

Lakes Entrance Northern Growth Area
Outline Development Plan
October 2013



Quality Assurance – Report Record

Prepared by:	Melissa Griffin
Reviewed by:	Jennifer Jones& pjf
Approved by:	Jennifer Jones & pjf
Revision No.:	D
Date of issue:	17 February 2014



Contents

1.0	Introduction	1
2.0	Subject Area Analysis	2
2.1	Development Plan Area	2
2.2	Site Context	3
2.3	Development History	3
2.4	Topography and Landform	5
2.5	Surrounding area	6
2.6	Community Facilities	6
2.7	Site Assessments	8
2.8	Key opportunities & constraints	18
3	Outline Development Plan Principles	20
3.1	Development Principles	20
3.2	Development Plan Objectives	21
4	Outline Development Plan	24
4.1	Land Use Budget	26
4.2	Lot Sizes and Diversity	26
4.3	Low Density Housing (1250m ² +)	27
4.4	Conventional Density Housing	27
4.5	Medium density housing	27
4.6	Statutory assessment guidelines	30
5	Neighbourhood Centre	32
5.1	Statutory Assessment Guidelines	32
6	Access and Mobility	34

6.1	Roads	34
6.2	Intersections	34
6.3	Road Hierarchy	38
6.4	Road Cross Sections	39
		1
6.5	Pedestrian and cycling shared trials	42
6.6	Statutory Assessment Guidelines	43
7	Drainage Infrastructure	44
7.1	Statutory Assessment Guidelines	46
8	Environment	47
8.1	Lakes Entrance Northern Growth Area Native Vegetation Precinct Plan	47
8.2	Bushfire Protections Measures	47
8.3	Planning Guidelines	47
9	Open Space	48
9.1	Passive Open Space	48
9.2	Active Open Space	48
10	Community Facilities	50
10.1	Statutory Guidelines	51
11	Services provision	52
11.1	Statutory Assessment Guidelines	52
12	Infrastructure Provision and Maintenance Responsibilities	54
12.1	Development Contributions Plan	57
13	Glossary of Terms	58
14	Referenced Documents	60



1.Introduction

The Lakes Entrance Northern Growth Area (“LENGA”) has been identified by East Gippsland Shire Council to largely facilitate the long term residential growth of Lakes Entrance. This Outline Development Plan (“ODP”) has been prepared by SMEC Urban, for and on behalf of East Gippsland Shire Council (“EGSC”). The ODP will define a long term vision for land use in the Lakes Entrance LENGA for the next thirty to forty years. It will help guide future growth and development to improve the quality of life for the local community.

The Lakes Entrance LENGA ODP brings together a wide range of opportunities and constraints for development within the area. In doing so, it establishes a visionary and deliverable framework to guide future growth and development of Lakes Entrance in a logical and integrated way, the needs and aspirations of the existing and future community demands.

The Lakes Entrance LENGA ODP is underpinned by a range of guiding documents which provide the parameters for growth to occur, These include:

- *Lakes Entrance Northern Growth Area Native Vegetation Precinct Plan (October 2013)* by East Gippsland Shire Council;
- *Lakes Entrance Northern Growth Area Hydrology Plan, Water Technology (October 2013)* prepared by Water Technology Pty Ltd;
- *Lakes Entrance Northern Growth Area Social Impact Assessment (August, 2012)* prepared by East Gippsland Shire Council; and
- *Lakes Entrance Northern Growth Area Development Contributions Plan (November 2013)* prepared by Urban Enterprise Pty Ltd.

These documents and the Lakes Entrance ODP will ensure the following objectives are achieved in the LENGA:

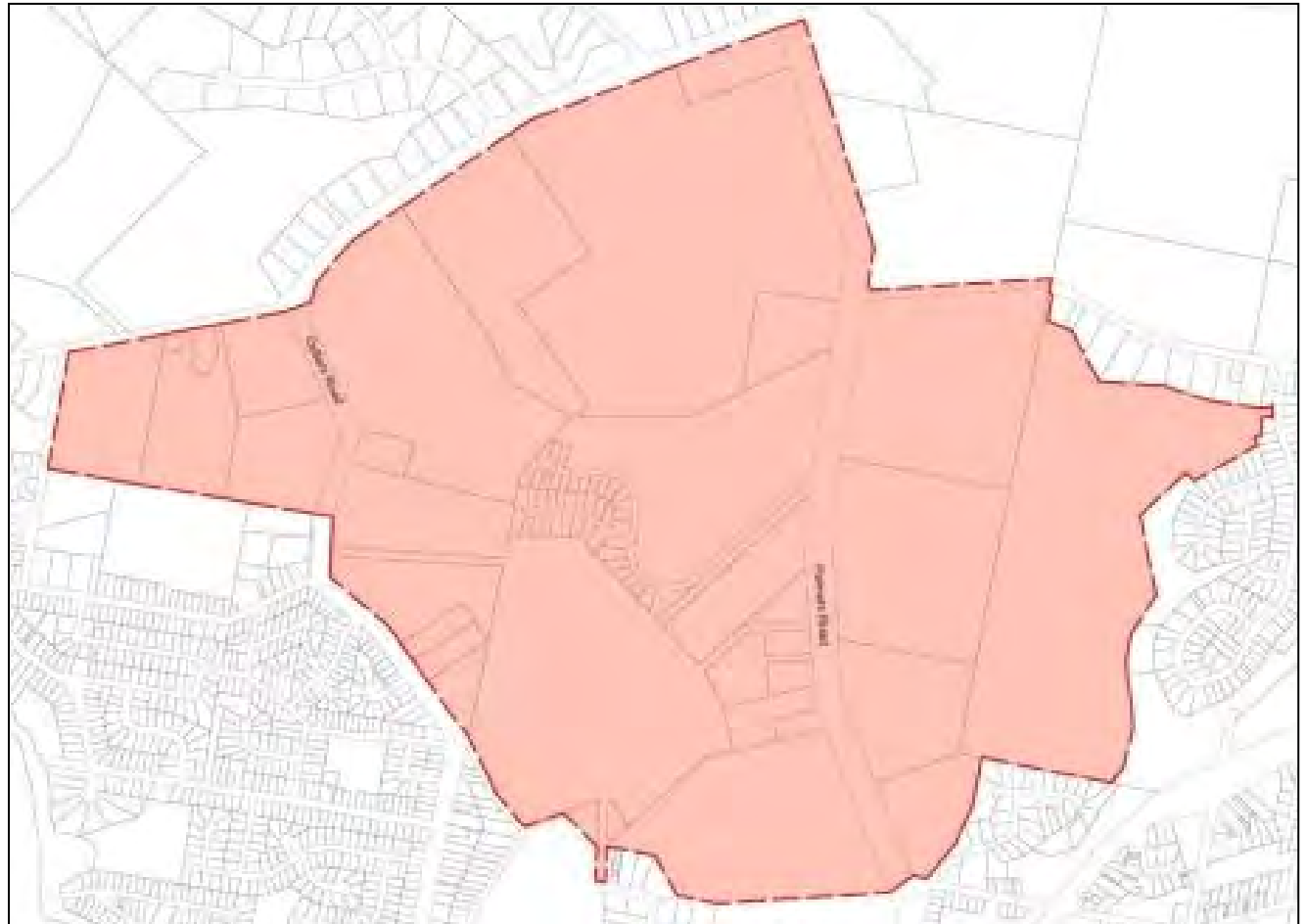
- Sustainability – balancing the economic, social and environmental consequences of growth to ensure that benefits are sustained in the long term;
- Diversity – promoting a varied mix of economic, social and environmental opportunities (where appropriate);
- Liveability – promoting a high quality urban and rural environment that supports healthy lifestyles; and
- Integration – maximising opportunities for linkages and synergies between the growth area and existing community.

2. Subject Area Analysis

2.1. Development Plan Area

This ODP relates to land parcels located within the Northern Growth Area of Lakes Entrance, as outlined in Plan 1 right:

Plan 1 – Lakes Entrance Northern Growth Area



2.2. Site Context

The LENGA is situated to the north east of the Lakes Entrance Township. It can generally be described as the land bound by Myers Street, Blairs Road and Ostlers Road to the west, Thorpes Lane and the established Merrangbaur Heights Estate to the west, and the East Gippsland Shire Council (Lakes Entrance Branch) building to the south.

The total area covered by the LENGA covers in excess of 245.06 hectares. It is located on the east side of Ostler Road; Myers Street extending north from Outlook Avenue and the Lakes Entrance Secondary College to a point adjoining the intersection on Blairs Road; and Ostlers Road in Lakes. This land is situated away from the low-lying main township region and is to be rezoned for residential use.

2.3. Development History

During recent history, parcels of land within the LENGA Precinct have been subject to rezoning applications and discussions with Council. This has provided impetus for leading to the creation of this Northern Growth Area ODP. The study area is largely made up of (but not limited to) six land holdings which have actively contributed to the development of this ODP.

Five separate applications from major land holders within this growth area have been made for rezoning. Additionally, another landholder in the LENGA has expressed intent to rezone and subdivide their land. These applications and discussions are summarised in Table 1 – Previous Rezoning Requests. The ODP draws on the subdivision details prepared in support of each of these rezoning requests, and provides further analysis in relation to biodiversity, topography, hydrological and community infrastructure assessment.

Table 1 – Previous Rezoning Requests

Landholder	Site and development details
Geomin / Bertloti	- Land adjacent to Myer St and Ostlers Road on the eastern side. - Landholder has applied for five (5) separate Planning Scheme Amendment requests, with the latest being C75 which received a conditional Authorisation pending the outcome of Amendment C68 – East Gippsland Town Urban Design Framework. - Draft development plans indicated the proposal will have a lot yield of approximately 260.
Goff Berlingeri	- Land fronting Myer St and Blairs Road. - Site area of 11ha. - A draft plan has proposed a lower density concept for the area including 59 lower density lots with an average of 1,366m².
Paynter Dixon	- Land fronting Ostlers Road and Colquhoun Road - Site is approximately 39ha in size, with considerable vegetation cover. The concept plan proposed 210 standards density lots.
Guillot	- Land fronting Palmers Road and Colquhoun Road. - Site is approximately 36Ha. The concept proposed development of 176 lots.
McColley	- Land to the south of the LENGA fronting Palmers Road. - This site is one of the smaller parcels of land within the LENGA. With an area of 3.89ha , the concept plan has envisaged 30 lots to be created on site.
Kelly	- Land located to the west of Palmers Road (described as Lot 2 PS515970) - This is a smaller parcel of land within the LENGA with an area of 1.5ha. - The site is capable of accommodating approximately 9 standard residential lots.

2.4. Topography and Landform

The LENGA comprises valleys, slopes and waterways throughout. These areas naturally generate a sloping and hilly landform across the area. Land situated to the west of the LENGA, along Blairs Road has a general slope toward the south west with gullies existing along waterways. Similarly the central area of the LENGA, bound by Ostlers Road and Palmers Road undulates to the south of the LENGA and is defined largely by the waterway and gully located on land to the west of Ostlers Road. Land within the LENGA situated to the east of Palmers Road has a slighter slope which undulates south of the LENGA. Again, a waterway and gully running north to south through this area, characterises the land form in this area. Refer to Plan 3 – Slope Analysis.

The land is not subject to inundation and falls above the 1 in 100 year flood level.

Plan 2 – Slope Analysis





2.5. Surrounding area

Key observations are:

- The centre point of the Northern Growth Area is approximately 1km north of Lakes Entrance;
- The land to the immediate south, east and west of the subject site is currently included within the residential 1 zone;
- Land to the North East, is currently zoned Rural Living Areas, with a landfill site to the immediate north;
- Land to the North West is zoned Low-density residential; and
- Nearby community facilities include Tennis Courts, Lakes Entrance Indoor Swimming Pool, Secondary College, Primary schools, recreation ovals and a surf lifesaving club.

Please refer to Plan 3 - Site Context Plan.

2.6. Community Facilities

Lakes Entrance has extensive social/community infrastructure which reflects its historical growth over a long period of time Key services in the area include:

- Lakes Entrance Neighbourhood House;
- Lakes Aquadome Leisure Centre;
- Lakes Entrance Youth and Recreation Centre;
- Lakes Entrance Recreation Reserve;
- Apex Park;
- Lakes Entrance Primary Schools;
- Child care centres; and
- Health facilities.

Most of the infrastructure is either ageing, unable to expand to service increased demand or is physically disparate and poorly integrated across the community. As a response (due to flooding concerns), future development of the LENGA will be required to contribute towards new and upgrades to existing community facilities.





2.7. Site Assessments

A number of site assessments have been undertaken for the land. A summary of each is provided below.

2.7.1. Utilities and Services

Water

- A recently installed water booster pumping station in Whithers Street is understood to have adequate design capacity to cater for part of the study area.
- The remaining study area will require upgrades to the water supply system.

Sewer

- To service the study area, all reticulated sewerage is to be conveyed via gravity trunk sewers to the existing sewerage pumping station in Palmers Road or into a new regional sewerage pumping station that would transfer the collected sewerage directly to the sewerage treatment plant.
- The Growth Development area that has been identified by EGW as being serviced via the existing Tea Tree sewerage pumping station. A dedicated trunk sewer would need to be constructed to connect the development to the existing system.

Electricity

- The study area is provided with overhead power within the existing road reserves.
- Sections of the existing above ground power network that transverses the developable sections of land could be relocated that would allow easements to be removed and increase the potential lot yields. The cost of relocation of existing assets would be borne by the developers of the land.

Gas

- The study area is currently not within the planned reticulated gas supply for Lakes Entrance.
- It is likely that future reticulated gas will be provided from the existing Woollongong-Longford High Pressure main that runs to the north of the study area.

Internet

- The study area falls within NBN Co.'s long term footprint for deploying fibre infrastructure in broad acre developments (in excess of 100 lots).



2.7.2. Native Vegetation

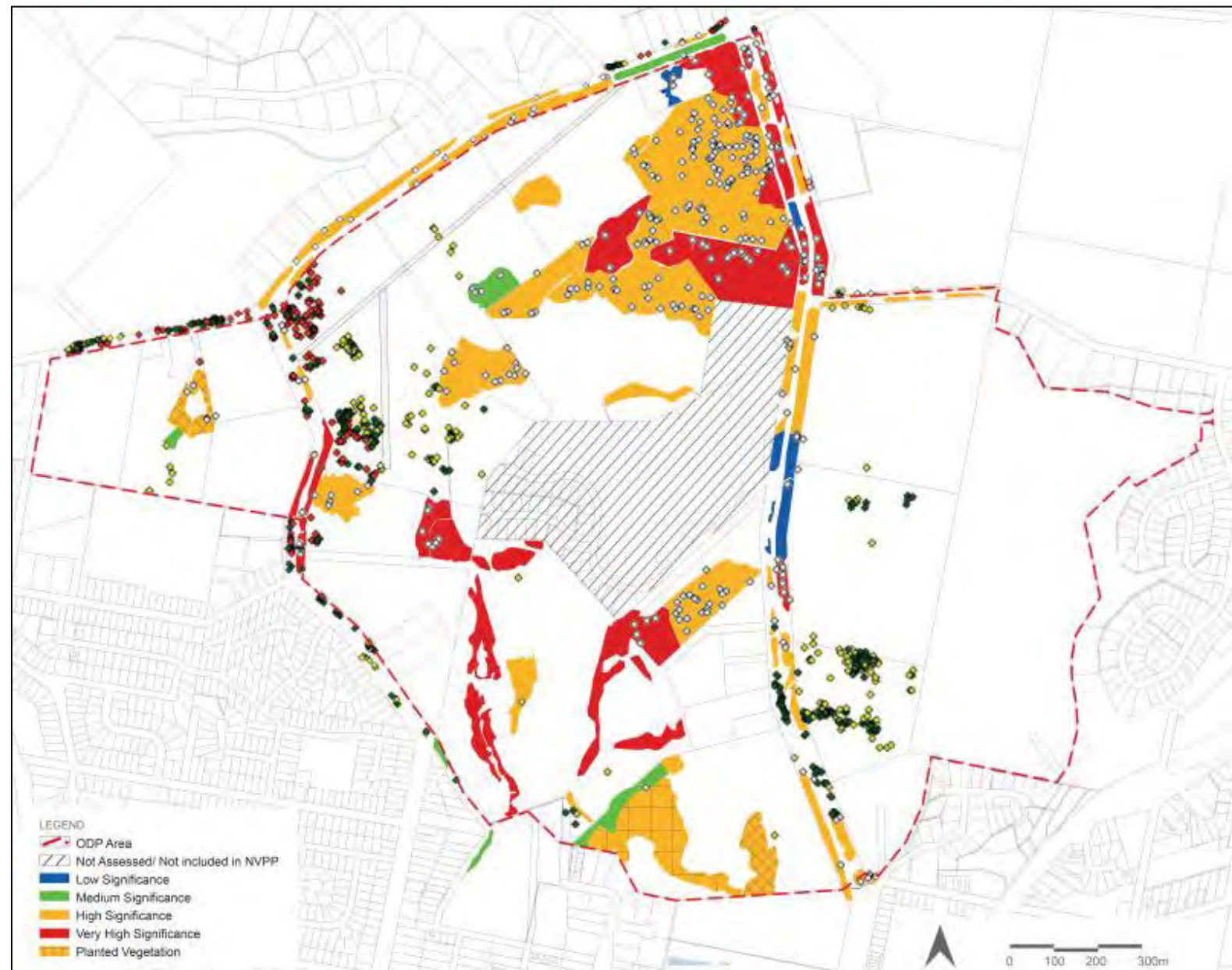
Key areas and biodiversity values within the LENGA include:

- 49.5 hectares with an assessed value of 24 habitat hectares, of native vegetation patches;
 - three (3) patches of remnant Lowland Forest;
 - eight (8) patches of remnant Plains Grassy Forest;
 - six (6) patches of remnant Limestone Box Forest vegetation
 - eight (8) patches of remnant Swamp Scrub vegetation
 - two (2) patches of Plains Grassy Wetland
 - two (2) patches of planted Warm Temperate Rainforest and two (2) patches of planted Plains Grassy Forest;
 - a number of small patches of native vegetation within existing road reserves consisting of Lowland Forest, Limestone Box Forest and Plains Grassy Forest, Damp Sands Herb-rich Woodland and Swamp Scrub
- 648 scattered trees;
- A large area of vegetation exists in the north eastern corner of the LENGA which includes Lowland Forest, Limestone Box Forest and Plains Grassy Forest. This area forms a significant body of vegetation within the LENGA and is of high to very high conservation significance;
- Smaller patches of vegetation categorised as very high conservation significance also exist to the south of the LENGA within the central area. These patches consist mostly of Swamp Scrub but also include Plains Grassy Forest, Limestone Box Forest, Lowland Forest and Wetland. Vegetation categorised as very high conservation significance can also be found in the existing road reserves along Palmers Road and Ostlers Road;
- Nine areas of vegetation located throughout the LENGA are identified as having high conservation significance;
- Many scattered trees are identified as having high conservation significance;
- The rare species Coast Grey Box *Eucalyptus Bosistoana*, is locally abundant; and
- A number of other rare or threatened species of flora and fauna occur within the LENGA.

Refer to Plan 4 – Native Vegetation Conservation Significance.

The conservation of biodiversity values is important throughout the LENGA. The majority of significant vegetation will be retained in the LENGA, however some areas may be removed in accordance with the *Lakes Entrance Northern Growth Area Native Vegetation Precinct Plan (October 2013)*.

Plan 4 - Native Vegetation Conservation Significance





2.7.3. Heritage

There are four areas of Cultural Heritage Sensitivity identified within the Lenga. Three of these areas are on land holdings located along the east of Ostlers Road. The remaining area of Cultural Heritage Sensitivity site is located in the western most land holding in the Lenga. An Aboriginal Cultural Heritage Place Survey and Cultural Heritage Management Plan has been completed for this area.

A Cultural Heritage Management Plan is to be prepared for all areas of Cultural Heritage Sensitivity within the Lenga. In the instance an existing Cultural Heritage Management Plan has been prepared, future development must accord with this Plan.

2.7.4. Environmental Significance Overlay

The Environmental Significance Overlay (“ESO”) applies to land holdings situated in the eastern most part of the Lenga. purpose of the ESO is:

To identify areas where the development of land may be affected by environmental constraints.

To ensure that development is compatible with identified environmental values.

The application of the ESO to the Lenga requires that *a planning permit is required to subdivide land. This does not apply if a schedule to this overlay specifically states that a permit is not required.* Future subdivision proposed for this land included in the ESO will be required to demonstrate compliance the Lakes Entrance NVPP in relation to the retention of existing vegetation.

2.7.5. Bushfire hazard and risk

The Lakes Entrance Northern Growth Area is located within a locality subject to bushfire risk.

A bushfire study has been prepared by GHD (August 2013) East Gippsland Shire Council Lakes Entrance Northern Growth Area – Bushfire Study was undertaken with the following Project objectives as recited from section 1.2;

The objectives of the project are:

- For EGSC to have increased understanding of the bushfire planning requirements for subdivisions where there are complex vegetation related issues;
- To show case site analysis methods and expected standards of reporting; and

- To enable transfer of learning from the case study to other large scale subdivision proposals in East Gippsland "(page 4, GHD, August 2013)".

The bushfire study also included a qualitative landscape bushfire risk assessment and modelled likely construction standards in accordance with AS3959.

Statutory controls

The LENGA is located entirely within a Declared Bushfire Prone Area. Additionally part of the land meets the criteria set out in Planning Advisory Note 46: Bushfire Management Overlay Mapping Methodology and Criteria (August 2013).

Bushfire hazard

At a landscape scale, having consideration of vegetation, weather and topography there is area and significant threat of high intensity bushfires reaching the LENGA.

North to north westerly influence weather patterns are associated with most adverse conditions possible in East Gippsland. With adverse conditions the likely forms of bushfire attack in the area would include ember attack and spotting. There is also potential for spot fires to form ahead of the main fire front impacting on the area from various directions. Also if the main fire front impacts on the area there is potential for other forms of bushfire attack, including radiant heat and direct flame contact.

Fire may emerge from the forest and could travel through existing vegetation and grassland, regenerating fire intensity relevant to the vegetation. This could result in direct flame contact and radiant heat impacts, particularly from the northern aspects.

In more extreme fire event, there is a potential for a convective driven fire (convection column over the Colquhoun State Forest) to move in from the north and west. This type of fire would move through the landscape in a manner, unaffected by the local conditions (including weather and topography). When fires of this nature reach areas of lower fuel (for example Lakes Entrance LENGA) generally convective column would 'collapse' showering embers across the landscape and generating excessive winds (for example 75kph).

2.7.6. Erosion Management Overlay

A review of the existing Erosion Management Overlay (“EMO”), as it applies under the East Gippsland Planning Scheme has been carried out by Ethos NRM. A detailed analysis has identified prospective changes to the Overlay. These changes are summarised as follows:

- Overall the EMO covers a large area, however it only focuses on tunnel and gully erosion.
- The EMO is proposed to be removed from the LENGA.
- This change in EMO and the fact that it only focuses on tunnel and gully erosion will mean that very few planning permits will be triggered by development of the LENGA as the, *“EMO should be amended to exempt all development except for work associated with subdivisions”*.

This will have specific implications for the Northern Growth Area for Lakes Entrance as the area will not be exempt from the EMO.

Given the level of detail provided on mapping currently available, it is unclear as to whether the LENGA is included in the EMO if the draft changes take effect. In their supporting report, Ethos NRM have identified that further steps are required to support proposed changes to the EMO which seeks to establish a fine-scale edit to the revised EMO map.

2.7.7. Surface Water Management Strategy (Water Technology, October 2013)

The LENGA Precinct comprises into three (3) drainage catchments. Broadly these catchments can be defined as:

- Catchment 1 – land west of Ostlers Road;
- Catchment 2 – land bound by Palmers Road to the west and Ostlers Road to the east;
- Catchment 3 – land east of Palmers Road.

Within each of these catchment areas, there are localised sub-catchments which drain toward one central waterway. Refer to Plan 5 – Catchment Areas, this was updated in October 2013 to reflect the proposed splitting of the Planning Scheme Amendment (PSA) into Parts 1 & 2, the drainage has plan been updated to enable development to occur in Part 1 area initially with drainage design separated for each PSA component.

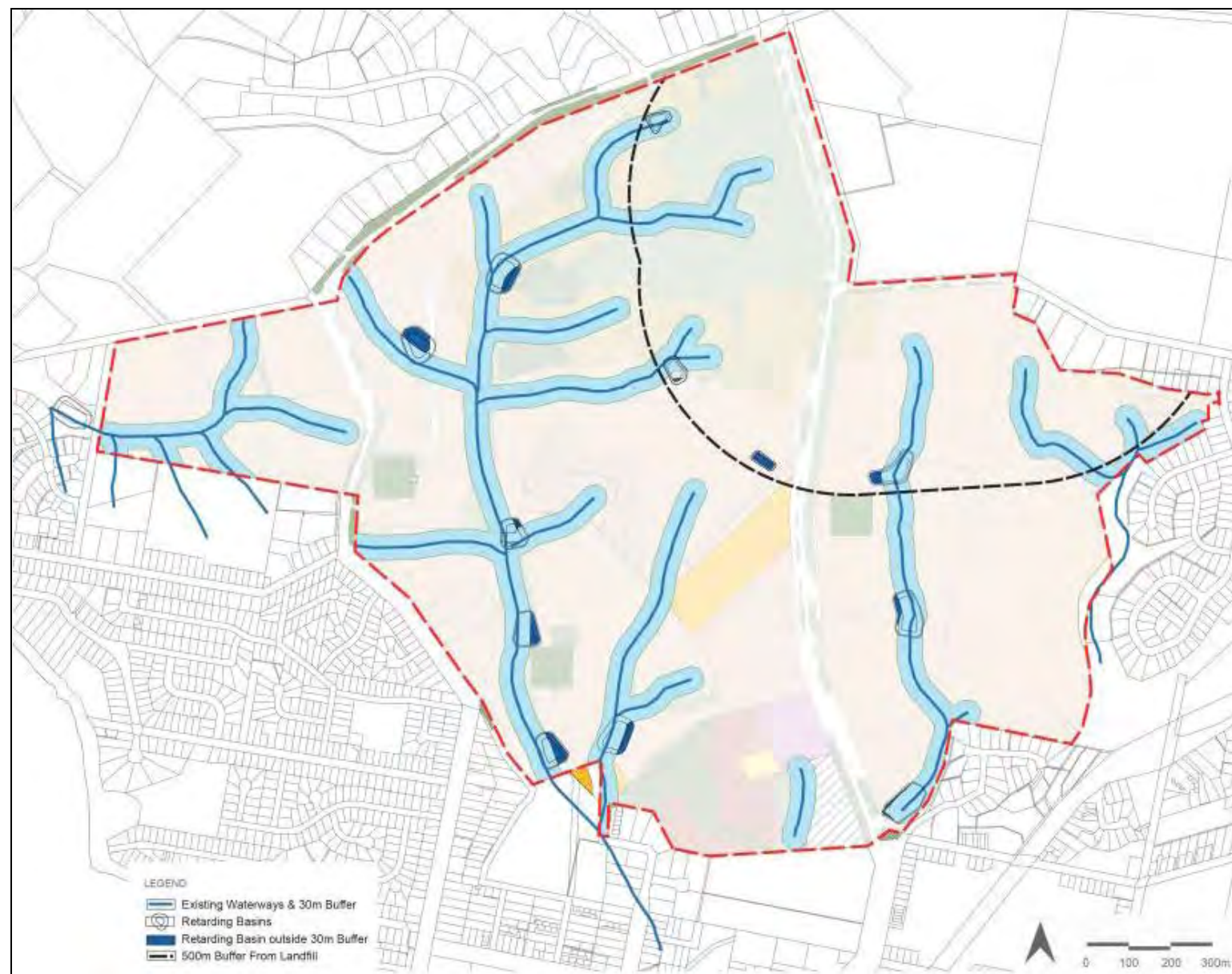
Due to the steep nature of the development area it is difficult to modify stormwater flow paths through the LENGA Precinct to water treatment and conveyance features which will be developed. Future subdivision design will often need to accommodate existing land attributes such as waterways and dams.

In some circumstances existing dam features have been identified to serve as stormwater flow attenuation storage areas. Where existing dams are identified to be retained, engineering modifications are required for the existing to increase/decrease storage volume, incorporation of low flow pipes to maintain storage capacity, and construction of scour protected spillways.

The North Arm and Eastern Creek are the respective receiving water bodies for all sub catchments within the development. As part of the greater Gippsland Lakes system, both waterways are considered to have high environmental, amenity, cultural, stormwater and economic values to the local community.

The LENGA Precinct must be designed to protect the values of waterways it discharges into.

Plan 5 – Catchment Areas





2.7.8. Transport and Traffic Impact Assessment Report

The LENGA is currently serviced by Palmers Road and Ostlers Road which run south to north through the precinct from the Lakes Entrance township. Palmers Road is situated to the east of the LENGA and is an Urban Collector Road. The existing Palmers Road reserve can accommodate increased traffic flow generated by the LENGA. Intersections along Palmers Road need to be established in appropriate locations to provide access to the LENGA.

As Lakes Entrance continues to develop and respond to changing environmental issues, Palmers Road may be upgraded to form a second northern access between Lakes Entrance Township and the Princes

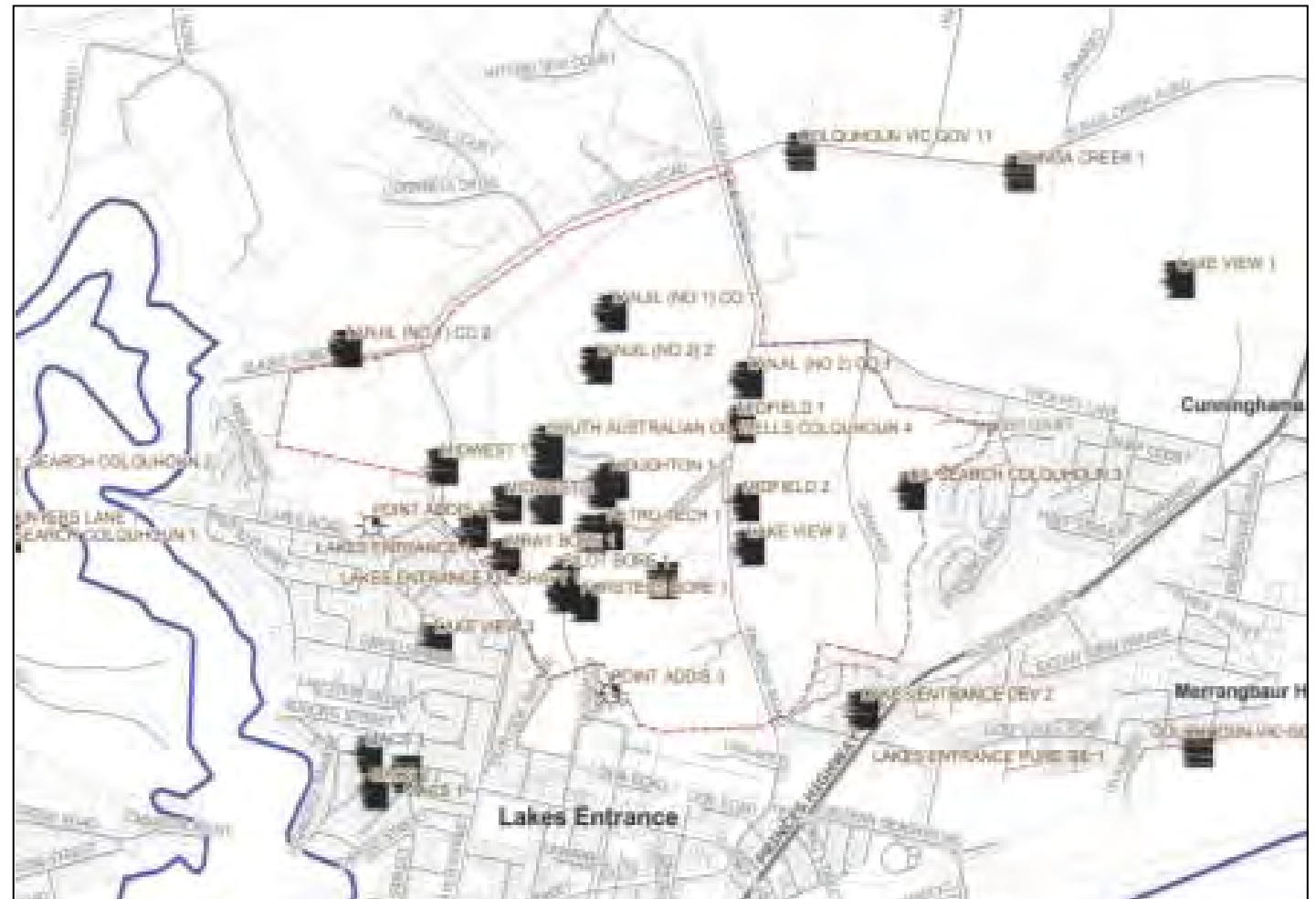
Ostlers Road is located in the western portion of the LENGA and is an Urban Collector Road. The existing road reserve is capable of accommodating increased traffic generated by development of the LENGA. Intersections along Ostlers Road need to be established to provide internal access to the LENGA.

2.7.9. Contaminated Land

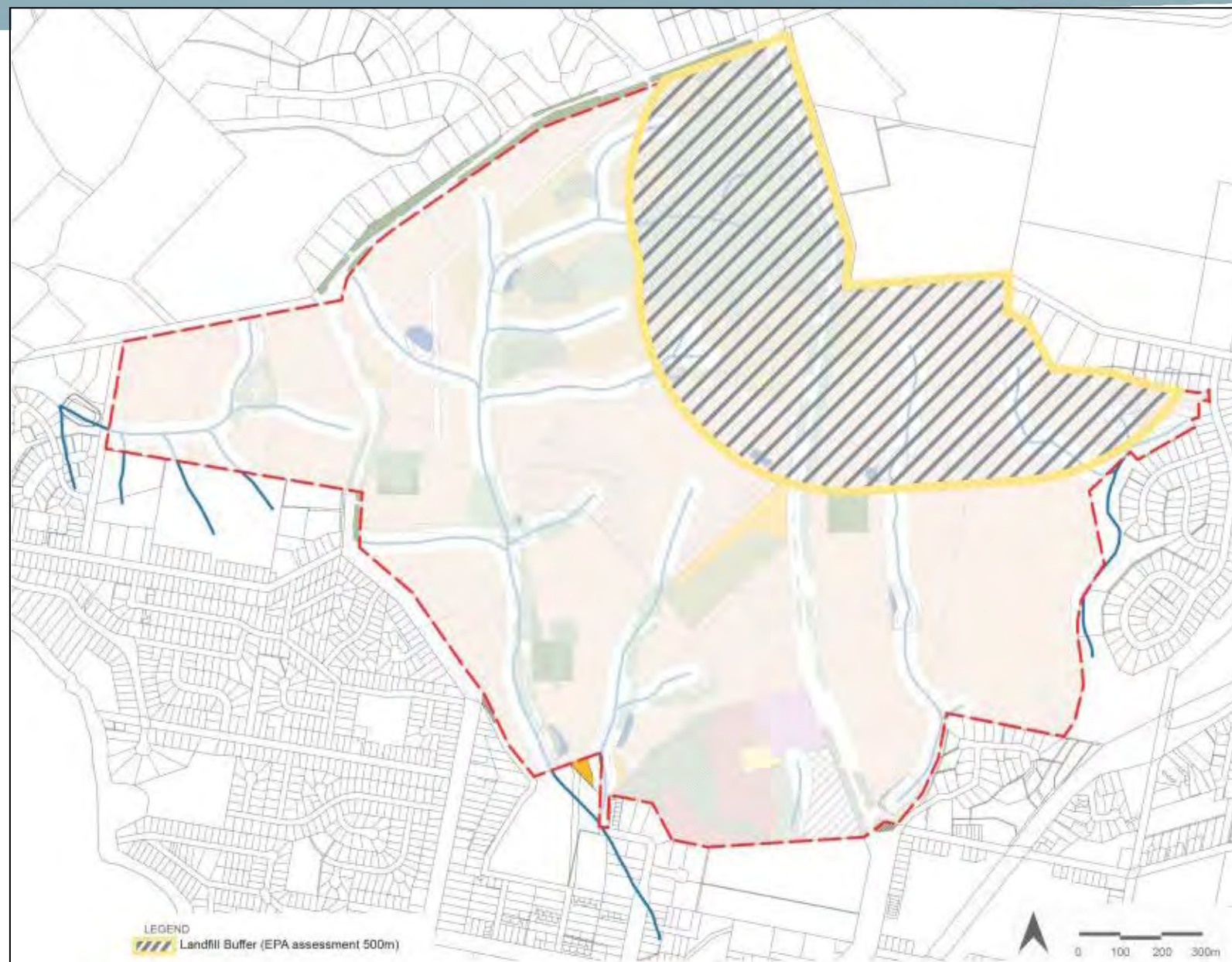
A number of oil and gas bores, wells and shafts have been identified scattered across the LENGA (refer to 'Wells and Borehole' as identified at geovic.vic.gov.au). These oil and gas bores, wells and shafts have potential to be of environmental interest. Further assessment of these particular areas is required prior to development occurring and will need to demonstrate that the land is suitable for sensitive uses and any remediation measures required to be undertake. Refer to Plan 6 – Potential Hazard Areas.

The existing landfill situated opposite the north east of the LENGA is identified as potentially being of high environmental interest. Further assessments are required to demonstrate that sensitive land uses are suitable in this area. The Lakes Entrance LENGA ODP reflects this requirement, providing a 500m environmental audit buffer over this area. Implementation of the Environmental Audit Overlay (EAO) within the Planning Scheme will also reflect this requirement for further assessment to identify the extent (if any) of land contamination issues prior to carrying out any development. Refer to Plan 7 – Environmental Audit Overlay.

Plan 6 – Potential Hazard Areas



**Plan 7 – Environmental Audit
Overlay**





2.8. Key Opportunities & Constraints

The subject area analysis has revealed a series of key opportunities and constraints that have influenced the overall ODP.

Opportunities

- Provide an integrated wetland system with both flood storage and water quality management functions. Incorporate an existing feature of the site into the new development and streetscapes whilst providing open space and integration opportunities with existing waterway reserves;
- Create better connections to surrounding social infrastructure, residential areas and open space. The street and open space network should clearly link residents to surrounding community infrastructure, reserves and public facilities;
- Introduce a neighbourhood level activity centre within walking distance of most residents to serve their daily shopping needs. Sustainable neighbourhood design is based around the provision of local services and shops within walking distance of residents in order to reduce car trips. Such centres also create a focus for new communities and improve interactions with residents;
- Create large lots or open spaces to manage challenging interfaces, particularly with the Bushfire Management Overlay to the north and high quality native vegetation areas. Managing these interfaces through the creation of large lots or the provision of open spaces to enable appropriate separation between uses, and not impact on the overall amenity and safety of new residents;
- Improve connections to surrounding open spaces; and
- Create an urban area that is integrated with surrounding residential areas. This can be achieved through a clearly connected street network, utilising existing road infrastructure including Palmers Road and Ostlers Road, and creating frontage to key external facing roads and open spaces. Locating open spaces within a walkable catchment of surrounding residents also encourages them to be part of the new development.

Constraints

- A large portion of the LENGA is covered by vegetation with a high conservation significance, which requires conservation.
- Vegetation with high conservation significance located in the northern portion of the LENGA is a recognised bushfire hazard in the locality of the LENGA and changes to the vegetation and landscaping could affect the risk from bushfire. Bushfire protection measures need to be considered, including the need for buffers between the hazard and the residential development
- "A section of the LENGA Precinct has been identified as being suitable for inclusion within future Bushfire Management Overlay mapping, identifying and recognising the bushfire hazard as a constraint".



- The Lenga includes a number of existing waterways which require an ecological buffer area through the development. These waterways are connected with the wider Gippsland Lakes network and therefore careful design and maintenance of storm water treatment is required in the Lenga.
- Terrain of the Lenga is steep in areas, which requires bulk earthworks and innovative urban design to establish residential areas.
- Existing residential areas located in the centre of the Lenga are to be integrated with new development in area.



3. Outline Development Plan Principles

3.1. Development Principles

A series of development principles have been established to inform the development planning process. These will act as a 'checking mechanism' to ensure the feasibility and deliverability of the Development Plan over time. The development principles are as follows:

- Maximise development outcomes;
- Provide a Neighbourhood Activity Centre centrally located within the area;
- Provide passive & active open spaces;
- Minimise development costs through logical design;
- Consider title boundaries when designing essential structural elements to ensure (early) delivery and avoid issues related to cost;
- Consider title boundaries in neighbourhood design;
- Utilise existing easements and reserves;
- Connect to the existing grid / road network where possible;
- Avoid single fronted roads with the exception of public open space interfaces;
- Avoid irregular shaped lots;
- Utilise natural features in design and development;
- Facilitate the achievement of sustainable neighbourhood outcomes;
- Provide legible connections to key community anchors within and surrounding the study area i.e. schools, commercial, recreation reserve;
- Provide for walkability throughout the new community with strong connections to existing urban areas and natural settings;
- Integrate Water Sensitive Urban Design (WSUD) elements with open space requirements; and
- Incorporate Crime Prevention through Environment Design (CCPTED) principles in neighbourhood design.
- Provide subdivision layouts and bushfire management statement plans which appropriately identify the prevailing bushfire risk.
- Respond to environmental conditions, constraints and hazards (adopting a risk based approach).

The preparation of the Development Plan was guided by these agreed development principles.

3.2. Development Plan Objectives

In addition to the principles listed above, the key elements of the Development Plan have been prepared in accordance with a series of strategic objectives based around best practice approaches to growth area planning established by the State Government's Growth Area Authority (GAA) and Clause 56 of the Victoria Planning Provisions.

The GAA's Growth Area Precinct Structure Planning guidelines provide clear objectives and direction for delivering sustainable neighbourhood design in growth areas. These guidelines have equal relevance to Lakes Entrance, despite it being a regional centre, and have been applied to the growth area planning process and used to test the key elements of the plan. The objectives of the Development Plan are listed below.

Community Design Objectives

To establish a sense of place and community

- Design neighbourhoods to be safe and compact, making it easy to walk or cycle to shops, local jobs, schools, community facilities and public transport stops;
- Promote healthy lifestyles and strong diverse communities through well designed public spaces and community facilities;
- Provide access to residents and workers to a variety of open spaces (parks, gardens, plazas and reserves) for relaxation and recreation;
- Create strong local character through distinct natural and cultural features as well as the urban form;
- Create communities and urban form that incorporates ecological processes of subject area;
- Promote positive experiences in the growth area for future generations through high quality design and built form; and
- Design neighbourhood centres to ensure they are attractive, lively and convenient focus for the community they serve and include the provision of quality public spaces.



Housing Diversity Objectives

To create greater housing choice, diversity and affordable places to live:

- Provide housing that meets a range of population needs as the community ages and grows over time;
- Achieve an average net density of 9 dwellings per developable hectare;
- Locate higher density housing within and around the neighbourhood centre, along bus routes and close to public open space;
- Complement existing stock housing within Lakes Entrance;
- Provide a range of lot sizes and housing styles;
- Locate a mix of private, affordable and social housing, in and around activity centres for households on low to moderate incomes; and
- Locate houses close to where people work.

Movement Network Objectives

To provide better transport choices and options

- Provide safe and efficient walking, cycling, public transport and vehicle access to connect residents directly to the convenience centre, open space, community facilities within and adjoining the growth area and wider regional networks;
- Ensure that all areas can be adequately and efficiently serviced by buses;
- Design streets to cater for shared paths and bus movements; and
- Locate higher density housing along the bus route

To create well connected streets

- Ensure streets and urban form are designed to cater for people's choice in movement – walking, cycling, public transport, car and other motorized vehicles;
- Encourage a mix of land uses within and around the convenience centre that can be easily accessed;
- Distribute traffic evenly through the local street network, and avoid opportunities for 'rat running'; and
- Create permeable street networks, avoiding use of cul-de-sacs.

Open Space Objectives

To provide easily accessible open —space for passive recreation

- Provide local parks within at least 400m safe walking distance of at least 95% of all dwellings;
- Provide active open space within 1km of 95% of all dwellings;
- Provide linear parks and trails, most often along waterways, but also linked to vegetation corridors and road reserves within 1km of 95% of all dwellings;
- Create clear links to active recreation opportunities at the existing Lakes Aquadome; and
- Use encumbered land productively for open space where possible.

Environment Objectives

To increase environmental sustainability —and urban water management

- Implement integrated water management, including water sensitive urban design, re-use of storm water and recycled water;
- Encourage best practice urban water management systems to deliver appropriate water quality and quantity outcomes.
- Neighbourhood design should ensure that waterways and ecologically significant areas of native vegetation and other important habitat areas become key community assets;
- Protect the built environment from flooding, inundation and storm water drainage.
- Encourage the preparation of Landscape plans which comprehensively integrate open space, reserves, streetscapes, pathways, buffers, entrance features, protected and retaining vegetation including offset areas and any vegetation to be managed for bushfire risk recognising multiplicity of roles and outcomes.



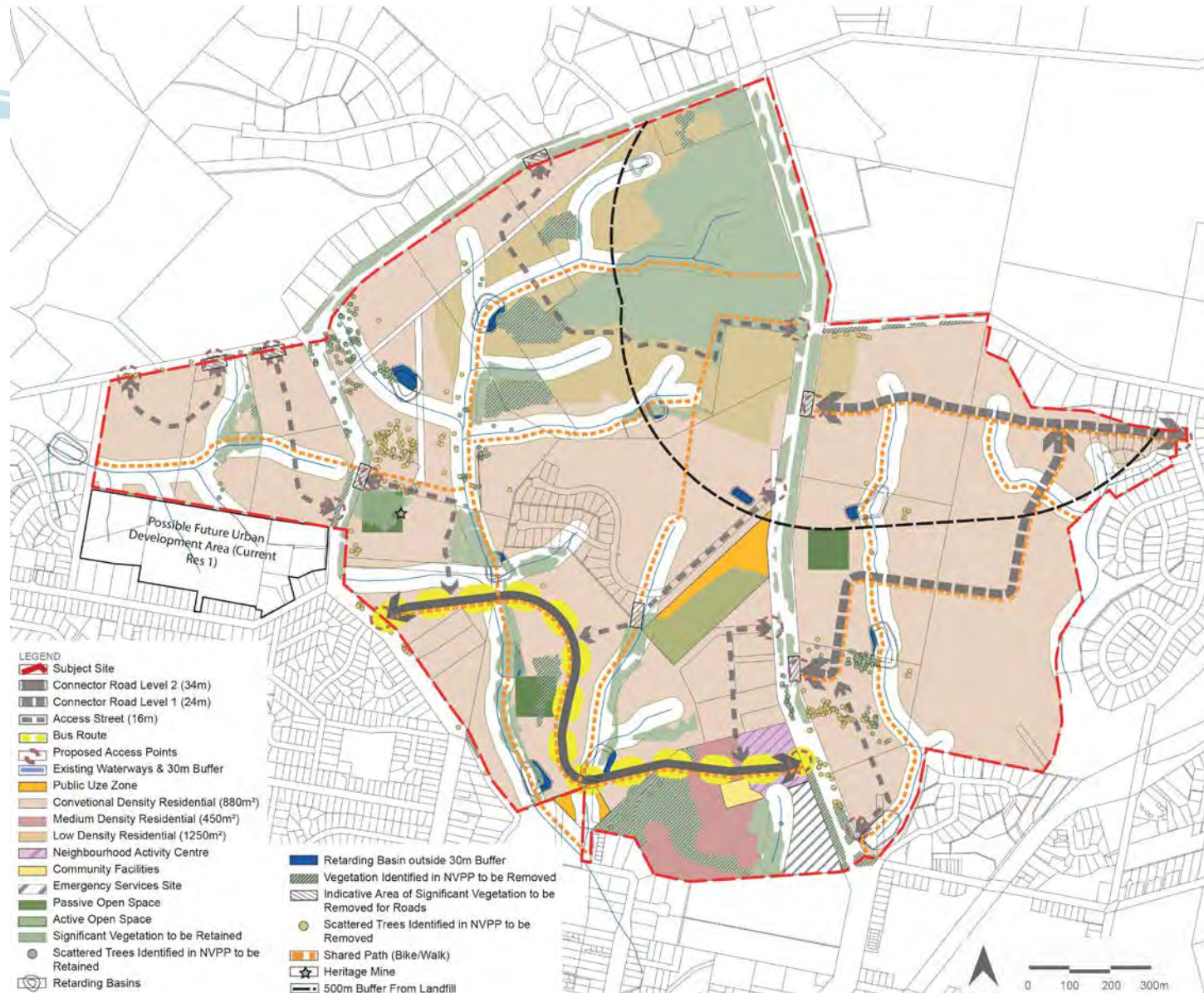
4. Outline Development Plan

The Outline Development Plan provides the grounds to produce a diverse and sustainable neighbourhood. The plan aims to provide diverse housing types and tenures to cater for a range of socio-economic groups. The Outline Development Plan also acknowledges the varied motivations people have to live in Lakes Entrance, be that as a permanent resident, holiday maker or, increasingly, retiree. The variation in lot size and the allocation of land for certain uses has been considered for these varied lifestyles.

The Outline Development Plan has been profoundly influenced by natural features, drainage and vegetation across the site. These elements create a striking natural setting with beautiful views thus offering excellent development opportunities for existing land holders. The ODP seeks to ensure that there is development equity for all land holders based on these constraints and opportunities.

The design has been particularly careful in connecting with surrounding residential areas and internally. The provision of shared and linear paths takes full advantage of the unique landscape of Lakes Entrance. Paths are designed to meander throughout the neighbourhood to ensure high walkability and an active lifestyle.

In regard to sustainability, a variety of housing density is encouraged through the growth area, with opportunities for medium density housing closer to shops, parks and community facilities. Low density options have been provided in order to enable integration with conservation areas. This design will promote a less car-dependent environment. Drainage, wetland and Water Sensitive Urban Design (WSUD) techniques in local streets will add to sustainability in terms of capture, use and treatment of stormwater. The integrity of the ecological systems are retained and enhanced, with particular emphasis on the wetland corridors.



Plan 8 – Outline Development Plan

4.1. Land Use Budget

The Lakes Entrance Lenga covers a gross development area (GDA) (all inclusive land within its boundaries irrespective of its use or condition) of 244.64 hectares and of this gross area, are the net developable area comprising 167.71 hectares (NDA - the proportion of the gross land that is able to be developed). That is 74 per cent of the Lenga is available for development.

The NDA figure excludes a range of proposed developments and land uses that do not include dwellings (such as public open space, arterial roads and community facilities).

The summary land use budget (refer to Table 3 – Summary Land Use Budget) provide target land budget and target lot yield details for the future urban structure as a whole.

4.2. Lot Sizes and Diversity

The Lenga Precinct will ultimately accommodate 1545 new dwellings. The new community will comprise an urban structure providing for a range of densities commensurate with zoning requirements and objectives, while acknowledging existing urban character in Lakes Entrance.

Future development layouts will provide for a range of lot sizes and housing diversity (refer to Table 2) in accordance with (DPO8) and Clause 56. The range of lot sizes will maximise density and will provide the flexibility required to meet the range of housing needs of the growing Lakes Entrance community.

The proposed lot sizes respond to Council's intention for this area to predominantly accommodate conventional density housing.

Table 2 – Density and Lot Sizes

Lot Type	Density	Average Lot Size	Potential Lot Yield	
			Part 1 Area	Part 2 Area
Conventional density housing (including existing R1Z land)	9.5 dwellings/ha	880m ²	1006	273
Low density housing	6 dwellings/ha	1,250m ²	57	69
Medium density housing	16 dwellings/ha	450m ²	140	0

4.3. Low Density Housing (1250m²+)

Low density housing (or larger lots) are proposed for the area in the north-east corner of the LENGA Precinct, adjacent to the larger area of very high significance vegetation. Due to the scale and density of high significance vegetation located in this area the area is likely to be affected by Bushfire Management Overlay controls. The low density housing area provides a buffer to the high significance vegetation, whilst also limiting the impact of bushfire on future residents.

Low density housing will also serve an important urban design function offering a lifestyle alternative providing large lot sizes with exposure to vegetation reserves.

Conventional density housing in this area may be considered in identified low density housing areas

4.4. Conventional Density Housing

Conventional density housing will be the primary housing typology throughout the LENGA and will comprise lot sizes of around 880m². The nature of conventional density housing within the LENGA will reflect the existing urban character of Lakes Entrance whilst also being well integrated with adjoining medium and low density residential areas.

4.5. Medium Density Housing

Medium density housing, typically 450m² is allocated adjacent to the neighbourhood centre in the southern area of the Outline Development

Plan. The size of the medium density is relatively larger in order to provide a housing type appropriate to the larger lots of Lakes Entrance.

Neighbourhood centre:

Medium density housing is encouraged within 400 metres of the neighbourhood centre, increasing the critical mass and overall vitality of this area - an important factor in the success of the local shops. A denser form of housing will also facilitate walking and cycling to the shops, reducing reliance on the car.

The topography within this area lends itself to terraced typed urban form, appropriate to the land form.

High amenity locations:

Medium density housing is encouraged adjacent to high amenity areas such as wetlands and local parks. Residents that can take advantage of the amenity and enjoy a more natural setting from their windows. It will provide a level of passive surveillance to these key pedestrian zones.

Near to the bus route:

Medium density housing is encouraged (where possible) within 400 metres of the bus route to provide residents with sustainable transport options within walking distance from home. Maximising opportunities for people to catch the bus to work, school or recreation is very important particularly when most of these destinations are only a short trip away.

A maximum lot size of 450 m² is envisaged in the preferred medium density locations. It is acknowledged that this lot size is quite small and is uncommon at present in Lakes Entrance. This option reflects the need to provide for housing diversity and respond to State Planning requirements to provide a mixture of housing opportunities and locate a high portion of housing close to activity centres, open space and public transport networks.

