transport environment and it provides appropriate social infrastructure (including a residential aged care facility, integrated retirement village on site and a community centre”).

In her evidence, Ms Davies concurred with the overall Council assessment of the key impacts, and identified the following as additional issues:

- Impact on community infrastructure;
- Affordable housing;
- Provision of a community facility;
- Community connectedness and liveability;
- Scope of the SIA; and
- Consultation and response to community opposition.

She concluded that, while there will be impacts arising from the proposal, appropriate mitigation measures can be taken to ensure an overall social and community benefit from the proposed development.

In its opening submission, the Point Lonsdale Coastal Spaces Group (PLCSG) argued that in relation to social consequences:

> The intensity of the proposed development and the social consequences are linked. They are linked because the level of intensity of this new suburb relate very much to the way of life and sense of well being of the local community. A suburb on this site has little connection with the Point Lonsdale Village and yet is not a suburb of Geelong. A new suburb will generate cost pressures on local infrastructure and social services. In the face of such cost pressures it is hard to argue that the proposal will generate a net community benefit for the local community. The cost of the proposal will be solely borne by the residents of Point Lonsdale. It must follow that there is no demonstrated net benefit for Point Lonsdale if the proposal proceeds.

Many submitters spoke anecdotally about the stressed level of community services in Point Lonsdale and the impact this proposal might have on those services. There was a strong view by opposing submitters that the social infrastructure of the township could not cope with the additional population and its requirements, especially if the ageing demographic profile continued. Conversely, submitters in support argued that an increase in population will enable the growth of support services and will provide a new impetus for strengthening of community activities such as sporting clubs and the like.
The Panel has identified that the key issues in relation to social impacts include:

(i) Demographic profile;
(ii) Community services and facilities;
(iii) Affordable housing;
(iv) Social change/social impacts; and
(v) Net community benefit.

12.2 Panel Response

(i) Demographic Profile

The EES provides an overview of the existing socio-economic profile of Point Lonsdale and Queenscliff, which in summary could be described as follows:

- A predominantly ageing population profile, with over 35% of the total population aged over 60 years, with a corresponding lower percentage (23%) of the population aged under 24 years;
- Over 88% of detached dwellings, compared with state average of 77%;
- Higher local average annual household income, compared with the broader region; and
- Lower proportion of car ownership in local area compared with region.

The EES data suggest that about 50% of the total number of dwellings are used as holiday or non-permanent homes. Some submitters estimated this to be as high as 60%.

It was variously put to the Panel that the socio-economic profile of Point Lonsdale and Queenscliff is that of an ageing population, with high proportions of retired and elderly people and lower proportions of young people. This is evidenced by the closure of the Queenscliff Secondary College and low numbers of children attending the local primary schools. Even though many people are retired, income levels suggest a degree of affluence. It is clear that the townships are popular destination for both permanent population and for the semi-permanent and occasional (or less regular) visitor.

There were varying opinions about the profile of residents who might reside in the new community. Some suggested it will follow a similar profile, but perhaps slightly younger. They will consist of second and third home buyers, as well as non permanents seeking a holiday home. Mr Lee argued they will be different to the existing profile in that there will be family groups – comprising adults in their late 30s and early 40s, with younger school age children. He estimated that in his
opinion, the household structure will comprise 70% of permanent and 30% of holiday households. Others suggested that it will be more of the same. The Panel was told that Point Lonsdale is occasionally referred to as “God’s waiting room” because of the elderly profile. One reason for this profile is that many of the long-term holiday residents eventually retire to the region. Mr Mitchell expressed the view that purchasers of the new properties are more likely to be retirees, holiday makers and increasingly investors who have been observed to use their properties even less than holiday makers. He concluded that:

Given the profile of home buyers likely to subscribe for the purchase of homes in the proposed development, a large scale housing development in its own right will do little to add to the long term sustainable prosperity and diversity of the Queenscliff and Point Lonsdale community.

The Panel generally supports the view of the proponent that the new community will add to the structure and diversity of the population in the Point Lonsdale/Queenscliff area and provide for new opportunities in community culture and composition. However, in saying that, the Panel saw no substantive evidence that the new community will necessarily be any younger than its current profile.

(ii) Community Services and Facilities

The development proposal before the Panel proposes a number of specific community facilities and overall improvements to the general social infrastructure of the Point Lonsdale area. These include:

- Multi-purpose community facility;
- Local convenience shop;
- Retirement village of 170 independent living units;
- Aged care facility of 120 beds;
- Network of local parks, walking paths and bicycle trails; and
- Possible provision of a child care centre on Shell Road (proposed after the exhibition period).

Point Lonsdale sits within both the City of Greater Geelong and the Borough of Queenscliffe, and Council advised approximately 500 Point Lonsdale households are located within the City of Greater Geelong. A number of submitters commented that there will be an overburden of use by the new residents on the existing facilities at Point Lonsdale. Additionally, it was suggested that there will be an inequality of rate burden and that some of the rates that accrue from the Lonsdale Lakes development should go to the Borough of Queenscliffe.
Further, it was suggested to the Panel that some of the community services and facilities are operating at capacity, while others are less utilised. A number of submitters advised that the local doctor is very popular, and residents need to wait for two to three weeks to get an appointment. It was inferred that additional residents would place even more pressure on this doctor. Some submitters painted a bleak picture arguing that the potential new residents face a lack of social services such as, schools, medical care, public transport and employment. The Panel can only comment that threshold levels for particular services level out over time and if there was to be an injection of new residents, then service provision would also, over time, respond. Mr Smith advised there is a range of Council sponsored services and facilities located in Ocean Grove which is only five minutes away by car.

Stockland propose to build a multi-purpose community facility (“community hub”) of around 500 square metres within the site as specified in the draft Development Plan Overlay and the S173 Agreement relating to Infrastructure. The specifics of this proposal have not yet been formally considered by the City of Greater Geelong Council but the Panel was advised that the Council officers and Stockland social planners have consulted with the Borough of Queenscliffe on its make up. It is intended to be designed as a flexible space and has the potential to be used for children’s services amongst other uses.

(iii) Affordable Housing

Some submitters were concerned that this proposal would not assist in the provision of affordable housing in the locality or the region. This was acknowledged by Ms Davies who said in her evidence that:

The issue of affordable housing is a complex one. Current legislation and planning policy does not require Stockland to provide affordable housing for low income people within their proposed development.

However, by increasing and diversifying the housing market, the development does provide for a range of housing types that will broaden housing choice for the existing and new community.

Ms Davies supported this view at the hearing by noting that a distinction needs to be made between affordable and available housing. She argued that for affordable housing objectives to be achieved, it is preferable to be in an area with a high level of service provision where a range of different opportunities can be achieved. Availability of services and a range of accommodation types assist in providing a more dynamic housing environment. The Panel accepts Ms Davies’s view that potential residents in the Point Lonsdale area are currently being priced out of the
existing housing market by retirees and sea-changers, and that this proposal will allow for a new and more diverse market.

Mr Lee shared a similar view and concurred that the proposal does not make provision for affordable housing. In putting this position, he said:

> The creation of 600 residential lots and 170 retirement living units at the subject site represents a substantial increase in the total supply of housing lots in the local area, and would be expected to have a downward effect on the price of new housing in Point Lonsdale and Queenscliff. This is particularly important having regard to data showing that median house prices in the Borough of Queenscliffe were approximately $510,000 in 2006.

The evidence presented in this regard was consistent and the Panel accepts that while the proposal will open up availability of housing to a wider range of entrants, it will not be aimed at first home buyers (i.e. the generally agreed context of affordability). Neither the City of Greater Geelong nor the Borough of Queenscliffe saw this as a flaw in the proposal, with both accepting that it would provide for more diverse housing opportunities than currently exist.

(iv) Social Change/Social Impacts

There were numerous arguments about the impact of social change put to the Panel by various groups and individuals opposing this proposal. Many of these had considerable merit and are discussed throughout the report. Some were particularly concerned about the impact this proposal would have on the general ambience and social structure of Point Lonsdale.

A key concern about the social impact related to the influx and impact of a new population. The development will realise in the order of approximately 1200 new residents over a 10 to 12 year period. It was strongly contended by objecting submitters that Point Lonsdale could not take such a “massive” 37% increase in population even over that time and it would result in social disruption, over burdening of services and facilities, parking problems for Point Lonsdale township, destruction of the character and ambience of the town and the like.

One of the arguments against the development that the Panel did not find very convincing was that principally put by Mr Keon Cohen. In cross examining both Ms Davies and Ms Cooper on social impacts, he took them through various parts of the SIA, and in particular Section 8 of the Technical Report dealing with Community Attitudes and Values. As part of preparation of the SIA, the consultants undertook qualitative community research and asked residents to nominate “things they liked
about the area”, some of which included: easy lifestyle, small, close knit community; quiet sort of place; quaint and safe. Mr Keon Cohen was very concerned that this proposal went against these characteristics.

It was clear to the Panel from this line of questioning that Mr Keon Cohen and many submitters, both permanent residents and holiday home owners, are very protective of Point Lonsdale and determined to retain its exclusive and serene atmosphere. Views were expressed that the development would destroy the peaceful and quiet nature of the township. The Panel is not persuaded by this line of argument which could be interpreted as social exclusiveness. In any case it is aware that the serenity is seriously disrupted during every holiday period and that significant parts of the present township are essentially suburban in character and ambience. It is persuaded by the fact that Victoria’s population is increasing at unprecedented post war rate. Diversity of lifestyle, housing choice and location must remain an important consideration in all planning.

It was put to the Panel that urban growth on the Bellarine Peninsula should be directed towards Ocean Grove, Drysdale and Leopold, and that the bulk of growth in the wider Geelong region will be directed towards Armstrong Creek. The Panel accepts that the bulk of growth will occur in these locations.

It was nevertheless suggested by some submitters that the Panel should consider this proposal as if the land was not zoned residential as it should not be used for residential purposes. For example, the Geelong Environment Council submitted that:

The current zoning is an accident of history with a real lack of awareness regarding the values of the site in 1982. Planners were seduced by promises by the landowners and project manager of lakes and parkland with parkland winding though and all indigenous vegetation planted.

When asked the source of the above quote, the GEC could not say where it had come from. The subject land is zoned residential, and the Panel understands that at no stage in the past 20 years, has there been any move to rezone it even though the opportunity has existed during various reviews. There has been no evidence from any submittor that the residential zoning is an “accident of history” nor any seduction by promises.

Stockland advised that they would be putting into place a Community Management Plan to monitor the impacts of the development of Lonsdale Lakes and it would undertake post-occupancy surveys to keep on top of emerging issues as the community became more settled. Additionally, the Panel was advised Stockland
retains two social planners who assist in coordination and management of all new Stockland developments in Victoria. The City of Greater Geelong will also have a major coordination role to play in this regard, in that they too will be responsible for ensuring that the social needs of the new community for a range of services and facilities are well looked after.

(v) Net Community Benefit

An analysis of net community benefit which should also include an analysis of any dis-benefits accruing to a project is a useful and important way to deal with issues relating to social impact. Such an analysis is sometimes difficult to quantify, especially if weighted values are placed upon the benefits or dis-benefits identified. Depending on how the analysis is undertaken also depends on who constructs it and the inherent values and qualitative approach used. In this regard, Clauses 11.01 and 11.02 of the SPPF state:

*It is the State Government’s expectation that planning and responsible authorities will endeavour to integrate the range of policies relevant to the issues to be determined and balance conflicting objectives in favour of net community benefit and sustainable development.*

*The State Planning Policy Framework seeks to ensure that the objectives of planning in Victoria (as set out in Section 4 of the Planning and Environment Act 1987) are fostered through appropriate land use and development planning policies and practices which integrate relevant environmental, social and economic factors in the interests of net community benefit and sustainable development.* (Panel underlining)

These are important State policy considerations. The Panel has turned its mind to whether this site is capable of sustaining the proposed use and development, without undue negative impacts on the existing local community. In dealing with this issue, the Panel considered that overall, an analysis of the community benefits provides a useful measurement tool.

The PLCSG noted that with regard to the above clauses “*It is the expectation of the State Government that decisions to amend planning schemes, and issue planning permits, will be made after integrating social, economic and environmental policies in favour of net community benefit and sustainable development*”. Further, it said “*The proper assessment of net community benefit, … is of fundamental importance to the Panel’s assessment of this proposal*”.

The PLCSG was then critical of the way in which the proponent had assessed net community benefit and submitted that “*the proponent has provided only the most*
superficial analysis of net community benefit and sustainable development to the Panel”. Mr Kane argued it is superficial because of the lack of analysis of the social, economic and environmental costs to the local community. The Panel notes that this criticism is directed towards impacts on the existing community and does not seem to take account of the needs of a new or expanded community.

In his opening submission, Mr Morris provided an overview of the key environmental social and economic effects included in the community benefit analysis. Ms Davies did not provide any additional assessment in her social planning evidence. Nevertheless, while not set out as such, the Panel found a useful summary of the issues surrounding net community benefit in Appendix B of Technical Appendix 12. Based on this information, the Panel has summarised net community benefit in the following table. The Panel has not attempted to weight the perceived advantages and disadvantages or to place them in any particular order.

Table 5: Community Benefits and Impacts

<table>
<thead>
<tr>
<th>Positive Benefits</th>
<th>Negative Impacts</th>
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<tbody>
<tr>
<td>• Additional housing in an area that has few opportunities for new development</td>
<td>• Large increase in population</td>
</tr>
<tr>
<td>• Add to housing choice, diversity and availability</td>
<td>• Pressure on community services</td>
</tr>
<tr>
<td>• Provide additional community services and facilities for both the new and existing communities</td>
<td>• Division in the community</td>
</tr>
<tr>
<td>• Provision of aged accommodation and aged services</td>
<td>• Council/Community will shoulder the financial burden of upgrading public infrastructure</td>
</tr>
<tr>
<td>• Make the best use of land already zoned for residential purposes</td>
<td>• Housing will not be affordable</td>
</tr>
<tr>
<td>• Utilise semi-degraded land in an efficient and best practice manner</td>
<td>• Isolated community</td>
</tr>
<tr>
<td>• Provide economic benefits through generation of employment and an increased local economy</td>
<td>• Perception that Point Lonsdale will change from a small coastal town with a distinct sense of community, to a suburb of Geelong</td>
</tr>
<tr>
<td>• Provision of new recreation and conservation areas for local residents</td>
<td>• Increase in traffic</td>
</tr>
<tr>
<td>• Increase in population</td>
<td></td>
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<tr>
<td>• Proposal has planning support through its Residential 1 Zone and through various policy provisions of the Greater Geelong Planning Scheme.</td>
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</table>
Overall, the Panel concludes the proposal will result in a net community benefit to both the existing residents of Point Lonsdale/Queenscliff and, importantly, to the residents of the new Lonsdale Lakes community once it is established.

12.3 Findings and Recommendations

Point Lonsdale has a long standing and well established community. It may not have participated in the rapid development that has taken place on other parts of the coast line but it has been expanding incrementally. Even so it is unsurprising that a major new development proposal has raised issues about its impact on services, community connectedness and cohesion, integration, affordability and responsibility for service provision.

The key question is whether, on balance, these issues can be resolved without undue negative impact. In a vibrant society, there will always be change and Point Lonsdale should be no different. If it is to survive Point Lonsdale needs change in line with the broader community including the wider community’s need for housing.

The Panel accepts that it may take some time for the new community to integrate with the existing one. The increase in population, even over a 10 year period, may cause some resentment among the established residents, whether permanent or part-time. The Victorian planning system has to be robust enough to resist such pressures in the interests of the community as a whole. The Panel therefore does not consider possible difficulties integrating the new community are reason enough to reject the development.

The proposal before the Panel will ultimately aid in providing for a more balanced demographic profile in that it will enable a wider age cohort to reside in Point Lonsdale than at present. It will ensure greater availability and diversity of housing and enhance the economy of Point Lonsdale and Queenscliff. It is likely to boost enrolment in the local schools and strengthen community oriented activities such as sporting clubs, theatre and the like.

In discussing the Strategic Assessment Guidelines, the Panel agrees with the City of Greater Geelong analysis that the proposed amendment will have the following positive social and economic effects:

- Employment opportunities both during construction and also in the local and regional area through increased population levels and associated multiplier effects.
- Provision of large tracts of public open space.
- Reduction in the potential flood risk to the site and surrounding land.
• **Provision of a community centre, aged care facility and retirement village.**

For these reasons, the Panel sees this proposal as having a positive social impact on the Point Lonsdale and Queenscliffe region, and it considers that the social impacts will be positive and provide support for its approval. The Panel considers the proponent has adequately addressed the social impacts and it has no reason to be concerned that the proponent will not implement its overall recommendations as outlined in the EES to ensure that social impacts are appropriately managed.

The Panel has no specific recommendations in relation to social impacts.
13. LANDSCAPE AND VISUAL

The majority of the site is low-lying with standing water in the lowest areas. There is a remnant sand dune and some rudimentary “islands” which were constructed as part of the former uncompleted development in the south-eastern portion. In the northern portion, overburden from the sand and shell grit mining has created a linear quasi-dune. Overviews are limited to brief views from the Bellarine Highway and Shell Road.

The proponent regards the visual impact of the proposal as beneficial and some submissions agree, describing the current area as swampy, derelict and unsightly. The proponent showed the Panel that they have undertaken a range of improvement works including weed removal, tree planting and removal of dumped car bodies and other rubbish since purchasing the site.

On the other hand many submittors see the low-lying coastal vegetation and wetland and its waterbirds as attractive in itself and as providing both a boundary and sense of arrival to Point Lonsdale. Further the design of the proposed development is considered completely incompatible with the understated and charming seaside character of Point Lonsdale.

The Panel considered the potential impacts on the external and internal landscapes separately.

The Panel considered the landscape and visual analysis provided by the proponent in the light of the City of Greater Geelong and Borough of Queenscliffe planning schemes and strategic documents and the submissions. The proponent’s analyses, set out in Chapter 15 of the EES report, is supported by a landscape architectural report prepared by Mr Barry Murphy of MDG Landscape Architects (Technical Appendix 13) and a peer review by Mr Alan Wyatt ERM (Australia).

13.1 Introduction and Key Issues

Clause 4.7.7 of the Assessment Guidelines for Environment Effects Statements requires the Panel to consider the visual quality of the proposed development and its impact on the amenity and character of adjacent areas. It should avoid or mitigate any adverse effects. The proponent is to provide:

- Details of the design concepts;
- A landscape assessment; and
- Details of any proposals to minimise the amenity impacts and ensure
integration with the surrounding environment.

The Design and Siting Guidelines for Structures on the Victorian Coast provides recommendations for the type of structures appropriate in “Setting Types”. It describes the “Setting Type” of this area, including the development site, as: Characterised by limestone cliffs and dunes. Vegetation is low in exposed areas which contrast with tall exotic plantings in Queenscliffe”. Section 3.2.2 of the Guidelines goes on to recommend that: “The form of the structure should maintain and enhance the established coastal landscape character of the area as expressed in the dominant forms of the surrounding environment”.

The Borough of Queenscliffe Urban Character Study identifies number of key elements which distinguish Point Lonsdale including:

- A land form dominated by the undulating dune topography;
- Dense coastal native vegetation of Tea Tree and Moonah;
- A predominantly low density, low scale, detached housing;
- A mix of built form ranging from Californian Bungalow to contemporary seaside style.

