



Central Coast Council

**ORDINARY MEETING**

**ENCLOSURES**

**Monday, 11 March, 2019**

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**Central Coast Council**  
Enclosures to the  
**Ordinary Meeting**  
to be held in the Council Chamber,  
2 Hely Street, Wyong  
on Monday, 11 March 2019,  
Commencing at 6.30pm

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Central  
Coast  
Council

February 2019



# GREATER LAKE MUNMORAH



## STRUCTURE PLAN

**DRAFT**

## Structure Plan - Greater Lake Munmorah

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# Structure Plan - Greater Lake Munmorah

## Executive Summary

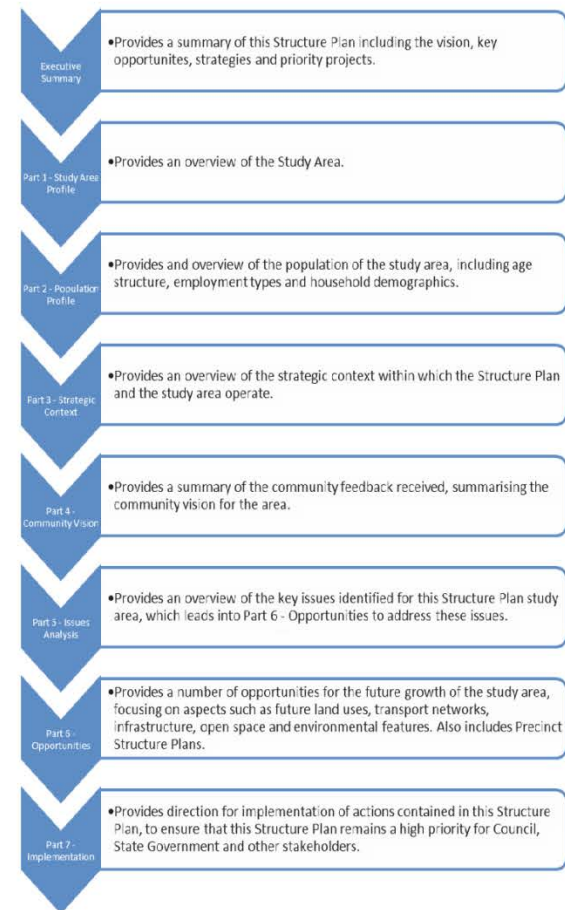
### Executive Summary

#### Overview

The Greater Lake Munmorah Structure Plan establishes a framework to guide the future growth of the study area from approximately 8,500 people to approximately 13,500 people. It is guided by a vision that aims to support sustainable growth and has been developed through significant analysis and stakeholder engagement.

#### Structure Plan Components

The Greater Lake Munmorah Structure Plan is divided into five separate parts, each with a distinct focus:



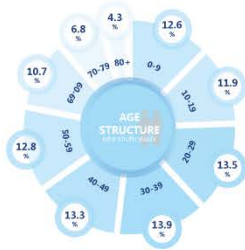
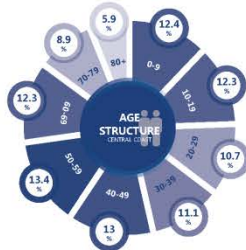
# Structure Plan - Greater Lake Munmorah

## Executive Summary

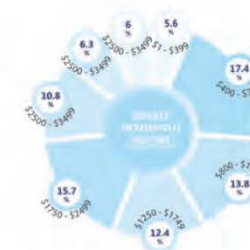
### A profile of Greater Lake Munmorah

Parts 2 and 3 discusses the profile of the study area and the study areas population, respectively. The population profile includes age structure, employment types and household demographics.

### Greater Lake Munmorah



Category	Lake Munmorah (%)	Central Coast (%)	New South Wales (%)
BACHELOR OR HIGHER DEGREE	7.1%	14%	23.4%
ADVANCED EMPLOYER OR OFFICER	7.2%	9.2%	8.9%
VOCATIONAL QUALIFICATIONS	27.4%	24.4%	18.1%
NO QUALIFICATION	46.8%	41.8%	39.1%



# Structure Plan - Greater Lake Munmorah

## Executive Summary

### Community Vision

Provides a summary of the community feedback received, summarising the community vision for the area.

**TO BE COMPLETED AFTER PUBLIC EXHIBITION PERIOD**

**Examples:**

"Maintain the strong connection to the natural landscape of the bushland and Lakes."

"Improve transport and pedestrian/cyclist connections"

"Provide housing choice for different life stages"

"Protect the natural environment for current and future generations to enjoy"

## Northern Lakes, San Remo-Budgewoi & Toukley



**Suburbs**

Chain Valley Bay, Doyalson North, Frazer Park, Freemans, Gwandalan, Kingfisher Shores, Lake Munmorah, Mannering Park, Point Wolstoncroft, Summerland Point, Wybung, Blue Haven, Budgewoi, Budgewoi Peninsula, Buff Point, Colongra, Doyalson, Halekulani, San Remo, Canton Beach, Norah Head, Norville and Toukley.



centralcoast.nsw.gov.au



Figure 1: Community Strategic Plan results for the study area



## Structure Plan - Greater Lake Munmorah

## Executive Summary

### Strengths and weaknesses - Setting the scene for Greater Lake Munmorah

Provides an overview of the key strengths and weaknesses identified for this Structure Plan study area, which leads into Part 6 - Opportunities to address these issues.

#### ENVIRONMENTAL

- No and/or limited visual connections to the lake foreshore.
- Cluttered visual landscape which can interfere with the natural beauty of the area.
- Presence of Ecologically Endangered Communities and threatened species.
- Requirement to define a biodiversity corridor.

#### HAZARDS

- Significant bushfire hazard.
- Significant flood hazard.
- Dispersive soils are prevalent in this area, particularly south of Karignan Creek
- Necessity to prepare for climate change impacts.

#### SERVICING

- Sequencing of development – Development out-of-sync with NWSSP staging can add significant cost.
- Funding – Who pays for lead-in infrastructure?
- Sewer Servicing – Capacity constraints
- Sewerage Treatment Plant – Potential odour issues for certain precincts
- Easements – Significant TransGrid transmission line easement

#### TRANSPORT

- Pacific Highway cuts the study area into Northern and Southern areas.
- Carters Road Intersection issues during peak school times.
- Limited access to public transport services.
- Limited physical connections to Lake Macquarie and Lake Munmorah foreshore.
- Discontinuous walking and cycling networks.
- Limited physical connections to Lake Foreshore.
- Discontinuous walking and cycling networks.

#### RECREATION

- Limited physical connections to Lake Foreshore.
- Discontinuous walking and cycling networks.
- Limited pedestrian access to playground facilities.
- Limited access to sportsground facilities.

#### COMMUNITY

- Many residents are isolated from services and facilities
- Ageing population with areas of socio-economic disadvantage
- Existing Community Facilities limited in use and functionality.

#### ECONOMY

- No single Town Centre to act as a community hub
- Tired Neighbourhood Centres that lack aesthetic amenity and character
- Limited access to local employment

#### LAND USE CONFLICTS

- Underground mining, resource land and surface development restrictions.
- Current rezoning proposals, out-of-sync with NWSSP development timeframes.
- Large area of land zoned RU6 Transition causing uncertainty around future land uses.

#### CHARACTER

- No defined character for this area due to haphazard development patterns

#### PRECINCTS

- Further refinement of the NWSSP precincts, and staging of development, is required.



## Structure Plan - Greater Lake Munmorah

## Executive Summary

### Opportunities

Provides a number of opportunities for the future growth of the study area, focusing on aspects such as future land uses, transport networks, infrastructure, open space and environmental features. The following tables present a consolidated action plan for implementing the Urban Design Framework, incorporating the objectives and actions discussed in the preceding chapters. The following timelines apply to the priorities:

Short : 1-2 years

Medium : 3-5 years

Long : 6 years plus

On-going : continual / as needs arise

Issue	Project	Responsibility	Timing
<b>Environmental</b>	Review land zoning within the biodiversity corridor, as part of precinct-based rezoning investigations.	Council	Ongoing
	Pursue installation of biodiversity crossing structures and exclusion fencing across the Pacific Highway corridor, to reduce the barrier to fauna crossing the Pacific Highway, whilst reducing road-kill incidents.	Council / RMS	Medium
	Pursue a program of street tree plantings along the wider parts of the Pacific Highway median strip, which will assist in safe crossing opportunities for fauna.	Council / RMS	Medium
<b>Hazards</b>	Implement a street tree planting program	Council	Short
	Ensure that Water Sensitive Urban Design is integrated into new developments.	Council	Ongoing
	Overland flow paths to be retained wherever possible. Piping of flows is generally not supported.	Council	Ongoing
<b>Servicing</b>	Review the Development Servicing Plan for the study area.	Council	Short
	Prepare a hydraulic sewer model for sewer catchments to ensure a holistic capacity review and refine the Development Servicing Plan.	Council	Short-term
	Ensure that rezoning applications are not approved within the odour contour area, without a Voluntary Planning Agreement (or similar) committing to mitigating odours for future residents.	Council	Ongoing
	Ensure that no inappropriate development is permitted within the transmission line easements.	Council	Ongoing
<b>Transport</b>	Provide a connector road between Tall Timbers Road and Carters Road to service development Precinct 8.	Developer	Medium
	Provide a connector road between Rutleys Road and Tall Timbers Road to service the employment lands precinct.	Developer	Long
	Provide a connector road between Chain Valley Bay Road and Carters Road, subject to the approval of the rezoning of land owned by Darkinjung Local Aboriginal Lands Council.	Developer	Long
	Provide a signalised intersection, including pedestrian crossing, at the junction of Chain Valley Bay Road and Pacific Highway to service Precinct 7 and the proposed Darkinjung Local Aboriginal Lands Council development.	Developer / RMS	Long
	Provide a signalised intersection, including pedestrian crossing, along the Pacific Highway Corridor in the vicinity of the junction of Acacia Road and the new development Precinct 8.	Developer / RMS	Long
	Incorporate the necessary portion of funds required to construct these roads into a Section 94 Development Contributions Plan (if necessary).	Council	Medium
	Prepare a package of proposed improvements for the Pacific Highway corridor, for lodgement with the RMS: <ul style="list-style-type: none"> <li>Improve lighting along the Pacific Highway between Carters Road and Tall Timbers Road to ensure that the safety and usability is improved for the community.</li> <li>Reduce maximum speed limit to 60km/hour at a minimum.</li> <li>Implement a program of street tree plantings, including median plantings, to provide shaded spaces and a small degree of buffering to the Pacific Highway for shared pathway users.</li> <li>Incorporate bus transport infrastructure along the Pacific Highway corridor.</li> </ul>	Council / RMS	Long
	Council to encourage access to public transport services by ensuring that: <ul style="list-style-type: none"> <li>Housing and subdivision designs are to integrate with land use, transport and access, both pedestrian and vehicular.</li> <li>Walking and cycling networks are aligned with public transport routes to improve accessibility to public transport.</li> <li>Bus stops are provided in locations as nominated by the relevant authority.</li> <li>A bus interchange is provided as part of the Lake Munmorah Local Centre expansion.</li> </ul>	Council	Ongoing

## Structure Plan - Greater Lake Munmorah

## Executive Summary

Issue	Project	Responsibility	Timing	
<b>Recreation</b>	Ensure that: <ul style="list-style-type: none"> <li>Walking and cycling networks are incorporated into subdivision design and constructed by developers as part of subdivision works.</li> <li>Walking and cycling networks must be designed to ensure safe, amenable and convenient pedestrian and cycle connections.</li> <li>Footpath and cycle path widths are increased in areas expecting higher usage such as near schools, community centres, neighbourhood centres, local centres, public transport interchanges and bus stops.</li> <li>Pedestrian and cycle crossings are provided at all relevant intersections and along key desire lines.</li> </ul>	Council	Ongoing	
	Require precinct based rezonings to incorporate playground/park space into concept plans.	Council	Ongoing	
	Embellish Colongra Bay Reserve playground – either replace old facilities or incorporate new facilities.	Council	Short	
	Liaise with NPWS to deliver a play-space at the Elizabeth Bay Drive reserve within Munmorah State Conservation Area.	Council	Medium	
	Investigate options for the reserve at the end of Greenacre Avenue to encourage more public use.	Council	Medium	
	Continue to coordinate the delivery of the play-space adjacent to Gumbuyah Reserve on Tall Timbers Road.	Council	Short	
	Coordinate the delivery of a new sports ground at Tall Timbers Road (north of Gumbuyah Oval) as follows: <ul style="list-style-type: none"> <li>Site investigations to determine suitability for future Sports Ground.</li> <li>Undertake Planning Proposal to amend Central Coast LEP to rezone site to RE1 Public Open Space, and add site to Land Reservation Acquisition map.</li> <li>Purchase property.</li> <li>Construct sports ground complex.</li> </ul>	Council Council Council Council	Short Medium Long Long	
	Coordinate the embellishment of the basketball and tennis courts at Acacia Avenue, Lake Munmorah.	Council	Long	
	<b>Community</b>	Upgrade Lake Munmorah Colongra Bay Hall in accordance with the recommendation of the North Wyong Shire Community Facilities Plan 2015.	Council	Short
		Investigate a suitable location for the Multi-purpose community facility in proximity to the Lake Munmorah Local Centre.	Council	Short
<b>Economy</b>	Liaise with owners of the Lake Munmorah Local Centre to discuss options for developing the adjacent vacant land as a Town Centre to cater for the growing population.	Council	Short	
	Prepare a Master Plan for the Lake Munmorah Local Centre, in consultation with the landowner	Council	Medium	
	Prepare a Public Domain Plan for the Lake Munmorah Neighbourhood Centre	Council	Short	
	Prepare a Public Domain Plan for the Chain Valley Bay Neighbourhood Centre	Council	Short	
	Rezoning of land for employment uses to be identified as long term, in order to ensure take-up of the WEZ lands is not discouraged.	Council	Long term	
	Employment land uses with a frontage to the Pacific Highway should incorporate significant levels of landscaping, locate parking to the rear of the building and provide screening of any loading or service areas.	Council	Short	
<b>Land Use Conflicts</b>	Implement a staged program of Planning Proposals to ensure the study area is developed in a responsible and sustainable manner.	Council	Ongoing	
<b>Character</b>	Prepare chapters of the future Central Coast DCP for the future development precincts, as necessary.	Council	Ongoing	
<b>Precincts</b>	Implement a staged program of Planning Proposals to ensure the study area is developed in a responsible and sustainable manner.	Council	Ongoing	

# Structure Plan - Greater Lake Munmorah

## Executive Summary

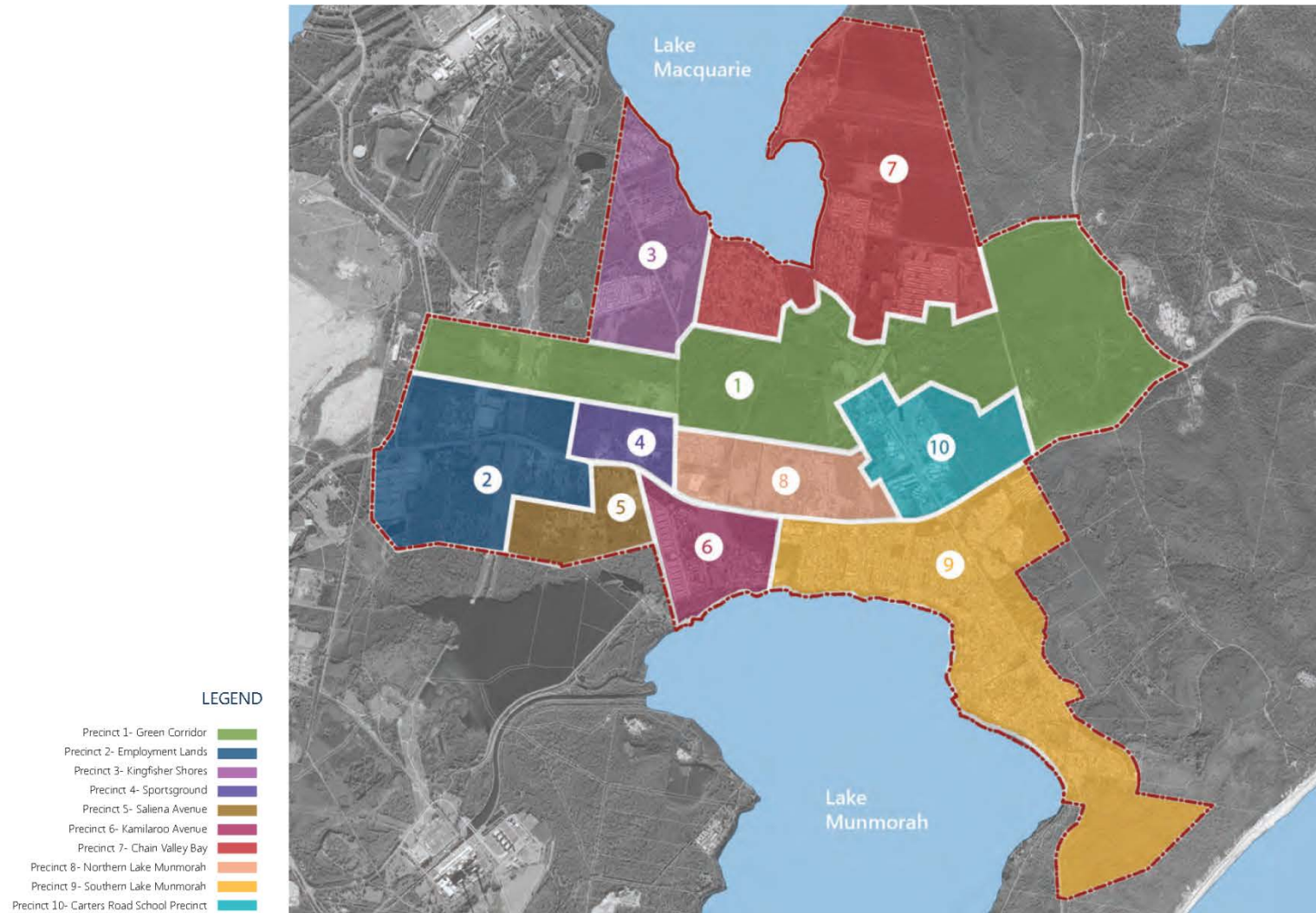


Figure 2: Study Area Precincts

Study Area Boundary

Structure Plan - Greater Lake Munmorah

Executive Summary

- LEGEND**
- Residential Land- Proposed Low Density
  - Residential Land- Proposed Low/ Medium Density
  - Residential Land- Managed Conservation Site- Proposed
  - Commercial Land- Existing
  - Commercial Land- Proposed
  - Employment Land- Proposed
  - Education Land- Existing
  - Recreation Land: Sports Ground- Existing
  - Recreation Land: Sports Ground- Proposed
  - Environmental Land (Biodiversity Corridor)
  - Environmental Land (Proposed Green Corridor/ Drainage Corridor)
  - Recreation Land: Passive Recreation- Proposed
  - Recreation Land: Passive Recreation- Existing
  - Major Road (Pacific Highway)- Existing
  - Main Road (Higher Traffic Volume)- Existing
  - Minor Road (High Traffic Volume)- Existing
  - Main Road (Higher Traffic Volume)- Proposed
  - Minor Road (High Traffic Volume)- Proposed
  - Shared Pathways- Existing
  - Shared Pathways- Proposed (by Structure Plan)
  - Signalised Intersection - Existing
  - Signalised Intersection - Proposed
  - Roundabout- Existing
  - Roundabout/ Other Intersection Treatment- Proposed
  - Recreation Land: Play Space- Existing
  - Recreation Land: Play Space- Proposed
  - Community Infrastructure- Existing
  - Community Infrastructure- Proposed/ Opportunity
  - Swimming Area
  - Boat Ramp (Council)- Existing
  - Jetty (Council)