Land Use Budget Property Plan

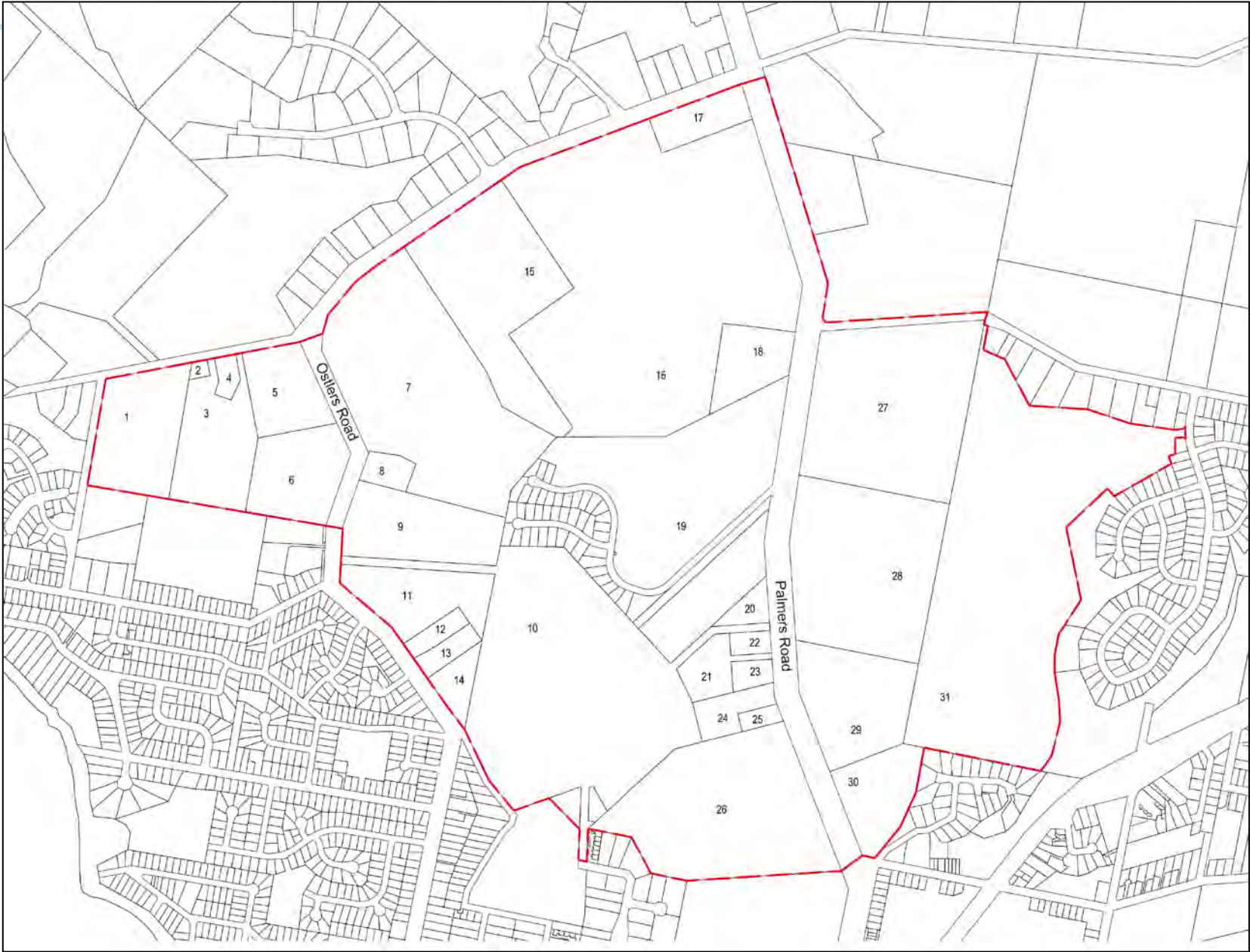


Table 3 Land Use Budget

Property Number	Total Area (Hectares)	ENCUMBERED LAND				Gross Developable Area	COMMUNITY				UNENCUMBERED LAND OPEN SPACE		Total Net Developable Area (Ha)	OTHER LAND USES (retail/office/industrial use)	Total Net Residential Area (Ha)	CONVENTIONAL DENSITY (9.5 Dwellings/ha)		LOW DENSITY Dwellings/ha) (6		MEDIUM DENSITY Dwellings/ha) (16		TOTAL COMBINED		
		Drainage Reserve	Drainage Basin (in encumbered land)	Powefline Easement	Environmental Conservation Area		Community Facilities	Drainage Basin (in Unencumbered land)	Emergency Services	Schools	Active Open Space	Passive Open Space (Local parks & linear reserves)				NRHa	Indicative Dwellings	NRHa	Indicative Dwellings	NRHa	Indicative Dwellings	NRHa	Indicative Dwellings/NRH a	Indicative Dwellings
		Not Included in OS%	Not Included in OS%	Not Included in OS%	Not Included in OS%		Not included in NDA	Not Included in OS%	Not Included in NDA	Not Included in NDA	Included in OS%	Included in OS%												
Property 1	6.06	1.55	0.00	0.00	0.00	4.51	0.00	0.00	0.00	0.00	0.00	0.00	4.51	0.00	4.51	4.51	42.88	0.00	0.00	0.00	0.00	4.51	9.50	42.88
Property 2	0.18	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.18	0.18	1.72	0.00	0.00	0.00	0.00	0.18	9.50	1.72
Property 3	5.57	2.75	0.00	0.00	0.14	2.69	0.00	0.00	0.00	0.00	0.00	0.00	2.69	0.00	2.69	2.69	25.54	0.00	0.00	0.00	0.00	2.69	9.50	25.54
Property 4	0.52	0.46	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.06	0.06	0.58	0.00	0.00	0.00	0.00	0.06	9.50	0.58
Property 5	3.60	0.04	0.00	0.00	0.02	3.53	0.00	0.00	0.00	0.00	0.00	0.00	3.53	0.00	3.53	3.53	33.51	0.00	0.00	0.00	0.00	3.53	9.50	33.51
Property 6	4.72	1.25	0.00	0.00	0.00	3.47	0.00	0.00	0.00	0.00	0.00	0.00	3.47	0.00	3.47	3.47	32.97	0.00	0.00	0.00	0.00	3.47	9.50	32.97
Property 7	19.18	5.72	0.11	0.84	0.20	12.31	0.00	0.20	0.00	0.00	0.00	0.00	12.11	0.00	12.11	11.33	107.62	0.79	4.71	0.00	0.00	12.11	9.27	112.33
Property 8	0.92	0.00	0.00	0.00	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.92	0.92	8.71	0.00	0.00	0.00	0.00	0.92	9.50	8.71
Property 9	5.90	0.72	0.20	0.00	1.39	3.59	0.00	0.06	0.00	0.00	0.00	0.26	3.27	0.00	3.27	3.27	31.04	0.00	0.00	0.00	0.00	3.27	9.50	31.04
Property 10	26.57	7.52	1.10	0.00	1.15	16.80	0.00	0.21	0.00	0.00	0.00	1.04	15.55	0.00	15.55	15.55	147.75	0.00	0.00	0.00	0.00	15.55	9.50	147.75
Property 11 Part 1	4.49	1.92	0.10	0.00	0.00	2.47	0.00	0.00	0.00	0.00	0.00	0.00	2.47	0.00	2.47	2.47	23.49	0.00	0.00	0.00	0.00	2.47	9.50	23.49
Property 12 Part 1	0.77	0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.77	0.77	7.36	0.00	0.00	0.00	0.00	0.77	9.50	7.36
Property 13 Part 1	0.87	0.00	0.00	0.00	0.00	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.87	0.87	8.26	0.00	0.00	0.00	0.00	0.87	9.50	8.26
Property 14 Part 1	1.26	0.00	0.00	0.00	0.00	1.26	0.00	0.00	0.00	0.00	0.00	0.00	1.26	0.00	1.26	1.26	11.98	0.00	0.00	0.00	0.00	1.26	9.50	11.98
Property 15 Part 1	11.79	3.82	0.35	0.24	0.07	7.32	0.00	0.09	0.00	0.00	0.00	0.00	7.23	0.00	7.23	3.88	36.88	3.35	20.08	0.00	0.00	7.23	7.88	56.96
Property 16 Part 1	14.35	4.43	0.00	0.39	1.55	7.97	0.00	0.00	0.00	0.00	0.00	0.00	7.97	0.00	7.97	2.54	24.17	5.43	32.55	0.00	0.00	7.97	7.12	56.73
Property 16 Part 2	24.67	4.70	2.06	0.01	15.09	2.81	0.00	1.07	0.00	0.00	0.00	0.00	1.74	0.00	1.74	0.47	4.47	4.35	26.10	0.00	0.00	4.82	6.34	30.57
Property 17 Part 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Property 17 Part 2	2.14	0.00	0.00	0.00	0.82	1.32	0.00	0.00	0.00	0.00	0.00	0.00	1.32	0.00	1.32	0.00	0.00	1.32	7.92	0.00	0.00	1.32	6.00	7.92
Property 18 Part 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Property 18 Part 2	2.95	0.00	0.00	0.00	0.00	2.95	0.00	0.00	0.00	0.00	0.00	0.00	2.95	0.00	2.95	0.00	0.00	2.95	17.70	0.00	0.00	2.95	6.00	17.70
Property 19 Part 1	9.29	1.16	0.00	0.00	0.00	8.13	0.00	0.00	0.00	0.00	0.00	0.00	8.13	0.00	8.13	8.13	77.27	0.00	0.00	0.00	0.00	8.13	9.50	77.27
Property 19 Part 2	5.56	0.00	0.15	0.00	0.00	5.41	0.00	0.00	0.00	0.00	0.00	0.00	5.41	0.00	5.41	4.95	47.03	1.41	8.46	0.00	0.00	6.36	8.72	55.49
Property 20 Part 1	0.83	0.00	0.00	0.00	0.02	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.81	0.81	7.69	0.00	0.00	0.00	0.00	0.81	9.50	7.69
Property 21 Part 1	1.73	0.00	0.00	0.00	0.00	1.73	0.00	0.00	0.00	0.00	0.00	0.00	1.73	0.00	1.73	1.73	16.43	0.00	0.00	0.00	0.00	1.73	9.50	16.43
Property 22 Part 1	0.55	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.55	0.55	5.20	0.00	0.00	0.00	0.00	0.55	9.50	5.20
Property 23 Part 1	0.66	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.66	0.66	6.24	0.00	0.00	0.00	0.00	0.66	9.50	6.24
Property 24 Part 1	1.53	0.00	0.00	0.00	0.00	1.53	0.00	0.00	0.00	0.00	0.00	0.00	1.53	0.00	1.53	1.53	14.49	0.00	0.00	0.00	0.00	1.53	9.50	14.49
Property 25 Part 1	0.46	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.46	0.46	4.33	0.00	0.00	0.00	0.00	0.46	9.50	4.33
Property 26 Part 1	15.08	1.32	0.00	0.00	0.52	13.24	0.47	0.00	2.01	0.00	0.00	0.00	10.76	2.03	8.73	0.00	0.00	0.00	0.00	8.73	139.64	8.73	16.00	139.64
Property 27 Part 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Property 27 Part 2	15.54	1.79	0.05	0.00	0.00	13.70	0.00	0.00	0.00	0.00	0.00	0.00	13.70	0.00	13.70	12.28	116.65	1.47	8.82	0.00	0.00	13.75	9.13	125.48
Property 28 Part 1	10.74	1.66	0.34	0.00	0.00	8.75	0.00	0.04	0.00	0.00	0.00	1.01	7.70	0.00	7.70	7.70	73.14	0.00	0.00	0.00	0.00	7.70	9.50	73.14
Property 28 Part 2	3.20	2.04	0.34	0.00	0.00	0.82	0.00	0.11	0.00	0.00	0.00	0.00	0.71	0.00	0.71	2.53	24.04	0.00	0.00	0.00	0.00	2.53	9.50	24.04
Property 29 Part 1	6.59	1.09	0.09	0.00	0.00	5.41	0.00	0.00	0.00	0.00	0.00	0.00	5.41	0.00	5.41	5.41	51.36	0.00	0.00	0.00	0.00	5.41	9.50	51.36
Property 30 Part 1	3.81	0.91	0.44	0.00	0.00	2.47	0.00	0.05	0.00	0.00	0.00	0.00	2.42	0.00	2.42	2.42	22.98	0.00	0.00	0.00	0.00	2.42	9.50	22.98
Property 31 Part 1	20.75	1.53	0.00	0.00	0.00	19.22	0.00	0.00	0.00	0.00	0.00	0.00	19.22	0.00	19.22	19.22	182.56	0.00	0.00	0.00	0.00	19.22	9.50	182.56
Property 31 Part 2	11.82	2.78	0.00	0.00	0.00	9.04	0.00	0.00	0.00	0.00	0.00	0.00	9.04	0.00	9.04	8.46	80.37	0.00	0.00	0.00	0.00	8.46	9.50	80.37
Total	244.64	49.14	5.33	1.49	20.98	167.71	0.47	1.83	2.01	0.00	0.00	2.31	161.10	2.03	159.07	134.60	1278.69	21.06	126.35	8.73	139.64	164.38	9.40	1544.68

Note: Where native vegetation is shown on the outline development plan - the underlying land use zone has been calculated for the purpose of this land budget

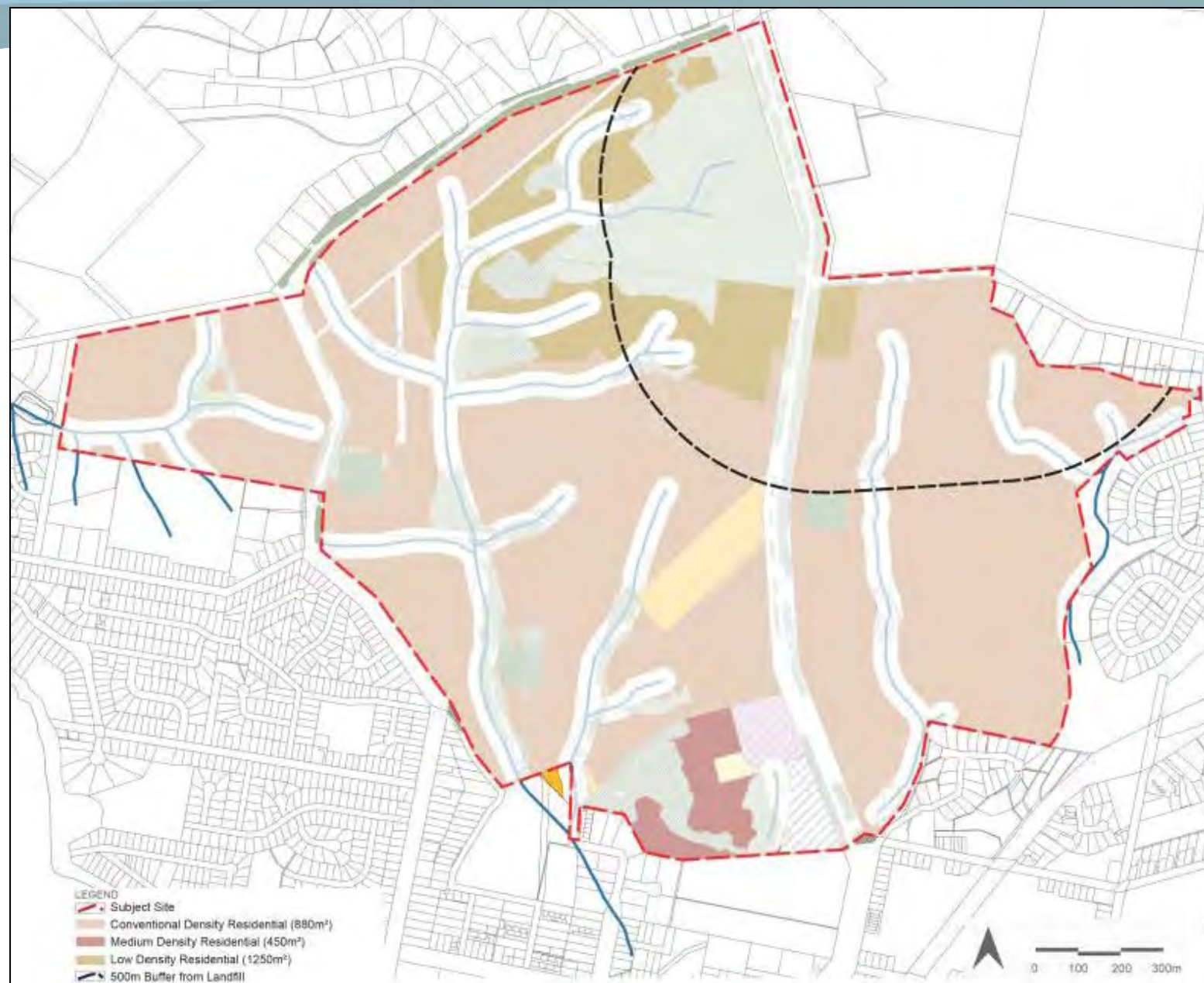


4.6. Statutory assessment guidelines

- Any future Development Plan should be prepared generally in accordance with the proposed urban structure and dwelling density identified in Table 3.
- Conventional density residential should achieve an average of 9.5 dwellings per hectare;
- Low density housing will only be supported in the areas designated on the Outline Development Plan.
- Medium density housing will only be supported in the areas designated on the Outline Development Plan.
- A landscape master plan is required for any future subdivision. The masterplan must include any open space, reserves, pathways and streetscapes, entrance features and any other key attribute within the subdivision.
- A landscape masterplan is required for any future medium density development. The masterplan must include provision of vegetation along the front boundary to screen interface uses.
- Refer to Plan 9 – Residential Areas



Plan 9 – Residential Areas





5. Neighbourhood Centre

A neighbourhood activity centre (“NAC”) is proposed within the land holding in the southern portion of the LENGA, nearest to the Lakes Entrance Township. The NAC is located adjacent to Palmers Road and is ideally located next to existing community facilities.

The NAC will perform a daily needs function for the residents within the precinct. It may also capture a wider range of users subject to demand. An area of 3.5 hectares has been identified for the NAC, which reflects its intended role as a secondary retail precinct within Lakes Entrance. The NAC will serve the future community of the LENGA, providing for their main shopping needs.

The NAC will form an important community focal point and have a mix of uses to meet local needs. Accessible to a viable user population by walking, cycling and by local bus services to Lakes Entrance township. Community facilities and emergency services are to be co-located with the NAC to reinforce its status as activity centre and community focal node.

Medium density housing opportunities are provided around the centre to increase overall critical mass and encourage walking and cycling trips.

The NAC will require design to address both street frontages, with shop entries clearly legible for passers-by on both the Ostlers Road and the new north-south street frontages. The centre should be designed to include seating, rubbish bins and lighting in the paved area at the front of the shops, as well as landscaping to improve overall amenity.

5.1. Statutory Assessment Guidelines

- An area of 3.5 hectares must be set aside for the development of a neighbourhood centre;
- The land developed for the NAC will be required to be rezoned to the Business 1 Zone (B1Z) or other commercial zone as appropriate. Use and development will need to be consistent with the zone provisions.
- An economic assessment will inform a future development plan to be prepared for the NAC. This will provide further detail of appropriate use and gross floor area requirements needed to serve the local catchment. This economic assessment will underpin the development of this area, to provide a viable activity centre.

- A Concept Plan must be prepared for the NAC. The following design guides apply:
 - Built form should be connected creating a continuous façade to the streets.
 - Buildings should be well presented to all abutting streets with clearly defined entrances that connect with the pedestrian footpath at street level.
 - Street facades and all visible side or rear facades should be visually rich, interesting and well-articulated to create visual interest and interaction.
 - Good quality built form should be encouraged.
 - Buildings of up to 2 storeys in height will be supported in principle.
 - Side building facades (excluding shop fronts) and continuous walls, should not exceed 10m without articulation, fenestration, activity or visual interest.
 - Upper level development should be a recessive element. Entrances provided at the street front will be required to be consistent with the provisions of the B1Z or other commercial zone as appropriate.
 - Built form should be activated on the ground floor.
 - On street angled car parking should be provided for customers. Any additional car parking must be located to the rear of the buildings.
 - The concept plan should show seats, bins and lighting in the neighbourhood centre. Screening of centralised waste collection points should minimise amenity impacts with adjoining areas and users of the centre.
 - Streets, public spaces and car parks should be well lit with pedestrian-friendly lighting.
 - New buildings within the neighbourhood centre must relate empathically to the interface with adjoining residential area and creek corridor.



6. Access and Mobility

6.1. Roads

The Outline Development Plan has been designed to provide an arterial road network which will underpin a clear and legible street network in the Lenga. The ODP utilises existing roads and road reserves to build the basis for a logical east-west and north-south street grid. Intersection locations along Palmers Road and Ostlers Road will create logical connections between residential areas, open space and the neighbourhood centre.

A new east west collector road will be constructed from Ostlers Road to Palmers Road and will run through the southern portion of the development site. This road will provide the primary access for land within the precinct and service the majority of future residents. A bus route has also been proposed for this collector road.

The proposed development site is expected to generate approximately 16,830 vehicle trips per day and 1,683 peak hour trips. The majority of roads within the subdivision will be classified in accordance with Clause 56.06 of the East Gippsland Planning Scheme.

Whilst it is recognised that a future northern access from Lakes Entrance to the Princes Highway is likely to be facilitated via Palmers Road, no upgrade to Palmers Road is required due to development of the Lenga.

6.2. Intersections

There are 14 proposed vehicular access points to the site:

Blairs Road

There are two proposed access points on Blairs Road. These two sites are to provide access to the two parcels of land divided by watercourse.

Ostlers Road

There are three proposed access points on Ostlers Road. These are staggered to ensure no traffic conflicts, a high level of safety and to avoid the use of unnecessary traffic treatment. The engineering detail must take into account the significance of native vegetation as per the NVPP and mitigate the need for environmental offsets.

Palmers Road

There are five proposed access points on Palmers Road, two on the eastern side and three on the western side. There is currently an existing vehicular access for the area currently Residential 1 Zone. This has been taken into account in the allocation of vehicular access. These are also staggered to ensure no traffic conflicts, a high level of safety and to avoid the use of unnecessary traffic treatment. The utilisation of existing road reserve is preferred so that existing dwellings will not be compromised.

These intersections are to be provided in accordance with Table 5 – Intersection Requirements and the relevant standards outlined in Figure 1 to 3.

Table 5 – Intersection Requirements

Major Road	Turn Treatment	Major Road	Turn Treatment
Access Point 1: (Blairs Road)	Basic Left	Access Point 8: (Colquhoun Road)	Auxiliary Left (Short)
	Basic Right		Channelised Right (Short)
Access Point 2: (Blairs Road)	Basic Left	Access Point 9: (Colquhoun Road)	Auxiliary Left
	Basic Right		Channelised Right
Access Point 3: (Blairs Road)	Basic Left	Access Point 10: (Colquhoun Road)	Auxiliary Left (Short)
	Basic Right		Channelised Right
Access Point 4: (Ostlers Road)	Basic Left	Access Point 11: (Colquhoun Road)	Basic Left
	Basic Right		Channelised Right
Access Point 5: (Ostlers Road)	Basic Left	Access Point 12: (Colquhoun Road)	Auxiliary Left (Short)
	Channelised Right (Short)		Channelised Right
Access Point 6: (Ostlers Road)	Basic Left	Access Point 13: (Colquhoun Road)	Auxiliary Left (Short)
	Channelised Right		Channelised Right (Short)
Access Point 7: (Colquhoun Road)	Auxiliary Left	Access Point 14: (Ostlers Road)	Basic Left
	Channelised Right		Basic Right



Figure 1: Rural basic left turn treatment



Figure 2: Rural auxiliary left turn treatment

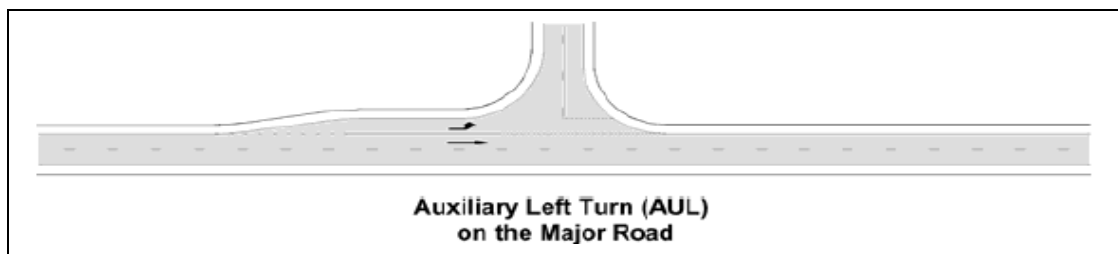
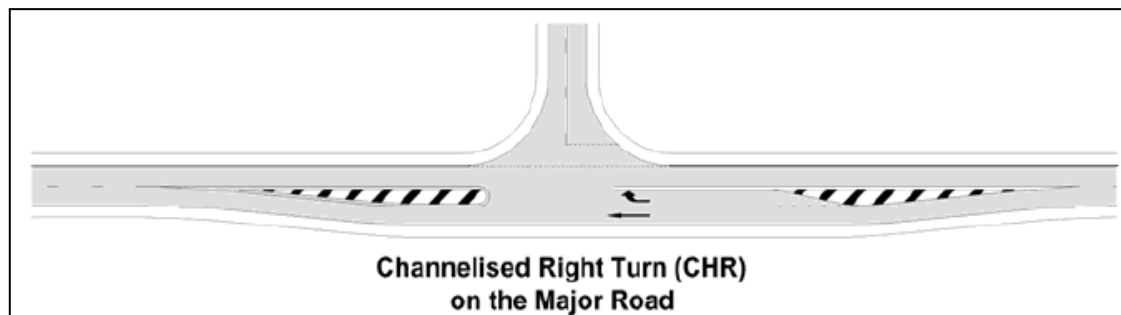


Figure 3: Rural channelised right turn treatment



Generation of trips by the commercial land use areas have not been considered in this assessment. An economic assessment is required to determine to the nature of uses and scale of development to occur within the Neighbourhood Activity Centre (NAC). Until this assessment has been carried out, it would be unnecessarily prescriptive to project traffic volumes and requirements generated by the NAC. These would be based on future gross floor area and particular types of land uses. Therefore, a further traffic assessment will be required support of future Development Plan to be prepared for the NAC site. The further traffic assessment must detail:

- Traffic flow generation;
- Turning movements;
- Intersection requirements;
- Pedestrian access.

Traffic generated by the community facilities and the active open space are expected to be minimal given that this is serviced by the proposed bus route, reducing the use of private vehicles for these trips. In addition, use of these facilities typically occurs during off-peak periods and on weekends.

6.3. Road Hierarchy

The Infrastructure Design Manual (IDM) has been used to determine the road hierarchy for the Lakes Entrance Development Area. Table 6 is an extract from Table 2 of the IDM (version 4.0).

Table 6: Classification of urban roads

Classification	Traffic Volume (max vehicles per day)	Road Classification Definition
Access Street	1,000	A street providing local residential access where traffic is subservient, speed and volume are low, and pedestrian and bicycle movements are facilitated.
Connector Street – Level 1	3,000	A street that carries higher volumes of traffic. It connects access places and access streets through and between neighbourhoods.
Connector Street – Level 2	3,000 to 6,000	

6.4. Road Cross Sections

The IDM sets out the road cross section configuration for each road type. Table 7 provides a summary of the cross section requirements (as per the IDM version 4.0) for the road types proposed in the road hierarchy for the development area.

Table 7: Street widths, parking provisions and speed

Street Type	Carriage-way Width*	Min Reserve Width	Parking Provision Within Street Reservation	Min Verge Width (includes footpath)	Footpath Provision	Cycle Path Provision	Target Speed^ (km/h)
Access Street	7.5m	16.0m	Both sides	3.5m each side	1.5m wide both sides, minimum offset of 1m from kerb	Shared zone	40
Connector Street – Level 1	11.0m	24.0m	Both sides	6.0m each side	2.5m shared path on both sides, minimum offset of 1m from kerb	Shared zone	50
Connector Street – Level 2	2 x 7.0m + 5.0m median	34.0m	Both sides	6.0m each side	1.5m wide both sides, minimum offset of 1m from kerb	On-street, shared or dedicated lanes OR Off-street, shared path	60

* Carriageway width is measured from kerb invert to kerb invert.

^ Target speed is the desired speed at which motorists should travel.

Note: The road cross sections are to comply with the relevant IDM as updated.

Road cross section of the bus route should comply with the *Department of Transport Guidelines for Land Use and Development: Public Transport, 2008* which require the following:

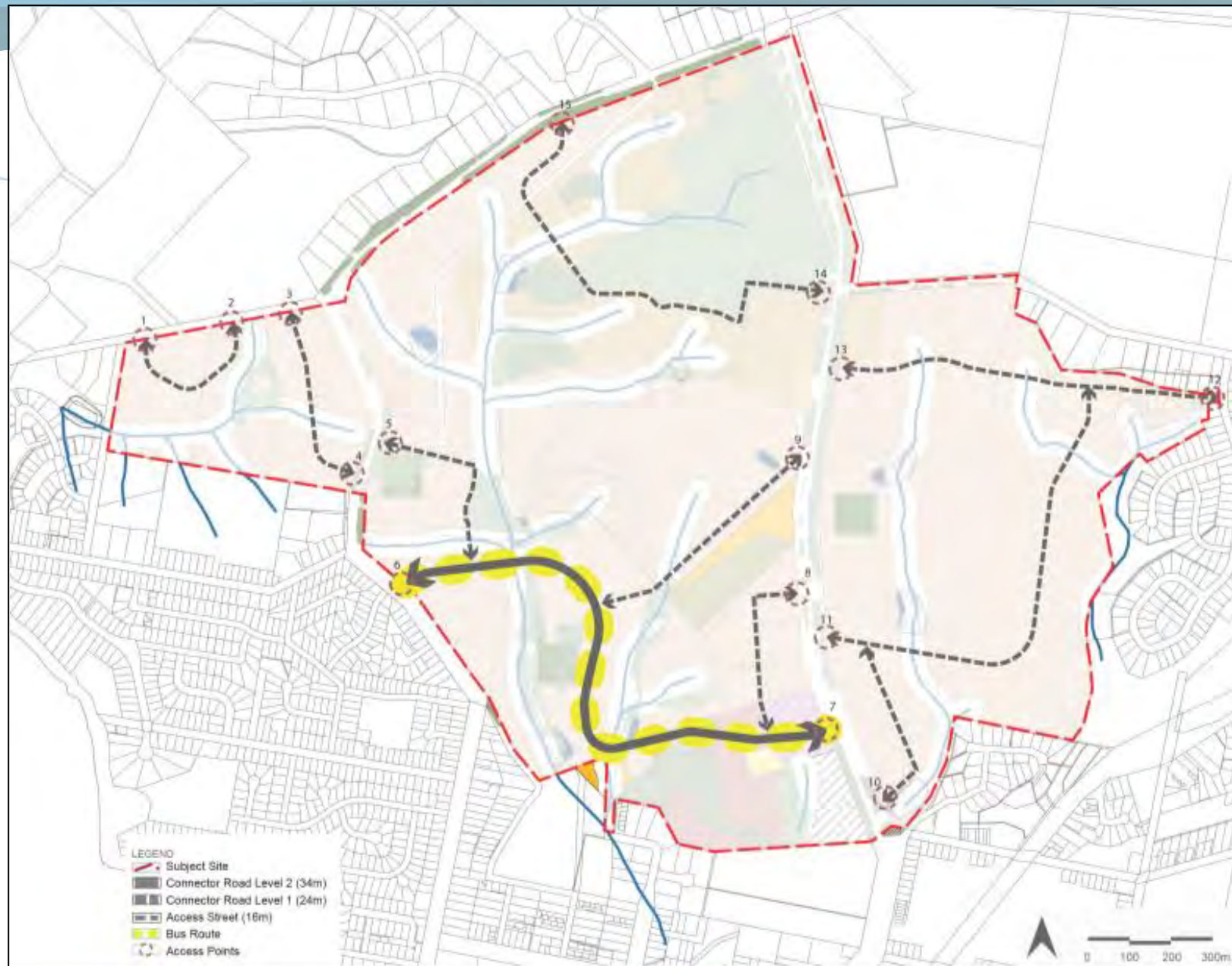
- 4.2m wide traffic lane in each direction to allow on road cycling
- 2.3m wide indented parking lane on both sides of the road
- 4.5m verge width on one side of the road with a 1.5m wide footpath.
- 5.5m verge width the other side of the road with a 2.5m wide shared path.

These requirements are met by the Connector Street – Level 1 and Connector Street – Level 2 cross sections. Refer to Figure 4 – Road Cross Sections.

Figure 4 – Proposed Typical Cross Sections



Plan 10 - Road Hierarchy Plan



6.5. Pedestrian and Cycling Shared Trials

There is currently, little walking and cycling infrastructure within the Lenga. East Gippsland Shire Council, the landowners and existing community are eager for provision of shared path to be provided through the Lenga. This serves to connect the existing and future community of Lakes Entrance, and facilitate recreational purposes.

The Outline Development Plan provides an extensive shared path network principally along the watercourse corridors, connecting with existing residential areas and off-road trails in the forested areas north of Lakes Entrance.

This path network will partly act as an uninterrupted loop, providing an excellent option for residents to pursue active recreation. Refer to Figure 5 – Indicative Shared Pathway Cross Section.

**Figure 5 –
Cross Section**

Indicative Shared Pathway



6.6. Statutory Assessment Guidelines

- Any future development plan should include a traffic impact assessment for the affected area. This traffic impact assessment should be generally in accordance the access outcomes sought by this outline development plan and the *Lakes Entrance Northern Growth Area Traffic Assessment (August, 2012)*.
- Development should be designed to address the street where possible.
- A permeable street network must be created.
- Future development should, at the minimum, provide signs on Ostlers Road and Palmers Road where shared paths cross road networks. It is particularly important to include this provision when these roads are upgraded.
- The constructed detail of the path shall be determined by landscape architects and/or councils. It shall comply with relevant construction standards in order to facilitate both pedestrian and bicycle use.
- Road cross sections should comply with the Infrastructure Design Manual as well as Department of Transport Guidelines for Land Use and Development: Public Transport, 2008 where provision for public transport has been allowed.
- Connector streets (including any culverts and all related infrastructure) must be constructed progressively by development proponents as part of the subdivision works (before the issue of a statement of compliance for the relevant stages);
- All intersections must be designed, constructed and controlled generally in accordance with the *Lakes Entrance Northern Growth Area Traffic Assessment (August, 2012)* and to the satisfaction of the Responsible Authority and the Roads Corporation;
- Subdivisions must be staged to provide for the timely connection of road links between properties and to the arterial road network, supporting transport and movement links (walking, cycling and vehicular links);
- Provision must be made for any bus route and bus stop (which must have direct and safe pedestrian access connected to an existing walking / cycling path) where nominated by the Director of Public Transport;
- Walking and cycling path crossings must be provided at all relevant intersections and at the intersection of key LENGA-wide shared paths and higher order roads. In accordance with the ODP the land must be provided to the municipal council at no cost;
- Cycle parking facilities must be provided in convenient and prominent locations at key destinations such as schools, community centres, activity centres and public transport interchanges.
- Development must be designed to address emergency access requirements.

7. Drainage Infrastructure

The natural slope and waterways which are present within the Lenga underpin the ultimate urban form of the precinct. Waterways within the Lenga and wider Lakes Entrance area hold high ecological significance they are to be retained, protected and embraced as part of future urban development.

In accordance with the requirements of the *Water Act 1999*, a 30 metre ecological buffer is to be provided either side of identified waterways. Where appropriate these ecological buffers and existing dams in the

Lenga will be used to facilitate necessary drainage infrastructure to serve the precinct. Refer to Plan 11 – Drainage Features.

Drainage infrastructure throughout the precinct will provide for stormwater drainage detention and water quality requirements. An integrated delivery of retardation basins and wetlands has been identified within the ODP. Refer to Figure 6 – Retarding Basin and Wetland. Water sensitive urban design features are to be sized to meet best practice for the system and wetlands are to be located within the base of the retarding basins.

The drainage design seeks to implement the principles of water sensitive urban design. By providing a series of integrated wetlands throughout the Lenga Precinct which allow for best practice stormwater management, by establishing:

- 80% reduction in Total Suspended Solid loads;
- 45% reduction in Total Phosphorus loads;
- 45% reduction in Total Nitrogen loads; and
- 70% reduction in Gross Pollutant loads.

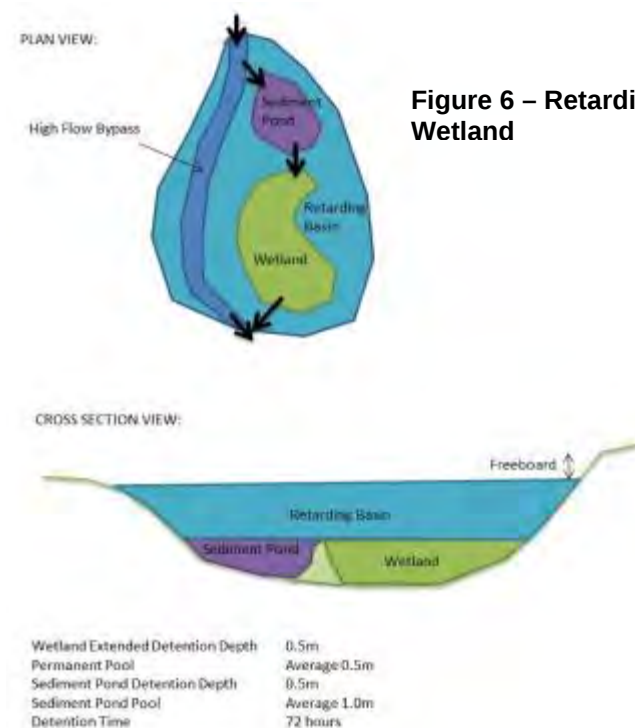
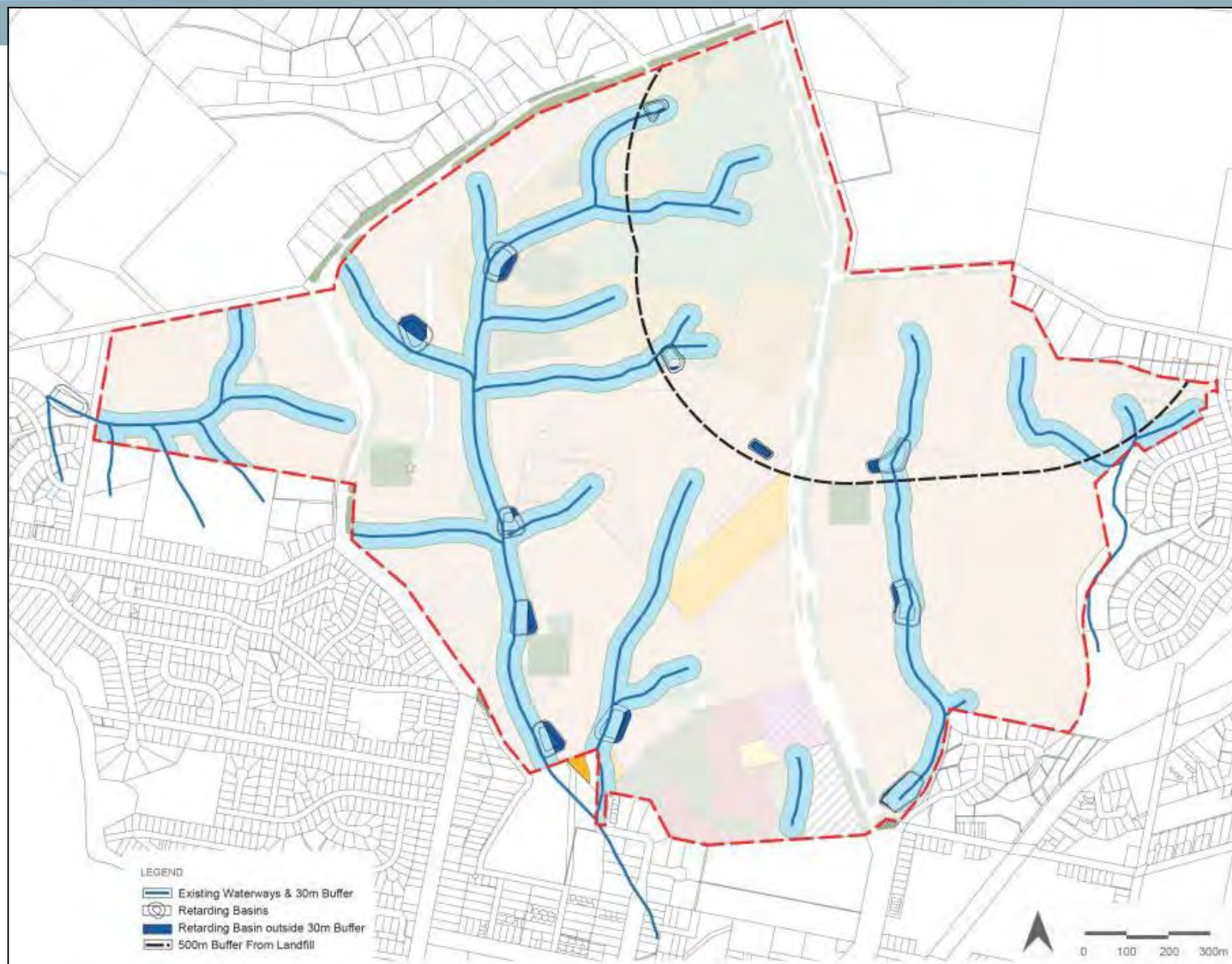


Figure 6 – Retarding Basin and Wetland

Plan 11 – Drainage Features

Note: The level of bushfire risk associated with any revegetation or vegetation management pertaining to waterways, basins or wetlands must be demonstrated to be acceptable.





7.1. Statutory Assessment Guidelines

- Any future development plan should include a stormwater management plan for the affected area. This stormwater management plan should be generally in accordance with the drainage outcomes sought by this Outline Development Plan and the *Northern Growth Area Lakes Entrance Development Concept Plan Hydrology - Water Technology, October 2013*.
- Storage and drainage feature locations are to be provided, consistent with Plan 11 – Drainage Features.
- Wetlands and water sensitive urban design features are to be designed in accordance with Plan 11 – Drainage Features.
- Drainage reserves are to be created at the time of subdivision and management transferred to the municipal council or relevant water authority.
- Incorporate Water Sensitive Urban Design including retarding basins and wetlands to manage stormwater flows and create habitat for native plants and animals along creeks and drainage lines;
- Local retardation basins, overland flow paths, water quality treatment trains and stream interface / outlet works, must be provided to the satisfaction of the responsible authority on relevant land parcels in accordance with the stormwater management strategy for the LENGA, as approved by the relevant drainage authority;
- Wetlands and a treated stormwater storage basin (for re-use of water by the irrigation system for the regional active recreation area) must be provided to the satisfaction of the responsible authority;



8.Environment

8.1. Lakes Entrance Northern Growth Area Native Vegetation Precinct Plan

The *Lakes Entrance Northern Growth Area Native Vegetation Precinct Plan (October 2013)* (the “Lakes Entrance Lenga NVPP”) has carried out a full biodiversity and net gain assessment of the Lenga. This Plan identifies areas of vegetation to be conserved and areas to be removed with offsets provided. All development within the Lenga must comply with the Lakes Entrance Lenga NVPP.

8.2. Bushfire Protections Measures

- Future subdivision layout must have regard for identified bushfire risk and respond with appropriate road layout and hierarchies, provide suitable emergency and service access and include as appropriate suitable separation buffers from identified hazard and where appropriate have regard to Bushfire Management Overlay and any nominated Schedule.
- Further strategic work will be undertaken to implement a Schedule to the Bushfire Management Overlay as required

8.3. Planning Guidelines

- Any development plan prepared is to be in accordance with the Lakes Entrance Lenga NVPP;
- Any development plan prepared must address the key provisions of the Planning Scheme which relate to the ESO, BMO and VPO;
- Development in proximity to trees identified for protection in the Lakes Entrance Lenga NVPP must be completed in accordance with any Tree Protection and Construction Management Plan; and
- Any Tree Protection and Construction Management Plan developed in consultation with the Department of Sustainability and Environment must address the need for measures to limit and manage earthworks in subdivisional and public open space to support health of existing vegetation.
- Planning practice note 64 – Local Planning for Bushfire Protection (August 2013)



9. Open Space

The open space network contains active and passive open space which will be well connected through the shared pathway and road networks. Open space is strategically located within 400 metres of most future residential allotments and in conjunction with the LENGA's natural attributes and activity centres. Refer to Plan 12 – Open Space.

Open space will allow for the productive use of encumbered land within the LENGA and is to be designed for passive recreation purposes, providing good location for walking and cycling.

9.1. Passive Open Space

Best Practice requires that local parks are provided within a 400 meter catchment of all dwellings. This radius enables clear sightlines to provide passive surveillance in surrounding areas has been developed in accordance with the Crime Prevention Through Environmental Design (CPTED) Planning principles.

The ODP identifies two areas of passive open space within the LENGA. These passive open space areas have been strategically located to be accessible for all new dwellings within the LENGA and to co-locate with conservation reserves and waterways.

A shared pathway is also identified within the ODP which is intended to act as the spine of the community, connecting open space, conservation reserves, activity centres and new residential areas. This shared pathway will primarily be established in waterway reserves, and will extend along the internal road network in some locations. The shared pathway has also been strategically located to maximise opportunities for connectivity with the existing residential area in Lakes Entrance and the town centre.

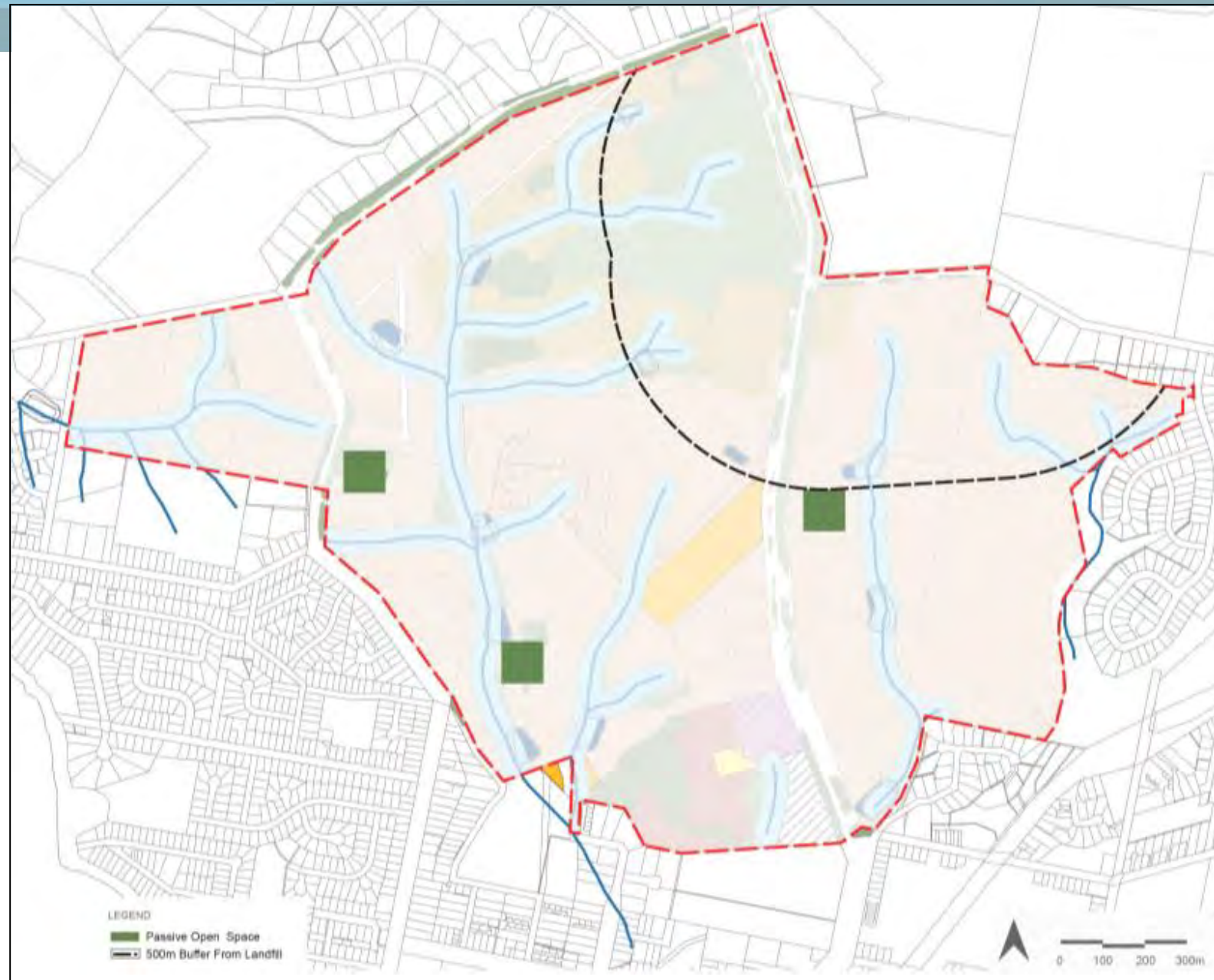
9.2. Active Open Space

Active open space has been provided immediately adjacent to the growth area in Council owned land at the Aquadome Aquatic Reserve site on Palmers Road. This is in accordance with the Lakes Entrance Northern Growth Area Social Impact Assessment (August, 2012). This accords with Councils Soccer and Croquet Concept plan and provide for two square fields within close proximity to the growth precinct.

The drainage corridor includes a high quality open space link connecting activity centres, open spaces and community facilities through a safe shared path trail;

- All public open space (excluding habitat conservation areas) must be provided to the satisfaction of the responsible authority before the transfer of land:
 - with completed bulk earthworks where required, fit for intended purpose;
 - cleared of all rubbish and environmental weeds, top soiled and grassed with warm climate grass;
 - with a water tapping point for recycled and potable water;
 - with landscaping including drought-resistant tree and other planting;
 - with shared paths and footpaths, as appropriate;
 - with vehicle exclusion devices and maintenance access points;
 - active recreation spaces will be connected to all appropriate utilities;
 - with the installation of basic play equipment, as appropriate; and
 - funding for these works will include development contributions collected under the development infrastructure levy in the Lakes Entrance LENGA DCP;
- Subdivision design is to incorporate the environmental, cultural and historical values of a site.
- Development of public open space and drainage works will meet the design requirements for fauna habitat.

Plan 12 – Open Space



10. Community Facilities

Community facilities are accommodated for in the Outline Development Plan. These are designed to support a strong and viable Lakes Entrance community which is to grow as the result of the cumulative effects of the proposed residential developments. The many social and environmental challenges outlined *Lakes Entrance Social Impact Assessment (August, 2012)* provide an opportunity to adapt to a changing landscape and to ensure that social infrastructure supports the community into the future.

Development of community facilities within the LENGA will generate a network of community hubs throughout the precinct. These areas will form focal points for community activity and interaction within the area.

Locations of community facilities seek to provide for safe and convenient access by public transport, walking and cycling networks.

Infrastructure requirements to be accommodated within the LENGA are outlined in Table 8. These requirements are reflected in the Outline Development Plan.

Funding for community facilities will be drawn from a range of sources including the Lakes Entrance Northern Growth Area Development Contributions Plan (LENGA DCP).

Table 8 – Infrastructure Requirements

Recommendation	Area Required	Location
Develop multi-purpose community facility with flexible spaces for :- • Meetings • Art displays and small • Performance pieces • Consulting rooms for primary • Health providers • Community Programs through • Neighbourhood House • Commercial kitchen	0.5 ha	Northern Growth Area Development (55 Palmers Rd)
Create two new playgrounds/neighbourhood parks	2 ha	Northern Growth Area Development



Table 8 – Infrastructure Requirements Continued

Recommendation	Area Required	Location
Develop an activity centre to service the new development and those already under construction to the east of Palmers Rd.	3.5 ha	Northern Growth Area Development (55 Palmers Rd)
Develop site for Emergency Services location	2 ha	Northern Growth Area Development (55 Palmers Rd)
Develop proposal for sports fields with pavilion, and playground	4 ha	Palmers Road adjacent to Lakes Entrance Aquadome

10.1. Statutory Guidelines

- Community facilities should be co-located and where possible integrated with other East Gippsland Shire Council and government facilities, appropriate commercial facilities and / or proposed public open spaces;
- Emergency services are to be located:
 - o within or adjoining community hubs;
 - o within or on the edge of activity centres; or
 - o on either connector streets or arterial roads where access can be provided safely.
- Land identified for community facilities is to be provided to Council at the time of subdivision at no cost.
- The community facilities located adjacent to the NAC will be developed to the satisfaction of the responsible authority.



11. Services provision

Whilst the exact location of physical infrastructure and staging of development will be determined by proponents of development, the ODP provides an opportunity to ensure that integrated servicing of the LENGA will facilitate innovative, sustainable and energy efficient approaches to urban infrastructure.

The LENGA will be serviced appropriately with supply provided to all developed lots to the satisfaction of the relevant authority. Urban services provided to the LENGA will be

- A potable water supply;
- A reticulated sewerage;
- An underground electricity; and
- Telecommunications;
- Hydrants for fire fighting purposes.

11.1. Statutory Assessment Guidelines

- Permits for the subdivision of land into lots must include a condition requiring the installation of infrastructure to the satisfaction of the responsible authority (Refer to Table 9); and
- Development must retain and protect existing easements within the LWP. These assets are to be provided within a designated reserve or road reserve to the satisfaction of the relevant authority.



Table 9 - Responsible Service Authorities

Service	Responsible Authority
Water	Gippsland Water
Sewerage	Gippsland Water
Electricity	SP Ausnet
Telecommunications	Telstra

12. Infrastructure Provision and Maintenance Responsibilities

Infrastructure within the Lenga is to be delivered through a number of mechanisms including:

- land development works and / or full funding by developers (individually or jointly in some cases);
- development contributions (community infrastructure levy and development infrastructure levy);
- utility service provider works and / or funding;

- capital works and / or funding by the Australian Government, State Government, East Gippsland Shire Council and other agencies and non-Government organisations; and
- grants funding available from a variety of sources.

Table 10 - Infrastructure Required in Lakes Entrance Lenga summarises the infrastructure required to ensure the appropriate development of Lenga generally in accordance with the Lenga. ODP

Table 10 – Infrastructure Required in Lenga

No.	Infrastructure Item	Works	Comments	Funding Responsibility
Roads				
<i>Intersection Works</i>				
1.	Access Point 1: (Blairs Road)	Basic Left	Pavement widening/turning lane	Developer
		Basic Right	Pavement widening/turning lane	Developer
2.	Access Point 2: (Blairs Road)	Basic Left	Pavement widening/turning lane	Developer
		Basic Right	Pavement widening/turning lane	Developer
3.	Access Point 3: (Blairs Road)	Basic Left	Pavement widening/turning lane	Developer
		Basic Right	Pavement widening/turning lane	Developer

No.	Infrastructure Item	Works	Comments	Funding Responsibility
4.	Access Point 4: (Ostlers Road)	Basic Left	Pavement widening/turning lane	Developer
		Basic Right	Pavement widening/turning lane	Developer
5.	Access Point 5: (Ostlers Road)	Basic Left	Pavement widening/turning lane	Developer
		Channelised Right (Short)	Pavement widening/turning lane	Developer
6.	Access Point 6: (Ostlers Road)	Basic Left	Pavement widening/turning lane	Developer
		Channelised Right	Pavement widening/turning lane	Developer
7.	Access Point 7: (Colquhoun Road)	Auxiliary Left	Pavement widening/turning lane	Developer
		Channelised Right	Pavement widening/turning lane	Developer
8.	Access Point 8: (Colquhoun Road)	Auxiliary Left (Short)	Pavement widening/turning lane	Developer
		Channelised Right (Short)	Pavement widening/turning lane	Developer
9.	Access Point 9: (Colquhoun Road)	Auxiliary Left	Pavement widening/turning lane	Developer
10.	Access Point 10: (Colquhoun Road)	Auxiliary Left (Short)	Pavement widening/turning lane	Developer
		Channelised Right	Pavement widening/turning lane	Developer
11.	Access Point 11: (Colquhoun Road)	Basic Left	Pavement widening/turning lane	Developer
		Channelised Right	Pavement widening/turning lane	Developer
12.	Access Point 12: (Colquhoun Road)	Auxiliary Left (Short)	Pavement widening/turning lane	Developer
		Channelised Right	Pavement widening/turning lane	Developer
13.	Access Point 13: (Colquhoun Road)	Auxiliary Left (Short)	Pavement widening/turning lane	Developer
		Channelised Right (Short)	Pavement widening/turning lane	Developer
14.	Access Point 14: (Ostlers Road)	Basic Left	Pavement widening/turning lane	Developer
		Basic Right	Pavement widening/turning lane	Developer
Road Works				
15.	Connector and access roads	Construction	Constructed to Council standards	Developer
16.	Connector road waterway crossings	Construction	Constructed to Council standards	Developer

No.	Infrastructure Item	Works	Comments	Funding Responsibility
17.	Service/fronting roads	Construction	Constructed to Council standards	Developer
18.	Shared Pathway	Construction	Constructed to Council standards	Developer
Public Transport				
19.	Bus Service			DOT
20.	Bus stops	Construction	Within the LENGA	Council
Drainage Works – as per Water Technology Report (October 2013)				
21.	Waterways	Land and construction		Developer
22.	Retarding Basins	Land and construction		DCP (DIL)
23.	Wetland Treatments	Land and construction		DCP (DIL)
Community Facilities				
24.	Multipurpose community facility	Land and construction		DCP (CIL)
25.	Playgrounds/neighbourhood parks	Land and construction		DCP (CIL)
26.	Neighbourhood activity centre	Land and construction		DCP (CIL)
27.	Emergency Service relocation	Land and construction		DCP (CIL)
28.	Active open space including football/cricket field with pavilion, netball courts and playground	Land and construction		DCP (CIL)
Biodiversity				
29.	Conservation Areas	Construction		Developer
Services				
30.	Potable Water	Construction		Gippsland Water
31.	Sewerage	Construction		Gippsland Water
32.	Electricity	Construction		SP Ausnet

No.	Infrastructure Item	Works	Comments	Funding Responsibility
33.	Telecommunications	Construction		NBN Co.

12.1. Development Contributions Plan

A Development Contribution Plan (DCP) has been prepared for the Lenga in conjunction with this Lenga ODP. The Lenga DCP is an incorporated document in the Scheme.

13. Glossary of Terms

Active public open space	Land set aside for the specific purpose of active recreation, including playing fields and courts and their associated buildings and infrastructure.
Community facilities	Infrastructure provided by government or non-government organisations for accommodating a range of community support services, programs and activities. This includes facilities for education and learning (such as childcare, pre-schools, government and non-government primary and secondary schools, universities, adult learning centres), health and community services (such as maternal and child health, hospitals, aged care, doctors, dentists, family and youth services, specialist health services); community (such as civic centres, libraries, neighbourhood houses), arts and culture (such as galleries, museums, performance space), sport, recreation and leisure (such as public open space, swimming pools and other recreation), justice (such as law courts), voluntary and faith (such as places of worship) and emergency services (such as police, fire and ambulance stations).
Conventional Density Housing	Housing with average density of 7 to 11 dwellings per net developable hectare.
Developer	The proponent for the proposed development of land or the planning permit applicant for a proposed new land use or development.
Development	Includes: a) the construction or exterior alteration or exterior decoration of a building; b) the demolition or removal of a building or works; c) the construction or carrying out of works; d) the subdivision or consolidation of land, including buildings or airspace; e) the placing or relocation of a building or works on land; and f) the construction or putting up for display of signs or hoardings;
Development Contributions Plan	Document that sets out the contributions expected from each individual landowner to fund infrastructure and services. Refer to Part 3B of the <i>Planning and Environment Act 1987</i> .
Encumbered public open	Land for public open space that is constrained for development purposes by easements for electricity transmission lines, sewers or gas, by retarding basins or wetlands, by landfill and by habitat conservation areas. This land may be used for a range of

space	activities including walking / cycling trails and active recreation.
Outline Development Plan	Lakes Entrance Northern Growth Area Outline Development Plan
Frontage	The road alignment at the front of a lot. If a lot abuts two or more roads, the one to which the building or proposed building has its main pedestrian entry.
Gross residential density	Gross residential density means the number of dwellings per hectare of land excluding encumbered land, arterial roads and other roads with four or more lanes.
Linear public open space network	Corridors of public open space such as along waterways that link nodes of public open space or other activity areas or community facilities.
Native Vegetation Precinct Plan	A plan relating to native vegetation within the Lenga that must be implemented in conjunction with the Lakes Entrance Lenga ODP. The Lakes Entrance Lenga NVPP is incorporated into the Scheme and listed in the schedule to Clause 52.16.
Medium density housing	Housing with an average density of 16 to 30 dwellings per net developable hectare.
Net development area	Total amount of land within the Lenga that is made available for development of housing and employment buildings, including lots, local and connector streets. Total Lenga area minus community facilities and open space, arterial roads and encumbered land. Small local parks defined at subdivision stage are included in the net developable area. Net developable area may be expressed in terms of hectare units (that is, net developable hectare (NDHa)).
Net residential area	As for net developable area but excludes neighbourhood activity centres, non-government schools and other existing or permitted non-residential land uses (such as golf course sites). Net residential area may be expressed in terms of hectare units (that is, net residential hectare (NRHa)).
Passive public open space	Public open space that is set aside for parks, gardens, linear corridors, habitat conservation, natural systems, nature reserves, public squares and community gardens that are made available for passive recreation, play and unstructured physical activity including walking, cycling, hiking, revitalisation, contemplation and enjoying nature.
Scheme	East Gippsland Shire Planning Scheme
Water Sensitive Urban Design	A sustainable water management approach that aims to provide water-quality treatment, flood management to reduce the pollution carried to waterways and more sustainable urban landscapes. Key principles include minimising water resistant areas; recharging natural groundwater aquifers (where appropriate) by increasing the amount of rain absorbed into the ground; encouraging onsite re-use of rain; encouraging on-site treatment to improve water quality and remove pollution and using temporary rainfall storage (retarding basins / wetlands) to reduce the load on drains and improve landscape viability.



14. Referenced Documents

Lakes Entrance Northern Growth Area Native Vegetation Precinct Plan (October 2013) prepared by East Gippsland Shire Council

Lakes Entrance Northern Growth Area Hydrology Plan, Water Technology (October 2013) prepared by Water Technology Pty Ltd

Lakes Entrance Northern Growth Area Social Impact Assessment (August, 2012) prepared by East Gippsland Shire Council

Lakes Entrance Northern Growth Area Development Contributions Plan (November 2013) prepared by Urban Enterprise Pty Ltd

Lakes Entrance *Northern Growth Area* **Native Vegetation** **Precinct Plan**

Amendment C112 to the East Gippsland Planning Scheme

October 2013





East Gippsland Shire Council
273 Main Street PO Box 1618
Bairnsdale VIC 3875
www.eastgippsland.vic.gov.au
ABN: 81 957 967 765

Acknowledgements:

The Department of Environment and Primary Industries - Gippsland Environment and Water unit:

- Environmental Advice and Approvals staff
- East Gippsland Terrestrial Biodiversity staff

Lakes Entrance Northern Growth Area Native Vegetation Precinct Plan

Contents

- 1 Purpose
- 2 Vegetation protection objectives
- 3 Native Vegetation to be protected
- 4 Native Vegetation which can be removed, destroyed or lopped
- 5 Offset calculations
- 6 Conditions
- 7 Procedures for the collection of any payments
- 8 Exemptions and other information
- 9 Reference documents

Maps

- Map 1: Area to which the Native Vegetation Precinct Plan applies
- Map 2: Native Vegetation to be protected and removed

Tables

- Table 1: Habitat Zones of native vegetation to be protected
- Table 2: Scattered Trees to be protected
- Table 3: Habitat Zones of native vegetation which can be removed
- Table 4: Scattered Trees which can be removed
- Table 5: Offset requirements for Habitat Zones of native vegetation
- Table 6: Offset requirements for Scattered Trees
- Table 7: Property offset summary for Habitat Zones and Scattered Trees which can be removed

This is the Lakes Entrance Northern Growth Area Native Vegetation Precinct Plan listed under the Schedule to Clause 52.16 of the East Gippsland Planning Scheme. The removal, destruction or lopping of native vegetation in accordance with this Native Vegetation Precinct Plan, does not require a permit provided conditions and requirements specified in this Native Vegetation Precinct Plan are met.

The Lakes Entrance Northern Growth Area Native Vegetation Precinct Plan applies to all land shown in Map 1.

1. Purpose

The purpose of the Lakes Entrance Northern Growth Area Native Vegetation Precinct Plan is to:

- Specify the native vegetation to be protected and the native vegetation that can be removed, destroyed or lopped.
- Ensure that areas set aside to protect native vegetation are managed to conserve ecological values in accordance with the Lakes Entrance Northern Growth Area Outline Development Plan (EGSC 2013).
- Ensure that the removal, destruction or lopping of native vegetation specified to be protected is consistent with conserving the ecological values of these areas and is in accordance with regulatory requirements.
- Set out the works or other necessary actions required to offset the removal, destruction or lopping of native vegetation.
- Streamline the planning approvals process through a landscape approach to native vegetation protection and management.

2. Vegetation protection objectives to be achieved

The vegetation protection objectives to be achieved are to:

- Conserve as habitat a patch area of 15 hectares of high quality, native vegetation in the north east corner of the precinct.
- Conserve 3.5 hectares of selected stands of Coast Grey Box *Eucalyptus bosistoana*.
- Protect native vegetation within waterway corridors, and revegetate when consistent with maintaining an acceptable level of bushfire risk.
- Protect native vegetation on roadsides significant for habitat and ecological connectivity.
- Consolidate ecological connectivity by linking a large area of high quality, native vegetation with waterway corridors, smaller significant vegetation patches, stands of scattered trees and roadside vegetation.
- Minimise degradation and fragmentation of native vegetation within protected habitat zones, conservation areas, roadside vegetation or waterway corridors.
- Maintain nectar production and hollow formation through preferential retention and protection of large trees.
- Remove understorey vegetation for bushfire risk management in identified selected areas only.

3. The Native Vegetation to be protected

The native vegetation to be protected is described in Tables 1 and 2 and shown in Map 2 to this Plan.

The native vegetation to be protected should not be removed. The vegetation has been shown to be protected because a landscape wide approach to retention and removal of native vegetation has been adopted in the preparation of this Native Vegetation Precinct Plan rather than a site by site approach. Decisions relating to removal of certain individual trees and areas of native vegetation have been made in a holistic manner taking into account scattered trees and areas of native vegetation

which are proposed to be protected. The ad-hoc removal of native vegetation which is identified for protection may undermine the holistic and landscape wide approach to the preparation of this Native Vegetation Precinct Plan.

A minimum of 15 hectares is to be protected as a conservation area on property number 16 (consisting of habitat zones HZ21i, HZ21ii, HZ21iii, HZ22i, HZ24i, HZ24ii, HZ25Ai and HZ25B) in one contiguous patch. The habitat scores for these habitat zones as described in Table 1 must be maintained. The conservation area may be used, as appropriate, to offset native vegetation losses.

Coast Grey Box *E. bosistoana*, in stand densities at or near the ecological vegetation class benchmark, is to be protected within 3.5 hectares of conservation areas or public open spaces on properties number 7, 9 and 29.

All habitat conservation and waterway corridors areas must be developed and provided, to the satisfaction of the Responsible Authority, fit for intended purpose, clear of waste or rubbish and free of noxious and environmental weeds.

At least three large Gippsland Red-gum *E. tereticornis* ssp. *mediana* trees, representing the eastern-most known occurrence of this sub-species, are to be protected on property 26. Additional selective retention of trees may be desirable to retain the landscape character of the precinct, taking into consideration the Outline Development Plan Principles and Objectives set out in the Lakes Entrance Northern Growth Area Outline Development Plan (EGSC 2013).

A tree protection and construction management plan must be prepared before commencement of works. When undertaking subdivision, building and works or vegetation removal within 50 metres of native vegetation identified to be protected or retained, a buffer area to protect this vegetation from indirect loss must be established. The buffer must accord with the Native Vegetation Technical Information Sheet - Defining an acceptable distance for tree retention during construction works (DSE 2011), and be at least two metres from any protected vegetation. All adverse activity must be excluded from within the buffer unless confirmed by a qualified arborist that the activity will cause no significant damage.

Permanent protection areas must be provided for all protected vegetation. Protection of a tree requires an area with twice the canopy diameter of the tree to be fenced or otherwise protected from adverse impacts. Grazing by stock and soil disturbance are not permitted. Fallen timber is to be retained, weeds must be controlled and other intervention or management must be provided as necessary to ensure that adequate natural regeneration or planting can occur. The protection area must also be sufficient to minimise losses of vegetation that may result from a need to mitigate risk to personal safety or property due to the potential structural failure hazard of trees. Other development or activities, including location of dwellings and active or passive recreation such as children's play areas or walking paths, must be excluded from areas at risk to structural failure of trees unless it is confirmed by a qualified arborist that the specific development or activity is subject to an acceptable minimal current and on-going risk from the structural failure of a protected tree.