It then summarises the landscape character surrounding the site under Section 5.2.3 Sense of Arrival:

Approaching the Borough from the open rural landscape of the Bellarine Highway the first impression on arrival at the top of the escarpment near Suma Park homestead is that of a distant concentration of activity around the coast. This is defined by densely vegetated areas representative of the Port Phillip Bay foreshore and Point Lonsdale and the elevated skyline of Queenscliff overlooking Swan Bay. The entry to the Borough is clearly defined by the commencement of urban development near Fellows Road. The character of this area is fairly unremarkable and suburban but with some allusions as to the special character of Point Lonsdale proper. Low level detached housing in a suburban setting with native vegetation characterises the area although more recent tourist accommodation and the caravan park provide the first links to the coastal village character of the Borough.

The character of this adjacent residential area is defined as “coastal contributory” and the guidelines that follow aim to “achieve high quality urban design and architecture” which “reflects the particular characteristics, aspirations and a cultural identity of the community ….”

The City of Greater Geelong has prepared a township brochure for its portion of Point Lonsdale, based on its Residential Character Study. It proposes that “the
seaside character of this part of Point Lonsdale will be maintained and strengthened, and the visual cohesiveness of this part of the township with the remainder in the Borough of Queenscliff will be improved by:

- encouraging the use of indigenous vegetation species;
- encouraging the use of appropriate building materials;
- ensuring the siting of buildings to reflect spacing patterns;
- managing site coverage to provide adequate space for planting;
- ensuring building form and scale reflects predominant patterns; and
- encouraging common public domain street treatments.

Further, within the specific precinct of the existing Lonsdale Lakes area (adjoining the subject site) the objective is to: “Maintain the openness of the area and strengthen the seaside character and visual cohesiveness with the remainder of the township by encouraging innovative architecture; discouraging front fencing; and encouraging the retention and planting of indigenous plants.”

The DSE Coastal Spaces and Landscape Assessment Study includes the development site as Regionally Significant as it lies within an area valued for its undeveloped coastal landscape with coastal views. It recommends installation of a Significant Landscape Overlay for Murradoc Hill as it “…forms a significant landscape backdrop to many towns and viewing locations and offers expansive out views.”

The key issues in relation to landscape and visual include:

(i) Design Principles;
(ii) Internal Visual Aspects of the Proposal;
(iii) Key External Interfaces; and
(iv) Other Issues.

13.2 Panel Response
(i) Design Principles

The proponent believes they have incorporated the various policy guidelines in establishing their key design principles, as are set out in the EES documentation as:

- To create a development that is well linked internally, as well as strongly integrated with the existing urban fabric of Point Lonsdale;
- To respect sensitive environmental areas and to embrace environmentally sensitive design in as much of the development as possible, including ensuring good solar orientation for lots and incorporating water sensitive urban design measures where
feasible within the project;

- To ensure environmentally viable lakes and water bodies that can maintain acceptable water quality levels;
- To create a variety of residential form and character which will then encourage a diverse population within the project;
- To use the low lying topography as an opportunity to create water for the provision of residential amenity;
- To create an earthworks balance between cut and fill to avoid import or export of material;

(ii) Internal Visual Aspects of the Proposal

The proposed development would include components that influence the internal landscapes as follows, some of which require further description:

- Distributed residential areas with a variety of lot sizes and elevations;
- Reserved areas including existing significant habitat;
- A tidally flushed lake system connected to Lakers Cutting;
- A variety of lake edge treatments;
- A linked hierarchy of streetscapes;
- Water sensitive urban design;
- Open space and paths linking the residential areas;
- Controls on form, character and materials of buildings; and
- Special attention to key interfaces.

Range of lot sizes, elevations and orientations

The proposal includes Units and Townhouses with lot sizes ranging up to 300 square metres, Villas and Courtyard residence areas with lots of 300 to 600 square metres and Conventional and Premium residence areas with lots up to 768 square metres. Contouring of the streets and residential pods provides a modest (1-3 metre) range of elevations and aspects. The units and townhouses and some of the premium allotments are located in areas with views to the waterways and parklands. The remainder of the premium allotments are on the higher elevations. The lots are generally oriented to obtain views to the waterways and open spaces and a price premium is clearly expected where this can be maximised.
Lake edge treatments

The lake edges would all have a “safety bench”, comprising a 2.5 metre wide shallow and relatively level area as well as signage to protect public safety. Most of the edge would be “soft” with a timber palisade, rock beaching or vegetated margin. The “hard” edge sections will include concrete walls, informal stone revetments or rock edges where necessary to prevent wave erosion. Some areas would have a “beach” edge.

Controls on form, character and materials of buildings

Building controls would address the design objectives by specifying building heights (maximum 7.5 metres), set backs, architectural character, building materials, solar efficiency, external colours, site coverage, fences, outbuildings, driveways, interface to streets and roof configuration. The EES Urban Design report (MDG 2007) proposes that “the built form will adopt a contemporary design style and palette of materials, but with an emphasis on sustainability in terms of building design and materials. Within this consistently contemporary form however a wide variety of housing types are envisaged ranging from single family detached homes through to apartments, townhouses, duplexes and villas.”

Internal streetscapes

A sense of informality and density of plantings is intended to link the various streetscape types. The primary connector street between the Bellarine Highway and Shell Road would have copses of street trees under-planted with indigenous grasses and tussocks. There would be a parallel shared pathway using parkland in the central area as part of the linkage.

The secondary street linking to the existing Lonsdale Lakes development would be 22m wide allowing for a 7.5m carriageway and off-street parking with grassed swales and a footpath. Copses of trees and informal ground level plantings of indigenous grasses and sedges would be located along its length. Streets within the development would have an 18m reserve with a 5.5m pavement with flush kerbs and “rain gardens” for stormwater quality treatment in the verges. There would also be informal plantings of street trees to reflect the character old Point Lonsdale.

Water Sensitive Urban Design

Measures intended to reduce stormwater run-off and to improve its quality could have beneficial landscape impact as they include grassed swales and “rain gardens” within the street verges and open space areas.
(iii) **Key External Interfaces**

An overview of the development area is visible briefly from Marcus Hill on the Bellarine Highway. Rooftops would be visible adjacent to the Highway from there to the current urban boundary at Fellows Road. Broad setbacks are proposed and an existing vegetated mound would be retained and further vegetated. Two new roundabouts would be required on the highway, one specifically for the development. The other, at Fellows Road, may eventually be required in any case. The proponent points to the Borough of Queenscliffe description of the present entry to Point Lonsdale at Fellows Road as "fairly unremarkable and suburban."

There is also an external interface with the existing Lonsdale Lakes development. Integration there would be achieved through installation of new street lighting in the current development area consistent with the development site and a unified tree planting strategy.

(iv) **Other Issues Raised by Submittors**

The loss of the current ready opportunity to see coastal wetland with its typical native vegetation and to observe waterbirds is of concern to many submittors. Further its replacement with suburban back fences along the Bellarine Highway will replace the current exciting sense of arrival to Point Lonsdale and Queenscliffe townships. Numerous submittors consider that the proposed development is completely out of character with the existing residential areas of "old” Point Lonsdale. Mr Mitchell, for the Point Lonsdale Coastal Spaces Group, asked the Panel to consider reducing the obtrusive visibility of houses adjacent to the Highway by lowering the ground elevation of the blocks. He pointed out that these allotments are currently proposed to be the highest elevations of the development site.

13.3 **Findings and Recommendations**

The Panel considers that sufficient description and analysis has been provided by the proponent for it to assess the visual aspects of the proposal. It accepts that the proposal can meet the EES Assessment Guideline criteria by achieving a high internal visual quality and an acceptable external impact. This can be achieved through attention to the landscape character objectives set out by the City of Greater Geelong, Borough of Queenscliffe and the Coastal Council in the detailed project design. In summary these are to achieve a high quality and innovative design which maintains a seaside character and is compatible with the particular visual characteristics and cultural identity of Point Lonsdale.
The Panel reached this conclusion despite seeing some inconsistency between the proponent’s announced wish to replicate the character of “old” Point Lonsdale and the construction of a new development designed to maximise the visual appeal offered by canal waterways and a lake. The former requires emphasis on clusters of dense tree plantings, limited external views and intimate private spaces. The latter requires more open views from the residences and must inevitably be different. Even so, the Panel accepts that while the proponent’s description of its design intention may have been somewhat slanted to increase local appeal, the proposed design and controls can achieve an attractive visual landscape that is sufficiently compatible with the character of the older parts of the township.

The intention to integrate the development to the existing Point Lonsdale Lakes residential area through installation of consistent street lighting and tree planting is supported.

With regard to external visual impacts, the Panel concludes that the project would have impact on the visual entry to Point Lonsdale. The sense of arrival would be affected as the township entry would move about 600 metres along the Bellarine Highway towards Geelong from Fellows Road to a new roundabout entering the development.

The Panel has concluded that this is not a significant change primarily because the current entry at Fellows road is not particularly attractive. Further with an increased emphasis placed on planting taller tree species on and adjacent to the existing mound parallel to the highway, further screening is possible. The suggestion that the elevation of allotments adjacent to the Highway be lowered is not supported although the option should be available to the proponent if that would assist the re-balancing of earthworks necessary to implement the Panel’s recommendations about potential sea level rise.

The Panel has no specific recommendations in relation to landscape and visual impacts.
14. TRANSPORT

Transport is included as Chapter 16 of the EES and is based on a Traffic Impact Assessment report prepared by Cardno Grogan Richards (October 2007) which is provided as Technical Appendix 14 to the EES. The Technical Appendix builds upon a Traffic Engineering Assessment report dated June 2007, also prepared by Cardno Grogan Richards.

Mr Stephen Hunt of Cardno Grogan Richards presented transport/traffic evidence at the hearing. His evidence statement includes further research that was undertaken by his firm since the EES exhibition, which responds to the proposed inclusion of a Child Care Centre on the site. His statement also responds to submissions. Mr Hunt supplemented his written evidence statement with a further presentation, which contained additional recommendations in response to matters raised in opening submissions by various parties.

The Panel notes that VicRoads lodged two submissions in relation to the proposal. These submissions take the form of letters to Council dated 23 July 2007 and 11 December 2007 where VicRoads indicates that, subject to a number of conditions, they “do not object to Planning Scheme Amendment C150 and Planning Permit No PP673/2007 proceeding”.

14.1 Description and Key Issues

The EES describes the existing transport network and conditions in the vicinity of the project site, with issues outlined and examined including:

- Methodology adopted in the traffic assessment;
- Description of the existing local and regional road network;
- Analysis of existing traffic volumes;
- Overview of traffic accident history;
- Overview of car parking within Point Lonsdale;
- Overview of current public transport provision within the Bellarine Peninsula; and
- Requirements for internal car parking provision.

Having provided the overview of existing conditions the EES then documents an Impact Assessment for the ‘external road network’ and ‘internal road network’. A number of management and mitigation measures to reduce the impact of increased traffic volumes arising from the proposed development, both during its construction and post development are documented.
The EES Traffic assessment concludes as follows:

The proposal incorporates safe and convenient access to and from the site via a number of intersection treatments, and internally provides a clear and simple hierarchy providing legible access and circulation throughout the site.

While the proposed development is predicted to increase the volume of traffic using the local road network, the upper maximum traffic volumes predicted for the local roads are within acceptable levels of traffic activity for the existing road categories. A number of mitigation measures have been identified in order to reduce the impact of increased traffic volumes. These include modifying external intersections to mitigate congestion and increase safety. Further possible actions include a review of speed limits on the Bellarine Highway and Shell Road adjacent to the site, investigating a local community shuttle service from the proposed development, and the provision of new bus stops adjacent to the site.

The Panel considers that the key issues in relation to traffic and transport include:

(i) Impact on Local Traffic Conditions;
(ii) Integration with Existing Township;
(iii) Public Transport Accessibility;
(iv) Point Lonsdale Shopping Centre Parking;
(v) Point Lonsdale Foreshore Bicycle/Pedestrian Link; and
(vi) Funding of Proposed Works.

14.2 Panel Response

(i) Impact on Local Traffic Conditions

A number of submitters raised concerns about the impact of the development on local roads and traffic.

As an opening observation, the Panel accepts that the amount of traffic in Point Lonsdale will increase as a result of the project. In this regard the EES contains estimates of traffic that will be generated from the proposal, in typical situations, and at peak (holiday) periods. Inputs to the Cardno Grogan Richard’s modelling of projections were selected in consultation with VicRoads. Under typical conditions it is projected that the proposed development will generate approximately 5,050 vehicle movements per day, and during peak periods this will rise to approximately 6,740 per day.
Having estimated likely trip generation from the development, an impact assessment was undertaken on surrounding intersections using amongst other tools, a SIDRA (Signalised and Unsignalised Intersection Design and Research Aid) analysis. The findings of the analysis were utilised to identify traffic management and mitigation measures required in response.

The Panel notes that VicRoads, in their submission dated 23 July 2007, confirm they are satisfied with the assessments and traffic volume assignments contained in the Cardno Grogan Richards Traffic Engineering Assessment Report.

Mr Hunt’s response to submissions concerning impact on local traffic conditions acknowledged that the proposal will generate additional traffic onto the surrounding road network. However it is his opinion that:

*While on some roads volume increases can be considered to be significant in relative terms, traffic is able to be absorbed within the existing capacity of the arterial road network.*

*Intersection works proposed at the access points to the site and at Fellows Road/Bellarine Highway will be provided to the satisfaction of Council and VicRoads and will ensure safe and efficient operation at these locations.*

*Traffic increases on local road will be limited by connection options to the east and increases on existing streets will be moderate. Flows on existing local roads to the east which will connect to the site including Lakes Entrance Road, Silver Ridge Road and Peterho Boulevard are expected to remain well under 1000 vehicle movements per day which is consistent with the environmental capacity of access streets within ResCode.*

In response to this issue Council’s opening submission noted:

*The development is capable of managing its own internal traffic generation potential and linking to the existing arterial network can be managed adequately. Impact on the surrounding major road network is within capacity, and impact on local access streets is limited. Vehicular access to the site will be provided from the Bellarine Highway, Shell Road and Fellows Road and new intersections will be required at these points to VicRoads and Council standards.*

As mentioned previously, the Panel notes that the EES has identified an extensive suite of management and mitigation measures to off-set traffic impacts associated with the development. The Panel agrees with the measures proposed and is satisfied that they are adequately advanced and facilitated by the revised suite of proposed
planning controls. Having noted this, two additional management and mitigation measures were discussed during the course of the hearing.

The first relates to the need to provide appropriate pedestrian crossing treatments for both the Bellarine Highway and Shell Road in proximity to the bus stops that are proposed. The Panel considers it appropriate that safe and appropriately located crossings be provided at the cost of the proponent, in these locations. Modifications to the wording of Permit Conditions 1f) and 5b) is recommended to achieve this outcome. The form and design of the treatments, signalized or non-signalized, should be resolved in consultation with VicRoads and the Responsible Authority.

The second additional management and mitigation measure discussed relates to the design of the proposed Shell Road Roundabout. The submission of behalf of J McMahon & Sons notes that “the intersection is diagonally opposite the entrance to the McMahon land and accordingly will need to be designed to accommodate current truck movements in and out of the McMahon site, including 19 metre-long semi trailers”. In this regard the Panel notes that the location of the proposed roundabout was recommended in the Traffic Impact Assessment and is specifically supported by VicRoads in their supplementary submission dated 11 December 2007. The Panel agrees that the design of the roundabout should ensure maintenance of safe vehicle and truck movements. Modification to the wording of Permit Condition 14 is recommended to achieve this outcome.

With the above additions incorporated, the Panel is satisfied that the timely implementation of the traffic mitigation measures outlined in EES will result in the anticipated impacts of the proposed development on the local and arterial road networks being within acceptable limits.

(ii) Integration with Existing Township

A number of submissions advanced the view that the proposal does not adequately link with the township of Point Lonsdale, and in response, Council’s opening submission noted:

The eastern boundary of subject site has an abuttal to the existing Residential 1 zoned land, whilst all other boundaries have an abuttal to the Farming Zone. Given the Lonsdale Lakes housing development is contained within a series of court bowls, there are only two possible road connections (Silver Ridge Road and Peterho Boulevard). The plan of subdivision has also allowed for future integration with the two larger properties to the east (211-229 Fellows Road and 231-239 Fellows Road) should they ever be developed. Integration with the western boundary is limited because of it environmental significance and the access points on the northern (Bellarine Highway) and southern (Shell Road)
boundaries must be limited as they are in Road Zones – Category 1 and 2 respectively. Therefore it is considered that the proposed plan of subdivision shows good integration, where possible, with the existing residential land.

Mr Hunt’s response to these submissions highlighted that direct links to the east with Point Lonsdale are restricted by the existing road network which has been constructed in the Lonsdale Lakes Estate. Further he states that the two possible vehicular connection points “have been utilised to maximise connectivity”, and goes on to say:

Direct links to Point Lonsdale Township are provided along Shell Road /Lawrence Road corridor and this connection is expected to provide satisfactory linkages between the site and the existing Township …

Overall, the Panel is satisfied that the proposed development maximises road connectivity opportunities to the Point Lonsdale township.

(iii) Public Transport Accessibility

Mr Fuller and others criticised the proposal on the grounds of its limited access and connectivity to the public transport network.

Council did not support these submissions noting that the plans and reports submitted with the proposal address public transport issues primarily through the existing bus network. Council’s submission on this matter notes that internal roads will be designed to accommodate buses to ensure public transport accessibility. These sentiments are also reflected in Council’s Clause 56.06-3 Assessment (Public transport network).

In response to submissions on this, Mr Hunt noted the following:

The proposal will generate additional demand for public transport services. At present bus services run along Bellarine Highway, Fellows Road and Shell Road adjacent to the subject site. The three services provide options for connection to Queenscliff, Ocean Grove, Barwon Heads and Geelong, with each service providing local connection from Shell Road or Bellarine Highway to Point Lonsdale Township.

The EES proposes additional public bus stops along Bellarine Highway and Shell Road adjacent to access points to the site which will be accessible within reasonable walking distance. Given the width of the site typical walking distances will be 400 metres with a maximum of approximately 800 metres.
Mr Hunt observed that:

The Geelong Transport Strategy as part of Strategic Direction 2 seeks to integrate services and modes to create a logical regional network of routes. This includes investigation of Intra Regional and Local Model interchanges at Drysdale and Queenscliff and a proposed high frequency fixed route bus service between Queenscliff and Geelong via Bellarine Highway …

Local public transport interchanges, such as at Queenscliff and Ocean Grove are proposed to be linked to fixed route services but will also, if necessary be serviced by demand responsive services. In addition the Internal connector roads will be designed to accommodate buses if required.

In summary it is considered that the existing network serving the site provides the basis for development of suitable public transport access. Frequency of services and additional routes are issues which will be determined by the Department of Transport in accordance with the strategies and objectives of the Geelong Transport Strategy.

The Panel accepts this evidence and is satisfied that the proposal adequately integrates with the existing regional public transport network.

(iv) Parking Increases at Point Lonsdale Shopping Centre

Some submissions criticised the proposal on the grounds that it will generate additional parking demand at the Point Lonsdale Shopping Centre, a centre where car parking availability often cannot meet demand particularly at peak holiday periods.