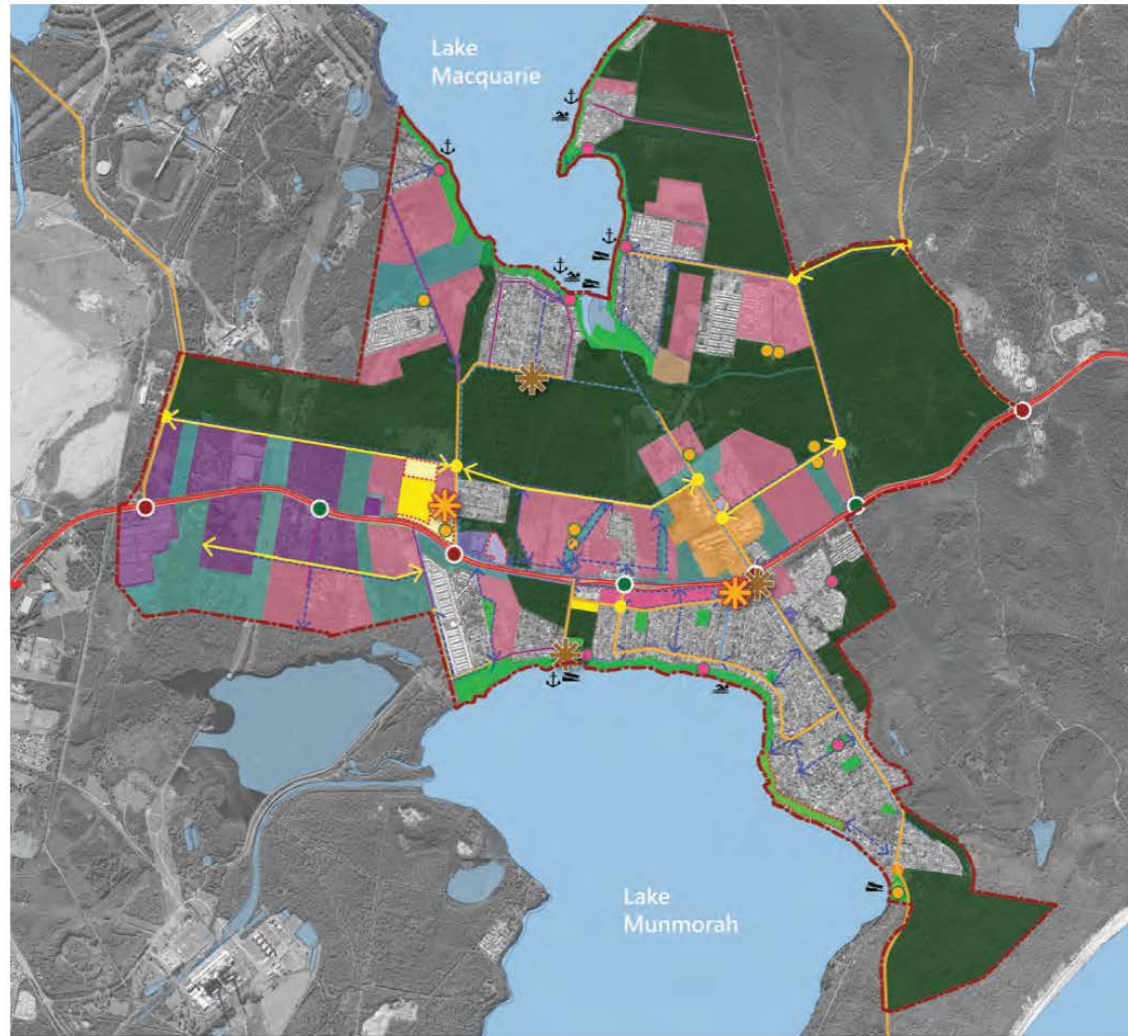


Figure 3: Composite Structure Plan

Study Area Boundary

## Structure Plan - Greater Lake Munmorah

## Executive Summary

### Implementation

#### Action Plan

Once endorsed by the Council, the Implementation Plan for the Greater Lake Munmorah Structure Plan will be activated. The Implementation Plan identifies the key actions arising from the plan, as well as the organisation with the main responsibility for the action. The Implementation Plan also identifies a staged approach for the key actions, to ensure that project funding and resources can be appropriately managed. Maintaining a strict approach to implementing the actions of this plan will ensure that the Greater Lake Munmorah area remains a priority for the Central Coast Council organisation.

#### Precinct Planning

This Structure Plan seeks to inform the community of the future direction and vision for the study area over the next 30 years. It is a high level framework that is not intended to resolve all issues associated with the study area. Current planning controls such as zoning, minimum lot sizes and building heights constrain the proposed development identified in this Structure Plan and will need to be amended to enable development. This Structure Plan does not amend these controls. Instead, it is anticipated that the outcomes of this Structure Plan will be implemented through local planning proposals, prepared by land owners to amend the zoning and/or planning controls that apply to their land.

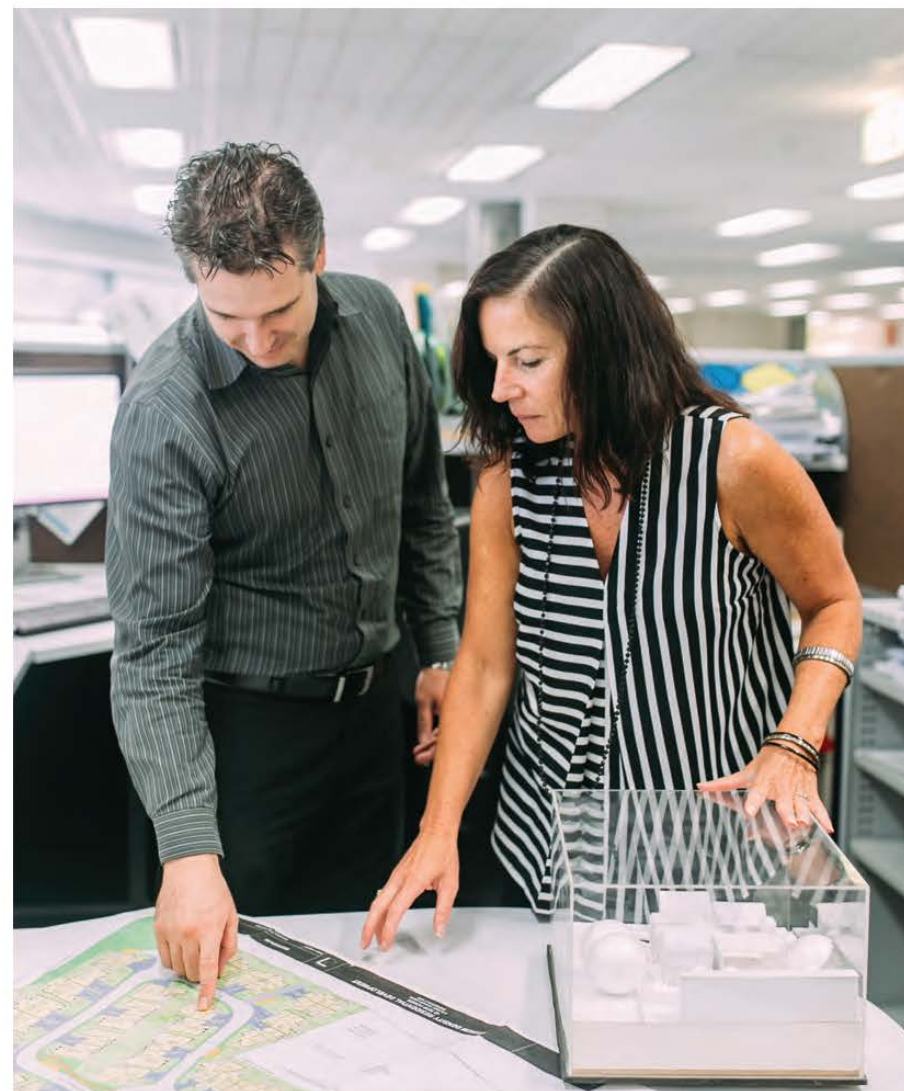
The parts of the study area identified as potential development precincts within the NWSSP have been further divided into smaller precincts, based on land ownership, topographic features and location. Development proponents will be required to group rezoning proposals and subdivision applications together by the relevant refined precinct. It is anticipated that this refinement of precincts will enable more positive development outcomes for the area, enabling Council to more holistically assess development proposals, rather than on a piecemeal basis which may have eventuated otherwise.

A number of technical studies will be required, relating to traffic and transport, flooding and drainage, contamination and reme-

diation, hazards and risk, open space, social infrastructure, ecology, odour, infrastructure servicing and so on. The next steps will involve drafting new planning controls in response to the vision in the Land Use and Infrastructure Strategy and the outcome of the technical studies. Planning proposals will need to be generally consistent with this Structure Plan. However, it is recognised that additional studies undertaken may require this Structure plan to be varied. For example, a review of over-land flow of stormwater may require larger or smaller drainage corridors than identified in this Structure Plan. This is acceptable provided it is justified.

#### Supporting Documents

A development control plan chapter, masterplans and a public domain strategy will also be developed to guide the future development of the study area.



## Structure Plan - Greater Lake Munmorah

## Executive Summary

### Acronyms

ABS	Australian Bureau of Statistics
APZ	Asset Protection Zone
CBD	Central Business District
CCL	Consolidated Coal Lease
CCRP	Central Coast Regional Plan
COSS	Coastal Open Space System
DCP	Development Control Plan
DLALC	Darlingung Local Aboriginal Land Council
DPE	Department of Planning & Environment
DSP	Development Servicing Plan
EEC	Endangered Ecological Community
ELS	Employment Lands Strategy
LEP	Local Environmental Plan
LGA	Local Government Area
MHE	Manufactured Housing Estate
NDA	Net Developable Area
NPWS	National Parks & Wildlife Service
NWSPP	North Wyong Shire Structure Plan
OEH	Office of Environment & Heritage
PMF	Probable Maximum Flood
RCS	Retail Centres Strategy
RDS	Residential Development Strategy
RFS	Rural Fire Service
RMS	Roads and Maritime Services
SCA	State Conservation Area
SEPP	State Environmental Planning Policy
SPS	Sewage Pumping Station
STP	Sewage Treatment Plant
TL	Transmission Line
VPA	Voluntary Planning Agreement
WEZ	Wyong Employment Zone
WLEP	Wyong Local Environmental Plan 2013
WSUD	Water Sensitive Urban Design







# Structure Plan - Greater Lake Munmorah

## Study Area Profile

### Regional Context

The coastal village of Lake Munmorah is located in the north-east of the Central Coast Council LGA and is bounded by Munmorah State Conservation Area to the east, Chain Valley Bay to the north, Lake Munmorah to the south, and Doyalson North to the west. It is one of two northern gateways of Central Coast Local Government Area (LGA) and the main gateway into eastern Lake Macquarie. The Pacific Highway runs in an east-west direction through the study area and is a major traffic corridor connecting the northern half of the LGA to Lake Macquarie east, and further north to Newcastle City. The study area is moderately isolated from the major residential areas to the south, with the closest major shopping centre located 10km to the south at Lake Haven.

The M1 Motorway is located approximately 12km to the west, Wye train station is located 9km to the north-west and Warnervale train station 15km south-west. The area is serviced by a recently constructed supermarket located in the B2 Local Centre zone at Tall Timbers Road, Lake Munmorah, as well as 2 neighbourhood centres at Anita Avenue, Lake Munmorah and Lloyd Avenue, Chain Valley Bay South.

**LEGEND**  
 — Study Area Boundary  
 — Central Coast LGA Boundary



# Structure Plan - Greater Lake Munmorah

## Study Area Profile

### The Study Area

The study area is depicted in Figure 2, left. The study area is an extensive area that covers the suburbs of Lake Munmorah, Doyalson North, Chain Valley Bay and a small area of Crangan Bay. This area has been selected in order to ensure that an outcome of this Structure Plan is the resolution of issues in relation to future land use in this area. Therefore, the entire area identified for future employment and residential land use along this portion of the Pacific Highway, as well as the area identified as a future biodiversity corridor, is included in the study area.

The study area is characterised to the south and north by low density residential areas skirting Lake Munmorah and Lake Macquarie water bodies respectively, to the east by conservation reserves of high ecological value, and in the centre of the study area and to the west by more rural activities and rural residential development. There are two power stations nearby including the now decommissioned Munmorah Power Station at Colongra to the southwest, and Vales Point Power Station to the north-west, which remains operational.



## Structure Plan - Greater Lake Munmorah

## Study Area Profile

### Why Is A Structure Plan Required?

The Greater Lake Munmorah Structure Plan project (this Structure Plan) has commenced as a result of an identified need to accommodate population growth in the north-east of the Central Coast LGA. The State Government's North Wyong Shire Structure Plan (2012) identifies a large area of land within the study area for long-term regional greenfield residential and employment land. The North Wyong Shire Structure Plan (2012) identifies the following timeframes for staging of development in this area:

- Short - Land already zoned and serviced
- Medium - Land that is expected to be rezoned in the next 15 years (from 2012)
- Long - Land this is not expected to be rezoned in the next 15 years (from 2012).

This area has historically been mooted for longer-term development due to surface development restrictions related to underground mining within the area. However, these surface development restrictions over a large part of the study area have now been relaxed by Subsidence Advisory NSW. A number of stimulus developments are also in the planning stages, including:

- 2 significant rezoning applications lodged, including Darkinjung Local Aboriginal Land Council's 150ha parcel.
- 2 significant recreation facilities (Skate Park and Regional Play-space) proposed for the area.

Therefore an opportunity exists to consider bringing development forward in the medium term, and consider the study area in its entirety to ensure best outcomes for the current and future residents.

Council recognises the importance of developing a vision for the future development of the Lake Munmorah area, to ensure that development of this area occurs in an orderly and desirable manner. A detailed Structure Plan of the broader Lake Munmorah area is therefore required, prepared in consultation with the community and other stakeholders.

### Purpose Of The Structure Plan

This Structure Plan will set a coherent framework for development, facilitating the future growth and prosperity of the area, and will identify:

- Appropriate development footprints for new residential and employment land, and any relevant staging requirements; and
- Appropriate transport, environmental and open space networks to cater for expected population growth.

This Structure Plan will set the direction for detailed planning instruments, including Local Environmental Plans (LEPs) and Development Control Plans (DCPs), as well as higher level planning tools such as Masterplans and Public Domain Plans.

### Structure Plan Objectives

The objectives of the Structure Plan area to develop a local land use framework that:

- Addresses relevant issues such as supply and demand factors, servicing and infrastructure provision, environmental values, housing diversity & ageing in place, connectivity, traffic and parking, safety, community infrastructure and the like.
- Accommodates a longer term vision for the area over the next 30 years, by facilitating growth within Lake Munmorah for the short, medium and long term – whilst still ensuring the orderly development of land.
- Enhances the existing public domain through the development of a Public Domain Plan and urban design guidelines, identifying opportunities for potential linkages and improvements to public spaces and streetscapes. This will include strengthening north-south connections between the existing residential area and green-field precincts.
- Enhances social interaction through careful placement of social facilities and infrastructure.
- Promotes significant natural features, including waterfront areas and public reserves and identify potential linkages between these areas and the village centre.
- Considers potential biodiversity corridors and linkages within the study area.
- Reviews the appropriateness of existing zones adopted under the Wyong Local Environmental Plan 2013 (WLEP 2013).
- Provides greater certainty to land owners, the community, and industry groups with regard to land use options and the location of future development and conservation areas within the study area.





2

Population Profile

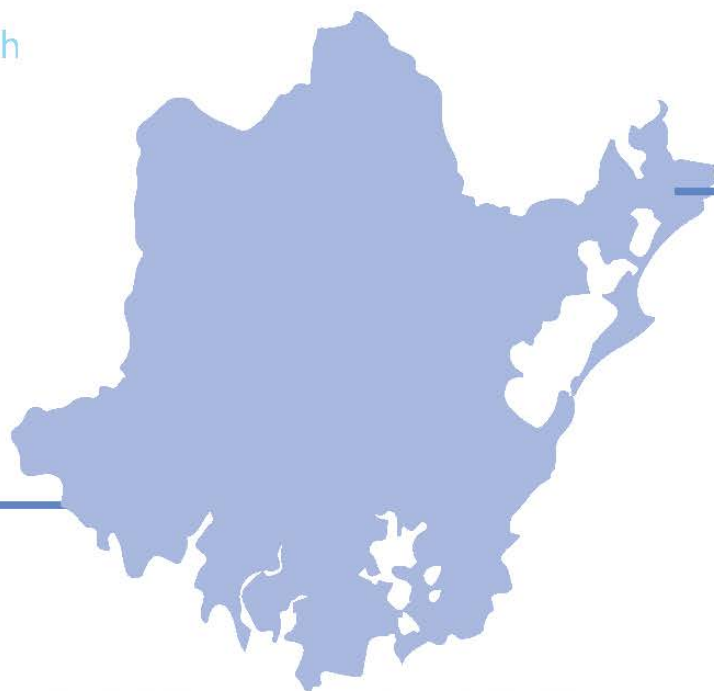
**Structure Plan - Greater Lake Munmorah** Population Profile

A profile of Greater Lake Munmorah

The population of the study area was 8,449 people in 2017 (ABS ERP 2017). Between 2011 and 2016, the population increased by 506 people.

Central Coast region

**339,450** people living on the Central Coast



**2.5%**

**8,449** live within the Greater Lake Munmorah study area

Greater Lake Munmorah

AGE STRUCTURE

In 2016, 20.3% of the study area's population was aged between 0 and 19, and 39.5% were aged 60 years and over, compared with 24.7% and 27.1% respectively for the Central Coast LGA. The major differences between the age structure of the study area, and the Central Coast LGA were:

- A larger percentage of seniors (70-84)
- A larger percentage of empty nesters and retirees (60-69)
- A smaller percentage of parents and homebuilders (35-49)
- A smaller percentage of young workers (25-34).

Between 2011-2016, the largest changes in age structure were in the following groups:

- Seniors (70-84) – J 309 people
- Young workers (25-34) – J 108 people
- Older workers and pre-retirees (50-59) – J 106 people
- Parents and homebuilders (35-49) – K 95 people.