Applications for subdivision must demonstrate how the design response avoids the removal of native vegetation and is consistent with the Native Vegetation Precinct Plan. In particular the protection of habitat scores as described in Table 1 must be demonstrated. The design of subdivision must ensure that there is a road interface or other effective buffer or permanent management strategy for vegetation protection, with manageable boundaries and access between protected native vegetation and

the residential area. If requirements for protected habitat zones and protected scattered trees are not met, the vegetation will be considered by default as lost and must be offset in accordance with Clause 52.16.

Where applicable, a Bushfire Site Assessment must be prepared and must identify native vegetation to be protected as described in Tables 1 and 2 and shown on Map 2. Appropriate defendable space as required under Clause 52.47 must be provided without additional removal or modification of protected vegetation. 100% of the canopy trees of habitat zones HZ22ii and HZ25Aii on property number 16 are to be protected however the understorey may be modified or removed. The required offset for this area is based on a proportional (60%) partial loss in habitat quality with an assumed loss of 100% of the current understorey and 100% retention of the canopy trees.

4. Native Vegetation that can be Removed, Destroyed or Lopped

The native vegetation described in Tables 3 and 4 and shown as native vegetation that can be removed in Map 2 can be removed, destroyed or lopped, subject to the requirements and conditions as allowed under Clause 52.16.

Where a scattered tree is not listed in either Table 2 or Table 4 or shown to be protected in Map 2, it is considered to be a scattered tree of low conservation significance which can be removed, destroyed or lopped subject to the requirements and conditions as allowed under Clause 52.16.

Permits for further native vegetation removal to the minimum extent necessary to facilitate efficient subdivision may be reasonably sought, including:

- On roadsides where the removal is to enable essential road upgrades or at a minimised number of entry points at locations of minimum impact for subdivisional access roads.
- To facilitate drainage works by or on behalf of the Municipality.
- Where, as agreed to in writing by East Gippsland Catchment Management Authority and to the satisfaction of the Responsible Authority, the extent of a declared waterway corridor is reduced.

5. Offset Calculations

Offset requirements are based on values identified by the Lakes Entrance Northern Growth Area Biodiversity Assessment Report (EGSC 2012) and the applicable regulatory framework for native vegetation at the time (NRE 2002). Offset requirements for the removal of native vegetation which can be removed, are described in Native Vegetation Precinct Plan Tables 5 and 6. A summary of offset totals for each property is listed in Table 7.

Application may be made for review or variation of offset requirements, subject to the requirements and conditions as allowed under Clause 52.16.

6. Conditions

The following conditions apply from the gazettal of the Native Vegetation Precinct Plan.

- This Native Vegetation Precinct Plan ceases to authorise any removal, destruction or lopping of any native vegetation after 1 July 2023. However, this Native Vegetation Precinct Plan will continue to protect vegetation identified in the plan to be protected or retained.
- All earthworks must be undertaken in a manner that will minimise soil erosion and adhere to Construction Techniques for Sediment Pollution Control (EPA 1991).
- Only indigenous plants of local provenance may be used in revegetation works of conservation areas.
- Water run-off must be designed to ensure that native vegetation to be protected is not compromised.
- Any native vegetation to be removed (in accordance with this Native Vegetation Precinct Plan) must be clearly marked on site to the satisfaction of the Responsible Authority whilst works are being undertaken within the vicinity.
- Prior to the removal, destruction or lopping of any native vegetation within any given property (based on the property number in Map 1 of the Native Vegetation Precinct Plan) offsets must be provided, and a legal agreement entered into, in relation to all of the native vegetation within that property which this Native Vegetation Precinct Plan allows to be removed, destroyed or lopped, to the satisfaction of the Secretary to the Department of Environment and Primary Industries.
- Prior to felling any tree which may be removed, the tree must be examined by a suitably qualified zoologist for the presence of fauna in hollows or external nests. If native fauna species are located, they must be salvaged and relocated to the closest suitable vegetation, in consultation with the Department of Environment and Primary Industries
- Prior to commencement of any works including vegetation removal a highly visible vegetation protection fence must be erected as required in accordance to this Native Vegetation Precinct Plan to protect vegetation from indirect loss, for all native vegetation which has been identified to be protected, unless otherwise agreed to in writing by the Secretary to the Department of Environment and Primary Industries and to the satisfaction of the Responsible Authority.
- Any construction stockpiles fill and machinery must be placed away from areas supporting native vegetation and drainage lines to the satisfaction of the Responsible Authority.

7. Procedures for the Collection of any Payments

No payments are necessary or specified.

8. Exemptions and Other Information

Planted vegetation on property 3 when within 30 metres of a waterway is protected. Removal of planted vegetation at property 3 is not required to be offset. Medium, large or very large old trees remnant of the original vegetation and within habitat

zones which can be removed, are subject to the requirements and conditions of this Native Vegetation Precinct Plan.

Planted vegetation on property 26 when within 30 metres of a waterway is protected. Removal of planted vegetation at property 26 is required to be offset to the satisfaction of the responsible authority with the written agreement of the Department of Environment and Primary Industries. Medium, large or very large old trees remnant of the original vegetation and within habitat zones which can be removed, are subject to the requirements and conditions of this Native Vegetation Precinct Plan.

Properties 18 and 19 are not included in this Native Vegetation Precinct Plan. Native vegetation in these areas is subject to the standard considerations of Clause 52.17 and does not qualify for the exemptions provided to areas within the Native Vegetation Precinct Plan. Schedule 1 to the Vegetation Protection Overlay of the East Gippsland Planning Scheme (VPO1) does not apply to land within the Native Vegetation Precinct Plan but does apply to properties 18 and 19 and to the roadside adjoining properties 18 and 19.

9. Reference Documents

DSE 2011, Native Vegetation Technical Information Sheet, Defining an acceptable distance for tree retention during construction works. Victorian Government Department of Sustainability and Environment, Melbourne, September 2011.

EGSC 2012, Lakes Entrance Northern Growth Area Biodiversity Assessment Report. East Gippsland Shire Council, November 2012.

EGSC 2013, Lakes Entrance Northern Growth Area Outline Development Plan. Prepared by Smec Urban for East Gippsland Shire Council, October 2013.

EPA 1991, Construction Techniques for Sediment Pollution Control, Environment Protection Authority Victoria, May 1991.

NRE 2002, Victoria's Native Vegetation Management: A Framework for Action. The State of Victoria, Department of Natural Resources and Environment, 2002.

Tables

Table 1: Habitat Zones to be protected

Property Number or Road Name	Title Number	Habitat Zone	EVC No. and initials	Size in hectares	Habitat Score	Large Old Trees in Zone	Conservation Significance	Notes
3	2\PS446606	HZ 39	151 PGF	0.118	27	0	Medium	
3	2\PS446606	HZ 40i	151 PGF	0.291	37	1	High	Planted without public funding (excludes remnant old trees)
3	2\PS446606	HZ 40iii	151 PGF	0.140	37	3	High	Planted without public funding (excludes remnant old trees)
3	2\PS446606	HZ 41	32 WTR	0.323	38	1	High	Planted without public funding (excludes remnant old trees)
7	2\PS513312	HZ 28i	151 PGF	0.767	42	4	High	
9	1\LP219776	HZ 29	15 LBF	0.509	60	4	Very High	
9	1\LP219776	HZ 30	151 PGF	0.673	51	3	Very High	
9	1\LP219776	HZ 33	151 PGF	0.960	33	7	High	
10	2\PS610073	HZ 46	125 PGW	0.188	40	0	Very High	
10	2\PS610073	HZ 47	125 PGW	0.073	40	0	Very High	
10	2\PS610073	HZ 49	53 SS	0.373	44	0	Very High	
10	2\PS610073	HZ 50	53 SS	0.085	44	0	Very High	
10	2\PS610073	HZ 51	53 SS	0.774	50	0	Very High	
10	2\PS610073	HZ 52i	53 SS	0.377	44	0	Very High	
10	2\PS610073	HZ 52ii	53 SS	0.529	44	0	Very High	
10	2\PS610073	HZ 53	53 SS	0.855	55	0	Very High	
10	2\PS610073	HZ 54	53 SS	0.469	44	0	Very High	
15	1\PS513312	HZ 31i	15 LBF	0.641	28	1	Medium	
15	1\PS513312	HZ 32ii	16 LF	0.388	40	1	High	
16	2\PS441043	HZ 21i	151 PGF	0.479	52	3	Very High	
16	2\PS441043	HZ 21ii	151 PGF	0.341	52	4	Very High	
16	2\PS441043	HZ 21iii	151 PGF	3.059	52	16	Very High	
16	2\PS441043	HZ 22i	16 LF	10.211	61	99	High	
16	2\PS441043	HZ 22ii	16 LF	2.007	61	19	High	Must retain 100% canopy, may remove 100% understorey
16	2\PS441043	HZ 23i	15 LBF	0.065	29	3	Medium	Estimated Large Old Tree number
16	2\PS441043	HZ 24i	15 LBF	0.514	57	2	Very High	
16	2\PS441043	HZ 24ii	15 LBF	1.235	57	3	Very High	

16	2\PS441043	HZ 25Ai	15 LBF	0.630	47	3	High	
16	2\PS441043	HZ 25Aii	15 LBF	0.173	47	0	High	Must retain 100% canopy, may remove 100% understorey
16	2\PS441043	HZ 25B	15 LBF	0.177	49	2	High	
16	2\PS441043	HZ 26	53 SS	0.354	21	0	High	
16	2\PS441043	HZ 27	53 SS	0.110	39	0	High	
17	1\PS441043	HZ 35	151 PGF	0.809	59	3	Very High	Does not over-ride 52.48 Bushfire Protection Exemptions
26	1\PS420976	HZ 45	32 WTR	1.041	30	0	High	Planted vegetation
32	31C\PP2412	HZ 36	16 LF	1.852	56	21	High	
32	31C\PP2412	HZ 37	16 LF	0.942	59	3	Very High	
32	31C\PP2412	HZ 38	53 SS	0.103	46	2	Very High	
Colquhoun Rd		HZ 15Bi	15 LBF	0.035	55	1	Very High	
Colquhoun Rd		HZ 15Bii	15 LBF	0.184	55	4	Very High	
Colquhoun Rd		HZ 16	16 LF	0.121	42	2	Low	
Colquhoun Rd		HZ 17	151 PGF	0.394	53	5	Very High	
Colquhoun Rd		HZ 18	15 LBF	0.232	47	1	High	
Colquhoun Rd		HZ 19	151 PGF	0.085	57	3	Very High	
Ostlers Rd		HZ 3A	151 PGF	0.131	52	6	Very High	
Ostlers Rd		HZ 3B	151 PGF	0.407	45	1	Very High	
Ostlers Rd		HZ 5A	151 PGF	0.095	38	2	High	
Ostlers Rd		HZ 5B	151 PGF	0.036	38	2	High	
Ostlers Rd		HZ 5C	151 PGF	0.088	29	0	High	
Ostlers Rd		HZ 6B	15 LBF	1.001	47	12	High	
Ostlers Rd		HZ 7	16 LF	0.464	50	1	Medium	
Palmers Rd		HZ 12Ai	15 LBF	0.174	45	0	High	
Palmers Rd		HZ 12Aii	15 LBF	0.227	45	2	High	
Palmers Rd		HZ 12Aiii	15 LBF	0.055	45	1	High	
Palmers Rd		HZ 12Aiv	15 LBF	0.086	45	1	High	
Palmers Rd		HZ 12Av	15 LBF	0.018	45	0	High	
Palmers Rd		HZ 12Avi	15 LBF	0.028	45	0	High	
Palmers Rd		HZ 12B	15 LBF	0.236	51	6	Very High	
Palmers Rd		HZ 13Ai	16 LF	0.458	41	2	Low	
Palmers Rd		HZ 13Aii	16 LF	0.242	41	4	Low	
Palmers Rd		HZ 13Bi	16 LF	0.028	36	0	Low	
Palmers Rd		HZ 13Bii	16 LF	0.032	36	0	Low	

Palmers Rd		HZ 13Biii	16 LF	0.184	36	0	Low	
Palmers Rd		HZ 14Ai	15 LBF	0.729	46	2	High	
Palmers Rd		HZ 14Aii	15 LBF	0.051	46	1	High	
Palmers Rd		HZ 14Aiii	15 LBF	0.255	46	5	High	
Palmers Rd		HZ 14Aiv	15 LBF	0.188	46	0	High	

Table 2: Scattered Trees to be protected

Property Number or Road Name	Title Number	Tree Identification Number	Species	Diameter at Breast Height cm	Size Class	EVC Number and Initial	Conservation Significance	Easting	Northing
3	2\PS446606	233	Blue Box	169	Very Large Old Tree	151 PGF	Medium	587065.4	5809007
3	2\PS446606	234	Coast Grey Box	62	Medium Old Tree	151 PGF	Medium	587072.8	5809027
3	2\PS446606	235	Coast Grey Box	81	Large Old Tree	151 PGF	Medium	587067.9	5809041
3	2\PS446606	236	Blue Box	65	Medium Old Tree	151 PGF	Medium	587058	5809088
3	2\PS446606	237	Blue Box	150	Very Large Old Tree	151 PGF	High	587134	5809278
7	2\PS513312	79	Blue Box	34	Small Tree	15 LBF	Low	587663	5809060
7	2\PS513312	80	Blue Box	51	Small Tree	15 LBF	Low	587666.3	5809051
7	2\PS513312	81	Blue Box	54	Medium Old Tree	15 LBF	Medium	587665.5	5809056
7	2\PS513312	82	Blue Box	77	Large Old Tree	15 LBF	Medium	587665.2	5809058
7	2\PS513312	83	Blue Box	59	Medium Old Tree	15 LBF	Medium	587668	5809054
7	2\PS513312	84	Blue Box	68	Medium Old Tree	15 LBF	Medium	587673.1	5809061
7	2\PS513312	85	Blue Box	22	Small Tree	15 LBF	Low	587668.2	5808986
7	2\PS513312	86	Coast Grey Box	31	Small Tree	15 LBF	Low	587689.2	5809036
7	2\PS513312	87	Coast Grey Box	21	Small Tree	15 LBF	Low	587692.1	5809030
7	2\PS513312	88	Coast Grey Box	20	Small Tree	15 LBF	Low	587702.6	5809034
7	2\PS513312	90	White Stringybark	50	Small Tree	15 LBF	Low	587780.8	5809173
7	2\PS513312	91	Mountain Grey Gum	55	Medium Old Tree	15 LBF	Medium	587738.1	5809182
7	2\PS513312	92	Red Ironbark	78	Large Old Tree	15 LBF	Medium	587726.7	5809113
7	2\PS513312	93	Red Ironbark	53	Medium Old Tree	15 LBF	Medium	587719	5809108
7	2\PS513312	94	Red Ironbark	83	Large Old Tree	15 LBF	Medium	587717.6	5809123
7	2\PS513312	95	Blue Box	104	Large Old Tree	15 LBF	Medium	587701.6	5809131

7	2\PS513312	96	Blue Box	60	Medium Old Tree	15 LBF	Medium	587706	5809115
7	2\PS513312	97	Blue Box	28	Small Tree	15 LBF	Low	587706.4	5809116
7	2\PS513312	98	Blue Box	40	Small Tree	15 LBF	Low	587707	5809113
7	2\PS513312	99	Blue Box	43	Small Tree	15 LBF	Low	587708	5809110
7	2\PS513312	100	Mountain Grey Gum	43	Small Tree	15 LBF	Low	587707.3	5809105
7	2\PS513312	101	Blue Box	32	Small Tree	15 LBF	Low	587706.9	5809103
7	2\PS513312	102	Blue Box	54	Medium Old Tree	15 LBF	Medium	587704.8	5809107
7	2\PS513312	103	Mountain Grey Gum	72	Large Old Tree	15 LBF	Medium	587700.7	5809106
7	2\PS513312	111	Blue Box	97	Large Old Tree	15 LBF	Medium	587654.8	5809208
7	2\PS513312	112	Blue Box	63	Medium Old Tree	15 LBF	Medium	587666	5809222
7	2\PS513312	113	Blue Box	56	Medium Old Tree	15 LBF	Medium	587671.4	5809220
7	2\PS513312	114	Blue Box	49	Small Tree	15 LBF	Low	587672.9	5809223
7	2\PS513312	115	Blue Box	62	Medium Old Tree	15 LBF	Medium	587678	5809219
7	2\PS513312	135	Coast Grey Box	68	Medium Old Tree	151 PGF	High	587377.4	5809267
7	2\PS513312	136	Coast Grey Box	60	Medium Old Tree	151 PGF	High	587386.6	5809263
7	2\PS513312	137	Coast Grey Box	34	Small Tree	151 PGF	Low	587386.7	5809270
7	2\PS513312	138	Coast Grey Box	38	Small Tree	151 PGF	Low	587399.6	5809274
7	2\PS513312	139	Coast Grey Box	99	Large Old Tree	151 PGF	High	587400.9	5809281
7	2\PS513312	140	Coast Grey Box	67	Medium Old Tree	151 PGF	High	587391.6	5809286
7	2\PS513312	141	Coast Grey Box	44	Small Tree	151 PGF	Low	587405.8	5809282
7	2\PS513312	142	Coast Grey Box	91	Large Old Tree	151 PGF	High	587413.1	5809281
7	2\PS513312	143	Blue Box	140	Very Large Old Tree	15 LBF	Medium	587446.8	5809311
7	2\PS513312	144	Coast Grey Box	87	Large Old Tree	15 LBF	Medium	587460.8	5809318
7	2\PS513312	145	Blue Box	68	Medium Old Tree	15 LBF	Medium	587459.3	5809319
7	2\PS513312	146	Blue Box	41	Small Tree	15 LBF	Low	587468.2	5809324
7	2\PS513312	147	Blue Box	54	Medium Old Tree	15 LBF	Medium	587468.4	5809322
7	2\PS513312	148	Blue Box	49	Small Tree	15 LBF	Low	587477.2	5809322
7	2\PS513312	149	Blue Box	58	Medium Old Tree	15 LBF	Medium	587477.6	5809319
7	2\PS513312	150	Blue Box	71	Large Old Tree	15 LBF	Medium	587483.8	5809316
7	2\PS513312	151	Blue Box	42	Small Tree	15 LBF	Low	587483.7	5809314
7	2\PS513312	152	Blue Box	42	Small Tree	15 LBF	Low	587486.5	5809313
7	2\PS513312	153	Blue Box	69	Medium Old Tree	15 LBF	Medium	587489.6	5809305
7	2\PS513312	154	Blue Box	33	Small Tree	15 LBF	Low	587494.8	5809300
7	2\PS513312	155	Blue Box	97	Large Old Tree	15 LBF	Medium	587497.9	5809293

7	2\PS513312	156	Blue Box	86	Large Old Tree	15 LBF	Medium	587485	5809290
7	2\PS513312	157	Blue Box	45	Small Tree	15 LBF	Low	587483.7	5809298
7	2\PS513312	158	Blue Box	49	Small Tree	15 LBF	Low	587485.8	5809300
7	2\PS513312	159	Blue Box	58	Medium Old Tree	15 LBF	Medium	587482.6	5809304
7	2\PS513312	160	Blue Box	56	Medium Old Tree	15 LBF	Medium	587474.7	5809303
7	2\PS513312	161	Blue Box	61	Medium Old Tree	15 LBF	Medium	587472.2	5809305
7	2\PS513312	162	Blue Box	33	Small Tree	15 LBF	Low	587475.1	5809318
7	2\PS513312	163	Coast Grey Box	54	Medium Old Tree	15 LBF	Medium	587467.4	5809312
7	2\PS513312	164	Blue Box	108	Very Large Old Tree	15 LBF	Medium	587470.7	5809336
7	2\PS513312	165	Blue Box	112	Very Large Old Tree	15 LBF	Medium	587459.2	5809328
7	2\PS513312	166	Coast Grey Box	28	Small Tree	151 PGF	Low	587396.2	5809354
7	2\PS513312	167	Coast Grey Box	54	Medium Old Tree	151 PGF	High	587392.6	5809352
7	2\PS513312	168	Coast Grey Box	76	Large Old Tree	151 PGF	High	587395	5809349
7	2\PS513312	169	Coast Grey Box	54	Medium Old Tree	151 PGF	High	587394.6	5809346
7	2\PS513312	170	Coast Grey Box	54	Medium Old Tree	151 PGF	High	587392.3	5809349
7	2\PS513312	171	Coast Grey Box	54	Medium Old Tree	151 PGF	High	587386.8	5809346
7	2\PS513312	172	Coast Grey Box	34	Small Tree	151 PGF	Low	587386.5	5809344
7	2\PS513312	173	Coast Grey Box	65	Medium Old Tree	151 PGF	High	587389.1	5809339
7	2\PS513312	174	Coast Grey Box	30	Small Tree	151 PGF	Low	587383.9	5809341
7	2\PS513312	175	Coast Grey Box	69	Medium Old Tree	151 PGF	High	587379.3	5809344
7	2\PS513312	176	Coast Grey Box	70	Large Old Tree	151 PGF	High	587384.4	5809363
7	2\PS513312	177	Mountain Grey Gum	59	Medium Old Tree	151 PGF	High	587374.6	5809361
7	2\PS513312	178	Coast Grey Box	96	Large Old Tree	151 PGF	High	587363.6	5809336
7	2\PS513312	179	Coast Grey Box	81	Large Old Tree	151 PGF	High	587356.3	5809339
7	2\PS513312	180	Coast Grey Box	82	Large Old Tree	151 PGF	High	587352.4	5809352
7	2\PS513312	181	Coast Grey Box	55	Medium Old Tree	151 PGF	High	587335.3	5809364
7	2\PS513312	182	Coast Grey Box	54	Medium Old Tree	151 PGF	High	587342	5809370
7	2\PS513312	183	Coast Grey Box	67	Medium Old Tree	151 PGF	High	587338.5	5809379
7	2\PS513312	184	Coast Grey Box	27	Small Tree	151 PGF	Low	587338.2	5809384
7	2\PS513312	185	Coast Grey Box	35	Small Tree	151 PGF	High	587333.1	5809383
7	2\PS513312	186	Coast Grey Box	200	Very Large Old Tree	151 PGF	High	587330	5809389
7	2\PS513312	187	Coast Grey Box	27	Small Tree	151 PGF	Low	587333.5	5809393
7	2\PS513312	188	Coast Grey Box	54	Medium Old Tree	151 PGF	High	587335.7	5809400
7	2\PS513312	189	Coast Grey Box	52	Small Tree	151 PGF	Low	587339.6	5809397

7	2\PS513312	190	Coast Grey Box	24	Small Tree	151 PGF	Low	587341.3	5809397
7	2\PS513312	191	Coast Grey Box	46	Small Tree	151 PGF	Low	587344.6	5809402
7	2\PS513312	192	Coast Grey Box	21	Small Tree	151 PGF	Low	587346.7	5809399
7	2\PS513312	193	Coast Grey Box	62	Medium Old Tree	151 PGF	High	587349	5809396
7	2\PS513312	194	Coast Grey Box	72	Large Old Tree	151 PGF	High	587356.9	5809390
7	2\PS513312	195	Coast Grey Box	43	Small Tree	151 PGF	Low	587355.1	5809376
7	2\PS513312	196	Coast Grey Box	68	Medium Old Tree	151 PGF	High	587355.6	5809370
7	2\PS513312	197	Coast Grey Box	45	Small Tree	151 PGF	Low	587358	5809377
7	2\PS513312	198	Coast Grey Box	75	Large Old Tree	151 PGF	High	587365.9	5809368
7	2\PS513312	199	Coast Grey Box	35	Small Tree	151 PGF	Low	587376.7	5809381
7	2\PS513312	200	Coast Grey Box	67	Medium Old Tree	151 PGF	High	587374.7	5809383
7	2\PS513312	201	Coast Grey Box	68	Medium Old Tree	151 PGF	High	587389.1	5809384
7	2\PS513312	202	Coast Grey Box	46	Small Tree	151 PGF	Low	587392.7	5809388
7	2\PS513312	203	Coast Grey Box	86	Large Old Tree	151 PGF	High	587408.4	5809383
7	2\PS513312	204	Coast Grey Box	72	Large Old Tree	151 PGF	High	587402.9	5809386
7	2\PS513312	205	Coast Grey Box	39	Small Tree	151 PGF	Low	587400.6	5809390
7	2\PS513312	206	Coast Grey Box	48	Small Tree	151 PGF	Low	587406.4	5809393
7	2\PS513312	207	Coast Grey Box	61	Medium Old Tree	151 PGF	High	587403.4	5809395
7	2\PS513312	208	Coast Grey Box	69	Medium Old Tree	151 PGF	High	587396	5809397
7	2\PS513312	209	Coast Grey Box	95	Large Old Tree	151 PGF	High	587386.9	5809396
7	2\PS513312	210	Coast Grey Box	77	Large Old Tree	151 PGF	High	587406.3	5809408
7	2\PS513312	211	Coast Grey Box	91	Large Old Tree	151 PGF	High	587404.6	5809414
7	2\PS513312	212	Coast Grey Box	90	Large Old Tree	151 PGF	High	587388	5809417
7	2\PS513312	213	Coast Grey Box	53	Medium Old Tree	151 PGF	High	587380.6	5809419
7	2\PS513312	214	Coast Grey Box	53	Medium Old Tree	151 PGF	High	587381.9	5809411
7	2\PS513312	215	Coast Grey Box	37	Small Tree	151 PGF	Low	587360.1	5809430
7	2\PS513312	216	Coast Grey Box	31	Small Tree	151 PGF	Low	587361.5	5809451
7	2\PS513312	217	Coast Grey Box	53	Medium Old Tree	151 PGF	High	587363.3	5809449
7	2\PS513312	218	Coast Grey Box	48	Small Tree	151 PGF	Low	587368.9	5809449
7	2\PS513312	219	Coast Grey Box	53	Medium Old Tree	151 PGF	High	587363.8	5809452
7	2\PS513312	220	Coast Grey Box	31	Small Tree	151 PGF	Low	587362.7	5809454
7	2\PS513312	221	Coast Grey Box	81	Large Old Tree	151 PGF	High	587384.3	5809445
7	2\PS513312	222	Coast Grey Box	82	Large Old Tree	151 PGF	High	587399.2	5809456
7	2\PS513312	223	Coast Grey Box	86	Large Old Tree	151 PGF	High	587392.3	5809459

7	2\PS513312	224	Coast Grey Box	41	Small Tree	151 PGF	Low	587383	5809464
7	2\PS513312	225	Coast Grey Box	59	Medium Old Tree	151 PGF	High	587384.2	5809481
7	2\PS513312	226	Coast Grey Box	74	Large Old Tree	151 PGF	High	587388.7	5809480
7	2\PS513312	227	Coast Grey Box	92	Large Old Tree	151 PGF	High	587401.1	5809470
7	2\PS513312	228	Coast Grey Box	127	Very Large Old Tree	151 PGF	High	587394.7	5809499
7	2\PS513312	230	Blue Box	95	Large Old Tree	151 PGF	High	587382.2	5809294
7	2\PS513312	231	Coast Grey Box	56	Medium Old Tree	151 PGF	High	587378.2	5809289
15	1\PS513312	129	Blue Box	113	Very Large Old Tree	15 LBF	Medium	587705.1	5809529
15	1\PS513312	130	Blue Box	115	Very Large Old Tree	15 LBF	Medium	587709.3	5809542
15	1\PS513312	131	Blue Box	130	Very Large Old Tree	15 LBF	Medium	587722.7	5809474
26	1\PS420976	534	Gippsland Red Gum	82	Large Old Tree	151 PGF	High	588142.6	5808304
26	1\PS420976	535	Gippsland Red Gum	71	Large Old Tree	151 PGF	High	588120.0	5808284
26	1\PS420976	536	Gippsland Red Gum	74	Large Old Tree	151 PGF	High	588026.7	5808204
26	1\PS420976	533	Rough Barked Manna	105	Very Large Old Tree	3 DSHrW	Medium	588441.5	5808208
28	125\PP2412	249	Red Ironbark	49	Small Tree	15 LBF	Low	588649.7	5808960
28	125\PP2412	250	Dead	40	Small Tree	15 LBF	Low	588647.5	5808951
28	125\PP2412	251	Red Ironbark	53	Medium Old Tree	15 LBF	Medium	588629.5	5808969
28	125\PP2412	252	Mountain Grey Gum	68	Medium Old Tree	15 LBF	Medium	588626.2	5808961
28	125\PP2412	253	Mountain Grey Gum	73	Large Old Tree	15 LBF	Medium	588624.1	5808964
28	125\PP2412	254	Mountain Grey Gum	51	Small Tree	15 LBF	Low	588616.3	5808963
28	125\PP2412	255	Mountain Grey Gum	109	Very Large Old Tree	15 LBF	Medium	588609	5808968
28	125\PP2412	256	Coast Grey Box	52	Small Tree	15 LBF	Low	588616.9	5808958
28	125\PP2412	257	Blue Box	46	Small Tree	15 LBF	Low	588620.2	5808958
28	125\PP2412	258	Blue Box	49	Small Tree	15 LBF	Low	588616.9	5808951
28	125\PP2412	259	Other/unknown	68	Medium Old Tree	15 LBF	Medium	588664.7	5808871
29	2\PS505056	312	Coast Grey Box	116	Very Large Old Tree	15 LBF	Medium	588682.4	5808409
29	2\PS505056	313	Coast Grey Box	88	Large Old Tree	15 LBF	Medium	588699	5808407
29	2\PS505056	314	Coast Grey Box	81	Large Old Tree	15 LBF	Medium	588705.9	5808412
29	2\PS505056	315	Blue Box	87	Large Old Tree	15 LBF	Medium	588664.8	5808428
29	2\PS505056	319	Coast Grey Box	28	Small Tree	15 LBF	Low	588650.6	5808465
29	2\PS505056	320	Coast Grey Box	28	Small Tree	15 LBF	Low	588652.9	5808465
29	2\PS505056	321	Coast Grey Box	37	Small Tree	15 LBF	Low	588651.5	5808466
29	2\PS505056	322	Blue Box	101	Large Old Tree	15 LBF	Medium	588644.5	5808473
29	2\PS505056	323	Blue Box	54	Medium Old Tree	15 LBF	Medium	588652.6	5808480

29	2\PS505056	324	Coast Grey Box	68	Medium Old Tree	15 LBF	Medium	588656	5808492
29	2\PS505056	325	Blue Box	30	Small Tree	15 LBF	Low	588664.6	5808455
29	2\PS505056	326	Coast Grey Box	26	Small Tree	15 LBF	Low	588669.8	5808446
29	2\PS505056	327	Coast Grey Box	42	Small Tree	15 LBF	Low	588671.3	5808449
29	2\PS505056	328	Coast Grey Box	45	Small Tree	15 LBF	Low	588674.3	5808445
29	2\PS505056	329	Coast Grey Box	47	Small Tree	15 LBF	Low	588675.6	5808451
29	2\PS505056	330	Coast Grey Box	30	Small Tree	15 LBF	Low	588669.6	5808454
29	2\PS505056	331	Coast Grey Box	30	Small Tree	15 LBF	Low	588662.6	5808455
29	2\PS505056	332	Coast Grey Box	65	Medium Old Tree	15 LBF	Medium	588674.1	5808462
29	2\PS505056	333	Coast Grey Box	38	Small Tree	15 LBF	Low	588671.5	5808467
29	2\PS505056	334	Coast Grey Box	35	Small Tree	15 LBF	Low	588672.2	5808470
29	2\PS505056	335	Coast Grey Box	60	Medium Old Tree	15 LBF	Medium	588673.9	5808470
29	2\PS505056	336	Coast Grey Box	68	Medium Old Tree	15 LBF	Medium	588660	5808528
29	2\PS505056	337	Blue Box	85	Large Old Tree	15 LBF	Medium	588672.6	5808558
29	2\PS505056	338	White Stringybark	58	Medium Old Tree	15 LBF	Medium	588670.5	5808568
29	2\PS505056	339	Coast Grey Box	68	Medium Old Tree	15 LBF	Medium	588677.9	5808599
29	2\PS505056	340	Coast Grey Box	57	Medium Old Tree	15 LBF	Medium	588678.8	5808598
29	2\PS505056	341	Coast Grey Box	74	Large Old Tree	15 LBF	Medium	588678.9	5808598
29	2\PS505056	347	Coast Grey Box	40	Small Tree	15 LBF	Low	588672.2	5808607
29	2\PS505056	348	Coast Grey Box	93	Large Old Tree	15 LBF	Medium	588667.3	5808609
29	2\PS505056	349	Coast Grey Box	53	Medium Old Tree	15 LBF	Medium	588666.2	5808615
29	2\PS505056	350	Coast Grey Box	46	Small Tree	15 LBF	Low	588663.4	5808608
29	2\PS505056	351	Coast Grey Box	46	Small Tree	15 LBF	Low	588654.7	5808612
29	2\PS505056	352	Coast Grey Box	40	Small Tree	15 LBF	Low	588654.8	5808605
29	2\PS505056	353	Coast Grey Box	30	Small Tree	15 LBF	Low	588652.6	5808604
29	2\PS505056	354	Coast Grey Box	43	Small Tree	15 LBF	Low	588651.9	5808600
29	2\PS505056	355	Coast Grey Box	39	Small Tree	15 LBF	Low	588653.7	5808600
29	2\PS505056	356	Coast Grey Box	61	Medium Old Tree	15 LBF	Medium	588665.9	5808602
29	2\PS505056	357	Coast Grey Box	42	Small Tree	15 LBF	Low	588665.2	5808596
29	2\PS505056	358	Coast Grey Box	70	Large Old Tree	15 LBF	Medium	588659	5808579
29	2\PS505056	359	Blue Box	52	Small Tree	15 LBF	Low	588646.7	5808568
29	2\PS505056	360	Mountain Grey Gum	84	Large Old Tree	15 LBF	Medium	588627	5808578
29	2\PS505056	361	Coast Grey Box	41	Small Tree	15 LBF	Low	588637.7	5808586
29	2\PS505056	362	Coast Grey Box	60	Medium Old Tree	15 LBF	Medium	588639.5	5808583

29	2\PS505056	363	Blue Box	31	Small Tree	15 LBF	Low	588647.1	5808588
29	2\PS505056	364	Coast Grey Box	20	Small Tree	15 LBF	Low	588648.6	5808591
29	2\PS505056	365	Coast Grey Box	69	Medium Old Tree	15 LBF	Medium	588647.3	5808594
29	2\PS505056	366	Coast Grey Box	52	Small Tree	15 LBF	Low	588633.6	5808593
29	2\PS505056	367	Blue Box	48	Small Tree	15 LBF	Low	588633.7	5808596
29	2\PS505056	368	Blue Box	76	Large Old Tree	15 LBF	Medium	588624.8	5808592
29	2\PS505056	369	Blue Box	54	Medium Old Tree	15 LBF	Medium	588626.1	5808598
29	2\PS505056	370	Blue Box	36	Small Tree	15 LBF	Low	588625.9	5808599
29	2\PS505056	371	Coast Grey Box	48	Small Tree	15 LBF	Low	588633.5	5808606
29	2\PS505056	372	Blue Box	34	Small Tree	15 LBF	Low	588639.2	5808605
29	2\PS505056	373	Coast Grey Box	26	Small Tree	15 LBF	Low	588645.4	5808614
29	2\PS505056	374	Coast Grey Box	33	Small Tree	15 LBF	Low	588645.2	5808616
29	2\PS505056	375	Blue Box	44	Small Tree	15 LBF	Low	588644.6	5808621
29	2\PS505056	376	Blue Box	35	Small Tree	15 LBF	Low	588649.7	5808624
29	2\PS505056	377	Blue Box	30	Small Tree	15 LBF	Low	588640.8	5808619
29	2\PS505056	378	Blue Box	19	Small Tree	15 LBF	Low	588640.5	5808617
29	2\PS505056	379	Blue Box	26	Small Tree	15 LBF	Low	588637.8	5808620
29	2\PS505056	380	Blue Box	42	Small Tree	15 LBF	Low	588635.8	5808622
29	2\PS505056	381	Blue Box	36	Small Tree	15 LBF	Low	588629.3	5808619
29	2\PS505056	382	Blue Box	33	Small Tree	15 LBF	Low	588627.3	5808613
29	2\PS505056	383	Blue Box	52	Small Tree	15 LBF	Low	588626.3	5808607
29	2\PS505056	384	Blue Box	30	Small Tree	15 LBF	Low	588624	5808608
29	2\PS505056	385	Blue Box	38	Small Tree	15 LBF	Low	588623.5	5808614
29	2\PS505056	386	Blue Box	59	Medium Old Tree	15 LBF	Medium	588623.9	5808623
29	2\PS505056	387	Blue Box	55	Medium Old Tree	15 LBF	Medium	588618.4	5808629
29	2\PS505056	388	Blue Box	50	Small Tree	15 LBF	Low	588610.1	5808631
29	2\PS505056	389	Blue Box	65	Medium Old Tree	15 LBF	Medium	588590.9	5808629
29	2\PS505056	390	Mountain Grey Gum	64	Medium Old Tree	15 LBF	Medium	588591.6	5808621
29	2\PS505056	391	Blue Box	57	Medium Old Tree	15 LBF	Medium	588606.1	5808612
29	2\PS505056	392	Blue Box	68	Medium Old Tree	15 LBF	Medium	588602.6	5808601
29	2\PS505056	393	Mountain Grey Gum	57	Medium Old Tree	15 LBF	Medium	588608.4	5808601
29	2\PS505056	394	Mountain Grey Gum	67	Medium Old Tree	15 LBF	Medium	588621.9	5808584
29	2\PS505056	395	Blue Box	38	Small Tree	15 LBF	Low	588622.3	5808580
29	2\PS505056	396	Blue Box	40	Small Tree	15 LBF	Low	588620.5	5808577

29	2\PS505056	397	Blue Box	47	Small Tree	15 LBF	Low	588619.9	5808574
29	2\PS505056	398	Blue Box	74	Large Old Tree	15 LBF	Medium	588607.6	5808581
29	2\PS505056	402	Coast Grey Box	82	Large Old Tree	15 LBF	Medium	588520.9	5808606
29	2\PS505056	403	Coast Grey Box	31	Small Tree	15 LBF	Low	588524.7	5808608
29	2\PS505056	404	Coast Grey Box	94	Large Old Tree	15 LBF	Medium	588525.6	5808606
29	2\PS505056	405	Blue Box	75	Large Old Tree	15 LBF	Medium	588539.7	5808621
29	2\PS505056	406	Coast Grey Box	122	VLarge Old Tree	15 LBF	Medium	588509.8	5808633
Blairs Rd		467	Coast Grey Box	113	VLarge Old Tree	151 PGF	High	587244.5	5809378
Blairs Rd		468	Coast Grey Box	100	Large Old Tree	151 PGF	High	587203.2	5809377
Blairs Rd		469	Coast Grey Box	70	Large Old Tree	151 PGF	High	587183.8	5809376
Blairs Rd		470	White Stringybark	29	Small Tree	151 PGF	Low	587184	5809370
Blairs Rd		471	Coast Grey Box	21	Small Tree	151 PGF	Low	587180.4	5809375
Blairs Rd		472	Coast Grey Box	23	Small Tree	151 PGF	Low	587178.9	5809375
Blairs Rd		473	White Stringybark	45	Small Tree	151 PGF	Low	587177.6	5809363
Blairs Rd		474	Coast Grey Box	34	Small Tree	151 PGF	Low	587164	5809371
Blairs Rd		475	Coast Grey Box	49	Small Tree	151 PGF	Low	587162.1	5809370
Blairs Rd		476	Coast Grey Box	25	Small Tree	151 PGF	Low	587162.9	5809367
Blairs Rd		477	Coast Grey Box	42	Small Tree	151 PGF	Low	587155.8	5809369
Blairs Rd		478	Coast Grey Box	111	Very Large Old Tree	151 PGF	High	587150.2	5809369
Blairs Rd		479	Coast Grey Box	85	Large Old Tree	151 PGF	Low	587142.7	5809360
Blairs Rd		480	Coast Grey Box	32	Small Tree	151 PGF	Low	587117.6	5809363
Blairs Rd		481	Coast Grey Box	91	Large Old Tree	151 PGF	High	587101.6	5809352
Blairs Rd		482	Coast Grey Box	53	Medium Old Tree	151 PGF	High	587092.4	5809348
Blairs Rd		483	Coast Grey Box	61	Medium Old Tree	151 PGF	High	587092.3	5809353
Blairs Rd		484	Coast Grey Box	48	Small Tree	151 PGF	Low	587088.2	5809352
Blairs Rd		485	Coast Grey Box	44	Small Tree	151 PGF	Low	587079.8	5809353
Blairs Rd		486	Coast Grey Box	57	Medium Old Tree	151 PGF	High	587063.3	5809349
Blairs Rd		487	Coast Grey Box	45	Small Tree	151 PGF	Low	587060.9	5809350
Blairs Rd		488	Coast Grey Box	65	Medium Old Tree	151 PGF	High	587051.4	5809349
Blairs Rd		489	Coast Grey Box	114	Very Large Old Tree	151 PGF	High	587039.9	5809347
Ostlers Rd		525	Coast Grey Box	55	Medium Old Tree	151 PGF	High	587380	5809157
Ostlers Rd		526	Coast Grey Box	41	Small Tree	151 PGF	Low	587377.1	5809167
Ostlers Rd		527	Coast Grey Box	35	Small Tree	151 PGF	Low	587385.1	5809169
Ostlers Rd		528	Coast Grey Box	24	Small Tree	151 PGF	Low	587375.7	5809172

Ostlers Rd		529	Coast Grey Box	68	Medium Old Tree	151 PGF	High	587373.5	5809190
Ostlers Rd		530	Coast Grey Box	79	Large Old Tree	151 PGF	High	587344.8	5809242
Ostlers Rd		531	Coast Grey Box	47	Small Tree	151 PGF	Low	587346.1	5809247
Ostlers Rd		532	Coast Grey Box	82	Large Old Tree	151 PGF	High	587347.9	5809249
Ostlers Rd		409	Coast Grey Box	34	Small Tree	151 PGF	Low	587344.6	5809288
Ostlers Rd		454	White Stringybark	40	Small Tree	16 LF	Low	587303.6	5809335
Ostlers Rd		455	White Stringybark	25	Small Tree	16 LF	Low	587301.4	5809332
Ostlers Rd		456	White Stringybark	21	Small Tree	151 PGF	Low	587302.9	5809334
Ostlers Rd		457	White Stringybark	43	Small Tree	151 PGF	Low	587302.8	5809335
Ostlers Rd		458	Mountain Grey Gum	57	Medium Old Tree	151 PGF	High	587301.7	5809336
Ostlers Rd		459	Coast Grey Box	33	Small Tree	151 PGF	Low	587301.7	5809341
Ostlers Rd		460	White Stringybark	30	Small Tree	151 PGF	Low	587300.7	5809342
Ostlers Rd		461	Coast Grey Box	65	Medium Old Tree	151 PGF	High	587292.4	5809358
Ostlers Rd		462	Coast Grey Box	45	Small Tree	151 PGF	Low	587287.9	5809368
Ostlers Rd		463	Coast Grey Box	97	Large Old Tree	151 PGF	High	587287.9	5809377
Ostlers Rd		464	Coast Grey Box	67	Medium Old Tree	151 PGF	High	587303.9	5809384
Ostlers Rd		465	Coast Grey Box	51	Small Tree	151 PGF	Low	587324.3	5809394
Ostlers Rd		466	Coast Grey Box	71	Large Old Tree	151 PGF	High	587325.4	5809408
Palmers Rd		410	White Stringybark	52	Small Tree	15 LBF	Low	588441.5	5808681
Palmers Rd		411	White Stringybark	25	Small Tree	15 LBF	Low	588448.9	5808569
Palmers Rd		412	White Stringybark	48	Small Tree	15 LBF	Low	588445.4	5808572
Palmers Rd		413	White Stringybark	34	Small Tree	15 LBF	Low	588444.8	5808551
Palmers Rd		414	White Stringybark	40	Small Tree	15 LBF	Low	588444.2	5808546
Palmers Rd		415	White Stringybark	32	Small Tree	15 LBF	Low	588454.6	5808544
Palmers Rd		416	White Stringybark	36	Small Tree	15 LBF	Low	588455.3	5808532
Palmers Rd		417	White Stringybark	23	Small Tree	15 LBF	Low	588459.7	5808520
Palmers Rd		418	White Stringybark	45	Small Tree	15 LBF	Low	588456.4	5808521
Palmers Rd		419	White Stringybark	24	Small Tree	15 LBF	Low	588457.1	5808517
Palmers Rd		420	Coast Grey Box	35	Small Tree	15 LBF	Low	588457.4	5808515
Palmers Rd		421	Other/unknown	38	Small Tree	15 LBF	Low	588454.6	5808510
Palmers Rd		422	Coast Grey Box	30	Small Tree	15 LBF	Low	588457.3	5808508
Palmers Rd		423	White Stringybark	31	Small Tree	15 LBF	Low	588453.3	5808504
Palmers Rd		424	White Stringybark	37	Small Tree	15 LBF	Low	588458.8	5808497
Palmers Rd		425	White Stringybark	44	Small Tree	15 LBF	Low	588460.9	5808500

Palmers Rd		426	White Stringybark	45	Small Tree	15 LBF	Low	588464	5808492
Palmers Rd		427	White Stringybark	32	Small Tree	15 LBF	Low	588466.9	5808490
Palmers Rd		428	White Stringybark	38	Small Tree	15 LBF	Low	588467.4	5808487
Palmers Rd		429	White Stringybark	51	Small Tree	15 LBF	Low	588468.8	5808483
Palmers Rd		430	White Stringybark	47	Small Tree	15 LBF	Low	588466.8	5808482
Palmers Rd		431	Coast Grey Box	45	Small Tree	15 LBF	Low	588465.4	5808473
Palmers Rd		432	White Stringybark	44	Small Tree	15 LBF	Low	588467.7	5808474
Palmers Rd		433	White Stringybark	37	Small Tree	15 LBF	Low	588470.3	5808466

Table 3: Habitat Zones which can be removed

Property Number or Road Name	Title Number	Habitat Zone	EVC No. and initials	Size in hectares	Habitat Score	Large Old Trees in Zone	Conservation Significance	Notes
3	2\PS446606	HZ 40ii	151PGF	0.050	37	0	High	Planted without public funding (excludes remnant old trees)
7	2\PS513312	HZ 28ii	151PGF	0.767	42	0	High	
10	2\PS610073	HZ 44B	151PGF	0.074	21	0	Medium	
10	2\PS610073	HZ 48	15 LBF	0.666	47	1	High	
15	1\PS513312	HZ 31ii	15 LBF	0.596	28	3	Medium	
15	1\PS513312	HZ 32i	16 LF	0.757	40	8	High	
16	2\PS441043	HZ 23ii	15 LBF	0.532	29	1	Medium	Estimated Large Old Tree number
16	2\PS441043	HZ 25Aiii	15 LBF	0.718	47	4	High	
17	1\PS441043	HZ 34	15 LF	0.235	45	2	Low	
26	1\PS420976	HZ 42	151PGF	2.872	34	1	High	Planted vegetation
26	1\PS420976	HZ 43	151PGF	0.158	41	0	High	
26	1\PS420976	HZ 44A	151PGF	0.681	21	0	Medium	
Ostlers Rd		HZ 4	151PGF	0.195	44	1	Very High	
Outlook Av		HZ 2	16 LF	0.079	10	0	Medium	
Palmers Rd		HZ 9	3 DSHrW	0.444	39	3	High	
Palmers Rd		HZ 8	53 SS	0.044	33	0	High	
Palmers Rd		HZ 10i	15 LBF	0.162	43	4	High	

Palmers Rd		HZ 10ii	15 LBF	0.102	43	0	High	
Palmers Rd		HZ 11	3 DSHrW	0.127	36	2	High	
Thorpes La		HZ 14Bi	15 LBF	0.115	37	0	High	
Thorpes La		HZ 14Bii	15 LBF	0.058	37	0	High	
Thorpes La		HZ 14Biii	15 LBF	0.034	37	0	High	
Thorpes La		HZ 14Biv	15 LBF	0.064	37	0	High	

Table 4: Scattered trees which can be removed

Property Number or Road Name	Title Number	Tree Identification Number	Species	Diameter at Breast Height cm	Size Class	_EVC No and Initial	Conservation Significance	Easting	Northing
7	2\PS513312	1	Blue Box	96	Large Old Tree	15 LBF	Medium	587502.1	5809194
7	2\PS513312	2	Blue Box	108	Very Large Old Tree	15 LBF	Medium	587483.3	5809186
7	2\PS513312	3	Coast Grey Box	64	Medium Old Tree	15 LBF	Medium	587466.2	5809168
7	2\PS513312	4	Coast Grey Box	21	Small Tree	15 LBF	Low	587468	5809164
7	2\PS513312	5	Coast Grey Box	33	Small Tree	151 PGF	Low	587466	5809161
7	2\PS513312	6	Coast Grey Box	32	Small Tree	151 PGF	Low	587463.6	5809164
7	2\PS513312	7	Coast Grey Box	29	Small Tree	151 PGF	Low	587461.3	5809161
7	2\PS513312	8	Coast Grey Box	18	Small Tree	151 PGF	Low	587461.5	5809154
7	2\PS513312	9	Coast Grey Box	49	Small Tree	151 PGF	Low	587461.4	5809156
7	2\PS513312	10	Blue Box	37	Small Tree	15 LBF	Low	587476.5	5809166
7	2\PS513312	11	Coast Grey Box	21	Small Tree	15 LBF	Low	587479	5809165
7	2\PS513312	12	Blue Box	56	Medium Old Tree	15 LBF	Medium	587485.1	5809168
7	2\PS513312	13	Blue Box	32	Small Tree	15 LBF	Low	587478.3	5809162
7	2\PS513312	14	Blue Box	39	Small Tree	15 LBF	Low	587473.8	5809161
7	2\PS513312	15	Coast Grey Box	22	Small Tree	151 PGF	Low	587456	5809158
7	2\PS513312	16	Coast Grey Box	84	Large Old Tree	151 PGF	High	587456.3	5809153
7	2\PS513312	17	Coast Grey Box	32	Small Tree	151 PGF	Low	587455.8	5809145
7	2\PS513312	18	Coast Grey Box	52	Small Tree	151 PGF	Low	587452.6	5809164
7	2\PS513312	19	Coast Grey Box	27	Small Tree	151 PGF	Low	587452.4	5809154

7	2\PS513312	20	Coast Grey Box	36	Small Tree	151 PGF	Low	587450.1	5809159
7	2\PS513312	21	Blue Box	59	Medium Old Tree	151 PGF	High	587434.1	5809141
7	2\PS513312	22	Coast Grey Box	26	Small Tree	151 PGF	Low	587461.8	5809145
7	2\PS513312	23	Coast Grey Box	68	Medium Old Tree	151 PGF	High	587467.2	5809141
7	2\PS513312	24	Coast Grey Box	58	Medium Old Tree	151 PGF	High	587471.5	5809146
7	2\PS513312	25	Coast Grey Box	28	Small Tree	151 PGF	Low	587466.9	5809144
7	2\PS513312	26	Coast Grey Box	20	Small Tree	151 PGF	Low	587464.7	5809146
7	2\PS513312	27	Coast Grey Box	39	Small Tree	151 PGF	Low	587467.1	5809144
7	2\PS513312	28	Coast Grey Box	31	Small Tree	151 PGF	Low	587462	5809146
7	2\PS513312	29	Coast Grey Box	49	Small Tree	151 PGF	Low	587460.1	5809153
7	2\PS513312	30	Coast Grey Box	49	Small Tree	151 PGF	Low	587464.6	5809154
7	2\PS513312	31	Blue Box	29	Small Tree	151 PGF	Low	587470.9	5809154
7	2\PS513312	32	Coast Grey Box	90	Large Old Tree	151 PGF	High	587472	5809137
7	2\PS513312	33	Coast Grey Box	37	Small Tree	151 PGF	Low	587465.2	5809132
7	2\PS513312	34	Coast Grey Box	26	Small Tree	151 PGF	Low	587463.1	5809127
7	2\PS513312	35	Coast Grey Box	48	Small Tree	151 PGF	Low	587454.5	5809117
7	2\PS513312	36	Blue Box	37	Small Tree	151 PGF	Low	587470.6	5809125
7	2\PS513312	37	Blue Box	46	Small Tree	151 PGF	Low	587479.4	5809117
7	2\PS513312	38	Coast Grey Box	30	Small Tree	151 PGF	Low	587475.7	5809121
7	2\PS513312	39	Blue Box	61	Medium Old Tree	151 PGF	High	587475.4	5809119
7	2\PS513312	40	Mountain Grey Gum	84	Large Old Tree	151 PGF	High	587485.1	5809113
7	2\PS513312	41	Blue Box	114	Very Large Old Tree	15 LBF	Medium	587492.4	5809123
7	2\PS513312	42	Red Ironbark	26	Small Tree	15 LBF	Low	587491.4	5809126
7	2\PS513312	43	Blue Box	62	Medium Old Tree	15 LBF	Medium	587511.9	5809111
7	2\PS513312	44	Blue Box	47	Small Tree	15 LBF	Low	587520.2	5809120
7	2\PS513312	45	Blue Box	32	Small Tree	15 LBF	Low	587521.6	5809120
7	2\PS513312	46	Blue Box	59	Medium Old Tree	15 LBF	Medium	587515.1	5809118
7	2\PS513312	47	Blue Box	76	Large Old Tree	15 LBF	Medium	587508.6	5809132
7	2\PS513312	48	Blue Box	42	Small Tree	15 LBF	Low	587514.6	5809139
7	2\PS513312	49	Blue Box	46	Small Tree	15 LBF	Low	587506.4	5809141
7	2\PS513312	50	Blue Box	61	Medium Old Tree	15 LBF	Medium	587509.7	5809148
7	2\PS513312	51	Blue Box	83	Large Old Tree	15 LBF	Medium	587507.6	5809162
7	2\PS513312	52	Blue Box	64	Medium Old Tree	15 LBF	Medium	587500.3	5809175
7	2\PS513312	53	Blue Box	25	Small Tree	15 LBF	Low	587498.1	5809177

7	2\PS513312	54	Blue Box	73	Large Old Tree	15 LBF	Medium	587501.1	5809179
7	2\PS513312	55	Blue Box	53	Medium Old Tree	15 LBF	Medium	587528.6	5809174
7	2\PS513312	56	Blue Box	46	Small Tree	15 LBF	Low	587533.3	5809149
7	2\PS513312	57	White Stringybark	53	Medium Old Tree	15 LBF	Medium	587540.7	5809144
7	2\PS513312	58	Blue Box	36	Small Tree	15 LBF	Low	587540	5809138
7	2\PS513312	59	Blue Box	47	Small Tree	15 LBF	Low	587541.9	5809139
7	2\PS513312	60	Blue Box	51	Small Tree	15 LBF	Low	587545.6	5809134
7	2\PS513312	61	Blue Box	55	Medium Old Tree	15 LBF	Medium	587543.1	5809129
7	2\PS513312	62	Blue Box	36	Small Tree	15 LBF	Low	587534.2	5809139
7	2\PS513312	63	Blue Box	20	Small Tree	15 LBF	Low	587534.1	5809139
7	2\PS513312	64	Blue Box	72	Large Old Tree	15 LBF	Medium	587537.4	5809127
7	2\PS513312	65	Blue Box	37	Small Tree	15 LBF	Low	587543.3	5809121
7	2\PS513312	66	Blue Box	38	Small Tree	15 LBF	Low	587527.9	5809114
7	2\PS513312	67	Blue Box	48	Small Tree	15 LBF	Low	587529	5809115
7	2\PS513312	68	Blue Box	73	Large Old Tree	15 LBF	Medium	587537.5	5809124
7	2\PS513312	69	Blue Box	46	Small Tree	15 LBF	Low	587533.5	5809112
7	2\PS513312	70	Blue Box	100	Large Old Tree	15 LBF	Medium	587535.8	5809097
7	2\PS513312	71	Blue Box	19	Small Tree	15 LBF	Low	587532	5809099
7	2\PS513312	72	Blue Box	29	Small Tree	15 LBF	Low	587530.4	5809096
7	2\PS513312	73	Blue Box	52	Small Tree	15 LBF	Low	587515.8	5809106
7	2\PS513312	74	Blue Box	40	Small Tree	15 LBF	Low	587513.4	5809107
7	2\PS513312	75	Blue Box	59	Medium Old Tree	15 LBF	Medium	587549.6	5809034
7	2\PS513312	76	Blue Box	89	Large Old Tree	15 LBF	Medium	587615.7	5809069
7	2\PS513312	77	Blue Box	71	Large Old Tree	15 LBF	Medium	587654.6	5809059
7	2\PS513312	78	Blue Box	55	Medium Old Tree	15 LBF	Medium	587656.5	5809057
7	2\PS513312	89	Red Ironbark	64	Medium Old Tree	15 LBF	Medium	587776.8	5809026
7	2\PS513312	104	Blue Box	70	Large Old Tree	15 LBF	Medium	587646.3	5809124
7	2\PS513312	105	Blue Box	91	Large Old Tree	15 LBF	Medium	587645.6	5809128
7	2\PS513312	106	Blue Box	84	Large Old Tree	15 LBF	Medium	587609.5	5809138
7	2\PS513312	107	Blue Box	90	Large Old Tree	15 LBF	Medium	587604.1	5809140
7	2\PS513312	108	Blue Box	70	Large Old Tree	15 LBF	Medium	587610.2	5809154
7	2\PS513312	109	Blue Box	93	Large Old Tree	15 LBF	Medium	587614.4	5809158
7	2\PS513312	110	Blue Box	65	Medium Old Tree	15 LBF	Medium	587640.5	5809163
7	2\PS513312	116	Blue Box	74	Large Old Tree	15 LBF	Medium	587659.8	5809308

7	2\PS513312	117	Blue Box	142	Very Large Old Tree	15 LBF	Medium	587650.4	5809252
7	2\PS513312	118	Blue Box	135	Very Large Old Tree	15 LBF	Medium	587622.4	5809267
7	2\PS513312	229	Coast Grey Box	91	Large Old Tree	151 PGF	High	587456.3	5809440
8	1\PS438847	534	Dead	67	Medium Old Tree	151 PGF	High	587446.8	5809074
8	1\PS438847	535	Blue Box	64	Medium Old Tree	151 PGF	High	587410.8	5809040
8	1\PS438847	536	Coast Grey Box	37	Small Tree	151 PGF	Low	587454.1	5809052
8	1\PS438847	537	Blue Box	60	Medium Old Tree	151 PGF	High	587456.6	5809052
8	1\PS438847	538	Coast Grey Box	64	Medium Old Tree	151 PGF	High	587458.9	5809058
8	1\PS438847	539	Blue Box	44	Small Tree	151 PGF	Low	587470.7	5809047
8	1\PS438847	540	Blue Box	78	Large Old Tree	151 PGF	High	587494.1	5809042
8	1\PS438847	541	Blue Box	52	Small Tree	151 PGF	Low	587497.4	5809043
8	1\PS438847	542	Blue Box	71	Large Old Tree	151 PGF	High	587513	5809035
8	1\PS438847	543	Blue Box	72	Large Old Tree	151 PGF	High	587534.1	5809029
8	1\PS438847	544	Blue Box	61	Medium Old Tree	151 PGF	High	587529.3	5809022
8	1\PS438847	545	Blue Box	23	Small Tree	151 PGF	Low	587524.5	5809021
8	1\PS438847	546	Blue Box	60	Medium Old Tree	151 PGF	High	587530.2	5809020
8	1\PS438847	547	Blue Box	51	Small Tree	151 PGF	Low	587525.4	5809009
8	1\PS438847	548	Blue Box	60	Medium Old Tree	151 PGF	High	587518.7	5809002
8	1\PS438847	549	Blue Box	54	Medium Old Tree	151 PGF	High	587517.3	5809084
8	1\PS438847	550	Blue Box	34	Small Tree	151 PGF	Low	587525	5809087
8	1\PS438847	551	Blue Box	61	Medium Old Tree	151 PGF	High	587511.4	5809101
8	1\PS438847	552	Blue Box	39	Small Tree	151 PGF	Low	587495.9	5809106
8	1\PS438847	553	Coast Grey Box	55	Medium Old Tree	151 PGF	High	587493.5	5809107
8	1\PS438847	554	Coast Grey Box	56	Medium Old Tree	151 PGF	High	587469.1	5809112
8	1\PS438847	555	Coast Grey Box	67	Medium Old Tree	151 PGF	High	587448.1	5809099
8	1\PS438847	556	Coast Grey Box	77	Large Old Tree	151 PGF	High	587460.3	5809099
8	1\PS438847	557	Coast Grey Box	69	Medium Old Tree	151 PGF	High	587454.2	5809099
9	1\LP219776	119	Coast Grey Box	108	Very Large Old Tree	151 PGF	High	587388.1	5808925
9	1\LP219776	120	Blue Box	54	Medium Old Tree	151 PGF	High	587389.7	5808876
9	1\LP219776	121	Blue Box	76	Large Old Tree	151 PGF	High	587400.8	5808870
9	1\LP219776	122	Blue Box	64	Medium Old Tree	151 PGF	High	587404.3	5808876
9	1\LP219776	123	Blue Box	50	Small Tree	151 PGF	Low	587408	5808878
9	1\LP219776	124	Blue Box	37	Small Tree	151 PGF	Low	587401.2	5808876
9	1\LP219776	125	Blue Box	54	Medium Old Tree	151 PGF	High	587399.8	5808889