Similar to its opening observation in response to concerns regarding the proposed development’s impact on the local road network, the Panel accepts that the realisation of project will generate increased demand for parking within Point Lonsdale (and Queenscliffe, and Ocean Grove, and at other centres on the Peninsula).

In relation to the impact of the development on parking within Point Lonsdale, the Panel accepts the following evidence of Mr Hunt:

Sufficient capacity is available within existing parking areas to cater for additional demands “out of season”. At high peak holiday season, as with virtually all coastal towns, parking is at a premium and influenced by tourist and foreshore parking requirements.
Point Lonsdale provides local shopping requirements and these services may grow to cater for the increased local population and service demands. Any redevelopment within the centre to increase floor area will require parking consideration under the provisions of the Queenscliff Planning Scheme.

(v) **Point Lonsdale Foreshore Bicycle/Pedestrian Link**

The Panel highlights the following extract from the evidence of Mr Hunt:

> *Having regard to the submissions received, it is recommended that a pedestrian/bicycle link between the development and Point Lonsdale foreshore be investigated in conjunction with the Borough of Queenscliffe, and that a similar link to the Bellarine Rail trail to the north be considered.*

In response to this opinion, during the course of the hearing the proponent has agreed, at its cost, to construct and upgrade a shared path along Lawrence Road between Fellows Road and Point Lonsdale Road to the satisfaction of the Borough of Queenscliffe. This initiative was welcomed by parties to the hearing, is supported by the Panel and has been included as a revised planning permit condition (refer condition 5b iv) and the revised Illustrative Masterplan.

In agreeing to the construction of this shared pathway, the Panel notes that the benefits arising from it will be enjoyed not only by future residents of the proposed development, but by existing and future residents in the vicinity of the subject site.

(vi) **Funding of Proposed Works**

In relation to funding of proposed traffic management and mitigation works, Council’s submission notes:

> *The Amendment and Draft Planning Permit were referred to VicRoads which did not object to the proposal subject to a number of conditions being included on the draft planning permit which relate to road and intersection construction. The draft Planning Permit includes a condition that requires Stockland to enter into Agreements with the Responsible Authority (Council) under Section 173 of the Planning and Environment Act 1987. Draft Agreements have been prepared and were exhibited with the Amendment. The first S173 Agreement relates to the developer’s obligations with regards to infrastructure including construction of road intersection works and intersection upgrades.*

The Panel highlights that the scope of works required is not contested by the proponent, and such works have been identified in the planning controls proposed.
Having noted this, the proponent contests the position shared by both the City of Greater Geelong and the Borough of Queenscliffe that the proponent should fully fund the cost of upgrades to the intersections at Bellarine Highway/Fellows Road and Point Lonsdale Road/Lawrence Road.

The proponent’s position in relation to this is that it should only be responsible for contributing a reasonable proportion (related to the additional traffic generated by the proposed development) of the costs of these two intersection upgrades. Its closing submission to the Panel noted:

*Stockland will make a fair contribution to the cost of remedial works. There is no basis on the evidence for any greater requirement. In any event, this is the most that can be reasonably (and lawfully) required.*

The Borough of Queenscliffe, in their closing submission argued strongly that this position of the proponent should not be entertained by the Panel and stated:

*Queenscliffe is not, and should not, be expected to make any monetary contribution to the improvement of roads required as a result of the development. Published population figures well into the future predict minimal population increase for the municipality. It follows that internally generated traffic volumes are also unlikely to increase significantly in the absence of a large-scale new traffic generator. Both intersections operate satisfactorily at present with minimal delays and negligible accident history. Therefore, the Panel should proceed on the basis no funding is available for the road works which have been identified as being required.*

The City of Greater Geelong endorses the position articulated above.

In considering this matter the Panel supports the position of the Borough of Queenscliffe. The Panel considers that there is a clear and sole nexus between the requirements for the intersection upgrades (at this time) and the proposed development. In reaching this conclusion, the Panel notes that the EES highlights both of these upgrades as required management and mitigation measures. Further the Panel notes that the Point Lonsdale Road/Lawrence Road Intersection upgrade is explicitly identified by VicRoads as a condition of their approval (refer Condition 38 c). Therefore the Panel supports the inclusion of these road works as items that should be funded by the proponent. Modification to the wording of the revised Permit Condition 5b v) is recommended to reflect this.
14.3 Findings and Recommendations

The Panel is satisfied that the EES has adequately considered relevant traffic and access matters. Further it is satisfied that the proposed management and mitigation measures, together with the inclusions recommended below, are an appropriate response to potential traffic impacts arising from the development.

The Panel makes the following recommendation in relation to transport:

(i) **Amend Planning Permit Condition 1 f) to read:**

   f) *Location of bus stops (including shelters and associated signs) and corresponding safe pedestrian crossing treatments on the Bellarine Highway, Shell Road and within the site as necessary;*

(ii) **Include the following additional items in Revised Planning Permit Condition 5b):**

   v) *Intersection upgrades at ‘Bellarine Highway/Fellows Road’ and ‘Point Lonsdale Road/Lawrence Road’.*

   vi) * Appropriately sited pedestrian crossings on the Bellarine Highway and Shell Road in proximity of proposed bus stops.*

(iii) **Amend Planning Permit Condition 14 a) to read:**

   a) *A roundabout (major traffic control item) and associated roadworks including lighting, linemarking and drainage in Shell Road at the intersection of the subdivisional access road having regard the need to maintain safe truck and vehicular movements to and from adjacent properties;*
15. INFRASTRUCTURE SERVICES NETWORK

Infrastructure Services Network is included as Chapter 17 of the EES and is based on the infrastructure services report prepared by Earth Tech (2007) which is provided as Technical Appendix 15 to the EES.

No specific ‘infrastructure’ evidence was called as no party to the hearing materially contested the ability of the site to be serviced with electricity, gas, telecommunications, water, sewerage and stormwater infrastructure. However Mr Rhys Bennett, Barwon Water’s Planning Engineer, attended the hearing to provide further advice regarding Barwon Water’s capacity to provide water and reticulated sewerage services to the proposed development.

15.1 Description and Key Issues

The EES documents the infrastructure and services network that will supply the site and identifies potential impacts relating to service provision. It notes that the routes and alignments for infrastructure within and outside the development site have not yet been determined. It states that this will be resolved during the detailed design phase. The EES highlights that inside the project site, the route alignments will be the responsibility of the developer in conjunction with the service provider. Outside the site connection to the sewerage, water supply and power supply providers will be the responsibility of the developer. The EES notes that connection to the gas and telecommunications supply will be undertaken by the service provider.

The key service providers are noted as follows:

- Electricity – Powercor
- Gas – TXU
- Telecommunications – Telstra
- Water supply – Barwon Water
- Sewerage – Barwon Water
- Stormwater Drainage – City of Greater Geelong

The particular utility works required as a result of the development are listed as follows:

- Connection into electricity, gas, telecommunications, water supply and sewerage networks;
- Provision of 6 or 7 substation kiosk reserves within the development site for the supply of electricity;
• Augmentation of the water main along the Portarlington-Queenscliff Road (approximately 600m);
• Possible supply of a temporary Load Levelling Storage Facility for sewerage services at the development site;
• Installation of a Modified Conventional Sewer System, Pressure Sewer System or Reduced Infiltration Gravity Sewer – currently under review by Barwon Water; and
• Installation of a storm water drainage system with water sensitive urban design principles.

The EES includes an Impact Assessment in relation to the provision of services. The key findings of this assessment and corresponding proposed mitigation measures can be summarised as follows:

• Sewerage, water supply and utility services will be installed following the major earthworks program. The provision of infrastructure will have minimal environmental impact and will be undertaken in strict compliance with each stage specific Project Environmental Management Plans in order to address relevant areas such as quality, health, safety, traffic management, environmental control and site management;
• A conventional sewerage system has been excluded from further investigation due to potential for ground water infiltration/sewer exfiltration and technical difficulties in effectively sealing a sewer below the water table;
• The possibility of sewerage overflow or discharge to nearby waterways is considered to be negligible when using a Modified Convention Sewerage System or Pressure Sewer System although standard risk reduction measures should be incorporated for the case of pump failure;
• The risks of ecological impacts have been considered in a preliminary manner for each of the two possible sewerage systems. Further assessments will be undertaken during detailed design and system selection processes in conjunction with Barwon Water. The preliminary assessment notes that impacts on the environment could occur from both systems in the event of blockages or pump malfunctions at their sump/pump stations over a period of time that exceeded the capacity of the sump/s. The EES notes however that management of the selected system by Barwon Water would include modern telemetry and control systems inclusive of alert functions for pump failure. It was concluded that both systems can operate effectively and in an environmentally safe manner.

Although no party materially contested the ability of the site to be serviced, two matters were raised at the hearing which expressed concern. These relate to the impacts associated the possible disturbance of Acid Sulphate Soils in the
construction phase of the sewer network and the efficiency of stormwater drainage system. These matters are discussed in the following sub-section of the report together with the Panel’s response in relation to other infrastructure network issues under the following headings:

(i) Electricity;
(ii) Gas;
(iii) Telecommunications;
(iv) Water Supply;
(iv) Sewerage;
(vi) Stormwater Drainage; and
(vii) Asset Protection from Potential Salinity Effects.

15.2 Panel Response

(i) Electricity

The EES notes that some minor upgrade works will be required to augment approximately 800 metres of overhead high voltage lines along Shell Road and that provision of six or seven substation kiosk reserves will need to be incorporated in the subdivisional layout of the development. In addition it states that conduits will be needed as part of civil works across proposed bridges and culverts. In relation to the above, the Panel notes that a submission was lodged by Powercor in response to the exhibition of the proposal, which states:

As the relevant clauses are included regarding cable easements and sub station reserves, Powercor has nil comments at this time.

Based on the above the Panel is satisfied that the electricity service network can be extended to the development at no detriment to the existing network.

(ii) Gas

The EES states that TXU has existing assets along the Bellarine Highway, Fellows Road and Shell Road and in the existing roads of the original Lonsdale Lakes subdivision. It concludes that there is currently adequate supply capacity to extend gas services to the proposed domestic and commercial premises in the development. TXU did not make a submission in response to exhibition of the proposal and the Panel is satisfied that the gas service network can be extended to the development at no detriment to the existing network.
(iii) **Telecommunications**

The EES states that Telstra has existing assets situated around the periphery of the site and in existing roads of the Lonsdale Lakes subdivision. It states that Fibre Optic cables are located along Bellarine Highway, Fellows Road and Shell Road. The EES concludes that Telecommunications facilities can readily be made available to service the proposed development. While Telstra did not lodge a submission in response to exhibition of the proposal, the Panel is satisfied that the telecommunications service network can be extended to the development at no detriment to the existing network.

(iv) **Water**

The EES states that Point Lonsdale and Queenscliff townships are supplied with water from the Queenscliff Water Basin which is situated approximately 1km to the north of the proposed development. It describes the current supply arrangements and highlights proposed upgrades by Barwon Water in the coming years. The EES concludes that other than the proposed upgrading of water-works infrastructure there are no constraints to the provision of a potable water supply to the development. A submission was lodged by Barwon Water which states:

> A new 300mm main is required to be constructed parallel to the existing 450mm main, running along Queenscliff Road to the edge of the Stocklands land to service the development. This main shall be constructed to service the Stocklands development only and hence is classified as a reticulation asset, which is required to be funded by the developer. There will be 255mm sized mains required inside the Stocklands development which also will be considered as reticulation assets given that they are only required for the development.

The Panel notes that the proponent acknowledges these obligations.

Mr Bennet, Barwon Water’s Planning Engineer attended the hearing to amplify comments in their written submission. A briefing note dated 25 June 2008 was tendered by Mr Bennett that reiterated the above highlighted comments from Barwon Water’s submission. The briefing note contained a plan showing proposed alignments of the new mains and location of existing reticulated water mains that will need to be extended and interconnected. In respect of water supply Mr Bennet concluded “it’s all fairly straight forward from a water supply point of view”.

The Panel is satisfied that the water service network can be extended to the development at no detriment to the existing network.
(v) **Sewer**

The EES notes that Barwon Water is the service provider and that it has reviewed the of sewerage services and recycling/reuse opportunities on the Bellarine Peninsula. This review highlighted that significant upgrades may be required to the Queenscliffe/Point Lonsdale to Black Rock sewage delivery system. In relation to the impact of such augmentation on the proposed development the EES concludes that the timeframes for the network upgrade will not affect the development to any significant extent.

As highlighted in Section 15.1 above, in consultation with Barwon Water, the option of a conventional sewerage system has been excluded from further investigation due to potential for ground water infiltration/sewer exfiltration and technical difficulties in effectively sealing a sewer below the water table. The Panel was advised in submission by Barwon Water that “the exact methodology being taken forward to detailed design is still under investigation by Barwon Water, however it should be noted that we are committed to providing reticulated sewerage to the site.”

In relation to Environmental Risk and Mitigation Measures the EES acknowledges that “all works undertaken on site including the installation of utility services within, and to the site of the proposed project will need to be performed in strict compliance with the stage specific Project Environmental Management Plan in order to address relevant areas such as quality, health, safety, traffic management, environmental control and site management”. With regard to the sewerage system, the EES highlights that “the system will need to have systems in place to alert for pump failure” and, as highlighted previously, “that management of the selected system by Barwon Water would include modern telemetry and control systems”. The briefing note tendered by Mr Bennet notes that “Barwon Water recognises that sewerage contamination is an issue that must be carefully managed in its sewerage systems” and that in response, its “sewer design standards comply with EPA and Water Services Association of Australia specifications”.

The issue raised in some submissions regarding the disturbance/creation of acid sulfate soils during the construction of the sewer network, is addressed in Chapter 6 of this Report. The Panel concluded that it is confident that acid sulfate soils can be adequately managed.
(vi) Stormwater Drainage

The EES notes the City of Greater Geelong is ultimately responsible for stormwater drainage systems at the development site, and says that “internally to the development site a stormwater drainage system will be designed and provided as an integral part of the road network” and that “the minor drainage system (underground piped drains) will interconnect with water quality treatment elements within road reservations”. In respect to the major drainage system it notes that “this will be facilitated by a combination of upsized underground piped drains that together with overland flows will provide overall capacity for the conveyance of extreme rainfall events that will protect properties within the development from rainfall events up to the 100-year ARI storm”.

In its description of the stormwater drainage system, the EES states that the “treatment of stormwater runoff, from 6-month to 1-year ARI events, will be implemented in accordance with Water Sensitive Urban Design (WSUD) principles” with the principle treatment regime “being a bioretention system in the form of rain gardens”. It is noted that “additional treatment capacity will be provided, on an as needs basis, in bioretention basins/ponds at drain outlets in reserves adjacent to lakes and waterways and that House drains will be connected to swale drains and/or kerbs that will direct flow to the rain gardens”.

The Panel notes that Appendix C to Technical Appendix 5 of the EES highlights that stormwater will be harvested via the inclusion of household water tanks with captured water being then used for toilet flushing and outdoor use. These initiatives, which will reduce the quantity of stormwater requiring management, are supported by the Panel.

The Panel’s consideration of the effectiveness of the proposed urban stormwater drainage network is discussed in Chapter of 7 of this report. In consideration of this, the Panel has concluded the proposed stormwater treatment system through the use of WSUD complies with the best practice management standards required under Clause 56.07 of the Planning Provisions. Further to this, the Panel is satisfied that best practice targets for storm water treatment at the site (as defined in the Victorian Urban Stormwater Best Practice Environmental Management Guidelines, 2001) can be achieved or bettered. Accordingly the Panel is satisfied with the EES approach which requires a Water Quality Management Plan to be prepared and implemented for each stage of the project and for the on-going operation of the lakes system.
(vii) Asset Protection from Potential Salinity Effects

The submission from the Corangamite Catchment Management Authority (CCMA) highlights it is in the process of developing a Salinity Management Overlay (SMO) for the Greater Geelong Planning Scheme “to guide decision making in any development in salinity prone areas to protect public and community assets from salinity impact on infrastructure”. The submission notes that current information would indicate that the SMO will cover components of the Stockland site. In response, the CCMA recommends that the exhibited Schedule to the Development Plan Overlay be modified to highlight the need to: protect saline environmental assets; protect urban development from the effects of salinity; and protect future development from aggravating or creating new salinity problems. The Panel supports the intent of this submission. In response to the Panel’s previously recommended endorsement of a restructured suite of controls, it considers the most appropriate position to articulate the CCMA request is in Condition 7 l) of the revised Planning Permit.

15.3 Findings and Recommendations

In relation to the infrastructure services network the Panel is satisfied that the EES has adequately considered relevant matters. It agrees with the submissions of Barwon Water, Powercor and SPI AusNet that infrastructure servicing can be appropriately provided.

The Panel is satisfied that mitigation measures associated with the provision of infrastructure services to the site have been adequately addressed to date (via the identification of potential risks) and that the Environmental Management Framework, inclusive of the requirements to prepare and implement Project Environmental Management Plans and Contractor Management Plans will facilitate orderly and managed infrastructure provision geared to avoiding and minimising environmental impacts.

The Panel makes the following recommendation in relation to infrastructure:

(i) Amend Revised Planning Permit Condition 7 l) to read:

l) Salinity control measures to protect: saline environmental assets; development from the effects of salinity; and future development from aggravating or creating new salinity problems;
16. PROJECT IMPLEMENTATION

Project Implementation is included as Chapter 18 of the EES and is based on the Environmental Management Framework (EMF) prepared by Golder Associates (November 2007) which is provided as Technical Appendix 18 to the EES.

The EMF has been prepared by Stockland to:

*Provide the framework for, and the minimum specifications for, the procedures and controls, responsibilities, monitoring programs and contingency plans to protect human health and the environment during the design, construction and operation of the proposed Point Lonsdale Residential and Waterways Project.*

No evidence was called in relation to the Environmental Management Framework.

16.1 Description and Key Issues

The EES Project Implementation Chapter outlines the management approach to be adopted in relation to environmental issues associated with the construction and ongoing maintenance of the proposed development. The EES states that the framework advanced via the EMF provides a structured approach to translating environmental commitments and conditions of the planning approval into practice during construction and on-going operation and management of the site.

The EES notes that the technical assessments listed in Section 1.9 of the EES form the basis of the EMF and that the recommendations within the EMF reflect the findings of the various reports included in the technical appendices. The EES highlights that while the EMF encompasses all the environmental issues relevant to the project, emphasis has been placed on surface water and groundwater, soils and terrestrial ecology. The Panel notes that climate change and sea level rise issues were further addressed in the EES as supplementary reports.

The EMF details the goals and objectives, minimum requirements for the environmental control measures, and the performance indicators in relation to the management of key environmental interactions inclusive of the following:

- Site Lake System Management;
- Groundwater Management;
- Soils Management;
- Terrestrial Ecology Management;
- Cultural Heritage Management;
• Air Quality and Noise Management; and
• General Site Management.

In addition to the above, the EMF outlines the following key elements:

• The process for managing environmental risk and an overview of the roles of subsidiary documentation (the Project Environmental Management Plan (PEMP) and the Contractor Environmental Management Plan (CEMP));
• The functional relationships between the EMF, the PEMP and the CEMPs; and
• Procedures and requirements for the:
  - review of the EMF, PEMP and CEMPs;
  - roles and responsibilities of key personnel;
  - induction and training;
  - inspections and monitoring of mitigation and management measures and controls;
  - handling of non-compliance events; and
  - community relations.