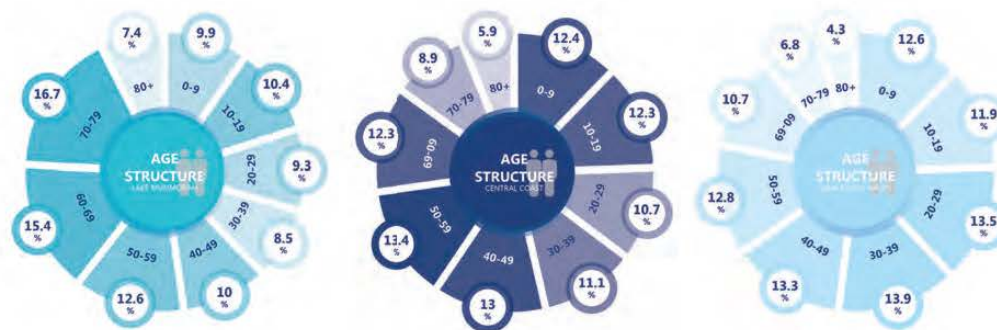


Figure S: Population Age Structure

# Structure Plan - Greater Lake Munmorah

## Population Profile

### Population Profile

#### DWELLINGS

In 2016, the total number of dwellings in the study area was 3,838. Between 2011 and 2016 the total number of dwellings in the study area increased by 243 dwellings. Of these dwellings, 98.3% were separate dwellings. The remaining dwellings were made up of medium density dwellings (1.1%) and caravans and/or relocatable homes (0.6%). Comparatively, in the wider Central Coast LGA, 76.6% of dwellings were separate dwellings, and 18.3% medium density dwellings.

The 2016 figure relating to caravans and/or relocatable homes may not be accurate, and during the 2006 ABS Census, 813 households were permanently residing in 7 MHE's and caravan parks across the study area. Due to the historic permissibility of manufactured housing estate's (MHE)/caravan parks within the 7(b) (Scenic Protection Zone) under Wyong LEP 1991, this land use proliferated within the study area. There is a mixture of de facto retirement village-style MHE communities and older/lower amenity caravan parks and MHEs. Whilst this housing product is required for low and very low income households in particular circumstances, this use has often been viewed negatively in the past as it reflects quite a high density residential use often located in isolated areas where access to essential services is limited.

An estimate of the number of households permanently residing in MHE's and caravan parks in 2018, is 1,500. Therefore, the percentage of residents living in this type of dwelling within the study area, will be closer to 40%. This more accurately reflects the importance of this form of housing within the study area.

#### HOUSEHOLDS

In 2016, the study area had a lower proportion of couple families with child(ren), and one parent families, compared to the Central Coast LGA. Overall, 21.7% of families were couple families with child(ren), and 9.2% were one-parent families, compared with 28.3% and 12.7% respectively for the Central Coast. There was also a higher proportion of lone person households and a higher proportion of couples without children. Overall, the proportion of lone person households was 28.9% compared to 25.1% in the Central Coast LGA while the proportion of couples without children was 33.7% compared to 25.2% in the Central Coast LGA.

In 2016, households within the study area were smaller compared to the remainder of the Central Coast LGA, with 2.28 residents/dwelling compared to 2.49 residents/dwelling for the wider Central Coast LGA.

Between 2011 and 2016, the largest changes in family/household types in the study area were:

- Couples with child(ren) (+ 75 households)
- Couples without child(ren) (+ 67 households)
- Lone person (+ 45 households)
- One parent families (- 39 households).

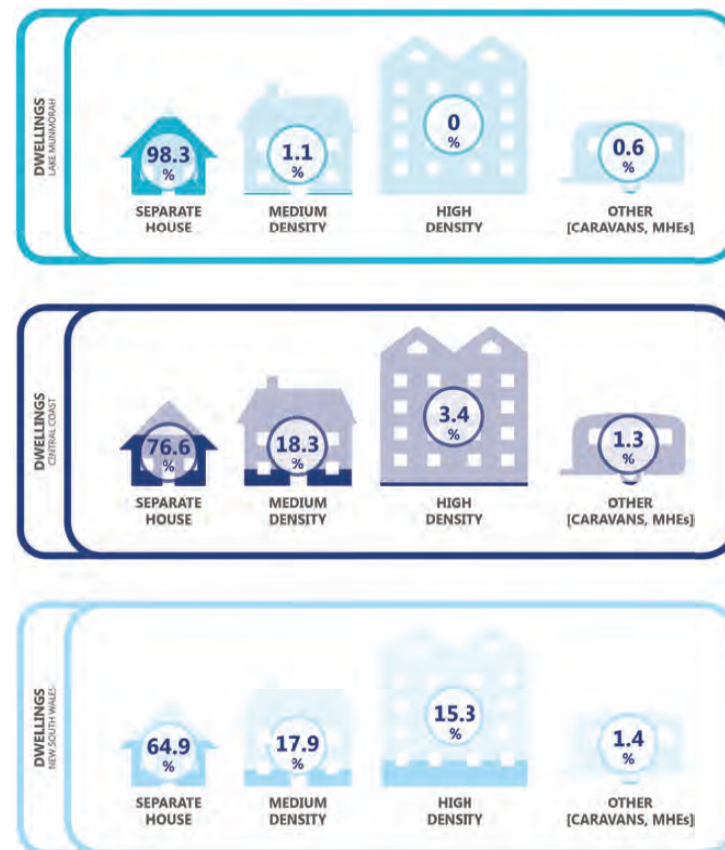


Figure 6: Dwelling Typology

# Structure Plan - Greater Lake Munmorah

## Population Profile

### Population Profile (continued)

#### CULTURAL DIVERSITY

In 2016:

- 4% of the study area population were Indigenous Australians. Between 2011 and 2016, the Indigenous population increased by 0.9%.
- 82.1% of the study area population was born in Australia. This compares to 78.8% for the Central Coast LGA. Overall, 10.7% of the population was born overseas, and 2.2% were from a non-English speaking background, compared with 14.6% and 6.2% respectively for the Central Coast LGA.
- 2% of the study area population spoke a language other than English at home, compared to 5.9% for the Central Coast LGA.
- Between 2011 and 2016, the number of people born overseas decreased by 74 people, and the number of people from a non-English speaking background stayed the same (168 people).

#### POPULATION PROJECTION

By 2036, the study area population is forecast to grow from 8,449 to 15,328. This is based predominantly on net migration; however natural increase/decrease is also included in this figure. This is based on an increase of over 3,347 dwellings during the period. This data is based on the population experts forecasting. The likelihood of achieving this figure by 2036 is discussed in more detail in Part 6 – Key Issues and Opportunities.

#### SOCIO-ECONOMIC DISADVANTAGE

The SEIFA Index of Disadvantage measures the relative level of socio-economic disadvantage based on a range of Census characteristics. A higher score on the index means a lower level of disadvantage. A lower score on the index means a higher level of disadvantage.

In 2016, Lake Munmorah-Manning Park scored 955 on the SEIFA index of disadvantage. This compares to a score of 989 for the wider Central Coast LGA, and represents a small improvement from the 2011 SEIFA score of 952.6 for the Lake Munmorah study area.



Figure 7: Household Types

# Structure Plan - Greater Lake Munmorah

## Population Profile

### Economic Profile

#### HOUSEHOLD INCOME

In 2016, the major differences between weekly household incomes of the study area population, and the Central Coast LGA are:

- More households had an income of less than \$800 (38.3% compared to 27.9%)
- Less households had an income of more than \$2,500 (10.2% compared to 16.5%)

#### EMPLOYMENT RATES

Employment characteristics of the population are an important indicator of the socio-economic status of an area. It shows the share of the population that is employed full-time, part-time or unemployed, as well as changes over time in the labour force.

In 2016, the size of the study area's labour force was 2,884 persons. The labour force participation rate refers to the proportion of the population over 15 years of age that are employed or actively looking for work. In 2016, analysis of the labour force participation rate of the population in the study area shows that there was a smaller proportion in the labour force (44%) compared with the wider Central Coast LGA (56%), which can be explained by the older age profile.

In 2016:

- 93% of the labour force was employed, compared with 93.3% for the wider Central Coast LGA.
- 37.1% of the labour force was employed on a part-time basis, and 54.8% were employed full-time.

#### EDUCATION

In 2016, the major differences between qualifications held by the study area population, and the Central Coast LGA are:

- More of the population with Vocational qualifications (27.4% compared to 24.4%)
- Less of the population with Bachelor or Higher degrees (7.1% compared to 14%)
- Less of the population with no formal qualifications (46.8% compared to 41.8%).

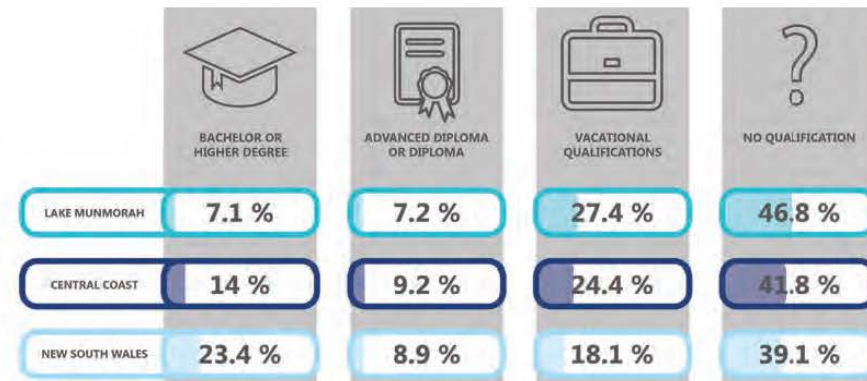


Figure 8: Educational Qualifications.



Figure 9: Household Incomes



# Structure Plan - Greater Lake Munmorah

## Population Profile

### Economic Profile (continued)

#### EMPLOYMENT SECTORS

Most people in the study area are employed in the retail trade (14%), health care & social assistance (14.4%) and construction sectors (16.1%). In combination, these three sectors employed 1,057 people in total or 39.7% of the total employed population.

In 2016, the major differences between the jobs held by the study area's labour force and the Central Coast LGA were:

- More people employed in construction (16.1% compared to 11.3%)
- More people employed in mining (2.2% compared to 0.5%)
- Less people employed in professional, scientific and technical services (4.0% compared to 5.4%)

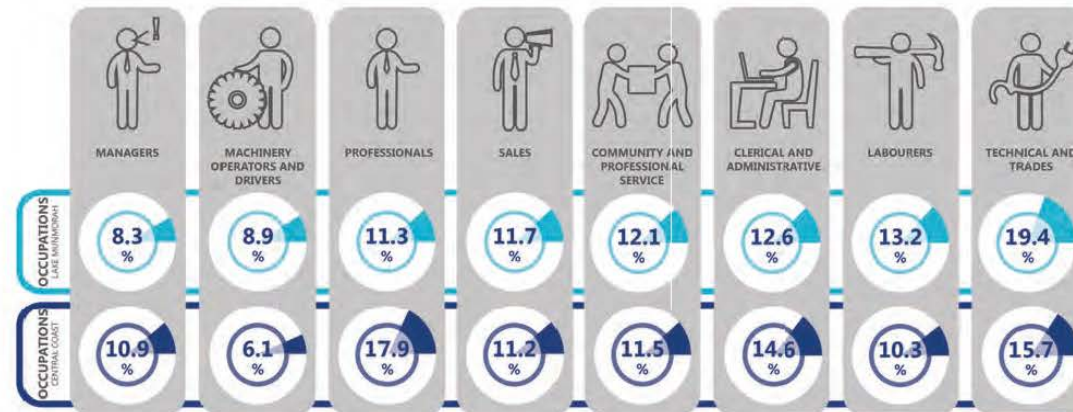


Figure 10: Employment Sectors

Structure Plan - Greater Lake Munmorah

Population Profile

Economic Profile (continued)

OCCUPATIONS

In 2016, the three most popular occupations were:

- Technicians and Trades Workers (18.4%)
- Community and personal service workers (13.8%)
- Clerical and Administrative Workers (13.6%)

In combination, these three occupations accounted for 1,325 people in total or 45.8% of the employed resident population. In comparison, the Central Coast LGA employed 15.5% in Technicians and Trades Workers; 12.4% in Labourers; and 13.7% in Clerical and Administrative Workers. The major differences between the jobs held by the population of the study area, and Central Coast LGA were:

- More people employed as Technicians/Trades Workers (18.4% compared to 15.5%)
- More people employed as Community/Personal Service Workers (13.8% compared to 12.4%)
- More people employed as Labourers (12.1% compared to 10.4%)
- Less people employed as Professionals (12.4% compared to 18.6%)
- Less people employed as Managers (8.1% compared to 11.2%).

METHOD OF TRAVEL TO WORK

In 2016, fewer study area residents travelled to work by public transport, compared to the wider Central Coast LGA (2.7% compared to 8.8%). This is likely a result of the relative isolation of this area and the subsequent limited access to public transport.

In 2016, 25.3% of workers (more than 35,287 people) travelled out of the LGA for work each day. Increasing local jobs both within the study area and the wider Central Coast LGA will reduce this number.



Figure 11: Occupations: CENTRAL COAST



Figure 12: Occupations: CENTRAL COAST



# Structure Plan - Greater Lake Munmorah

## Strategic Context

### Central Coast Regional Plan

The State Government's Central Coast Regional Plan (CCRP) is the blueprint for the next 20 years, and identifies that 41,500 new dwellings will be required by 2036, to accommodate population growth on the Central Coast. The CCRP sets 4 goals, as follows:

#### A prosperous Central Coast with more jobs close to home

1. Grow Gosford City Centre as the region's capital
2. Focus economic development in the Southern and Northern Growth Corridors
3. Support priority economic sectors
4. Strengthen inter/intra-regional connections for business
5. Support new and expanded industrial activity
6. Strengthen the economic self-determination of Aboriginal communities
7. Increase job containment in the region

#### Protect the natural environment and manage the use of agricultural and resource lands

1. Recognise the cultural landscape of the Central Coast
2. Protect and enhance productive agricultural land
3. Secure the productivity and capacity of resource lands
4. Sustain / balance productive landscapes west of the M1
5. Protect and manage environmental values
6. Sustain water quality and security
7. Protect the coast and manage natural hazards and climate change

#### Well-connected communities and attractive lifestyles

1. Create a well-planned, compact settlement pattern
2. Grow investment opportunities in the region's centres
3. Align land use and infrastructure planning
4. Create places that are inclusive, well-designed and offer attractive lifestyles

#### A variety of housing choice to suit needs and lifestyles

Accelerate housing supply and improve housing choice

5. Grow housing choice in and around local centres
6. Provide housing choice to meet community needs
7. Deliver housing in new release areas that are best suited to building new communities
8. Manage rural lifestyles

In the CCRP, Lake Munmorah is identified as an 'Other Centre'. The closest Strategic Centre is the proposed Warnervale Town Centre, followed by Wyong and Tuggerah. Gosford is identified as the Regional City for the Central Coast. This Structure Plan will need to be consistent with the CCRP.



26 Greater Lake Munmorah | STRUCTURE PLAN



Figure 13: Central Coast Regional Plan - Central Coast 2036

# Structure Plan - Greater Lake Munmorah

## Strategic Context

### North Wyong Shire Structure Plan

The study area is affected by the State Government's North Wyong Shire Structure Plan (NWSSP) which identifies future residential and employment precincts as well as areas that may be suitable for inclusion in a regional biodiversity corridor.

#### Residential and Employment land

The NWSSP identifies residential development precincts within the study area that have the capacity to provide approximately 2,636 new dwellings. Land within the west of the study area is also identified as a long term employment precinct. In 2013, Council prepared an Employment Lands Study (ELS), which found that there is currently sufficient employment lands in the former Wyong LGA. This land is likely to be exhausted by 2036 and new employment land will need to be activated by this time. The ELS notes that only 1/4 - 1/3 of future jobs are likely to be in broad hectare employment lands.

#### Timeframes

The NWSSP predates the establishment of the Lake Munmorah Local Centre on the corner of the Pacific Highway and Tall Timbers Road. This centre has resulted in a growing interest from land owners and the community for continued growth in the medium term (within the next 10 years). The proposed development timeframes found within the NWSSP therefore should also be reviewed as part of this Structure Plan.

#### Biodiversity Corridors

The NWSSP identifies a regional biodiversity corridor which extends from Kiar and Bushells Ridge in the west to Wybung and Freemans in the east. The corridor aims to link the mountain areas in the west to the ocean foreshore in the east. This corridor provides a system of corridor and habitat networks for flora and fauna. The green corridor will also reinforce the landscape and visual setting for urban development within Wyong LGA.

It is important that this Structure Plan:

- Reviews the current residential and employment lands precinct boundaries and determines the staging of Residential and Employment land release, and the likelihood of the take-up of Employment Lands. This analysis may result in a recommendation

that the area of future employment land is reduced and the area of future residential land is increased. Consideration of potential issues that may arise if residential development is proposed within the current Employment Lands Precinct will also be required.

- Investigates suitable employment types and zoning for the Employment Precincts, including a B6 Enterprise Corridor along the Pacific Highway frontage, as recommended in the ELS.
- Reviews the biodiversity corridors and strategically located, constrained sites. The NWSSP defines these sites as "Strategically located, constrained sites subject to further investigation and offset strategies to define conservation requirements and development potential".



Figure 14: North Wyong Shire Structure Plan

# Structure Plan - Greater Lake Munmorah

## Strategic Context

### Wyong Shire Settlement Strategy

The former Wyong Shire Council's Settlement Strategy was developed to provide a blueprint for the growth of the former Wyong LGA with accessible and reliable transport, a strong regional economy, a vibrant community and a healthy natural environment. The Settlement Strategy provides an analysis of demand, supply and nature of land and identifies where additional land may need to be set aside for residential, business and commercial development while retaining the natural environment.

The former Wyong Shire Council's Residential Development Strategy (RDS) has been superseded by the Settlement Strategy. The Settlement Strategy recommends that Precinct 2 of the RDS be retained for consideration as a long term development site, in spite of this land being identified as potential biodiversity corridor. This Structure Plan will give consideration to appropriate zones within this area, in particular in relation to the Biodiversity Corridor.

### Employment Land Study & Industrial Land Audit

The Employment Land Study (ELS) identified the following timeframes for the proposed employment lands within the study area:

- Doyalson South West and Doyalson North East – Land required >2025.
- Doyalson West, Doyalson East and Lake Munmorah – Land required >2036.

The ELS projected that there will be demand for approximately 695,000m<sup>2</sup> of additional employment land floorspace across the former Wyong LGA by 2036. Since there is currently approximately 1.12 million m<sup>2</sup> of additional floorspace capacity, there is sufficient supply across existing precincts, with spare capacity of around 425,000m<sup>2</sup>. The conclusion is therefore that prior to 2036, there will be no need to rezone additional areas to industrial. However, Council needs to monitor demand, and manage the zoning and servicing of its employment land stock to accommodate possible changes to the local economy which lead to increased demand for land.

The ELS cautions that proposals for new employment areas should always be tempered by realism in terms of future take up possibilities and infrastructure and servicing costs. A coordinated approach to employment land release ultimately represents the most efficient and cost sensible way to manage supply responses to demand.