10	2\PS610073	132	Gippsland Red Gum	66	Medium Old Tree	151 PGF	Medium	588061.4	5808352
10	2\PS610073	134	White Stringybark	73	Large Old Tree	151 PGF	Medium	587859.8	5808791
15	1\PS513312	126	Coast Grey Box	76	Large Old Tree	15 LBF	Medium	587664.4	5809582
15	1\PS513312	127	Coast Grey Box	95	Large Old Tree	15 LBF	Medium	587667.3	5809580
15	1\PS513312	128	Coast Grey Box	90	Large Old Tree	15 LBF	Medium	587675.1	5809561
27	1\TP601189	238	Mountain Grey Gum	156	Very Large Old Tree	15 LBF	Medium	588572.4	5809403
27	1\TP601189	239	White Stringybark	69	Medium Old Tree	15 LBF	Medium	588601	5809407
27	1\TP601189	240	Mountain Grey Gum	79	Large Old Tree	15 LBF	Medium	588632.6	5809405
27	1\TP601189	241	Dead	40	Small Tree	15 LBF	Low	588640.2	5809404
27	1\TP601189	242	Coast Grey Box	64	Medium Old Tree	15 LBF	Medium	588647.5	5809401
27	1\TP601189	243	Coast Grey Box	82	Large Old Tree	15 LBF	Medium	588656.7	5809399
27	1\TP601189	244	Red Ironbark	78	Large Old Tree	15 LBF	Medium	588651	5809042
28	125\PP2412	245	Dead	34	Small Tree	15 LBF	Low	588745.2	5808977
28	125\PP2412	246	Dead	47	Small Tree	15 LBF	Low	588754.5	5808974
28	125\PP2412	247	Red Ironbark	35	Small Tree	15 LBF	Low	588744.7	5808969
28	125\PP2412	248	Red Ironbark	31	Small Tree	15 LBF	Low	588742.5	5808956
28	125\PP2412	408	Red Ironbark	75	Large Old Tree	15 LBF	Medium	588531	5808660
29	2\PS505056	260	Blue Box	35	Small Tree	15 LBF	Low	588509.7	5808471
29	2\PS505056	261	Blue Box	49	Small Tree	15 LBF	Low	588518.7	5808470
29	2\PS505056	262	Blue Box	48	Small Tree	15 LBF	Low	588523.5	5808474
29	2\PS505056	263	Blue Box	48	Small Tree	15 LBF	Low	588512.3	5808480
29	2\PS505056	264	Blue Box	43	Small Tree	15 LBF	Low	588508.1	5808483
29	2\PS505056	265	Blue Box	33	Small Tree	15 LBF	Low	588509.2	5808489
29	2\PS505056	266	Blue Box	53	Medium Old Tree	15 LBF	Medium	588516.8	5808486
29	2\PS505056	267	Blue Box	39	Small Tree	15 LBF	Low	588529.9	5808483
29	2\PS505056	268	Blue Box	37	Small Tree	15 LBF	Low	588529.9	5808482
29	2\PS505056	269	Blue Box	56	Medium Old Tree	15 LBF	Medium	588531.8	5808476
29	2\PS505056	270	Blue Box	37	Small Tree	15 LBF	Low	588538.9	5808482
29	2\PS505056	271	Blue Box	78	Large Old Tree	15 LBF	Medium	588538.6	5808489
29	2\PS505056	272	Coast Grey Box	52	Small Tree	15 LBF	Low	588545.2	5808488
29	2\PS505056	273	Blue Box	40	Small Tree	15 LBF	Low	588544	5808476
29	2\PS505056	274	Blue Box	50	Small Tree	15 LBF	Low	588545.3	5808477
29	2\PS505056	275	Blue Box	26	Small Tree	15 LBF	Low	588550	5808480
29	2\PS505056	276	Blue Box	47	Small Tree	15 LBF	Low	588554.6	5808491

29	2\PS505056	277	Blue Box	36	Small Tree	15 LBF	Low	588550.6	5808495
29	2\PS505056	278	Blue Box	35	Small Tree	15 LBF	Low	588553	5808498
29	2\PS505056	279	Blue Box	32	Small Tree	15 LBF	Low	588553.3	5808497
29	2\PS505056	280	Blue Box	53	Medium Old Tree	15 LBF	Medium	588549.8	5808498
29	2\PS505056	281	Blue Box	57	Medium Old Tree	15 LBF	Medium	588545	5808509
29	2\PS505056	282	Blue Box	36	Small Tree	15 LBF	Low	588554.1	5808506
29	2\PS505056	283	Blue Box	58	Medium Old Tree	15 LBF	Medium	588558.2	5808506
29	2\PS505056	284	Blue Box	26	Small Tree	15 LBF	Low	588559.1	5808481
29	2\PS505056	285	Blue Box	23	Small Tree	15 LBF	Low	588560.1	5808486
29	2\PS505056	286	Blue Box	73	Large Old Tree	15 LBF	Medium	588561.2	5808487
29	2\PS505056	287	Blue Box	50	Small Tree	15 LBF	Low	588568	5808488
29	2\PS505056	288	Blue Box	35	Small Tree	15 LBF	Low	588567.4	5808490
29	2\PS505056	289	Blue Box	59	Medium Old Tree	15 LBF	Medium	588570.5	5808489
29	2\PS505056	290	Blue Box	47	Small Tree	15 LBF	Low	588574.4	5808488
29	2\PS505056	291	Blue Box	37	Small Tree	15 LBF	Low	588577.1	5808484
29	2\PS505056	292	Blue Box	67	Medium Old Tree	15 LBF	Medium	588583.5	5808473
29	2\PS505056	293	Blue Box	41	Small Tree	15 LBF	Low	588586.7	5808465
29	2\PS505056	294	Blue Box	36	Small Tree	15 LBF	Low	588587.5	5808468
29	2\PS505056	295	Blue Box	36	Small Tree	15 LBF	Low	588591.9	5808465
29	2\PS505056	296	Blue Box	66	Medium Old Tree	15 LBF	Medium	588591.1	5808468
29	2\PS505056	297	Dead	44	Small Tree	15 LBF	Low	588592	5808462
29	2\PS505056	298	Coast Grey Box	53	Medium Old Tree	15 LBF	Medium	588593.1	5808447
29	2\PS505056	299	Coast Grey Box	54	Medium Old Tree	15 LBF	Medium	588596.1	5808454
29	2\PS505056	300	Blue Box	32	Small Tree	15 LBF	Low	588600.1	5808462
29	2\PS505056	301	Blue Box	41	Small Tree	15 LBF	Low	588607.3	5808461
29	2\PS505056	302	Blue Box	24	Small Tree	15 LBF	Low	588606.2	5808466
29	2\PS505056	303	Blue Box	43	Small Tree	15 LBF	Low	588605.7	5808467
29	2\PS505056	304	Blue Box	41	Small Tree	15 LBF	Low	588604.2	5808469
29	2\PS505056	305	Blue Box	39	Small Tree	15 LBF	Low	588613.5	5808465
29	2\PS505056	306	Blue Box	92	Large Old Tree	15 LBF	Medium	588620.8	5808461
29	2\PS505056	307	Blue Box	44	Small Tree	15 LBF	Low	588605.6	5808488
29	2\PS505056	308	Blue Box	32	Small Tree	15 LBF	Low	588603.1	5808489
29	2\PS505056	309	Blue Box	45	Small Tree	15 LBF	Low	588603.4	5808493
29	2\PS505056	310	Blue Box	57	Medium Old Tree	15 LBF	Medium	588606.2	5808496

29	2\PS505056	311	Blue Box	70	Large Old Tree	15 LBF	Medium	588592.1	5808494
29	2\PS505056	316	Blue Box	26	Small Tree	15 LBF	Low	588658.2	5808445
29	2\PS505056	317	Blue Box	44	Small Tree	15 LBF	Low	588641.5	5808462
29	2\PS505056	318	Blue Box	75	Large Old Tree	15 LBF	Medium	588651.1	5808460
29	2\PS505056	342	Coast Grey Box	67	Medium Old Tree	15 LBF	Medium	588751.1	5808536
29	2\PS505056	343	Coast Grey Box	74	Large Old Tree	15 LBF	Medium	588752.4	5808539
29	2\PS505056	344	Coast Grey Box	51	Small Tree	15 LBF	Low	588754.6	5808571
29	2\PS505056	345	Coast Grey Box	77	Large Old Tree	15 LBF	Medium	588749.3	5808571
29	2\PS505056	346	Coast Grey Box	63	Medium Old Tree	15 LBF	Medium	588756.8	5808582
29	2\PS505056	399	Coast Grey Box	74	Large Old Tree	15 LBF	Medium	588567.5	5808566
29	2\PS505056	400	Coast Grey Box	57	Medium Old Tree	15 LBF	Medium	588496.4	5808534
29	2\PS505056	401	Blue Box	51	Small Tree	15 LBF	Low	588494.5	5808577
29	2\PS505056	407	Coast Grey Box	72	Large Old Tree	15 LBF	Medium	588529.6	5808641
Blairs Rd		490	Coast Grey Box	78	Large Old Tree	151 PGF	High	586996.2	5809339
Blairs Rd		491	Coast Grey Box	83	Large Old Tree	151 PGF	High	586925.9	5809319
Blairs Rd		492	Coast Grey Box	111	Very Large Old Tree	151 PGF	High	586910.8	5809317
Blairs Rd		493	Blue Box	51	Small Tree	15 LBF	Low	586861.5	5809307
Blairs Rd		494	Blue Box	65	Medium Old Tree	15 LBF	Medium	586859.8	5809305
Blairs Rd		495	Blue Box	35	Small Tree	15 LBF	Low	586856.3	5809303
Blairs Rd		496	Blue Box	27	Small Tree	15 LBF	Low	586849.1	5809306
Blairs Rd		497	Blue Box	43	Small Tree	15 LBF	Low	586846.8	5809306
Blairs Rd		498	Blue Box	52	Small Tree	15 LBF	Low	586846.2	5809303
Blairs Rd		499	Blue Box	41	Small Tree	15 LBF	Low	586841.1	5809305
Blairs Rd		500	Blue Box	64	Medium Old Tree	15 LBF	Medium	586832.6	5809303
Blairs Rd		501	Blue Box	75	Large Old Tree	15 LBF	Medium	586836.3	5809307
Myer St		435	White Stringybark	38	Small Tree	16 LF	Low	587651.4	5808444
Myer St		436	Blue Box	80	Large Old Tree	16 LF	Low	587532	5808625
Myer St		437	Blue Box	35	Small Tree	16 LF	Low	587526.2	5808629
Myer St		438	White Stringybark	42	Small Tree	16 LF	Low	587522.5	5808631
Myer St		439	White Stringybark	53	Medium Old Tree	16 LF	Medium	587519	5808635
Myer St		440	White Stringybark	48	Small Tree	16 LF	Low	587519.3	5808637
Myer St		441	Red Ironbark	47	Small Tree	16 LF	Low	587518.6	5808637
Myer St		442	White Stringybark	63	Medium Old Tree	16 LF	Medium	587517.5	5808644
Myer St		443	White Stringybark	52	Small Tree	16 LF	Low	587486.7	5808677

Myer St		444	White Stringybark	71	Large Old Tree	16 LF	Low	587452.6	5808705
Myer St		445	White Stringybark	60	Medium Old Tree	16 LF	Low	587450.5	5808707
Myer St		446	White Stringybark	74	Large Old Tree	16 LF	Low	587445.4	5808711
Myer St		447	White Stringybark	29	Small Tree	16 LF	Low	587445.6	5808715
Myer St		448	White Stringybark	57	Medium Old Tree	16 LF	Low	587415.9	5808735
Myer St		449	White Stringybark	79	Large Old Tree	16 LF	Low	587405.4	5808741
Myer St		450	White Stringybark	25	Small Tree	16 LF	Low	587408.3	5808747
Myer St		451	White Stringybark	38	Small Tree	16 LF	Low	587415.6	5808742
Myer St		452	White Stringybark	32	Small Tree	16 LF	Low	587411.8	5808747
OstlersRd		453	White Stringybark	101	Large Old Tree	16 LF	Low	587367.5	5808811
Outlook Av		434	Coast Grey Box	47	Small Tree	16 LF	Low	587717.9	5808332
Palmers Rd		502	White Stringybark	32	Small Tree	15 LBF	Low	588510	5808436
Palmers Rd		503	Coast Grey Box	29	Small Tree	15 LBF	Low	588514.7	5808437
Palmers Rd		504	Coast Grey Box	39	Small Tree	3 DSHrW	Low	588529.7	5808365
Palmers Rd		505	White Stringybark	40	Small Tree	3 DSHrW	Low	588537	5808358
Palmers Rd		506	Coast Grey Box	33	Small Tree	3 DSHrW	Low	588535	5808347
Palmers Rd		507	Coast Grey Box	38	Small Tree	3 DSHrW	Low	588534.3	5808346
Palmers Rd		508	Rough Barked Manna	34	Small Tree	3 DSHrW	Low	588537.3	5808354
Palmers Rd		509	Coast Grey Box	22	Small Tree	3 DSHrW	Low	588549.9	5808353
Palmers Rd		510	Rough Barked Manna	50	Small Tree	3 DSHrW	Low	588539.5	5808328
Palmers Rd		511	Rough Barked Manna	37	Small Tree	3 DSHrW	Low	588555.1	5808327
Palmers Rd		512	White Stringybark	35	Small Tree	3 DSHrW	Low	588559.8	5808328
Palmers Rd		513	Rough Barked Manna	60	Medium Old Tree	3 DSHrW	Medium	588565.8	5808318
Palmers Rd		514	White Stringybark	64	Medium Old Tree	3 DSHrW	Medium	588569.7	5808297
Palmers Rd		515	White Stringybark	37	Small Tree	3 DSHrW	Low	588571.4	5808294
Palmers Rd		516	Coast Grey Box	75	Large Old Tree	3 DSHrW	Medium	588573.2	5808261
Palmers Rd		517	Rough Barked Manna	29	Small Tree	3 DSHrW	Low	588580.5	5808262
Palmers Rd		518	White Stringybark	31	Small Tree	3 DSHrW	Low	588579.6	5808261
Palmers Rd		519	White Stringybark	56	Medium Old Tree	3 DSHrW	Medium	588583	5808256
Palmers Rd		520	White Stringybark	33	Small Tree	3 DSHrW	Low	588586.5	5808257
Palmers Rd		521	White Stringybark	37	Small Tree	3 DSHrW	Low	588587.3	5808252
Palmers Rd		522	Rough Barked Manna	44	Small Tree	3 DSHrW	Low	588589.8	5808249
Palmers Rd		523	Rough Barked Manna	31	Small Tree	3 DSHrW	Low	588574.1	5808256
Palmers Rd		558	Rough Barked Manna	73	Large Old Tree	3 DSHrW	Medium	588486.8	5808385

Table 5: Offset requirements for Habitat Zones for native vegetation which can be removed

Property Number or Road Name	Title Number	Habitat Zone	EVC No. and initials	Size in hectares	Habitat Score	Large Old Trees in Zone	Conservation Significance	Loss in Habitat Hectares	Net Gain Multiplier for Habitat hectares	Loss of Large or Very Large Old Trees	Offset Required		
											Habitat Hectares Gain Target	Large Old Trees to be Protected	New trees to be recruited or planted
3	2\PS446606	HZ 40ii	151PGF	0.050	37	0	High	0.019	1.5	4	0.03	0	0
7	2\PS513312	HZ 28ii	151PGF	0.767	42	0	High	0.322	1.5	4	0.48	0	0
10	2\PS610073	HZ 44B	151PGF	0.074	21	0	Medium	0.016	1	2	0.02	0	0
10	2\PS610073	HZ 48	15 LBF	0.666	47	1	High	0.313	1.5	4	0.47	4	20
15	1\PS513312	HZ 31ii	15 LBF	0.596	28	3	Medium	0.167	1	2	0.17	6	30
15	1\PS513312	HZ 32i	16 LF	0.757	40	8	High	0.303	1.5	4	0.45	32	160
16	2\PS441043	HZ 23ii	15 LBF	0.532	29	1	Medium	0.154	1	2	0.15	2	10
16	2\PS441043	HZ 25Aiii	15 LBF	0.718	47	4	High	0.337	1.5	4	0.51	16	80
16	2\PS441043	HZ22ii	16 LF	2.007	60% of 61	NA	High	0.735	1.5	NA	1.10	0	0
16	2\PS441043	HZ25Aii	15 LBF	0.173	60% of 47	NA	High	0.049	1.5	NA	0.07	0	0
17	1\PS441043	HZ 34	15 LF	0.235	45	2	Low	0.106	1	0	0.11	0	0
26	1\PS420976	HZ 42	151PGF	2.872	34	1	High	0.976	1.5	4	1.46	4	20
26	1\PS420976	HZ 43	151PGF	0.158	41	0	High	0.065	1.5	4	0.10	0	0
26	1\PS420976	HZ 44A	151PGF	0.681	21	0	Medium	0.143	1	2	0.14	0	0
Ostlers Rd		HZ 4	151PGF	0.195	44	1	Very High	0.086	2	8	0.17	8	40
Outlook Av		HZ 2	16 LF	0.079	10	0	Medium	0.008	1	2	0.01	0	0
Palmers Rd		HZ 9	3 DSHrW	0.444	39	3	High	0.173	1.5	4	0.26	12	60
Palmers Rd		HZ 8	53 SS	0.044	33	0	High	0.015	1.5	4	0.02	0	0
Palmers Rd		HZ 10i	15 LBF	0.162	43	4	High	0.070	1.5	4	0.10	16	80
Palmers Rd		HZ 10ii	15 LBF	0.102	43	0	High	0.044	1.5	4	0.07	0	0
Palmers Rd		HZ 11	3 DSHrW	0.127	36	2	High	0.046	1.5	4	0.07	8	40
Thorpes La		HZ 14Bi	15 LBF	0.115	37	0	High	0.043	1.5	4	0.06	0	0
Thorpes La		HZ 14Bii	15 LBF	0.058	37	0	High	0.021	1.5	4	0.03	0	0
Thorpes La		HZ 14Biii	15 LBF	0.034	37	0	High	0.013	1.5	4	0.02	0	0
Thorpes La		HZ 14Biv	15 LBF	0.064	37	0	High	0.024	1.5	4	0.04	0	0

Table 6: Offset required for scattered trees which can be removed

Property Number or Road Name	Title Number	Tree Identification Number	Species	Diameter at Breast Height cm	Size Class	EVC No. and Initial	Conservation Significance	Offset Required	
								Other trees to be protected	New trees to be recruited or planted
7	2\PS513312	1	Blue Box	96	Large Old Tree	15 LBF	Medium	2 LOTs	10
7	2\PS513312	2	Blue Box	108	Very Large Old Tree	15 LBF	Medium	2 LOTs	10
7	2\PS513312	3	Coast Grey Box	64	Medium Old Tree	15 LBF	Medium	1 MOT	5
7	2\PS513312	4	Coast Grey Box	21	Small Tree	15 LBF	Low		5
7	2\PS513312	5	Coast Grey Box	33	Small Tree	151 PGF	Low		5
7	2\PS513312	6	Coast Grey Box	32	Small Tree	151 PGF	Low		5
7	2\PS513312	7	Coast Grey Box	29	Small Tree	151 PGF	Low		5
7	2\PS513312	8	Coast Grey Box	18	Small Tree	151 PGF	Low		5
7	2\PS513312	9	Coast Grey Box	49	Small Tree	151 PGF	Low		5
7	2\PS513312	10	Blue Box	37	Small Tree	15 LBF	Low		5
7	2\PS513312	11	Coast Grey Box	21	Small Tree	15 LBF	Low		5
7	2\PS513312	12	Blue Box	56	Medium Old Tree	15 LBF	Medium	1 MOT	5
7	2\PS513312	13	Blue Box	32	Small Tree	15 LBF	Low		5
7	2\PS513312	14	Blue Box	39	Small Tree	15 LBF	Low		5
7	2\PS513312	15	Coast Grey Box	22	Small Tree	151 PGF	Low		5
7	2\PS513312	16	Coast Grey Box	84	Large Old Tree	151 PGF	High	4 LOTs	20
7	2\PS513312	17	Coast Grey Box	32	Small Tree	151 PGF	Low		5
7	2\PS513312	18	Coast Grey Box	52	Small Tree	151 PGF	Low		5
7	2\PS513312	19	Coast Grey Box	27	Small Tree	151 PGF	Low		5
7	2\PS513312	20	Coast Grey Box	36	Small Tree	151 PGF	Low		5
7	2\PS513312	21	Blue Box	59	Medium Old Tree	151 PGF	High	2 MOTs	10
7	2\PS513312	22	Coast Grey Box	26	Small Tree	151 PGF	Low		5
7	2\PS513312	23	Coast Grey Box	68	Medium Old Tree	151 PGF	High	2 MOTs	10
7	2\PS513312	24	Coast Grey Box	58	Medium Old Tree	151 PGF	High	2 MOTs	10
7	2\PS513312	25	Coast Grey Box	28	Small Tree	151 PGF	Low		5
7	2\PS513312	26	Coast Grey Box	20	Small Tree	151 PGF	Low		5
7	2\PS513312	27	Coast Grey Box	39	Small Tree	151 PGF	Low		5

7	2\PS513312	28	Coast Grey Box	31	Small Tree	151 PGF	Low		5
7	2\PS513312	29	Coast Grey Box	49	Small Tree	151 PGF	Low		5
7	2\PS513312	30	Coast Grey Box	49	Small Tree	151 PGF	Low		5
7	2\PS513312	31	Blue Box	29	Small Tree	151 PGF	Low		5
7	2\PS513312	32	Coast Grey Box	90	Large Old Tree	151 PGF	High	4 LOTS	20
7	2\PS513312	33	Coast Grey Box	37	Small Tree	151 PGF	Low		5
7	2\PS513312	34	Coast Grey Box	26	Small Tree	151 PGF	Low		5
7	2\PS513312	35	Coast Grey Box	48	Small Tree	151 PGF	Low		5
7	2\PS513312	36	Blue Box	37	Small Tree	151 PGF	Low		5
7	2\PS513312	37	Blue Box	46	Small Tree	151 PGF	Low		5
7	2\PS513312	38	Coast Grey Box	30	Small Tree	151 PGF	Low		5
7	2\PS513312	39	Blue Box	61	Medium Old Tree	151 PGF	High	2 MOTs	10
7	2\PS513312	40	Mountain Grey Gum	84	Large Old Tree	151 PGF	High	4 LOTS	20
7	2\PS513312	41	Blue Box	114	Very Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	42	Red Ironbark	26	Small Tree	15 LBF	Low		5
7	2\PS513312	43	Blue Box	62	Medium Old Tree	15 LBF	Medium	1 MOT	5
7	2\PS513312	44	Blue Box	47	Small Tree	15 LBF	Low		5
7	2\PS513312	45	Blue Box	32	Small Tree	15 LBF	Low		5
7	2\PS513312	46	Blue Box	59	Medium Old Tree	15 LBF	Medium	1 MOT	5
7	2\PS513312	47	Blue Box	76	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	48	Blue Box	42	Small Tree	15 LBF	Low		5
7	2\PS513312	49	Blue Box	46	Small Tree	15 LBF	Low		5
7	2\PS513312	50	Blue Box	61	Medium Old Tree	15 LBF	Medium	1 MOT	5
7	2\PS513312	51	Blue Box	83	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	52	Blue Box	64	Medium Old Tree	15 LBF	Medium	1 MOT	5
7	2\PS513312	53	Blue Box	25	Small Tree	15 LBF	Low		5
7	2\PS513312	54	Blue Box	73	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	55	Blue Box	53	Medium Old Tree	15 LBF	Medium	1 MOT	5
7	2\PS513312	56	Blue Box	46	Small Tree	15 LBF	Low		5
7	2\PS513312	57	White Stringybark	53	Medium Old Tree	15 LBF	Medium	1 MOT	5
7	2\PS513312	58	Blue Box	36	Small Tree	15 LBF	Low		5
7	2\PS513312	59	Blue Box	47	Small Tree	15 LBF	Low		5
7	2\PS513312	60	Blue Box	51	Small Tree	15 LBF	Low		5
7	2\PS513312	61	Blue Box	55	Medium Old Tree	15 LBF	Medium	1 MOT	5

7	2\PS513312	62	Blue Box	36	Small Tree	15 LBF	Low		5
7	2\PS513312	63	Blue Box	20	Small Tree	15 LBF	Low		5
7	2\PS513312	64	Blue Box	72	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	65	Blue Box	37	Small Tree	15 LBF	Low		5
7	2\PS513312	66	Blue Box	38	Small Tree	15 LBF	Low		5
7	2\PS513312	67	Blue Box	48	Small Tree	15 LBF	Low		5
7	2\PS513312	68	Blue Box	73	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	69	Blue Box	46	Small Tree	15 LBF	Low		5
7	2\PS513312	70	Blue Box	100	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	71	Blue Box	19	Small Tree	15 LBF	Low		5
7	2\PS513312	72	Blue Box	29	Small Tree	15 LBF	Low		5
7	2\PS513312	73	Blue Box	52	Small Tree	15 LBF	Low		5
7	2\PS513312	74	Blue Box	40	Small Tree	15 LBF	Low		5
7	2\PS513312	75	Blue Box	59	Medium Old Tree	15 LBF	Medium	1 MOT	5
7	2\PS513312	76	Blue Box	89	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	77	Blue Box	71	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	78	Blue Box	55	Medium Old Tree	15 LBF	Medium	1 MOT	5
7	2\PS513312	89	Red Ironbark	64	Medium Old Tree	15 LBF	Medium	1 MOT	5
7	2\PS513312	104	Blue Box	70	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	105	Blue Box	91	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	106	Blue Box	84	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	107	Blue Box	90	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	108	Blue Box	70	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	109	Blue Box	93	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	110	Blue Box	65	Medium Old Tree	15 LBF	Medium	1 MOT	5
7	2\PS513312	116	Blue Box	74	Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	117	Blue Box	142	Very Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	118	Blue Box	135	Very Large Old Tree	15 LBF	Medium	2 LOTS	10
7	2\PS513312	229	Coast Grey Box	91	Large Old Tree	151 PGF	High	4 LOTS	20
8	1\PS438847	534	Dead	67	Medium Old Tree	151 PGF	High	2 MOTs	10
8	1\PS438847	535	Blue Box	64	Medium Old Tree	151 PGF	High	2 MOTs	10
8	1\PS438847	536	Coast Grey Box	37	Small Tree	151 PGF	Low		5
8	1\PS438847	537	Blue Box	60	Medium Old Tree	151 PGF	High	2 MOTs	10
8	1\PS438847	538	Coast Grey Box	64	Medium Old Tree	151 PGF	High	2 MOTs	10

8	1\PS438847	539	Blue Box	44	Small Tree	151 PGF	Low		5
8	1\PS438847	540	Blue Box	78	Large Old Tree	151 PGF	High	4 LOTS	20
8	1\PS438847	541	Blue Box	52	Small Tree	151 PGF	Low		5
8	1\PS438847	542	Blue Box	71	Large Old Tree	151 PGF	High	4 LOTS	20
8	1\PS438847	543	Blue Box	72	Large Old Tree	151 PGF	High	4 LOTS	20
8	1\PS438847	544	Blue Box	61	Medium Old Tree	151 PGF	High	2 MOTs	10
8	1\PS438847	545	Blue Box	23	Small Tree	151 PGF	Low		5
8	1\PS438847	546	Blue Box	60	Medium Old Tree	151 PGF	High	2 MOTs	10
8	1\PS438847	547	Blue Box	51	Small Tree	151 PGF	Low		5
8	1\PS438847	548	Blue Box	60	Medium Old Tree	151 PGF	High	2 MOTs	10
8	1\PS438847	549	Blue Box	54	Medium Old Tree	151 PGF	High	2 MOTs	10
8	1\PS438847	550	Blue Box	34	Small Tree	151 PGF	Low		5
8	1\PS438847	551	Blue Box	61	Medium Old Tree	151 PGF	High	2 MOTs	10
8	1\PS438847	552	Blue Box	39	Small Tree	151 PGF	Low		5
8	1\PS438847	553	Coast Grey Box	55	Medium Old Tree	151 PGF	High	2 MOTs	10
8	1\PS438847	554	Coast Grey Box	56	Medium Old Tree	151 PGF	High	2 MOTs	10
8	1\PS438847	555	Coast Grey Box	67	Medium Old Tree	151 PGF	High	2 MOTs	10
8	1\PS438847	556	Coast Grey Box	77	Large Old Tree	151 PGF	High	4 LOTS	20
8	1\PS438847	557	Coast Grey Box	69	Medium Old Tree	151 PGF	High	2 MOTs	10
9	1\LP219776	119	Coast Grey Box	108	Very Large Old Tree	151 PGF	High	4 LOTS	20
9	1\LP219776	120	Blue Box	54	Medium Old Tree	151 PGF	High	2 MOTs	10
9	1\LP219776	121	Blue Box	76	Large Old Tree	151 PGF	High	4 LOTS	20
9	1\LP219776	122	Blue Box	64	Medium Old Tree	151 PGF	High	2 MOTs	10
9	1\LP219776	123	Blue Box	50	Small Tree	151 PGF	Low		5
9	1\LP219776	124	Blue Box	37	Small Tree	151 PGF	Low		5
9	1\LP219776	125	Blue Box	54	Medium Old Tree	151 PGF	High	2 MOTs	10
10	2\PS610073	134	White Stringybark	73	Large Old Tree	151 PGF	Medium	2 LOTS	10
10	2\PS610073	132	Gippsland Red Gum	66	Medium Old Tree	151 PGF	Medium	1 MOTs	5
15	1\PS513312	126	Coast Grey Box	76	Large Old Tree	15 LBF	Medium	2 LOTS	10
15	1\PS513312	127	Coast Grey Box	95	Large Old Tree	15 LBF	Medium	2 LOTS	10
15	1\PS513312	128	Coast Grey Box	90	Large Old Tree	15 LBF	Medium	2 LOTS	10
27	1\TP601189	238	Mountain Grey Gum	156	Very Large Old Tree	15 LBF	Medium	2 LOTS	10
27	1\TP601189	239	White Stringybark	69	Medium Old Tree	15 LBF	Medium	1 MOT	5
27	1\TP601189	240	Mountain Grey Gum	79	Large Old Tree	15 LBF	Medium	2 LOTS	10

27	1\TP601189	241	Dead	40	Small Tree	15 LBF	Low		5
27	1\TP601189	242	Coast Grey Box	64	Medium Old Tree	15 LBF	Medium	1 MOT	5
27	1\TP601189	243	Coast Grey Box	82	Large Old Tree	15 LBF	Medium	2 LOTs	10
27	1\TP601189	244	Red Ironbark	78	Large Old Tree	15 LBF	Medium	2 LOTs	10
28	125\PP2412	245	Dead	34	Small Tree	15 LBF	Low		5
28	125\PP2412	246	Dead	47	Small Tree	15 LBF	Low		5
28	125\PP2412	247	Red Ironbark	35	Small Tree	15 LBF	Low		5
28	125\PP2412	248	Red Ironbark	31	Small Tree	15 LBF	Low		5
28	125\PP2412	408	Red Ironbark	75	Large Old Tree	15 LBF	Medium	2 LOTs	10
29	2\PS505056	260	Blue Box	35	Small Tree	15 LBF	Low		5
29	2\PS505056	261	Blue Box	49	Small Tree	15 LBF	Low		5
29	2\PS505056	262	Blue Box	48	Small Tree	15 LBF	Low		5
29	2\PS505056	263	Blue Box	48	Small Tree	15 LBF	Low		5
29	2\PS505056	264	Blue Box	43	Small Tree	15 LBF	Low		5
29	2\PS505056	265	Blue Box	33	Small Tree	15 LBF	Low		5
29	2\PS505056	266	Blue Box	53	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	267	Blue Box	39	Small Tree	15 LBF	Low		5
29	2\PS505056	268	Blue Box	37	Small Tree	15 LBF	Low		5
29	2\PS505056	269	Blue Box	56	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	270	Blue Box	37	Small Tree	15 LBF	Low		5
29	2\PS505056	271	Blue Box	78	Large Old Tree	15 LBF	Medium	2 LOTs	10
29	2\PS505056	272	Coast Grey Box	52	Small Tree	15 LBF	Low		5
29	2\PS505056	273	Blue Box	40	Small Tree	15 LBF	Low		5
29	2\PS505056	274	Blue Box	50	Small Tree	15 LBF	Low		5
29	2\PS505056	275	Blue Box	26	Small Tree	15 LBF	Low		5
29	2\PS505056	276	Blue Box	47	Small Tree	15 LBF	Low		5
29	2\PS505056	277	Blue Box	36	Small Tree	15 LBF	Low		5
29	2\PS505056	278	Blue Box	35	Small Tree	15 LBF	Low		5
29	2\PS505056	279	Blue Box	32	Small Tree	15 LBF	Low		5
29	2\PS505056	280	Blue Box	53	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	281	Blue Box	57	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	282	Blue Box	36	Small Tree	15 LBF	Low		5
29	2\PS505056	283	Blue Box	58	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	284	Blue Box	26	Small Tree	15 LBF	Low		5

29	2\PS505056	285	Blue Box	23	Small Tree	15 LBF	Low		5
29	2\PS505056	286	Blue Box	73	Large Old Tree	15 LBF	Medium	2 LOTS	10
29	2\PS505056	287	Blue Box	50	Small Tree	15 LBF	Low		5
29	2\PS505056	288	Blue Box	35	Small Tree	15 LBF	Low		5
29	2\PS505056	289	Blue Box	59	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	290	Blue Box	47	Small Tree	15 LBF	Low		5
29	2\PS505056	291	Blue Box	37	Small Tree	15 LBF	Low		5
29	2\PS505056	292	Blue Box	67	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	293	Blue Box	41	Small Tree	15 LBF	Low		5
29	2\PS505056	294	Blue Box	36	Small Tree	15 LBF	Low		5
29	2\PS505056	295	Blue Box	36	Small Tree	15 LBF	Low		5
29	2\PS505056	296	Blue Box	66	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	297	Dead	44	Small Tree	15 LBF	Low		5
29	2\PS505056	298	Coast Grey Box	53	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	299	Coast Grey Box	54	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	300	Blue Box	32	Small Tree	15 LBF	Low		5
29	2\PS505056	301	Blue Box	41	Small Tree	15 LBF	Low		5
29	2\PS505056	302	Blue Box	24	Small Tree	15 LBF	Low		5
29	2\PS505056	303	Blue Box	43	Small Tree	15 LBF	Low		5
29	2\PS505056	304	Blue Box	41	Small Tree	15 LBF	Low		5
29	2\PS505056	305	Blue Box	39	Small Tree	15 LBF	Low		5
29	2\PS505056	306	Blue Box	92	Large Old Tree	15 LBF	Medium	2 LOTS	10
29	2\PS505056	307	Blue Box	44	Small Tree	15 LBF	Low		5
29	2\PS505056	308	Blue Box	32	Small Tree	15 LBF	Low		5
29	2\PS505056	309	Blue Box	45	Small Tree	15 LBF	Low		5
29	2\PS505056	310	Blue Box	57	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	311	Blue Box	70	Large Old Tree	15 LBF	Medium	2 LOTS	10
29	2\PS505056	316	Blue Box	26	Small Tree	15 LBF	Low		5
29	2\PS505056	317	Blue Box	44	Small Tree	15 LBF	Low		5
29	2\PS505056	318	Blue Box	75	Large Old Tree	15 LBF	Medium	2 LOTS	10
29	2\PS505056	342	Coast Grey Box	67	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	343	Coast Grey Box	74	Large Old Tree	15 LBF	Medium	2 LOTS	10
29	2\PS505056	344	Coast Grey Box	51	Small Tree	15 LBF	Low		5
29	2\PS505056	345	Coast Grey Box	77	Large Old Tree	15 LBF	Medium	2 LOTS	10

29	2\PS505056	346	Coast Grey Box	63	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	399	Coast Grey Box	74	Large Old Tree	15 LBF	Medium	2 LOTs	10
29	2\PS505056	400	Coast Grey Box	57	Medium Old Tree	15 LBF	Medium	1 MOT	5
29	2\PS505056	401	Blue Box	51	Small Tree	15 LBF	Low		5
29	2\PS505056	407	Coast Grey Box	72	Large Old Tree	15 LBF	Medium	2 LOTs	10
Blairs Rd		490	Coast Grey Box	78	Large Old Tree	151 PGF	High	4 LOTs	20
Blairs Rd		491	Coast Grey Box	83	Large Old Tree	151 PGF	High	4 LOTs	20
Blairs Rd		492	Coast Grey Box	111	Very Large Old Tree	151 PGF	High	4 LOTs	20
Blairs Rd		493	Blue Box	51	Small Tree	15 LBF	Low		5
Blairs Rd		494	Blue Box	65	Medium Old Tree	15 LBF	Medium	1 MOT	5
Blairs Rd		495	Blue Box	35	Small Tree	15 LBF	Low		5
Blairs Rd		496	Blue Box	27	Small Tree	15 LBF	Low		5
Blairs Rd		497	Blue Box	43	Small Tree	15 LBF	Low		5
Blairs Rd		498	Blue Box	52	Small Tree	15 LBF	Low		5
Blairs Rd		499	Blue Box	41	Small Tree	15 LBF	Low		5
Blairs Rd		500	Blue Box	64	Medium Old Tree	15 LBF	Medium	1 MOT	5
Blairs Rd		501	Blue Box	75	Large Old Tree	15 LBF	Medium	2 LOTs	10
Myer St		435	White Stringybark	38	Small Tree	16 LF	Low		5
Myer St		436	Blue Box	80	Large Old Tree	16 LF	Low		10
Myer St		437	Blue Box	35	Small Tree	16 LF	Low		5
Myer St		438	White Stringybark	42	Small Tree	16 LF	Low		5
Myer St		439	White Stringybark	53	Medium Old Tree	16 LF	Medium	1 MOT	5
Myer St		440	White Stringybark	48	Small Tree	16 LF	Low		5
Myer St		441	Red Ironbark	47	Small Tree	16 LF	Low		5
Myer St		442	White Stringybark	63	Medium Old Tree	16 LF	Medium	1 MOT	5
Myer St		443	White Stringybark	52	Small Tree	16 LF	Low		5
Myer St		444	White Stringybark	71	Large Old Tree	16 LF	Low		10
Myer St		445	White Stringybark	60	Medium Old Tree	16 LF	Low		5
Myer St		446	White Stringybark	74	Large Old Tree	16 LF	Low		10
Myer St		447	White Stringybark	29	Small Tree	16 LF	Low		5
Myer St		448	White Stringybark	57	Medium Old Tree	16 LF	Low		5
Myer St		449	White Stringybark	79	Large Old Tree	16 LF	Low		10
Myer St		450	White Stringybark	25	Small Tree	16 LF	Low		5
Myer St		451	White Stringybark	38	Small Tree	16 LF	Low		5

Myer St		452	White Stringybark	32	Small Tree	16 LF	Low		5
Ostlers Rd		453	White Stringybark	101	Large Old Tree	16 LF	Low		10
Outlook Av		434	Coast Grey Box	47	Small Tree	16 LF	Low		5
Palmers Rd		502	White Stringybark	32	Small Tree	15 LBF	Low		5
Palmers Rd		503	Coast Grey Box	29	Small Tree	15 LBF	Low		5
Palmers Rd		504	Coast Grey Box	39	Small Tree	3 DSHrW	Low		5
Palmers Rd		505	White Stringybark	40	Small Tree	3 DSHrW	Low		5
Palmers Rd		506	Coast Grey Box	33	Small Tree	3 DSHrW	Low		5
Palmers Rd		507	Coast Grey Box	38	Small Tree	3 DSHrW	Low		5
Palmers Rd		508	Rough Barked Manna	34	Small Tree	3 DSHrW	Low		5
Palmers Rd		509	Coast Grey Box	22	Small Tree	3 DSHrW	Low		5
Palmers Rd		510	Rough Barked Manna	50	Small Tree	3 DSHrW	Low		5
Palmers Rd		511	Rough Barked Manna	37	Small Tree	3 DSHrW	Low		5
Palmers Rd		512	White Stringybark	35	Small Tree	3 DSHrW	Low		5
Palmers Rd		513	Rough Barked Manna	60	Medium Old Tree	3 DSHrW	Medium	1 MOT	5
Palmers Rd		514	White Stringybark	64	Medium Old Tree	3 DSHrW	Medium	1 MOT	5
Palmers Rd		515	White Stringybark	37	Small Tree	3 DSHrW	Low		5
Palmers Rd		516	Coast Grey Box	75	Large Old Tree	3 DSHrW	Medium	2 LOTs	10
Palmers Rd		517	Rough Barked Manna	29	Small Tree	3 DSHrW	Low		5
Palmers Rd		518	White Stringybark	31	Small Tree	3 DSHrW	Low		5
Palmers Rd		519	White Stringybark	56	Medium Old Tree	3 DSHrW	Medium	1 MOT	5
Palmers Rd		520	White Stringybark	33	Small Tree	3 DSHrW	Low		5
Palmers Rd		521	White Stringybark	37	Small Tree	3 DSHrW	Low		5
Palmers Rd		522	Rough Barked Manna	44	Small Tree	3 DSHrW	Low		5
Palmers Rd		523	Rough Barked Manna	31	Small Tree	3 DSHrW	Low		5
Palmers Rd		558	Rough Barked Manna	73	Large Old Tree	3 DSHrW	Medium	2 LOTs	10

Table 7: Property offset summary for Habitat Zones and Scattered Trees which can be removed

Property Number	Title Number	Loss of vegetation from patches (Habitat Zones)		Loss of scattered trees				Total offset required for all vegetation which can be removed (excluding adjoining roadsides)			
				VLOT	LOT	MOT	Small	Habitat hectares Gain Target	Number of other trees to be protected		Number of trees to be planted or recruited
		Habitat Hectares	LOTs in Zone						Large Old Trees	Medium Old Trees	
1	4-A\PP5447	0	0	0	0	0	0	0	0	0	0
2	1\PS316721	0	0	0	0	0	0	0	0	0	0
3	2\PS446606	0.019	0	0	0	0	0	0.03	0	0	0
4	1\PS446606	0	0	0	0	0	0	0	0	0	0
5	1-A\PP5447	0	0	0	0	0	0	0	0	0	0
6	2-A\PP5447	0	0	0	0	0	0	0	0	0	0
7	2\PS513312	0.322	0	4	20	17	50	0.48	56	21	630
8	1\PS438847	0	0	0	4	13	7	0	16	26	245
9	1\LP219776	0	0	1	1	3	2	0	8	6	80
10	2\PS610073	0.329	1	0	1	1	0	0.49	6	1	35
11	1\PS505044	0	0	0	0	0	0	0	0	0	0
12	1\PS524608	0	0	0	0	0	0	0	0	0	0
13	2\PS524608	0	0	0	0	0	0	0	0	0	0
14	1\TP816373	0	0	0	0	0	0	0	0	0	0
15	1\PS513312	0.470	11	0	3	0	0	0.62	44	0	220
16	2\PS441043	1.275	5	0	0	0	0	1.83	18	0	90
17*	1\PS441043	0.106	2	0	0	0	0	0.11	0	0	0
20	1\PS344950	0	0	0	0	0	0	0	0	0	0
21	3\PS344951	0	0	0	0	0	0	0	0	0	0
22	1\PS344951	0	0	0	0	0	0	0	0	0	0
23	2\PS344951	0	0	0	0	0	0	0	0	0	0

24	2\PS515970	0	0	0	0	0	0	0	0	0	0
25	1\PS515970	0	0	0	0	0	0	0	0	0	0
26	1\PS420976	1.184	1	0	0	0	0	1.70	4	0	20
27	1\TP601189	0	0	1	3	2	1	0	8	2	55
28	125\PP2412	0	0	0	1	0	4	0	2	0	30
29	2\PS505056	0	0	0	9	14	41	0	18	14	355
30	1\PS505056	0	0	0	0	0	0	0	0	0	0
31	B\PS640197	0	0	0	0	0	0	0	0	0	0
32	31C\PP2412	0	0	0	0	0	0	0	0	0	0

DBH: Diameter at Breast Height
 VLOT: Very Large Old Tree (DBH greater than or equal to 105cm)
 LOT: Large Old Tree (DBH greater than or equal to 70cm)
 MOT: Medium Old Tree (DBH between 70 to 52.5 cm)
 Small: Small Tree (DBH between 52.5 to 17.5cm)
 EVC: Ecological Vegetation Class
 DSHrW: Damp Sands Herb-rich Woodland
 LBF: Limestone Box Forest
 LF: Lowland Forest
 PGF: Plains Grassy Forest
 PGW: Plains Grassy Wetland
 SS: Swamp Scrub
 WTR: Warm Temperate Rainforest

Notes:

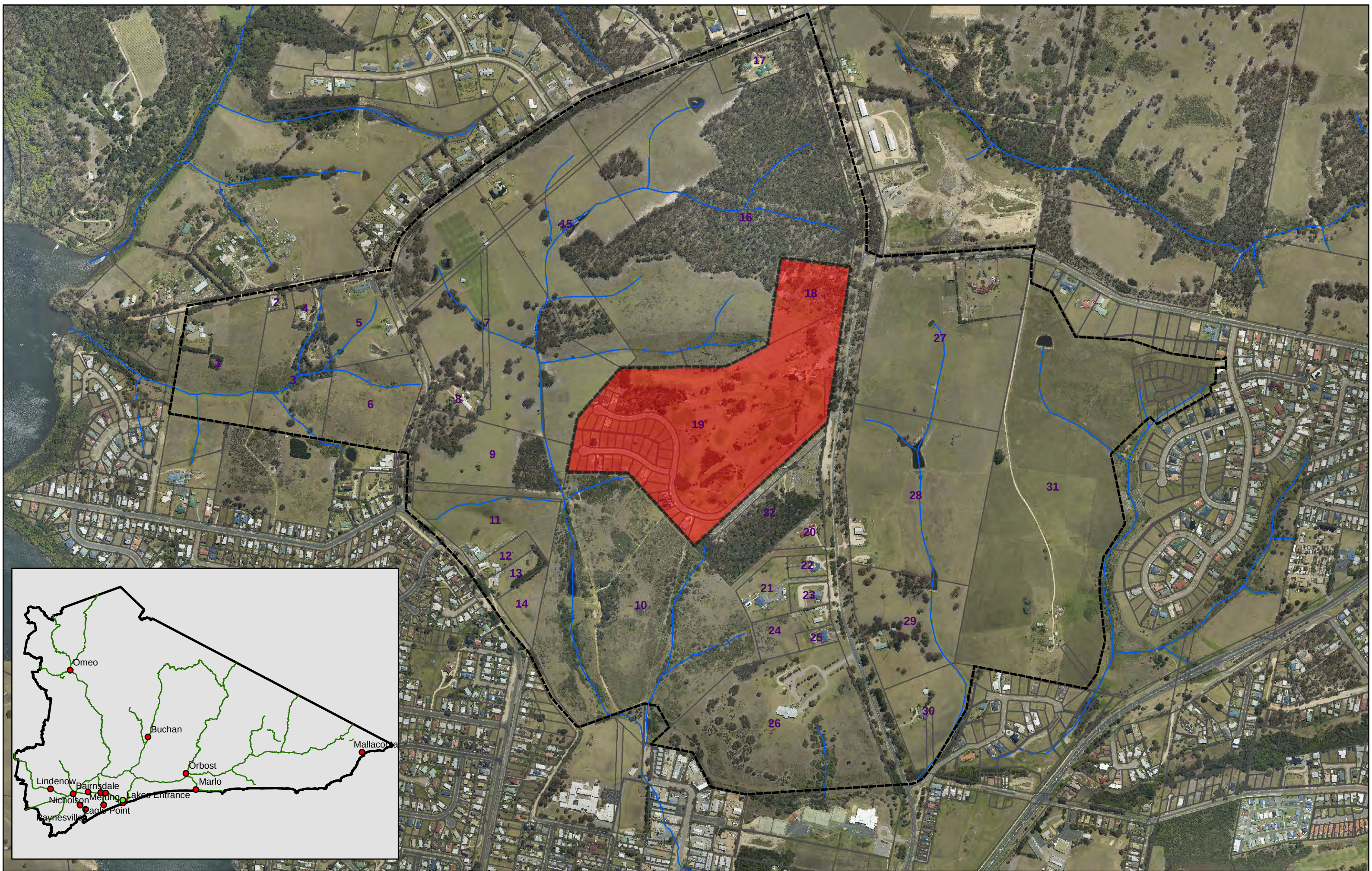
Additional like-for-like considerations apply.

Protection of a tree at an offset site requires an area at least twice the canopy diameter of the tree to be protected from adverse impacts.

Offsets must be actively managed for 10 years.

Native vegetation offsets require on-title protection in perpetuity.

* Does not over-ride 52.48 Bushfire Protection Exemptions



Map 1 - Area to which the Native Vegetation Precinct Plan applies

Legend

- Native Vegetation Precinct Plan boundary
- Properties excluded from Native Vegetation Precinct Plan
- 1 Property Identification Number
- Waterways

0 112.5 225 450 675 900
Metres

Version August 2013

N





Map 2 - Native Vegetation to be protected and removed

Legend

- ▲ Scattered trees which can be removed
- ▲ Scattered trees to be protected
- Waterways
- Native Vegetation Precinct Plan boundary
- Native Vegetation to be protected
- Native Vegetation which can be removed
- Properties excluded from Native Vegetation Precinct Plan
- 1 Property identification number

N





Northern Growth Area - Lakes Entrance Development Concept Plan Hydrology



October 2013



DOCUMENT STATUS

Version	Doc type	Reviewed by	Approved by	Date issued
R01	Report	Stephen Reynolds / Luke Cunningham	Stephen Reynolds	31/07/2012
R03	Report	Sarah Law	Sarah Law	10/10/2013

PROJECT DETAILS

Project Name	Northern Growth Area - Lakes Entrance – Development Concept Plan Hydrology
Client	SMEC Urban
Client Project Manager	Melissa Griffin
Water Technology Project Manager	Sarah Law
Report Authors	SEL, ADV, SMH
Job Number	2093-04
Report Number	R03
Document Name	J209-4_Lakes_Entrance_NGA_R03_V01.docx

Cover Photo: View across Guillot property, Water Technology site visit October 2011

Copyright

Water Technology Pty Ltd has produced this document in accordance with instructions from SMEC Urban for their use only. The concepts and information contained in this document are the copyright of Water Technology Pty Ltd. Use or copying of this document in whole or in part without written permission of Water Technology Pty Ltd constitutes an infringement of copyright.

Water Technology Pty Ltd does not warrant this document is definitive nor free from error and does not accept liability for any loss caused, or arising from, reliance upon the information provided herein.

154 Macleod Street
 Bairnsdale VIC 3875
 PO Box 387
 Bairnsdale VIC 3875
 Telephone (03) 5152 5833
 Fax (03) 5152 5855
 ACN No. 093 377 283
 ABN No. 60 093 377 283

TABLE OF CONTENTS

1.	Introduction	1
2.	Development Proposal.....	4
3.	PART 1 Development Concept Plan	7
3.1	RORB Modelling.....	7
3.2	Water Quality	11
4.	PART 2 Development Concept Plan	13
4.1	RORB Modelling.....	13
4.2	Water Quality	17
5.	Works Costing	18
5.1	Cost Apportionment per Catchment	21
5.2	Land Required for Works.....	22
6.	Further Assessments Required	24
6.1	Additional Site Survey.....	24
6.2	Surface Water Management Strategy (~\$7,500 - \$15,000 per site)	24
6.3	Reuse Strategy (~\$5,500 per site)	25
6.4	Consultation with relevant authorities (~\$3,500 per site)	25
6.5	Waterway Management Plan (~\$3,500 – \$5,500 per site)	25

LIST OF FIGURES

Figure 1-1	EGSC Northern Growth Area (Background image - Google Maps 2011)	1
Figure 1-2	Landfill Buffer Extent (Source: SMEC Urban).....	3
Figure 2-1	Waterway features and internal catchment boundaries DCP (background image Vic. State Govt. Planning Maps online 2011).....	6
Figure 3-1	RORB Model Structure	7
Figure 3-2	Proposed Part 1 Storage Basin Locations (RORB).....	8
Figure 3-3	Proposed Part 1 Storage Basin Locations (aerial imagery).....	9
Figure 3-4	Part 1 MUSIC model layout (background image SMEC Urban, 2012)	11
Figure 4-1	Proposed Part 2 Storage Basin Locations (RORB).....	14
Figure 4-2	Proposed Part 2 Storage Basin Locations (aerial imagery).....	15
Figure 4-3	Part 2 MUSIC model layout (background image SMEC Urban, 2012)	17
Figure 5-1	Cost apportionment – catchment boundaries.....	23

LIST OF TABLES

Table 2-1	Catchment Characteristics	4
Table 2-2	Catchment Hydrology Characteristics.....	5
Table 3-1	Summary of Part 1 Storages.....	10
Table 3-2	Part 1 Catchment details	12
Table 3-3	Part 1 WSUD details.....	12
Table 4-1	Summary of Part 2 Storages.....	16
Table 4-2	Part 2 Catchment details.....	18
Table 4-3	Part 2 WSUD details.....	18
Table 5-1	Retarding Basin Costing	20
Table 5-2	Works costing per catchment (Part 1)	21
Table 5-3	Works costing per catchment (Part 2)	22
Table 5-4	Land take for Retarding Basins.....	22

1. INTRODUCTION

In late 2011, five separate planning scheme amendment requests were lodged for land at the edge of the existing Lakes Entrance Township. The total area covered by the five requests covered approximately 150 hectares, located on the east side of Ostler Road; Myer Street extending north from Outlook Avenue and the Lakes Entrance Secondary College to a point adjoining the intersection on Blairs Road; and Ostlers Road in Lakes Entrance (refer Figure 1-1). This land is situated away from the low-lying main township region and is to be rezoned for residential use. Collectively the area planned for rezoning and residential development is known by the East Gippsland Shire Council (EGSC) as the Northern Growth Area (NGA).

EGSC initially engaged SMEC Urban to oversee the preparation of an Outline Development Plan (ODP). The ODP is a detailed plan of the development that establishes the vision and objectives for development of the area to provide a structured plan for growth. It is split into three key focus areas: Infrastructure; Environment; and Infrastructure Provision and Maintenance responsibilities.

As part of the ODP process Water Technology was requested to assist with the Environment focus area, specifically the hydrological aspects relevant for the NGA. This report was prepared and submitted in mid November 2011. The analysis at the time was high level with more detailed work slated for completion as the planning processes progressed. Water Technology was asked to undertake specific investigations into the Protection of Waterways, Water Sensitive Design and to a lesser degree Drainage Infrastructure.

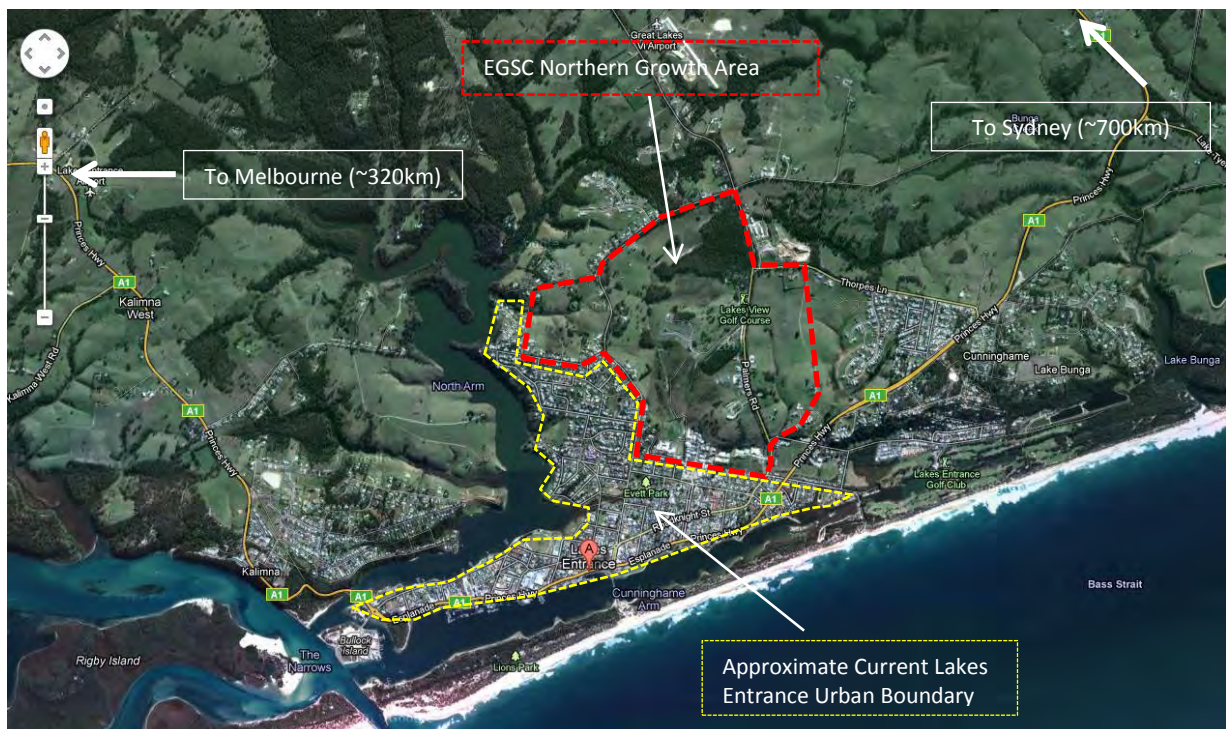


Figure 1-1 EGSC Northern Growth Area (Background image - Google Maps 2011)

The scope for the 2011 investigation comprised:

- A site inspection, including a meeting with SMEC Urban and/or where appropriate the client;
- Review of relevant data (hydrologic/survey etc.) for the ODP area;
- Review of site survey plans and preliminary assessment of drainage issues across the ODP area;
- Preliminary review of proposed development plans (appropriate to their level of detail) for the ODP area;
- Preparation of a report describing the main water quality/drainage issues for the ODP area describing the constraints that these issues may place on development;
- Discussion on the way in which the proposed development may fit into these constraints;
- Determination of the designated waterways and the restrictions placed on development associated with their presence;
- Conceptual sizing and locations of attenuation basins across the ODP;
- Preliminary designated waterway feature offset requirements (where appropriate);
- Commentary on impacts of external catchments contributing flows to the five developments; and
- Recommendations as to what further work should be carried out as part of the detailed assessments and setting out the associated timing and budget. Issues relating to water quantity (drainage) and quality (storm water) management will be assessed.

In further discussions between SMEC Urban and the landowners in 2012, it was determined that a Development Contributions Plan (DCP) should be developed to encompass the entire ODP area. As a result of this, a broader and more detailed assessment of the ODP area is required to determine / refine the storm water management requirements. Additionally, storm water management concept design costs are required to inform joint drainage infrastructure decisions. A supplementary report was submitted by Water Technology in 2012 to conduct 1D-2D flood modelling of a section of the Eastern Creek drainage line.

This updated report details the work undertaken in October 2013, based on the revised conditions as a result of the landfill buffer. The study area was separated into two parts (Part 1 & 2) to represent areas within and outside the landfill buffer, as shown in Figure 1-2.



Figure 1-2 Landfill Buffer Extent (Source: SMEC Urban)

All land within the landfill buffer (Part 2) is considered to be undeveloped when defining the drainage strategy for Part 1. The features required for Part 1 were then separately sized to ensure the runoff met best practice for flood storage and water quality.

2. DEVELOPMENT PROPOSAL

The area identified for development includes five principal individual parcels which are proposed for residential development. The ODP (2011) documentation showed five development areas in different stages of planning, with the more progressed developments showing detailed plans, while others showed more conceptual layouts. The individual Proponents involved in the ODP had nominated reserve areas that were largely associated with designated waterway features within the developments. A review of available data for land within the Development Concept Plan (DCP) area shows that the proposed developments are impacted to some degree by designated waterways (shown as blue lines in **Error! Reference source not found.**). Current planning overlays show the areas are not subject to either a Flood Overlay (FO) or Land Subject to Inundation overlay (LSIO).

The current development plans supplied to Water Technology, show the developments will consist of a significant portion of residential development coupled with large open space reserves. A summary of each development has been provided in Table 2-1. Where lot sizes were not available it was assumed that they will consist of standard residential lots. Using this assumption, a basic land assessment was determined for each of the catchment areas within the DCP area. The adopted land characteristics are shown in Table 2-2.

Table 2-1 Catchment Characteristics

Catchment	~ Dev Size (Ha)	Existing Land Zone
1	4.3	FZ3 - Farming
2	9.1	FZ3 - Farming
3	5.5	FZ3 - Farming
4	19.6	FZ3 - Farming
5	19.0	FZ3 - Farming
6	5.2	FZ3 - Farming
7	7.2	FZ3 - Farming
8	4.8	FZ3 - Farming
9	13.0	FZ3 – Farming & R1Z Residential
10	3.2	R1Z Residential
11	4.1	R1Z Residential
12	9.8	FZ3 - Farming
13	12.5	FZ3 - Farming
14	7	FZ3 - Farming

Table 2-2 Catchment Hydrology Characteristics

Catchment Name	Area (Ha)	RORB sub-Catchments*
1	4.3	X
2	9.1	S, T, U, V and W
3	5.5	J
4	19.6	A,B, C, D, E, F and G
5	19.0	L, M, I, H,J, K, M and N
6	5.2	P
7	7.2	A,B, C, D, E, F, G, H, I, J, K, L, M, N, O, P and Q
8	4.8	A,B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q and R
9	13.0	AD, AE, AF, AH and AG
10	3.2	AS
11	4.1	AR
12	9.8	Y and Z
13	12.5	Y, Z and AA
14	7	Y, Z, AA, AB and AC

* Including external catchments

Under existing catchment conditions, the majority of the NGA region drains south towards the town's major storm water collection channel (Eastern Creek) in the lower lying and flatter portion of Lakes Entrance, and then moves west, discharging into the North Arm (part of the Gippsland Lakes system). The western most development (catchment 1 and 2) flows directly west and also discharges into the North Arm waterway.