The key issues in relation to Project Implementation include:

(i) Robustness of the Proposed Environmental Management Approach; and
(ii) Positioning of the Environmental Management Framework in the Proposed Planning Controls.

16.2 Panel Response

(i) Robustness of the Proposed Environmental Management Approach

Chapter 3 of the EES includes an environmental risk assessment that identifies key environmental issues associated with the project, assesses the level of risk posed by project activities and, in response, identifies a management framework to be put in place to minimise these risks.

The general framework for environmental management of the site that has been developed in response to the identified risks, comprises essentially three interconnected elements:

• The EMF i.e. the overarching framework;
• The Project Environment Management Plan (PEMP) which is a much more detailed management plan done at the detailed design phase of the project; and
Contractor Environment Management Plans (CEMPs) which are developed by individual contractors, are required to be approved by the proponent, and are required to comply with the PEMP.

Chapter 3 of the EES (at Section 3.5) provides a concise overview of the EMF as follows:

The Environmental Management Framework prepared for the project will translate EES commitments and conditions of regulatory approval into practice. The Framework and its various management plans will ensure all major planning and environmental issues are resolved prior to construction and operation of each development stage, and priorities and accountabilities for long-term management actions are established.

The EMF will guide the incorporation of environmental management requirements into the detailed design of the proposed development. The framework will also guide the technical specifications for construction and operation/maintenance of the proposed development. The sub-plans must comply with the EMF, and will specify in more detail specific responsibilities, and specific environmental management controls, monitoring, reporting and rectification of non compliance.

The Panel is satisfied that the EMF provides a satisfactory framework for managing the project as it sets out:

- The regulatory requirements for the project;
- The way in which the EMPs for the project are to be prepared, namely using a risk based approach;
- The division of responsibilities within Stockland and between Stockland and its contractors;
- Requirements for inductions, training, inspection, monitoring and dealing with non-compliance; and
- The “Minimum Requirements for Environmental Management Procedures”; and
- Requirements for risk mitigation.

The closing submission of the proponent highlights that “the first four items listed above are standard parts of any EMF. Those parts will be further developed in the Project EMP, in order to comply with AS/NZS ISO 14001 requirements. The “Minimum Requirements for Environmental Management Procedures” are issues based checklists of the recommendations contained in the relevant technical reports”.

The Panel notes that the ‘Minimum Requirements checklists’ referred to here relate to the minimum requirements for the content of specific environmental procedures in the PEMP and, where relevant to the scope of a contractor’s work, in the CEMP’s.
Sections 13.1 – 13.7 in the EMF detail the *minimum requirements* for environmental procedures for:

- 13.1 Site Lake System Management
- 13.2 Groundwater Management
- 13.3 Soils Management
- 13.4 Terrestrial Ecology Management
- 13.5 Cultural Heritage Management
- 13.6 Air Quality and Noise Management
- 13.7 General Site Management

The proponent’s closing submission highlighted that the issues addressed in the above were identified through a risk assessment process and “essentially, they are the issues that were identified through the EES technical studies as having a risk rating greater than “low” in the absence of mitigation measures. These risks are identified in Table 5 of the EMF (pp20-21)”

As outlined by the proponent in closing, each of the 7 sub-reports follows a standard format, as follows:

- Goals - e.g. that the site lake system will achieve a turnover time not exceeding 20 days more than 20% of the time;
- Environmental Control Measures - e.g. the design is to use further monitoring of tides and testing of prototype Tideflex tubes to confirm head loss-flow rate characteristics;
- Responsibilities for Environmental Control Measures – e.g. Stockland or Contractors;
- Inspection and Monitoring including scope, frequency and responsibilities – e.g. Stockland to monitor hourly, for 6 months, the tidal conditions in Lakers Cutting and West Channel Pile, to extend the existing data set used to calibrate the model; and
- Compliance performance indicators – e.g. Complete the monitoring program and produce an update report on baseline conditions before the commencement or construction works.

The Panel is satisfied with the approach adopted to issue identification and the structure of EMF (and specifically the approach advanced for the specific environmental procedures). The Panel highlights that Geelong Council’s detailed review of the 7 sub-reports identified a number of modifications to the EMF which it seeks to be addressed via the updating of the document. The Panel supports the modifications requested by Council, and it supports the request by DSE that the
Responsible Authority consult with them prior to their approval of the PEMP (refer Panel’s Recommendations at Section 16.3).

A final matter in relation to the robustness of the environment management approach relates to the Geelong Council’s expressed concern relating to the need to specify a separate step-by-step contingency plan to cater for “the sustainability of the development should the development stall or founder completely”. During the course of the hearing the Panel sought the proponent’s response to this issue and stressed that it was a matter which required resolution. As highlighted in Chapter 4.2 a new Permit Condition has been recommended to address this issue. The new condition, listed under the Staging, requires prior to commencement of any works for a stage of the development the submission of a plan, to the satisfaction and approval of the Responsible Authority, showing the manner in which the development of the land will be completed if the next stage is the final stage. The condition requires the works shown to be carried, and requires that the owner of the land enter into a Section 173 agreement providing appropriate security that such works will be carried out if the development of the land ceases at the end of the stage.

The Panel is satisfied with this response.

(ii) Positioning of the Environmental Management Framework in the Proposed Planning Controls

It is noted that Chapter 4.2 of this report discusses structural issues associated with the planning controls proposed in particular the positioning of the EMF.

By way of summary, the Panel concluded that the EMF and Master Plans should become requirements of the Development Plan and that the PEMP and staging plans should become requirements of the Planning Permit.

This structural repositioning of the EMF, Master Plans and the PEMP are supported by the Panel and addresses the Panel’s (and others) concerns regarding the need for a more transparent and robust suite of controls that will maximise Council’s control over the project. The Panel reiterates that it has confidence that the revised suite of controls will facilitate the project in an orderly, secure and manageable fashion consistent with the intent of the VPPs and relevant planning legislative requirements.

16.3 Findings and Recommendations

The Panel is satisfied that the EMF identifies both the main risks of the project and the main commitments contained in the EES technical reports. Further, the Panel is
satisfied that general framework for environmental management of the site comprising the three interconnected elements of the EMF, PEMP and the CEMP’s represent a robust approach to the environmental management of the project.

The Panel makes the following recommendations, consistent with those requested by the City of Greater Geelong, in relation to Project Implementation:

(i) **Update the Environment Management Framework to include the following modifications:**

1. **Section 13.1, 1.0 Goals, 5. – to include “and the Melbourne Water WSUD Engineering Procedures: Stormwater”**;
2. **Section 13.1, 2.0 Environmental Control Measures, Design – to include reference to the installation of a floating litter trap (Bandalong type) in the outlet channel north of the Bellarine Highway**;
3. **Section 13.1, 2.0 Environmental Control Measures, Construction – delete any reference to hay bales and replace with straw bales**;
4. **Section 13.1, 3.0 Inspection and Monitoring, Operation – include a maintenance requirement for the floating litter trap**;
5. **Section 13.1 – include monitoring of the water in Lake Victoria which is likely to enter the site lake**;
6. **Section 13.4, 2.0 Environmental Control Measures, Operation, 2. – insert Stockland as being responsible**;
7. **Section 13.4, 3.0 Inspection and Monitoring, Operation, 1. – amend frequency to every 6 months instead of every 2 years**;
8. **Section 13.4, 3.0 Inspection and Monitoring, Design/Construction/Operation – include specific reference to the protection of the Moonah Woodland area particularly after excavation has occurred to the north as per the bulk earthworks strategy**;
9. **Section 13.4, 3.0 Inspection and Monitoring, Design/Construction/Operation – include ongoing monitoring, adaptive response and reporting of associated management approaches in relation to salt dependant vegetation communities**;
10. **Section 13.4 – include reference to the approved Native Vegetation Offset Plan**;
11. **Section 13.4 – allow for the management and control of domestic animals and weed escapes**;
12. **Section 13.4 – include mitigation measures, monitoring, response and reporting requirements to address the impact on the ten (10) flora species identified as being of State Conservation Significance**;
13. **Environmental monitoring and adaptive management strategies for:**
    - Sea grass and other aquatic vegetation communities, water depth, sea
level, area and temperature in the on-site lakes;
- Erosion and turbidity on site and down stream during and after construction;
- Discharge water quality in the pond west of Fellow’s Road.

14. All appendices must be linked back to an activity within either the design, construction or operation sections contained within the report.

(ii) Amend Planning Permit Condition 7 to read:

7. Prior to works commencing a Project Environmental Management Plan (PEMP) must be submitted to and approved by the Responsible Authority following its consultation with the Department of Sustainability and Environment. The PEMP must be generally in accordance with and implement the recommendations and requirements of the Point Lonsdale Environmental Management Framework (Golders Associates Pty Ltd 2008) forming part of the approved Development Plan under clause 43.04 of the Scheme.
PART 3: CONCLUSIONS AND RECOMMENDATIONS
17. RESPONSE TO EES TERMS OF REFERENCE

In accordance with section 9(1) Environment Effects Act 1978 the Minister for Planning determined to hold an Inquiry into the environmental effects of the Stockland Point Lonsdale Residential and Waterways Development.

The EES Terms of Reference require the Panel to respond to three tasks as follows:

(i) To inquire into and make findings regarding the potential environmental effects (impacts) of the proposed project, including impacts on relevant matters under the EPBC Act.

(ii) To recommend any modifications to the project, including in relation to siting and design, as well as environmental mitigation and management measures, that would be needed to achieve acceptable environmental outcomes, within the context of applicable legislation and policy.

(iii) To recommend whether the project should proceed in light of its expected effects, assuming the measures under (ii) were implemented.

The proposed development site for the Stockland Waterways and Residential Development at Point Lonsdale comprises a total of approximately 195 hectares. The zoning regime currently applied to the site includes the Farming Zone (approximately 109 hectares), the Residential 1 Zone (approximately 81.5 hectares), the Business 4 Zone (approximately 3 hectares) and the Rural Conservation Zone (approximately 1.5 hectares). Within the Residential 1 zoned component of the site, as exhibited, the development proposal seeks to accommodate 598 dwellings in the form of detached dwellings, apartments and townhouses, plus a retirement village (170 independent living units) and a 120 bed aged care facility. The development of a Child Care Centre is also proposed as a post exhibition inclusion. In addition, the proposal reserves approximately 56 hectares as environmental open space with a further 32 hectares, including the lake and canals, proposed as public open space.

17.1 Potential Environmental Effects and Proposed Modifications

This section of the report documents the Panel’s conclusions in relation to the first two tasks of its Terms of Reference (ie the potential environmental effects and the proposed modifications) under the following headings, in the same order as set out in the preceding sections of this report:
(i) Geotechnical and Geomorphology

The EES acknowledges that construction of the proposed development will involve extensive excavation of dune areas and the swamps to provide fill for residential areas and to construct the lake system, which will necessitate the removal of some evidence of the site’s historical landform. While acknowledging this, the EES identifies the geotechnical risks during and post construction from the development are considered to be low to medium and can be managed through implementation of best practice environmental management.

Submissions and evidence contend that the site has areas of High Regional Geological Significance as the dunes in particular display the landform history of the Bellarine Peninsula and the southern region of Port Phillip Bay.

While the disturbance of the dune areas will reduce its geomorphologic value the Panel considers that as there are other examples of the same processes within the locality, that the reduction in geomorphologic demonstration value is minor and acceptable.

(ii) Site Contamination and Acid Sulfate Soils

Site examinations to date have not identified the presence of acid sulfate soils although the EES acknowledges potential for their formation. The EES acknowledges some low level contamination within the site. The EES notes that because of high calcium carbonate deposits, there is a natural buffering capacity to prevent net acid generation over a large portion of the site and treatment of these soils will not be required. Where such buffering capacity is deemed inadequate, treatment and on-site burial of those soils is proposed. The Panel accepts this management and mitigation response and supports the EES commitment to engage an EPA accredited Auditor to conduct a Statutory Audit of the site and to manage contamination and acid sulfate soils through its Environmental Management Framework.

(iii) Hydrology and Water Quality

The proposed development is to create a 4.5 km canal with passive valves controlling entry and exit of tidal water from Lakers Cutting to achieve a one-way water flow. Based on modelling, the proponent proposes that a design flushing time (i.e. hydraulic detention time) of 20 days for water in the canal will not be exceeded more than 20% of the time. The proponent has assessed that this flushing time is sufficient to prevent algal blooms in the waterway.
The proponent’s objective is to return water to Lakers Cutting at a quality which is at least as high as that taken from it. Achievement of this is reliant on meeting the flushing time objective. The proponent will monitor water quality to ensure its objectives are being met and if necessary make modifications through a modified passive system with greater inflows or different bathymetry, or the use of pumping. It is considered there is sufficient flexibility to modify the flushing system should it be required.

Currently the water quality in Lakers Cutting, which receives inputs from the subject site and elsewhere, does not meet the applicable water quality objectives set out in the State Environment Protection Policy (Waters of Victoria). This complies with SEPP (WoV) as, in cases where environmental quality objectives cannot be attained (due to natural variation) the SEPP allows for the background level to become the environmental quality objective.

During the hearing concern was expressed that the shallow sill separating Lakers Cutting from Swan Bay might silt up over time, thereby restricting flows into the waterway and into Swan Bay. Based on the evidence put before it, the Panel is satisfied that the tidal flow over the sill is sufficient to prevent it silting up.

In relation to these issues, the Panel concludes that the physical design of the lake system proposed will function appropriately and that there is only a minimal and manageable risk that algal blooms will originate from the project site. Further the Panel concludes that the EES has set appropriate water quality and flushing objectives and best practice targets for stormwater quality and that the Environmental Management Framework provides a workable monitoring, management and mitigation framework to provide for their realisation.

(iv) Flora

Surveys of the site undertaken in the preparation of the EES did not identify any plant species of National Significance within the site however ten plant species of State significance were identified. Five of these are likely to be impacted by the development and mitigation measures are proposed. In addition 76 plant species of Regional Significance were recorded for which no specific conservation measures are proposed.

The proposal includes conservation/restoration measures for the retained native vegetation. In addition, 30 hectares of native re-vegetation (some off site) of five Ecological Vegetation Classes is proposed as an offset to compensate for vegetation loss. The planned revegetation is composed of:
Coastal Salt-marsh  
Brackish Sedge-land  
Coastal Alkaline Scrub  
Coastal Tussock Grassland  
Damp sands Herb-rich Woodland

The Panel considers that adequate Effective Net Gain compensation is provided where native vegetation losses are unavoidable. However the 31.4 hectares of Saline Aquatic Meadow, which does not technically require an offset under the Native Vegetation Framework, has important conservation values and no “like for like” compensation is practicable. The Panel supports DSE’s recommendation that a seven hectare external offset site be secured by the proponent to compensate for loss of the Saline Aquatic Meadow and this requirement be incorporated in the project’s Environmental Management Framework along with monitoring and management provisions for Rice Grass (Spartina townsendii/S.anglica) which, if not controlled, could block the waterways.

(v) Fauna

The data provided in the EES and submissions in response to its exhibition demonstrate that the site is centrally located within an extensive wetland complex of very high value for avifauna. Field surveys in 2003 and 2007 recorded a total of 95 terrestrial vertebrate species, predominantly birds. Rabbits, foxes and dogs were also recorded on the site and feral cats, although not observed, are also undoubtedly present.

With respect to the various species found on the site, or which could potentially inhabit it, that require protection under the FFG Act and the Commonwealth’s EPBC Act, (including the Red-necked Stint and the Common Greenshank, the Orange-bellied Parrot and the Little Egret), the Panel considers that the site does not provide significant or limiting habitat for any of these species and furthermore any deleterious impacts will be mitigated via the implementation of measures set out in the project’s Environmental Management Framework.

(vi) Wetlands

Many submissions to the exhibition of the EES contend that the existing wetlands in the development site are a critical link in a chain of wetlands linking the Swan Bay Ramsar site to Lake Victoria, and to the Ramsar wetlands further to the west, and that they will be detrimentally impacted by the proposed development. The Panel accepts that the current ephemeral wetland chain will be disrupted by the development but considers that an effective linkage will be maintained via the
development of a permanent tidal waterway within the development site and proposed management and mitigation measures outlined in the Environment Management Framework.

(vii) **Climate Change and Sea Level Rise**

Subsequent to the start of EES exhibition period the Draft Victorian Coastal Strategy was released. This Strategy proposes a maximum sea level rise of 0.8 metres by 2100 as a planning guideline.

Based on the evidence before it, the Panel accepts that with a co-incident tidal storm surge and overland flood, the peak water level might reach 2.35m AHD in Point Lonsdale by 2100, implying that substantial low-lying parts of the existing township will require protective embankments. If embankments are raised, as the proponent argues will have to happen, the predicted peak water level might be restricted to 1.65m AHD. On this basis, the Proponent considers it appropriate to apply a minimum floor level of 1.8 AHD for all dwellings in the development. The proposal before the Panel reflects this.

The Panel however does not agree that it would be sensible to add to the number of houses that might otherwise be flooded if the existing embankments are not raised. Accordingly the Panel recommends a minimum floor level for all dwellings of 2.35 metres AHD. Further the Panel recommends that if the Government sets a sea-level rise guideline of more than 0.8 metres, the minimum floor level should be revised by the differential. In forming these conclusions and recommendations the Panel acknowledges the proponents verbal advice that the house foundations on the lower allotments can feasibly be raised to meet this design parameter. This would require about 50% of the houses to have their floor levels raised above their current proposed level by a maximum of 600mm.

(viii) **Cultural Heritage**

Point Lonsdale is regarded as an area of high cultural significance. Members of the Bengalta balug Clan of the Wathaurong Tribe inhabited it at the time of European settlement, and the area contains a number of sensitive Aboriginal archaeological sites including burials. The EES acknowledges that the proposed development will involve the disturbance of:

- Two large areas of the site considered having Aboriginal archaeological sensitivity.
- Seven recorded Aboriginal archaeological sites located either within the development footprint or in the northwest dunes that are required to be
excavated for use as fill material for the residential pods.

- One non-Aboriginal historical archaeological sites, the Shell Grit Camp located to the south of the Bellarine Highway which would be disturbed and would require a permit from Heritage Victoria.

In addition, the construction of a drainage channel beneath the Queenscliff railway, has the potential to impact on the rail line, which is included in a Heritage Overlay in the Greater Geelong Planning Scheme.

Having considered the above impacts the Panel is satisfied that protection of indigenous and non indigenous heritage will be appropriately managed through measures proposed including a Cultural Heritage Management Plan (CHMP). In addition to management measures articulated in the proposal, the Panel recommends that an interpretative program be developed.

(ix) Economics and Tourism

In relation to economic impacts, the Panel concludes that the realisation of the project will confer substantial and enduring economic benefits for retailers, non-retail businesses, and residents of Point Lonsdale, Queenscliffe, the Bellarine Peninsula and wider Geelong. Such benefits will include an increase of approximately $19 million in annual local expenditure (once the project is completed) which will be directly attributable to permanent residents of the development and their visitors. In addition, local job opportunities will be created both during and post construction.

The Panel supports the conclusion of the EES that the proposed development will have a positive economic and tourism impact on Queenscliff, Point Lonsdale and the wider study area, and that mitigation measures are not required to off-set any potential economic effect.