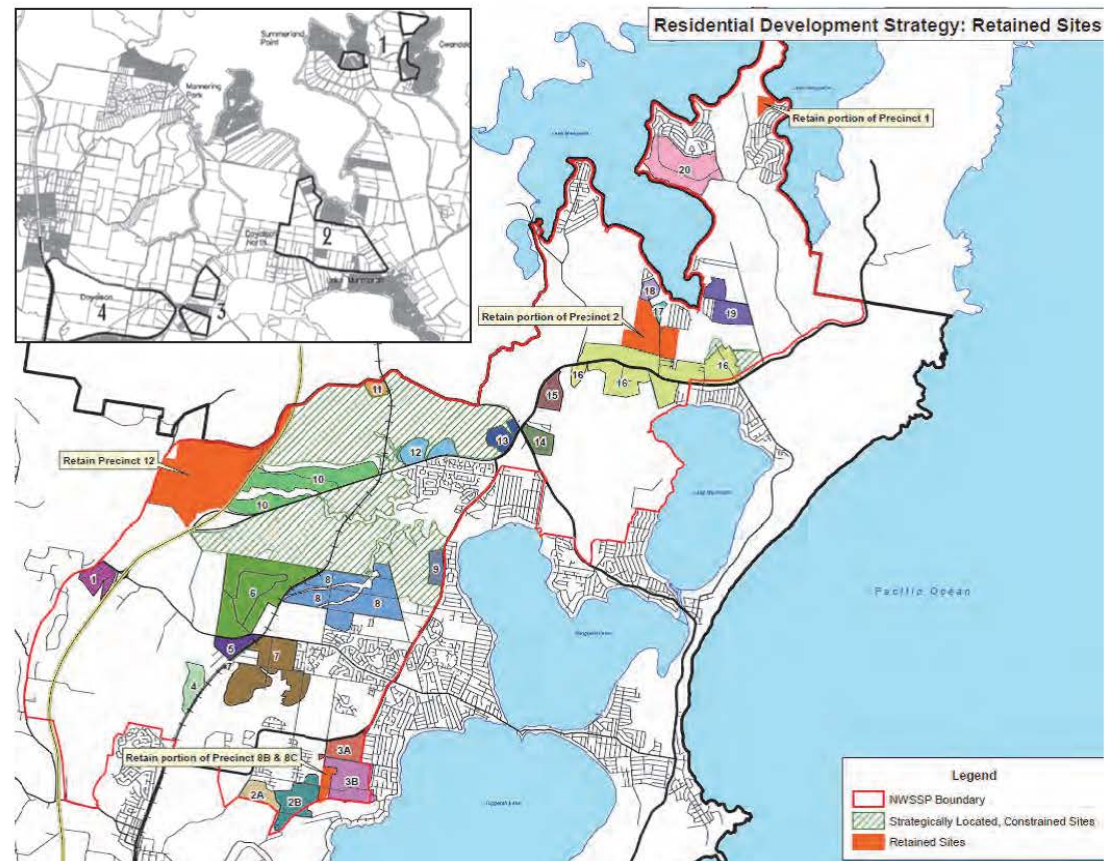


Figure 15: Settlement Strategy (Inset - Residential Development Strategy)

## Structure Plan - Greater Lake Munmorah

## Strategic Context

### Retail Centres Strategy

The Retail Centres Strategy (RCS) considers opportunities for the renewal of existing centres within the former Wyong LGA and establishes requirements for the development of new centres, having regard to future population growth. The RCS identifies Tuggerah as the former LGA's Major Centre, and Wyong, Bateau Bay, The Entrance, Lake Haven, Toukley and the proposed Warnervale Town Centre as Town Centres.

The RCS identified the 5,500m<sup>2</sup> Centre at Tall Timbers Road, Lake Munmorah as a Local Centre (the destination for convenience shopping for the surrounding local community). The RCS also estimated that, taking into account available expenditure from catchment households and the potential to attract some trade from beyond the catchment, the centre currently needs to attract around 35% of available retail expenditure from catchment households. Opportunities to expand should be restricted until there is significant population growth in the catchment. This Structure Plan will take into account these recommendations.

The study area also has 2 Neighbourhood Centres - a 705m<sup>2</sup> Centre at Anita Avenue, Lake Munmorah and a 449m<sup>2</sup> Centre at Lloyd Avenue, Chain Valley Bay, discussed further in "Issues" section of this structure plan.

### One - Central Coast

The Central Coast Council Community Strategic Plan 2018 is a document which identifies the Central Coast community's five priority focus areas to create the best possible quality of life for residents, as follows:

1. Belonging
2. Smart
3. Green
4. Responsible
5. Liveable

This Structure Plan will need to be consistent with these objectives. Of particular relevance to this Structure Plan are the following objectives:

- B4 Activate spaces and places to complement activity around town centres, foreshores, lakes and green spaces for families, community and visitors
- C1 Target economic development in growth areas and major centres and provide incentives to attract businesses to the Central Coast
- C3 Facilitate economic development to increase local employment opportunities and provide a range of jobs
- F1 Protect our rich environmental heritage by conserving beaches, waterways, bushland, wildlife corridors and inland areas and the diversity of local native species

- F2 Promote greening and ensure the wellbeing of communities through the protection of local bushland, urban trees, tree canopies and expansion of the Coastal Open Space System (COSS)
- H1 Solve road and drainage problem areas and partner with State Government to improve road conditions
- H2 Improve pedestrian movement safety, speed and vehicle congestion around schools, town centres, neighbourhoods, and community facilities
- H4 Plan for adequate and sustainable infrastructure to meet future demand for transport, energy, telecommunications and a secure supply of drinking water
- I1 Preserve local character and protect our drinking water catchments, heritage and rural areas by concentrating development along transport corridors and town centres east of the M1
- I2 Ensure all new developments are well planned with good access to public transport, green space and community facilities and support active transport
- I3 Ensure land use planning and development is sustainable and environmentally sound and considers the importance of local habitat, biodiversity corridors, energy efficiency and stormwater management
- I4 Provide a range of housing options to meet the diverse and changing needs of the community including adequate affordable housing.



Figure 16: Existing Retail Centre at Tall Timbers Road, Lake Munmorah



Figure 17: Existing Neighbourhood Centre at Lake Munmorah





Structure Plan - Greater Lake Munmorah

Community Vision

TO BE COMPLETED AFTER PUBLIC EXHIBITION PERIOD

Examples:

- "Provide housing choice for different life stages"*
- "Improve transport and pedestrian/cyclist connections"*
- "Improve provision of recreation facilities"*
- "Maintain the strong connection to the natural landscape of the bushland and Lakes."*
- "Protect the natural environment for current and future generations to enjoy"*

# Northern Lakes, San Remo-Budgewoi & Toukley



**Suburbs**  
 Chain Valley Bay, Doyalson North, Frazer Park, Freemans, Gwandalan, Kingfisher Shores, Lake Munmorah, Manning Park, Point Wolstoncroft, Summerland Point, Wybung, Blue Haven, Budgewoi, Budgewoi Peninsula, Buff Point, Colongra, Doyalson, Halekulani, San Remo, Canton Beach, Norah Head, Norville and Toukley.



<b>POPULATION</b> 48,094	<b>MEDIAN AGE</b> 43	<b>MEDIAN HOUSEHOLD INCOME</b> \$1,060	<b>COUPLES WITH CHILDREN</b> 25%	<b>OLDER PEOPLE WITHOUT CHILDREN</b> 15%	<b>PEOPLE LIVING ALONE</b> 26%
<b>SPEAK ANOTHER LANGUAGE</b> 3%	<b>INDIGENOUS PEOPLE</b> 5.8%	<b>USE PUBLIC TRANSPORT TO GET TO WORK</b> 3%	<b>HEALTHCARE AND SOCIAL ASSISTANCE</b> 19%	<b>RETAIL TRADE</b> 11.3%	<b>EDUCATION AND TRAINING</b> 8.4%
<b>UNIVERSITY QUALIFICATIONS</b> 7%	<b>TRADE QUALIFICATIONS</b> 27%	<b>UNEMPLOYMENT RATE</b> 7.9%			

centralcoast.nsw.gov.au



Figure 18: Community Strategic Plan results for the study area



Structure Plan - Greater Lake Munmorah

Existing Conditions

Environment

Topography

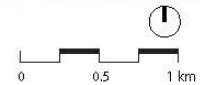
The study area is depicted in Figure 2, left. The study area is an extensive area that covers the suburbs of Lake Munmorah, Doyalson North, Chain Valley Bay and a small area of Crangan Bay. This area has been selected in order to ensure that an outcome of this Structure Plan is the resolution of issues in relation to future land use in this area. Therefore, the entire area identified for future employment and residential land use along this portion of the Pacific Highway, as well as the area identified as a future biodiversity corridor, is included in the study area.

The study area is characterised to the south and north by low density residential areas skirting Lake Munmorah and Lake Macquarie water bodies respectively, to the east by conservation reserves of high ecological value, and in the centre of the study area and to the west by more rural activities and rural residential development. There are two power stations nearby including the now decommissioned Munmorah Power Station at Colongra to the southwest, and Vales Point Power Station to the north-west, which will remain operational until 2028.



LEGEND  
10m Contours

Figure 19: Topography  
Study Area Boundary



# Structure Plan - Greater Lake Munmorah

Existing Conditions

Environment

## Biodiversity Corridors

### Regional

The NWSSP identifies a regional biodiversity corridor which extends from Klar and Bushells Ridge in the west to Wybung and Freemans in the east. The corridor aims to link the mountain areas in the west to the ocean foreshore in the east. This corridor provides a system of corridor and habitat networks for flora and fauna. The green corridor will also reinforce the landscape and visual setting for urban development within Wyong LGA.

The width of a regional corridor is a significant influence on the overall effectiveness of a biodiversity corridor. Increased width is vital due to edge effects, including changes in light and wind, increased predation and increased degradation on the edges. The continued functionality of the Munmorah corridor network therefore depends on both the structural integrity of the habitat patches and the strength of connectivity between the patches.

### Local

The NWSSP also identifies a local biodiversity corridor that extends from the northern side of the Pacific Highway, adjacent to the Lake Munmorah Local Centre, across the Pacific Highway, proceeding in a south-easterly direction towards the Lake Munmorah waterbody. The Pacific Highway corridor is approximately 50m wide at this point, representing a significant barrier to crossing for a large proportion of fauna. This Structure Plan will have regard for these biodiversity corridors and ensure that these areas are protected, and improved, in perpetuity. BioBanking opportunities will be investigated where appropriate.

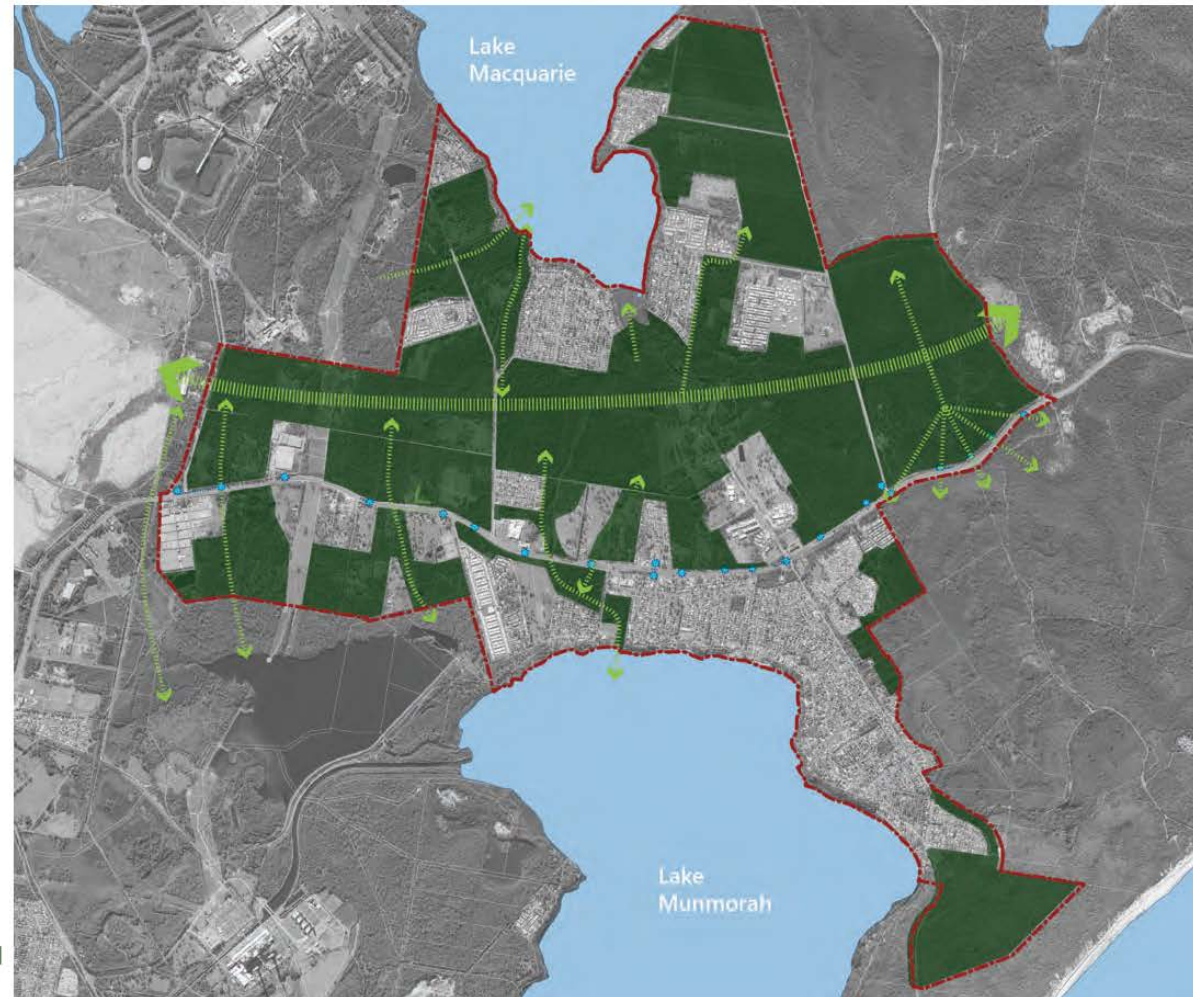
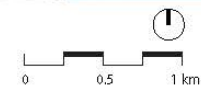


Figure 20: Biodiversity Corridor

--- Study Area Boundary

### LEGEND

Environmental Land (Biodiversity Corridor)



# Structure Plan - Greater Lake Munmorah

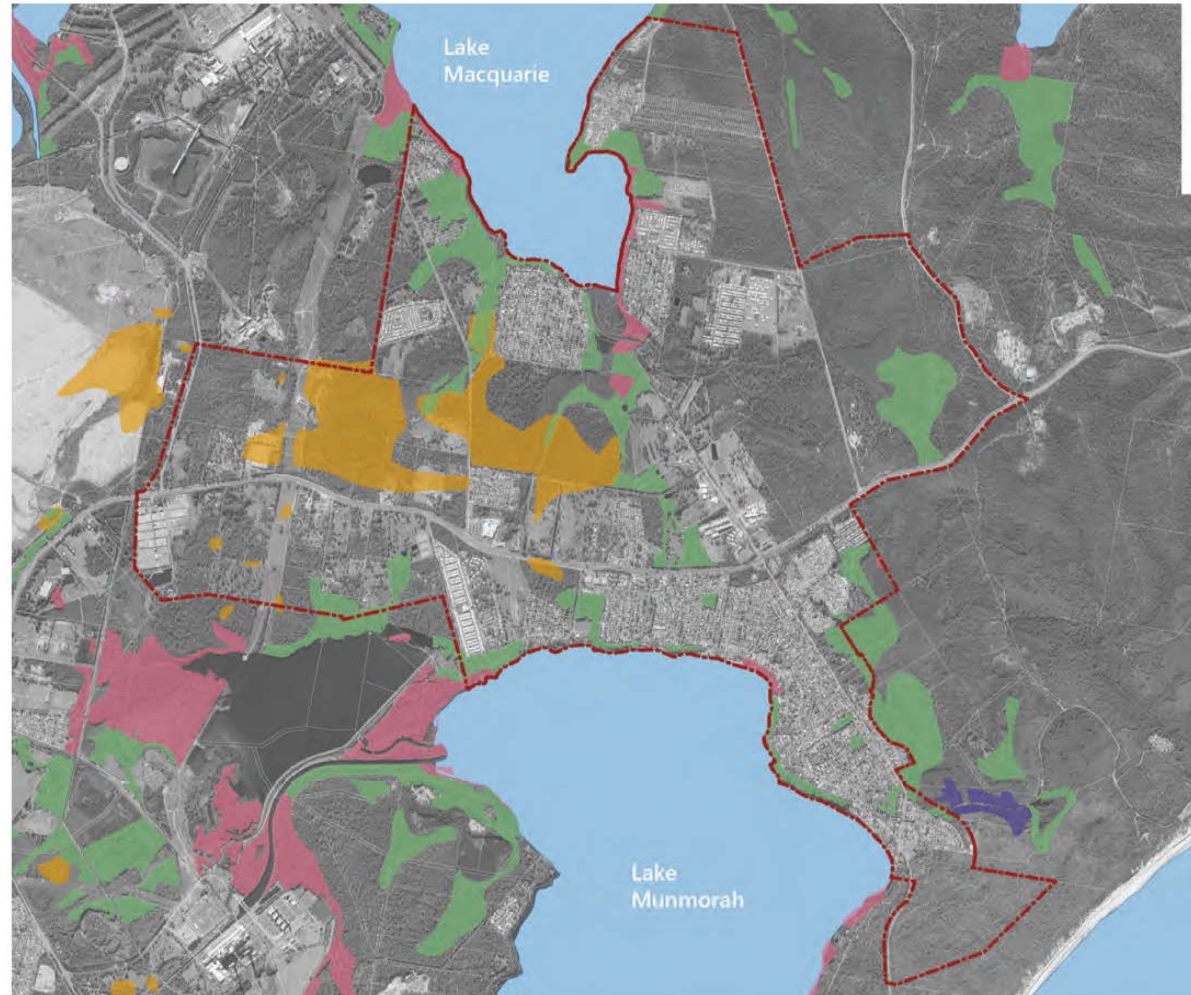
Existing Conditions

Environment

## Endangered Ecological Communities

The study area is subject to a number of environmental constraints. Figure 8 depicts in orange the extent of the study area that has been found to have a high level of *Angophora inopina* (Charmhaven Apple) specimens. This species is endemic to the Central Coast LGA and is listed as a 'vulnerable' species under the *Environment Protection and Biodiversity Conservation Act 1999*.

In terms of Endangered Ecological Communities (EECs), small pockets of Swamp Sclerophyll Forest on Coastal Floodplain and Swamp Oak Floodplain Forest communities are found in the eastern part of the study area. *State Environmental Planning Policy (Coastal Management) 2018* also applies to this part of the study area. This Structure Plan will take into account the significant environmental constraints within these parts of the study area. Long term protection of these environmental assets will be considered a priority.