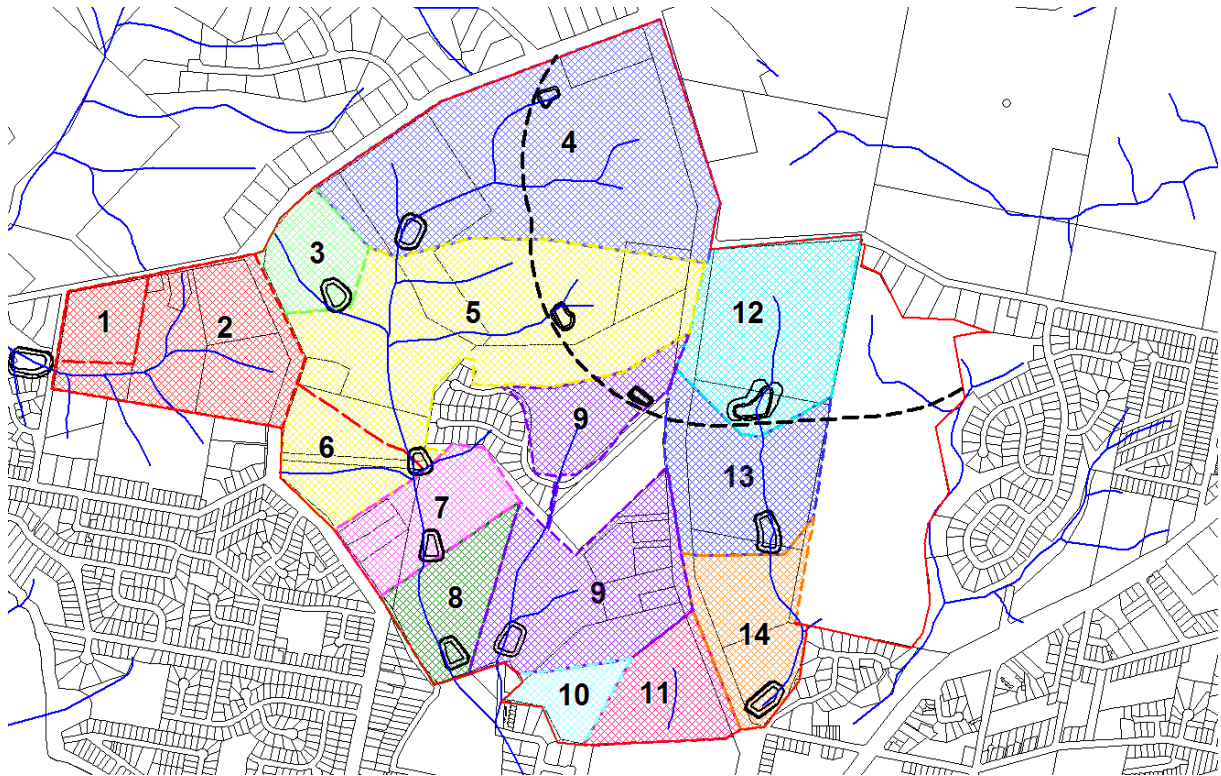


Figure 2-1 Waterway features and internal catchment boundaries DCP (background image Vic. State Govt. Planning Maps online 2011)

3. PART 1 DEVELOPMENT CONCEPT PLAN

3.1 RORB Modelling

3.1.1 Calculations

Please refer to the Water Technology 'Northern Growth Areas – Lakes Entrance Development Concept Plan Hydrology' report dated July 2012 for details of the RORB model setup and Rational Method calculations.

3.1.2 Existing Conditions RORB Model Development

The RORB model was not modified in the existing conditions. Figure 3-1 displays the RORB structure.



Figure 3-1 RORB Model Structure

3.1.3 Developed Conditions RORB Model Results

The developed RORB model was modified to represent the modified Lakes Entrance Northern Growth Area ODP. Modifications were made to the RORB reaches, subarea Fraction Imperviousness for subareas within Part 2, and storage nodes were modified. All areas within Part 2 were assumed to be undeveloped and hence assigned a fraction impervious value of 0.1. If further development occurs in this area the flows will be mitigated back to this existing flow.

Storage Basins are proposed to be located throughout the proposed new development. The location of the proposed basins can be seen below in Figure 3-2 and Figure 3-3.

Table 3-1 shows a summary of the storages which have been designed through an iterative process in RORB. The modified basins are highlighted in orange.

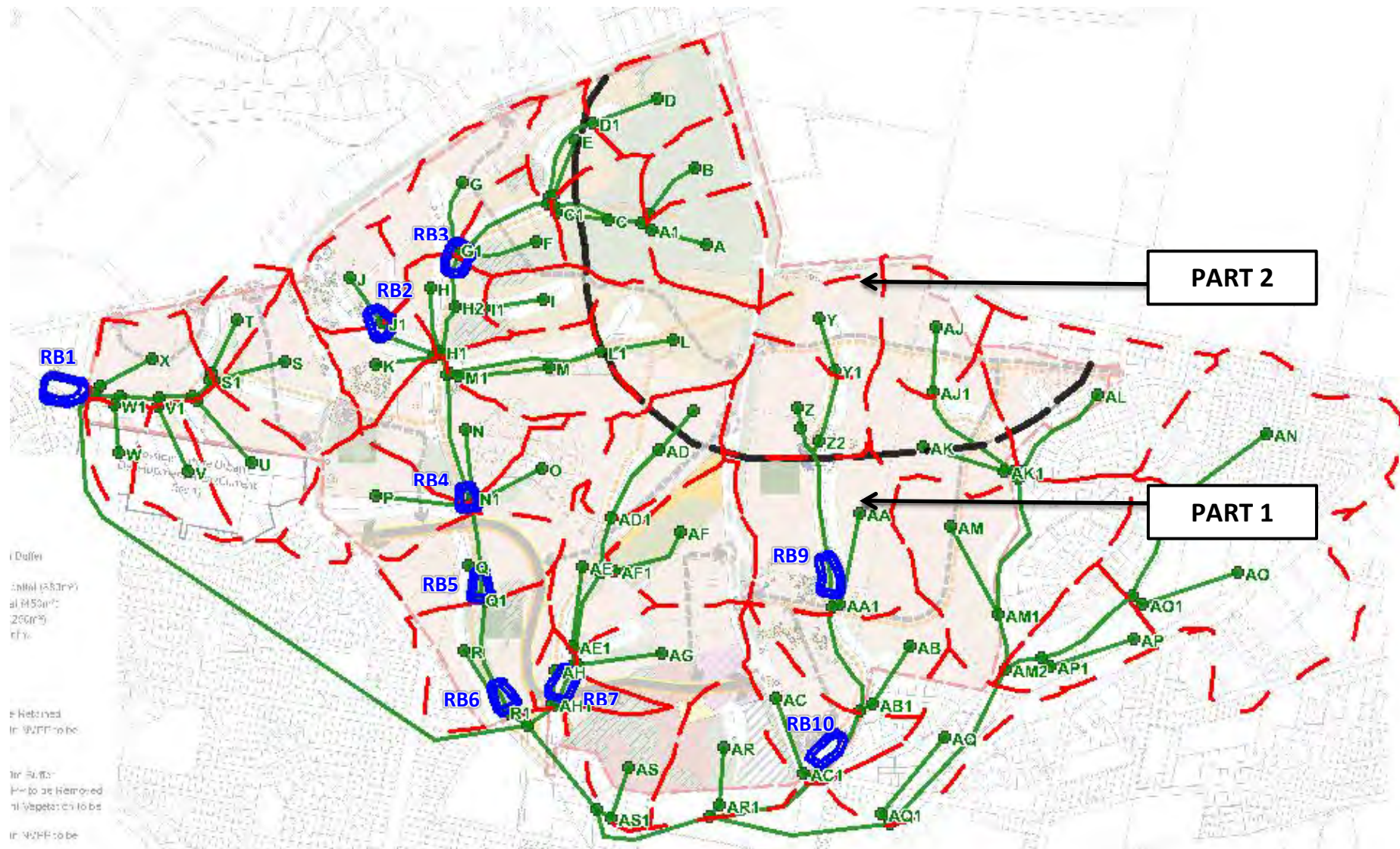


Figure 3-2 Proposed Part 1 Storage Basin Locations (RORB)



Figure 3-3 Proposed Part 1 Storage Basin Locations (aerial imagery)

Table 3-1 Summary of Part 1 Storages

RB ID	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB9	RB10
US Invert Level (mAHD)	16.0	43.0	39.0	25.0	22.0	16.0	18.0	34.0	18.0
No of pipes	2	2	3	3	2	2	1	1	1
Diameter (mm)	900	450	900	900	1200	900	900	750	900
Length (m)	15	15	15	15	15	15	15	15	15
Slope (%)	1	1	1	1	1	1	1	1	1
INFLOW (m ³ /s)	3.23	1.39	2.27	4.61	3.94	4.06	2.41	4.13	2.55
OUTFLOW (m ³ /s)	2.09	0.34	1.76	4.00	3.92	3.89	1.62	1.24	1.96
Outflow duration	2hr	4.5hr	9hr	9hr	9hr	9hr	9hr	9hr	9hr
EXISTING condition flow	2.09	0.39	1.86	4.00	4.08	4.19	1.64	1.32	2.06
Difference in flow	0	-0.06	-0.10	0	-0.16	-0.30	-0.02	-0.08	-0.10
100yr level (mAHD)	16.97	43.47	39.69	26.15	23.32	17.58	19.33	35.22	19.6
Storage (m ³)	4,090	1,150	2,030	2,090	2,910	4,070	4,750	4,100	5,200
Area (including 300mm freeboard) (m ²)	5,635	3,071	4,563	2,400	3,392	4,064	5,005	5,048	4,942

3.2 Water Quality

The MUSIC model was modified to remove the portions of the catchment upstream of the landfill buffer as this land is assumed to be undeveloped (or best practice will be met if developed at a later stage).

The layout of the MUSIC model is shown in Figure 3-4, with catchment and treatment details shown in Table 3-2 and Table 3-3. WSUD features have been sized to meet best practice for the system and wetlands are to be located within the base of the retarding basins.

For each of the wetlands the following layout was assumed:

Wetland Extended Detention Depth	0.5m
Permanent Pool	Average 0.5m
Sediment Pond Detention Depth	0.5m
Sediment Pond Pool	Average 1.0m
Detention Time	72 hours

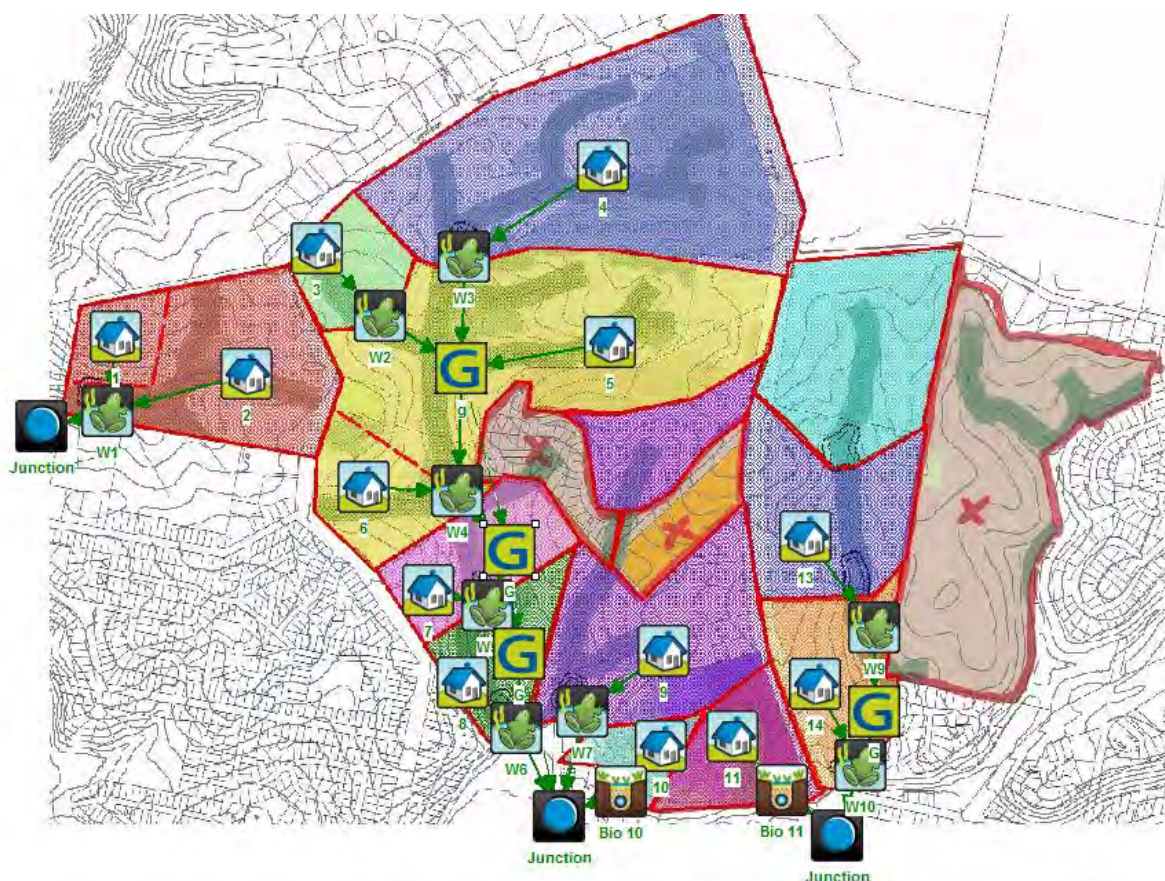


Figure 3-4 Part 1 MUSIC model layout (background image SMEC Urban, 2012)

Table 3-2 Part 1 Catchment details

Catchment Name	Effective Impervious Area (hectares)	Fraction Impervious (%)
1	4.3	60%
2	9.1	60%
3	5.5	60%
4	16.7	45%
5	15.4	60%
6	5.2	40%
7	7.2	60%
8	4.8	60%
9	12.0	65%
10	3.2	80%
11	4.1	80%
13	12.5	55%
14	7.0	60%

Table 3-3 Part 1 WSUD details

Feature Location	Sediment Pond Area (m ²)	Wetland Area (m ²)
W1	600	3,000
W2	500	1,500
W3	500	2,000
W4	700	4,000
W5	300	1,500
W6	400	1,200
W7	550	2,500
W9	500	2,000
W10	500	1,500
Neighbourhood Activity Centre (Catchments 10 & 11)		500 (2* 250 bioretention)

Table 3-3 shows that as a result of the removal of Part 2 there is negligible difference in the water quality treatment requirements, other than the removal of Wetland 8 from the DCP. Only slight differences were observed for the other basins as there was limited development area within Part 2.

Other slight modifications have also been made to wetlands 5 & 7 in order to take into account the updated zonings since the prior report.

4. PART 2 DEVELOPMENT CONCEPT PLAN

4.1 RORB Modelling

4.1.1 Calculations

Please refer to the Water Technology 'Northern Growth Areas – Lakes Entrance Development Concept Plan Hydrology' report dated July 2012 for details of the RORB model setup and Rational Method calculations.

4.1.2 Existing Conditions RORB Model Development

The RORB model was not modified in the existing conditions other than to provide flow values at the boundary between Part 1 and Part 2.

4.1.3 Developed Conditions RORB Model Results

The developed RORB model was modified to represent the modified Lakes Entrance Northern Growth Area ODP. The proposed development in Part 1 was assumed to be consistent with previous reports.

Storage Basins are proposed to be located throughout the proposed new development. The location of the proposed basins can be seen below in Figure 3-2 and Figure 3-3.

Table 3-1 shows a summary of the storages which have been designed through an iterative process in RORB.

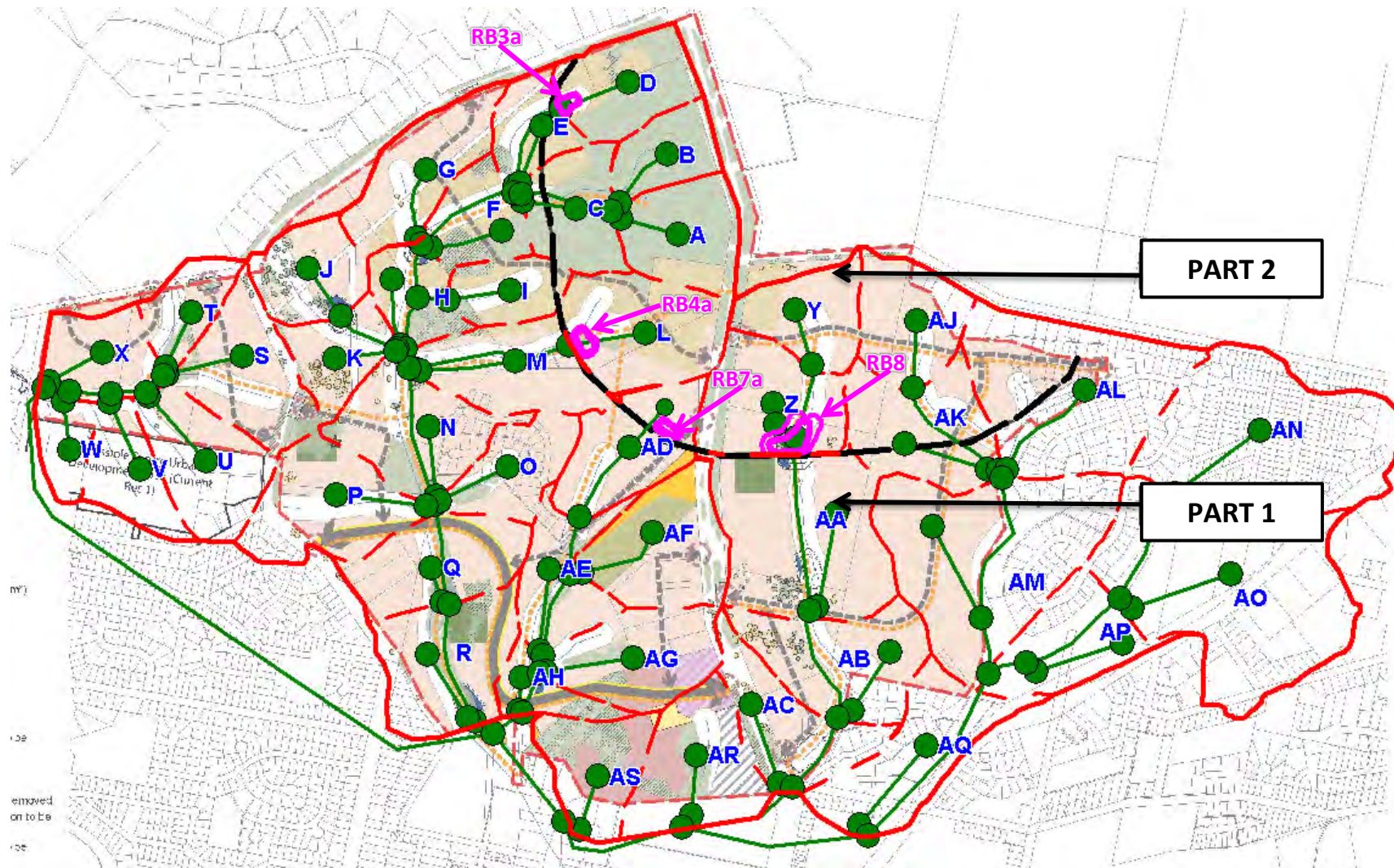


Figure 4-1 Proposed Part 2 Storage Basin Locations (RORB)



Figure 4-2 Proposed Part 2 Storage Basin Locations (aerial imagery)

Table 4-1 Summary of Part 2 Storages

RB ID	RB3a	RB4a	RB7a	RB8
US Invert Level (mAHD)	61.0	52.5	64.0	45.5
No of pipes	4	4	2	3
Diameter (mm)	300	300	375	525
Length (m)	15	15	15	15
Slope (%)	1	1	1	1
INFLOW (m ³ /s)	0.60	1.75	1.36	1.59
OUTFLOW (m ³ /s)	0.38	0.60	1.04	0.89
Outflow duration	2hr	2hr	2hr	4.5hr
EXISTING condition flow	0.54	0.76	1.06	0.96
Difference in flow	-0.16	-0.16	-0.02	-0.07
100yr level (mAHD)	61.40	53.23	64.40	46.12
Storage (m ³)	567	1,310	410	2,620
Area (including 300mm freeboard) (m ²)	1,913	2,568	1,509	5,261

* Note: The flows for RB7a are calculated at the end of Subarea AD (entry to existing development)

The new RBs and shifted RB8 ensure that best practice storage requirements are met for Part 2.

4.2 Water Quality

A separate MUSIC model of only the Part 2 catchment was developed to size wetlands to meet best practice water quality treatment. The layout of the MUSIC model is shown in Figure 3-4, with catchment and treatment details shown in Table 3-2 and Table 3-3.

For each of the wetlands the following layout was assumed:

Wetland Extended Detention Depth	0.5m
Permanent Pool	Average 0.5m
Sediment Pond Detention Depth	0.5m
Sediment Pond Pool	Average 1.0m
Detention Time	72 hours

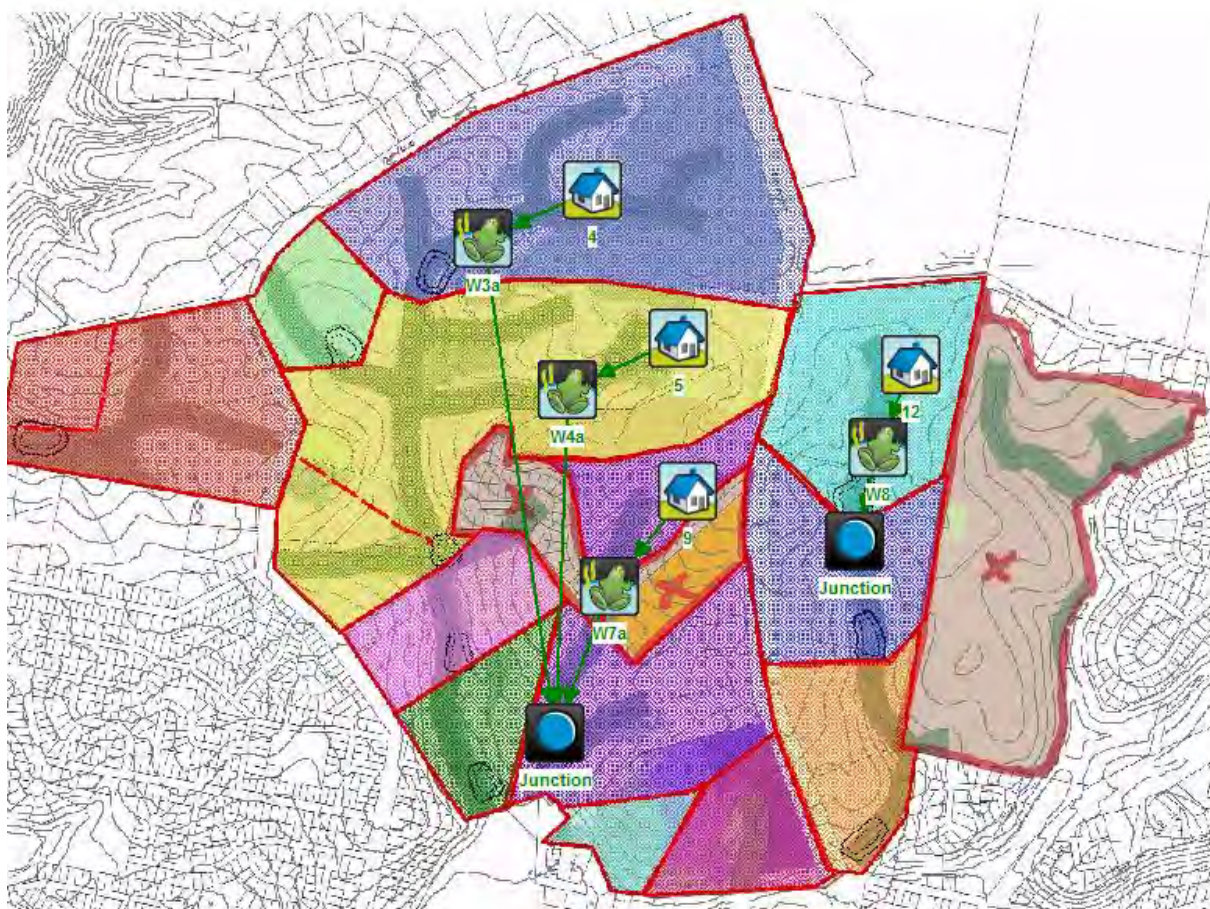


Figure 4-3 Part 2 MUSIC model layout (background image SMEC Urban, 2012)

Table 4-2 Part 2 Catchment details

Catchment Name	Effective Impervious Area (hectares)	Fraction Impervious (%)
4	2.9	48%
5	3.6	60%
9	2.0	65%
12	9.8	55%

Table 4-3 Part 2 WSUD details

Feature Location	Sediment Pond Area (m ²)	Wetland Area (m ²)
W3a	200	600
W4a	200	750
W7a	150	400
W8	600	3,000

5. WORKS COSTING

The proposed wetland, bio-retention swales and retarding basin works have been costed in accordance with Melbourne Water's costing spread sheet used for Drainage Schemes. The 'South-Eastern' regional costs were used.

A number of assumptions were made in the costing of works, these include:

- No land acquisition costs are applicable;
- All outlet pipes from retarding basins are rubber ring jointed with 100% fine crushed rock backfill;
- No grassing is required in retarding basins due to the wetlands being located within each basin;
- Retarding basin excavation cost is based on the entire storage volume 0.25m above the normal water level of the wetland. This is a conservative estimate as the areas selected for basin locations aim to minimise the amount of required cut;
- 50% of cut soil (based on the entire storage volume) requires disposal off site;
- Each basin spillway has been estimated to cost \$15,000 before contingencies;
- Each retarding basin outlet structure has been estimated to cost \$5,000 before contingencies;
- The volume of the required basin embankment wall is estimated to be the product of the embankment length x embankment width x (0.5 x embankment height);
- \$25/m² for filter media for bio retention swales;
- No GPT's or litter traps;
- Wetlands include pipes, vegetation and excavation; and
- No geotextile for bio-retention.

Estimated costings for retarding basins, wetlands and bioretention swales are shown in Table 5-1. All costings provided are based on regional estimates and should be used as a guide only. Water Technology does not guarantee the absolute accuracy of costing data. Detailed costing should be completed during a functional or detailed design stage.

Table 5-1 Retarding Basin Costing

	RB1		RB2		RB3		RB3a		RB4		RB4a		RB5	
Construction	9,400	\$ 132,000	1,900	\$ 27,000	600	\$ 9,000	0	\$ -	1,100	\$ 16,000	400	\$ 6,000	1,400	\$ 19,000
Pipes RRJ 10	2 x 900mm	\$ 17,000	2 x 450mm	\$ 7,000	3 x 900mm	\$ 26,000	4 x 300mm	\$ 10,000	3 x 900mm	\$ 26,000	4 x 300mm	\$ 10,000	2 x 1200mm	\$ 27,000
Inlet/Outlet (#)	1	\$ 5,000	1	\$ 5,000	1	\$ 5,000	1	\$ 5,000	1	\$ 5,000	1	\$ 5,000	1	\$ 5,000
Spillway (#)	1	\$ 15,000	1	\$ 15,000	1	\$ 15,000	1	\$ 15,000	1	\$ 15,000	1	\$ 15,000	1	\$ 15,000
Excavation (m ³)	5,200	\$ 31,000	200	\$ 1,000	2,400	\$ 14,000	200	\$ 1,000	2,600	\$ 16,000	800	\$ 5,000	0	\$ -
Disposal of c	2,600	\$ 26,000	100	\$ 1,000	1,200	\$ 12,000	100	\$ 1,000	1,300	\$ 13,000	400	\$ 4,000	0	\$ -
Total Cost		\$ 226,000		\$ 56,000		\$ 81,000		\$ 32,000		\$ 91,000		\$ 45,000		\$ 66,000
Contingency (20%)		\$ 45,000		\$ 11,000		\$ 16,000		\$ 6,000		\$ 18,000		\$ 9,000		\$ 13,000
Total Cost including Continge		\$ 271,000		\$ 67,000		\$ 97,000		\$ 38,000		\$ 109,000		\$ 54,000		\$ 79,000

	RB6		RB7		RB7a		RB8		RB9		RB10	
Construction	2,200	\$ 31,000	2,000	\$ 28,000	300	\$ 5,000	600	\$ 9,000	1,900	\$ 27,000	6,000	\$ 85,000
Pipes RRJ 10	2 x 900mm	\$ 17,000	1 x 900mm	\$ 9,000	2 x 375mm	\$ 6,000	3 x 525mm	\$ 12,000	1 x 750mm	\$ 6,000	1 x 900mm	\$ 9,000
Inlet/Outlet (#)	1	\$ 5,000	1	\$ 5,000	1	\$ 5,000	1	\$ 5,000	1	\$ 5,000	1	\$ 5,000
Spillway (#)	1	\$ 15,000	1	\$ 15,000	1	\$ 15,000	1	\$ 15,000	1	\$ 15,000	1	\$ 15,000
Excavation (m ³)	600	\$ 3,000	5,200	\$ 31,000	400	\$ 2,000	11,900	\$ 71,000	3,700	\$ 22,000	29,900	\$ 179,000
Disposal of c	300	\$ 3,000	2,600	\$ 26,000	200	\$ 2,000	5,900	\$ 59,000	1,800	\$ 18,000	14,900	\$ 149,000
Total Cost		\$ 74,000		\$ 114,000		\$ 35,000		\$ 171,000		\$ 93,000		\$ 442,000
Contingency (20%)		\$ 15,000		\$ 23,000		\$ 7,000		\$ 34,000		\$ 19,000		\$ 88,000
Total Cost including Continge		\$ 89,000		\$ 137,000		\$ 42,000		\$ 205,000		\$ 112,000		\$ 530,000

PART 1									
	Wetland 1	Wetland 2	Wetland 3	Wetland 4	Wetland 5	Wetland 6	Wetland 7	Wetland 9	Wetland 10
Wetland Cos	\$365,000	\$315,000	\$290,000	\$245,000	\$275,000	\$265,000	\$340,000	\$315,000	\$290,000
Contingency	\$73,000	\$63,000	\$58,000	\$49,000	\$55,000	\$53,000	\$68,000	\$63,000	\$58,000
Total Cost inc	\$438,000	\$378,000	\$348,000	\$294,000	\$330,000	\$318,000	\$408,000	\$378,000	\$348,000
PART 2									
	Wetland 8	Wetland 3a	Wetland 4a	Wetland 7a					
Wetland Cos	\$365,000	\$200,000	\$215,000	\$170,000					
Contingency	\$73,000	\$40,000	\$43,000	\$34,000					
Total Cost inc	\$438,000	\$240,000	\$258,000	\$204,000					

	Bioretention 1	Bioretention 2
Bioretention	\$15,000	\$15,000
Contingency	\$3,000	\$3,000
Total Cost inc	\$18,000	\$18,000

5.1 Cost Apportionment per Catchment

Estimated construction costs have also been divided into catchment areas as shown in Table 5-2 (Part 1) and . With reference to Figure 3-4 and Figure 5-1 for context, the following works are proposed in each catchment.

The total cost of works is the total sum of the works required within each catchment including contingencies as described above. The cost per effective impervious hectare is the total cost of works for that catchment divided by the total effective impervious area in that catchment. Drainage scheme costs have then been further broken down to represent to two unique study areas Part 1 & 2.

It is important to note that Catchments 1 and 2 share the costs of Wetland and Retarding Basin 1 and Catchments 5 and 6 share the costs of Wetland and Retarding Basin 4. The cost per effective impervious hectare on these catchments is therefore calculated by the total cost of works divided by the sum of the effective impervious area for the sharing catchments. The final cost per catchment is the cost per effective area multiplied by the effective impervious area in the catchment.

Table 5-2 Works costing per catchment (Part 1)

Catchment Name	Total Effective Impervious Area (hectares)	Works	Total Cost of works	Cost per Effective Impervious hectare Part 1	Cost per Catchment Part 1
1	4.3	W1, RB1	\$ 709,000	\$ 52,910	\$ 227,515
2	9.1	W1, RB1	\$ 709,000	\$ 52,910	\$ 481,485
3	5.5	W2, RB2	\$ 445,000	\$ 80,909	\$ 445,000
4	16.7	W3, RB3	\$ 445,000	\$ 26,647	\$ 445,000
5	15.4	W4, RB4	\$ 403,000	\$ 26,169	\$ 403,000
6	5.2	W4, RB4	\$ 403,000	\$ 26,169	\$ 136,078
7	7.2	W5, RB5	\$ 409,000	\$ 56,806	\$ 409,000
8	4.8	W6, RB6	\$ 407,000	\$ 84,792	\$ 407,000
9	12	W7, RB7	\$ 545,000	\$ 45,417	\$ 545,000
10	3.2	Bio1	\$ 18,000	\$ 5,625	\$ 18,000
11	4.1	Bio2	\$ 18,000	\$ 4,390	\$ 18,000
13	12.5	W9, RB9	\$ 583,000	\$ 46,640	\$ 583,000
14	7	W10, RB10	\$ 460,000	\$ 65,714	\$ 460,000
TOTAL	107		\$ 5,554,000	\$ 575,098	\$ 4,578,078

Table 5-3 Works costing per catchment (Part 2)

Catchment Name	Total Effective Impervious Area (hectares)	Works	Total Cost of works	Effective Impervious Area (hectares) Part 2	Cost per Effective Impervious hectare Part 2	Cost per Catchment Part 2
4	19.6	W3a, RB3a	\$ 278,000	2.9	\$ 95,862	\$ 278,000
5	19	W4a, RB4a	\$ 312,000	3.6	\$ 86,667	\$ 312,000
9	13	W7a, RB7a	\$ 246,000	1	\$ 246,000	\$ 246,000
12	9.8	W8, RB8	\$ 643,000	9.8	\$ 65,612	\$ 643,000
TOTAL	61.4		\$ 1,479,000	17.3	\$ 494,141	\$ 1,479,000

5.2 Land Required for Works

Urban Enterprise have requested the area (or land take) required for each basin and bio retention swale. The approximate surface area of each basin at the top water level plus a 300mm freeboard is given in Table 8-5. Each bio retention swale requires a surface area of 350m².

Table 5-4 Land take for Retarding Basins

RB Number	Area (including freeboard) (m ²)
PART 1	
1	5,635
2	3,071
3	4,563
4	2,400
5	3,392
6	4,064
7	5,005
9	5,048
10	4,942
PART 2	
3a	1,913
4a	2,568
7a	1,509
8	5,261

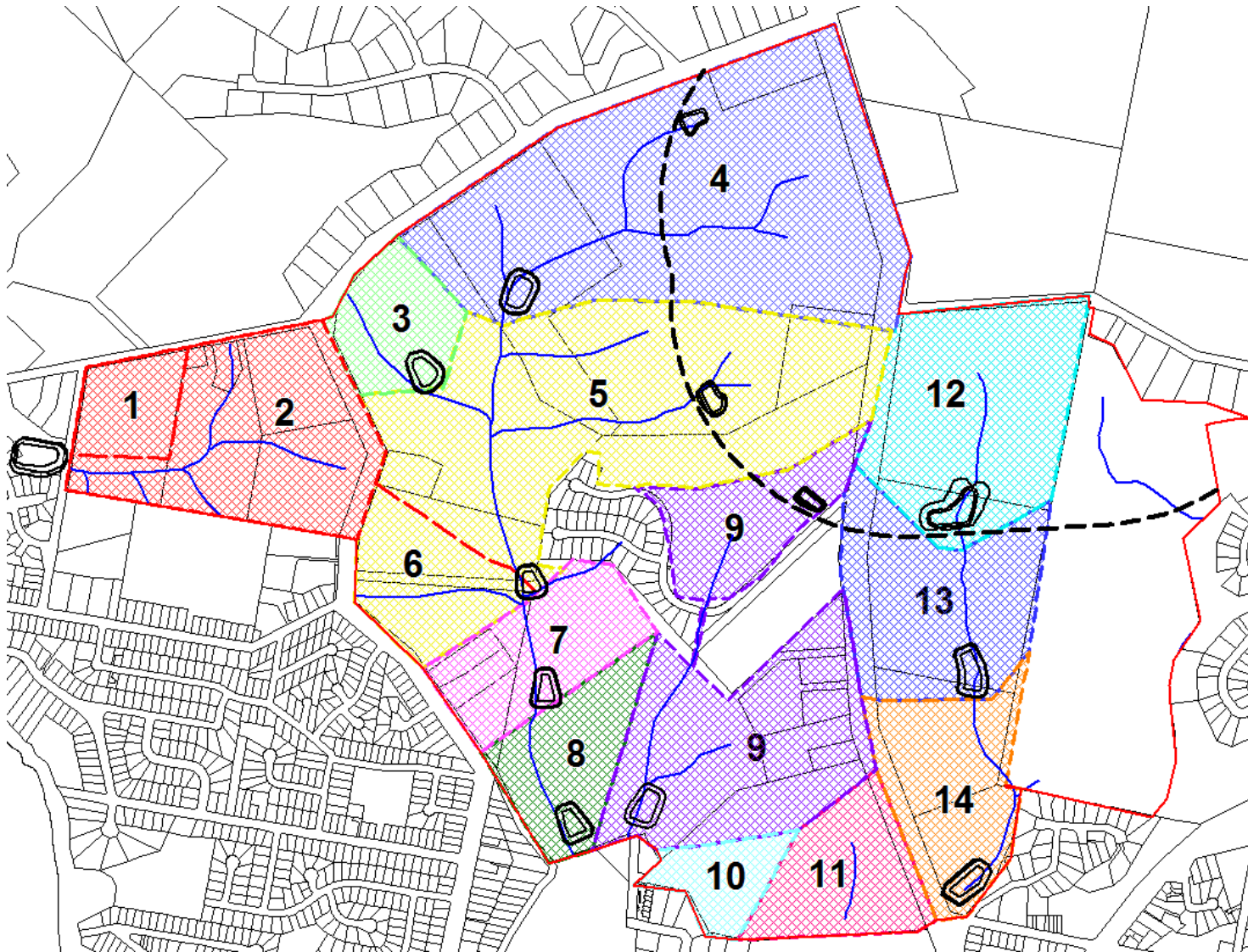


Figure 5-1 Cost apportionment – catchment boundaries

6. FURTHER ASSESSMENTS REQUIRED

Based on this investigation Water Technology advises that a number of further studies will ultimately be required to meet EGSC and EGCMA requirements. This is likely to include detailed flow path modelling (pre development & post development) at the detailed subdivision design scale, detailed surface water drainage design (including final engineering basin sizing / culvert sizing), a Waterway Management Plan and a Stormwater management plan. These studies should address all of the points addressed in this study. Indicative costs provided in this report should be viewed as a guide only. The following hydrological / water quality / stormwater management related components are likely to be required:

6.1 Additional Site Survey

It is considered that the currently available site survey will be sufficiently accurate to undertake the majority of any additional hydrological work required for individual developments. LiDAR information may be available for some sections (generally the lower elevation areas) and this data should be sourced and utilised where possible. Additional detailed survey is likely to be required at all proposed basin locations and existing farm dams to determine the detailed storage characteristics, overflow configurations and general hydraulic behaviour of these features.

It is expected that individual sites will need to be feature surveyed for development plans, and this work could be tied in with the above requirements. Individual site costs will vary but an additional 2-4 days of field work would not be un-reasonable (\$4,000 – \$8,000 per site).

6.2 Surface Water Management Strategy (~\$7,500 - \$15,000 per site)

Given the designated waterways present in all sites, a Surface Water Management Strategy (SWMS) will be required for individual development areas that detail stormwater quantity and quality management features for the development. This study should refer to a detailed concept development plan that provides an accurate assessment of lot, POS and road layouts. Individual sub-catchment storage and WSUD features will be detailed and benchmarked with EGSC and EGCMA requirements. Key elements of this study would include:

6.2.1 Hydrologic Assessment

A detailed hydrologic analysis of the site flows is required. The RORB model presented in this report should be used as the primary catchment modelling tool. Depending on detailed design requirements, adjustment or refinement of the RORB sub catchment properties presented in this report may be appropriate.

6.2.2 Water Quality

An assessment of storm water management requirements including design of appropriate water quality treatment measures will need to be completed. This is to ensure Best Practice in meeting any receiving water requirements. This report has presented suitable conceptual treatment components, with detailed design to occur at a later stage in liaison with civil designers.

In general, individual SWMS for separate developments will involve the following:

- Review of the surface water management issues for the site as a whole which may impact on function and sustainability of water bodies and drainage paths including consideration of Water Sensitive Urban Design (WSUD) principles in the proposed development;
- Design / confirmation of proposed stormwater water management system options and assessment of their suitability and effectiveness using Best Practice Management tools (stormwater treatment modelling tool MUSIC). Depending on the final suite of WSUD assets employed, sub versions of the MUSIC model developed for this report may be appropriate to provide additional detail within specific developments;
- Preparation of a report detailing the final design and analysis of the WSUD components of the development.

Based on our work conducted for this investigation, we believe there is ample scope within the development to achieve an attractive and functional stormwater system, with multiple water quality and aesthetic values associated with the designs.

6.3 Reuse Strategy (~\$5,500 per site)

If reuse of stormwater is considered a viable and attractive option for the development, Water Technology could develop a reuse strategy which encompasses the following:

- Demand analysis for various potential users in the development;
- Water storage design – whether this is within reservoirs, underground storages or rainwater tanks;
- Consideration of any water quality requirements associated with reuse; and
- Water balance analysis.

6.4 Consultation with relevant authorities (~\$3,500 per site)

As the EGSC and EGCMA are important referral authorities for the development, additional meetings will be required to discuss drainage, flooding and water quality related issues.

6.5 Waterway Management Plan (~\$3,500 – \$5,500 per site)

Given the designated waterways present in all sites, a Waterway Management Plan (WMP) will be required for individual development areas. The WMP will detail the design and implementation of best practice waterway management options and maintenance requirements to ensure the short and long term health and function of the designated waterways.



Acknowledgments

We acknowledge the traditional owners of the land, the Gunnai Kurnai people and pay our respects to their elders past and present.

The time, expertise and local knowledge which community members, local service providers, and government agencies have contributed to the process of the preparation of this report is greatly appreciated. Thank you to everyone who assisted.

Table of Contents

1	SUMMARY	1
2	INTRODUCTION	3
2.1	DEFINITIONS	3
2.2	LEGISLATIVE FRAMEWORK FOR SIAs IN VICTORIA.....	5
2.3	POLICY CONTEXT	5
3	SCOPING OF THE DEVELOPMENT.....	7
3.1	DESCRIPTION OF THE PROPOSED PROJECT	7
3.2	CHARACTERISTICS OF THE LAKES ENTRANCE AREA.....	9
3.3	LOCAL INDUSTRY	19
4	UNDERSTANDING THE FUTURE COMMUNITY	21
4.1	ASSESSMENT ASSUMPTIONS.....	21
4.2	OTHER INFLUENCING FACTORS	21
4.3	GROWTH SCENARIOS	21
4.4	FRAMEWORK FOR ASSESSING THE IMPACTS OF THE DEVELOPMENT	22
5	THE VIEWS OF THE COMMUNITY.....	24
5.1	OVERVIEW OF THE CONSULTATION PROCESS	24
5.2	KEY ISSUES.....	24
5.3	OTHER ISSUES.....	26
6	ASSESSMENT OF THE SOCIAL IMPACTS.....	28
6.1	OVERVIEW	28
6.2	GROUPS/INDIVIDUALS THAT WILL BE IMPACTED BY THE DEVELOPMENT PROPOSAL.....	28
6.3	CONSIDERATION OF FACTORS WHICH CONTRIBUTE TO WELL-FUNCTIONING COMMUNITIES	30
7	MAPPING OF SERVICES AND FACILITIES.....	33
7.1	OVERVIEW	34
7.2	DETERMINING THE SCOPE AND QUANTUM OF COMMUNITY INFRASTRUCTURE	34
7.3	SOCIAL AND HEALTH INFRASTRUCTURE	35
7.4	RECREATION FACILITIES	36
7.5	PUBLIC OPEN SPACE	38
7.6	LIBRARY/ COMMUNITY MEETING SPACES	38
7.7	EMERGENCY SERVICES PROVISION	39
7.8	PUBLIC TRANSPORT	39
7.9	VEHICLE TRAFFIC.....	40
7.10	HOUSING.....	40
7.11	POPULATION AND SERVICE DEMAND.....	40
7.12	SOCIAL INFRASTRUCTURE AUDIT	41
7.13	INFRASTRUCTURE AND SERVICE REQUIREMENTS.....	41
7.14	ASSESSING THE VALIDITY OF ASSUMPTIONS OVER TIME.....	41
8	RECOMMENDATIONS.....	53
9	REFERENCES	57
	APPENDIX 1. PROJECTED POPULATION GROWTH TO 2025 BY SINGLE AGE GROUPS	58
	APPENDIX 2. EMPLOYMENT PROFILE (ABS, 2006)	59
	APPENDIX 3 SURVEY TOOL	60
	APPENDIX 4 COMMUNITY GROUPS AND ORGANISATIONS	61

List of Tables

TABLE 1:	POPULATION OF LAKES ENTRANCE, 2006	10
TABLE 2:	AGE OF POPULATION, LAKES ENTRANCE, 2006	10
TABLE 3:	MEDIAN STATISTICS –LAKES ENTRANCE (ABS 2006, EAST GIPPSLAND SHIRE COUNCIL -COMMUNITY PROFILE, 2012).....	10
TABLE 4:	POPULATION PROJECTION 2006-2025 –LAKES ENTRANCE	11
TABLE 5:	POPULATION GROWTH BY AGE GROUPING TO 2025	12
TABLE 6:	SEIFA SCORES BY CENSUS COLLECTOR DISTRICTS (CDs), 2006	13
TABLE 7:	HOUSING TYPE (ABS 2006)	14
TABLE 8:	DWELLING TYPE (ABS 2006)	15
TABLE 9:	FAMILY STRUCTURE (ABS, 2006)	16
TABLE 10:	UNEMPLOYMENT RATE BY STATISTICAL LOCAL AREA 2007-2011 (DEEWR SMALL AREA STATISTICS)	17
TABLE 11:	SOCIAL IMPACT ASSESSMENT MATRIX	33
TABLE 12:	TYPE OF COMMUNITY INFRASTRUCTURE	34
TABLE 13:	QUANTITATIVE ANALYSIS OF SOCIAL/COMMUNITY INFRASTRUCTURE ACROSS THREE DEMOGRAPHIC SCENARIOS	43
TABLE 14:	MAJOR SOCIAL INFRASTRUCTURE AUDIT	45

List of Figures

FIGURE 1:	LAND DEVELOPMENT PARCELS AND NUMBER OF POTENTIAL LOTS	7
FIGURE 2:	LAKES ENTRANCE URBAN LOCALITY SHOWING ABS CENSUS COLLECTION DISTRICT BOUNDARIES	9
FIGURE 3:	POPULATION PROJECTION (CURRENT GROWTH) 2014-2025	12
FIGURE 4:	LAKES ENTRANCE CENSUS COLLECTION DISTRICTS (CCD)	13
FIGURE 5:	PART TIME EMPLOYMENT BASED ON ABS (2006)	18
FIGURE 6:	OCCUPATION TYPE COMPARISON BAIRNSDALE/LAKES ENTRANCE (BASED ON ABS CENSUS 2006).....	18
FIGURE 7:	IMAGES OF LAKES ENTRANCE FORESHORE	19
FIGURE 8:	ESPLANADE RETAIL AREA BETWEEN MYER STREET AND CARPENTER STREET	20
FIGURE 9:	COMMUNITY LISTENING POST	24
FIGURE 10:	MAPPING OF RETAIL FOOD OUTLETS, PUBLIC TRANSPORT AND WALKABILITY	32
FIGURE 11:	LAKES AQUADOME LEISURE CENTRE AND LAKES ENTRANCE YOUTH AND RECREATION CENTRE	37
FIGURE 12:	LAKES ENTRANCE FORESHORE	38

1 Summary

The development of a number of parcels of land within the Lakes Entrance Northern Growth Area has provided an opportunity to reflect on the social, economic and environmental context of the Lakes Entrance community. The proposed level of development will, over time have a significant impact on the local community and may provide an opportunity for the town to undertake growth which is not dependant on existing challenges of inundation and climate change. The level of uncertainty on these latter issues is providing a barrier to social and economic stability and hence there is an opportunity for advocacy on behalf of the community to make progress towards a greater definition of the future of the town.

The study has found a community with a number of strengths and challenges and an understanding of its own complexity and vulnerability. The positive support for the proposed residential development also reflects the community's desire for "progress" and "growth". It indicates a sense of engagement by the community in its future development and provides an insight into the level of commitment to maintaining the viability of a town often a reflection of its historical context.

The key facets of the social/community infrastructure which have informed the SIA recommendations are as follows:-

The community has poor internal transport connections and is reliant on vehicle use to provide access to the retail area, education, and recreation and health services. Walking is actively encouraged along the foreshore area but infrastructure to support greater access to facilities is unconnected and poorly signposted. The proposed development can play a major role in improving the connectivity and walkability across the community and as a link between the foreshore and major trails and walkways to the north of Lakes Entrance

Lakes Entrance has extensive social/community infrastructure which reflects its historical growth over a long period of time although most of the infrastructure is either ageing, unable to expand to service increased demand or is physically disparate and poorly integrated across the community. Key areas for examination were the provision of early year's education services, the location of emergency services, the connectivity to the diverse recreation opportunities and the potential to improve coordination of services and facilities to maximize service provision across the age groups.

The community is, in some small areas, amongst the lowest percentiles of advantage in East Gippsland. The education and employment levels, especially in professional/sub professional occupations are low and household incomes are low compared with East Gippsland and Victorian averages. Economic growth is limited to the main employment generators, tourism and fisheries, and both are reliant on seasonal variability. Casualisation of the local employment market, resultant from these major employers, drives much of the lower household income rates. There are therefore a number of potentially vulnerable families in Lakes Entrance. The need to support and grow access to public education, health and welfare services within the town will be a key driver in developing future social/community infrastructure.

The ageing of the East Gippsland community is well documented and the level is equal to and will potentially be above the municipal rate over time if there was to be no change in the existing demographic patterns. The uptake of the proposed development and the demographic that is attracted to it will depend on the economic, social and environmental development of Lakes Entrance. The high level of separate housing is indicative of the housing profile in rural and regional towns, with the high level of tourism accommodation generally targeted at the caravan parks and smaller motel units. The development of a greater diversity in the housing stock is required to provide for variations in household types, with the potential for older residents to move to medium density housing and to release more affordable family size housing on to the market.

The health and wellbeing of the community is reflective of that for the East Gippsland Shire. Primary health occasions of service per 1,000 population is 76.7% above the Victorian average, reflecting the health service demand and the rural and regional health delivery model existing in East Gippsland.

In 2008, 66.5% of males in the Shire met the physical activity guidelines, similar to Victorian males (61.0%), however only 51.0% of females in the Shire met the physical activity guidelines, lower than Victorian females (59.7%). The percentage of females in the Shire classified as completing an insufficient amount of physical activity (38.2%) was higher than Victorian females (27.2%). The percentage of persons at risk of short-term harm from alcohol consumption is 31% higher than the Victorian average.

Increased access to public health infrastructure is supported within the study and there is evidence to show that the demand for services will continue.

Improved access to recreational opportunities will contribute to a healthier community as will opportunities for increased social interaction and economic growth.

The recommendations developed from the assessment, are designed to support a strong and viable Lakes Entrance community which is to grow as the result of the cumulative effects of the proposed residential developments. The many social and environmental challenges outlined within this study provide for the opportunity to adapt to a changing landscape and to ensure that the social infrastructure supports the community into the future.

2 Introduction

The East Gippsland Shire Council has been presented with a number of potential residential developments in Lakes Entrance for which it has decided to produce an Overall Development Plan (ODP), in an area now defined as the **Lakes Entrance Northern Growth Area**.

Council has also decided to undertake a number of studies to establish appropriate baseline information from which to define a series of recommendations by which the future development of the proposed residential land can be guided.

A major component of the proposed studies will be the assessment of the social impact of the proposed development. This process has been designed to follow Council's Draft *Social Impact Assessment Guidelines for Development Applications* and considers the various impacts of the proposed residential developments on the local community and its social infrastructure.

This document provides an explanatory discussion on the principles and practice of Social Impact Assessment as it relates to the proposal for residential development in the Lakes Entrance Northern Growth Area. It also examines the evidence of existing social support and infrastructure and, in reference to population projection data, makes recommendations for adaptations to change resulting from the proposed residential development

2.1 Definitions

Social infrastructure

Social Infrastructure refers to:-

"the community facilities, services and networks which help individuals, families, groups and communities meet their social needs, maximise their potential for development and enhance community wellbeing.

They include:

- *universal facilities and services such as education, training, health, open space, recreation and sport, safety and emergency services, religious, arts and cultural facilities, and community meeting places*
- *lifecycle-targeted facilities and services, such as those for children, young people and older people*
- *targeted facilities and services for groups with special needs, such as families, people with a disability and Indigenous and culturally diverse people*

(South East Queensland Regional Plan 2005-2026 Implementation Guideline No.5: Social infrastructure planning)

Social Impact Assessment

Social Impact Assessment (SIA) is defined as:-

"the processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment" (International Association of Impact Assessment, 2010).

Developments impact on communities across a spectrum of conditions and responses and can result in changes to how people live, work and interact with each other, their culture, community and

environment, as well as their health and wellbeing. Developments can also impact on people's fears and aspirations, including their perceptions about their safety. Understanding and managing the long-term effects of these changes is central to supporting the development of sustainable communities in the long term and mitigation against any negative impacts.

A number of factors have led to the introduction of social impact assessments as part of the planning approval process. These include:

- Council is committed to promote and implement the community's vision for strong, vibrant, sustainable and productive communities;
- Growth and change is occurring across a number of communities, as Council encourages economic growth;
- Increasing land prices encourages sub-division of farming land for residential development, particularly in coastal communities;
- Environmental changes are occurring, as a result of climate change impact, with increasing devastation from bushfires and floods. There is a need to manage these changes and support communities in the longer term;
- There is increasing divides in socio-economic status between communities in the municipality, with disadvantage and poverty increasing in socially isolated communities and increasing wealth and prosperity in the coastal and more accessible areas of the municipality. There is a need to manage the potential displacement of existing low income residents to more isolated areas where land is affordable;
- Council has a process for economic and environmental assessments. Given the definition of "sustainable communities" outlined in the Ministerial Guidelines (Ministerial Guidelines for Assessment of Environmental Effects, Department of Sustainability and Environment, 2006) and the East Gippsland Shire Council Plan 2009-2013, there is a need to develop a more robust process for assessing social impacts.

The SIA process will:

- Enable an integrated planning process to occur, complementing the economic and environmental assessments which are currently required;
- Provide a systemic assessment of the cumulative effect of multiple development proposals in local communities;
- Introduce better outcomes for communities, linking the planning process to the directions of the Council Plan;
- Promote the "liveability" of the Shire; and
- Ensure that potential negative impacts are reduced through effective management and the opportunities for potential positive impacts are maximised.

Social Impact Assessments can

- Identify and maximise the positive community health and wellbeing impacts and opportunities that development, policy changes and infrastructure can bring;
- Identify, avoid and minimise, through changes to project design and implementation, the unintended negative community health and wellbeing impacts that can arise;
- Identify relevant Federal, State and local Government regulations and policies which may impact on the project;

- Identify existing community issues, including gaps in services and infrastructure, which could amplify the impact of a proposed project and affect its viability;
- Provide a process through which the project can work in partnership with council and local health and wellbeing service providers to jointly alleviate any existing social or health concerns or potential negative social impacts;
- Contribute to broader community and local stakeholder involvement and engagement that can build trust, draw out any community concerns and generate dialogue about the best ways that the project can benefit local communities;
- Provide a balanced and integrated approach between social, economic and environmental outcomes;
- Provide an equitable, transparent and evidence-based approach to planning and funding community infrastructure and development activities to protect and enhance sustainable local livelihoods and communities;
- Assist to jointly negotiate those aspects of community health and wellbeing which are the responsibility of the project and those aspects which are the responsibility of council and other levels of government;
- Help to manage project sustainability and viability.

2.2 Legislative framework for SIAs in Victoria

The guidelines for Social Impact Assessment, developed by Council, cover the process for meeting the social objectives of land use and development planning, in accordance with the Act.

The legislative framework for SIAs and authority of Local Government to require SIAs to be undertaken for selected developments, is contained in the Planning and Environment Act Victoria 1987:

- Section 4: Objectives;
Objective 2 (d): to ensure that the effects on the environment are considered and provide for explicit consideration of social and economic effects when decisions are made about the use and development of land;
- Section 12: Duties and powers of planning authorities;
Section 12 (2) (c): may take into account its social effects and economic effects. and
- Section 60: What matters must be considered by a responsible authority.
Section 60 (1A) (a): Before deciding on an application, the responsible authority, if the circumstances appear to so require, may consider— any significant social and economic effects of the use or development for which the application is made.

2.3 Policy context

The policy contexts that will can inform or direct the proposed residential development include:-

- Planning and Environment Act 1987
- East Gippsland Planning Scheme - especially relating to the vision and objectives for Lakes Entrance :-

“Lakes Entrance will continue its role as the largest coastal town in the Gippsland area, with a strong focus on commercial fishing and recreational boating activities. The

protection and enhancement of environmental and landscape values will be a key priority.

Residents will enjoy an easily accessible town with a variety of housing types, employment opportunities and retail and commercial uses” (Clause 21.06, EGPS, 2012)

- Healthy by Design- Heart Foundation
- Disability Discrimination Act
- East Gippsland Community Wellbeing Plan

3 Scoping of the development

3.1 Description of the proposed project

This Social Impact Assessment study includes six individual parcels of land which are being viewed collectively to ensure that the cumulative impacts of the developments are considered. These are illustrated in Figure 1 and include a parcel of land which is owned by the East Gippsland Shire Council, the location of Council's Lakes Entrance Offices.

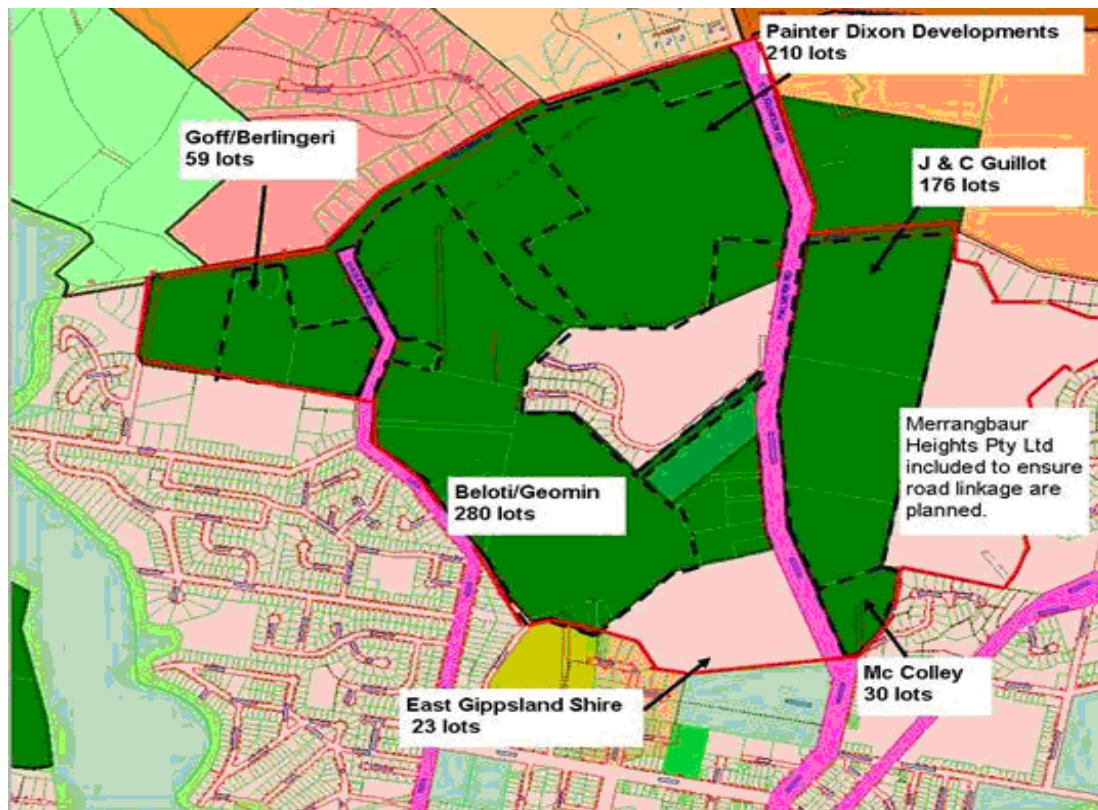


Figure 1: Land development parcels and number of potential lots

Land Owner	Number of Lots
Goff/Berlingeri	59
Beloti/Geomin	280
J&C Guillot	176
McColley	30
Painter/Dixon Developments	210
East Gippsland Shire	23

The land is mostly sloping towards the south with a number of prominent gullies. It is situated at the northern edge of the township and in some parts is adjacent to existing residential areas. There is a golf course, cemetery and a small existing area of residential development within the study area. The area is bordered by Ostlers Rd, Colquhoun Rd and Palmers Rd.