(x) Social Impacts

The EES identifies that Point Lonsdale, which has not participated in the rapid development that has taken place on other parts of the coast line, has a long standing, well established community of approximately 2,500 permanent residents (2006 ABS). The population of the town expands to more than 8,400 people during the summer holiday period. When completed (10 to 12 years following commencement of construction) the permanent population of the proposed development will increase by approximately 1,200.
While the Panel acknowledges that many existing residents oppose the development due to concerns that the development will change the general ambience and social structure of Point Lonsdale in a negative way and place additional strains on community services, its concludes that the development will result in an overall positive social impact. In forming this conclusion the Panel considers that the proposal will, among other things, aid in providing a more balanced demographic community profile, add to the diversity and opportunity for housing, is likely to boost enrolment in local schools, clubs and community organisations and will result in improved community services.

(xi) Landscape and Visuals

In regard to external visual impacts, the EES acknowledges that the development will be visible from Marcus Hill on the Bellarine Highway and rooftops will be visible on the approach to the township. The Panel considers that the proposed measures to minimise the visual impact of the development, which include the planting of screening trees, building height controls and setbacks are an appropriate and acceptable response.

The Panel also acknowledges that the revised suite of planning control mechanisms that have been advanced in response to the exhibition and consideration of the proposal will include internal building controls and design guidelines that will amongst other things, specify architectural character, building materials and external colours to assist the development’s integration with the existing urban fabric of old Point Lonsdale. Measures are provided in the Environmental Management Framework to reduce stormwater run-off, promote solar efficiency and to support the planting of indigenous vegetation which are all supported by the Panel.

(xii) Transport

The EES identifies that under typical conditions it is projected that the proposed development will generate approximately 5,050 vehicle movements per day, and during peak periods this will rise to approximately 6,740 per day. The Panel notes that VicRoads is satisfied with the traffic volume assignments and documented traffic impact assessments.

The EES includes an extensive suite of management and mitigation measures to off-set increases in vehicular traffic and respond to the increase demand for public transport services. The Panel agrees with the suite of management and mitigation measures proposed, and recommends additional measures following its consideration of submissions and evidence. With the inclusion of the additional measures identified, the Panel is satisfied that the anticipated impacts of the
proposed development on both the local and arterial road networks are within acceptable limits.

(xiii) Infrastructure Services Network

The Panel is satisfied that the EES has appropriately documented the infrastructure and services network that will supply the site and that the EES has undertaken an appropriate risk assessment of potential impacts relating to their provision. The Panel notes that the routes and alignments for infrastructure within and outside the development site have not yet been determined and that they will be resolved during the detailed design phase.

The Panel concludes that mitigation measures associated with the provision of infrastructure services to the site have been adequately addressed to date and that the Environmental Management Framework, inclusive of the requirements to prepare and implement Project Environmental Management Plans and Contractor Management Plans will facilitate orderly and managed infrastructure provision geared to avoiding and minimising environmental impacts. Modification of a planning permit condition is recommended to clarify requirements associated with salinity control.

(xiv) Project Implementation

The EES contains a detailed and cascading Environmental Management Framework (EMF) to:

*Provide the framework for, and the minimum specifications for, the procedures and controls, responsibilities, monitoring programs and contingency plans to protect human health and the environment during the design, construction and operation of the proposed Point Lonsdale Residential and Waterways Project.*

The overarching EMF documents the project’s environmental goals and objectives, processes for managing environmental risk, the minimum requirements for the various environmental control measures, and performance indicators in relation to the management of key environmental aspects of the development. A Project Environmental Management Plan and Contractor Environmental Management Plans are subsidiary documentation to the Framework.

The Panel is satisfied that the EMF identifies both the main risks of the project and the main commitments contained in the EES technical reports. Further, the Panel is satisfied that the general framework for environmental management of the site
comprising the three interconnected elements of the EMF, PEMP and the CEMP’s represent a robust approach to the environmental management of the project.

The Panel recommends that the EMF be updated/modified to include: additional environmental control measures; inspection, monitoring and reporting requirements; development and implementation of additional adaptive management strategies and the inclusion of a Native Vegetation Offset Plan.

The Panel recommends a repositioning of the EMF components in the suite of planning controls. The revised structure positions the Environmental Management Framework and Master Plans as requirements of the Development Plan within the Schedule to the Development Plan Overlay, and the Project Environmental Management Plan and staging plans become requirements of the Planning Permit.

To address the possibility that the project may stall or flounder a new Permit Condition is recommended that requires the Proponent submit a plan, to the satisfaction and approval of the Responsible Authority that shows the manner in which the development of the land will be completed if the next stage is the final stage. This condition requires the owner of the land to enter into a Section 173 agreement providing appropriate security that such works will be carried out if the development of the land ceases at the end of the stage.

17.2 Overall Conclusion and Recommendation

In response the Panel’s third Term of Reference, having considered all the information available to it in the EES, associated technical reports, written and verbal submissions and the evidence of expert witnesses, the Panel concludes that the project should be approved, subject to various modifications. The Panel therefore recommends the following in relation to the EES:

(i) Approve the Environmental Effects Statement to provide the basis of the development proposal (Option B), subject to the consolidated recommendations and modifications documented in Chapter 20.
18. MATTERS OF COMMONWEALTH INTEREST

The Federal Minister for the Environment, Heritage and the Arts has determined that the proposal is a controlled action that needs approval under the Commonwealth’s Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The Minister has accredited this EES Inquiry as the required process under that Act to assess matters relevant to an Australian Government decision to approve the project.

The controlling provisions of the EPBC Act specified by the Minister are:

- Sections 16 and 17B (Wetlands of international importance);
- Sections 18 and 18A (Listed threatened species and communities); and
- Sections 20 and 20A (Listed migratory/ marine species).

In summary the Panel considers that the site does not provide significant or limiting habitat for any species requiring protection under the EPBC Act or for any species listed in international conventions and that it will retain habitat suitable to a number of them. The substantial reasons for this conclusion are set out in Chapter 8 which deals with the potential impacts on all flora and fauna, including those of Commonwealth interest.

The Panel’s summary of the specific EPBC issues is discussed under the three categories set out in the Act.

18.1 Wetlands of International Importance

Numerous submissions, including particularly Point Lonsdale Coastal Spaces Group and Bird Observation and Conservation Australia, contend that the wetlands in the development site is a “critical link” or “fly-way” in a chain of wetland habitat linking the Swan Bay Ramsar site to the Lake Victoria and to the Ramsar classified wetlands further west. They consider that it will be completely disrupted by the houses, traffic, dogs, cats and other features of human presence including lights and noise. The proponent argues that the current wetlands are transient and artificial and that the tidal canals and open space areas will provide an alternative and potentially more reliable waterway link.

The Panel accepts that the current continuous linkage of wetland and native vegetation will be disrupted by the development but considers that, with the implementation of the management and mitigation measures included in the project’s Environmental Management Framework (EMF), the tidal waterway will
maintain an effective and functional linkage.

Some submittors assert that the water quality of Swan Bay will be adversely affected. The Panel accepts the water quality assessment which indicates that a negative impact is unlikely particularly as the volume of water involved is a tiny fraction of the total tidal exchange. The Panel is satisfied that the EMF contains appropriate water quality and flushing objectives, best practice targets for stormwater quality, and that it provides a workable monitoring, management and mitigation framework to provide for their realisation.

18.2 Listed Threatened Species and Communities

The EPBC Protected Matters Search Tool lists three flora species and thirty-eight fauna (31 birds, 4 mammals, 2 fish, 1 amphibian) that have been either recorded within five kilometres of the site or have likely suitable habitat within this range. It is to be noted that the number of species identified by the search tool is strongly affected by the site’s proximity to shore-line and ocean habitats and it therefore includes, for example, 11 species of Albatross and Giant Petrel.

The three EPBC listed flora species (Maroon Leek Orchid, River Swamp Wallaby Grass and Clover Glycine) are listed under the Victorian Flora and Fauna Guarantee and are discussed in Chapter 8. The Panel does not consider that any of these would be adversely affected by the development.

As indicated in Table 6, seventeen of the listed fauna species require habitat quite different from that at the site and seven require habitat substantially different. There are eight EPBC listed marine/migratory bird species for which suitable habitat may occur and these are further discussed in Chapter 18.3 of this report. Two mammal species are considered locally extinct and it is noted that the habitat of the site is generally unsuitable to these species. The remaining four listed species are birds, three of which are widespread and require scrub habitat for which the planned site revegetation is expected to offset any loss of existing habitat. The fourth species, the Orange-bellied parrot, which has not been observed on the site, is listed as critically endangered in both the EPBC Act and the Victorian Flora and Fauna Guarantee Act. The Panel’s evaluation of the potential risk to the Orange-bellied parrot is discussed in Chapter 8 where it is concluded that there would be no significant impact from the development.
Table 6: EPBC Listed Fauna Species

<table>
<thead>
<tr>
<th>EPBC listed Species (Nationally significant and/or Migratory-Marine)</th>
<th>On-site habitat potentially suitable</th>
<th>Possible on-site habitat</th>
<th>No on-site habitat</th>
<th>Locally extinct</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Birds</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albatross Butler’s</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Albatross Campbell’s</td>
<td></td>
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<td></td>
<td>x</td>
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<tr>
<td>Albatross Gibson’s</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
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<tr>
<td>Albatross nthn royal</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Albatross Salvin’s</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Albatross shy (2 species)</td>
<td></td>
<td></td>
<td></td>
<td>x x</td>
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<tr>
<td>Albatross sthn royal</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
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<tr>
<td>Albatross wandering</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Curlow eastern</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curlow Sandpiper</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Eagle sea white-bellied</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
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<tr>
<td>Fantail rufous</td>
<td>x</td>
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<tr>
<td>Flycatcher satin</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Greenshank common</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Honeyeater regent</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Needletail white-throated</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Parrot orange-bellied</td>
<td>x</td>
<td></td>
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<tr>
<td>Parrot swift</td>
<td>x</td>
<td></td>
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<tr>
<td>Petrel giant northern</td>
<td>x</td>
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<td></td>
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<tr>
<td>Petrel giant southern</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
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<tr>
<td>Plover double-banded</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Plover grey</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
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<tr>
<td>Plover hooded</td>
<td>x</td>
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<td></td>
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<tr>
<td>Plover Pacific golden</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Prion fairy</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Sandpiper sharp-tailed</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snipe Latham’s</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snipe painted</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stint red necked</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnstone ruddy</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

| **Mammals**                                                  |                                      |                          |                   |                 |
| Bandicoot Sthn brown                                         |                                      |                          |                   | x               |
| Flying fox grey headed                                       |                                      |                          |                   | x               |
| Potoroo long nosed                                           |                                      |                          |                   | x               |
| Quoll spot tailed                                            |                                      |                          |                   | x               |

| **Amphibians**                                               |                                      |                          |                   |                 |
| Frog growling grass                                          |                                      | x                        |                   |                 |

| **Fish**                                                     |                                      |                          |                   |                 |
| Galaxias dwarf                                               |                                      |                          |                   | x               |
| Grayling Australian                                          |                                      |                          |                   | x               |

* italic: species recorded on site
18.3 **Listed Migratory/Marine Species**

Suitable habitat occurs within the development site for eight species of migratory wading and shore birds that are listed by the EPBC Act:

- Red-necked Stint
- Sharp-tailed Sandpiper
- Curlew Sandpiper
- Double-banded Plover
- Eastern Curlew
- Pacific Golden Plover
- Grey Plover
- Common Greenshank

Reliable records of the occurrence of these species on the development site are few, being limited to the Red-necked Stint, (Biosis Pty. Ltd. and Mr John Murray) and Common Greenshank (Mr Murray). The paucity of records is said by submitters to be primarily due to the tendency for observers to concentrate on the adjoining public land reserves as they are more easily accessible than the private property of the development site. Biosis, on the other hand considers that the range of visiting shore birds is not diverse and that no species occurs in significant numbers. They consider that this probably due to “the nature of the substrates of the shell grit extraction ponds which are generally considered unsuitable to foraging waders and their invertebrate prey.”

Nevertheless expert opinion is that these species all certainly utilise brackish wetlands and salt-marsh like that on the site and may occur there at times.

The Environmental Management Plan intends that the wetlands are designed so as to make at least some of them suitable to waders and shorebirds. Roosting habitat will also be established.

For the reasons articulated in Chapter 8 of this report, and as summarised here, the Panel concludes that there will be a neutral impact on habitat for EPBC listed migratory/marine species.
19. RESPONSE TO PLANNING MATTERS

As outlined previously in Chapter 17.2, the Panel concludes that the proposal should be approved, subject to various modifications.

With specific reference to planning matters, the Panel finds that the proposal is generally consistent with State Planning Policy and the strategic intent articulated in the Local Planning Policy of the Greater Geelong Planning Scheme. In reaching this finding, the Panel acknowledges that there are some elements of policy, particularly relating to environmental considerations where the proposal’s consistency has been challenged. Having undertaken its review of environmental issues the Panel concludes that the project complies with relevant State and Federal policy considerations, has an appropriately robust and responsive environment management framework, and that the project’s implementation will afford a net environmental benefit. The Panel finds on balance, the development satisfactorily integrates relevant social and economic factors in the interest of net community development.

The various components that the Panel needs to address under the provisions of the Planning and Environment Act 1987 are now addressed.

19.1 Amendment C150

Amendment C150 seeks to:

- introduce a new Development Plan Overlay Schedule and apply it to the site; and
- replace the Schedule to the Farming zone to allow the creation of a 35 hectares lot and allow the lot to be used as a dwelling.

The amendment is accompanied by two draft agreements under section 173 of the Planning and Environment Act 1987.

(i) Application of the Development Plan Overlay

As exhibited the Development Plan Overlay has been applied to the entire subject site. The Panel considers this inappropriate as the proposal sought to be advanced via the combined EES inquiry and planning scheme amendment process primarily relates only to the south east portion of the subject site with the exception of some works to the waterway linkage. Removal of the Development Plan Overlay from areas north east of the Bellarine Highway, other than the area required for the
waterway link to Lakers Cutting is required to ensure adequate opportunity for future third party review of any proposal to develop the remainder of the subject site.

(ii) Development Plan Overlay Schedule

The exhibited Development Plan Overlay Schedule, which the Panel notes is incorrectly numbered, contains specific provisions for the future use and development of the subject site, consistent with those articulated in the EES. For the reasons outlined in Chapter 4.2, the Panel concludes that it requires significant re-arrangement to improve clarity and accountability. Modifications required include:

- The introduction of a new clause in the Development Overly (Requirements before a permit is granted) to conditionally enable a permit to be granted prior to the approval of a Development Plan so that the consideration of the Development Plan and proposed permit can occur simultaneously;
- Modify conditions and requirements on permits to specify that a planning permit must include conditions relating to ensure:
  - That the subdivision and development of the land will not commence until a Development Plan has been approved under Schedule 14 of clause 43.04.
  - Preparation and approval of a Project Environmental Management Plan and specific Earthworks, Stormwater, Waterways, Native Vegetation Offset and Landscape plans all in general accordance with Development Plan.
  - Compliance with Building and Landscape Design Guidelines.
  - Compliance with a Conservation and Open Space Areas Agreement and an Infrastructure Agreement prepared pursuant to Section 173 of the Planning and Environment Act 1987.
  - The Schedule to Development Plan Overlay should be modified to require the Responsible Authority to consider whether the proposal is generally consistent with the purpose of the zone and whether the use or development is generally in accordance with any approved development plan;
- Modify the Schedule to the Development Plan Overlay to require the Responsible Authority to consider whether the proposal is generally consistent with the purpose of the zone and whether the use or development is generally in accordance with any approved development plan;
- Modify the Requirements for the Development Plan in the Schedule to the Development Plan Overlay to remove references relating to meeting objectives and in their place require the Development Plan to include: an Environmental Management Framework; Building and Landscape Design Guidelines; and
Masterplans for Earthworks, Landscape, Stormwater Drainage, and Waterways that are generally in accordance with the approved EES for the land and the Minister’s Assessment;

- In addition, the DPO should specify that the Building and Landscape Design Guidelines must have regard to relevant guidelines in the Building Siting and Design Guidelines – Point Lonsdale Coastal Area – Borough of Queenscliffe and the Waterway Master Plan must be designed in accordance with best practice principles and be to the satisfaction of the Responsible Authority and the relevant Floodplain Management Authority;
- Modify the Decision Guidelines of the Schedule to the Development Plan Overlay to remove reference to consistency with objectives set out in this schedule and in its place specify that the Responsible Authority must consider as appropriate, the EES and Technical Reports Vol 1 -14 as well as the Minister’s assessment of the EES;
- Include a new provision of the Schedule to the Development Plan Overlay requiring the Responsible Authority to consult with the Borough of Queenscliffe and the Department of Sustainability and Environment before approving the Development Plan; and
- Include the updated Masterplan in the Schedule to the Development Plan Overlay.

These modifications are reflected in the Revised DPO Schedule presented in Appendix 4 of this report. As presented, the Panel is satisfied with the transparency and robustness provided by the redrafted control. It is the Panel’s view that its adoption would enable the project to proceed in an orderly, secure and manageable fashion consistent with the intent of the EES and the intent of the VPPs and relevant planning legislative requirements.

(iii) Farming Zone

The Panel is supports the exhibited modification to Clause 35.07 which replaces the existing schedule with a new schedule to allow the creation of rural lot with a house entitlement on the subject site with a minimum subdivision size of 35 hectares. In forming this conclusion the Panel decided that the creation of one such lot does not threaten the integrity of the non-urban break between Point Lonsdale and Ocean Grove.

The Panel makes the following recommendations in relation to Amendment C150:

Adopt Amendment C150 to the Greater Geelong Planning Scheme, subject to the following modifications:
(i) Amend the Exhibited Version of Planning Scheme Map 83 DPO by:
   - Replacing the reference to ‘DPO 12’ with ‘DPO14’
   - Removing the application of the DPO from areas north east of the Bellarine Highway, other than the area required for the waterway link to Lakers Cutting; and
(ii) Adopt the revised Schedule to the Development Plan Overlay, as documented in Appendix 4.

19.2 Planning Permit Application PP673/2007

The exhibited Planning Permit Application PP673/2007 seeks to allow removal of native vegetation, earthworks, creation of access to a road in a Road Zone 1 and a stage multi-lot residential subdivision, on the subject site in a manner consistent with the proposal articulated in the EES and the accompanying exhibited Schedule to the Development Plan Overlay.

The Panel is generally satisfied with Council’s Clause 56 assessment of the proposal and its delegate report in respect to the exhibited permit. For the reasons outlined in Chapter 4.2, the Panel considers that the Permit requires modification in the following way:

- Under the heading Amended Plans, remove reference to “Prior to works commencing” and replace with “before a plan of subdivision is certified”;
- Include a provisions relating to Staging that:
  - allow the subdivision be carried out in stages provided an Overall Staging Plan is approved by the Responsible Authority before commencement of any works, including earthworks, waterway re-construction, provision of public open space and community facilities and the off-site road and intersection works.
  - require submission prior to commencement of each stage of contingency plan acceptable to the Responsible Authority, demonstrating how the development will be satisfactorily completed if, for any reason, that stage should actually become the final stage.
  - requiring the owner of the land to enter into a Section 173 agreement providing security that the works set out in the contingency plan will be carried out should they become necessary.
- Remove the specification for the preparation and approval of an Environmental Management Framework from the Permit. In its place include in the Development Plan, a requirement for the preparation of a Project Environmental Management Plan and its approval by the Responsible Authority prior to works commencing. (Note that the Environment Management Framework becomes a Requirement of the Development Plan.)
• Remove requirements for the preparation of Master Plans for Earthworks, Landscape, Stormwater Drainage and Waterways and in their place require preparation of Plans that must be generally in accordance with the Master Plans that form part of the approved Development Plan.