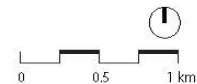


**LEGEND**

- Swamp Sclerophyll Forest on Coastal Floodplains EEC ■
- Swamp Oak Floodplain Forest ■
- Angophora Inopina ■
- Coastal Saltmarsh ■

Figure 21: Endangered Ecological Communities

--- Study Area Boundary



# Structure Plan - Greater Lake Munmorah

Existing Conditions

Environment

## Heritage

The study area has one heritage item, listed under Wyong LEP 2013 as an item of local significance. This site is a farm complex at 89 Carters Road, Lake Munmorah. Built in 1915, the Wyong Heritage Inventory (2014) describes the reason for its significance as follows:

'An aesthetically significant intact orchard and farmhouse, with outbuildings, unique in the area. The group reflects the early pattern of permanent settlement and agriculture in the area.'

This Structure Plan is to have regard for this locally significant heritage item.



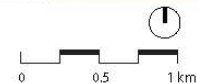
LEGEND

Heritage Item- Local Significance



Figure 22: Heritage Items

Study Area Boundary



Structure Plan - Greater Lake Munmorah

Existing Conditions

Environment

Scenic Amenity

Lake Munmorah and Lake Macquarie provides a scenic backdrop to the Study Area. However, there are limited visual connections to these lakes due to the relatively flat topography of the area, as well as the presence of private dwellings lining the majority of the foreshore area. Colongra Bay Road has been identified as the street with the best visual connection to the foreshore area, however this could be improved further. Other streets in the area have limited vistas to the foreshore area due to private dwellings along the foreshore.

Urban development in the study area will significantly affect the scenic amenity of the study area. As many parts of the study area currently have very low levels of urban development, future development will obviously create a more urban landscape. Development within the future employment lands in the western part of the study area will also have a visual impact.

This Structure Plan is to have regard for these potential visual impacts as part of future developments.

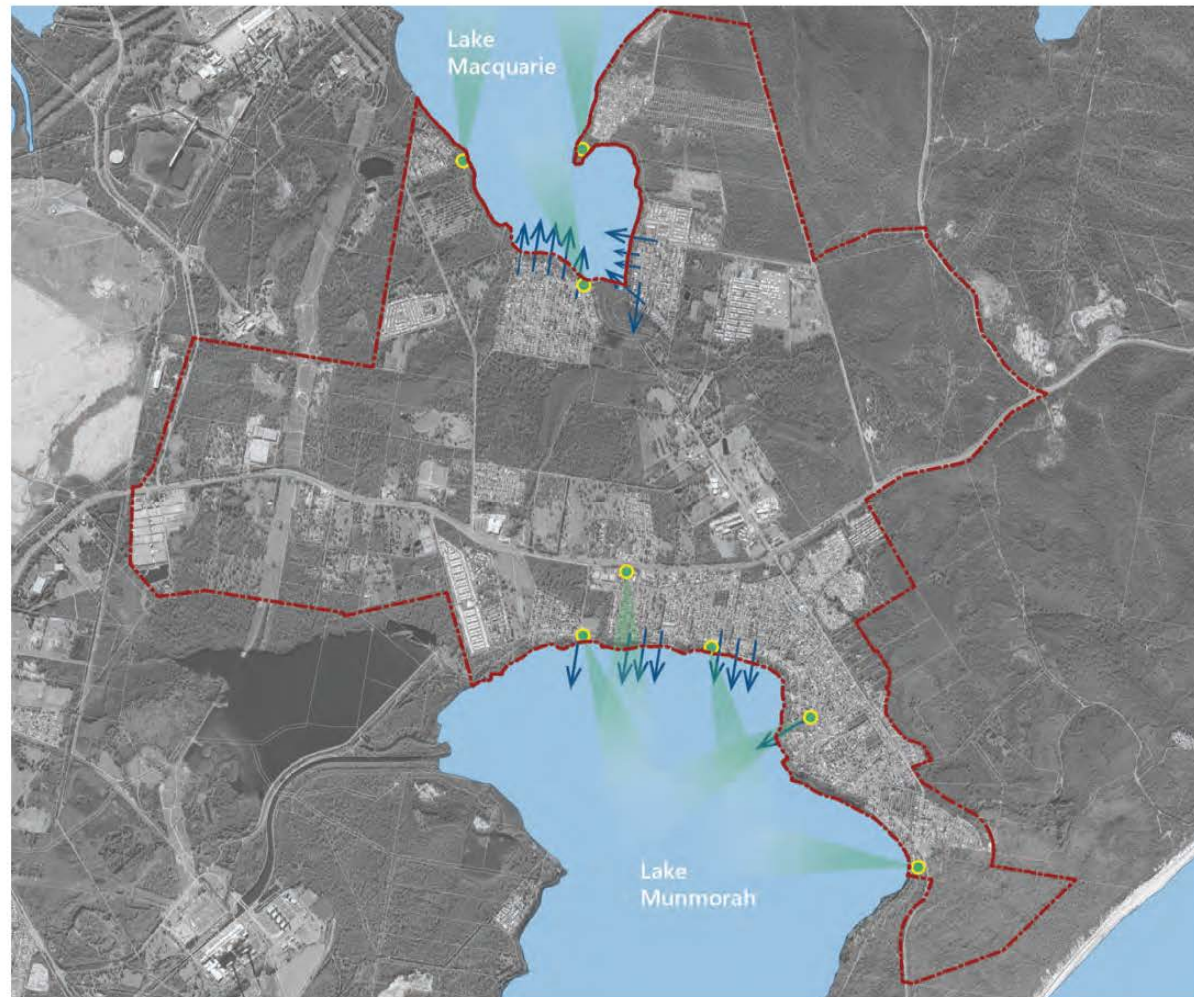
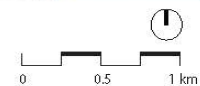


Figure 23: Scenic Viewpoints and Sightlines

**LEGEND**

- Scenic Views 
- View Corridor Roadways 

 Study Area Boundary



# Structure Plan - Greater Lake Munmorah

Existing Conditions

Environment

## Coastal Protection Zone

State Environmental Planning Policy (Coastal Management) 2018 applies to a number of locations within the study area.

### Coastal Wetlands

This SEPP identifies State significant Coastal Wetlands in the centre-north of the study area at Chain Valley Bay, and in the north-east of the study area at Chain Valley Bay. These wetlands coincide with areas of "Swamp Sclerophyll Forest on Coastal Floodplain" EECs.

### Coastal Protection Zone

Approximately half of the study area is within the Coastal Protection Zone under the State Environmental Planning Policy (Coastal Management) 2018 (see Figure 9).

The SEPP specifies the development controls which will apply to particular forms of development or within particular coastal management areas. The SEPP also specifies the consent requirements for public authorities and private individuals who propose to construct coastal protection works. This Structure Plan is to have regard for the provisions under this SEPP.

The Structure Plan is to have regard for the provisions under State Environmental Planning Policy (Coastal Management) 2018.

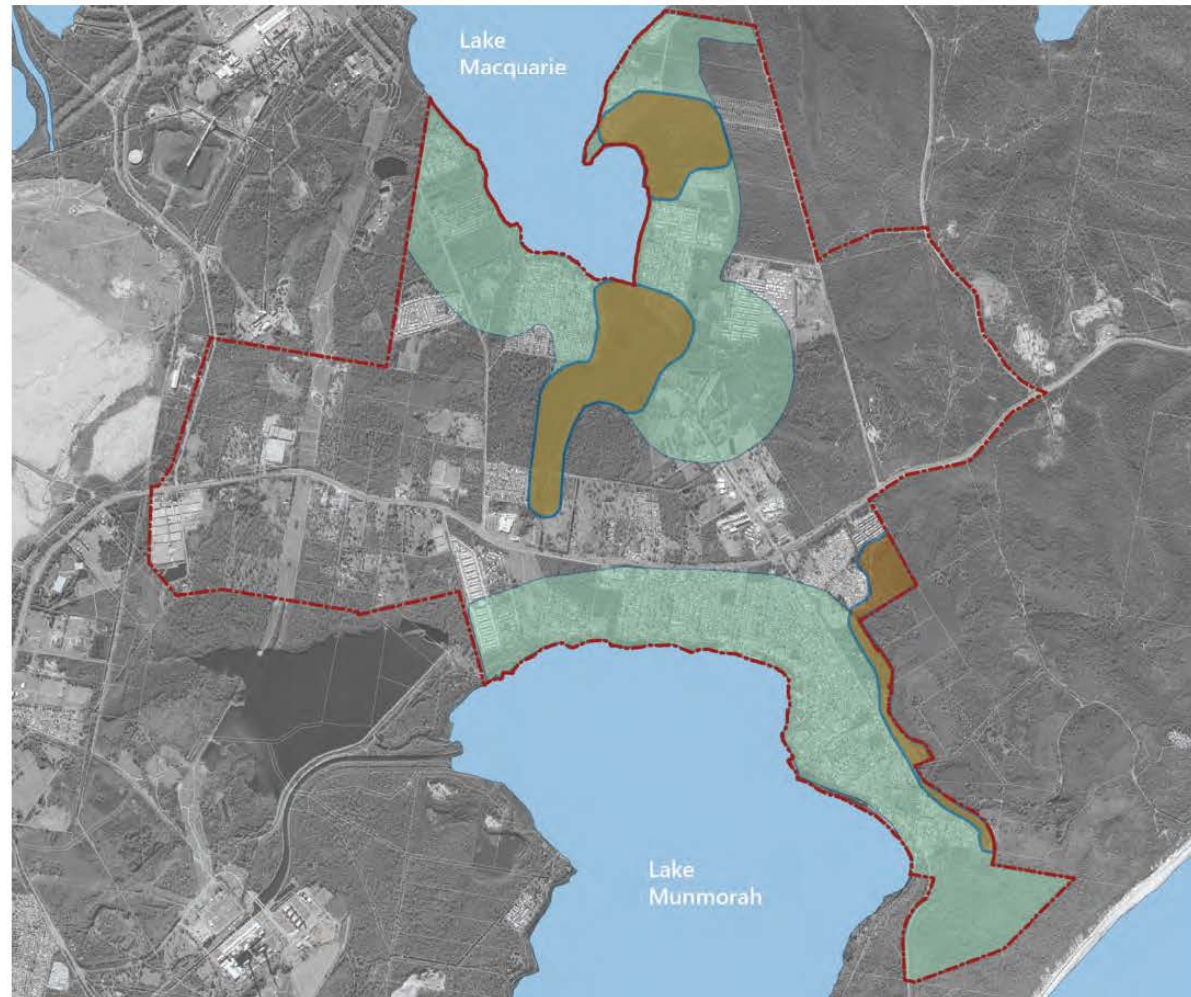
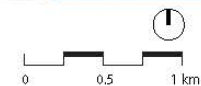


Figure 24: Coastal Protection Area

Study Area Boundary



LEGEND

- Coastal Zone- SEPP Coastal Management (2018)
- Coastal Wetlands- SEPP Coastal Management (2018)



Structure Plan - Greater Lake Munmorah

Existing Conditions

Environment

Overland Flow Paths / Drainage

Drainage

There are two main stormwater catchments that cover the study area:

1. North of the Pacific Highway which drains into Lake Macquarie;
2. South of the Pacific Highway which drains into Lake Munmorah.

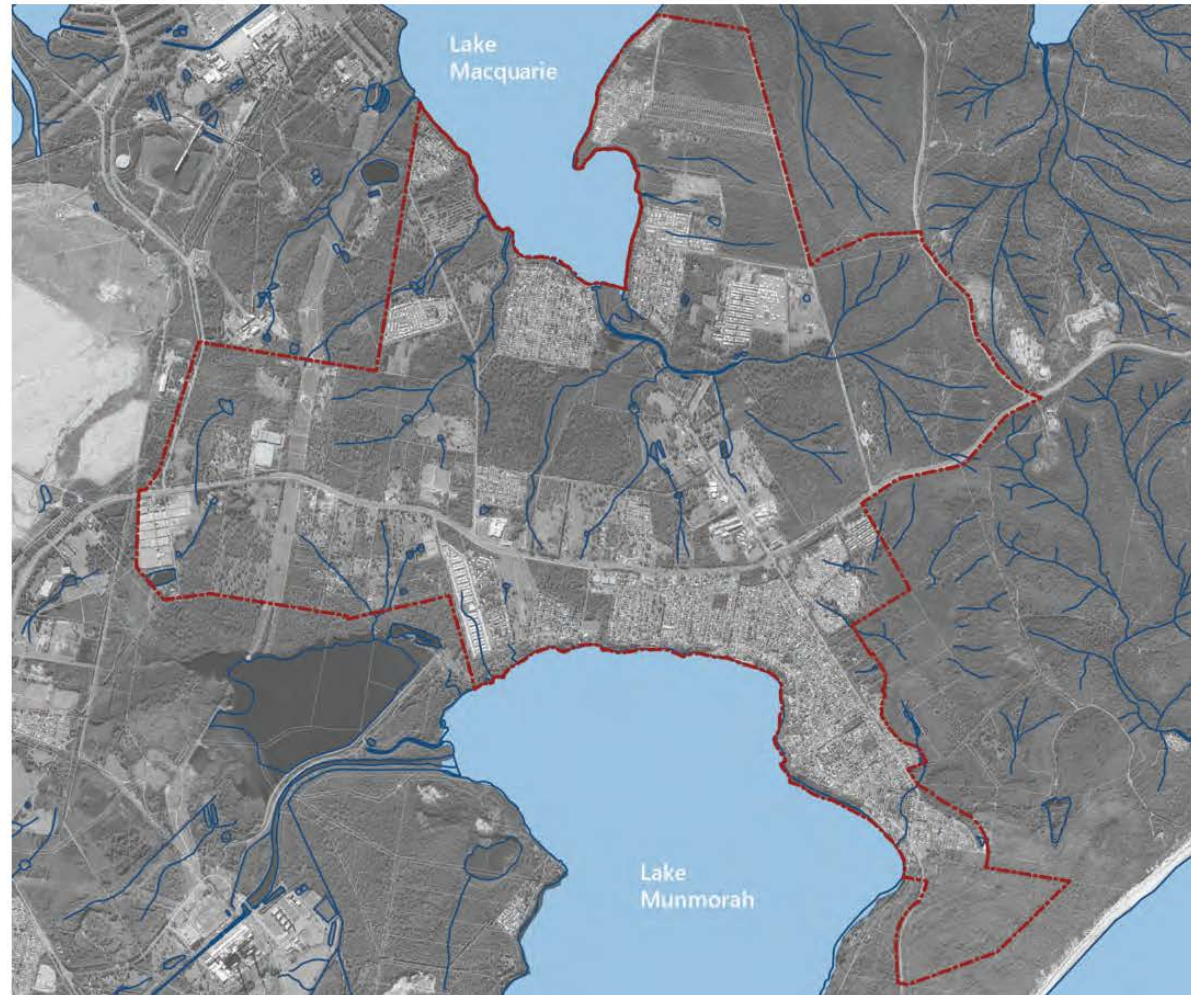
There is also a catchment that drains from the area adjacent to Elizabeth Bay Drive into the Munmorah State Conservation Area. The catchments and the 1 in 100 year flood level associated with Lake Munmorah and Lake Macquarie are indicated on the adjoining Figure.

Riparian Land

Riparian land represents the interface between land and a river or stream. Karignan Creek, in the centre-north of the study area, represents the main riparian land within the study area.

A minimum core riparian zone of 40m either side of the waterbody should generally be preserved to ensure urban development does not compromise the protection of riparian land and waterbodies. The core riparian zone is to be verified for each rezoning or development proposal. With the potential impact of humans and the pressures of development, core riparian zones may also require a vegetated buffer to limit access to riparian areas and filter and improve the water quality of the water entering the waterbodies.

This Structure Plan is to have regard to riparian land protection measures.



LEGEND

Storm Water Drainage Path

Study Area Boundary

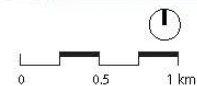


Figure 25: Storm Water Drainage

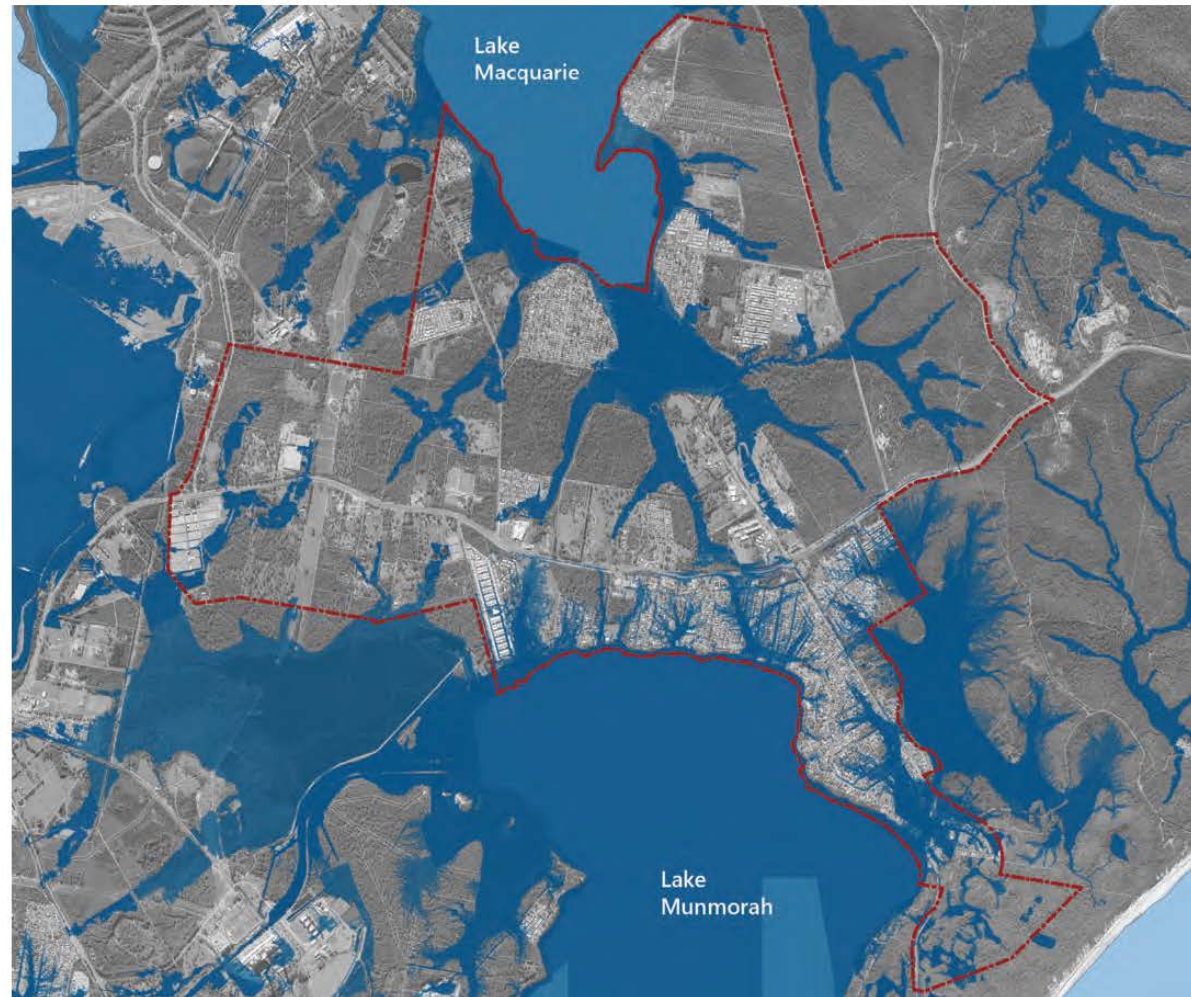
Structure Plan - Greater Lake Munmorah

Existing Conditions

Hazards

Flooding

The study area is significantly affected by flooding concerns (see Figure). Council has recently undertaken an Overland flow flood study for the Lake Macquarie catchment, and this has resulted in a large part of the study area being identified as potentially subject to the Probably Maximum Flood (PMF) extent. Whilst a large area of the land subject to the PMF is located within the regional or local biodiversity corridors, a significant area of land identified for future residential or employment lands development is also affected by this PMF extent. This could have an impact on development opportunities, and add to costs involved in provision of infrastructure. Consideration will need to be given to this hazard when identifying future uses or embellishments to the open space area along the foreshore, as part of this Structure Plan.