View of Lakes Entrance Cemetery, Palmers Rd



View South from Ostlers Road

As there are a number of land development proposals within the study, the Social Impact Assessment will necessarily view the cumulative effects of all proposals on the Lakes Entrance community and its social infrastructure. As such, the assessment becomes more complex because of a number of variables which need to be taken into account such as the timing of the potential land development releases and the effects of those releases over a period of 20 years. The timeframe is chosen to relate to the current scope of demographic projections *ie* to 2025/6.

The East Gippsland Shire Council Draft *Social Impact Assessment Guidelines for Development Applications* sets out a mechanism to develop a picture of the future effects of development proposals. Although the guidelines provide the best evidence based approach to assessment of social impact of development applications we must be aware that this process is predictive. Assumptions and conclusions are based on available information and the opportunities to interpret and reflect on possible population and demographic projections.

3.2 Characteristics of the Lakes Entrance Area

3.2.1 Physical

The Lakes Entrance Study Area is 2,807 hectares with a population density of 1.74 people per hectare. This SIA will use the same geographic definition previous studies on land use in Lakes Entrance, ABS category of 'Urban Locality' ((Urban Enterprise, 2010) (see Figure 2).



Figure 2: Lakes Entrance Urban Locality showing ABS Census Collection District boundaries

3.2.2 Climate Change and Land Inundation in Lakes Entrance

The main town centre of Lakes Entrance has been subject to interim planning controls due to the issues of land inundation from flooding. This effect, in conjunction with planning considerations and concerns for climate change on low lying areas, has led to the development of a number of studies to examine the vulnerability of the community to environmental change.

The social impact of climate change in Lakes Entrance has yet to be quantified. However, the community is concerned about the effects of climate change on their town and way of life, their property values and their ability to adapt to a potentially difficult and challenging environment. Importantly, some health, education and community service provision and the majority of the commercial and tourism infrastructure are situated in or close to the areas where inundation and sea level rise is predicted to have the most significant effect.

3.2.3 Population characteristics

To effectively plan for social infrastructure which is able to meet the needs of the community into the future, it is important to understand the profile of the communities which are the subject of the study.

Existing demographic information is available from a number of sources, all of which are reliant on the Australian Bureau of Statistics (ABS) which derive their data from the national census undertaken every five years. The current information is sourced from the 2006 census which will be superseded by the 2011 census data, available from July 2012. There are also a number of predictive measures such as the Estimated Resident Population (ERP) which provides estimated population growth using a number of economic and social measures. These data are available to 2025 through a number of Commonwealth and State government agencies (Department of Health, Department of Planning and Community Development).

Table 1 shows the total population of Lakes Entrance, at the time of the 2006 Census. These data indicate that the total population of the town at that time was just over 5,500. Table 2 shows the breakdown of the population in 2006 (Census 2006, ABS).

Table 1: Population of Lakes Entrance, 2006

Person Characteristics	Lakes Entrance	% of total persons in Lakes Entrance	% of total persons in East Gippsland Shire	% of total persons in Victoria	% of total persons in Australia
Total persons (excluding overseas visitors)	5,548	100%			
Males	2,691	48.5%	49.2%	50.9%	49.4%
Females	2,857	51.5%	50.8%	49.1%	50.6%
Aboriginal persons	205	3.7%	2.9%	0.6%	2.3%

Table 2: Age of population, Lakes Entrance, 2006

Age Groups	Lakes Entrance	% of total persons in Lakes Entrance	% of total persons in East Gippsland Shire	% of total persons in Victoria	% of total persons in Australia
0-4 years	303	5.5%	5.3%	6.2%	6.3%
5-14 years	633	11.4%	13.1%	13.1%	13.5%
15-24 years	552	9.9%	10.2%	13.7%	13.6%
25-54 years	1,805	32.5%	35.2%	42.6%	42.2%
55-64 years	841	15.2%	15.2%	10.7%	11.0%
65 years and over	1,413	25.5%	21.0%	13.7%	13.3%

To understand some of the drivers for social and economic determinants, we have provided an examination of a number of medians (i.e. the middle ranking of all values) and provided comparative information for East Gippsland, Victoria and Australia (see Table 3).

Table 3: Median statistics –Lakes Entrance (ABS 2006, East Gippsland Shire Council -Community Profile, 2012)

Medians	Lakes Entrance	East Gippsland Shire	Victoria	Australia
Median age of persons (years)	47	45	37	37
Median individual income (\$/weekly)	\$326	\$357	\$456	\$466
Median family income (\$/weekly)	\$702	\$868	\$1,170	\$1,171

Median household income (\$/weekly)	\$588	\$653	\$1,022	\$1,027
Median housing loan repayment (\$/monthly)	\$962	\$867	\$1,252	\$1,300
Median rent (\$/weekly)	\$140	\$132	\$185	\$190
Average number of persons per bedroom	1.1	1.1	1.1	1.1
Average household size	2.2	2.3	2.6	2.6

Observations from the Population and Median data

These data indicate that Lakes Entrance is a town dominated by older people, with a quarter of the population aged 65 years of age or older. The older persons (55 and older) count is higher for Lakes Entrance than all comparative measures, being almost double the national average. This has the effect of raising the median age of the community.

Younger people under 25 are under-represented in the community in comparison to Victorian averages with the 15-24 age group most affected

There are a larger percentage of Aboriginal people in the Lakes Entrance area. It is generally accepted by service agencies in the area that the census statistics are an under-estimation of the Indigenous population and that the actual number is likely to be up to double the census count.

Individual incomes are below municipal and state medians with family incomes at 60% of the Victorian average

The cost of owning a house and renting a house in Lakes Entrance is proportionately higher when considered with household incomes

3.2.4 Anticipated Population Change

Table 4 shows the estimated population for the Bairnsdale Statistical Local Area (SLA) as compiled by the Australian Bureau of Statistics (ABS). The Lakes Entrance population projection is derived from adjusting the population by the percentage growth of the SLA which encompasses the area from Bairnsdale to Lakes Entrance.

Table 4: Population Projection 2006-2025 –Lakes Entrance

Bairnsdale SLA	2006	2012	2016	2021	2025
Population	26,192	28,591	30,028	31,715	32,927
% increase per annum		1.8	1.0	1.1	0.8
Lakes Entrance Population Projection	5,548	6,047	6,349	6,698	6,965

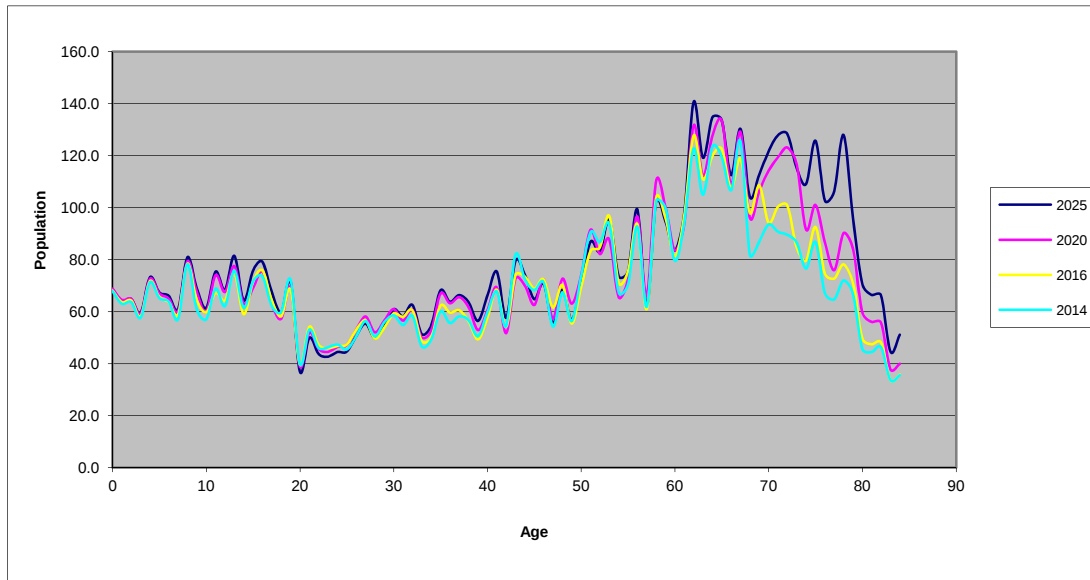
Source: ABS

3.2.5 Population Projection by Age

Population by age is a determinant of social infrastructure planning. The number of people who are expected to live in the Lakes Entrance study area is predicated on natural birth/death balance and

ageing of the population using the Bairnsdale Statistical Local Area growth pattern (Table 4, represented graphically by age in Chart 1.)

Figure 3: Population Projection (current growth) 2014-2025



Source: ABS 2006

The graph indicates the growth of the community by age groups. The outstanding elements of the graph are the high level of the 60+ age group, which remains the dominant grouping across the period to 2025. Equally evident are the low numbers of young people in the 20-30 age grouping.

The above table is a benchmark from which we need to extrapolate the addition of the extra population produced by the proposed residential land development. If we assume that the proposed developments have 30 dwellings purchased each year, for the current estimated lot yield of 750-900, there would be approximately 25-30 years of residential supply in the overall development. If we use the most common persons per household data for Lakes Entrance (2.2) we would have an extra 66 people in the community per annum. The breakdown of the age groupings, based on current profiling for the study area, is shown below (Table 6).

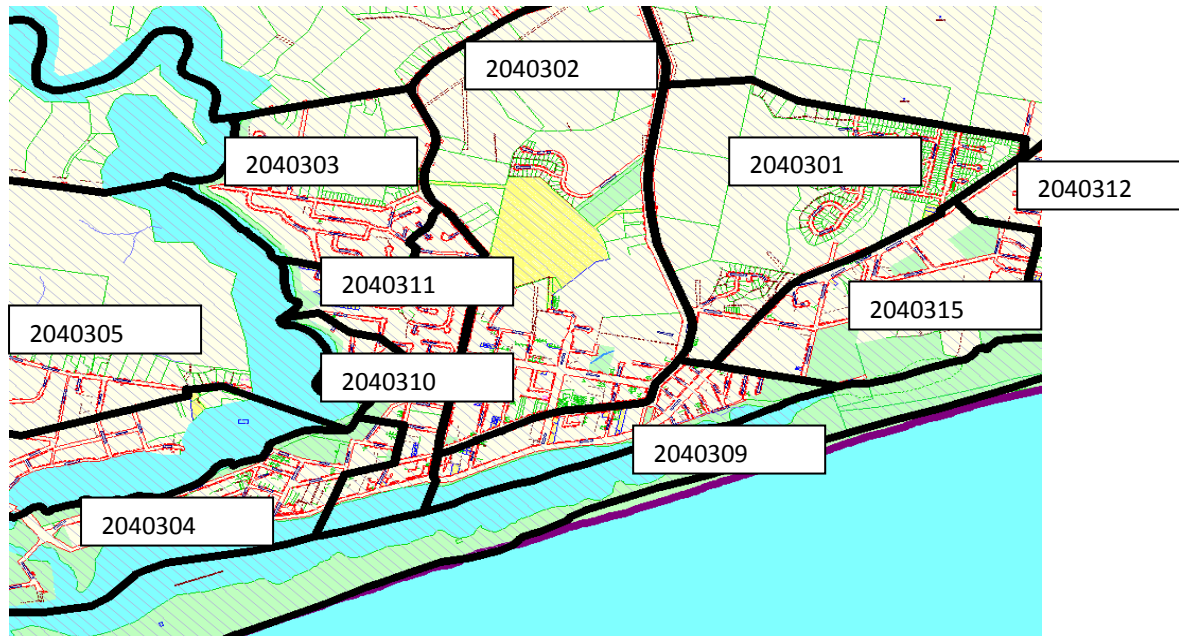
Table 5: Population Growth by Age Grouping to 2025

Age Grouping	% of Population	Number/annum	Number after 25 years
0-4	5.5	3.6	91
5-14	11.4	7.5	188
15-24	9.9	6.5	163
25-34	32.5	21.5	538
55-64	15.2	10.0	250
64+	25.5	16.8	420
Total	100	65.9	1650

3.2.6 Social and Economic Indicator for Advantage (SEIFA)

The SEIFA rating provides a comparative tool to estimate the relative advantage and disadvantage of individual communities. It operates with a set of indicators which provide a measure that makes comparisons against the average Australian level of advantage, which is set at 1000. Lakes Entrance has a mix of SEIFA ratings which are provided here at the Census Collection District level (areas of 225 houses, on average) and shown below (Figure 3). The numbers on the chart below represent collector districts.

Figure 4: Lakes Entrance Census Collection Districts (CCD)



Source: ABS

Socioeconomic factors such as income, employment, education, social support and housing are all intricately linked to the health and wellbeing of the community. Disentangling the relationships between wellbeing of a community and these factors is complex because the causal direction is often unclear. For example, people who have higher levels of education are more likely than others to be employed in white-collar or professional jobs, and also tend to have higher incomes than unskilled workers. Therefore, some of the connection between income and health is due to the indirect effects of education and occupation. Education promotes skills and knowledge that can help an individual understand information and seek services to improve their health. Further, illness or disability can contribute to unemployment, which in turn results in reduced income. (Australia's Health 2010, AIHW).

Table 6: SEIFA scores by Census Collector Districts (CDs), 2006

CDs	Index of Relative Socio-economic Advantage and Disadvantage		Index of Relative Socio-Economic Disadvantage		Index of Economic Resources		Index of Education and Occupation		Usual Resident Population
	Score	Decile	Score	Decile	Score	Decile	Score	Decile	
2040301	900	2	941	3	962	4	865	1	724
2040302	846	1	854	1	844	1	873	1	575

CDs	Index of Relative Socio-economic Advantage and Disadvantage		Index of Relative Socio-Economic Disadvantage		Index of Economic Resources		Index of Education and Occupation		Usual Resident Population
	Score	Decile	Score	Decile	Score	Decile	Score	Decile	
2040303	894	2	896	2	896	2	924	3	615
2040304	78	2	896	2	892	2	900	2	339
2040305	931	3	977	4	985	5	895	2	670
2040309	873	1	885	2	869	1	891	2	328
2040310	901	2	918	2	925	3	901	2	292
2040311	858	1	888	2	922	2	847	1	711
2040312	953	4	1,000	5	995	5	921	3	459
2040313	922	3	963	3	965	4	921	3	512

Source: ABS 2006

Some observations from the SEIFA scores for Lakes Entrance

Collection District (CD) 2040302, which rates as the lowest overall SEIFA score (846), in Lakes Entrance and at the 4th percentile mark in Victoria, encompasses the majority of the Overall Development Plan area. Neighbouring CD's around the proposed developments, have SEIFA scores one closer to 900 (13th percentile) and one at 858 (5th percentile).

3.2.7 Housing and Family Structure Data

Comparison has been made between the Lakes Entrance study area, East Gippsland and Victoria in order to understand the makeup of the current housing stock and family makeup.

Table 7: Household Type, Lakes Entrance (ABS 2006)

Number of persons usually resident:	Family households	Non-family households	Total	% of total dwellings Lakes Entrance	% of total dwellings East Gippsland	% of total dwellings Victoria
One	0	669	669	30.0	27.0	24.5
Two	867	50	917	41.0	40.9	33.2
Three	248	6	254	11.5	12.0	15.9
Four	212	0	212	9.6	11.8	16.3
Five	118	0	118	5.4	5.3	7.1
Six or more	34	0	34	1.5	2.2	3.0
Total	1,479	725	2,204	100	100	100

Table 8: Dwelling Type, Lakes Entrance (ABS 2006)

Dwelling Type	Dwellings	Persons	% of total dwellings Lakes Entrance	% of total dwellings East Gippsland	% of total dwellings Victoria
Separate house	1,822	4,319	82.7	89.7	77.5
Semi-detached, row or terrace house, townhouse etc. with:					
• One storey	38	57			
• Two or more storeys	7	11			
Total	45	68	2.0	2.6	9.2
Flat, unit or apartment:					
• In a one or two storey block	268	406			
• In a three storey block	0	0			
• In a four or more storey block	0	0			
• Attached to a house	0	0			
Total	268	406	12.3	5.5	12.6
Other dwelling:					
• Caravan, cabin, houseboat	61	99			
• Improvised home, tent, sleepers out	0	0			
• House or flat attached to a shop, office, etc.	6	20			
Total	67	119	3.0	2.2	0.7
Dwelling structure not stated	0	0			
Total	2,204	4,912	100	100	100

Source: ABS (2006)

Table 9: Family Structure (ABS, 2006)

Enumerated data	2006 Lakes Entrance number	2006 Lakes Entrance %	2006 East Gippsland Shire %	2001 Lakes Entrance number	2001 Lakes Entrance %	2001 East Gippsland Shire %	Change 2001 to 2006
Couples with child(ren) under 15 years	408	22.6	25.3	435	25.3	28	-27
Couples with child(ren) 15 years and over	170	9.4	9.9	168	9.8	9.7	1
Total couples with child(ren)	578	31.9	35.2	604	35	37.7	-26
One parent families with child(ren) under 15 years	188	10.4	8.7	181	10.5	9.1	6
One parent families with child(ren) 15 years and over	89	4.9	5	74	4.3	5	16
Total one parent families	277	15.3	13.7	255	14.8	14.1	22
Couples without child(ren)	942	52.1	50.2	840	48.8	47	101
Other families	12	0.7	0.9	24	1.4	1.1	-12
Total families	1,809	100	100	1,724	100	100	85
One family households	1,765	65.9	67.6	1,676	63.5	66.4	89
Two or more family households	11	0.4	0.5	14	0.5	0.3	-3
Total family households	1,776	66.3	68.1	1,690	64	66.7	86
Lone person households	741	27.7	27.2	690	26.1	26.3	50
Group households	72	2.7	2.3	63	2.4	2.3	10
Other not classifiable households	89	3.3	2.4	197	7.5	4.7	-109
Total households	2,678	100	100	2,640	100	100	38

Source: ABS

Observations from Housing and Family Structure Data

- Over 33% of households are classed as non-family households, above the East Gippsland and Victorian levels.
- Two person households are the largest group which reflects the number of older couples living without children.

- Four persons, family households are only 9.6% of the housing types compared with 16.3% for Victoria.
- 83% of housing is separate housing which is above the Victorian average by 14%. This high percentage reflects the traditional development of housing in rural towns.
- Couples with children under 15 years of age have declined from 2001 to 2006 possibly reflecting the lack of local employment or lack of affordable family housing. Renting accounts for 26% of housing slightly higher than the Regional Victoria average and almost 3% above the East Gippsland figures. House purchasing (22%) was lower than East Gippsland (26%) and much lower than Regional Victoria (32%).
- One parent families have increased from 2001-2006 whereas the East Gippsland numbers have reduced overall

3.2.8 Employment

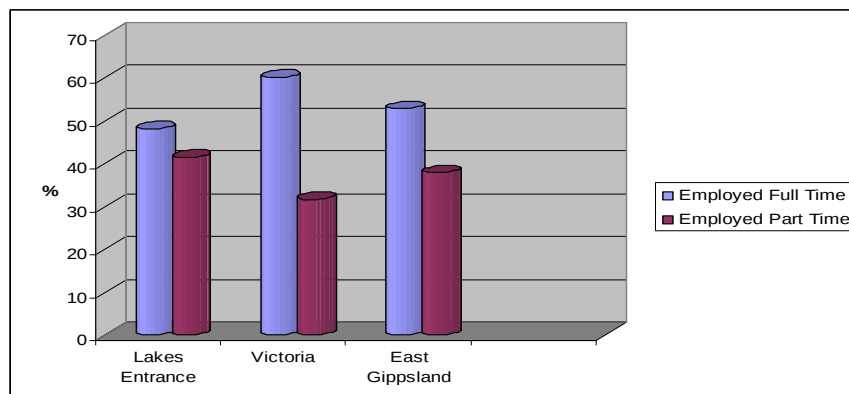
Information on the current employment status of the Lakes Entrance study area is provided by the Department of Education, Employment and Workplace Relations (DEEWR). Since December 2011 the unemployment rate has fallen across most of East Gippsland as represented below in Table 9.

Table 10: Unemployment rate by Statistical Local Area 2007-2011 (DEEWR Small Area Statistics)

Statistical Local Area	December 2007	December 2010	March 2011	June 2011	September 2011	December 2011
Bairnsdale (includes Lakes Entrance)	6.6	5.5	5.4	5.2	5.3	4.9
Orbost	6.9	6.7	6.7	6.5	6.6	6.3
South West	4.5	5.7	5.7	5.6	5.7	5.2
Rural Balance	5.1	4.5	4.3	4.1	3.9	3.8

As a town with extensive reliance on seasonal employment attached to the major industries of fishing and tourism, there are a large number of part time positions. This is represented in Fig 5 and highlights the difference between Lakes Entrance employment

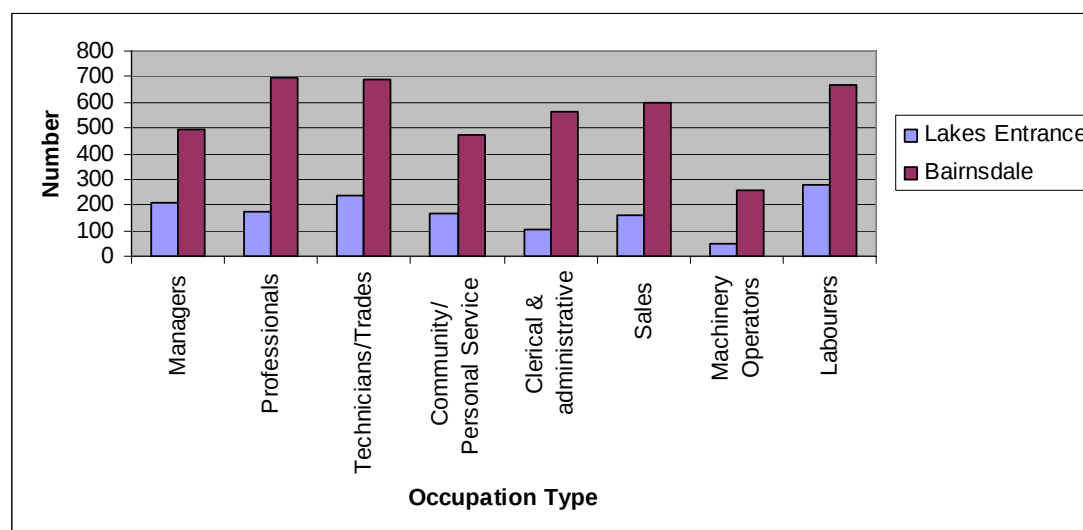
Figure 5: Part time employment based on ABS (2006)



Source: ABS

An examination of the major occupation types (Fig 6) suggests that the employment in Lakes Entrance provides less work for professionals than in a comparison with Bairnsdale and a greater percentage offering of technicians/trades positions and labourers. This reflects the SEIFA index characteristics of the Lakes Entrance community (see Section 3.2.6).

Figure 6: Occupation Type Comparison Bairnsdale/Lakes Entrance (based on ABS Census 2006)



Source: ABS 2006

3.3 Local Industry

3.3.1 Tourism

Tourism is the one of the major industries in Lakes Entrance and brings an average of \$170,000,000 into the economy of the town. There has been considerable investment in tourism in recent years with \$9m invested in 2008. In 2010 this had reduced to \$1.2m.

Ninety percent of tourists who visit East Gippsland are from other parts of Victoria, mainly from the eastern suburbs. Council's Visitor Information Centre is a key component of tourism development and promotion.

Figure 7: Images of Lakes Entrance foreshore



The top five activities that tourists engage in while visiting East Gippsland are (in order):

- To eat at restaurants
- To visit friends and relatives
- To go shopping
- Go to the beach
- General sightseeing

Despite the current robustness of the industry, tourism faces a challenge from the impact of climate change and sea-level rises. Modelling indicates that by 2040, large areas of the low lying land in Lakes Entrance will have an increased risk of inundation on a regular basis (Gippsland Coastal Board). This may affect the major retail and commercial businesses of Lakes Entrance which support the tourism effort in the town.

3.3.2 Fishing Industry

The other major industry in Lakes Entrance is fishing. This includes both commercial lake fishing and off-shore fishing. Current data (Lakes Entrance Fishermen's Co-operative Society Limited) indicates:

- There are 80-100 vessels in the fishing fleet in Lakes Entrance;
- The fishing industry employs 20 full time and 40-50 casual employees; for each 2 jobs in the fishing industry there is 1 extra job which is a flow on effect of those positions. The high level of casual positions supports the data provided above on the casualisation of labour in the Lakes Entrance economy
- 4.5 million kilos of fish are caught annually; and
- Lakes Entrance is the largest supplier to the Melbourne Fish Market

3.3.3 Other Industry

A small industrial area in Whifers Street is located in what was originally to be on the “outskirts of town”. This area is now landlocked by residential development, including the proposed development. There are a number of small to medium business in the building/building supply trades, mechanical services and waste management located within the area but there is little room for expansion. This has necessitated Council to undertake a study into identifying the provision of further industrial land in Lakes Entrance.

3.3.4 Retail

The retail areas of Lakes Entrance are contained between The Esplanade and the areas of Church Street, Marine Parade and Roadknight Street. There are two supermarkets and a general department store, a range of restaurants, cafes and boutique shops. There is also a white goods retailer in Church Street and a Post Office on The Esplanade.

The Esplanade is the main retail area with small businesses operating in Myer Street between The Esplanade and Church Street and the supermarket and department store located in a large area between The Esplanade and Church Street. There are a small number of businesses operating in the streets between The Esplanade and Church Street.

Retail businesses in Lakes Entrance are impacted by the seasonality of being a holiday destination, with the summer population swelling to nearly 30,000. This means that the four months over summer are extremely busy and profitable; the remaining eight months of the year are considerably less busy with the consequence of reduced income and poorer employment opportunities.

The need for increased resilience of small business has emerged as a priority for Lakes Entrance.

Figure 8: Esplanade retail area between Myer Street and Carpenter Street



4 Understanding the Future Community

4.1 Assessment Assumptions

Assessing the quantum of the community infrastructure and the impacts of the development for the existing community requires an understanding of the nature of the growth. At this stage, the nature of the development is not confirmed. However, a number of assumptions underpin this assessment and influence the growth. These include:

- The new development will target permanent residents;
- The overall number of new lots will be between 750 and 900, dependent on lot yield per hectare. This represents 1650 – 2,000 people, based on the average household size of 2.2;
- The calculations on the uptake of the new dwellings will be discussed using three population growth scenarios. These scenarios provide an opportunity to develop a picture of the community dependent on a number of specific social and economic factors. Recent land use studies for Lakes Entrance (Urban Enterprise 2010) have suggested that the average number of new dwellings approved each year is 74 with 43 approved in Residential 1 Zone areas.

4.2 Other Influencing Factors

A number of other factors will influence the growth in the northern area of Lakes Entrance. These include:

- The Merrangbaur Heights proposal situated immediately east of the proposed development, although not specifically part of the study, will have an impact on the community established in the Northern Growth Area. This development is proposed to provide approximately 162 lots with an additional area designated for a retirement village, although the village is not part of the developer's current considerations.
- The timeframe for the release of land is not known and is dependent on the commercial decisions made by the developers. This means that the increase in population may occur over a ten to twenty year period or may occur more rapidly;
- The nature of the housing is not known and is dependent on the demographic of the population growth. This will impact on any predictions regarding the nature of the additional community infrastructure.

4.3 Growth Scenarios

Three growth scenarios have been developed and are used as the basis for the assessment. All assume that the development will be completed within ten to twenty years, *i.e.*, the population in Lakes Entrance will increase by between 1650 – 2,000 people by 2022-32. These scenarios are:

Scenario One

Population composition remains equivalent to the existing. This assumes that the new residents will parallel the existing community and will primarily be older residents, with some younger families.

Scenario Two

The new development attracts families with children, increasing the proportion of children and young people in the community to the levels equivalent to Bairnsdale.

Scenario Three

The new development attracts families with children and young people, increasing the proportion of children and young people to the levels equivalent to the whole of the State.

Achievement of Scenarios Two and Three require complementary economic development strategies targeted at expanding the industry base of Lakes Entrance and/or surrounding areas. The development will not attract families unless there are employment opportunities within a reasonable commuting distance.

All three scenarios have been modelled for capacity assessment against existing infrastructure benchmarks (Table 13, p. 43)

4.4 Framework for Assessing the Impacts of the Development

4.4.1 Working towards achieving the directions of Council

East Gippsland Shire Council is committed to working with the community to build on the natural beauty of the municipality and the attributes of the local communities – to working with communities to achieve its vision, outlined in “Unlocking the Future – Long Term Community Vision 2030”. This vision is centred on three themes, which together with principles of good governance, form the four strategic objectives of the Council Plan, 2009-13. These are:

- **Liveability: Strong and vibrant communities create healthy, productive and fulfilling places to live:**
 - *Cohesive Communities:* Cohesive communities with a strong sense of identity involved in the development and implementation of shared vision;
 - *Active, Healthy and Safe:* An active, health and safe engaged in recreational, arts and cultural activities;
 - *Diverse and Connected:* Services and facilities that support community diversity and connectivity, and promote quality lifestyles.
- **Productivity – Investment and visitation develop a sustainable and prosperous economy:**
 - *Economic Environment:* A vibrant and dynamic environment in which to do business;
 - *Development:* Infrastructure and information systems that support and attract diverse economic and social development in the region.
- **Sustainability – proactive leadership and strategic partnerships protect and enhance our quality environment**
 - *Community:* Communities equipped for sustainable living
 - *Natural Environment:* a sustainable, healthy and diverse natural environment
 - *Built Environment:* a built environment that is adequately maintained and is sensitive to the region’s natural attributes.
- **Governance – strong leadership and prudent management of democratic and legislative requirements deliver good governance outcomes:**
 - *Financial sustainability* – well managed finances to maintain financial sustainability;
 - *Strong leadership and advocacy* – a responsible organisation that works actively with the community providing strong leadership and advocacy;
 - *Open and Accountable:* an open and accountable system of governance that reflects the highest level of good management.

Council is committed to ensuring that any proposed development in the municipality contribute to the achievement of this community vision and the delivery of the strategic objectives. Social

considerations of such changes are thus this critical. These directions are the key drivers of this assessment.

4.4.2 Social Impact Assessment Matrix

A range of different services and infrastructure are required to support the development and maintenance of sustainable and healthy communities across the age spectrum. Table 11 (p.33) outlines a Social Impact Assessment Matrix which was developed as part of Council's SIA guidelines. The elements of the matrix have been described within the body of the report and provide the evidence to assess the impacts of the developments in the Northern Growth Area of Lakes Entrance.

Dimensions of the Matrix

The dimensions of the matrix describe the key factors which contribute to healthy and sustainable communities. Using these dimensions, a systematic approach can be taken to:

- Describe the current characteristics of the community across the age cohorts;
- Understand the impacts of changes in relation to the dimensions for particular population cohorts;
- Quantify and describe the strategies to be developed to manage the impacts.

5 The Views of the Community

5.1 Overview of the Consultation Process

Consultation with the community has been a key component of this assessment. The views of the community, service providers and other stakeholders and experts have been taken into account in assessing the impacts of the proposed developments.

There have been a number of both formal and informal consultations which have occurred in connection with the development proposals. This included undertaking a “Community Listening Post” at the local supermarkets in Lakes Entrance. This provided an opportunity for passing residents to view the proposed developments, ask questions and to respond to an informal survey (see attached survey tool). Approximately sixty residents participated.

Council, in conjunction with SMEC Urban Consulting Group (2012), undertook a consultation with stakeholder agencies, developers and those community members neighbouring the development sites.

Overall, there is general support from the community for the development. It is viewed as an opportunity to re-vitalise Lakes Entrance and to provide opportunities to provide a vibrant future for the town. Residents saw the proposal as “progress for the town” and an answer to uncertainty on existing constraints on development due to climate change/inundation. Increased population implied benefit rather than burden.

At the same time, service providers emphasised the importance of ensuring that adequate facilities and services are in place to meet the needs of a growing community. There was support from land holders and developers for the Developers Contribution Plan to identify and contribute to the cost of providing community infrastructure.



Figure 9: Community Listening Post

5.2 Key Issues

The following key issues identified through the consultation have been brought together under the headings of Council’s SIA Framework (see Figure 11). Not all areas were noted in the consultation.

5.2.1 Community infrastructure and services

Accommodation and housing	• Maintain the seaside appeal of the area rather than just another housing development • Lot sizes are constrained by the typography so smaller lots may be unsuitable except where there is land with less slope.
Community facilities to support a range of activities	• Support for the Developers Contribution Plan (DCP) to provide for infrastructure within the development area • Potential for Council land at Palmers Road to be a site for CFA/Emergency Services • Service infrastructure to support the development will provide opportunity for improvement to adjoining residences • Council property on Palmers Road can be utilised better to include commercial, residential, emergency services and community service functions

Community services, including relevant government services	• Need to increase medical/health provision with larger community • Needs for infrastructure development to support the expanded housing and population
Education facilities	• Local schools can accommodate the additional students expected
Transportation	• Extend local bus services, footpaths and safe access for all age groups, especially for older people with mobility aids. • Improve communication of bus services and timetables and reduce travel time to Bairnsdale for employment and medical services • Improve traffic flow into and around the town including appropriate speed zoning and upgrading of Palmers Road and Ostlers Road/Myer Street
Roads and other public amenity	• Provide a Northern Entrance Road into Lakes Entrance • Transport and Roads- Provision of East West connectivity, impact on existing roads and linkages into the Princes Highway, development of alternative entry into Lakes Entrance from the north of the town and development of an appropriate bus route with dedicated cycle path and off road cycle tracks. • Increased safety will be required on boundary roads
Sport and Recreation	• Improvements to walking and cycling access to Aquadome recreation facility and provide increased sporting opportunities in the adjacent open land

5.2.2 Community functioning

Community safety and law and order issues	Safety is a major concern -potential for 24 hour Police at Lakes Entrance
Land use	- Council's Palmers Road site could be an opportunity to place appropriate mix of community facilities, commercial and residential development, although it is thought that the site would not be able to provide the same level of commercial activity within the current town area. - Issues of current landowners maintaining existing use rights

5.2.3 Economic Development

Employment	- Opportunity for job creation especially in the trades area. More employment would be encouraging young families to settle in Lakes Entrance. - Maintain existing major industries including fishing to ensure viability of the town - Service industry employment increased to accommodate the growing ageing population. Need to establish extra industrial area to improve employment
Local economic impacts	- Improvements to seasonal commercial opportunities - Commercial opportunities may include the establishment of new businesses such as a new supermarket chain in the town; - Provide opportunity for commercial development within the new development to take pressure of existing town provision - Uncertainty of climate change policy causing low consumer confidence in development of commercial and residential property in Lakes Entrance.

5.2.4 Natural Environment

Open public space	- Increase public parkland and high quality open spaces - Open space would require development of a high quality designated area for active participation of both new residence occupier and the broader community. - Residents want East-West connectivity, better open space planning, safe cycling and pedestrian links through the proposed developments
Specific local concerns	Ensure appropriate water pressure to proposed development to assist emergency services
Managing sustainability for	Proposed land area has "a lot of high value, complex vegetation" and there are potential issues with the pending bushfire regulations.

	• Drainage issues are complex due to topography and there are issues around flooding and water retention systems and flows into the Eastern Creek Drainage System. • Native vegetation removal and the ability to fund offsets to ensure adequate road provision and reduce fire risk • Environmental and vegetation concerns including issues of lifespan of Council land fill site
--	--

5.3 Other issues

Service providers consulted indicated different triggers which produced the need for service/facility expansion. For example, extensions to the hours of operation for the Lakes Entrance Police Station would be reliant on any increases in crime rates, whereas early years education centres were under license to ensure that there was an appropriate ratio of floor space to children.

Generally, service providers indicated that there is a need for external funding to accommodate any increase in building infrastructure or service delivery. Services which are managed by local committees of management rarely had sufficient reserves for other than maintenance works.

6 Assessment of the Social Impacts

6.1 Overview

This section provides an assessment of the possible impacts of an increase in population in Lakes Entrance in the northern growth area of between 1650 and 2,000 people. While the timing of this increase is unknown, it is assumed to occur over a ten to twenty year time period.

Using the framework developed by East Gippsland Shire (Table 11), the impacts are considered across the population and in the context of the factors which contribute to well-functioning communities:

- Community infrastructure and services
- Community functioning
- Economic Development
- Natural Environment

6.2 Groups/individuals that will be impacted by the development proposal

There is potential for both positive and negative impact due to the development proposal. Where positive impacts are identified, there is an opportunity to showcase the benefits of the development and where there are negative impacts, there is a need to develop either mitigation or adaptation measures that counteract those impacts.

6.2.1 Existing householders, adjoining the development.

The community “Listening Post” held in the Lakes Entrance commercial precinct revealed that a number of residents who adjoin the proposed development area were concerned at their loss of visual connection with the wooded areas, fields and coastal views across the development area.

There was also some concern shown for the increase in traffic, especially along Myer Street which is a 60 km/hr zone which enters a school zone area near the corner of Myer and School Streets.

The general consensus of the discussion with local residents was that the development represented progress and was considered a necessary action to aid growth in the town.

6.2.2 Families with young children (0 – 4 years)

It is difficult to predict whether the new development will attract families with young children to the area. The lack of employment opportunities in the area and/or access to employment is likely to impact on whether families are attracted to purchase in the area. This will require development and implementation of strategies to create employment opportunities (see section on Economic Development). Should the development see an uptake of housing by families, the potential impacts include an increased demand for the range of services required by families – child care, schools, recreation facilities and health services.

Research indicates that the inclusion of families in communities is important to developing sustainable communities and increasing the vitality of existing communities. To achieve this, it is important to increase access to the range of community infrastructure and facilities

which families require and look for in purchasing housing, as well as their access to employment.

The affordability of housing is also a critical factor for families.

6.2.3 Community Service Providers

An increase in population will result in an increase in the demand for community services across the spectrum. In some cases, there will be potential to expand services through per capita funding but in others there may not be opportunities for funding and/or physical growth.

6.2.4 Education facilities, including early years services

Consultation with both regional and local staff from the Department of Education and Early Childhood Development has indicated that there is existing capacity within the local secondary and primary school to manage slow population growth. The potential to expand the school population would provide the opportunity to increase student /teacher ratios and improve course offerings.

Kindergarten and childcare facilities are currently at or near capacity and the increase of young children into the community will need consideration. To manage the introduction of the provision of universal 15 hour kindergarten, existing infrastructure will need to be expanded. Work has already commenced to develop more integrated service models, to prepare for the introduction of universal access for kindergarten for all children in the year before commencing school in 2013.

Planning for kindergarten places in Lakes Entrance needs to take into account demand generated by casual and seasonal workers, those from transient families and those from outside the study area who find Lakes Entrance early years providers convenient for their employment needs.

6.2.5 Young people

Lakes Entrance, like many rural communities, faces an exodus of young people to metropolitan and major regional centres in the 15-24 year group (9.9% of the community compared with Victorian average of 13.7%). It is unlikely that this trend will be reversed in the foreseeable future, unless there is significant investment in job creation or tertiary education provision. The proposed residential land developments may lead to an increase in the real numbers of young people from 5-14 which may increase the potential for greater recreational, social and educational opportunities.

6.2.6 Older Persons

There are a large percentage of people over 60 years of age in East Gippsland (26% ABS, 2006) with expected growth continuing over the coming decades. The percentage is approximately 30% higher than the Victorian average and is reflected to a greater extent in the Lakes Entrance population.

Increasing population from the proposed development will see greater numbers of this cohort. However, the extent to which the development attracts a more mixed population is dependent on managing the economic and social aspects which will influence the capacity to attract families to move to Lakes Entrance.

Health services are a major requirement for older people and the demand on existing services is considered to be high.

Safety has been discussed as a high priority for older people as is access to transport and improved open space provision. Connectivity and walkability are common to all age groups but path of travel and way-finding are especially important to an older population to assist with the maintenance of health and well-being.

6.2.7 Aboriginal Community

There is a high percentage of Aboriginal people in the Lakes Entrance community (3.7%) with a number of smaller communities using Lakes Entrance as a service and retail centre. The actual number of Aboriginal people in the area is difficult to quantify due to under-counting which occurs during collection of the national census by the Australian Bureau of Statistics.

At present, there is no existing Cultural Heritage Overlay for the land described in the Overall Development Plan. Discussion with local Aboriginal service agencies has indicated that if there was a proposal to look at Aboriginal housing as part of the residential development, planning and development of housing needs to ensure that housing for Aboriginal families is not concentrated as an enclave but integrated across the development.

There is also a need to ensure safe and efficient transport into the commercial, education and service centre, opportunities for recreation and open space development and acknowledgement of the Aboriginal community's connection to land. Strategies to achieve this need to be developed in consultation with local elders and communities and should include interpretative signage and public art.

6.3 Consideration of factors which contribute to well-functioning communities

6.3.1 Community infrastructure and services

Section 7 provides a detailed overview of current capacity of the community infrastructure to meet existing and future demand for services.

6.3.2 Community functioning

Assessing the impact of developments on community functioning includes assessment of

- Cohesion impacts;
- Identity and culture, including historical aspects;
- Health and wellbeing of the community and opportunities to maximize this;
- Needs of particular groups;
- Social equity – displacement, needs of disadvantaged groups;
- Community safety and law and order issues.

The scale of the new development and the potential of a slow development uptake provides an opportunity for the new residents to integrate into the community and for any negative impacts of being excluded from the life of the community to be minimal. At the same time, the community has identified the need to ensure that the new developments are well-connected to the rest of the town through roads and adequate public transport. This will facilitate access to the established areas of the town and to ensure that the new developments are not isolated.

6.3.3 Natural Environment

The consultation process highlighted a number of impacts on the natural environment which may arise as a consequence of the developments. Management strategies are required to mitigate against any negative consequences. These issues include:

- Open space would require development of a high quality designated area for active participation of both new residence occupier and the broader community;
- Residents indicated that the planning for the new developments needs to incorporate improved East-West connectivity and safe cycling and pedestrian links through the proposed developments, linking the developments with the rest of the town;
- The proposed land area has high value, complex vegetation. Planning for the development of the area needs to take account of these, as well as any implications of the pending bushfire regulations.
- Drainage issues are complex due to topography and there are issues around flooding and water retention systems and flows into the Eastern Creek Drainage System.

6.3.4 Economic Development

There is uncertainty about the impact of inundation and climate change policy, resulting in a reluctance to develop commercial and residential property in Lakes Entrance. The proposed residential developments have the opportunity to provide for growth in the community with the potential for flow on effects into retail and service growth. However the issue remains that in order to encourage a greater diversity of population growth there needs to be appropriate levels of employment opportunities which can act as an attractor to the area.

Capacity to attract families to live in the new developments is strongly linked to the availability of employment and/or easy access to employment in nearby areas. The consultation also highlighted that the developments represent an opportunity to explore the development of new industries for the town and to consolidate and secure existing industries. This will be critical to ensuring that the developments attract permanent residents, rather than only people purchasing holiday homes.

The Advancing Country Towns Project is currently being piloted in Lakes Entrance, exploring amongst other things, a range of opportunities for industry development. Links with this project will assist in the planning of these housing developments.

Residents and others consulted also indicated that Council's Palmers Road site could be a site to locate a mix of community facilities and commercial development; although it is thought that the site would not be able to provide the same level of commercial activity within the current town area.

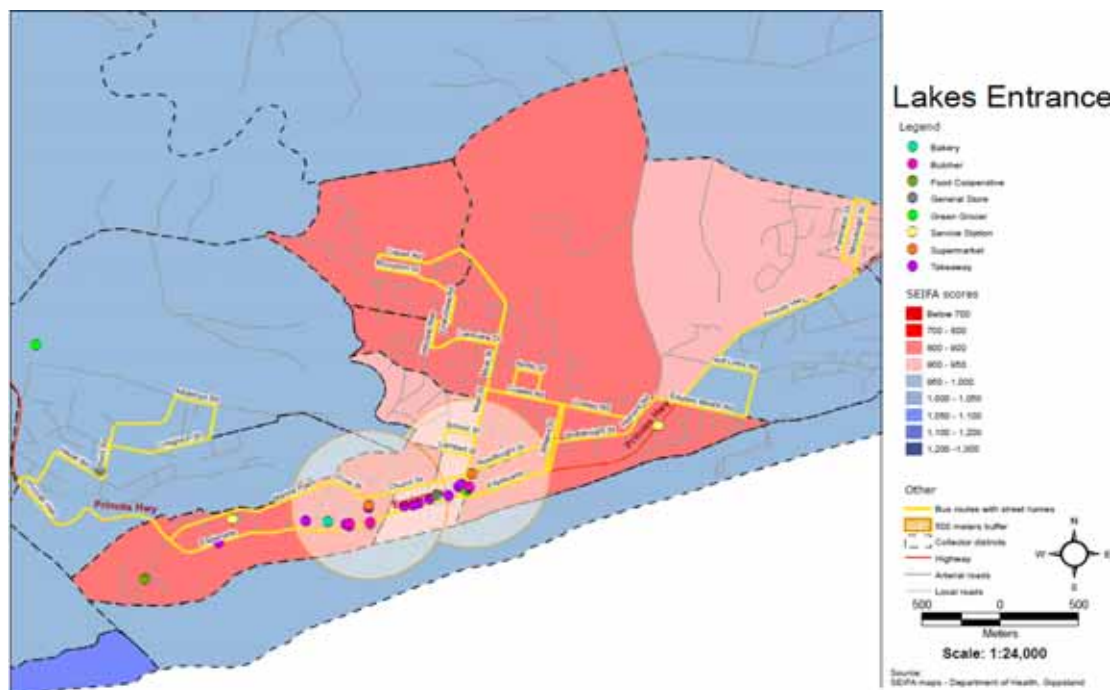
There are also existing issues within the Lakes Entrance community which will be pertinent to the developing community in the Northern Growth Area

Accessing retail for residents in the new developments

Figure 10 shows a map of the food retail businesses in Lakes Entrance. The map also indicates the transport routes of the local transit bus service and the SEIFA scales. The 500 metre zones provide an example of the distance barriers communities experience to shopping, without the use of transport. The residents of the proposed development need to have either a more effective public transport system which is frequent and accessible or there will be a need to locate a small activity centre within the development area. The

Council owned Palmers Rd site provides for an opportunity for some retail development to support the intended community, as well as those people in existing residences to the north and northeast of the towns retail centre.

Figure 10: Mapping of retail food outlets, public transport and walkability



6.3.5 Urban Design and Connectedness

The development and prosperity of the community relies on the combination of social, economic, cultural and environmental prosperity. Each of these dimensions is strongly influenced by the physical design of the places where live. Physical design influences the way in which we are able to connect and engage with one another, in fact it is the level of engagement and connectedness that defines the most important aspect of physical design. Studies (Space Syntax, University College, London, 2011,) have shown the following.

Better connected towns generate higher levels of retail income: - stronger connections between the residential populations and retail areas are facilitated through “movement infrastructure”, such as better walkways, paths and pedestrian crossings. These connections also serve to facilitate better networks that encourage access, transaction and browsing and hence improve local effective economies

People see more of each other in better connected places: - the levels of pedestrian movement between residential and town centres and facilities will create a higher level of social awareness and connectedness. The presence of other people is a social good with a range of economic and community health benefits.

Better designed streets have less anti social behaviour and are safer: - good design of the movement infrastructure will ensure that there are few areas where there is no or little public oversight which contributes to a sense of safety and community.

Better connected places encourage shorter less carbon intensive journeys: - walking and cycling is only viable if the movement infrastructure supports it.

Table 11: Social Impact Assessment Matrix- completed as part of the study

		Children and Families (0-4 yrs)	Children and Families (5-11 yrs)	Young people (12-24 yrs)	Adults (25-65 yrs)	Older Adults (65-80 yrs)	Older people (80+ yrs)
Population characteristics	Demographic characteristics	▲	▲	▲	▲	▲	▲
	Social characteristics	▲	▲	▲	▲	▲	▲
	Health characteristics	▲	▲	▲	▲	▲	▲
	Special needs, <i>e.g. disability</i>						
Community infrastructure	Accommodation and housing	▲	▲	▲	▲	▲	▲
	Community facilities to support a range of activities	▲	▲	▲	▲	▲	▲
	Community services, including relevant government services	▲	▲	▲	▲	▲	▲
	Intensive services – specialist treatment facilities						
	Education facilities	▲	▲	▲	▲	▲	▲
	Transportation	▲	▲	▲	▲	▲	▲
	Sport and Recreation	▲	▲	▲	▲	▲	▲
Community functioning	Cohesion impacts						
	Identity and culture, including historical aspects	▲	▲	▲	▲	▲	▲
	Health and wellbeing	▲	▲	▲	▲	▲	▲
	Needs of particular groups	▲	▲	▲	▲	▲	▲
	Social equity – displacement, needs of disadvantaged groups	▲	▲	▲	▲	▲	▲
	Community safety and law and order issues	▲	▲	▲	▲	▲	▲
Economic Development	Employment	▲	▲	▲	▲	▲	▲
	Local economic impacts	▲	▲	▲	▲	▲	▲
Natural Environment	Open public space	▲	▲	▲	▲	▲	▲
	Specific local concerns						
Community consultation	Perceptions of community	▲	▲	▲	▲	▲	▲

7 Mapping of services and facilities

7.1 Overview

Community facilities are an important part of the social infrastructure which supports a population. Lakes Entrance is serviced by a range of service providers, organisations and agencies. Some of these agencies are based in the town, others have visiting services, and some are further distant in Bairnsdale or beyond. It has been identified that access to services is sometimes limited by the lack of integration and accessibility across the municipality.

Council's SIA guidelines highlighted the fact that it is difficult to quantify benchmarks for determining community infrastructure and services. The guidelines note:

When assessing requirements for community infrastructure and services to meet the needs of residents in proposed developments and assessing the impact for existing residents, the following variables need to be taken into account:

- *Socio-demography of the community and surrounding areas;*
- *Typography of the area and transport availability and the impact that these have on accessibility to services;*
- *Fabric and quantity of existing community infrastructure; and*
- *Capacity of existing infrastructure and services to meet existing and anticipated community need.*

This section provides an assessment of the existing community facilities in Lakes Entrance, identifying capacity to meet existing and future demand for services.

7.2 Determining the Scope and Quantum of Community Infrastructure

It is difficult to determine the quantum of community infrastructure. However, there are some indicators of the scope and nature of infrastructure and services that are required to ensure healthy, well-functioning communities. Table 11 provides an indication of the types of services that are required in a town such as Lakes Entrance.

These cover the broad age range across the community.

Table 12: Type of community infrastructure

Social and health	• Neighbourhood house • Kindergarten • Occasional care • Small community meeting space to accommodate playgroups • Range of social and health promoting activities	• General practitioners • Allied health services • Community (primary) health services • Primary school • Library branch • Community facility with "wet" area rooms to facilitate art activities	• Child care • Multi-purpose community facility with commercial kitchen and multiple community meeting rooms • Home-based care
--------------------------	--	---	--

Environmental	• Playgrounds • Neighbourhood parks • Bicycle and walking tracks	• Ground with sporting club • Skate/BMX park • Parkland with passive and active capacity	• Multi-functional grounds and sports facilities • Aquatic centre
Economic	Local convenience store (neighbourhood location)	Multi-purpose shopping strip	Facilities to accommodate business and industry

7.3 Social and Health Infrastructure

7.3.1 Health Services

As the regional hospital is some 40 kilometres away in Bairnsdale, there are two large medical clinics in Lakes Entrance (Cunninghame Arm Medical Centre and Gippsland Lakes Community Health). Both provide General Practitioners and a range of allied health services. Additionally, Gippsland Lakes Community Health provides a number of community support programs and community meeting spaces.

The community health service provides a range of services, focussing on specific age cohorts. These include:

- Community-based services for older people and people with a disability, including home-based care and Planned Activity Groups;
- Clinical and nursing services, including home-based care;
- Allied health services;
- Family violence, counselling and alcohol and other drug counselling services;
- Maternal and Child Health Services; and
- General Practice.

The majority of services are targeted for low income residents, with the exception of the Maternal and Child Health Service, which is provided under contract with East Gippsland Shire Council and general practice, both of which are universal services.

Current capacity and implications for growth

Gippsland Lakes Community Health has indicated that all its services are currently operating to capacity.

Funding for a number of services is on a per capita basis. If these funding arrangements continue, the service capacity will be expected to increase in line with population increases. However, the capacity of the infrastructure is also limited. At present, there are no funding grants for not-for-profit organisations to access for infrastructure development. This is limited for Local Government and only available on a competitive grant basis.

An increase in population over time would require greater access to the programs and facilities of local community health and support services. As the indication is that there would be a greater demand on already heavily subscribed services, an assessment be provided to determine the requirements and broad costing for increased infrastructure and

increased staffing provided for local community based agencies will be required on a regular basis.

7.3.2 Lakes Entrance Neighbourhood House

The generally accepted benchmark for a neighbourhood house is one for every 3,000-5,000 people. The lower figure is probably more realistic in a town such as Lakes Entrance with such a high retired population and thus, increased opportunity to use the lifelong learning opportunities provided through the house.

Lakes Entrance Neighbourhood House is situated in a former kindergarten owned by East Gippsland Shire. The committee of management have a lease agreement with Council for the facility. The agreement stipulates that there is only allowed to be 15 people at any one time and there are some restrictions on the hours of opening.

Programs offered through a Neighbourhood House fill an important learning niche in the community. They provide informal inter-active education on a range of subjects and are an alternative to the more formal educational structures.

While Neighbourhood Houses are open to all the community, older adults as well as young parents and youth with limited opportunities often frequent them. The neighbourhood house also offers opportunities for people in the community to work as volunteers - as tutors, supporting people who use the house or providing assistance with program development.

The facility also provides internet access, meeting space and a large kitchen.

Current capacity and implications for growth

The restriction for 15 people to use the facility at any one time will severely restrict the neighbourhood house to expand to meet the demands of a growing population. The anticipated growth in the new developments also indicates that a community facility is required in the area.

7.4 Recreation facilities

Lakes Entrance has a range of facilities which cater for both passive and active recreation. The Council provides a large indoor recreation facility "Lakes Aquadome Leisure Centre" which has swimming, spa and sauna and a gym. This centre is currently undergoing expansion due to increased demand from the local community for fitness programs. Occasional childcare facilities are also available at the Centre.

Tennis facilities adjoin the Aquadome and there are existing plans for increased provision of sporting facilities in the vicinity. Connectivity to the broader community is limited and is provided by the local transit bus services although the majority of patrons travel to the centre by car.

There are two golf courses (one within the development area), and the Lakes Entrance Recreation Reserve which provides for football and cricket. Netball and indoor basketball are played at the Council owned "Lakes Entrance Youth and Recreation Centre" and local schools provide access for sports within their existing halls.

Clubs exist for a range of activities and age groups including the Senior Citizens Club and the University of the Third Age (see full listing of community organisations at appendix 4).

Figure 11: Lakes Aquadome Leisure Centre and Lakes Entrance Youth and Recreation Centre



Walking is a popular activity for all ages and there are opportunities for walking along both North Arm and Cunninghame Arm through the “Cunninghame Walk”.

Fishing and boating are obvious attributes of the Lakes Entrance community given its location on the edge of the Gippsland Lakes system. Management of the foreshore and the waterways are the responsibilities of the East Gippsland Shire Council, the Department of Sustainability and Environment, the East Gippsland Catchment Management Authority and Gippsland Ports.

Future plans have been developed by the Council for upgrading the foreshore with commencement of initial projects to improve shelter and shade facilities to commence in the 2012/2013 financial year.

Current capacity and implications for growth

It would appear that the current recreation facilities are adequate to meet existing community need. However, with an expanding population, this will require review. Importantly there is a need to ensure connectivity between the proposed development and the local recreation facilities, especially the Lakes Aquadome which is situated just below the development area

Figure 12: Lakes Entrance Foreshore



7.5 Public Open Space

Open space in the Lakes Entrance Study Area is concentrated around the foreshores of Cunninghame and North Arm, the Lakes Entrance Recreation Reserve, Apex Park and the Lions Park at Eastern Beach. A small number of undeveloped open spaces exist such as Evatt Park follows the watercourses. The Cunninghame Walking Track provides a loop walk along the foreshore and back through the town to meet up with the foreshore of North Arm. There are a small number of worn local paths through the foreshore areas although these are of various quality and length.

Trails are important for health and environmental purposes and a number of studies suggest that over half of all adults in Australia do not meet the recommended levels of physical activity necessary for health benefit. "Providing convenient access to trails is an important strategy to assist people in learning physical activity patterns and accessing other physical and social opportunities." (Draft East Gippsland Trail Strategy, 2012).

The East Gippsland Rail Trail is connected to the north of the town through the Discovery Trail which ends to the north of the proposed residential land development. There is opportunity to provide increased access to walking and cycling trails through linkages from the town potentially connecting the development site. Trails are likely to travel across Council managed land as well as other public land managed by different land management agencies. To ensure that these are managed well into the future, partnerships and strong co-operation between council and other agencies and community groups will be important. Recent studies suggest that there are benefits to both the local community and visitors from enhanced connectivity.

"Scenic and regional trails targeting visitors will require connections to local residential areas, to enhance opportunities and usability." (Draft East Gippsland Trail Strategy, 2012)

Recreation activities within the local parks provide basic play equipment and in some cases there are shade structures, toilets and barbeque facilities. The facilities are well used by locals and tourists alike although there is a need to provide upgrades to improve the flexibility and usability of the play spaces. All public open space is sited away from the development area and travel to both park reserves, which are situated on the foreshore, would require private vehicle transport.

7.6 Library/ Community Meeting Spaces

Libraries are central to accessing the internet and providing information and social connections for communities. In 2006, internet connections in East Gippsland were low compared to the rest of Victoria, although it is expected that this will have changed significantly over the past six years. The rollout of the National Broadband Network will provide optical fibre within Lakes Entrance although the town is not currently listed in the three year rollout plan. At present, the Lakes Entrance library is only open Monday – Friday.

Community meeting spaces are a fundamental element of social infrastructure, performing a central opportunity to exercise democratic, open society. The Mechanics Street Centre houses the Library and Business Centre of the East Gippsland Shire Council as well as a community managed meeting/community space. The well used meeting space provides for recreational activities, public meetings and for family/public celebrations.

There are a number of local halls and service and education providers who hire or provide spaces for community to come together for a range of activities. Hiring of community space can be difficult for community groups, as they often cannot afford the cost and this may impact on the community's opportunities to provide a range of social support services.

7.7 Emergency Services Provision

Discussions have already taken place with regards to the siting of the emergency services in Lakes Entrance. The opportunity for the State Emergency Service, Country Fire Authority and Regional Ambulance Victoria to expand at their current sites is constrained by physical location and by their current location within the inundation zones of the town.

Given that the proposed development areas are located above the inundation zone, an opportunity exists to co-locate emergency services in the proposed development area. The Council's Palmers Road area may provide an appropriate site. This would reinforce the need for a northern access road into Lakes Entrance as discussed within the study.

7.8 Public Transport

Public transport to and from Lakes Entrance is under contract by Public Transport Victoria (PTV) to V/Line and Dysons Buslines. The services are limited and are:

1. *V/line buses* pass through the town centre as they connect to the railway station in Bairnsdale for travel towards Melbourne. The reverse journey provides access to towns further east on the Princes Highway, terminating in Batemans Bay, New South Wales and Canberra.

The service has three pickup/drop off points within the town and the bus makes four journeys per day to Bairnsdale, three of which make connection with the westbound train/coach service which terminate in Melbourne. Reduced services operate on weekends with three journeys on Saturdays and two on Sundays.

2. *Dysons Bus Service* operates between Lakes Entrance and Bairnsdale. The service runs in off-peak times on weekdays only. Six buses run per day, stopping at a number of small towns on the Princes Highway and terminating in Bairnsdale. One bus service per week completes their journey at the Bairnsdale Regional Health Service.

3. *Lakes Entrance Loop Route* is operated by Dysons on weekdays between 9am and 4pm. They are:-

- The Kalimna Route-4 times per day
- The Town Loop- 7 times per day -hourly
- Lakes Entrance to Lakes Entrance North -4 times per day
- Lakes Entrance to Lakes Entrance East- 4 times per day

These services are currently under review by PTV and it is unknown whether the town services will continue to operate.

4. *School Bus Services* are designed to provide a service to schools in Lakes Entrance for students living 4.8 kilometres or more from the individual school. Students are able to occupy spare seats if they live less than 4.8 kilometres from their school and more than 1.6 kilometres from a public bus which would provide a stop at that school.

Current capacity and implications for growth

The public transport services to Lakes Entrance are severely limited, with little public transport available in peak times to facilitate access to employment both within the town and elsewhere.

No public transport buses servicing Lakes Entrance are considered to be accessible to people with a range of abilities. The only operator who provides accessible transport is the Lakes Taxi service. However if residents need to travel to Bairnsdale, taxi fares become unaffordable with a one way fare costing approximately \$60.

With an increase in population, the demands on public transport will increase. Advocacy is required with the Department of Transport to promote the development of an appropriate public transport network to service the proposed residential development. This includes a focus on:

- Accessibility for people of all abilities;
- Convenient access points within 400 metres from any new residence;
- High level of visibility and safety to ensure confidence in the network for all residents especially for older persons and young families; and
- Public transport availability during peak times.
- Access to school bus places

7.9 Vehicle Traffic

The development area is bordered by a number of roads which provide access to the north of the town (into Colquhoun Rd), to the town centre itself (via Ostlers into Myer St) and to the east of the town and on to the Princes Highway (via Palmers Rd). Feedback through the consultation process raised a number of issues. These include:

- The nature and condition of the existing roads;
- The capacity of the existing roads to carry increased traffic in a safe manner;
- The potential for a link across the development in an East-West direction; and
- The need to develop a northern link road as an alternative to the Princes Highway, which runs along the southern part of the town, through the identified inundation zone.