An updated Permit reflecting these modifications was tendered towards the end of the hearing. The revised permit conditions contained in Appendix 5 of this Report reflects the revised permit structure. All parties to the hearing were provided the opportunity to make submissions on the revised conditions. In response to its consideration of these submissions, the Panel has recommends the following modifications to the revised planning permit conditions:

(i) amend planning permit condition 1 f) to read:
   f) Location of bus stops (including shelters and associated signs) and corresponding safe pedestrian crossings on the Bellarine Highway, Shell Road and within the site as necessary;

(ii) include the following additional items in planning permit condition 5 b):
   v) Intersection upgrades at ‘Bellarine Highway / Fellows Road’ and ‘Point Lonsdale Road / Lawrence Road’.
   vi) Appropriately sited pedestrian crossing treatments on the Bellarine Highway and Shell Road in proximity of proposed bus stops.

(iii) amend planning permit condition 7 to read:
   7. Prior to works commencing a Project Environmental Management Plan (PEMP) must be submitted to and approved by the Responsible Authority following its consultation with the Department of Sustainability and Environment. The PEMP must be generally in accordance with and implement the recommendations and requirements of the Point Lonsdale Environmental Management Framework (Golders Associates Pty Ltd 2008) forming part of the approved Development Plan under clause 43.04 of the Scheme.

(iv) amend planning permit condition 7e) to read:
   e) Landscaping and vegetation management for open space areas including ecological management requirements for
conservation areas and a plan for the management of nutrients and irrigation.

(v) amend planning permit condition 7 l) to read:
   l) Salinity control measures to protect: saline environmental assets; development from the effects of salinity; and future development from aggravating or creating new salinity problems;

(vi) amend planning permit condition 14 a) to read:
   a) A roundabout (major traffic control item) and associated roadworks including lighting, linemarking and drainage in Shell Road at the intersection of the subdivisonal access road having regard the need to maintain safe truck and other vehicular movements to and from adjacent properties;

(vii) replace planning permit condition 22 with the following:
   22. The floor levels of all residential and commercial buildings must not be less than 2.35m AHD OR, if the Victorian Coastal Strategy adopts a 2100 sea level rise planning guideline of more than 0.8 metres, the floor levels of all residential and commercial buildings must not be less than 2.35m PLUS the differential between 0.8 metres and the revised planning guideline.

(viii) amend planning permit condition 24 to read:
   24. The Native Vegetation Offset Plan must provide for the:
      a) Additional provision and maintenance, off-site, of at least seven hectares of Coastal Salt-marsh and Brackish Sedge-land; and
      b) Application of all excess habitat hectares as compensation for loss of the Saline Aquatic Meadow (and therefore not be available for trade).
      and must include details of the following:
      c) Means of calculating......

(ix) amend planning permit condition 38 to include the following additional requirement:
c) **Culverts under Shell Road** shall be designed to accommodate its future duplication and to maintain consistency of flood levels on both sides of the road at 0.9m AHD (1% AEP flood level).

(x) **delete planning permit condition 63** (The freeboard for all new buildings constructed on the subdivision will be a minimum of 500 mm above the applicable flood level.) and renumber remaining permit conditions accordingly.

These modifications are reflected in the Planning Permit Conditions presented in Appendix 5 of this report. The Panel is satisfied that the revised conditions will enable Council to maintain control over the future use and development of the site and provides a high and adequate degree of certainty to the community regarding the development outcome.

The Panel makes the following recommendation in relation to Planning Permit Application No PP673/2007:

**Issue Planning Permit Application No PP673/2007 in accordance with the revised planning permit conditions as outlined in Appendix 5.**
20. PANEL RECOMMENDATIONS

For the reasons outlined in this report, the Panel makes the following recommendations:

1. Approve the Environmental Effects Statement to provide the basis of the development proposal (Option B), subject to recommendations 2 and 3 below, and the following consolidated list of modifications:

   (i) Update the Environmental Management Framework to include the following modifications:
       a) Section 13.1, 1.0 Goals, part 5 – to include “and the Melbourne Water WSUD Engineering Procedures: Stormwater”;
       b) Section 13.1, 2.0 Environmental Control Measures, Design – to include reference to the installation of a floating litter trap (Bandalong type) in the outlet channel north of the Bellarine Highway;
       c) Section 13.1, 2.0 Environmental Control Measures, Construction – delete any reference to hay bales and replace with straw bales;
       d) Section 13.1, 3.0 Inspection and Monitoring, Operation – include a maintenance requirement for the floating litter trap;
       e) Section 13.1 – include monitoring of the water in Lake Victoria which is likely to enter the site lake;
       f) Section 13.4, 2.0 Environmental Control Measures, Design – include the following requirements;
          - Preferentially select species of Regional and State Significance in re-vegetation and amenity plantings.
          - Establish and implement a specific monitoring program and contingency plan, if required, to prevent invasion of the waterways by Rice Grass (Spartina spp).
       g) Section 13.4, 2.0 Environmental Control Measures, Operation, 2. – insert Stockland as being responsible;
       h) Section 13.4, 3.0 Inspection and Monitoring, Operation, 1. – amend frequency to every 6 months instead of every 2 years;
       i) Section 13.4, 3.0 Inspection and Monitoring, Design / Construction / Operation – include specific reference to the protection of the Moonah Woodland area particularly after excavation has occurred to the north as per the bulk earthworks strategy;
       j) Section 13.4, 3.0 Inspection and Monitoring, Design / Construction / Operation – include ongoing monitoring, adaptive response and reporting of associated management approaches in relation to salt
dependant vegetation communities;

k) Section 13.4 – include reference to the approved Native Vegetation Offset Plan;

l) Section 13.4 – allow for the management and control of domestic animals and weed escapes;

m) Section 13.4 – include mitigation measures, monitoring, response and reporting requirements to address the impact on the ten (10) flora species identified as being of State Conservation Significance;

n) Section 13.5 - amend to require the development and implementation of an interpretation program consistent with the Cultural Heritage Management Plan;

o) Environmental monitoring and adaptive management strategies for:
   - Sea grass and other aquatic vegetation communities, water depth, sea level, area and temperature in the on-site lakes;
   - Erosion and turbidity on site and down stream during and after construction;
   - Discharge water quality in the pond west of Fellow’s Road.

p) All appendices must be linked back to an activity within either the design, construction or operation sections contained within the report.

2. **Adopt Amendment C150 to the Greater Geelong Planning Scheme, subject to the following modifications:**

   (i) amend the exhibited version of Planning Scheme Map 83 DPO by:
      - Replacing the reference to ‘DPO 12’ with ‘DPO14’;
      - Removing the application of the DPO from areas north east of the Bellarine Highway, other than the area required for the waterway link to Lakers Cutting; and
   
   (ii) adopt the revised Schedule to the Development Plan Overlay, as documented in Appendix 4.

3. **Issue Planning Permit Application No PP673/2007 in accordance with the revised planning permit conditions as outlined in Appendix 5.**

Kathryn Mitchell    William O’Neil    Peter Sheehan    Catherine Wilson
October 2008
APPENDIX 1: TERMS OF REFERENCE
EES: Stockland Waterways and Residential Development, Point Lonsdale
Greater Geelong Scheme: Amendment C150 and PP673/2007

TERMS OF REFERENCE

INQUIRY UNDER
SECTION 9(1) OF ENVIRONMENT EFFECTS ACT 1978

STOCKLAND POINT LONSDALE RESIDENTIAL AND WATERWAYS DEVELOPMENT

1. BACKGROUND

Stockland Development Pty Ltd (‘Stockland’) proposes to create a residential and waterways development on a site adjoining the Bellarine Highway at Point Lonsdale, approximately 30 km from Geelong. The proposal includes a residential subdivision of approximately 600 lots with integrated waterways, a retirement village, an aged care facility, a multi-purpose community centre, a convenience shop, public open space and habitat land protected for conservation purpose.

The site of 192ha of land has approximately 1.5km of frontage to the Bellarine Highway and Shell Road. It connects with Swan Bay Ramsar area via Lakers Cutting at its eastern boundary. The south-eastern portion of the site directly abuts the existing Lonsdale Lakes development, with the predominant interface being the rear of existing lots.

On 24 September 2003, the Minister for Planning determined that an Environment Effects Statement (EES) was required for the proposal under the Environment Effects Act 1978. The EES was prepared by the proponent in response to Assessment Guidelines initially issued for the proposal in February 2004. Revised Assessment Guidelines for this EES were issued in December 2006, following changes made by Stockland to their proposal in response to the Coastal Spaces Policy announced by the Government in April 2006.

In accordance with section 8A(3) of the Planning and Environment Act 1987, the Minister for Planning has authorised the Greater Geelong City Council as planning authority to prepare Amendment C150 to the Greater Geelong Planning Scheme to facilitate the Point Lonsdale Residential and Waterways Development.

Under Victorian law, the project also requires the following approvals:

- Coastal Management Act 1995 consent for works on coastal Crown land;
- Aboriginal Heritage Act 2006 consent to excavate or disturb Aboriginal archaeological sites; and
- Heritage Act 1995 consent to disturb heritage sites.

In addition, the project needs approval under the Commonwealth’s Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The controlling provisions under that Act are:
• Sections 16 and 17B (Wetlands of international importance);
• Sections 18 and 18A (Listed threatened species and communities); and
• Sections 20 and 20A (Listed migratory species).

The Australian Government has accredited the EES process as the required assessment process under the EPBC Act to assess the matters relevant to that Government’s decision whether to approve the project under this Act.

The EES was exhibited, together with Amendment C150 to the Greater Geelong Planning Scheme and Planning Permit Application (No.673/2007) to enable the proposal, from 29 November 2007 until 29 January 2008.

Following the report of this Inquiry\(^1\), the Minister for Planning will prepare an assessment of the project’s environmental effects\(^2\) to inform decisions whether or not to approve the project under legislation including the Planning and Environment Act and the EPBC Act.

2. TASK

The Inquiry is required:

i. To inquire into and make findings regarding the potential environmental effects (impacts) of the proposed project, including impacts on relevant matters under the EPBC Act.
ii. To recommend any modifications to the project, including in relation to siting and design, as well as environmental mitigation and management measures, that would be needed to achieve acceptable environmental outcomes, within the context of applicable legislation and policy.
iii. To recommend whether the project should proceed in light of its expected effects, assuming the measures recommended under (ii) were implemented.

3. METHOD

The Inquiry must consider the exhibited EES, any submissions received in response to the exhibited EES, the proponent’s response to submissions and other relevant information provided to or obtained by the Inquiry.

The Inquiry must conduct a public hearing and may make other such enquiries as are

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1 The members of which may also be appointed as a panel under sections 96, 153 and 155 of the Planning and Environment Act 1987 to consider submissions regarding the planning scheme amendment and associated planning permit applications. If this occurs, a single consolidated report meeting the requirements of both the EE Act and the Planning and Environment Act is to be prepared.

2 Under the seventh edition of the Ministerial guidelines for assessment of environmental effects (June 2006), environment for the purposes of assessment includes the physical, biological, heritage, cultural, social, health, safety and economic aspects of human surroundings, including the wider ecological and physical systems within which humans live.
relevant to its consideration of the potential environmental effects of the proposed Stockland Point Lonsdale Residential and Waterways Development.

The Inquiry must be conducted in accordance with the following principles:

- The inquiry hearings will be conducted in an open, orderly and equitable manner, in accordance with the rules of natural justice, with a minimum of formality and without the necessity for legal representation.
- The inquiry process will aim to be exploratory and constructive, where adversarial behaviour is minimised.
- Parties without legal representation will not be disadvantaged – cross-examination will be strictly controlled and prohibited where not relevant by the inquiry chair.

The Inquiry will meet and conduct hearings when there is a quorum of at least three of its members present including the Inquiry Chair.

4. OUTCOMES

To prepare a report for the Minister for Planning presenting:

- The Inquiry’s response to the matters detailed in section 2;
- Relevant information in support of the Inquiry’s recommendations; and
- A description of the proceedings conducted by the Inquiry and a list of those consulted and heard by the Inquiry.

5. TIMING

The Inquiry is required to report to the Minister for Planning in writing within eight weeks of its last hearing date.

6. FEES

The members of the Inquiry will receive the same fees and allowances as a panel appointed under Division 1 of Part 8 of the Planning and Environment Act 1987.
APPENDIX 2: LIST OF SUBMITTORS
• Adrianne Anderson
• David & Helena Anwyl
• S Armstrong
• Ian & Wendy Bainbridge
• R J Ball
• John & Karin Barty
• M Bedggood
• A & P Behan
• Dan Belluz
• Natasha Bennett
• Rod & Jane Berglund
• Ian & Patsy Blair
• Tracey Blany
• Anne Bobeff
• Noel Bond
• Deborah Brearley
• Charles Brincat
• Jane Britton
• Margaret Brookes
• Martin & Diana Brown
• Rosemary Brown
• W T Brown
• Edna & Rosemary Bull
• Dave & Margaret Campbell
• W R Campbell
• A Capell
• Barry Capp
• Margot Capp
• Ron & Rosemary Carlton
• J & B Carwardine
• David Chalmers
• Luci Chalmers
• Sandra Chrimes
• Graham Christie
• Samantha Clarke
• Bill & Peggy Comerford
• Robert Constance
• Bronwyn Constance
• A K Cornell
• Michael Cotton
• Caroline Cotton
• James Cotton
• R & E Cotton
• J C Crisp
• Jane Danne
• Jennifer Darling
• Leanna Darvall
• P Davidson
• R J Doherty
• G K & J A Dyke
• Judd & Harriet Epstein
• Simone Esler
• Peter Fayers
• Kate Fitzpatrick
• Helen Forsyth
• Kathleen Forsyth
• Donald Forsyth
• T & S Francis
• R J Fuller
• Nancy Gallagher
• H H Gallagher
• Jean Gallagher
• Jean Gardiner
• Mary Gathercole
• Ruth Gibson
• Brian & Prue Gillies
• C F & A Gilligan
• Tom Gleson
• Lorraine Golightly
• John & Carolyn Goodman
• Sue Gorton
• Michael Graf
• Avril Green
• Robert & Sally Green
• Eileen Lawrie
• Max & Margaret Hall
• Tyler Halsted
• Gigi Hancock
• Elaine Hannebery
• Tom Harley
• James & Margaret Harley
• Judith Harley
• Ian Harley
• Richard Harrison
• Judy Hassell
• Phillip Hassell
• Elizabeth Hayes
• Andrew Helps
• Debra Heyes
• Virginia Heywood
• Sarah Hill
• G & N Hill
• M & A Holme
• Robert & Denise Honey
• G A & E K Hope
• P Houghes
• Tom & Lyn Houldcroft
• Elaine Howley
• Madeleine Steele
• David Sutherland
• Henry Szwoster
• Grant Talbot
• Ernest Thomas
• Bev Tong
• Fiona Topolcsanyi
• Guido Ubaldi
• Anne Varley
• Jarrah Wadsworth
• Johanne Walker
• Natalie Walker
• John & Jackie Walter
• Ralph & Barbara Ward-Ambler
• Jill Warneke
• Andrew & Camilla Watson
• Susan Weigall
• Bob & Margaret Welsh
• Meil Werner
• Richard West
• K & L Wheat
• Mary Whyte
• Xenia Williamson
• J & B Wilson
• Gaye & Paul Wilson
• Roger Wood
• Naomi Wright-Smith
• S Zaitzev
• Swan Bay Integrated Catchment Management
• Point Lonsdale Coastal Spaces Group Inc.
APPENDIX 3 – DOCUMENT LIST
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<td>Map of Existing Zoning May 08</td>
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<td>Reference list re evaporation</td>
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<td>Submission for McMahon and Sons</td>
<td>Mark Naughton</td>
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<td>DSE report Port Phillip Bay and western shoreline Ramsar Sites (extracts)</td>
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<td>24/07/08</td>
<td>Borough of Queenscliffe submission incl 4 attachments: 2 x Draft planning permits and 2 x draft DPO Schedules.</td>
<td>Terry Montebello</td>
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<td>Additional submission and slides</td>
<td>Patsy &amp; Ian Blair</td>
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<td>Andrew Helps</td>
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<td>Jason Kane</td>
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<td>PLCSG submission (Mr Longmore)</td>
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<td>Golders Fig 1 (24/7) Lakers Cutting Conceptual Model</td>
<td>Stuart Morris</td>
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<td>hand drawn diagram of Lakers Cutting tideflow valve water levels (Mr Withers)</td>
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<td>Draft Schedule to the Development Plan Overlay and Planning Permit 673/2007 Agreed Position at 20/07/08</td>
<td>Stuart Morris/Peter Smith</td>
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<td>Plans accompanying Application for Planning Permit 673/2007</td>
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<td>Draft Schedule to the Development Plan Overlay and Planning Permit 673/2007 Agreed Position with marked exceptions</td>
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<td>Summary table of building envelope levels</td>
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<td>Mr Mackenzie</td>
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<td>Panel Submission Alf McKenzie</td>
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<td>Submission Jennifer Robin</td>
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<td>Submission Mr &amp; Mrs Macdonald</td>
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<td>Submission Joan Kenwood</td>
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<td>Final submission B A Keon Cohen</td>
<td>Brian Keon Cohen</td>
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<td>Jason Kane</td>
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<td>PLCSG submission regarding Conditions</td>
<td>Jason Kane</td>
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<td>Revised summary diagram of AHD levels and lot heights under various table scenarios</td>
<td>Stuart Morris</td>
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<td>01/08/08</td>
<td>Map of Contour levels Point Lonsdale locality</td>
<td>David Mitchell</td>
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<td>6. Environmental Management Framework</td>
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<td>*EPA Act 1970 Extract Cl 1A - !C</td>
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<td>Map of sector 9</td>
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<td>*Diagram of relationship between wet coastal EVCs</td>
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<td>*pp174-175 The Fortune Sellers William A Sheridan</td>
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<td>*Internet download: Extract Glaciers and Ice-sheets</td>
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<td>Cliff Ollier</td>
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<td>CoGG Amended Conditions</td>
<td>Peter Smith</td>
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APPENDIX 4: REVISED SCHEDULE TO DPO
SCHEDULE 14 TO THE DEVELOPMENT PLAN OVERLAY

Shown on the planning scheme map as DPO14

POINT LONSDALE RESIDENTIAL AND WATERWAYS DEVELOPMENT

This schedule applies to the land at Point Lonsdale described as:
Part of Volume 10662 Folio 736, Part of Volume 10662 Folio 737
Volume 10045 Folio 074, Volume 10045 Folio 075
Volume 10684 Folio 101, Volume 10721 Folio 275 and Volume 9901 Folio 324.

It is required to ensure that the new residential and open space system proposed for the land is planned and developed in a fully integrated and comprehensive manner that has regard to all major planning issues (including native vegetation protection, stormwater management, open space linkages, flood protection, urban design, traffic issues and pedestrian linkages).