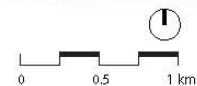


LEGEND

Extent of Extreme Flood

Figure 26: Extreme Flood Extent

Study Area Boundary



# Structure Plan - Greater Lake Munmorah

Existing Conditions

Hazards

## Contaminated Land

Approximately seven properties are identified within Council's contaminated land register as potentially being subject to contamination (see Figure 13). This potential contamination is based on factors largely surrounding past land uses on these sites. Contamination studies may need to be carried out for certain sites proposed for residential or certain business uses as part of this Structure Plan, however it is likely that these studies will not be required until the Planning Proposal stage.

## Soils

Dispersive soils are known to be prevalent particularly on the land claimed by the Darkinjung Local Aboriginal Land Council east of Carters Road. These soils erode easily and lead to sedimentation concerns in Lake Macquarie. This may also be a problem elsewhere in the study area and a geotechnical study may be necessary to develop on these sites.

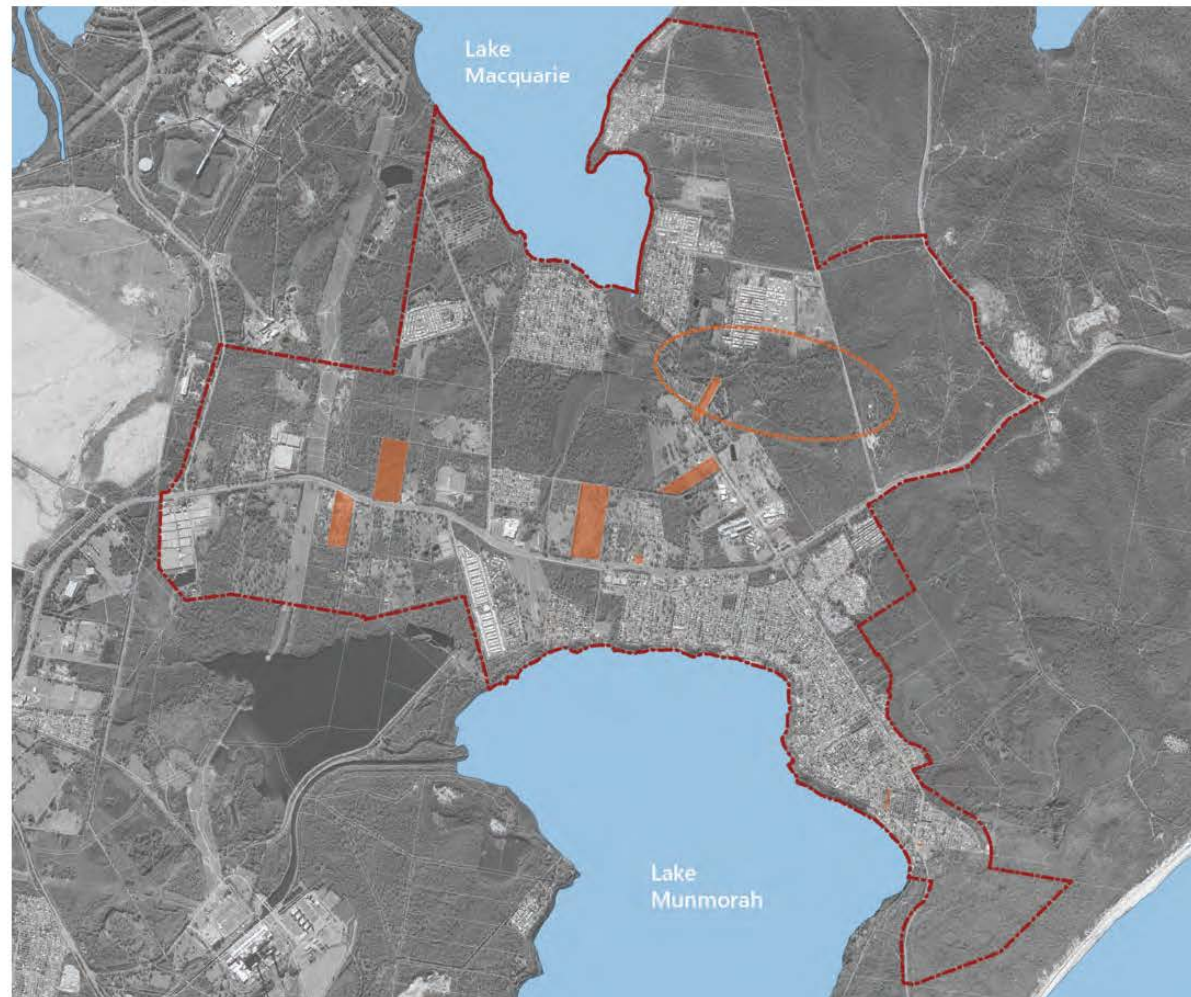
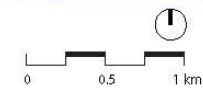


Figure 27: Potentially Contaminated Land

----- Study Area Boundary



Structure Plan - Greater Lake Munmorah

Existing Conditions

Hazards

Bushfire

The study area is subject to significant bushfire hazard due to the presence of natural vegetated areas.

Bushfire prone areas are subject to planning controls designed to improve the bushfire safety of structures that face greater risk of bushfire threat. When rezoning land for the purpose of urban development, Council is required to consider the ability to provide adequate Asset Protection Zones (APZ), fire fighting facilities and access for fire fighting equipment.

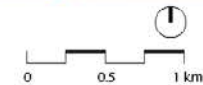
Residential development must comply with the provisions of Planning for Bush Fire Protection ("PfBP"). The PfBP provides the necessary planning considerations when developing areas for residential use when development sites are in close proximity to areas likely to be affected by bushfire events.

The Structure Plan will have regard for the provisions of Planning for Bushfire Safety (2018).



Figure 28: Bushfire

Study Area Boundary



# Structure Plan - Greater Lake Munmorah

Existing Conditions **Servicing**

## Service Infrastructure

### Delivery

Water, sewer and drainage infrastructure can be provided in various ways, as delivery is shared between different State Government agencies, Council, developers, and private sector investors. Generally, water and sewer assets are provided as follows:

Council (as Water Authority)	Private
Regional trunk mains	Standard trunk mains / Reticulation mains
Brownfield Sewer Pump Stations (SPS)	Greenfield Sewer Pump Stations
Sewage Treatment Plant (STP) upgrades	WICA Schemes

Council's Development Servicing Plan (DSP) 2014 provides for the long term servicing of development precincts within the NWSSP areas and existing residential areas in anticipation of expected growth in the area. Proposals outside of the NWSSP area, or significantly outside the NWSSP recommended development timeframes, will need to take into account required infrastructure provision, such as water, sewer, electricity and gas, to meet projected demand. This will need to be informed by projected growth figures in a high-level supply and demand analysis. In particular, Council's existing Water Supply and Sewerage DSP does not include the following precincts:

- Employment Lands Precinct, with the area likely requiring three sewage pumping stations and a rising main to Mannering Park STP to minimise impact on existing Mannering Park catchment infrastructure.
- The proposed Darkinjung Local Aboriginal Land Council development to the east of Carters Road School Precinct. A servicing strategy is currently being developed for this site, in consultation with Council.



Figure 29: Mannering Park STP

### Water

An existing trunk water main runs along the length of the Pacific Highway, providing sufficient bulk water to service proposed development within the area. The associated distribution mains which then convey water to individual properties can be staged with construction, with potential minor upgrades required as part of certain developments. An overview of existing water mains within the study area is provided in Figure 31.

### Sewer

The topography of the study area divides the area into 11 sewer catchments and several SPS catchments. Each of these catchments discharges to the Mannering Park STP, which for some catchments needs to be transferred to SPS via pressure mains due to topography. There are capacity constraints within the majority of these catchments.

In terms of odour impacts from the Mannering Park STP, an Odour Assessment Report was prepared in 2015, which provides an assessment of odour impacts of the STP, based on odour emission rates, and establishes an appropriate buffer zone, provided in the adjoining Figure. This may constrain development within Precinct 3 - Kingfisher Shores. The STP has a current capacity of 12,000 EP, with the next planned upgrade being a capacity increase to 18,000 EP within 20 years, depending on population growth.

The report assessed odour emissions from the current configuration of the STP –

therefore the diagram does NOT include anticipated odour impacts once the STP capacity is increased to 18,000 EP. The white line on the diagram depicts the average odour impacts across all 4 seasons, and is the threshold that is used to restrict development within this contour. There may be limited opportunities to undertake additional capital works at the plant to minimise the extent of the estimated two odour unit contour, however the funding of any potential works would be the responsibility of the developer and would require additional odour modelling to assess the likely effectiveness of potential options. It is not considered likely that an economic level of capital upgrades could be undertaken to eliminate the potential for odour impacts on the entirety of this precinct.

The existing sewer infrastructure is illustrated in the adjoining Figure.



Figure 30: Mardi Intake Tower

# Structure Plan - Greater Lake Munmorah

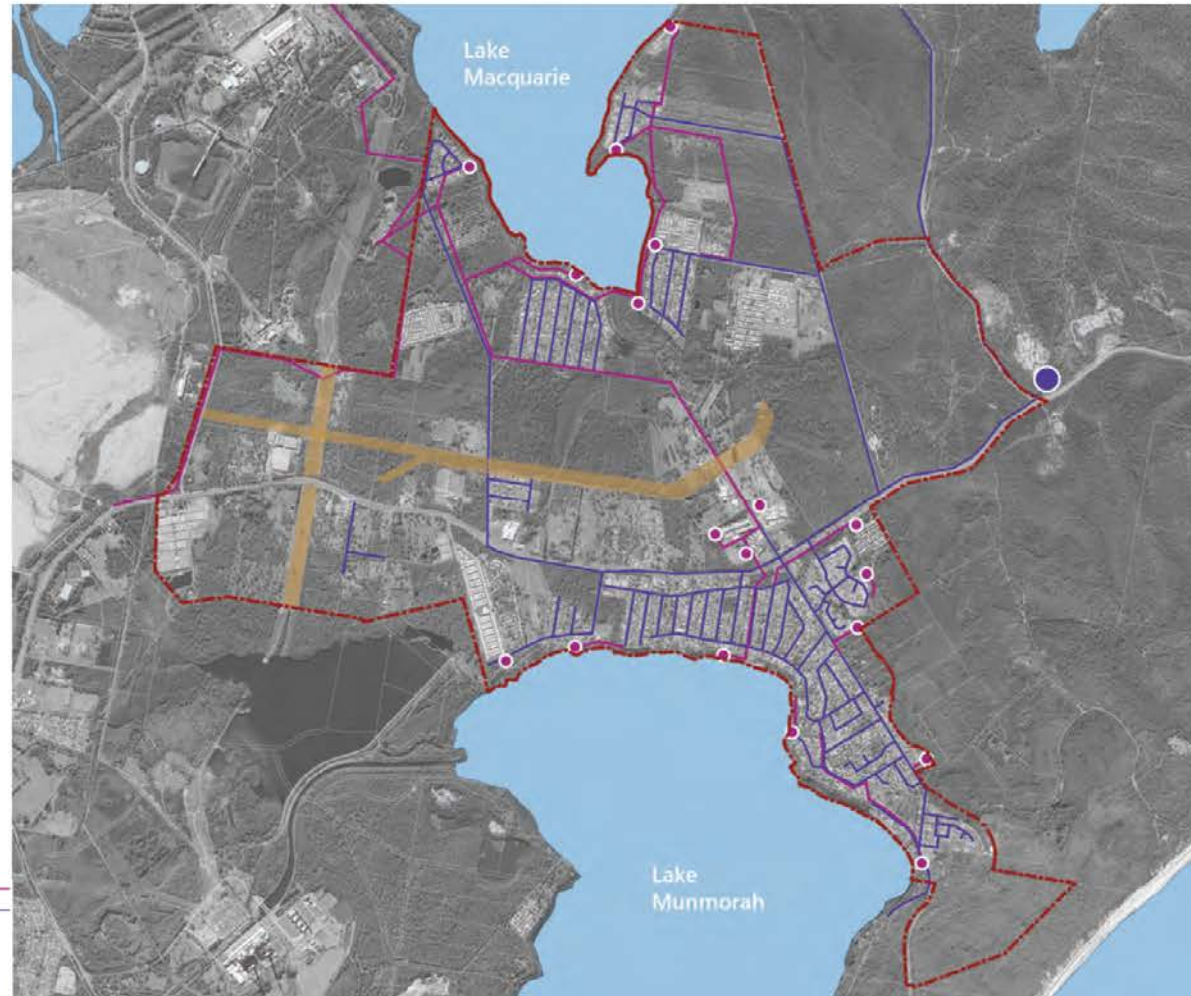
Existing Conditions **Servicing**

## Service Infrastructure (Ctd)

### Electricity

Electricity supply is readily available in the study area, due to its close proximity to Vales Point power station, substation and high voltage transmission lines. The substation, located on Carters Road, Lake Munmorah, is part of the 132kV network that distributes power to the surrounding suburbs via the smaller network of 11 kV lines.

A significant, 100m wide TransGrid transmission line (TL) easement runs through part of the study area (see Figure 22). TransGrid easements provide adequate clearance along the route of a TL for construction and maintenance work. Very limited construction works or other activity can be undertaken under or near a TL, in order to protect human life as well as ensure the security of the TL or associated infrastructure. Therefore, the presence of such an easement will significantly limit the development potential of the affected properties. For example, the construction of houses, buildings or other substantial structures is prohibited within a TL easement. This restriction will need to be incorporated into this Structure Plan for this area.



**LEGEND**

- Sewerage Infrastructure- Rising Mains
- Water Infrastructure- Water Mains
- Sewerage Infrastructure- Sewer Pumping Station
- Water Infrastructure- Reservoir
- Manning Park Sewage Treatment Plant Odour Area
- Transgrid Electricity Easement

Figure 31: Existing Service Infrastructure  
 Study Area Boundary



# Structure Plan - Greater Lake Munmorah

## Existing Conditions Transport

### Existing Road Network

The Pacific Highway is the predominant road corridor within the study area, with a number of secondary roads serving the suburbs of Lake Munmorah (Elizabeth Bay Drive), Chain Valley Bay South (Tall Timbers Road) and Chain Valley Bay North (Chain Valley Bay Road). The Pacific Highway corridor serves to separate the northern and southern parts of the study area, making vehicular and pedestrian connectivity difficult. The average speed on the Highway is in excess of the posted speed limit of 80km/h. Where travel speed exceeds 80km/h, vehicle speed / distance perception in road environments is very difficult to judge. This creates significant pedestrian safety issues associated with crossing the highway. An overhead pedestrian crossing, located at the major intersection of the Pacific Highway and Carters Rd, assists in ensuring safe passage across the Highway. However, the only other pedestrian crossing is located 1.9km to the west at the intersection of Tall Timbers Rd.

The Pacific Highway through Lake Munmorah has significant capacity for future growth and can accommodate 1800 vehicles per lane per hour. Generally there are no concerns with traffic flows however the Carters Road school precinct has been identified as a problem area in terms of traffic congestion during peak pick-up and drop-off periods.

The former Wyong Shire Council's funding lobbying tool, 'Transforming the NSW Central Coast', identified the need for the following road improvements within Lake Munmorah:

- Link road from Chain Valley Bay Rd to Kanangra Dr: A 700m long gravel road linking Chain Valley Bay North to Gwandalan/Summerland Point. Council requested the land be transferred to create a public road reserve, as well as funding for necessary upgrades.
- Carters Rd – Extend to Scaysbrook Ave, Chain Valley Bay South: This will reduce traffic on the Carters Rd/Pacific Hwy intersection, and provide an alternative access to Chain Valley Bay South.
- Carters Rd – Extend to Teragalin Dr, Chain Valley Bay North: This will reduce traffic on the Carters Rd/Pacific Hwy intersection, and provide an alternative access to Chain Valley Bay North which is currently restricted to one access.

This Structure Plan will consider the need for additional road networks based on future residential and employment growth within the study area. A transport specialist will be separately engaged for this purpose upon adoption of this Structure Plan and will undertake a macro-simulation focussed on key intersections along the Pacific Hwy, and will comprise up to three traffic scenarios as follows:

- A 'base case' modelled on existing development and road networks
- Additional development precincts utilising the existing road network
- Additional development precincts utilising existing and additional road networks if necessary.