An opportunity exists to construct suitable pathways and roadways to facilitate cycling and walking as a health and wellbeing alternative, to and from the development area. This will require further study, to research how the existing roads can be shared safely and to design new paths and trails within the development which link into the town centre and the recreational area around the Lakes Aquadome Leisure Centre.

7.10 Housing

As described in Table 7 (p.14) there are a large number of separate houses within the current community. The opportunity for rental is low in East Gippsland with low vacancy rates due to the large percentage of owned or being purchased homes (71%, ABS, 2006) which is exacerbated by 23.8 % of houses being used for holiday homes or are otherwise unoccupied. Housing affordability is low with many low income households (21% earn less than \$350 per week) experiencing housing stress where expenditure on housing costs are greater than 30% of income.

Medium density housing accounts for only 6.5% of the housing stock which is considerably less than the Victorian average (16.3%).

The opportunity exists to increase the diversity of the housing stock within the residential development which will provide more affordable housing for low income families and more appropriate housing for the older population.

7.11 Population and Service Demand

The social infrastructure planned within an area will not represent the final service provision for that area over its life. As the community in the development area grows and matures, the demographic profile will evolve and change. Demand for a wider variety of services, activities and programs will

be generated, including more specialised services whose provision can only be justified at much larger population catchment levels.

Members of the community will form into groups, whether informally or formally, to pursue shared interests. This, in turn, generates demand for physical infrastructure to accommodate these interests. (Guide to Social Infrastructure Planning , 2009).

Examination of the current infrastructure suggests that there are facilities which are at or near capacity (often being built for small numbers of participants e.g. 25 children childcare facilities) and those which require upgrading to fit into the need for flexible multi-purpose functions.

A quantitative analysis (provided at Table 13) has been carried out using benchmarks available for current growth areas in Victoria. We can use these as guides but must be sure not to assume a suburban community is structured the same as a regional or rural one. The town of Lakes Entrance provides a focus for a number of recreation, commercial, education and service demands from small towns on the edge of the study area and hence the calculations provided are more than likely at the minimum level of demand. The impact of non resident ratepayers returning to Lakes Entrance during peak holiday periods has also not been factored within the analysis, although research is currently underway to provide improved understanding of the population at any time of the year, rather than through census counts.

7.12 Social Infrastructure Audit

An audit of the major facilities available in Lakes Entrance has been undertaken (see Table 14). This audit examined the existing community infrastructure analysing its potential for growth over time. These predictions will change dependant on which of the three scenarios for growth that are used.

It is likely that the uptake of properties will either reflect the existing situation within the Lakes Entrance study area or there will be some change in the purchasing patterns due to the affordability and location of the development, the opportunities for employment and the availability of services. This would determine the timeframe for which changes to infrastructure are required.

All building works identified within the audit are to be costed at \$3000 per sq. metre.

7.13 Infrastructure and service requirements

Given the uncertainty about the quantum of population increases and the time frame in which these will occur, it is difficult to assess the total infrastructure requirements for the new developments. To ensure that a healthy, vibrant and well-connected community develops in the proposed area, the following tables (Tables 13 and 14) have been used to quantify the normal demand level for social/community infrastructure based on the three scenarios. The variables noted above (7.11) should be considered when using the results in these tables.

7.14 Assessing the validity of assumptions over time

As discussed there are a range of variables in relation to the proposed developments and it is critical that the assumptions of this SIA are examined regularly, to take into account the nature of the population growth of the proposed development. Liaison with service providers at commencing and at three year intervals will ensure that there is an opportunity to engage with the pace of development growth and the provision of infrastructure by both government and non government agencies. Appropriateness of service and social infrastructure development would be analysed with community and major stakeholders' feedback.

Table 13: Quantitative Analysis of Social/Community Infrastructure across three demographic scenarios

Facility	Benchmark	Existing Community 2006 (a)	Existing Community 2025 (b)	New Development Scenario 1 (c)	Total 2025 (b) + (c)	New Development Scenario 2 (d)	Total 2025 (b) +(d)	New Development Scenario 3 (e)	Total 2025 (b) + (e)
Early Learning Centres/ Children's Services									
Kindergarten (place)	1 place: 2.2 children aged 4 years (assumes 90% of demand is met by dedicated Council preschools) ¹	30	33.5	14.9	48.4	16	49.5	15.4	48.9
Maternal and Child Health (session)	1 EFT Nurse: 140 infants (0 year olds) Equivalent of 1 session: 14 infants (0 year olds)	0.46 EFT 4.6 sessions	0.53 EFT 5.3 sessions	0.1 EFT 1 session	0.63 EFT 6.3 sessions	0.12 EFT 1.2 sessions	0.65 EFT 6.5 sessions	0.11 EFT 1.1 sessions	0.64 EFT 6.4 sessions
Long day child care (place)	1 place: 4.8 children aged 0-6	97	97.3	19.9	117.2	23.5	120.8	22.8	120.1
Occasional care	1 place: 28 children aged 0-6	16.6	16.7	3.4	20.1	4.0	20.7	3.9	20.6
Community facilities									
Neighbourhood community centre	1 centre: 3,500-15,000 residents	0.36	0.46	0.08	0.54				
Multipurpose community centre	1 centre: 20,000-30,000 residents	0.18	0.23	0.04	0.27				
Community meeting room/hall	1 room: 6,000-10,000 residents	0.54	0.69	0.12	0.81				
Youth space/facility	1 venue: 1: 20,000 residents	0.27	0.35	0.06	0.41				
Cultural facilities									
Centre based library	1 static library: 30,000 residents	0.18	0.23	0.04	0.27				
Community arts venue	1 venue:60,000 residents	0.09	0.12	0.02	0.14				
Museum	1 venue: 30,000-130,000 residents	0.04	0.05	0.01	0.06				
Art Gallery	1: 30,000-150,000 residents	0.04	0.05	0.01	0.05				
Performing arts venue	1: 50,000-200,000 residents	0.027	0.035	0.006	0.04				
Civic/cultural space	1: 25,000 residents	0.22	0.28	0.05	0.32				
Active recreation facilities									
District park	1 park: 3,000-5,000 residents. Min of 8ha	1.1	1.4	0.24	1.6				
Sub-regional park	1 park: 30,000+ residents. Min of 8ha	0.18	0.23	0.04	0.27				

Facility	Benchmark	Existing Community 2006 (a)	Existing Community 2025 (b)	New Development Scenario 1 (c)	Total 2025 (b) + (c)	New Development Scenario 2 (d)	Total 2025 (b) +(d)	New Development Scenario 3 (e)	Total 2025 (b) + (e)
Football field	1 field: 5,000 residents	1.1	1.4	0.24	1.6				
Cricket field	1 field: 4,000 residents	1.35	1.7	0.3	2.0				
Soccer field	1 field: 5,000 residents	1.1	1.4	0.24	1.6				
Netball Court	1 Court: 7000 residents	0.8	1	0.18	1.2				
Hockey									
Tennis court	1 court: 3,000 residents	1.8	2.3	0.4	2.7				
Lawn bowls green	1 green: 10,000 residents	0.54	0.69	0.12	0.81				
Field for lower profile sports	1 field: 15,000 residents	0.36	0.46	0.08	0.54				
Indoor multipurpose court	1 court: 10,000 residents	0.54	0.69	0.12	0.81				
Indoor aquatic/leisure centre	1 venue: 60,000 residents	0.09	0.12	0.02	0.14				
Passive open space									
Passive space	1ha: 1000 people	5.4	6.9	1.2	8.1				
Informal park	Within 500m of every household								
Local/neighbourhood park	1 park: 750-3,000 people, generally min of 1ha	1.8	2.3	0.4	2.7				
District park	1 park: 3,000-5,000 residents. Min of 2ha	1.1	1.4	0.24	1.6				
Sub-regional park	1 park: 30,000+ residents. Min of 5ha	0.18	0.23	0.04	0.27				
Regional park	1 park: 200,000 or 20min drive. Min of 5-10ha	0.027	0.035	0.006	0.04				
Playgrounds									
Playgrounds	Within 500m of every household			-		-		-	
Playground	1 playground: 250 children aged 0-12 years	3.2	3.24	0.72	3.96	0.87	4.11	0.83	4.07
Education facilities									
Government primary students	55% of children aged 5-11	240	267	55	322	66	333	62	329

Lakes Entrance Northern Growth Area
Social Impact Assessment

Facility	Benchmark	Existing Community 2006 (a)	Existing Community 2025 (b)	New Development Scenario 1 (c)	Total 2025 (b) + (c)	New Development Scenario 2 (d)	Total 2025 (b) +(d)	New Development Scenario 3 (e)	Total 2025 (b) + (e)
Government secondary students	47% of children aged 12-17	157	172	35	207	51	223	48	220
Catholic primary students	25% of children aged 5-11	120	134	27	161	33	167	31	165
Catholic secondary students	25% of children aged 12-17	84	92	19	111	27	119	26	118
Independent school students	10% of children aged 12-17	34	37	8	45	11	48	10	47

Table 14: Major Social Infrastructure Audit

Facility	Location In Lakes Entrance	Facility Ownership	Governance	Current capacity	Required provision	Assessment of Infrastructure Demand to 2025
Active Recreation Facilities						
Lakes Aquadome Leisure Centre	Palmers Road	Council	Council	25m heated pool. Toddlers and learners pool, spa, sauna, gym.	0.14	The Aquadome has recently undergone extensions to provide increased gym capacity. The Aquadome provides for demand requirements beyond the future of residential development in Lakes Entrance.
				Tennis Court (floodlit)	2.7	There are adequate tennis courts (10) on the site for the current and future community.
				Soccer	1.6	A croquet court has been proposed and funded for the vacant Council land adjacent to the Aquadome. Proposals have been developed for the Council land adjacent to the Aquadome for the provision of both soccer and hockey fields
				Occasional Childcare	20.1	Extension to the facility should have regard for potential to increase occasional childcare provision by 6.0 EFT places in order to service the occasional care needs of those attending the Aquadome. Occasional Care is also provided by the main early learning centres
Lakes Entrance Recreation Reserve	Rowe Street	Department of Sustainability and Environment	Committee of Management	Football field, club house,	1.6	The recreation reserve provides below the required minimum level of football fields (1) and netball (2 courts). Netball is also provided at existing local school facilities. The demand provided by the development would
				Netball Courts	1.2	

Facility	Location In Lakes Entrance	Facility Ownership	Governance	Current capacity	Required provision	Assessment of Infrastructure Demand to 2025
				Tennis	2.7	require a second football/netball facility if the second and third scenarios were realised. As there is little room for expansion at the existing reserve (already in an inundation area) the location of a second facility would need to be found to the north of the current development proposal. Tennis is also provided at the Aquadome site
Lakes Entrance Youth and Recreation Centre	Church Street	Council	Committee of Management	Basketball, Netball	0.81 (Multipurpose Centre)	Young people and younger adults attend the facility for basketball and related sports. There is sufficient provision at the Youth and Recreation centre to act as a multipurpose centre and a youth facility
				Youth Services	0.41	The Centre will need to develop other forms of activities for young people to act as a support facility
Early Learning Centres						
Lakes Entrance Pre-School	Coates Road	Council	Committee of Management	30 places -4 y/o 25 places 3 y/o	48.4	The existing facility provides for the appropriate level of places; however the centre acts as a catchment for surrounding smaller areas (not in the study) and as such is currently at or near capacity despite the recent extensions to the premises.
Lakes Entrance Learning & Development Centre	Coates Road	Council	Committee of Management	66 places-Childcare and kindergarten 25 places After School Care/Vacation Program 25 P/T staff	117.2	The provision of childcare is through both private and not for profit organisations. Between the two services there are enough places to provide for the demand analysis. The services also act as catchments for a number of smaller areas outside the study area which means they are close to capacity with existing

Facility	Location In Lakes Entrance	Facility Ownership	Governance	Current capacity	Required provision	Assessment of Infrastructure Demand to 2025
Kids in Care	Myer Street	Private	Private	65 places Childcare Vacation/After School Care		demand There is an opportunity to consider the development of an integrated children’s hub to accommodate both Council early learning settings and a range of children’s services including maternal and visiting services. The Council’s land at Palmers Road would provide an appropriate location for such a development
Education facilities						
Lakes Entrance Primary School	Myer Street	DEECD	School Council	226 students 24.6 EFT teaching/non teaching staff	322	Increases in Primary and Secondary Education infrastructure is determined by ratios implemented by the Department of Education and Early Childhood Development. The Department have not identified any trigger point being reached by the development, although the issues of access to student transport needs to be addressed with local schools Non government schools currently provide for more than identified population of primary aged children. There is no non government secondary school in Lakes Entrance. This is provided in Bairnsdale for which bus services operate.
St Brendans Primary School	Golf Links Road	Non Government	School Council	208 students 16.6 EFT teaching/non teaching staff	161	
Lakes Entrance Secondary College	North Street	DEECD	School Council	253 students 37.2 EFT teaching/non teaching staff	207	
Community Facilities						

Facility	Location In Lakes Entrance	Facility Ownership	Governance	Current capacity	Required provision	Assessment of Infrastructure Demand to 2025
Lakes Entrance Senior Citizens Centre	Coates Road	Council	Committee of Management	Programs for senior citizens		The current Centre will be required to cater for 373 people aged 60+ if the current demographic is reflected in the new resident population. The Centre will require expansion of its premises to ensure that there are adequate activities provided to the older community. Sufficient land is available at the Coates Road facility for an increase of 100 sq m The Lakes Entrance U3A is currently housed in a local church hall and has over 100 members. The expanded Coates Road facility would provide an opportunity to co-locate these two services
Lakes Entrance Neighbourhood House	Heatherlea Grove	Council	Committee of Management	Social Support, Community and Adult Education Programs	0.54	The Neighbourhood House is limited in its size and its operation (by its position and license). There should be an opportunity to provide space at any community hub development at Council's Palmers Rd location, for the Neighbourhood House to provide an outreach service to the new development residents
Lakes Entrance Mechanics Institute	Mechanics Street	Council	Council committee	Community meeting space	0.81	The Mechanics Institute provides a suitable facility for community meetings. There are a number of existing halls and meeting rooms (eg Gippsland Lakes Community Health, Lakes Entrance Angling Club) which cater for small to medium groups

Facility	Location In Lakes Entrance	Facility Ownership	Governance	Current capacity	Required provision	Assessment of Infrastructure Demand to 2025
Cultural Facilities						
Lakes Entrance Library and Business Centre	Mechanics Street	Council	Council	Library and Business Centre	0.27	The current branch library provides for a range of library services including internet facilities. The potential population increase would require 400 sq. m of library facility in total which would require the current facility to either double in size or provide a range of more flexible, technology driven services
Community arts venue	1 venue:60,000 residents				0.14	There is no existing arts or cultural infrastructure within Lakes Entrance. There are a number of avenues for access to historical information (eg Lakes Entrance Historical Society) which require further enhancement. Although the demand analysis does not warrant a separate arts/performance facility there will be opportunities to develop arts based activities within existing and planned Council community infrastructure. Innovative programming in flexible spaces will support Council's commitment to a "Hub and Spoke " model of delivery centred at the Forge Theatre, Bairnsdale. Opportunity should be taken to improve access to Aboriginal art in public open spaces within and around the new development area and at key public spaces. Consultation with local aboriginal organisations will be undertaken to ensure appropriate planning and funding in line with Council's Public Art policy
Museum	1 venue: 30,000-130,000 residents				0.06	
Art Gallery	1: 30,000-150,000 residents				0.05	
Performing arts venue	1: 50,000-200,000 residents				0.04	
Civic/cultural space	1: 25,000 residents				0.32	

Facility	Location In Lakes Entrance	Facility Ownership	Governance	Current capacity	Required provision	Assessment of Infrastructure Demand to 2025
Passive Open Space						
Passive space	1ha: 1000 people				8.1 ha	The proposed development lies adjacent to the Lakes Entrance foreshore with extensive passive space provision. There is little passive space in the vicinity of the new residential development. Increased passive open space will be defined by the environmental studies being carried out as part of the ODP
Informal park	Within 500m of every household					To be developed as part of the Outline Development Plan
Local/neighbourhood park	1 park: 750- 3,000 people, generally min of 1ha				2.7	Two local parks exist within the existing township, neither accessible to the new residential development by existing pathways/cycling paths. It is recommended that a neighbourhood park be integrated into the development design
District park	1 park: 3,000-5,000 residents. Min of 2ha				1.6	A district park should be replaced with improvements to the linkages between existing passive and active open space and that within the new development, through the provision of an integrated movement infrastructure plan

Facility	Location In Lakes Entrance	Facility Ownership	Governance	Current capacity	Required provision	Assessment of Infrastructure Demand to 2025
Playgrounds						
Playgrounds	Within 500m of every household			-		To be integrated within Neighbourhood Parks
Playground	1 playground: 250 children aged 0-12 years	3.2	3.24	0.72	3.96	Existing playgrounds will not provide the level required by the new resident population. The development should provide at least two new playgrounds within the development area and ensure that access is practical for resident and non resident community
Health/Medical Services						
Gippsland Lakes Community Health	Jemmeson Street	GLCH	Board of Directors	Health and Medical Services		To be discussed with the organisation after periodic audit completed. Indications are that 3 more doctors will be required within Lakes Entrance to manage the general practice requirements of the expanded population
Cunninghame Arm Medical Centre	Whiters Street	Private	Private	Medical and Allied Health Private Practice		As a private practice the opportunity to expand to meet service demand lies with the practice. Evidence base developed through the ongoing community audit process will be available to inform the decision making

Facility	Location In Lakes Entrance	Facility Ownership	Governance	Current capacity	Required provision	Assessment of Infrastructure Demand to 2025
Lakes Entrance Aboriginal Health Association	Jemmeson Street	LEAHA	Board of Directors	Health and Medical Services for the Aboriginal community		To be discussed with the organisation after periodic audit completed
Other Government Services						
Lakes Entrance Police Station	Cnr Myer and Roadknight Street	State	State	Police Station		No current plan to expand existing facility

8 Recommendations

The following recommendations are designed to support a strong and viable Lakes Entrance community which is to grow as the result of the cumulative effects of the proposed residential developments. The many social and environmental challenges outlined in this study provide an opportunity to adapt to a changing landscape and to ensure that the social infrastructure supports the community into the future.

In assessing the level of infrastructure required by the population increase which results from the new developments, this report has assumed that the majority of the population growth over the next 10-15 years will be generated within the Northern Growth Area. Natural population increase for the Lakes Entrance community, as projected by the Australian Bureau of Statistics, assumes there is a supply of land to accommodate that growth. It is reasonable to assume that the Northern Growth Area will provide for the majority of the natural increase as well as for new residents attracted to the availability of land.

The following table also provides a hierarchy of need/demand which may provide some direction in prioritising the staging of social infrastructure. The hierarchy is based on current capacity assessments of the existing infrastructure completed in Table 14- Major Social Infrastructure Audit.

Infrastructure Requirements

Recommendation	Area Required		Location	Costing ¹ @\$2500 per m ²
Develop an early years hub for 110 children to provide Universal access to kindergarten, provision of childcare, occasional care and before/after school and vacation programs. Maternal and Child Health services Visiting services	350 sq metres	Existing Town Centre (Redevelopment of existing 43 Coates Rd. site)		\$875,000
Develop a multipurpose community facility with flexible spaces for :- Meetings Art displays and small performance pieces Consulting rooms for primary health providers Community Programs through Neighbourhood House Commercial kitchen	750 sq metres	Northern Growth Area Development (55 Palmers Rd)		\$1,875,000

Increase Aquadome Childcare space	20 sq metres internal/40 sq metres external	Existing Town Centre (43 Palmers Rd)	\$150,000
Develop an activity centre to service the new development and those already under construction to the east of Palmers Rd.	1 ha	Northern Growth Area Development (55 Palmers Rd)	³
Develop site for Emergency Service location	2 ha	Northern Growth Area Development- (55 Palmers Rd)	⁴
Create two new playgrounds/neighbourhood parks	2 ha	Northern Growth Area Development	²
Redevelop Lakes Entrance Youth and Recreation Centre to include spaces for support service provision for young people	Internal Redevelopment	Existing Town Centre (Church Street)	\$75,000
Develop Senior Citizens Centre to include new program partners	100 sq metres	Existing Town Centre (43 Coates Rd)	\$250,000
Increase library facility space Or Develop existing library as a learning and technology hub	200 sq metres 100 sq metres	Existing Town Centre (Mechanics Street)	\$500,000
Develop proposal for second football/cricket field with pavilion, netball courts and playground	4 ha	Northern Growth Area Development	²
Provide trail/pathway linkage between foreshore and new development towards Northern trails entrance	Provide land along existing and planned pathways	Township/Development area	

Notes:

1. Costing is based on average per square metre where no design specifications have been developed
2. Cost of active recreation land development would be influenced by cost of land preparation work (site specific)
3. Activity Centre costing would be a partnership between Council and retail developers
4. Site for Emergency Services development would be provided through appropriate leasing arrangements from Council

Timeframes

The timeframe for implementation across the strategies identified in the SIA is defined in five stages:

- Immediate- action is required to address this recommendation over the coming 12 months
- Short-term- action is required to address the recommendation over the coming 2-5 years
- Medium-term- action is required to address the recommendation over the coming 6-10 years
- Long- term- action is required to address the recommendation over the coming 11-15 years
- Ongoing- action is required in monitoring this recommendation on a regular basis.

Recommendation	Timeframe*	Responsibility
Review and Monitoring		
1. That all affected communities be consulted on a regular basis to examine the social impact effects of the proposed residential development and the provision of appropriate social infrastructure.	Ongoing	Council
2. That planning for services and community infrastructure be reviewed regularly, as the population grows.	Short Term Ongoing	Council/Community Organisations Council
3. That the increased need for community spaces which results from the proposed development is the subject of an audit every three years in order to ascertain the ability of all properties to provide for community accessibility and to adapt to the growing population.	Immediate/ Ongoing	Council
Community functioning		
4. That consultation occur with the community in relation to the most appropriate ways to acknowledge and express the attachment of the area to both Indigenous and non-Indigenous communities, as a mark of the changing social and environmental landscape.	Short term	Developer/Council
Community infrastructure and services		
5. That planning for medium density housing be encouraged within the proposed development in order to accommodate the existing older resident cohort.	Short term	Developer
6. That models of providing affordable housing in the proposed development, in order to increase the number of couples with young children (first home buyers) into the community	Short term	Developer/Council
7. That an assessment of the requirements and broad costing for increased infrastructure and increased staffing provided for local community based agencies	Short term/Medium Term	Council/Developer Council/Community Organisations

Recommendation	Timeframe*	Responsibility
be undertaken on a regular basis.	Ongoing	
8. That a multi-purpose community facility be constructed in the new development (capacity: 750 sq m) within Council land	Short/Medium Term	Developer/Council
9. That an Early Years Hub be developed to include “wrap around” service delivery model	Short Term	Developer/Council/ Early Years Committees
10. That a review of existing Council infrastructure be undertaken on the capacity to provide for an increased number of participants and more diverse program demand	Short term/ Ongoing	Council/Community Organisations
11. That walking and cycling connectivity to the “Lakes Aquadome Leisure Centre” be planned and constructed.	Short/Medium Term	Developer
12. That the proposed developments are connected to the rest of the town, including the foreshore bicycle and walking trails.	Short/Medium Term	Developer/Council
13. That Council promote the extension of Library resources to the community to ensure increased access to information and provide social connectivity for the growing population	Medium	Council
14. That Council’s Palmers Road area is examined to assess its potential to house a joint facility for all emergency services in Lakes Entrance. (p.33)	Immediate/ Short Term	Council/Emergency Services
15. That Council facilitate advocacy with the Department of Transport in relation to developing a more robust public transport network to service the proposed residential development.	Immediate	Council/Developer/Dep artment of Transport
16. That a study be undertaken to evaluate the capacity to improve public transport access from the proposed residential development to the retail centre of Lakes Entrance.	Short term	Council/Department of Transport
Natural Environment		
17. That high quality, accessible open space for passive and active recreation be constructed within the proposed residential land development ensuring linkages are developed through a Movement Infrastructure Plan.	Short/Medium Term	Developer/Council
Urban planning		
18. That planning is undertaken with relevant authorities to develop an alternative northern access road for Lakes Entrance	Medium/Long Term	Council/Department of Transport

Recommendation	Timeframe*	Responsibility
19. That traffic planning within the development and on the boundary roads define walking and cycling pathways which provide safe, accessible and convenient access to recreation, community, health, education and retail centres (p.35)	Short term	Council/Developer
20. That a study be undertaken to evaluate the capacity to improve public transport access from the proposed residential development to the retail centre of Lakes Entrance.	Short term	Council/Department of Transport
Economic Development		
21. That a study be undertaken to assess the potential for the development of an activity centre within the proposed development area especially the area of Council land at Palmers Road	Immediate/ Short Term	Council/Developer
22. That economic development and increased employment opportunities be explored, to attract families to live in the proposed development.	Short term	Council/Developer

9 References

- Arthurson, K. (2008), *Urban Regeneration, scale and balancing social mix*, paper prepared for the Social Inclusion and Place Based Disadvantage Workshop, sponsored by The Brotherhood of St Lawrence Research & Policy Centre and Department of Planning and Community Development, Melbourne:13th June, Brotherhood of St Lawrence, www.bsl.org.au
- Berube, A. (2005), *Mixed communities in England: A US perspective on evidence and policy prospects*, Joseph Rowntree Foundation, www.jrf.org.uk
- Carley, M., Kirk, K. and McIntosh, S. (2001), *Retailing, sustainability and neighbourhood regeneration*, Joseph Rowntree Foundation, www.jrf.org.uk
- Harrison, C. and Britt, H. (2010), *general Practice Workforce Gaps: now and in 2020*, *Australian Family Physician* Vol. 40, no. 1/2, January/February 2011
- Joseph Rowntree Foundation, (2008), 'Mixed Communities: success and sustainability', *Foundations*, March, www.jrf.org.uk
- Klaassen A., (2005), *Victorian Learning Towns Project: a Kyabram Perspective - Fellowship Report*, www.det.wa.edu.au
- Levett, R. (2004) *Housing in a Changing Climate*, Levett-Therivel, an environmental perspective paper prepared for Housing Futures 2024, www.buildingfutures.org.uk
- Mean, M. and Tims, C. (2005), *People Make Places: growing the public life of cities*, Demos with support from the Joseph Rowntree Foundation, www.demos.co.uk
- Sirolli, E. (2001), *Roads, Culture and Economic Development*, paper prepared for the National Scenic Byways Conference, Portland, Oregon, www.sirolli.com
- World Health Organisation (1997), *City planning for healthy and sustainable development – European Sustainable Development and Health Series: 2*, WHO Healthy Cities Project Agenda 21, European Sustainable Cities and Towns Campaign, European Commission and Healthy Cities Network, www.who.org
- Australian Medical Workforce Advisory Committee (2005), *The General Practice Workforce in Australia: supply requirements to 2013*, AMWAC Report 2005.2 August

Appendix 1. Projected population growth 2006- 2025 by single age groups

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Year																					
2025	70.2	63.2	64.7	59.5	73.8	68.1	68.0	61.5	80.3	70.8	60.2	76.7	70.1	79.8	65.0	76.0	78.6	66.2	60.5	70.6	36.5
2006	65	62	54	54	66	60	61	57	73	63	52	71	66	73	59	65	74	63	57	66	38
Age	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Year																					
2025	50.3	43.5	42.0	46.0	45.5	51.4	55.4	50.2	53.3	61.7	58.8	62.6	52.2	55.1	69.7	63.2	66.8	62.8	56.6	64.5	76.4
2006	53	48	42	45	43	48	55	47	44	51	49	54	46	44	58	63	60	63	51	53	65
Age	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
Year																					
2025	58.0	81.2	75.5	65.4	70.9	58.2	66.7	55.9	71.8	88.1	82.2	96.3	72.4	73.8	99.4	60.3	103.1	93.2	84.9	97.6	138.4
2006	50	77	78	65	72	58	63	55	71	84	89	89	68	66	87	59	98	93	82	75	99

Age	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
Year																					
2025	119.7	135.1	133.8	113.9	130.3	103.3	112.2	123.8	130.2	129.9	117.0	108.1	127.7	102.0	106.3	126.0	95.2	72.1	64.8	66.1	44.6
2006	89	91	93	82	89	69	70	73	74	76	64	61	67	59	55	59	61	49	40	42	28
Age	84	85+																			
Year																					
2025	49.9	312.7																			
2006	28	161																			

Appendix 2. Employment Profile (ABS, 2006)

	15-19			20-24			25-34			35-44			45-54			55-64			65-74			75-84		
	years			years			years			years			years			years			years			years		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Employed, worked:																								
Full-time(a)	43	17	60	56	23	79	127	38	165	167	76	243	164	95	259	74	54	128	11	5	16	0	0	0
Part-time	29	54	83	18	32	50	26	65	91	36	138	174	55	116	171	50	78	128	18	15	33	4	0	4
Employed, away from work(b)	0	9	9	0	0	0	6	8	14	9	10	19	19	13	32	17	12	29	5	3	8	0	0	0
Hours worked not stated	8	0	8	6	0	6	7	6	13	9	3	12	6	15	21	3	5	8	4	0	4	0	0	0
Total	80	80	160	80	55	135	166	117	283	221	227	448	244	239	483	144	149	293	38	23	61	4	0	4
Unemployed, looking for:																								
Full-time work	13	9	22	13	0	13	22	9	31	9	4	13	16	10	26	11	3	14	0	0	0	0	0	0
Part-time work	4	0	4	0	4	4	4	6	10	4	6	10	4	6	10	0	7	7	0	0	0	0	0	0
Total	17	9	26	13	4	17	26	15	41	13	10	23	20	16	36	11	10	21	0	0	0	0	0	0
Total labour force	97	89	186	93	59	152	192	132	324	234	237	471	264	255	519	155	159	314	38	23	61	4	0	4
Not in the labour force	50	68	118	19	39	58	32	89	121	33	83	116	70	102	172	213	264	477	299	318	617	203	224	427
Labour force status not stated	8	14	22	8	10	18	22	10	32	11	15	26	16	12	28	23	22	45	29	38	67	33	31	64
Total	155	171	326	120	108	228	246	231	477	278	335	613	350	369	719	391	445	836	366	379	745	240	255	495

Appendix 3 Survey Tool



Employment

What areas of growth in employment, due to the developments, do you see occurring and is there capacity within Lakes Entrance to provide this.

BUILDING - SERVICES - NEW HOUSES WILL BRING IN NEW WORKERS TO ADD TO EXISTING POPULATION - LAKE HAS A LOT OF CASUAL / PART TIME WORKERS WHO CAN PICK UP SOME STUFF

Housing demand- What sort of housing would you like to see built in the new residential development (eg family homes, flats, medium density) and why?

FAMILY HOMES AND MEDIUM DENSITY + RETIREMENT VILLAGE TO TARGET A GOOD CROSS SECTION OF PEOPLE - IE: FAMILIES - SINGLES - RETIRED PEOPLE.

Recreation and sporting demand - Can the current recreation infrastructure manage the growth in population? ~~Yes~~ No

If No, what sort of recreation does Lakes Entrance need and why (eg. walking and cycling paths, organised sport, the Lakes Aquadome)

THE AQUADOME NEEDS TO EXTEND - HYDROTHERAPY POOL AND 50 METER POOL - FOOTBALL BETTER USE OF REC RESERVE (NOT CARPARK). EXTENSION BAYS CLUB TO ENCOURAGE LARGE TOURNAMENTS

MORE CYCLE AND WALKING PATHS - NEED TO ENCOURAGE ACTIVITY IN THE POPULATION

Open Space demand Is the current open space able to manage the potential population growth and increased numbers of houses? ~~Yes~~ NO - YES

If No what type of open space will be needed (eg parks, spaces for community events and public art)

NEED MORE PARKS - BETTER USE OF OLD COUNCIL BUILDING ON THE HILL FOR PUBLIC EVENTS DISPLAYS ETC

Any Other Comments

THE SHOPPING PRECINCT NEED TO BE ABLE TO EXTEND - INTO CHURCH / ROBINSON ST IS ALREADY USED

THE BIG IDEA WOULD BE TO HAVE A TOP LEARNING FACILITY IN LAKES IE: UNIVERSITY - THIS WOULD BRING IN YOUNG WORKERS - FOR SERVICES INDUSTRY GROWTH AND FOR THE BUILDING INDUSTRY

Appendix 4 Community Groups and Organisations

[ANGLICAN CHURCH LAKES ENTRANCE St Nicholas](#)

RELIGIOUS GROUPS, Tel BH: 03 5155 1748, Email: barbara.logan2@bigpond.com

[Australian Volunteer Coast Guard Lakes Entrance VF18](#)

EMERGENCY SERVICES, Tel BH: 03 5155 1601, Email: fc.vf18@coastguard.com.au

[COMMUNITY HEALTH CENTRE - OCCUPATIONAL THERAPY Lakes Entrance](#)

HEALTH SUPPORT & COUNSELLING SERVICES, Tel BH: 03 5155 8300

[Friends of Gippsland Lakes Parks and Reserves](#)

RECREATION RESERVES HALLS & PLAYGROUNDS, Tel BH: 03 5156 6317, Email: windermere@net-tech.com.au

HEALTH SUPPORT & COUNSELLING SERVICES, Tel BH: 5157 5744, Email: bruthen@glch.org.au

[GIPPSLAND LAKES COMMUNITY HEALTH - LAKES ENTRANCE](#)

HEALTH SUPPORT & COUNSELLING SERVICES, Tel BH: 03 5155 8300, Email: lakes@glch.org.au

[GIPPSLAND LAKES FISHING CLUB INC.](#)

SPORT & RECREATION ACTIVITIES, Tel BH: 03 5155 1293

[HOSPICE LAKES ENTRANCE INC.](#)

HEALTH SUPPORT & COUNSELLING SERVICES, Email: bmorison@southernphone.com.au

[Kids in Care - Lakes Entrance Child Care Centre](#)

CHILDREN'S SERVICES, Tel BH: 5155 2566, Email: elclakesentrance@kidsincare.com.au

[LAKES COMMUNITY CHURCH INC](#)

RELIGIOUS GROUPS, Tel BH: 03 5155 3277, Email: lakes.ch@bigpond.net.au

[Lakes Entrance After School Vacation Care managed by Uniting Care Gippsland](#)

CHILDREN'S SERVICES, Tel BH: 5155 3946

[LAKES ENTRANCE AGED CARE FACILITY](#)

ADULT AGED & DISABLED SERVICES, Tel BH: 5155 2054, Email: jklnom@optusnet.com.au

[LAKES ENTRANCE AND DISTRICT BREAST CANCER SUPPORT](#)

HEALTH SUPPORT & COUNSELLING SERVICES, Tel BH: 03 5155 2025

[LAKES ENTRANCE BAPTIST CHURCH](#)

RELIGIOUS GROUPS, Tel BH: 5155 2884, Email: admin@lebc.org.au

[Lakes Entrance Baptist Church Tiny Turtles Playgroup](#)

CHILDREN'S SERVICES, Tel BH: 03 5155 2669

LAKES ENTRANCE BOWLS CLUB

SPORT & RECREATION ACTIVITIES, Tel BH: 03 5155 3578

LAKES ENTRANCE BRIDGE CLUB Inc

SPECIAL INTEREST GROUPS, Tel BH: 03 51563359, Email: b.pdingwall@wideband.net.au

LAKES ENTRANCE BUSINESS TOURISM ASSOCIATION

TOURISM/ EVENTS, Tel BH: 03 5155 4243

Lakes Entrance Cancer Council Unit

HEALTH SUPPORT & COUNSELLING SERVICES, Tel BH: 5155 2651, Email: jmdouglass@bigpond.com

LAKES ENTRANCE CATHOLIC CHURCH

RELIGIOUS GROUPS

Lakes Entrance Cemetery Trust

SERVICE CLUBS & SOCIETIES, Tel BH: 5155 1100

Lakes Entrance Child Care Centre- Uniting Care Gippsland

CHILDREN'S SERVICES, Tel BH: 5155 3946

LAKES ENTRANCE CIVIL CELEBRANT

RELIGIOUS GROUPS, Tel BH: 03 5155 1142

LAKES ENTRANCE COUNTRY WOMENS ASSOCIATION

SERVICE CLUBS & SOCIETIES, Tel BH: 03 5155 2962

LAKES ENTRANCE CROQUET CLUB INC

SPORT & RECREATION ACTIVITIES, Tel BH: 51552360, Email: barbandlance@bigpond.com

LAKES ENTRANCE FAMILY HISTORY RESOURCE CENTRE INC.

SPECIAL INTEREST GROUPS, Tel BH: 03 5155 3843, Email: lefhrc@internode.on.net

LAKES ENTRANCE GARDEN CLUB INC.

SPECIAL INTEREST GROUPS, Tel BH: 03 5155 1016

LAKES ENTRANCE GOLF CLUB

SPORT & RECREATION ACTIVITIES, Tel BH: 03 5155 1431

LAKES ENTRANCE LADIES BOWLS CLUB

SPORT & RECREATION ACTIVITIES, Tel BH: 03 5155 3578

LAKES ENTRANCE LEGACY WIDOWS CLUB

SERVICE CLUBS & SOCIETIES, Tel BH: 03 5155 1559

Lakes Entrance Maternal and Child Health Centre

HEALTH SUPPORT & COUNSELLING SERVICES, Tel BH: 5153 9500

LAKES ENTRANCE MECHANICS INSTITUTE MANAGEMENT COMMITTEE INC

SERVICE CLUBS & SOCIETIES, Tel BH: 03 5155 1991, Email: gamjradford@hotmail.com

LAKES ENTRANCE NEIGHBOURHOOD HOUSE INC.

NEIGHBOURHOOD HOUSES COMMUNITY RESOURCE & OUTREACH CENTRES, Tel BH: 03 5155 2277, Email: lakesnh@vic.australis.com.au

LAKES ENTRANCE PADDLE BOATS

SPORT & RECREATION ACTIVITIES, Tel BH: 419552753

Lakes Entrance Portside Boat Hire

TOURISM/ EVENTS, Tel BH: 5155 3832 or 0427 551 337

Lakes Entrance Preschool

CHILDREN'S SERVICES, Tel BH: 03 5155 2061, Email: lakes.entrance.kin@kindergarten.vic.gov.au

LAKES ENTRANCE RECREATION RESERVE COMMITTEE OF MANAGEMENT

SERVICE CLUBS & SOCIETIES, Tel BH: 03 5155 1800

LAKES ENTRANCE REGIONAL HISTORICAL SOCIETY INC.

SPECIAL INTEREST GROUPS, Tel BH: 03 5155 3939, Email: info@lakeshistory.com

LAKES ENTRANCE RETURNED & SERVICES LEAGUE

SERVICE CLUBS & SOCIETIES, Tel BH: 03 5155 1555, Email: enquire@rslglenaramotel.com.au

LAKES ENTRANCE SENIOR CITIZENS INC

SERVICE CLUBS & SOCIETIES, Tel BH: 03 5155 2320, Email: tuvue@bigpond.com

LAKES ENTRANCE SKATE PARK

SPORT & RECREATION ACTIVITIES

LAKES ENTRANCE SQUASH & RACQUETBALL CLUB

SPORT & RECREATION ACTIVITIES, Tel BH: 5155 1563

Lakes Entrance Surf Club Market

TOURISM/ EVENTS, Tel BH: 407098805

LAKES ENTRANCE SURF LIFE SAVING INC.

SPORT & RECREATION ACTIVITIES, Tel BH: 03 5155 1333

LAKES ENTRANCE TENNIS CLUB INC

SPORT & RECREATION ACTIVITIES, Tel BH: 03 5155 1503

LAKES ENTRANCE UNITING CHURCH

RELIGIOUS GROUPS, Tel BH: 03 5155 1004, Email: joycel@datafast.net.au

Lakes Entrance Uniting Church Playgroup

CHILDREN'S SERVICES, Tel BH: 03 5155 1416

Lakes Entrance Visitor Information Centre

TOURISM/ EVENTS, Tel BH: 5155 1966

LIONESS CLUB OF LAKES ENTRANCE

SERVICE CLUBS & SOCIETIES, Tel BH: 03 5155 2184, Email: lawcyn@datafast.net.au

LIONS CLUB OF LAKES ENTRANCE

SERVICE CLUBS & SOCIETIES, Tel BH: 03 5155 5070, Email: lions.lakesentrance@gmail.com

MATERNAL & CHILD HEALTH PROGRAM - Lakes Entrance Community Health

CHILDREN'S SERVICES, Tel BH: 03 5155 8300, Email: ailsac@glch.org.au

POLICE STATION Lakes Entrance

EMERGENCY SERVICES, Tel BH: 03 5155 1206, Email: colin.arnell@police.vic.gov.au

PROBUS CLUB OF LAKES ENTRANCE INC.

SPECIAL INTEREST GROUPS

ROTARY CLUB OF LAKES ENTRANCE

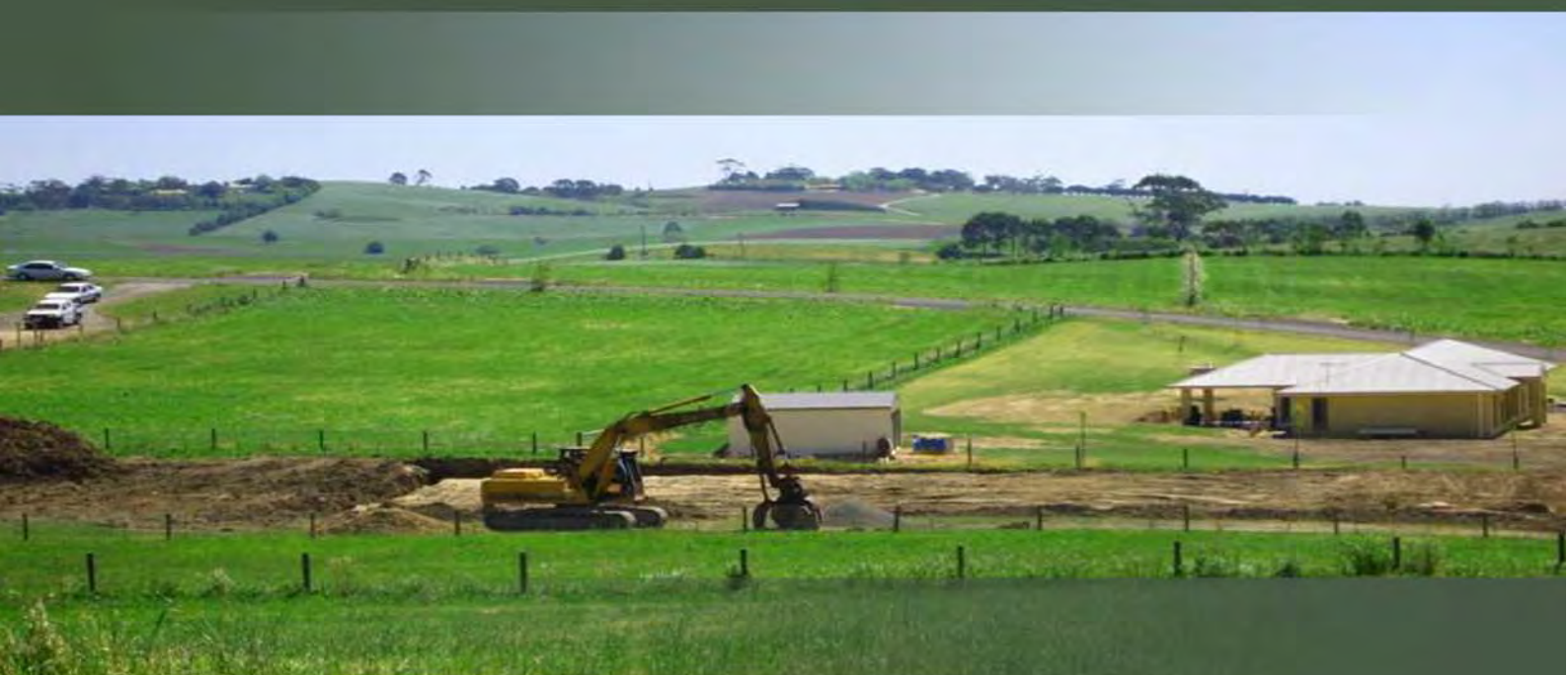
SERVICE CLUBS & SOCIETIES, Tel BH: 418595903

Lakes Entrance Northern Growth Area

DEVELOPMENT CONTRIBUTIONS PLAN

EAST GIPPSLAND SHIRE COUNCIL

FEBRUARY 2014
VERSION 2.1



Author

Paul Shipp

Reviewed by

Matt Ainsaar

© Copyright, Urban Enterprise Pty Ltd, July 2012.

This work is copyright. Apart from any use as permitted under Copyright Act 1963, no part may be reproduced without written permission of Urban Enterprise Pty Ltd.

Document Information

Filename: Lakes Entrance Northern Growth Area DCP Version 2.1 - Post Panel

Last Saved: 20 February 2014 10:22 AM

Last Printed: 20 February 2014 10:26 AM

File Size: 13702 kb

Disclaimer

Neither Urban Enterprise Pty. Ltd. nor any member or employee of Urban Enterprise Pty. Ltd. takes responsibility in any way whatsoever to any person or organisation (other than that for which this report has been prepared) in respect of the information set out in this report, including any errors or omissions therein. In the course of our preparation of this report, projections have been prepared on the basis of assumptions and methodology which have been described in the report. It is possible that some of the assumptions underlying the projections may change. Nevertheless, the professional judgement of the members and employees of Urban Enterprise Pty. Ltd. have been applied in making these assumptions, such that they constitute an understandable basis for estimates and projections. Beyond this, to the extent that the assumptions do not materialise, the estimates and projections of achievable results may vary.

CONTENTS

1.	INTRODUCTION	3
1.1.	BACKGROUND	3
1.2.	INFRASTRUCTURE DELIVERY	3
1.3.	THE LAKES ENTRANCE NORTHERN GROWTH AREA	4
1.4.	MAIN CATCHMENT AREA	5
1.5.	DRAINAGE CATCHMENTS	6
1.6.	DCP TIMEFRAME	7
1.7.	EXCLUDED DEVELOPMENT	7
2.	STATUTORY FRAMEWORK	8
2.1.	PLANNING AND ENVIRONMENT ACT 1987	8
2.2.	STATE PLANNING POLICY CONTEXT	8
2.3.	LOCAL PLANNING CONTEXT	9
3.	NEED AND NEXUS	10
3.1.	INTRODUCTION	10
3.2.	LAND BUDGET	10
3.3.	RESIDENTIAL DWELLING YIELD AND POPULATION	11
3.4.	COMMERCIAL DEVELOPMENT	11
3.5.	DEMAND UNITS	11
3.6.	OTHER USES	12
4.	INFRASTRUCTURE ITEMS TO BE FUNDED BY THE DCP	13
4.1.	DISTINCTION BETWEEN COMMUNITY AND DEVELOPMENT INFRASTRUCTURE	13
4.2.	EXTERNAL DEMAND	13
4.3.	COMMUNITY INFRASTRUCTURE ITEMS	13
4.4.	DEVELOPMENT INFRASTRUCTURE ITEMS	13
4.5.	INFRASTRUCTURE LOCATION MAPS	14
5.	CALCULATION OF LEVIES	16
5.1.	METHOD OF CALCULATING LEVIES	16
5.2.	DEVELOPMENT CONTRIBUTION RATES PER DEMAND UNIT	16
6.	DCP ADMINISTRATION	17
6.1.	INDEXATION OF LEVIES	17
6.2.	VALUATION OF LAND	17
6.3.	COLLECTING AGENCY	17
6.4.	DEVELOPMENT AGENCY	17
6.5.	COLLECTION OF LEVIES	18
6.6.	ADMINISTRATIVE PROCEDURES	19
6.7.	METHOD OF PROVISION	19
7.	IMPLEMENTATION STRATEGY	20

7.1.	INTRODUCTION	20
7.2.	PROVISION OF LAND AND WORKS IN-KIND	20
7.3.	LAND	21
7.4.	INFRASTRUCTURE ALLOCATION AND STRATEGIC JUSTIFICATION	21
7.5.	DETAILED CALCULATION OF INFRASTRUCTURE LEVIES	21
7.6.	FUNDS TO BE COLLECTED	25

FIGURES

FIGURE 1	LAKES ENTRANCE NORTHERN GROWTH AREA	5
FIGURE 2	MAIN CATCHMENT AREA	6
FIGURE 3	DRAINAGE CATCHMENTS	7
FIGURE 4	LOCATION OF INFRASTRUCTURE ITEMS	15

TABLES

TABLE 1	LAND BUDGET SUMMARY	10
TABLE 2	PROJECTED RESIDENTIAL LOT YIELD	11
TABLE 3	ACTIVITY CENTRE PROJECTIONS	11
TABLE 4	DEMAND UNITS BY LAND USE	12
TABLE 5	LEVY SUMMARY	16
TABLE 6	INFRASTRUCTURE ITEMS, COST APPORTIONMENT AND STRATEGIC JUSTIFICATION	22
TABLE 7	LEVY CALCULATION BY INFRASTRUCTURE ITEM	24
TABLE 8	SUMMARY OF COSTS APPORTIONED AND FUNDS TO BE COLLECTED (JULY 2012 VALUES)	25

1. INTRODUCTION

1.1. BACKGROUND

This Lakes Entrance Northern Growth Area Development Contributions Plan (**DCP**) has been developed to support the funding of shared infrastructure in land known as Part 1 of the Lakes Entrance Northern Growth Area (**LENGA**).

The DCP has been prepared concurrently with the Lakes Entrance Northern Growth Area Outline Development Plan (**ODP**), which has been prepared by SMEC Urban in conjunction with East Gippsland Shire Council.

The ODP sets the long - term strategic framework for the development of the Growth Area in relation to:

- Land use (such as residential development of varying densities, open space and community facilities);
- Transport (such as the road network, collector roads & proposed public transport);
- Activity Centres; and
- Open space (passive & active), waterways and environmentally sensitive areas.

This DCP applies to land known as Part 1 of the LENGA and requires contributions from all landowners/developers. Land zoned for public purposes and existing residential development (individual house lots on Country Club Drive, Riviera Court and Lawson Drive) is excluded from development contributions. The development and land identified in Section 1.7 of this DCP is also exempt from making a development contribution.

Improved social, economic, environmental and urban design outcomes are achieved through the provision of infrastructure early in the development of a new community. The delivery of key infrastructure in a timely and efficient manner is fundamental to sustainable outcomes in urban growth areas such as the Lakes Entrance Northern Growth Area.

1.2. INFRASTRUCTURE DELIVERY

The ODP process, together with the supporting Social Impact Assessment (East Gippsland Shire), has identified a range of civil and social infrastructure required as part of the development of the LENGA. These infrastructure items were identified to support the entire LENGA.

This DCP will collect levies to ensure that the infrastructure items identified are funded to enable Council to provide the infrastructure. However, this DCP is not the sole source of funding for all infrastructure in the LENGA. The full range of infrastructure required will only be delivered if infrastructure is provided by a variety of funding sources.

The infrastructure items will be provided through a number of mechanisms including:

- Subdivision and development construction works by developers (including but not limited to local and collector roads and intersections, passive open space improvements and off-road trails);
- Development contributions (Community Infrastructure Levy and Development Infrastructure Levy as shown in this DCP);

- Utility service provider contributions; and
- Capital works projects by Council, state government agencies and community groups.

Decisions have been made about the type of infrastructure which will be funded by this DCP, and these decisions are in line with the two *Ministerial Directions for Development Contributions* (15 May 2003 and 25 January 2012).

This DCP document has been developed in accordance with the provisions of Part 3B of the *Planning and Environment Act* (1987) and the Victorian State Government *Development Contributions Guidelines* (2007).

1.3. THE LAKES ENTRANCE NORTHERN GROWTH AREA

The LENGA consists of land identified in Figure 1 below. The LENGA is generally bounded by:

- Myer Street and existing residential development to the west;
- Ostlers Road and Blairs Road to the north;
- Existing residential development and Colquhoun Road to the east; and
- Existing residential, industrial and public land to the south.

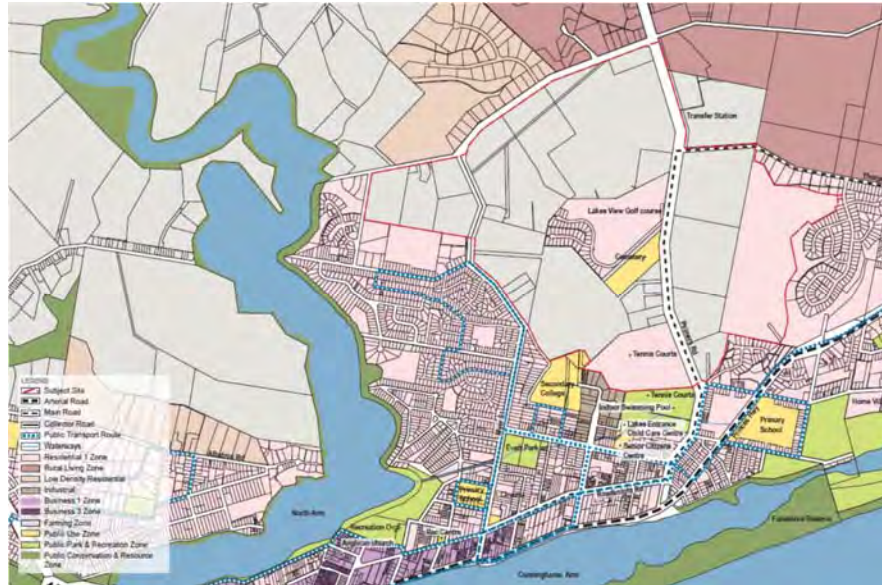
Amendment C112 to the East Gippsland Planning Scheme proposes to introduce an ODP for the LENGA, supported by this DCP and Native Vegetation Precinct Plan (**NVPP**). Following exhibition of the Amendment, discussions between Council and the Environment Protection Authority (EPA) resulted in the Amendment being split into two parts:

- Amendment C112 Part 1 - applies to land not within 500m of the Thorpes Lane Landfill (landfill); and
- Amendment C112 Part 2 - applies to land within 500m of the landfill.

Amendment C112 Part 1 has proceeded as part of the original amendment process, while Amendment C112 Part 2 has been postponed pending clarification of environmental issues regarding development within the landfill buffer.

This DCP applies to land within Part 1 of the LENGA only.

FIGURE 1 LAKES ENTRANCE NORTHERN GROWTH AREA



Source: Lakes Entrance Northern Growth Area Outline Development Plan Background Report, SMEC Urban, 2011.

1.4. MAIN CATCHMENT AREA

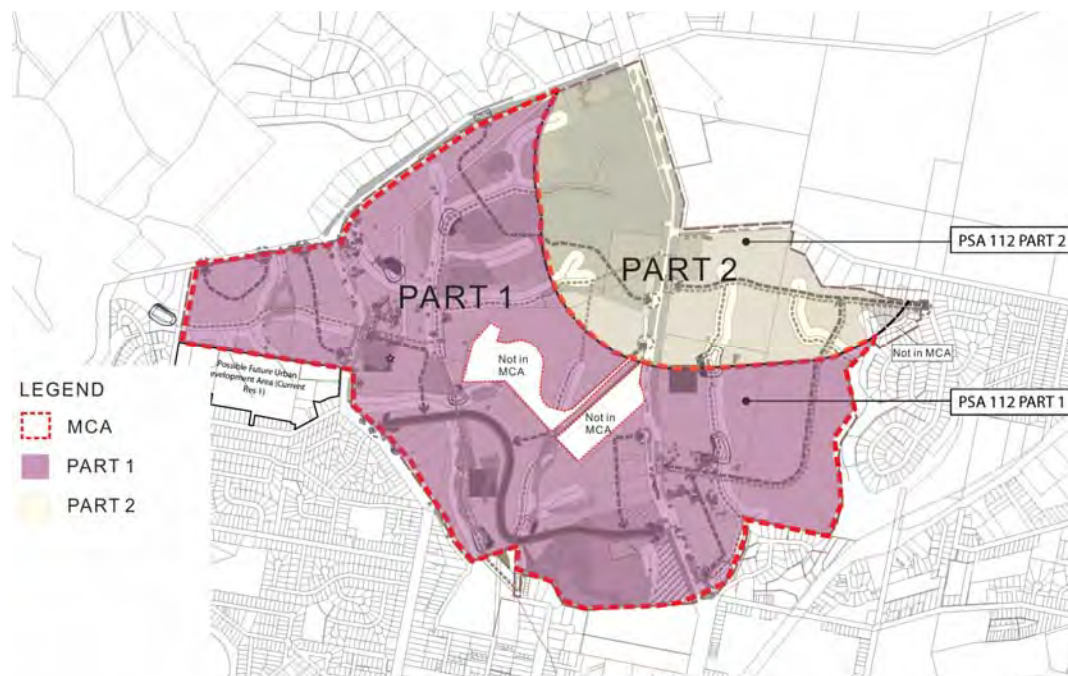
The Main Catchment Area (**MCA**) for the DCP accords with the boundaries of Part 1 of the Lenga, but excludes the following land parcels:

- Lakes Entrance Cemetery, Palmers Road; and
- Existing residential development (individual house lots) on Country Club Drive, Riviera Court and Lawson Drive.

A single levy amount is applied for all land in the MCA for all infrastructure items except drainage infrastructure, for which a variable levy is payable.

The MCA is shown in Figure 2.

FIGURE 2 MAIN CATCHMENT AREA



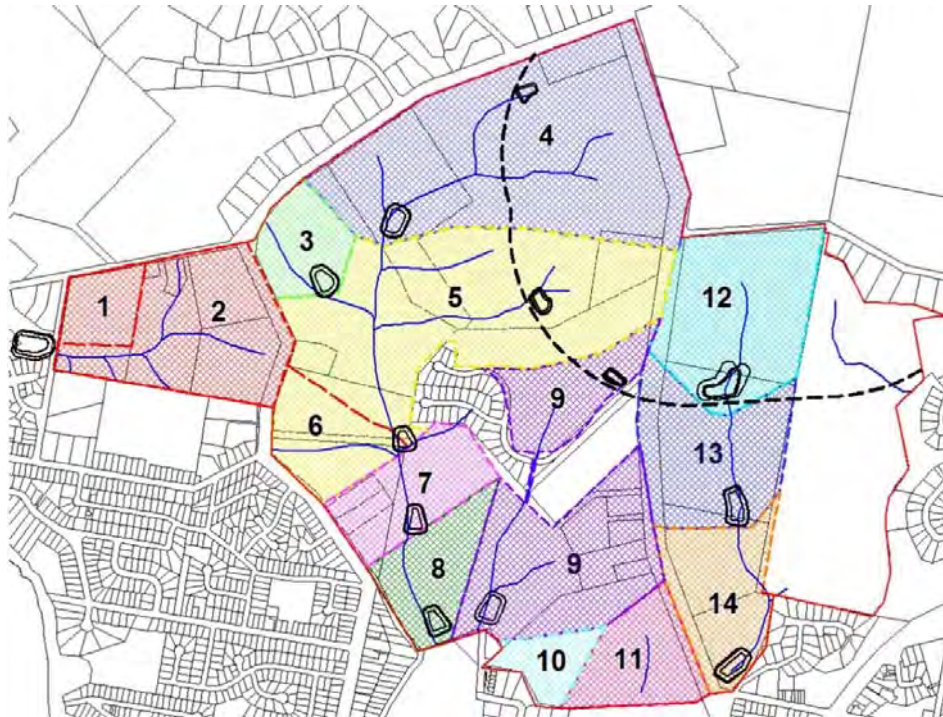
Source: SMEC Urban (2013), annotated by Urban Enterprise.

1.5. DRAINAGE CATCHMENTS

For the purposes of fairly apportioning Drainage Costs, the MCA is further divided into individual drainage catchments. The drainage catchments are shown in Figure 2.

Sub-catchments are marked 1 to 14. Sub-catchments 1 and 2 form Catchment A, sub-catchments 3-8 inclusive (Part 1 area only) form Catchment B, sub-catchment 9 (Part 1 only) forms Catchment C, sub-catchments 10 and 11 form Catchment D and sub-catchments 13 and 14 (Part 1 only) form Catchment E.

FIGURE 3 DRAINAGE CATCHMENTS



Source: Watertech catchment map, 2013.

1.6. DCP TIMEFRAME

For the purposes of the DCP a 30 year life has been adopted. This period commences from the date that the DCP is incorporated into the East Gippsland Planning Scheme.

1.7. EXCLUDED DEVELOPMENT

The development authorised by the planning permit which issues in application 177/2011/P provided the development is generally in accordance with the subdivision layout forming part of Permit Application 177/2011/P. Any development which is not generally in accordance with the subdivision layout forming part of permit application 177/2011/P is not exempt.

2. STATUTORY FRAMEWORK

2.1. PLANNING AND ENVIRONMENT ACT 1987

Part 3B of the *Planning and Environment Act 1987* outlines the statutory provisions relating to development contributions. In summary, Part 3B provides for, amongst other things:

- The inclusion of a DCP in the planning scheme, for the purpose of levying contributions for the provision of works, services and facilities (section 46I);
- The provision to impose either a development infrastructure levy or a community infrastructure levy (section 46J);
- The contents required of a DCP (Section 46K);
- The setting of limits in respect of a community infrastructure levy. In the case of the construction of a dwelling, the community levy must not exceed \$900 per dwelling (section 46L);
- The provision for the Minister to issue written directions relating to the preparation and content of a DCP (section 46M);
- The collection of a development infrastructure levy, by way of a condition on a planning permit either requiring the payment of a levy within a specified time, or entering into an agreement to pay the levy within a specified time (section 46N).