1.0 Requirement before a permit is granted

Before a Development Plan has been approved by the Responsible Authority, a permit may be granted for:

- the use and development of any social, community or educational facility.
- replacement of an existing dwelling.
- extensions or alterations to an existing building or works.
- the subdivision, development, vegetation removal and road access as envisaged in planning application number 673/2007.

2.0 Conditions and requirements for permits

Conditions on Permits

A planning permit authorising the development of the Point Lonsdale Residential and Waterways project must include conditions relating to the following:

- The subdivision and development of the Land must not commence until a Development Plan has been approved under Schedule 14 of clause 43.04.
- Compliance with Building and Landscape Design Guidelines.
- Preparation and approval of the following plans and staging plans:
  - Project Environmental Management Plan (PEMP), generally in accordance with the Environmental Management Framework forming part of the approved Development Plan;
  - Earthworks Plans, generally in accordance with the Earthworks Master Plan forming part of the approved Development Plan;
  - Landscape Plans, generally in accordance with the Landscape Master Plan forming part of the approved Development Plan;
• Stormwater Drainage Plans, generally in accordance with the Stormwater Drainage Master Plan forming part of the approved Development Plan;
• Construction Management Plan;
• Waterways Plans, generally in accordance with the Waterways Master Plan forming part of the approved Development Plan;
• Native Vegetation Offset Plan.

- A requirement to enter into a Conservation and Open Space Areas Agreement pursuant to Section 173 of the Planning and Environment Act 1987, containing:
  - the timing for the transfer to Greater Geelong City Council of conservation areas, open space and waterways as shown in the approved Development Plan.

- A requirement to enter into an Infrastructure Agreement pursuant to Section 173 of the Planning and Environment Act 1987, containing:
  - requirements to design and construct, at the Owner's cost the intersections at primary access points off Bellarine Highway and Shell Road.
  - requirements for line-marking works on Fellows Road at the Owner’s cost.
  - requirements to contribute a reasonable proportion of the cost of any intersection upgrades at:
    - Bellarine Highway/Fellows Road; and
    - Point Lonsdale Road/Lawrence Road.
  - construction or upgrading of a shared path along Lawrence Road between Fellows Road and Point Lonsdale Road.
  - requirements for the design and construction of a community facility not exceeding 500 square metres to the satisfaction of the City of Greater Geelong at the Owner’s cost and the subsequent transfer of ownership of the facility to the City of Greater Geelong.

**Decision Guidelines**

Before deciding on an application to use and develop the land, in addition to the matters set out in clause 65 of the Scheme, the Responsible Authority must consider whether the proposal is generally consistent with:

- Whether the proposed use or development is in accordance with the purpose of the zone;
- Whether the use or development is generally in accord with any approved Development Plan.

### 3.0 Requirements for Development Plan

The Development Plan must be generally consistent with the Point Lonsdale Residential and Waterways Development Master Plan in Clause 6.0.
At any one time, only one Development Plan may be approved for the land covered by this Schedule.

The Development Plan must include the following:

- **An Environmental Management Framework.** The Environmental Management Framework must be generally in accordance with the Point Lonsdale Environmental Management Framework (Golders Associates Pty Ltd 2008).

- **An Earthworks Master Plan.** The Earthworks Master Plan must be generally in accordance with the approved EES for the land and Minister’s Assessment and must include:
  
  a) Areas and volumes of soil to be excavated and filled;
  
  aa) An area representative of the original condition of the northern dune;
  
  b) Reference to, and demonstration of compliance with, any requirements specified by the Corangamite Catchment Management Authority (CCMA) in relation to finished surface levels, flood levels, proposed minimum floor levels and limitations or conditional statements attached to data provided by the CCMA;
  
  c) Approximate finished landform contours and finished levels;
  
  d) Geotechnical specifications to ensure that the residential development areas are suitable for the intended use;
  
  e) A testing programme for the placement and compaction of fill material including provision for completed works to be certified by an agreed appropriately qualified Geotechnical Engineer, to be funded by the developer.

- **A Landscape Master Plan.** The Landscape Master Plan must be generally in accordance with the approved EES for the land and the Minister’s Assessment and must include:
  
  a) A strategy for landscaping throughout the site which shows design principles for each space, what amenities they might provide, the function of the open space, the suite of vegetation species to be used in roads and open space areas (including indigenous tree canopy adjacent to open space reserves), interface approaches to site boundaries and major roads, and fence design for lots adjacent to open space reserves;
  
  b) Staging and likely sequence of development of the open space areas;
  
  c) Vegetation communities to be established on the land;
  
  d) The location for a future bicycle/pedestrian link between the subdivision and the Bellarine Rail Trail;
  
  e) Car parking locations and layout adjacent to all open space areas. This must detail treatment of car parks including landscaping and lighting;
  
  f) Show measures that restrict swimming, fishing, powered boating and dogs within the waterways, including appropriate signage;
  
  g) The western conservation area of the waterway should have a natural edge treatment, where possible to allow for natural regeneration of plants and wading birds, and should involve the relocation of the boardwalk.
from the tidal saltmarsh area further east over the waterway. This will result in the construction of a bicycle and pedestrian bridge;

h) Deletion of all referencing to the species Leptospermum laevigatum (Coastal Tea-tree);

i) Landscaping at all intersections must be designed to ensure that the landscaping does not impact upon sight distances;

j) The maintenance schedule that details responsibilities and requirements for the ongoing maintenance of all landscaped areas.

• A Stormwater Drainage Master Plan. The Stormwater Drainage Master Plan must be generally in accordance with the approved EES for the land and the Minister’s Assessment and must cater for the entire site, existing areas draining to the site and abutting undeveloped land and detail:

a) Any temporary or permanent drainage infrastructure that is required to facilitate effective staging of the subdivision to ensure the completion of any stage;

b) How the drainage system integrates with the function of the Waterways Master Plan;

c) How the plans are consistent with the design objectives of the State Environment Protection Policy (Waters of Victoria);

d) How the plans differentiate between aesthetic and functional features and identifies their locations;

e) How the flow management system would achieve the design objectives during construction and operation of the waterways;

f) The design of the hydraulic connection from Lake Victoria in a manner consistent with the adopted flood levels of both the site and land adjacent to Lake Victoria.

• A Waterways Master Plan. The Waterways Master Plan must be generally in accordance with the approved EES for the land and the Minister’s Assessment and must be designed in accordance with best practice principles and provide the following details all to the satisfaction of the Responsible Authority and the relevant Floodplain Management Authority:

a) The staged development of the lake system;

b) The form, function and management of the waterways, which includes:

i) the design of the lakes, edge treatments, depth and function;

ii) the provision of appropriate safety barriers or fencing to manage public access;

iii) the provision of appropriate facilities for public uses;

iv) the provision of appropriate safety barriers or fencing to manage public access;

v) compliance with the requirements of the Royal Life Saving Society – Guidelines for Safety in Urban Water Developments.

c) The minimisation of stagnant water within the stormwater drainage system to reduce the potential breeding ground for mosquitoes;
d) How the lake system integrates with the function of the Stormwater Drainage Master Plan;

e) A long term management, maintenance and monitoring strategy for the waterways during and post construction;

f) Measures to limit any impacts on Lakers Cutting in particular groundwater and sediment runoff;

g) Install a floating litter trap (Bandalong type) in the outlet channel north of the Bellarine Highway. Note, this must have legal vehicular access at a safe location that will ensure the litter trap can be easily serviced;

h) Life cycle management and maintenance costing for the waterways;

i) Have regard to catchment-wide issues, including flood levels, catering for flood flows within and through the site, upstream impacts on Lake Victoria, minimum development levels and floor levels.

• Building and Landscape Design Guidelines. The Guidelines must be consistent with Chapter 5 of the approved EES for the land and have regard to relevant guidelines in the Building Siting and Design Guidelines – Point Lonsdale Coastal Area – Borough of Queenscliffe.

The Development Plan must, in addition to the matters required by clause 43.04 -3, include:

• The location, type and extent of residential accommodation including for aged care, retirement living and medium density housing.

• The location of community, rural, retail and open space uses including conservation areas and waterways.

• The provision of an aged care facility to accommodate approximately 120 beds and a retirement village containing a minimum of 170 independent living units.

• The provision of a community hub, including a multi-functional community facility having a minimum building area of 500 square metres, to service both the existing residents of Point Lonsdale and the new community.

• The provision of any temporary community facility to operate before the completion of the community hub.

• The provision of a minimum of 87 hectares of open space, including conservation areas, local parks and waterways.

• Lot layouts, approximate number of lots and estimated number of dwellings.

• The extent of earthworks (areas of cut and fill).

• Contours at 0.5m intervals and existing vegetation.

• Views to and from the site.

• Access and connection points.

• Road layout.

• Proposed linking points to surrounding land.

• Pedestrian and cycle paths.

• The location of vegetation to be retained and removed.
• Any sites of environmental, cultural or heritage significance.
• Open space and recreation areas and their intended functions.
• Major drainage lines, water features, and floodways.
• The relationship of the development of the land to the existing and proposed land uses on adjoining land.
• Key environmental characteristics of the site including environmental constraints;
• Any other matter the responsible authority may reasonably require.

4.0 Decision Guidelines

In considering whether to approve a Development Plan, the Responsible Authority must consider, as appropriate:

• The Point Lonsdale Residential & Waterways project Environment Effects Statement and Technical Reports Vols 1-14.
• The Minister’s Assessment of the Point Lonsdale Residential & Waterways project Environment Effects Statement.

5.0 Consultation prior to approval of Development Plan

The responsible authority must consult with the Borough of Queenscliffe Council and Department of Sustainability and Environment before approving the Development Plan.

6.0 Master Plan

Refer Illustrative Master Plan Next Page
Greater Geelong Scheme: Amendment C150 and PP673/2007
EES: Stockland Waterways and Residential Development, Point Lonsdale

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APPENDIX 5: REVISED PLANNING PERMIT CONDITIONS
REVISED PLANNING PERMIT 673/2007

PLANNING PERMIT
GRANTED UNDER DIVISION 5 OF PART 4
OF THE PLANNING AND
ENVIRONMENT ACT 1987

ADDRESS OF THE LAND:
2202-2350 Bellarine Highway, Point Lonsdale
2305-2349 Bellarine Highway, Point Lonsdale
511-609 Shell Road, Point Lonsdale

THE PERMIT ALLOWS: A STAGED
MULTI LOT SUBDIVISION AND
ASSOCIATED EARTHWORKS,
REMOVAL OF NATIVE VEGETATION
AND CREATION OF ACCESS TO A
ROAD IN A ROAD ZONE 1

THE FOLLOWING CONDITIONS APPLY TO THIS PERMIT:

AMENDED PLANS

1. Before a plan of subdivision is certified under the Subdivision Act 1988, amended plans must be submitted to and approved by the Responsible Authority. When approved, these plans will be endorsed and form part of this permit. The plans must be drawn to scale and be generally in accordance with the plans lodged with the application but modified to show:

a) Lot layouts, approximate number of lots and estimated number of dwellings. All lots must be over 300 square metres in area;

b) Roads and road reserves which:
   i) Identify the proposed road layout.
   ii) Identify any changes to existing road reserves.
   iii) Show the location of connections to the Bellarine Highway and Shell Road;

c) Land proposed to be transferred to or vested in the Greater Geelong City Council for public open space;

d) Road connection from the subject land to the undeveloped land at 221-229 and 231-239 Fellows Road;

e) For lots between 300 square metres and 500 square metres, the plan must include building envelopes in accordance with the relevant standards of Clause 54 of the Greater Geelong Planning Scheme;

f) Location of bus stops (including shelters and associated signs) and corresponding safe pedestrian crossing treatments on the Bellarine Highway, Shell Road and within the site as necessary;
g) Location of all footpath and shared paths and associated signage to be in accordance with Clause 56.06 of the Greater Geelong Planning Scheme. These paths must be accessible to people with disabilities and include tactile ground surface indicators and kerb ramps.

all to the satisfaction of the Responsible Authority.

ENDORSED PLANS

2. The subdivision of the land, associated works and the removal of native vegetation must be undertaken in accordance with the endorsed plans referred to in this permit and must not be altered without the prior written consent of the Responsible Authority.

STAGING

3. The subdivision may be carried out in stages. Before the commencement of works, an overall Staging Plan (Overall Staging Plan) must be submitted to and approved by the Responsible Authority for the staging of the subdivision and the works. When approved, the Overall Staging Plan will be endorsed and form part of this permit. The Overall Staging Plan is not to be altered without the consent of the Responsible Authority. The Overall Staging Plan must include the staging of:

a) the subdivision including the provision of public open space and community facilities including the multi-functional Community Facility Building;

b) the provision of all offsite road and intersection works required under this permit or any section 173 agreement;

c) the earthworks; and

d) the waterways.

4. Prior to the commencement of any works for a stage, a plan must be submitted to and approved by the Responsible Authority, showing the manner in which the development of the land will be completed if the next stage is the final stage of the development. If the development of the land ceases at the end of that stage the works shown in that plan must also be carried out. The Owner of the land must enter into a section 173 agreement with the Responsible Authority to provide appropriate security for this obligation, taking into account the resources of the owner.

AGREEMENT/S

5. Prior to the commencement of works (including the removal of native vegetation), the owner of the land must enter into an agreement or agreements with the Greater Geelong City Council under Section 173 of the Planning and Environment Act 1987, providing for the following:

Conservation, Linear Open Space and Waterway Areas

a) The timing for the transfer to the Greater Geelong City Council of the conservation and open space areas and waterways as shown on the Endorsed Plans and the responsibility for this land.

Infrastructure Works

b) The Owner to undertake the following works:

   i) A new roundabout on the Bellarine Highway, south-east of Queenscliff-Portarlington Road at the intersection between the proposed development south of the Bellarine Highway.
ii) A new roundabout on Shell Road, located approximately midway along the Shell Road frontage of the site, to provide appropriate access to both the site and the land to the south of Shell Road.

iii) Appropriately line-mark to create a right-turn and left-turn lane in Fellows Rd at the intersection with Lakes Entrance.

iv) Construction and upgrading of the shared path along Lawrence Road between Fellows Road and Point Lonsdale Road to the satisfaction of the Borough of Queenscliffe Council.

v) Intersection upgrades at ‘Bellarine Highway / Fellows Road’ and ‘Point Lonsdale Road / Lawrence Road’.

vi) Appropriately sited pedestrian crossings on the Bellarine Highway and Shell Road in proximity of proposed bus stops.

all at the time indicated by the Overall Staging Plan approved under this Permit.

Community Facility

d) The Owner to construct a multi-functional community facility not exceeding a building area of 500 square metres, in accordance with plans and specifications approved by City of Greater Geelong, by the time identified in the Overall Staging Plan. The building is to be constructed on the land identified in the Endorsed Plans. The community facility is to be managed by the Owner until certification of the final lot in the subdivision before being transferred to the City of Greater Geelong.

Compliance with Building Envelopes and Building and Landscape Design Guidelines

e) The construction and maintenance of all dwellings must comply with the Building and Landscape Design Guidelines forming part of the Development Plan, except with the consent of the Responsible Authority.

Cats

f) No cats are to be kept.

TIME LIMIT

6. The time limit for commencement of the first stage of the subdivision hereby permitted is 3 years from the date of this permit and that stage is to be completed within five (5) years of the date of certification of the subdivision plan for that stage. All other stages are to be commenced and completed within 12 years from the date of this permit unless otherwise approved in writing by the Responsible Authority.

PROJECT ENVIRONMENTAL MANAGEMENT PLAN

7. Prior to works commencing a Project Environmental Management Plan (PEMP) must be submitted to and approved by the Responsible Authority following its consultation with the Department of Sustainability and Environment. The PEMP must be generally in accordance with and implement the recommendations and requirements of the Point Lonsdale Environmental Management Framework (Golders Associates Pty Ltd 2008) forming part of the approved Development Plan under clause 43.04 of the Scheme.

The PEMP must describe (but not be limited to) management processes and procedures to minimise the amenity and environmental impacts of the development of the site and associated construction activities. The PEMP may be prepared in stages.
The PEMP must set out objectives, performance and monitoring requirements for:

a) Erosion mitigation and control;
b) Surface water quality, aquatic ecology and hydraulics of the site lake system;
c) Groundwater management;
d) Bulk earthworks including geotechnical stability and any special requirements for construction;
e) Landscaping and vegetation management for open space areas including ecological management requirements for conservation areas and a plan for the management of nutrients and irrigation;
f) Cultural heritage management;
g) Control of off-site dust emissions;
h) Noise management including protocols for hours of operation of construction activities;
i) General site management including protocols for safety, waste management, storage and handling of hazardous materials, and site access for construction vehicles and machinery;
j) Traffic management during construction providing for activities both on site and associated with upgrade works to be undertaken off site;
k) Communication protocols during construction;
l) Salinity control measures to protect: saline environmental assets; development from the effects of salinity; and future development from aggravating or creating new salinity problems;
m) Fauna management and monitoring, in particular avifauna;
n) Protection measures for all vegetation to be retained;
o) Monitoring, reporting and auditing of the PEMP.

The PEMP may be amended to the satisfaction of the Responsible Authority. Once approved the PEMP shall form part of the Endorsed Plans approved under this permit.

EARTHWORKS PLAN

8. Prior to the commencement of construction works associated with each stage of the subdivision an Earthworks Plan must be prepared to the satisfaction of the Responsible Authority for that stage. The Earthworks Plan must be generally in accordance with the Earthworks Master Plan forming part of the approved Development Plan to the satisfaction of the Responsible Authority.

The Earthworks Plan for a stage may be amended to the satisfaction of the Responsible Authority. Once approved the Earthworks Plan for a stage shall form part of the Endorsed Plans under this permit.
LANDSCAPE PLAN

9. Prior to the commencement of any works for a stage of the subdivision, a Landscape Plan, prepared by a suitably qualified Landscape Architect, must be submitted to and approved by the Responsible Authority for that stage. The Landscape Plan must be generally in accordance with the Landscape Master Plan forming part of the approved Development Plan to the satisfaction of the Responsible Authority.

The Landscape Plan for a stage must show:

a) Proposed topography and earthworks within open space reserves;

b) Landscaping of traffic management devices (eg roundabouts, centre medians, entry treatments etc);

c) A planting schedule of all proposed trees, shrubs, grasses (drought tolerant) and ground covers, including botanical names, common names, supply sizes and plant numbers;

d) Details of landscaping to be undertaken within open space reserves, streets and the public realm;

e) Landscape features in open space reserves (eg play grounds, water features, paved areas, paths, retention basins, park furniture, bridges, shelters, etc);

f) All finished surfaces (eg lawns, paving, mulched garden beds etc);

g) Provision for maintenance of vehicle access throughout all open space reserves;

h) Suitable vehicle access barriers across the entrances to the reserves, of which some are to be de-mountable to allow access for maintenance vehicles;

i) Fence design details for lots adjacent to and around the boundaries of open space reserves and the high conservation reserve;

j) Consideration of the overall network of habitat links throughout the subdivision through the provision of indigenous planting zones to reflect these links;

k) Weed management landscape notes for all open space reserve areas;

l) Streetscape planting that identifies major indigenous tree canopy corridors adjacent to public open space reserves;

m) Streetscape designs which utilise predominantly indigenous species suitable for the area (as detailed in the Indigenous plants of the Geelong region Zone 4 brochure) and identifies indigenous tree canopy corridors that integrate habitat and pedestrian links between major public open space reserves;

n) Interim access arrangements to allow pedestrians and vehicles to access the open space reserves;

o) Maintenance regime to accord with the Project Environmental Management Plan (PEMP).

all to the satisfaction of the Responsible Authority.