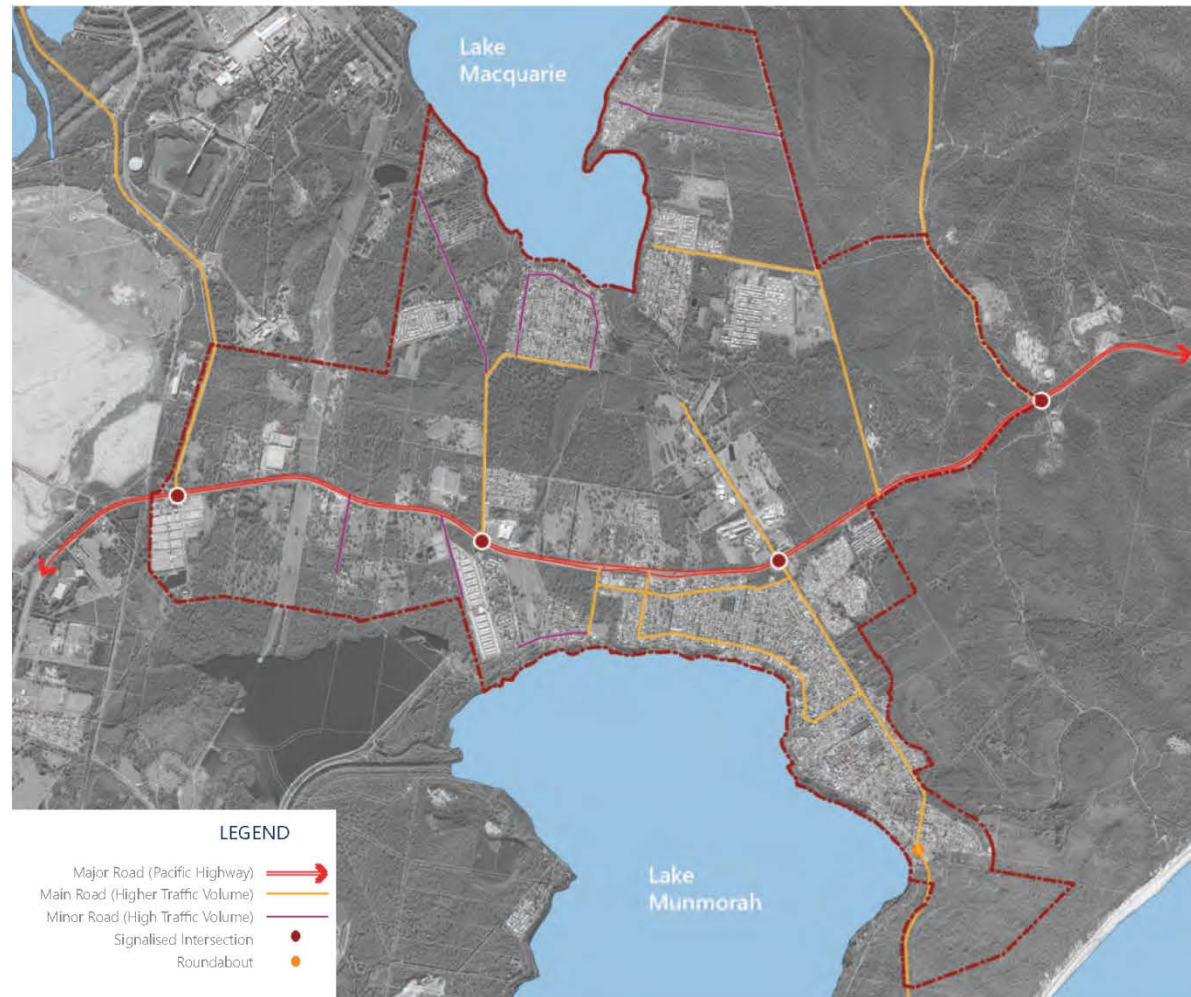


Figure 32: Existing Major Road Network  
 - - - - - Study Area Boundary

## Structure Plan - Greater Lake Munmorah

Existing Conditions

Transport

### Public Transport

Busways and Red Bus Service operate bus services within the study area. There is very little use of public transport within this area, with only 2.7% of residents using public transport to travel to work (ABS Census, 2016). This is largely due to the inadequate provision of public transport to this area, making public transport use both time and cost prohibitive. This Structure Plan should align walking and cycling networks with public transport routes to improve accessibility to public transport.

### Existing Shared Pathway Network

An important consideration for the liveability of the study area is the network of shared pathways. Shared pathways can be used by both pedestrians and cyclists, whilst bicycle lanes are on road facilities on the side of the road usually marked by painted white lines and bicycle symbols. Shared pathways enable pedestrian or cycle access to, and appreciation of, the natural environment and scenic landscapes, as well as more practical access to other places of interest such as commercial areas. This is an essential way to support community activity, interaction, health and wellbeing. The Pacific Highway is a major barrier for pedestrian and cyclist connectivity between the northern and southern segments of the study area.

The figure below depicts existing footpaths and/or shared pathways within the study area. This Structure Plan presents an opportunity to identify additional shared pathway connections to ensure that the network is functional and encourages active lifestyles.

*\*\* The existing shared pathway network is already being improved as part of the Farmer Wyong LGA's On-Road Bicycle and Shared Pathway Strategy (2010). This is a 10-year plan to achieve an improved on-road cycling and shared pathway network. This Strategy identifies one priority project within the study area, to connect the Lake Munmorah foreshore to the Pacific Highway / Elizabeth Bay Drive intersection, via Agatha Avenue. This was the missing link to connect the shared pathway from Chain Valley Bay North to Lake Munmorah foreshore. \*\**

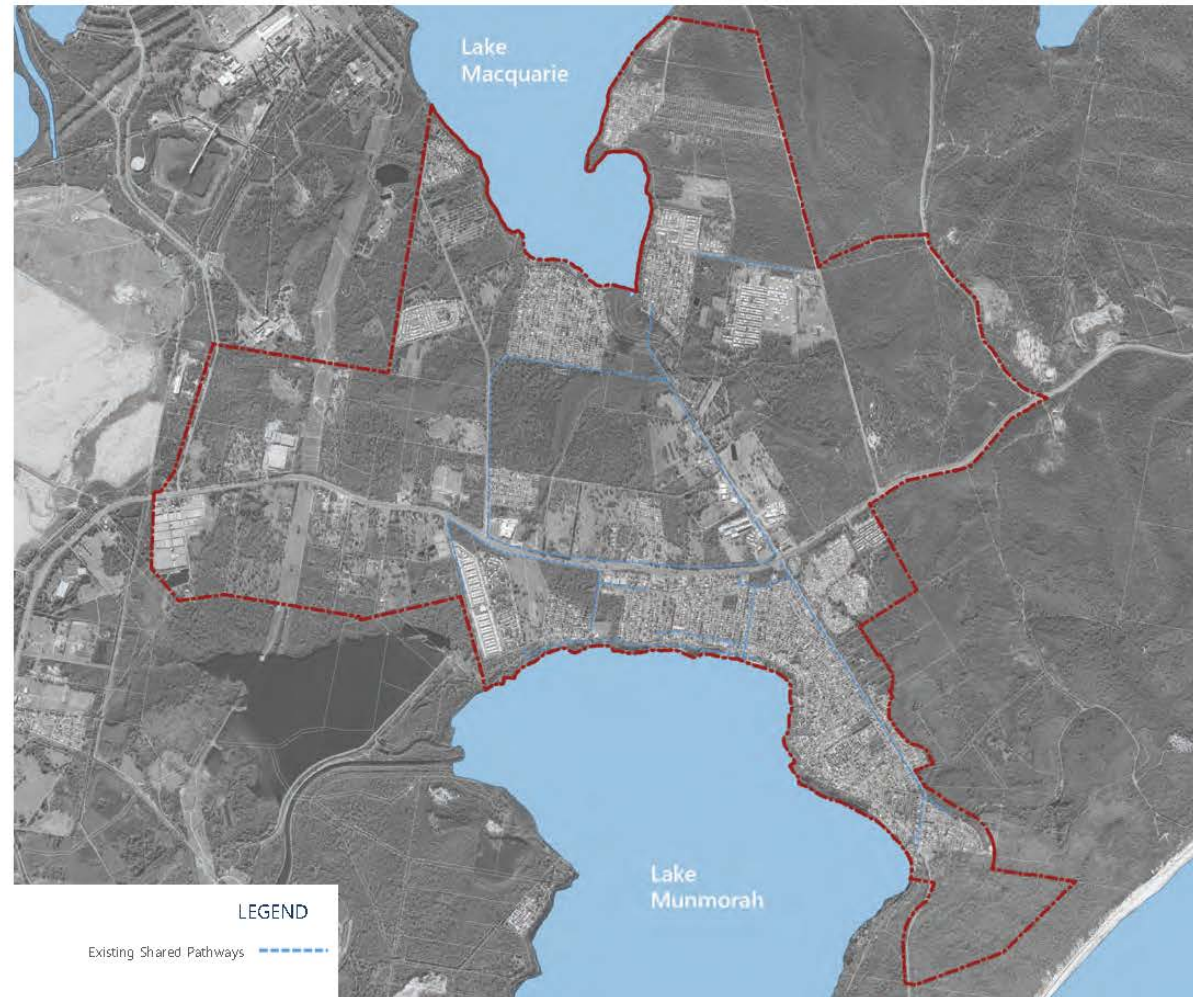
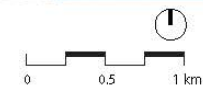


Figure 33: Existing Shared Pathway Network

Study Area Boundary





# Structure Plan - Greater Lake Munmorah

Existing Conditions

Recreation

## Recreation Facilities – Parks and Playgrounds

### Small Parks

Small parks, or neighbourhood parks, provide for regular use by local residents. The study area boasts a large number of small parks within the residential areas and lake foreshore. However, only the following small parks contain play equipment for children:

1. **Sunset Parade Playground**

Sunset Parade, Chain Valley Bay

2. **Patrick Kelly Reserve**

Clarence Street, Lake Munmorah

3. **Kingfisher Reserve**

Lakeshore Avenue, Kingfisher Shores

### Large Parks

Large parks cater to the needs of a broader population and therefore attract usage from a wider catchment than small parks. The study area boasts four large parks which cater to the needs of a broader population:

1. **Tom Burke Reserve: Anita Avenue, Lake Munmorah**

Facilities - This park is considered significant due to the combination of a playground, swimming beach, accessible BBQ and toilet, mini bus parking.

2. **Mulloway Reserve: Mulloway Road, Chain Valley Bay**

Facilities - This park is considered significant due to the combination of a boat ramp, jetty and playground.

3. **Colongra Bay Reserve: Colongra Bay Road, Lake Munmorah**

Facilities - This park is considered significant due to the co-location of the community hall, shared pathways, public toilets, BBQ facilities, playground and fitness equipment.

4. **Joshua Porter Reserve: Lloyd Avenue, Chain Valley Bay**

Facilities - This park is considered significant for local and regional visitors due to the playground, BBQ, public toilets and boat ramp.



Figure 34: Sunset Parade Playground



Figure 35: Patrick Kelly Reserve



Figure 37: Kingfisher Reserve



Figure 36: Tom Burke Reserve



Figure 38: Mulloway Reserve



Figure 39: Joshua Porter Reserve

## Structure Plan - Greater Lake Munmorah

Existing Conditions

Recreation

### Recreation Facilities – Sportsfields/ Courts and Natural Reserves

#### Sporting Fields / Courts

The study area is under-provided with respect to sporting fields and courts. The study area has the following sporting fields and/or courts:

1. Gumbuyah Oval (corner of the Pacific Highway and Tall Timbers Road): This is the only sporting field in the study area, currently leased exclusively by the Crown to the Northern Lakes Warriors Rugby League Football Club.
2. Lake Munmorah Tennis/Netball/Skate Park (Acacia Avenue, Lake Munmorah): Basketball, Netball, Tennis courts. Clubhouse / Amenities Block, Car Parking, Floodlights, Grassed Area, Park Furniture, Skate Park.

#### Semi-Natural Reserves

Semi-natural reserves can include bushland, foreshore areas and nature reserves with a primary purpose of wildlife conservation and biodiversity. These semi-natural open space areas can frequently be found within, or adjacent to other open space types, and may provide some limited recreation opportunities, such as picnicking and bush-walking. These reserves are also known as passive recreation areas.

The study area boasts large areas of semi-natural reserves along the Lake Munmorah and Lake Macquarie foreshores. These reserves provide extensive connections to recreation, community and retail attractors, however do not provide any facilities other than those noted below:

- Lake Munmorah Reserve (adjacent to the lake foreshore on Colongra Bay Road): This is currently a designated dog exercise off-leash area.
- Teraglin Reserve (Teraglin Drive, Chain Valley Bay): No facilities.
- Elizabeth Bay: Public toilet facilities but the playground was removed when the National Parks & Wildlife Service (NPWS) took over the site. It is well located as a local open space area.
- McCollock Reserve (Anita Avenue, Lake Munmorah): No facilities.
- RFS Park (Acacia Avenue, Lake Munmorah): No facilities.
- Rosemount Avenue, Lake Munmorah: No facilities.
- Rodney Close/Elizabeth Bay Drive, Lake Munmorah: No facilities. Drainage reserve.
- Hartog Avenue, Lake Munmorah: No facilities.
- Bodalla Road, Lake Munmorah: No facilities.
- Acacia Avenue, Lake Munmorah: Senior Citizens Centre.
- Munmorah Reserve (Colongra Bay Road, Lake Munmorah): No facilities.
- Kemira Road, Lake Munmorah: No facilities. Drainage reserve.
- Chain Valley Bay Foreshore Reserve (Kingfisher Shores - Chain Valley Bay): No facilities. Foreshore reserve.
- Lake Munmorah Foreshore Reserve: No facilities. Foreshore reserve. Utilised extensively at the western side but underutilised at the eastern extent accessible from Greenacre Avenue.



Figure 40: Gumbuyah Oval



Figure 41: Acacia Avenue Tennis and Basketball Courts

# Structure Plan - Greater Lake Munmorah

Existing Conditions

Recreation

## Recreation Facilities – Accessibility/ Functionality

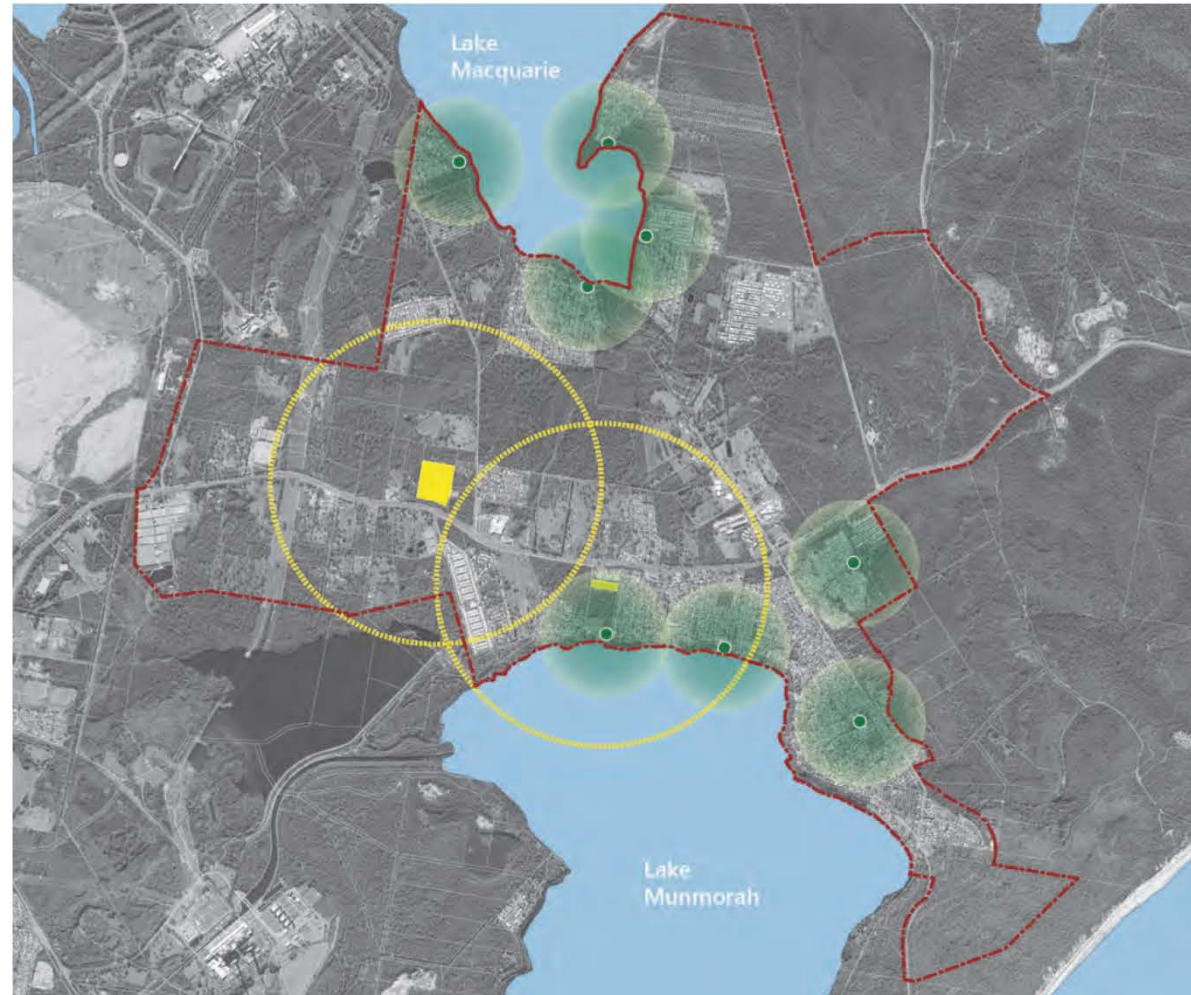
### Accessibility

The following figure identifies a 1km radius around the 2 major recreation reserves, as well as the smaller recreation reserves with a 400m radius. The figure shows how accessible this open space is to pedestrians. As evidenced by this figure, the location of the existing recreation reserves is suitable to provide adequate small scale recreation facilities within 400m to most existing residences. However, in terms of the major recreation reserves, large areas of the existing residences are located outside the 1km radius.

### Functionality

Many of the recreation reserves pictured in the previous figure have no playground facilities, or any other facilities such as picnic areas and BBQs. Once the recreation reserves WITHOUT such facilities are removed from the image, the lack of playground facilities within the study area becomes more apparent. Council will consider the embellishment of a number of existing passive reserves in order to improve pedestrian access to playground facilities for the community. This will increase quality of life for the residents within the study area.

This Structure Plan shall review the role of each site within a broader recreation hierarchy and identify areas where new recreation reserves shall be required to cater for future residential population growth, particularly in the north-east of the study area. Each site will also be considered for its potential to provide multi-use facilities. There are recognised benefits of co-location near schools, community facilities, commercial areas and good public and private transport links. Joint development with public facilities and in association with compatible private development is also of benefit.

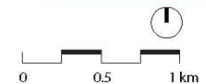


**LEGEND**

- Distance to Recreation Facility- Play Space 400m ●
- Distance to Recreation Facility- Sportsground 1km ○

Figure 42: Accessibility to Existing Playground/ Sportsground Facilities

----- Study Area Boundary



## Structure Plan - Greater Lake Munmorah

Existing Conditions

Recreation

### Recreation Facilities - Aquatic

The study area is heavily utilised for aquatic recreation due to its location adjacent to both Lake Munmorah and Lake Macquarie water bodies. The figure below depicts the location of aquatic infrastructure within and around the study area. Swimming areas are located at Tom Burke Reserve, Lake Munmorah and Joshua Porter Reserve, Chain Valley Bay South. Boat ramps are also located in Lake Munmorah and Chain Valley Bay South. The role of the marine industry may be important to the future economy of this area and will be reviewed.

### Recreation Facilities - Conclusion

With continued growth, the Structure Plan area will continue to build on the diverse network of public and private open spaces and related recreation opportunities, leveraging in part off the conservation of extensive vegetation and wetland communities and existing recreational facilities. To accommodate this, recreation planning will need to consider:

- The characteristics of the precinct
- The vision for the future urbanisation of the precinct
- The nature and extent of existing recreation and open space facilities
- The projected demand for recreation and open space facilities to service the proposed new community
- The means of addressing the demand having regard to the environmental context
- The underpinning design philosophy
- The implementation principles.