2.2. STATE PLANNING POLICY CONTEXT

The Minister's Direction dated 15 May 2003 outlines what may be funded with a development contribution levy, namely:

- Acquisition of land for roads, public transport corridors, drainage, public open space, community facilities;
- Construction of roads, including bicycle, footpaths and traffic management devices;
- Construction of public transport infrastructure, including fixed rail infrastructure, railway stations, bus stops and tram stops;
- Basic improvements to public open space, including earthworks, landscaping, fencing, seating and playground equipment;
- Drainage works;
- Buildings and works for maternal and child health centre, child care centre, kindergarten or a combination of these.

A second Minister's Direction was released on 25 January 2012, which specifies that: "a development contributions plan must not impose a development infrastructure levy or a community infrastructure levy in respect of the development of land for a non-government school."

GUIDELINES

The Victorian State Government has published a set of documents which make up the Development Contributions Guidelines (2007). The Development Contributions Guidelines (2007) are available through the Department of Transport, Planning and Local Infrastructure (DTPLI) website. These

documents provide guidance as to how DCPs are to be prepared and administered including the matters that DCPs are to consider.

2.3. LOCAL PLANNING CONTEXT

A number of strategic planning documents have been prepared by, or on behalf of Council that identify the need, standard and costs for the infrastructure items that are included in this DCP.

The strategic documents that have informed the provision of infrastructure items to be financed by the DCP are:

- *Lakes Entrance Northern Growth Area Outline Development Plan*, SMEC Urban (2013);
- *Lakes Entrance Northern Growth Area Outline Development Plan Background Study*, SMEC Urban (2011);
- *Lakes Entrance Northern Growth Area Social Impact Assessment*, East Gippsland Shire Council (2012);
- *Northern Growth Area - Lakes Entrance Development Concept Plan Hydrology*, Water Technology (2012 and revised 2013); and
- *Lakes Entrance Northern Growth Corridor Property Valuations*, Norling Property Valuers (2013).

This DCP has been prepared in close consultation with Council officers from relevant departments of East Gippsland Shire. Council officers have also provided strategic planning information and advice regarding costs for this DCP where appropriate.

3. NEED AND NEXUS

3.1. INTRODUCTION

Council has identified a need for each of the community and development infrastructure items that have been included in this DCP. Council has identified that each item is needed in order to provide for the wellbeing, health and safety of the future community.

The cost apportionment methodology adopted in this DCP relies on the nexus principle. The Main Catchment Area (MCA) for this DCP is deemed to have a nexus with an infrastructure item if the occupants of the MCA are likely to make use of the infrastructure item.

In order to fairly levy developers achieving varying densities while maintaining financial certainty for Council, one hectare of 'net developable area' equates to one demand unit for the Development Infrastructure Levy (DIL), and one dwelling equates to one demand unit for the Community Infrastructure Levy (CIL).

The land area within the MCA, projected dwelling yield and demand units are outlined in this section.

3.2. LAND BUDGET

Table 1 shows the budget of allocated land uses for the MCA. A detailed land budget by title boundary is shown in Appendix A, along with a map showing the location of each title within the MCA.

TABLE 1 LAND BUDGET SUMMARY

	ha
Total Area	178.76
Drainage Reserve	37.83
Drainage Basins (encumbered)	2.73
Powerline Easement	1.48
Environmental Conservation Area	5.07
Gross Developable Area	131.66
Active Open Space	0.00
Passive Open Space - unencumbered	2.31
Drainage basins (unencumbered)	0.65
Community facilities	0.47
Emergency Services	2.01
Net Developable Area	126.23
Residential	124.20
Activity Centres	2.03

Source: SMEC Urban, 2012. Note: figures are rounded to 2 decimal places.

Contributions are payable on the Net Developable Area of any given site. For the purpose of this DCP, the Net Developable Area of all residential land has been used to determine the development and population projections for the DCP.

Net Developable Area is defined as “land that can be converted to ‘urban purposes’. Urban purposes are those uses that are associated with the establishment of an urban community and will usually include all aspects of residential, commercial and public use.” (DPCD, *Development Contributions Guidelines*, p.44).

3.3. RESIDENTIAL DWELLING YIELD AND POPULATION

Table 2 shows the projected dwelling yield for each land parcel within Part 1 of the LENGA.

TABLE 2 PROJECTED RESIDENTIAL LOT YIELD

Density Category	Ha	Dwellings per ha	Dwellings
Conventional Density	105.91	9.5	1,006
Low Density	9.56	6.0	57
Medium Density	8.73	16.0	140
Residential Total	124.20	N/A	1,203

Source: SMEC Urban, 2013.

3.4. COMMERCIAL DEVELOPMENT

The Social Impact Assessment identifies the need for a Neighbourhood Activity Centre (NAC) to support the development of the LENGA. Table 3 shows the land area allocated to the NAC.

TABLE 3 ACTIVITY CENTRE PROJECTIONS

	Area (ha)
Neighbourhood Activity Centre	2.03
Activity Centres Total	2.03

Source: Social Impact Assessment, East Gippsland Shire, 2012; and Urban Enterprise, 2013.

3.5. DEMAND UNITS

In this DCP, one demand unit for the DIL equates to one Net Developable Hectare, and one demand unit for the CIL equates to one dwelling. The total number of demand units is shown in Table 4.

All development (residential and commercial) contributes to roads, drainage and planning items. The costs of these items are apportioned based on the ‘total’ demand units.

Only residential development contributes to open space, trails and community items. The costs of these items are apportioned based on the ‘residential’ demand units.

Land and development identified in Section 1.7 of this DCP is excluded from the payment of development contributions. As such, the estimated Net Developable Area (19.22ha) and dwelling yield (182 dwellings) associated with this land and development has been removed from the number of demand units for the purposes of calculating levies.

TABLE 4 DEMAND UNITS BY LAND USE

Levy	Development Infrastructure Levy (DIL)	Community Infrastructure Levy (CIL)
Demand Unit	NDA (ha)	Dwellings
Residential	104.98	1,021
Commercial	2.03	0
Total Demand Units	107.01	1,021

3.6. OTHER USES

Where residential land is subdivided into lots that are proposed to be used for a purpose other than a dwelling, a Development Contribution will be levied and must be paid, equivalent to the contribution which would otherwise have been paid if the land had been developed for dwellings. The whole of the land which is subdivided will be assessed on the basis of the demand units for dwellings at the rate of 9.5 dwellings per net developable area to be subdivided.

4. INFRASTRUCTURE ITEMS TO BE FUNDED BY THE DCP

4.1. DISTINCTION BETWEEN COMMUNITY AND DEVELOPMENT INFRASTRUCTURE

In accordance with the *Planning and Environment Act* (1987) and the Minister's Direction on Development Contributions, the DCP is required to make a distinction between "development" and "community" infrastructure.

Items of infrastructure of a community or social nature are to be classified as community infrastructure, whilst all other infrastructure required under the DCP is classified as development infrastructure.

Contributions relating to community infrastructure are to be made by the land owner at the time of building approval. Contributions relating to community infrastructure will be paid for at a "per-dwelling" rate. The *Planning and Environment Act* (1987) stipulates that the amount that may be contributed under a community infrastructure levy is no more than \$900 for each dwelling. If this cap is increased by the State Government in the future, Council may collect the un-capped Community Infrastructure Levy specified in this DCP up to the new cap amount.

Contributions relating to development infrastructure are to be made by developers at the time of subdivision. Contributions relating to development infrastructure will be paid at a per Net Developable Hectare rate in respect of the subdivision of residential land.

4.2. EXTERNAL DEMAND

The strategic planning undertaken to determine the requirement for infrastructure items within the DCP area has identified that demand for all infrastructure items is generated solely by the development of the Lenga. As such, the DCP includes no external usage allowance.

4.3. COMMUNITY INFRASTRUCTURE ITEMS

Strategic planning undertaken has identified a requirement for six (6) community infrastructure items, including a new multi-purpose community centre, a new active open space pavilion, and extensions and upgrades to the existing Aquadome, Youth Centre, Library and Senior Citizen's Centre.

The project number and description of these items have been summarised in Table 8 of this document.

4.4. DEVELOPMENT INFRASTRUCTURE ITEMS

Strategic planning undertaken by East Gippsland Shire Council and SMEC Urban has identified a requirement for 22 development infrastructure items. These development infrastructure items can be divided into five infrastructure categories, being:

- Land;
- Active Open Space;
- Drainage;

- Community Facilities; and
- Planning Costs.

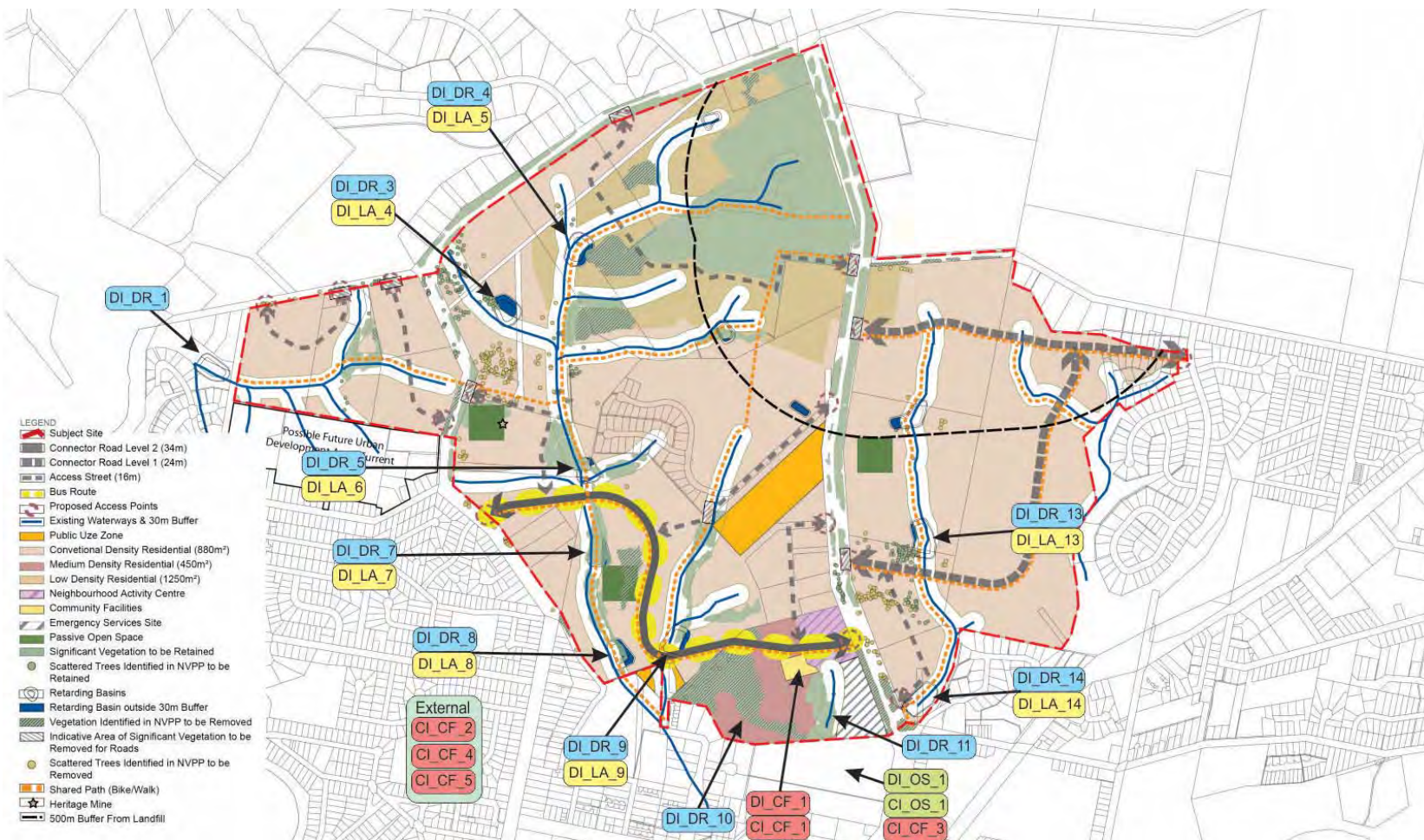
The project number and description of each item has been summarised in Table 8.

4.5. INFRASTRUCTURE LOCATION MAPS

The location of each infrastructure project is shown on the map in Figure 4.

Appendix B - DCP Infrastructure Project Sheets provides further detail on each of these projects in terms of the costing, apportionment and strategic justification of each item.

FIGURE 4 LOCATION OF INFRASTRUCTURE ITEMS



5. CALCULATION OF LEVIES

5.1. METHOD OF CALCULATING LEVIES

The DCP Infrastructure Project Sheets in Appendix B identify the levies assigned to each infrastructure item. The method of calculation is described in this section.

PROJECT COSTS

Each item in the DCP has a cost specified for either capital works or land. These costs are listed in Appendix B - DCP Infrastructure Project Sheets. The costs have been calculated as at July 2012 and will be indexed annually in accordance with the method specified in this DCP.

COST APPORTIONMENT METHODS

The cost of each of the infrastructure items has been apportioned based upon the likelihood that an item will be used by residents of the main catchment area of the DCP.

The method and justification for the cost apportionment that has been used for each infrastructure item is outlined in the DCP Infrastructure Project Sheets (Appendix B).

5.2. DEVELOPMENT CONTRIBUTION RATES PER DEMAND UNIT

A summary of the community and development contributions that are required to be made is provided in Table 5. These contributions are in July 2012 dollars. Table 5 will be indexed annually in accordance with the method specified in this DCP.

Although the cost of Community Infrastructure required to support development in the LENGA equates to approximately \$3,226 per dwelling, Council can only collect the capped amount under the Planning and Environment Act (currently \$900 per dwelling).

All developable land is subject to the Development Infrastructure Levy and Drainage Levy. Only residential dwellings are subject to the Community Infrastructure Levy.

It should be noted that the Development Infrastructure Levy in this DCP includes contributions towards drainage items as East Gippsland Shire Council is the drainage authority.

TABLE 5 LEVY SUMMARY

Levy	Types of development contributing	Infrastructure Cost	Demand Units	Levy
Development Infrastructure - Residential	Residential only	\$2,962,602	104.98	\$28,175.46
Development Infrastructure - Commercial	Commercial only	\$250,000	2.03	\$2,336.23
Drainage Levy Catchment A	All development	\$709,000	14.44	\$49,099.72
Drainage Levy Catchment B	All development	\$2,172,650	49.97	\$43,479.09
Drainage Levy Catchment C	All development	\$553,000	19.58	\$28,243.11
Drainage Levy Catchment D	All development	\$36,000	7.49	\$4,806.41
Drainage Levy Catchment E	All development	\$1,055,150	15.52	\$67,986.47
Community Infrastructure Levy	Residential only	\$3,294,000	1021.00	\$3,226.25
Community Infrastructure Levy (capped)	Residential only	\$3,294,000	1021.00	\$900.00

6. DCP ADMINISTRATION

6.1. INDEXATION OF LEVIES

Land values and construction costs listed in this DCP are in July 2012 dollars. They will be indexed annually according to the following specified method:

The Development Contribution for each demand unit must be adjusted as follows:

- In relation to the costs associated with all infrastructure items other than land, the cost must be adjusted and the contribution amounts recalculated according to the following method:
 - The capital costs of each infrastructure item must be adjusted by reference to the *Producer Price Indexes Australia, Victoria (Table 15 Selected Output of Division E - Construction industry, Building Construction Victoria (for buildings) and Road and Bridge Construction Victoria (for roads, bridges, trails, etc)* published by the ABS (Series 6427.0) or similar index;
 - The revised infrastructure costs and the adjustment of the contributions must be calculated as at 1 July in each year.
- In relation to the cost of land required under the DCP, the land value must be adjusted by adopting a revised land value for each parcel to be acquired based on the same valuation principles.
- The revised land value and the adjustment of the contributions must be calculated as of 1 July in each year.
- Within 14 days of the adjustments being made, the Responsible Authority must publish a notice of the amended contributions on its website.

If the Community Infrastructure Levy (CIL) cap (currently \$900 per dwelling) is ever increased, the Responsible Authority reserves the right to increase the CIL in this DCP to allow for cost escalation in accordance with the indexation methods in this DCP up to the new CIL cap. The higher levy will be collected from the date the new CIL cap is introduced.

6.2. VALUATION OF LAND

Valuations for land to be acquired under this DCP were provided by a qualified independent valuer (Norling Property Valuers). Land to be acquired was valued based on the 'before and after method' assuming that all usual services (reticulated water, sewerage, electricity, gas, drainage, telecommunications) will be available when the development proceeds.

6.3. COLLECTING AGENCY

East Gippsland Shire Council is the Collecting Agency pursuant to section 46K of the *Planning and Environment Act* (1987).

6.4. DEVELOPMENT AGENCY

East Gippsland Shire Council is the development agency for all infrastructure items pursuant to section 46K of the *Planning and Environment Act* (1987).

6.5. COLLECTION OF LEVIES

The Community Infrastructure levy will be collected by East Gippsland Shire Council at the Building Approval Stage in accordance with section 46(0) of the *Planning & Environment Act* (1987).

The Development Infrastructure Levy (including the Drainage Levy) will be collected by Council as follows:

- For the subdivision of residential land, before the issue of a Statement of Compliance under the Subdivision Act 1988 in respect of the subdivision creating any new residential lot;
- In relation to the development of commercial land, a planning permit condition must require the payment of the development contribution prior to the commencement of works unless there is an agreement with the Responsible Authority to secure the payment of the development contribution by some other means or other timeframe.

The Development Infrastructure Levy will be collected by the Responsible Authority (East Gippsland Shire Council) before the issue of a Statement of Compliance. A statement of compliance must not be issued until the development infrastructure levy is paid.

The Responsible Authority will impose conditions on a planning permit for subdivision or for the development of commercial land to collect the levies generally as follows:

FOR SUBDIVISIONS OF RESIDENTIAL LAND

A development infrastructure levy must be paid to the Responsible Authority in accordance with the provisions of the approved Development Contribution Plan for the land within the following specified time, namely after Certification of the relevant plan of subdivision but not more than 21 days prior to the issue of a Statement of Compliance in respect of that plan.

Where the subdivision is to be developed in stages the development infrastructure levy for that stage only may be paid to the Responsible Authority within the time specified provided that a Schedule of Development Contributions is submitted with each stage plan of subdivision. The schedule must show the amount of development contributions payable for each stage and paid in respect of prior stages to the satisfaction of the Responsible Authority.

FOR A PERMIT FOR THE DEVELOPMENT OF COMMERCIAL LAND

Unless some other arrangement has been agreed to by the Responsible Authority in a section 173 agreement, prior to the commencement of any development, the development infrastructure levy must be paid to the Responsible Authority in accordance with the provisions of the approved DCP for the land.

NO PERMIT REQUIRED FOR THE DEVELOPMENT OF LAND

Where no planning permit is required for the development of land, unless some other arrangement has been agreed to by the Responsible Authority in a section 173 agreement, prior to the commencement of any development, the development infrastructure levy must be paid to the Responsible Authority in accordance with the provisions of the approved DCP for the land.

6.6. ADMINISTRATIVE PROCEDURES

East Gippsland Shire Council will undertake ongoing accounting and review of this DCP in terms of:

- The relevance of projects listed in the DCP;
- The level of contributions collected;
- The construction costs of infrastructure projects;
- The land costs of infrastructure projects;
- Updating the DCP to reflect any relevant amendments to the *Planning and Environment Act* (1987), or any new Ministerial Directions relating to development contributions.

East Gippsland Shire Council will be required to undertake a formal review of this DCP every five years during the lifespan of the DCP.

Funds collected through development contributions will be held in a specific interest-bearing reserve account in accordance with the provisions of the *Planning and Environment Act* (1987). All monies held in this account will be used solely for the provision of infrastructure as itemised in this DCP.

If Council resolves not to proceed with any of the infrastructure projects listed in this Development Contribution Plan, the Responsible Authority will comply with section 46(Q) of the *Planning & Environment Act* (1987).

6.7. METHOD OF PROVISION

Responsibility for the delivery of infrastructure works as described in this DCP resides with East Gippsland Shire Council.

Infrastructure works may be provided by developers with a credit provided against their development contribution, subject to the agreement of the Responsible Authority. The process by which developers may receive this credit is outlined in Section 7 - Implementation Strategy.

7. IMPLEMENTATION STRATEGY

7.1. INTRODUCTION

This section provides further details of the implementation of the DCP following on from the Method of Provision outlined in Section 6, particularly with regards to the provision of Land and Works In-Kind.

7.2. PROVISION OF LAND AND WORKS IN-KIND

As outlined in Section 6, payment of development contributions is to be made in cash.

Alternatively, infrastructure works and land may be provided by developers with a credit provided against their development contribution, subject to the agreement of the Responsible Authority.

Council may enter into Section 173 Agreements with landowners to formalise details of infrastructure items to be provided in-kind. All development and community infrastructure can be provided in-kind under this agreement.

Where a developer intends to construct a building under this DCP in-kind, this must first be agreed to by the Responsible Authority. Any buildings constructed in-kind must be to the satisfaction of the Responsible Authority.

In determining whether to agree to the provision of works in lieu of cash the Responsible Authority will have regard to the following:

- Only works or land identified in the DCP can be provided in lieu of cash;
- Works must be provided to a standard that generally accords with the DCP unless agreed between the Responsible Authority and the developer;
- Detailed design must be approved by the Responsible Authority and generally accord with the standards outlined in the DCP unless agreed by the Responsible Authority and the developer;
- The construction of works must be completed to the satisfaction of the Responsible Authority.
- The impact on the DCP must be cost and revenue neutral.

Where the Responsible Authority agrees that works are to be provided by a developer in lieu of cash contributions:

- The credit for the works provided shall equal the value identified in the DCP taking into account the impact of indexation;
- The value of works provided in accordance with the principles outlined above, will be offset against the development contributions liable to be paid by the developer;
- The developer will not be required to make cash payments for contributions until the value of any credits for the provision of agreed works-in-kind are exhausted;
- Where credit for works-in-kind can't be offset against future levy payments, the developer shall be reimbursed by the Responsible Authority for any excess credit at the time of provision in the DCP;
- Where a developer chooses to bring forward works ahead of the scheduled time in the DCP, this can be done provided the impact on the DCP is cost and revenue neutral;

- Where a developer is in credit against their development contributions liability, this credit will be indexed annually in accordance with one of the methods described above.

7.3. LAND

Council wishes to obtain land required under the DCP, as an off-set against a developer's development contributions. As with works-in-kind, the provision of land would be agreed in an agreement between the developer and the Responsible Authority pursuant to Section 173 of the *Planning and Environment Act* (1987). The value of the off-set for providing land will equal the value shown in the DCP, subject to indexation.

7.4. INFRASTRUCTURE ALLOCATION AND STRATEGIC JUSTIFICATION

Table 6 provides a summary of the infrastructure items in the DCP, the determination of cost apportionment to the Main Catchment Area and the strategic justification for the item.

7.5. DETAILED CALCULATION OF INFRASTRUCTURE LEVIES

Table 7 provides details of the levy calculations for each infrastructure item.

TABLE 6 INFRASTRUCTURE ITEMS, COST APPORTIONMENT AND STRATEGIC JUSTIFICATION

Project ID	Project Summary	Capital Cost	Cost apportionment	Strategic Justification
DI_OS_1	Construction of Active Open Space Reserve	\$1,837,602	100% of the cost is apportioned to the LENGA based on demand generation.	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.
DI_P_1	Strategic Planning and Development Contributions	\$250,000	100% of the cost is apportioned to the LENGA based on demand generation.	Item required to ensure the orderly planning and development of the growth area and funding of shared infrastructure.
DI_CF_1	Construction of an Early Years Hub	\$875,000	100% of the cost is apportioned to the LENGA based on demand generation.	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.
CI_OS_1	Construction of an Active Open Space Pavilion	\$444,000	100% of the cost is apportioned to the LENGA based on demand generation.	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.
CI_CF_1	Multi-purpose Community Centre	\$1,875,000	100% of the cost is apportioned to the LENGA based on demand generation.	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.
CI_CF_2	Library extension	\$500,000	100% of the cost is apportioned to the LENGA based on demand generation.	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.
CI_CF_3	Aquadome extension	\$150,000	100% of the cost is apportioned to the LENGA based on demand generation.	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.
CI_CF_4	Youth Centre	\$75,000	100% of the cost is apportioned to the LENGA based on demand generation.	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.
CI_CF_5	Senior Citizens Centre	\$250,000	100% of the cost is apportioned to the LENGA based on demand generation.	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.
DI_DR_1	Drainage infrastructure - Catchments 1 and 2	\$709,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_DR_3	Drainage infrastructure - Catchment 3	\$445,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_LA_4	Land acquisition for drainage works - catchment 3	\$27,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_DR_4	Drainage infrastructure - Catchment 4	\$445,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_LA_5	Land acquisition for drainage works - catchment 4	\$12,150	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_DR_5	Drainage infrastructure - Catchments 5 and 6	\$403,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_LA_6	Land acquisition for drainage works - catchments 5 and 6	\$13,500	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).

Project ID	Project Summary	Capital Cost	Cost apportionment	Strategic Justification
DI_DR_7	Drainage infrastructure - Catchment 7	\$409,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_LA_7	Land acquisition for drainage works - catchment 7	\$3,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_DR_8	Drainage infrastructure - Catchment 8	\$407,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_LA_8	Land acquisition for drainage works - catchment 8	\$8,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_DR_9	Drainage infrastructure - Catchment 9	\$545,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_LA_9	Land acquisition for drainage works - catchment 9	\$8,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_DR_10	Drainage infrastructure - Catchment 10	\$18,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_DR_11	Drainage infrastructure - Catchment 11	\$18,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_DR_13	Drainage infrastructure - Catchment 13	\$583,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_LA_13	Land acquisition for drainage works - catchment 13	\$5,400	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_DR_14	Drainage infrastructure - Catchment 14	\$460,000	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
DI_LA_14	Land acquisition for drainage works - catchment 14	\$6,750	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).
TOTAL		\$10,782,402		

TABLE 7 LEVY CALCULATION BY INFRASTRUCTURE ITEM

Project ID	Project Summary	Cost to MCA	Levy
Development Infrastructure (DIL)			
DI_OS_1	Construction of Active Open Space Reserve	\$1,837,602	\$17,504.31
DI_P_1	Strategic Planning and Development Contributions	\$250,000	\$2,336.23
DI_CF_1	Construction of an Early Years Hub	\$875,000	\$8,334.92
Total Development Infrastructure		\$2,962,602	\$28,175.46
Drainage			
DI_DR_1	Drainage infrastructure - Catchments 1 and 2	\$709,000	\$49,099.72
Catchment A		\$709,000	\$49,099.72
DI_DR_3	Drainage infrastructure - Catchment 3	\$445,000	\$8,905.34
DI_LA_4	Land acquisition for drainage works - catchment 3	\$27,000	\$540.32
DI_DR_4	Drainage infrastructure - Catchment 4	\$445,000	\$8,905.34
DI_LA_5	Land acquisition for drainage works - catchment 4	\$12,150	\$243.15
DI_DR_5	Drainage infrastructure - Catchments 5 and 6	\$403,000	\$8,064.84
DI_LA_6	Land acquisition for drainage works - catchments 5 and 6	\$13,500	\$270.16
DI_DR_7	Drainage infrastructure - Catchment 7	\$409,000	\$8,184.91
DI_LA_7	Land acquisition for drainage works - catchment 7	\$3,000	\$60.04
DI_DR_8	Drainage infrastructure - Catchment 8	\$407,000	\$8,144.89
DI_LA_8	Land acquisition for drainage works - catchment 8	\$8,000	\$160.10
Catchment B		\$2,172,650	\$43,479.09
DI_DR_9	Drainage infrastructure - Catchment 9	\$545,000	\$27,834.53
DI_LA_9	Land acquisition for drainage works - catchment 9	\$8,000	\$408.58
Catchment C		\$553,000	\$28,243.11
DI_DR_10	Drainage infrastructure - Catchment 10	\$18,000	\$2,403.20
DI_DR_11	Drainage infrastructure - Catchment 11	\$18,000	\$2,403.20
Catchment D		\$36,000	\$4,806.41
DI_DR_13	Drainage infrastructure - Catchment 13	\$583,000	\$37,564.43
DI_LA_13	Land acquisition for drainage works - catchment 13	\$5,400	\$347.94
DI_DR_14	Drainage infrastructure - Catchment 14	\$460,000	\$29,639.18
DI_LA_14	Land acquisition for drainage works - catchment 14	\$6,750	\$434.92
Catchment E		\$1,055,150	\$67,986.47
Total Drainage Infrastructure		\$4,525,800	N/A
Community Facilities (CIL)			
CI_OS_1	Construction of an Active Open Space Pavilion	\$444,000	\$434.87
CI_CF_1	Multi-purpose Community Centre	\$1,875,000	\$1,836.43
CI_CF_2	Library extension	\$500,000	\$489.72

CI_CF_3	Aquadome extension	\$150,000	\$146.91
CI_CF_4	Youth Centre	\$75,000	\$73.46
CI_CF_5	Senior Citizens Centre	\$250,000	\$244.86
Total Community Infrastructure		\$3,294,000	\$3,226.25
TOTAL		\$10,782,402	\$3,226.25

7.6. FUNDS TO BE COLLECTED

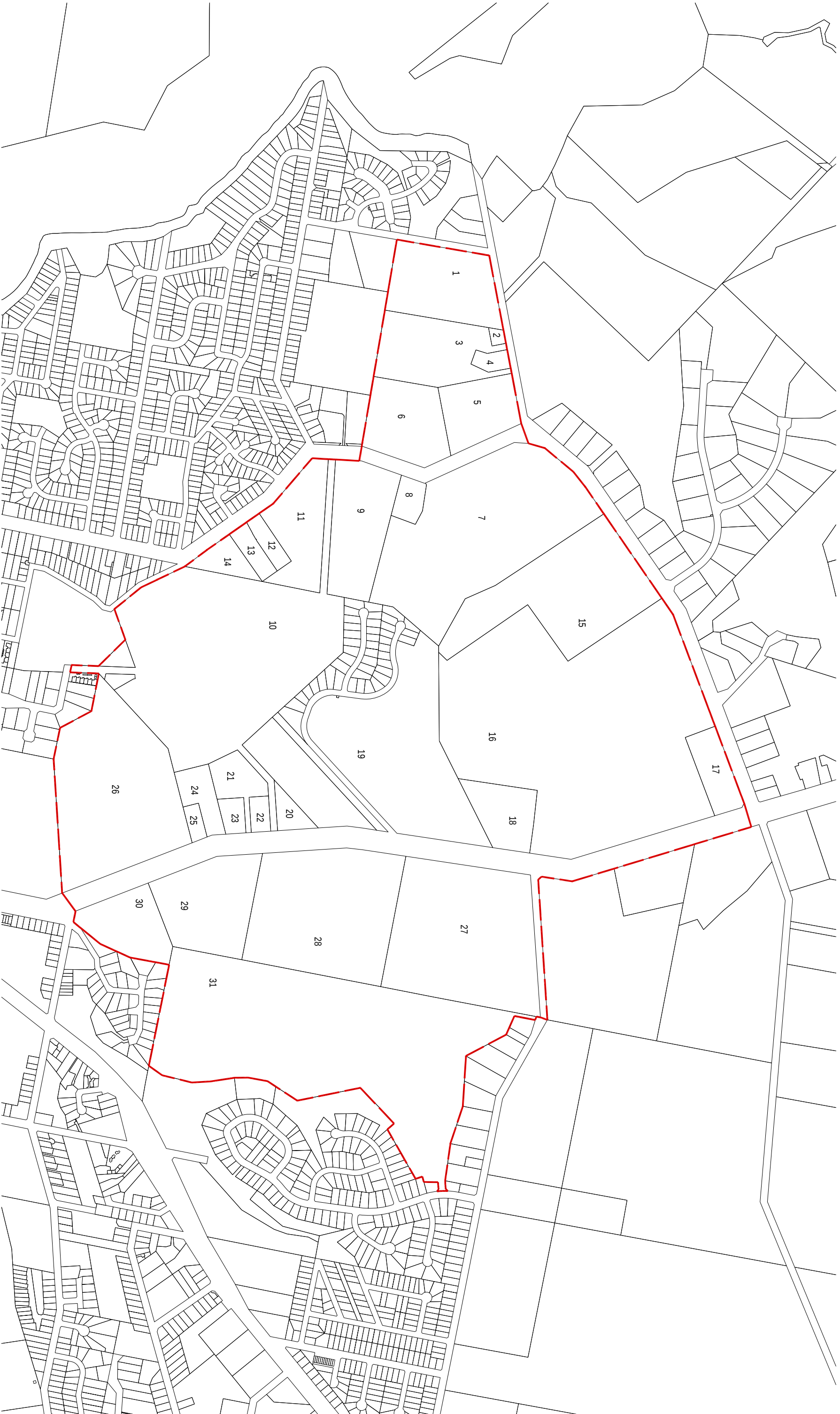
Table 8 shows the estimated funds to be collected through the various levies, and the amount which is to be funded by Council on behalf of existing development and to cover the Community Infrastructure Levy 'gap' (i.e. the amount per dwelling in excess of the \$900 cap).

TABLE 8 SUMMARY OF COSTS APPORTIONED AND FUNDS TO BE COLLECTED (JULY 2012 VALUES)

	Internal	External	Total
Development Infrastructure			
Total DIL Cost Apportioned	\$2,962,602	\$0	\$2,962,602
Total DIL Funds to be Collected under the DCP	\$2,962,602	\$0	\$2,962,602
Drainage Infrastructure			
Total Drainage Costs Apportioned	\$4,525,800	\$0	\$4,525,800
Total Drainage Funds to be collected under DCP	\$4,525,800	\$0	\$4,525,800
Community Infrastructure			
Total CIL Cost Apportioned	\$3,294,000	\$0	\$3,294,000
Total CIL Funds to be Collected under the DCP	\$918,900	\$0	\$918,900
All Infrastructure			
Total Cost Apportioned	\$10,782,402	\$0	\$10,782,402
Total Funds to be Collected under DCP	\$8,407,302	\$0	\$8,407,302

APPENDICES

Appendix A. DETAILED LAND BUDGET



Scale: 1:5000 @ A1

please note: This plan is based on preliminary information only and may be subject to change as a result of formal Council/Authority advice, detailed site investigations and confirmation by survey

Base Plan - Land Owners Lakes Entrance Northern Growth Area ODP

ref: 3410668P
date: 2 Aug 2012
rev.: A
drawn: DM
checked:

planning & urban design
melbourne - tel 9869 0800
© smec australia Pty Ltd
abn 47 065 475 149
trading as smec urban

Summary Land Use Budget (Part 1 only)

Property Number	Total Area (Hectares)	ENCUMBERED LAND				Gross Developable Area	COMMUNITY				UNENCUMBERED LAND OPEN SPACE		Total Net Developable Area (Ha)	OTHER LAND USES (retail/office/mixed use)	Total Net Residential Area (Ha)	CONVENTIONAL DENSITY (9.5 Dwellings/ha)		LOW DENSITY (6 Dwellings/ha)		MEDIUM DENSITY (16 Dwellings/ha)		TOTAL COMBINED		
		Drainage Reserve	Drainage Basin (in encumbered land)	Powerline Easement	Environmental Conservation Area		Community Facilities	Drainage Basin (in Unencumbered land)	Emergency Services	Schools	Active Open Space	Passive Open Space (Local parks & Linear reserves)				NRHa	Indicative Dwellings	NRHa	Indicative Dwellings	NRHa	Indicative Dwellings	NRHa	Indicative Dwellings/ NRHa	Indicative Dwellings
		Not Included in OS%	Not Included in OS%	Not Included in OS%	Not Included in OS%		Not Included in NDA	Not Included in OS%	Not Included in NDA	Not Included in NDA	Included in OS%	Included in OS%												
Property 1	6.06	1.55	0.00	0.00	0.00	4.51	0.00	0.00	0.00	0.00	0.00	0.00	4.51	0.00	4.51	4.51	42.88	0.00	0.00	0.00	0.00	4.51	9.50	42.88
Property 2	0.18	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.18	0.18	1.72	0.00	0.00	0.00	0.00	0.18	9.50	1.72
Property 3	5.57	2.75	0.00	0.00	0.14	2.69	0.00	0.00	0.00	0.00	0.00	0.00	2.69	0.00	2.69	2.69	25.54	0.00	0.00	0.00	0.00	2.69	9.50	25.54
Property 4	0.52	0.46	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.06	0.06	0.58	0.00	0.00	0.00	0.00	0.06	9.50	0.58
Property 5	3.60	0.04	0.00	0.00	0.02	3.53	0.00	0.00	0.00	0.00	0.00	0.00	3.53	0.00	3.53	3.53	33.51	0.00	0.00	0.00	0.00	3.53	9.50	33.51
Property 6	4.72	1.25	0.00	0.00	0.00	3.47	0.00	0.00	0.00	0.00	0.00	0.00	3.47	0.00	3.47	3.47	32.97	0.00	0.00	0.00	0.00	3.47	9.50	32.97
Property 7	19.18	5.72	0.11	0.84	0.20	12.31	0.00	0.20	0.00	0.00	0.00	0.00	12.11	0.00	12.11	11.33	107.62	0.79	4.71	0.00	0.00	12.11	9.27	112.33
Property 8	0.92	0.00	0.00	0.00	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.92	0.92	8.71	0.00	0.00	0.00	0.00	0.92	9.50	8.71
Property 9	5.90	0.72	0.20	0.00	1.39	3.59	0.00	0.06	0.00	0.00	0.00	0.26	3.27	0.00	3.27	3.27	31.04	0.00	0.00	0.00	0.00	3.27	9.50	31.04
Property 10	26.57	7.52	1.10	0.00	1.15	16.80	0.00	0.21	0.00	0.00	0.00	1.04	15.55	0.00	15.55	15.55	147.75	0.00	0.00	0.00	0.00	15.55	9.50	147.75
Property 11	4.49	1.92	0.10	0.00	0.00	2.47	0.00	0.00	0.00	0.00	0.00	0.00	2.47	0.00	2.47	2.47	23.49	0.00	0.00	0.00	0.00	2.47	9.50	23.49
Property 12	0.77	0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.77	0.77	7.36	0.00	0.00	0.00	0.00	0.77	9.50	7.36
Property 13	0.87	0.00	0.00	0.00	0.00	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.87	0.87	8.26	0.00	0.00	0.00	0.00	0.87	9.50	8.26
Property 14	1.26	0.00	0.00	0.00	0.00	1.26	0.00	0.00	0.00	0.00	0.00	0.00	1.26	0.00	1.26	1.26	11.98	0.00	0.00	0.00	0.00	1.26	9.50	11.98
Property 15	11.79	3.82	0.35	0.24	0.07	7.32	0.00	0.09	0.00	0.00	0.00	0.00	7.23	0.00	7.23	3.88	36.88	3.35	20.08	0.00	0.00	7.23	7.88	56.96
Property 16	14.35	4.43	0.00	0.39	1.55	7.97	0.00	0.00	0.00	0.00	0.00	0.00	7.97	0.00	7.97	2.54	24.17	5.43	32.56	0.00	0.00	7.97	7.12	56.73
Property 17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Property 18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Property 19	9.29	1.16	0.00	0.00	0.00	8.13	0.00	0.00	0.00	0.00	0.00	0.00	8.13	0.00	8.13	8.13	77.27	0.00	0.00	0.00	0.00	8.13	9.50	77.27
Property 20	0.83	0.00	0.00	0.00	0.02	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.81	0.81	7.69	0.00	0.00	0.00	0.00	0.81	9.50	7.69
Property 21	1.73	0.00	0.00	0.00	0.00	1.73	0.00	0.00	0.00	0.00	0.00	0.00	1.73	0.00	1.73	1.73	16.43	0.00	0.00	0.00	0.00	1.73	9.50	16.43
Property 22	0.55	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.55	0.55	5.20	0.00	0.00	0.00	0.00	0.55	9.50	5.20
Property 23	0.66	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.66	0.66	6.24	0.00	0.00	0.00	0.00	0.66	9.50	6.24
Property 24	1.53	0.00	0.00	0.00	0.00	1.53	0.00	0.00	0.00	0.00	0.00	0.00	1.53	0.00	1.53	1.53	14.49	0.00	0.00	0.00	0.00	1.53	9.50	14.49
Property 25	0.46	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.46	0.46	4.33	0.00	0.00	0.00	0.00	0.46	9.50	4.33
Property 26	15.08	1.32	0.00	0.00	0.52	13.24	0.47	0.00	2.01	0.00	0.00	0.00	10.76	2.03	8.73	0.00	0.00	0.00	0.00	8.73	139.64	8.73	16.00	139.64
Property 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Property 28	10.74	1.66	0.34	0.00	0.00	8.75	0.00	0.04	0.00	0.00	0.00	1.01	7.70	0.00	7.70	7.70	73.14	0.00	0.00	0.00	0.00	7.70	9.50	73.14
Property 29	6.59	1.09	0.09	0.00	0.00	5.41	0.00	0.00	0.00	0.00	0.00	0.00	5.41	0.00	5.41	5.41	51.36	0.00	0.00	0.00	0.00	5.41	9.50	51.36
Property 30	3.81	0.91	0.44	0.00	0.00	2.47	0.00	0.05	0.00	0.00	0.00	0.00	2.42	0.00	2.42	2.42	22.98	0.00	0.00	0.00	0.00	2.42	9.50	22.98
Property 31	20.75	1.53	0.00	0.00	0.00	19.22	0.00	0.00	0.00	0.00	0.00	0.00	19.22	0.00	19.22	19.22	182.56	0.00	0.00	0.00	0.00	19.22	9.50	182.56
Total	178.76	37.83	2.73	1.48	5.07	131.66	0.47	0.65	2.01	0.00	0.00	2.31	126.23	2.03	124.20	105.91	1006.14	9.56	57.35	8.73	139.64	124.19	9.69	1203.13

Note: Where native vegetation is shown on the outline development plan - the underlying land use zone has been calculated for the purpose of this land budg

Appendix B. DCP INFRASTRUCTURE PROJECT SHEETS

DI_OS_1	Construction of Active Open Space Reserve				
Description	Construction of a new active open space reserve adjacent to the Aquadome, including 2 square recreation fields and associated car parking and improvements. Land area approx. 2ha.				
	<table> <tr> <th>Infrastructure Type</th><th>Infrastructure Category</th></tr> <tr> <td>Development</td><td>Open Space</td></tr> </table>	Infrastructure Type	Infrastructure Category	Development	Open Space
Infrastructure Type	Infrastructure Category				
Development	Open Space				
Project Cost	\$1,837,602				
Indicative Provision Trigger	800 lots created or at Council discretion for early delivery.				
Strategic Justification	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.				
External Usage Discount	0%				
Project Cost to MCA	\$1,837,602				
Apportionment of Costs	100% of the cost is apportioned to the LENGA based on demand generation.				
Demand Units	104.98				
Levy Amount	\$17,504.31				
Costing Source	Council				

The Project Cost is expressed in July 2012 dollars.

Ref#

Version 2.1

5

FEBRUARY 2014



DI_P_1	Strategic Planning and Development Contributions	
Description	Strategic Planning and Development Contributions	
	Infrastructure Type	Infrastructure Category
	Development	Planning Costs
Project Cost	\$250,000	
Indicative Provision Trigger	Delivered.	
Strategic Justification	Item required to ensure the orderly planning and development of the growth area and funding of shared infrastructure.	
External Usage Discount	0%	
Project Cost to MCA	\$250,000	
Apportionment of Costs	100% of the cost is apportioned to the LENGA based on demand generation.	
Demand Units	107.01	
Levy Amount	\$2,336.23	
Costing Source	Council	

The Project Cost is expressed in July 2012 dollars.

Ref#

Version 2.1

6

FEBRUARY 2014

DI_CF_1	Construction of an Early Years Hub				
Description	Construction of an Early Years Hub for 110 children, including kindergarten, childcare, maternal and child health services and visiting services.				
	<table> <tr> <th>Infrastructure Type</th><th>Infrastructure Category</th></tr> <tr> <td>Development</td><td>Community facility</td></tr> </table>	Infrastructure Type	Infrastructure Category	Development	Community facility
Infrastructure Type	Infrastructure Category				
Development	Community facility				
Project Cost	\$875,000				
Indicative Provision Trigger	600 lots created or at Council discretion for early delivery.				
Strategic Justification	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.				
External Usage Discount	0%				
Project Cost to MCA	\$875,000				
Apportionment of Costs	100% of the cost is apportioned to the Lenga based on demand generation.				
Demand Units	104.98				
Levy Amount	\$8,334.92				
Costing Source	Council (SIA)				

The Project Cost is expressed in July 2012 dollars.

Ref#

Version 2.1

7

FEBRUARY 2014

CI_OS_1	Construction of an Active Open Space Pavilion	
Description	Construction of a Level 1 Pavilion to serve the Active Open Space reserve	
	Infrastructure Type	Infrastructure Category
	Community	Open Space
Project Cost	\$444,000	
Indicative Provision Trigger	800 lots created or at Council discretion for early delivery.	
Strategic Justification	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.	
External Usage Discount	0%	
Project Cost to MCA	\$444,000	
Apportionment of Costs	100% of the cost is apportioned to the LENGA based on demand generation.	
Demand Units	1,021.00	
Levy Amount	\$434.87	
Costing Source	Council	

The Project Cost is expressed in July 2012 dollars.

Ref#

Version 2.1

8

FEBRUARY 2014

CI_CF_2	Library extension	
Description	Construction of an extension to the existing library at Mechanics Street.	
	Infrastructure Type	Infrastructure Category
	Community	Community facility
Project Cost	\$500,000	
Indicative Provision Trigger	800 lots created or at Council discretion for early delivery.	
Strategic Justification	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.	
External Usage Discount	0%	
Project Cost to MCA	\$500,000	
Apportionment of Costs	100% of the cost is apportioned to the Lenga based on demand generation.	
Demand Units	1,021.00	
Levy Amount	\$489.72	
Costing Source	Council (SIA)	

The Project Cost is expressed in July 2012 dollars.

Ref#

Version 2.1

10

FEBRUARY 2014

CI_CF_3	Aquadome extension	
Description	Construction of an extension (20m2 internal and 40m2 external) to the existing Aquadome facility.	
	Infrastructure Type	Infrastructure Category
	Community	Community facility
Project Cost	\$150,000	
Indicative Provision Trigger	800 lots created or at Council discretion for early delivery.	
Strategic Justification	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.	
External Usage Discount	0%	
Project Cost to MCA	\$150,000	
Apportionment of Costs	100% of the cost is apportioned to the LENGA based on demand generation.	
Demand Units	1,021.00	
Levy Amount	\$146.91	
Costing Source	Council (SIA)	

The Project Cost is expressed in July 2012 dollars.

Ref#

Version 2.1

11

FEBRUARY 2014

CI_CF_4	Youth Centre	
Description	Redevelopment of existing Youth and Recreation Centre to includes spaces for support service provision for young people.	
	Infrastructure Type	Infrastructure Category
	Community	Community facility
Project Cost	\$75,000	
Indicative Provision Trigger	400 lots created or at Council discretion for early delivery.	
Strategic Justification	Item identified as required to meet the basic needs of the community in the Social Impact Assessment.	
External Usage Discount	0%	
Project Cost to MCA	\$75,000	
Apportionment of Costs	100% of the cost is apportioned to the Lenga based on demand generation.	
Demand Units	1,021.00	
Levy Amount	\$73.46	
Costing Source	Council (SIA)	

The Project Cost is expressed in July 2012 dollars.

Ref#
12

Version 2.1
FEBRUARY 2014

DI_DR_1	Drainage infrastructure - Catchments 1 and 2	
Description	Construction of a drainage works within the catchment, including retarding basins and wetlands.	
	Infrastructure Type	Infrastructure Category
	Development	Drainage
Project Cost	\$709,000	
Indicative Provision Trigger	Required to support subdivision in the catchment.	
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).	
External Usage Discount	0%	
Project Cost to MCA	\$709,000	
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	
Demand Units	14.44	
Levy Amount	\$49,099.72	
Costing Source	Watertech	

The Project Cost is expressed in July 2012 dollars.

Ref#
21

Version 2.1
FEBRUARY 2014

DI_DR_3	Drainage infrastructure - Catchment 3				
Description	Construction of a drainage works within the catchment, including retarding basins and wetlands.				
	<table> <tr> <th>Infrastructure Type</th><th>Infrastructure Category</th></tr> <tr> <td>Development</td><td>Drainage</td></tr> </table>	Infrastructure Type	Infrastructure Category	Development	Drainage
Infrastructure Type	Infrastructure Category				
Development	Drainage				
Project Cost	\$445,000				
Indicative Provision Trigger	Required to support subdivision in the catchment.				
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).				
External Usage Discount	0%				
Project Cost to MCA	\$445,000				
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.				
Demand Units	49.97				
Levy Amount	\$8,905.34				
Costing Source	Watertech				

The Project Cost is expressed in July 2012 dollars.

Ref#
23

Version 2.1
FEBRUARY 2014

DI_LA_4	Land acquisition for drainage works - catchment 3				
Description	Land acquisition (Property 7) for drainage works within the catchment. Total area required for drainage works: 3,100m2. Developable area to be acquired: 2,000m2 (encumbered area to be vested in Council at subdivision).				
	<table> <tr> <th>Infrastructure Type</th><th>Infrastructure Category</th></tr> <tr> <td>Development</td><td>Land</td></tr> </table>	Infrastructure Type	Infrastructure Category	Development	Land
Infrastructure Type	Infrastructure Category				
Development	Land				
Project Cost	\$27,000				
Indicative Provision Trigger	Required to support subdivision in the catchment.				
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).				
External Usage Discount	0%				
Project Cost to MCA	\$27,000				
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.				
Demand Units	49.97				
Levy Amount	\$540.32				
Costing Source	Norling Property Valuers				

The Project Cost is expressed in July 2012 dollars.

Ref#
24

Version 2.1
FEBRUARY 2014



DI_DR_4	Drainage infrastructure - Catchment 4	
Description	Construction of a drainage works within the catchment, including retarding basins and wetlands.	
	Infrastructure Type	Infrastructure Category
	Development	Drainage
Project Cost	\$445,000	
Indicative Provision Trigger	Required to support subdivision in the catchment.	
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).	
External Usage Discount	0%	
Project Cost to MCA	\$445,000	
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	
Demand Units	49.97	
Levy Amount	\$8,905.34	
Costing Source	Watertech	

The Project Cost is expressed in July 2012 dollars.

Ref#
25

Version 2.1
FEBRUARY 2014

DI_LA_5	Land acquisition for drainage works - catchment 4				
Description	Land acquisition (proeprty 15) for drainage works within the catchment. Total area required for drainage works: 4,400m2. Developable area to be acquired: 900m2 (encumbered area to be vested in Council at subdivision).				
	<table> <tr> <th>Infrastructure Type</th><th>Infrastructure Category</th></tr> <tr> <td>Development</td><td>Land</td></tr> </table>	Infrastructure Type	Infrastructure Category	Development	Land
Infrastructure Type	Infrastructure Category				
Development	Land				
Project Cost	\$12,150				
Indicative Provision Trigger	Required to support subdivision in the catchment.				
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).				
External Usage Discount	0%				
Project Cost to MCA	\$12,150				
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.				
Demand Units	49.97				
Levy Amount	\$243.15				
Costing Source	Norling Property Valuers				

The Project Cost is expressed in July 2012 dollars.

Ref#
26

Version 2.1
FEBRUARY 2014



DI_DR_5	Drainage infrastructure - Catchments 5 and 6	
Description	Construction of a drainage works within the catchment, including retarding basins and wetlands.	
	Infrastructure Type	Infrastructure Category
	Development	Drainage
Project Cost	\$403,000	
Indicative Provision Trigger	Required to support subdivision in the catchment.	
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).	
External Usage Discount	0%	
Project Cost to MCA	\$403,000	
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	
Demand Units	49.97	
Levy Amount	\$8,064.84	
Costing Source	Watertech	

The Project Cost is expressed in July 2012 dollars.

Ref#
27

Version 2.1
FEBRUARY 2014

DI_LA_6	Land acquisition for drainage works - catchments 5 and 6				
Description	Land acquisition (properties 9 and 10) for drainage works within the catchment. Total area required for drainage works: 2,400m2. Developable area to be acquired: 1,000m2 (encumbered area to be vested in Council at subdivision).				
	<table> <tr> <th>Infrastructure Type</th><th>Infrastructure Category</th></tr> <tr> <td>Development</td><td>Land</td></tr> </table>	Infrastructure Type	Infrastructure Category	Development	Land
Infrastructure Type	Infrastructure Category				
Development	Land				
Project Cost	\$13,500				
Indicative Provision Trigger	Required to support subdivision in the catchment.				
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).				
External Usage Discount	0%				
Project Cost to MCA	\$13,500				
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.				
Demand Units	49.97				
Levy Amount	\$270.16				
Costing Source	Norling Property Valuers				

The Project Cost is expressed in July 2012 dollars.

Ref#
28

Version 2.1
FEBRUARY 2014



DI_DR_7	Drainage infrastructure - Catchment 7	
Description	Construction of a drainage works within the catchment, including retarding basins and wetlands.	
	Infrastructure Type	Infrastructure Category
	Development	Drainage
Project Cost	\$409,000	
Indicative Provision Trigger	Required to support subdivision in the catchment.	
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).	
External Usage Discount	0%	
Project Cost to MCA	\$409,000	
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	
Demand Units	49.97	
Levy Amount	\$8,184.91	
Costing Source	Watertech	

The Project Cost is expressed in July 2012 dollars.

Ref#
29

Version 2.1
FEBRUARY 2014

DI_LA_7	Land acquisition for drainage works - catchment 7				
Description	Land acquisition (property 10) for drainage works within the catchment. Total area required for drainage works: 3,300m2. Developable area to be acquired: 300m2 (encumbered area to be vested in Council at subdivision).				
	<table> <tr> <th>Infrastructure Type</th><th>Infrastructure Category</th></tr> <tr> <td>Development</td><td>Land</td></tr> </table>	Infrastructure Type	Infrastructure Category	Development	Land
Infrastructure Type	Infrastructure Category				
Development	Land				
Project Cost	\$3,000				
Indicative Provision Trigger	Required to support subdivision in the catchment.				
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).				
External Usage Discount	0%				
Project Cost to MCA	\$3,000				
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.				
Demand Units	49.97				
Levy Amount	\$60.04				
Costing Source	Norling Property Valuers				

The Project Cost is expressed in July 2012 dollars.

DI_DR_8	Drainage infrastructure - Catchment 8	
Description	Construction of a drainage works within the catchment, including retarding basins and wetlands.	
	Infrastructure Type	Infrastructure Category
	Development	Drainage
Project Cost	\$407,000	
Indicative Provision Trigger	Required to support subdivision in the catchment.	
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).	
External Usage Discount	0%	
Project Cost to MCA	\$407,000	
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	
Demand Units	49.97	
Levy Amount	\$8,144.89	
Costing Source	Watertech	

The Project Cost is expressed in July 2012 dollars.

Ref#

Version 2.1

31

FEBRUARY 2014

DI_LA_8	Land acquisition for drainage works - catchment 8				
Description	Land acquisition (property 10) for drainage works within the catchment. Total area required for drainage works: 4,100m2. Developable area to be acquired: 800m2 (encumbered area to be vested in Council at subdivision).				
	<table> <tr> <th>Infrastructure Type</th><th>Infrastructure Category</th></tr> <tr> <td>Development</td><td>Land</td></tr> </table>	Infrastructure Type	Infrastructure Category	Development	Land
Infrastructure Type	Infrastructure Category				
Development	Land				
Project Cost	\$8,000				
Indicative Provision Trigger	Required to support subdivision in the catchment.				
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).				
External Usage Discount	0%				
Project Cost to MCA	\$8,000				
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.				
Demand Units	49.97				
Levy Amount	\$160.10				
Costing Source	Norling Property Valuers				

The Project Cost is expressed in July 2012 dollars.

Ref#
32

Version 2.1
FEBRUARY 2014



DI_DR_9	Drainage infrastructure - Catchment 9	
Description	Construction of a drainage works within the catchment, including retarding basins and wetlands.	
	Infrastructure Type	Infrastructure Category
	Development	Drainage
Project Cost	\$545,000	
Indicative Provision Trigger	Required to support subdivision in the catchment.	
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).	
External Usage Discount	0%	
Project Cost to MCA	\$545,000	
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	
Demand Units	19.58	
Levy Amount	\$27,834.53	
Costing Source	Watertech	

The Project Cost is expressed in July 2012 dollars.

Ref#
34

Version 2.1
FEBRUARY 2014

DI_LA_9	Land acquisition for drainage works - catchment 9				
Description	Land acquisition (property 10) for drainage works within the catchment. Total area required for drainage works: 5,000m2. Developable area to be acquired: 700m2 (encumbered area to be vested in Council at subdivision).				
	<table> <tr> <th>Infrastructure Type</th><th>Infrastructure Category</th></tr> <tr> <td>Development</td><td>Land</td></tr> </table>	Infrastructure Type	Infrastructure Category	Development	Land
Infrastructure Type	Infrastructure Category				
Development	Land				
Project Cost	\$8,000				
Indicative Provision Trigger	Required to support subdivision in the catchment.				
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).				
External Usage Discount	0%				
Project Cost to MCA	\$8,000				
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.				
Demand Units	19.58				
Levy Amount	\$408.58				
Costing Source	Norling Property Valuers				

The Project Cost is expressed in July 2012 dollars.

DI_DR_10	Drainage infrastructure - Catchment 10	
Description	Construction of a drainage works within the catchment, including a bio-retention basin.	
	Infrastructure Type	Infrastructure Category
	Development	Drainage
Project Cost	\$18,000	
Indicative Provision Trigger	Required to support subdivision in the catchment.	
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).	
External Usage Discount	0%	
Project Cost to MCA	\$18,000	
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	
Demand Units	7.49	
Levy Amount	\$2,403.20	
Costing Source	Watertech	

The Project Cost is expressed in July 2012 dollars.

Ref#

Version 2.1

37

FEBRUARY 2014

DI_DR_11	Drainage infrastructure - Catchment 11	
Description	Construction of a drainage works within the catchment, including a bio-retention basin.	
	Infrastructure Type	Infrastructure Category
	Development	Drainage
Project Cost	\$18,000	
Indicative Provision Trigger	Required to support subdivision in the catchment.	
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).	
External Usage Discount	0%	
Project Cost to MCA	\$18,000	
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	
Demand Units	7.49	
Levy Amount	\$2,403.20	
Costing Source	Watertech	

The Project Cost is expressed in July 2012 dollars.

Ref#
38

Version 2.1
FEBRUARY 2014

DI_DR_13	Drainage infrastructure - Catchment 13	
Description	Construction of a drainage works within the catchment, including retarding basins and wetlands.	
	Infrastructure Type	Infrastructure Category
	Development	Drainage
Project Cost	\$583,000	
Indicative Provision Trigger	Required to support subdivision in the catchment.	
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).	
External Usage Discount	0%	
Project Cost to MCA	\$583,000	
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	
Demand Units	15.52	
Levy Amount	\$37,564.43	
Costing Source	Watertech	

The Project Cost is expressed in July 2012 dollars.

Ref#
40

Version 2.1
FEBRUARY 2014

DI_LA_13	Land acquisition for drainage works - catchment 13	
Description	Land acquisition (property 28) for drainage works within the catchment. Total area required for drainage works: 3,800m2. Developable area to be acquired: 400m2 (encumbered area to be vested in Council at subdivision).	
	Infrastructure Type	Infrastructure Category
	Development	Land
Project Cost	\$5,400	
Indicative Provision Trigger	Required to support subdivision in the catchment.	
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).	
External Usage Discount	0%	
Project Cost to MCA	\$5,400	
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	
Demand Units	15.52	
Levy Amount	\$347.94	
Costing Source	Norling Property Valuers	

The Project Cost is expressed in July 2012 dollars.

Ref#
41

Version 2.1
FEBRUARY 2014



DI_DR_14	Drainage infrastructure - Catchment 14	
Description	Construction of a drainage works within the catchment, including retarding basins and wetlands.	
	Infrastructure Type	Infrastructure Category
	Development	Drainage
Project Cost	\$460,000	
Indicative Provision Trigger	Required to support subdivision in the catchment.	
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).	
External Usage Discount	0%	
Project Cost to MCA	\$460,000	
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	
Demand Units	15.52	
Levy Amount	\$29,639.18	
Costing Source	Watertech	

The Project Cost is expressed in July 2012 dollars.

Ref#
42

Version 2.1
FEBRUARY 2014

DI_LA_14	Land acquisition for drainage works - catchment 14	
Description	Land acquisition (property 30) for drainage works within the catchment. Total area required for drainage works: 4,950m2. Developable area to be acquired: 500m2 (encumbered area to be vested in Council at subdivision).	
	Infrastructure Type	Infrastructure Category
	Development	Land
Project Cost	\$6,750	
Indicative Provision Trigger	Required to support subdivision in the catchment.	
Strategic Justification	Item identified as required to meet the drainage needs at part of the overall drainage strategy (Watertech, 2013).	
External Usage Discount	0%	
Project Cost to MCA	\$6,750	
Apportionment of Costs	100% of the drainage costs are apportioned to the relevant catchment to support development within that catchment.	
Demand Units	15.52	
Levy Amount	\$434.92	
Costing Source	Norling Property Valuers	

The Project Cost is expressed in July 2012 dollars.

Ref#
43

Version 2.1
FEBRUARY 2014