The Landscape Plan for a stage may be amended to the satisfaction of the Responsible Authority. Once approved the Landscape Plan for a stage shall form part of the Endorsed Plans under this permit.
STORMWATER DRAINAGE PLAN

10. Prior to the commencement of any works for a stage of the subdivision, a Stormwater Drainage Plan, prepared by a suitably qualified Civil Engineer, must be submitted to and approved by the Responsible Authority for that stage. The Stormwater Drainage Plan must be generally in accordance with the Stormwater Drainage Master Plan forming part of the approved Development Plan to the satisfaction of the Responsible Authority.

The stormwater drainage must be designed:

a) To cater for the stormwater drainage system to be located within easements, reserves and/or road reserves and must cater for all lots, roads, streets and courts created by the subdivision and surrounding developed and undeveloped land;

b) To incorporate current best practice principles for Water Sensitive Urban Design (WSUD) having to regard to asset lifecycle costs and on-going management;

c) To minimise the presence of stagnant water within the stormwater drainage system to reduce the potential breeding ground for mosquitoes;

The Stormwater Drainage Plan for a stage may be amended to the satisfaction of the Responsible Authority. Once approved the Stormwater Drainage Plan for a stage shall form part of the Endorsed Plans under this permit.

WATERWAYS PLAN

11. Prior to the commencement of any works for a stage of the waterway, a Waterways Plan, prepared by a suitably qualified Engineer, must be submitted to and approved by the Responsible Authority and the relevant Floodplain Management Authority for that stage. The Waterways Plan must be generally in accordance with the Waterways Master Plan forming part of the approved Development Plan and be to the satisfaction of the Responsible Authority and the relevant Floodplain Management Authority.

The Waterways Plan for a stage may be amended to the satisfaction of the Responsible Authority and the relevant Floodplain Management Authority. Once approved the Waterways Plan for a stage shall form part of the Endorsed Plans under this permit.

CONSTRUCTION MANAGEMENT PLAN

12. Prior to the commencement of works a detailed Construction Management Plan, generally in accordance with the approved EES and Minister’s Assessment, must be submitted to and approved by the Responsible Authority. This plan must be consistent with the approved Project Environmental Management Plan and detail the following:

a) A staging plan for all construction phases including indicative dates for commencement and completion;

b) Intended access for construction vehicles;

c) Engineering assessment of assets that will be impacted on by construction and recommended techniques to minimise any adverse impact;

d) Details of actions to be implemented in the event of damage to abutting assets infrastructure;
e) Details of where construction personnel will park;
f) Hours/days of construction;
g) Phone numbers of on-site personnel or other supervisory staff to be contactable in the event of issues arising on site;
h) Details of site cleanliness and clean up regimes;
i) Material storage;
j) Dust suppression;
k) Measures to accord with the EPA Publication No. 960 “Doing it right on Subdivision – temporary environmental protection measures for subdivision construction sites” and No. 480 “Best Practice Environmental Guidelines for Major Construction Sites”.

The Construction Management Plan may be prepared in stages and may be amended to the satisfaction of the Responsible Authority. When approved the Construction Management Plan shall form part of this permit.

VEGETATION

13. Prior to the removal of any native vegetation pursuant to this permit, the boundaries of all vegetation stands to be retained must be clearly marked on the ground or marked with tape or temporary fencing to the satisfaction of the Responsible Authority.

ROAD DESIGN AND CONSTRUCTION

14. Prior to the commencement of any works, engineering plans for the design of:

a) A roundabout (major traffic control item) and associated road works including lighting, line marking and drainage in Shell Road at the intersection of the subdivisional access road having regard the need to maintain safe truck and vehicular movements to and from adjacent properties;

b) A southbound right-turn lane and northbound left-turn lane including linemarking, lighting and drainage in Fellows Road at the intersection with Lakes Entrance;

c) A new roundabout on Bellarine Highway at the entrance to the development catering for the future duplication of the highway including appropriate linemarking, intersection lighting, islands, advanced warning, direction and street name signage and road drainage.

must be prepared and submitted for approval of the Responsible Authority.

15. Prior to the commencement of any stage of the subdivision hereby approved, engineering construction plans for roads created by the subdivision (including bus stops and footpaths/shared paths) as shown on the Endorsed Plan shall be prepared by a suitably qualified Civil Engineer and must be submitted to and approved by the City of Greater Geelong. These plans must be designed in accordance with current standards and specifications or a best practice alternative approved by the City of Greater Geelong under the Provisions of Part 3 of the Subdivision Act 1988 at the time of any stage of subdivision to the satisfaction of the Responsible Authority.

16. Roads created by the proposed subdivision (including bus stops and footpaths/shared paths) and any major traffic control items shall be constructed to a full construction standard in accordance with the approved engineering plans and specifications to the satisfaction of the City of Greater Geelong Responsible Authority and at no cost to Council.
CONSTRUCTION PHASE

17. During the construction phase of the development, in addition to any requirements identified in the Endorsed Plans the following conditions must be met:
   a) Only clean rainwater shall be discharged to the stormwater drainage system;
   b) Stormwater drainage system protection measures shall be installed as required to ensure that no solid waste, sediment, sand, soil, clay or stones from the premises enters the stormwater drainage system;
   c) Vehicle borne material from the premises shall not accumulate on the roads abutting the site;
   d) All machinery and equipment must be cleaned (if required) on site and not on adjacent footpaths or roads;
   e) Fencing is to be fitted and installed so as to ensure safe access for pedestrians;
   f) All litter (including items such as cement bags, food packaging and plastic strapping) must be contained on site;
   g) All roads/ storage areas/ external stockpiles/ vacant or grazed areas must be maintained to avoid dust nuisance to any residential area.

   all to the satisfaction of the Responsible Authority.

RESTRICTION AND OTHER DETAILS:

18. Prior to the certification of any stage of the subdivision the plan of subdivision must include:
   a) A restriction sheet showing those lots where development of multi-dwellings is prohibited and those lots where no further subdivision is allowed;
   b) A restriction sheet showing the building envelopes in accordance with the endorsed plans. The restriction must require any building or development on the lots to be in accordance with the building envelope specified;
   c) The permit holder must provide a list of proposed street names for approval in accordance with Councils Place Names Policy;
   d) All bearings, distances, levels, street names, lot numbers, lot sizes, reserves and easements.

PRIOR TO STATEMENT OF COMPLIANCE:

20. Prior to the issue of a Statement of Compliance for each individual stage of the subdivision (including reserves):
   a) Street trees must be planted within the road reserve in the locations approved as part of the endorsed Plan. The trees must include some semi-mature trees and planted and maintained for a period of two years from planting to the satisfaction of the Responsible Authority.

   To satisfy this condition, the cost of street tree planting may be bonded to the satisfaction of the Responsible Authority at an appropriate rate per tree to enable the issue of a Statement of Compliance. This bond will be returned after completion of planting works to the satisfaction of the Responsible Authority.

   A maintenance bond shall be paid at a rate of 20% of the estimated cost of tree planting
and will be returned after expiry of the two years maintenance period of the street trees, less any amount required for replanting or maintenance;

b) A certificate of environmental audit or a statement of environmental audit must be issued by an environmental auditor appointed under the Environment Protection Act 1970 for any land proposed to be used for a sensitive use in accordance with Part IXD of the Environment Protection Act 1970, or

If a statement of environmental audit is issued pursuant to 12 a) of the Environment Protection Act 1970 this statement must state that the environmental conditions of the land are suitable for the sensitive use.

c) All landscaping works forming part of the endorsed landscape plans for all, or that stage of the subdivision, must be completed to the satisfaction of the Responsible Authority;

Where landscaping works forming part of the endorsed plans are not completed to the satisfaction of the Responsible Authority prior to the applicant seeking a Statement of Compliance for all, or particular stages of the subdivision, the Responsible Authority may issue a Statement of Compliance where the works are appropriately bonded. Where a bond is required, the estimate for the costs of incomplete landscaping works must be professionally costed and then submitted to the Responsible Authority for approval. The estimate must allow for completion of all incomplete works, maintenance of all works for a minimum period of two years and include a ten percent contingency factor.

d) The permit holder must provide and place relevant street signs;

e) The roads must be constructed in accordance with the approved engineering construction plans;

f) Construct the approved stormwater drainage system;

g) The lake system must be constructed in accordance with the approved Waterways Plan for that stage;

h) Install all street lighting within the subdivision

all to the satisfaction of the Responsible Authority and other relevant authorities (where required) and at no cost to the Responsible Authority.

LANDSCAPING MAINTENANCE

21. The permit holder must ensure that all works forming part of the endorsed landscaping plans are maintained for a minimum period of two years from the date of their completion. The maintenance period will commence on the date of issue of the Statement of Compliance for all, or that particular stage, of the subdivision where the landscape works have been completed to the satisfaction of the Responsible Authority. Where the landscaping works are bonded, the maintenance period shall commence from the time that the landscape works have been inspected and completed to the satisfaction of the Responsible Authority.

FLOOR LEVELS

22. The floor levels of all residential and commercial buildings must not be less than 2.35m AHD OR, if the Victorian Coastal Strategy adopts a 2100 sea level rise planning guideline of more than 0.8 metres, the floor levels of all residential and commercial buildings must not be less than 2.35m PLUS the differential between 0.8 metres and the revised guideline.
DEPARTMENT OF SUSTAINABILITY AND ENVIRONMENT

23. Before the vegetation removal starts, a Native Vegetation Offset Plan showing appropriate offsets to compensate for the removal of native vegetation pursuant to this permit, incorporating a vegetation management plan, to the satisfaction of the Department of Sustainability and Environment must be submitted to and approved by the Responsible Authority. Three copies of the plans must be provided. When approved, the Native Vegetation Offset Plan will be endorsed and will then form part of the Endorsed Plans under this permit. Maps or plans forming part of the offset plan must be drawn to scale with dimension (where appropriate).

24. The Native Vegetation Offset Plan must provide for the:
   a) Additional provision and maintenance, off-site, of at least seven hectares of Coastal Salt-marsh and Brackish Sedge-land; and
   b) Application of all excess habitat hectares as compensation for loss of the Saline Aquatic Meadow (and therefore not be available for trade);

   and must include details of the following:
   c) Means of calculating the offsets;
   d) Location where offsets will be provided;
   e) Types of offsets to be provided at each location;
   f) Details of revegetation including the numbers of trees, shrubs and other plants; species; mix and density;
   g) Means of interim protection for newly established vegetation until established including but not limited to measures of control grazing threats, vermin, pests and environmental weeds;
   h) Methods of permanent protection for the offsets including but not limited to measures of control grazing threats, vermin, pests and environmental weeds;
   i) Persons responsible for implementing and monitoring the offset plans;
   j) Time frames for implementing the offset plans;
   k) Details of any earthworks, drainage and other works.

25. Native vegetation removal pursuant to this permit, and the provision of offsets, must accord with the Endorsed Plans.

26. Unless with the consent of the Responsible Authority, no firewood, dead vegetation, fallen branches or organic matter may be removed from the offset area identified in the endorsed plan.

TELSTRA

27. That the plan of subdivision submitted for certification be referred to Telstra in accordance with Section 8 of the Subdivision Act 1988.

TENIX

28. Easements in favour of SPI Networks (Gas) Pty Ltd must be created on the plan to the satisfaction of SP AusNet (Gas).
29. The plan of subdivision submitted for certification must be referred to SP AusNet (Gas) in accordance with Section 8 of the Subdivision Act 1988.

POWERCOR

31. The applicant shall provide an electricity supply to all lots in the subdivision in accordance with Powercor’s requirements and standards (a payment to cover the cost of such work will be required). In the event that a supply is not provided the applicant shall provide written undertaking to Powercor Australia Ltd that prospective purchasers will be so informed.

32. Where building or other installations exist on the land to be subdivided and are connected to the electricity supply, they shall be bought into compliance with the Service Installation Rules issued by the Victorian Electricity Supply Industry.

33. Set aside on the plan of subdivision for the use of Powercor Australia Pty reserves and/or easements satisfactory where any electrical substation (other than a pole mounted type) is required to service the subdivision.

Alternatively, at the discretion of Powercor Australia Ltd a lease(s) of the site(s) and for easements for associated powerlines, cables and accessways shall be provided. Such a lease shall be for a period of 30 years at a nominal rental with a right to extend the lease for a further 30 years. Powercor Australia Ltd will register such leases on the title by way of a caveat prior to the registration of the plan if subdivision.

34. The applicant shall provide easements satisfactory to Powercor Australia Ltd, where easements have not been otherwise provided, for all existing Powercor Australia Ltd electric lines on the land and for any new powerlines required to service the lots and adjoining land, save for lines located, or to be located, on public roads set out on the plan. These easements shall show on the plan of easement(s) in favour of “Powercor Australia Ltd” for the purpose of:

- Power supply (underground)
- Power supply (overhead)
- Distribution of electricity

35. The applicant shall obtain for the use of Powercor Australia Ltd easements external to the subdivision required to service the lots.

36. The applicant shall adjust the position of any existing easements for powerlines to accord with position of the line as determined by survey.

37. The applicant shall provide to Powercor Australia Ltd, a copy of the version of the plan of subdivision submitted for certification, which shows any amendments which have been required.

VICROADS

38. The developer shall provide the following infrastructure items to the satisfaction of VicRoads and the Responsible Authority.

a) A roundabout shall be constructed at a new entrance to the development on the Bellarine Highway to the east of Queenscliff-Portarlington Road. The roundabout must be designed to provide for the future duplication of the Bellarine Highway;
b) Multicell culverts under the Bellarine Highway shall be designed to provide for the future duplication of the Bellarine Highway;

c) Culverts under Shell Road shall be designed to accommodate its future duplication and to maintain consistency of flood levels on both sides of the road at 0.9m AHD (1% AEP flood level);

d) The east bound pavement in Lawrence Street shall be widened to provide for two stand up lanes at the Point Lonsdale Road Intersection.

39. The development must not proceed until functional layout plans for the intersection and culvert works referred to in condition 38 are approved by VicRoads in writing. The layout plans shall be in accordance with Austroads standards and to VicRoads satisfaction.

40. A road safety audit must be carried out for the intersection and culvert treatments at the detailed design stage by a suitably qualified auditor in accordance with Austroads “Roads Safety Audit” (2002). These findings of the audit must be resolved by the developer to the satisfaction of VicRoads and the Responsible Authority.

41. Installation of all advisory and regulatory signage, linemarking and street lighting to provide for safe operation shall be in accordance with VicRoads Traffic Engineering Manual Volume’s 1 & 2.

42. The discharge of any concentrated drainage or sullage onto the arterial road reserve shall not be permitted unless approved in writing by VicRoads.

43. The applicant or applicant’s contractor must contact the Manager Program Delivery, VicRoads-Southwest Region (telephone 5225 2525) at least two weeks prior to commencing work within the arterial road reserve (Bellarine Highway and Point Lonsdale Road) to discuss construction management.

44. Prior to works commencing within the arterial reserves the developer or developer’s contractor(s) must:

a) Obtain the written consent of the Coordinating Roads Authority (VicRoads) in accordance with Section 63(1) of the Road Management Act 2004;

b) Ensure that any consultants and/or contractors engaged in the design or construction process are prequalified by VicRoads at Level R1;

c) Provide evidence that the developer/developer’s contractors have a level of public liability insurance acceptable to VicRoads for the duration of the proposed works;

d) Ensure that detailed design plans of all mitigating works are forwarded to VicRoads South Western Region Office for approval;

e) Prepare a specification for the works in accordance with the relevant standards of the VicRoads Standard Specification for Roadworks and Bridgeworks;

f) Obtain VicRoads approval for the proposed pavement design;

g) Demonstrate that all works will be administered in accordance with quality assurance principles, including but not limited to, Safety, Environmental Quality Management Systems;

h) Ensure that work site practices are in accordance with the Road Management Act 2004 Worksite Safety – Traffic Management, Code of Practice;
i) Provide a payment to VicRoads to meet all associated VicRoads surveillance and administrative costs incurred during the construction of works within the arterial road reserves;

j) Provide a security deposit of 5% of the estimated cost of works within the road reserves to VicRoads, of which 2.5% will be returned to the applicant on practical completion of the works. The balance of the deposit will be returned to the applicant following completion of the maintenance defect period of twelve (12) months.

COUNTRY FIRE AUTHORITY

45. The subdivision as shown on the endorsed plans must not be altered without the consent of CFA.

46. Operable hydrants, above or below ground must be provided to the satisfaction of the CFA.

47. The maximum distance between these hydrants and the rear of all building envelopes (or in the absence of building envelope, the rear of all lots) must be 90m and hydrants must be no more than 120m apart.


49. Roads must be constructed to a standard so that they are accessible in all weather conditions and capable of accommodating a vehicle of 15 tonnes for the trafficable road width.

50. The average grade must be no more than 1 in 7 (14.4%) (8.1 degrees) with a maximum of no more than 1 in 5 (20%) (11.3 degrees) for no more than 50 metres. Dips must have no more than a 1 in 8 (12%) (7.1 degrees) entry and exit angle.

BARWON WATER AUTHORITY

51. The creation of easements and/or reserves in accordance with Barwon Water’s Land Development Manual over existing and proposed sewers and water mains located or to be located in the subdivision in favour of the Barwon Region Water Corporation. It should be noted if further easements are required following design of reticulation mains, Barwon Water prior to release of the subdivision would require any necessary amendments to be made to the plan. No building will be permitted to be constructed within this easement.

52. Any plan submitted under the Subdivision Act 1988 must be forwarded to Barwon Water under Section 8 of the Act.

Water

53. The provision and installation of individual water services to all lots in the subdivision in accordance with Barwon Water’s requirements and Victorian Plumbing Regulations. Note that tappings and services are not to be located under existing or proposed driveways.

54. The payment of New Customer Contributions for each additional lot created and/or each additional metered connection for water supply within the subdivision.

55. Reticulated water mains are required to service the proposed development.
56. A new 300mm water main is required to service this development and is to extend from the existing 600mm water main in Queenscliffe Road and run parallel to the existing 450mm main along Bellarine Highway.

**Sewer**

57. The provision of sewerage services to all lots in the subdivision in accordance with Barwon Water's requirements and Victorian Plumbing Regulations. Individual allotment house connection drains are to be provided for and extend into each allotment.

58. The payment of New Customer Contributions for sewer for each additional lot created and/or each additional metered connection within the subdivision.

59. Reticulated sewer mains are required to service the proposed development.

60. As the details of the actual sewer infrastructure required to service the proposed development has not been determined, prior to the commencement of the development, the developer/owner must enter into negotiation with Barwon Water relating to the connection of sewerage to the satisfaction of Barwon Water.

**CORANGAMITE CATCHMENT MANAGEMENT AUTHORITY**

61. Flood mitigation works and structures must constructed and maintained on the proposed lake system that will limit the 1% AEP flood level to 0.9m AHD.

62. No new buildings can be constructed before the flood mitigation works and structures are operational.

63. Weather and water level monitoring on Lakers Cutting and Lake Victoria must be carried out for a period of at least 2 years.

64. The monitoring data collected must be appropriate to provide inputs to confirm the calibrations of the hydrology and hydraulic flood modelling of the lake system.