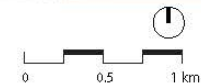
As with provision of community facilities discussed above, Council will need to explore a range of funding options for open space and recreation facilities ranging from Section 94, Council revenue, State and Federal government funding, through to commercial opportunities.

The Structure Plan shall review the role of each site within a broader recreation hierarchy and identify areas where new recreation reserves shall be required to cater for future residential population growth, particularly in the north-east of the study area. Each site should also be considered for its potential to provide multi-use facilities.



Figure 43: Aquatic Recreation Facilities

--- Study Area Boundary



## Structure Plan - Greater Lake Munmorah

Existing Conditions

Community

### Community Facilities

Community facilities make a fundamental contribution to our community by providing spaces for people to come together to socialise and learn, building a sense of community connections, and participation and reducing social isolation. The study area is located within the Northern Lakes social planning district. This district, and Warnervale/Wadalba social planning district, will continue to be the focus of the majority of new residential development and population growth occurring in the Central Coast LGA. Providing spaces for the community assists in the delivery of services, programs and activities to meet social needs, the future growing population and build community capacity.

Council currently provides three community facilities in the study area:

1. Colongra Bay Community Centre
2. Lake Munmorah and District Senior Citizens Centre
3. Chain Valley Bay Community Hall
- 4.

These facilities are currently well utilised, however there are some issues:

- Limited functionality / not suited to the needs of the local community
- Ageing facilities in varying condition that require regular maintenance
- Vandalism and Graffiti
- Lack of use by wider community (exclusive use)
- Lack of connection with surrounding open spaces/ parks/ playgrounds

There are also a number of non-council facilities available that have space available for the wider community to hire, however these are predominantly school halls. Most are permanently occupied for after-school activities by private dance groups/ martial arts groups and have very limited additional capacity. This use is obviously meeting a strong demand in the area, but also restricts use by other types of groups.

Lake Munmorah Bowling Club is also available for public hire for functions, with a function area that can be divided into smaller spaces. Traditionally these facilities have provided an option for sporting and larger group activities and private one-off functions but do not meet the demand for flexible multi-use community spaces.



Figure 44: Chain Valley Bay Community Centre



Figure 46: Lake Munmorah Senior Citizens Centre



Figure 45: Lake Munmorah Community Hall

## Structure Plan - Greater Lake Munmorah

Existing Conditions

Community

### Education Facilities

The Structure Plan area includes a range of public and private primary and secondary schools:

- Lake Munmorah High School - Year 7 to Year 12
- Lake Munmorah Public School - Kindergarten to Year 6
- St Brigid's Catholic College - Year 7 to Year 12
- St Brendan's Lake Munmorah - Kindergarten to Year 6

Demand for new schools will occur as various precincts grow. Local planning will need to accommodate potential new public school sites in consultation with the Department of Education, however there is likely to be enough capacity within the above four schools to accommodate future population growth in the area.

TAFE NSW has no plans to develop tertiary education within the northern part of the LGA at present.

The former Wyong Shire Council's 'Transforming the NSW Central Coast' was used as a key lobbying tool in the lead up to the 2015 State Election, and identified the need for Structure Planning the northern growth areas of the former Wyong LGA, and in particular the greater Lake Munmorah area. 'Transforming the NSW Central Coast' states the following:

*'The northern part of Wyong Shire has been earmarked (by the NSW State Government) in the Central Coast Regional Development Strategy 2008 and the North Wyong Shire Structure Plan 2012 for high population growth, with 17,000 additional dwellings and 37,400 new residents expected by 2031. Lake Munmorah is central to this area of the Shire and a series of new, critical pieces of economic and social infrastructure are required, together with the careful planning of environmental areas to cater for this major growth corridor.'*

This document addresses a number of issues in the study area, including:

#### **New infrastructure for Lake Munmorah**

To support future population growth in this area, Council has requested funding from the State Government to provide essential social and economic infrastructure. This infrastructure includes the Northern Community Hub, Northern Lakes Sporting facility, TAFE facility, Munmorah/Birdie Beach coastal facility, and the Mannering Park Rural Fire Service new facility/equipment.



Figure 47: Lake Munmorah High School



Figure 48: St Brigid's Catholic College

# Structure Plan - Greater Lake Munmorah

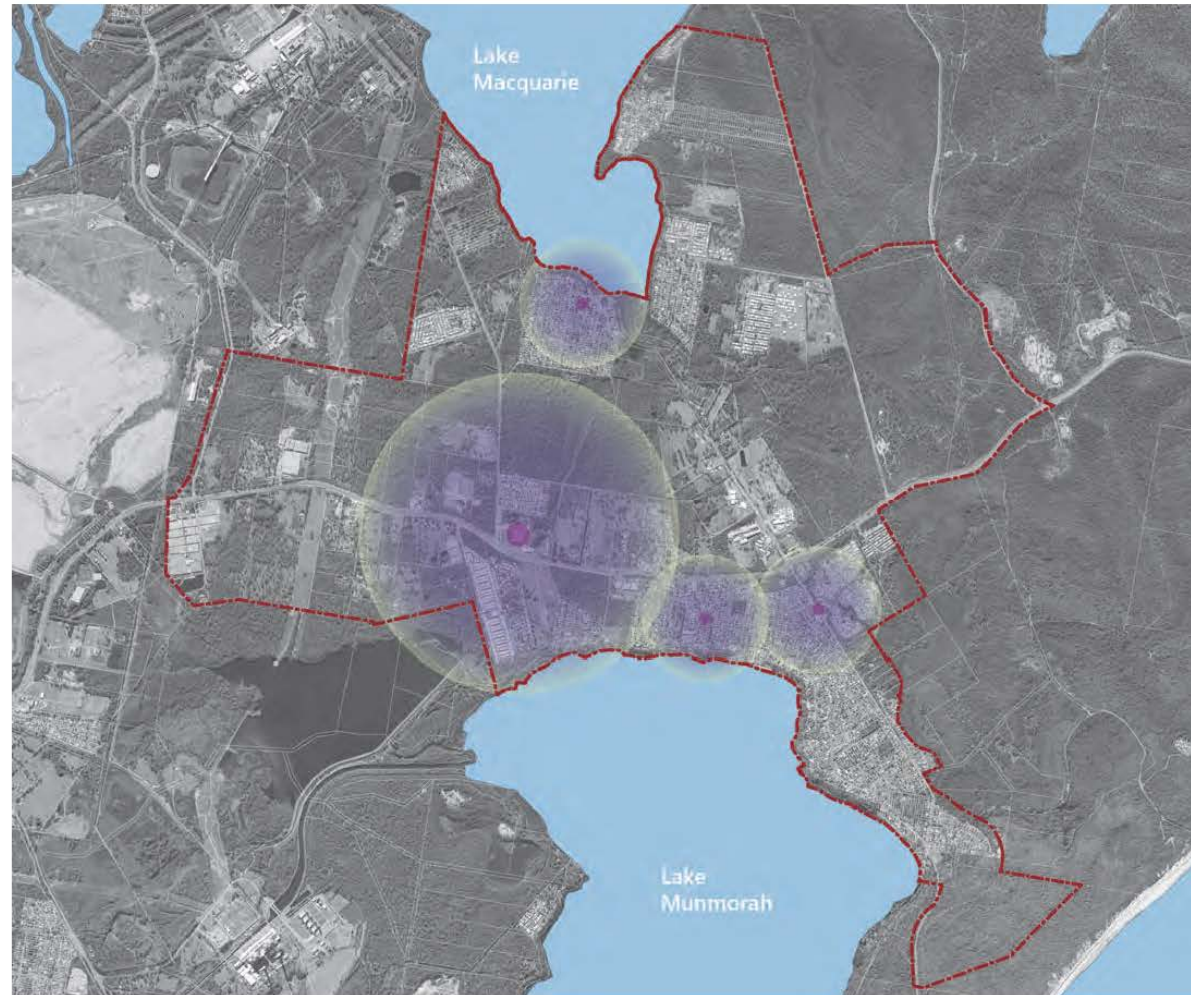
Existing Conditions

Economy

## Commercial Centres

The Wyong Retail Centres Strategy (2013) considered opportunities for the redevelopment and renewal of existing centres in the LGA as well as the distribution, function, broad land use and urban design criteria of centres. This strategy provides guidance for the Greater Lake Munmorah area:

- Lake Munmorah Local Centre at Tall Timbers Road, Lake Munmorah provides retail services to Lake Munmorah and surrounding localities and comprises 5,500m<sup>2</sup> of floorspace, including a 3,800m<sup>2</sup> supermarket, 1,200m<sup>2</sup> of specialty retail and a 500m<sup>2</sup> medical centre. Taking into account available expenditure from catchment households and the potential to attract some trade from beyond the catchment, it is estimated that the centre currently needs to attract around 35% of retail expenditure from catchment households. Opportunities to expand will be restricted until there is significant population growth in the catchment.
- Small neighbourhood centres are located at Anita Avenue and Elizabeth Bay Drive, Lake Munmorah, and Lloyd Avenue, Chain Valley Bay. Although neighbourhood centres within the catchment have likely experienced a downturn in sales since the opening of the Lake Munmorah Local Centre, there is sufficient expenditure available within the catchment to support these centres.



**LEGEND**

Distance to Commercial Centres- 400m

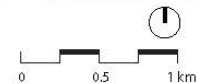


Distance to Commercial Centres-1km



----- Study Area Boundary

Figure 49: Walkability to Existing Local and Neighbourhood Centres



## Structure Plan - Greater Lake Munmorah

Existing Conditions

Economy

### Potential for a new Commercial Centre

There is a general lack of walkability to the existing commercial centres for the bulk of the study area. Figure 29 depicts a 1km radius around the B2 Local Centre and 500m radius around the B1 Neighbourhood Centres. The majority of residents are therefore not considered to be within a walkable distance to these centres. There is also no single commercial and/or civic centre that serves as a focus for the community, as neither the neighbourhood centres nor the local centre function as a community focal point at present, with limited retail choice and services. A civic centre can contribute significantly to community connectedness. Functional outdoor civic spaces and passive open spaces provide community meeting points and event spaces, and make a centre attractive to visitors. This contributes to community building by encouraging active community participation, and can have positive flow on effects for the economic success of a civic centre. The role of a civic centre for the residents of the study area is currently met by Lake Haven centre, and this will likely continue in the short to medium term.

This Structure plan will consider the appropriate location for a future Town Centre within the study area, and identify ways to attract a variety of uses to activate the site.

### Employment Self-Containment

There is little in the way of local employment within the study area. Retail opportunities exist at the Local and Neighbourhood Centres; Education opportunities within the Carters Road school precinct; and a small number of employment opportunities in agriculture as there are horticultural operations at Doyalson North within the western portion of the study area.

This Structure Plan will consider ways to increase employment self-containment for the study area.



Figure S0: Lake Munmorah Local Centre at Tall Timbers Road



Figure S1: Lake Munmorah Neighbourhood Centre



# Structure Plan - Greater Lake Munmorah

Existing Conditions

Economy

## Employment Land

The Department of Planning and Environment defines employment lands as:

*“Land zoned for industrial or similar purposes in planning instruments. They are generally lower density employment areas containing concentrations of businesses involved in: manufacturing; transport and warehousing; service and repair trades and industries; integrated enterprises with a mix of administration, production, warehousing, research and development; and urban services and utilities”.*

At present there is little in the way of employment lands within the Study Area. With the exception of Vales Point power station (due to close in 2028), the predominant form of employment is services to support the local population including retail and education. Coal fired power is not a sustainable form of power generation in the long-term and thus unlikely to be a driver of future demand for employment land.

As part of this Structure Plan, Council engaged Hill PDA Consultants to prepare an Economic Feasibility Analysis for the study area. As part of this analysis, a strategic assessment of the key strengths and weaknesses for the study area’s economy is as follows:

<b>Strength</b>	<ul style="list-style-type: none"> <li>• Pacific Highway corridor connecting Wyong with Newcastle.</li> <li>• Linkages to the M1 Pacific Motorway via the Pacific Highway</li> </ul>
<b>Weakness</b>	<ul style="list-style-type: none"> <li>• Close proximity to power generation and transmission assets; bound by power transmission easements and transitional / environmental conservation zones (RU6 and E2);</li> <li>• Limited access to ocean and lake;</li> <li>• Commercial office and light industrial likely not in line with market requirements</li> </ul>
<b>Opportunity</b>	<ul style="list-style-type: none"> <li>• Underlying land costs are somewhat lower than elsewhere in the region, which could mean lower cost dwelling product to help with more affordable and diverse housing options.</li> <li>• Lake Munmorah Local Centre currently supports a catchment of around 10,000 people with additional land to the west to support long term expansion for retail or other services.</li> </ul>
<b>Threat</b>	<ul style="list-style-type: none"> <li>• Future development or redevelopment of power stations or the need for additional expansion of mining assets.</li> </ul>



Figure S2: Vacant future employment Lands

# Structure Plan - Greater Lake Munmorah

Existing Conditions

Land Use Conflicts

## Current Development Activity

### Current Development Activity within Study Area

A number of land owners in the area have expressed an interest in developing land for residential purposes in the area OR have submitted a planning proposal as follows:

1. **Darkinjung Proposal:** A Gateway Determination for a Planning Proposal was issued on 12 January 2015. The draft concept provides for 600 lots.
2. **Pacific Highway Proposal:** The landowner is seeking rezoning of this Precinct as a residential release area. The owner has also advanced servicing investigations for the site.
3. **Carters Road Proposal:** Representations have been made on behalf of the owners of 78 – 92 Carters Road, Lake Munmorah to rezone the subject land from E3 Environmental Management to RU6 Transition. The site is located at a critical point within the biodiversity corridor, rezoning of this site would effectively sever this regional corridor and as a result Council does not support the rezoning.
4. **Mulloway Road Proposal:** A Gateway Determination was issued on 16 June 2017. The draft concept provides for approximately 100 residential lots.

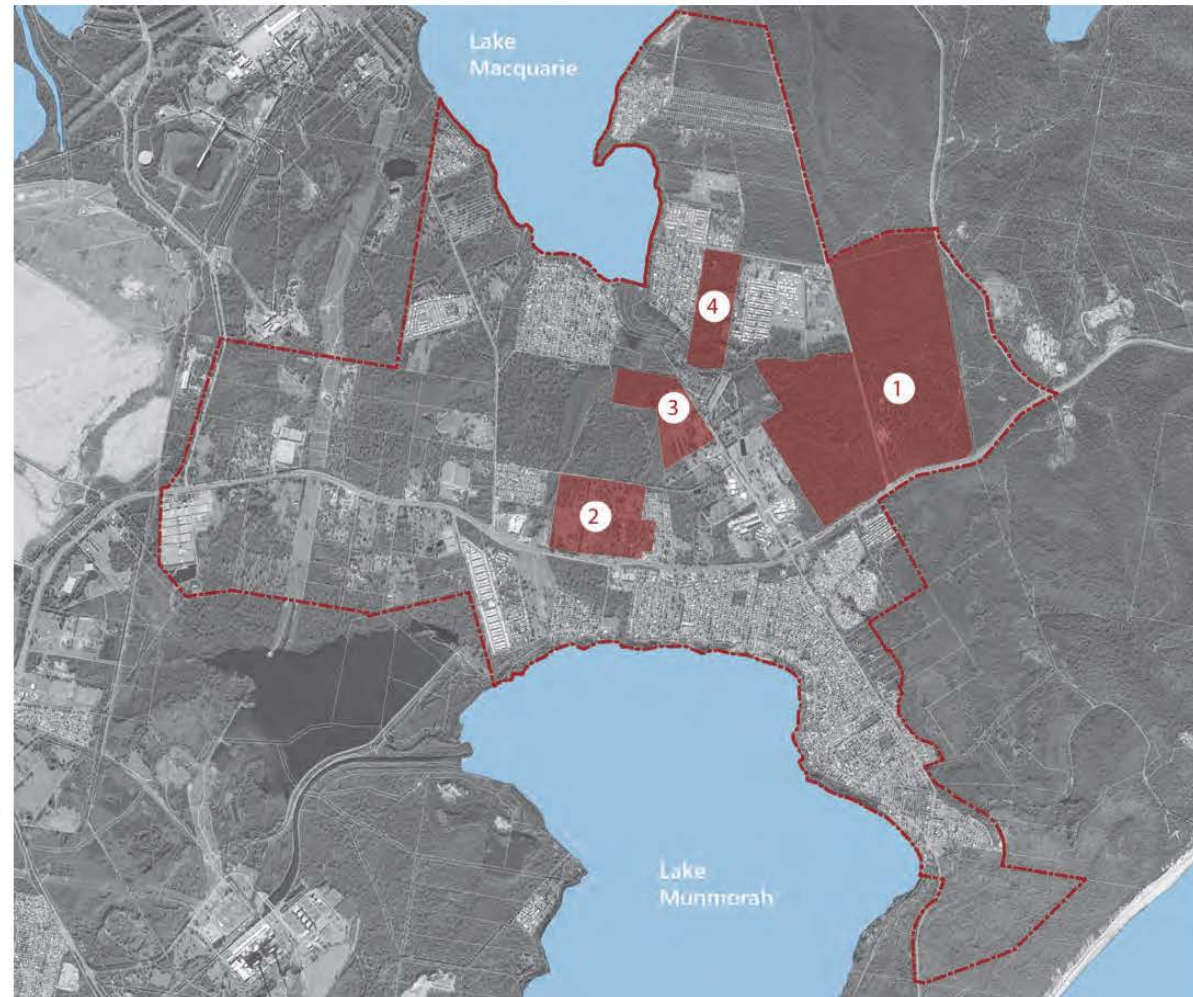


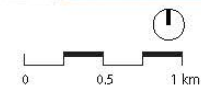
Figure 53: Planning Proposals within Study Area

Study Area Boundary

### LEGEND

Planning Proposals within Study Area

- 1. Darkinjung Local Aboriginal Land Council Proposal
- 2. Pacific Highway Project
- 3. Carters Road Proposal
- 4. Mulloway Road Proposal



## Structure Plan - Greater Lake Munmorah

Existing Conditions

Land Use Conflicts

### Current Development Activity (Ctd)

#### Current Development Activity outside Study Area

There are additional approved residential land releases in the vicinity of the study area at Wyee, Gwandalan, and Catherine Hill Bay as shown on the map below:

1. **Gwandalan South:** 623 dwellings comprising 387 residential dwellings contained in individual lots and 199 seniors living dwelling units.
2. **Gwandalan North:** 187 residential dwellings contained in individual lots.
3. **Gwandalan Commercial:** An application has been received which proposes the rezoning of the site from IN2 Light Industrial, RE1 Public Recreation, E2 Environmental Conservation to part B2 Local Centre, part R1 General Residential, and part R2 Low Density Residential. The proposed centre could potentially accommodate a supermarket, retail shops, medical centre, child care centre and other community commercial uses. This could have a significant impact on the viability of a new centre within the study area.
4. **Wyee:** Yield analysis conducted for the Wyee Local Environmental Study estimates a yield of 1,350 residential dwellings in individual lots.
5. **Catherine Hill Bay:** 548 residential lot subdivision has been approved, and development has commenced.

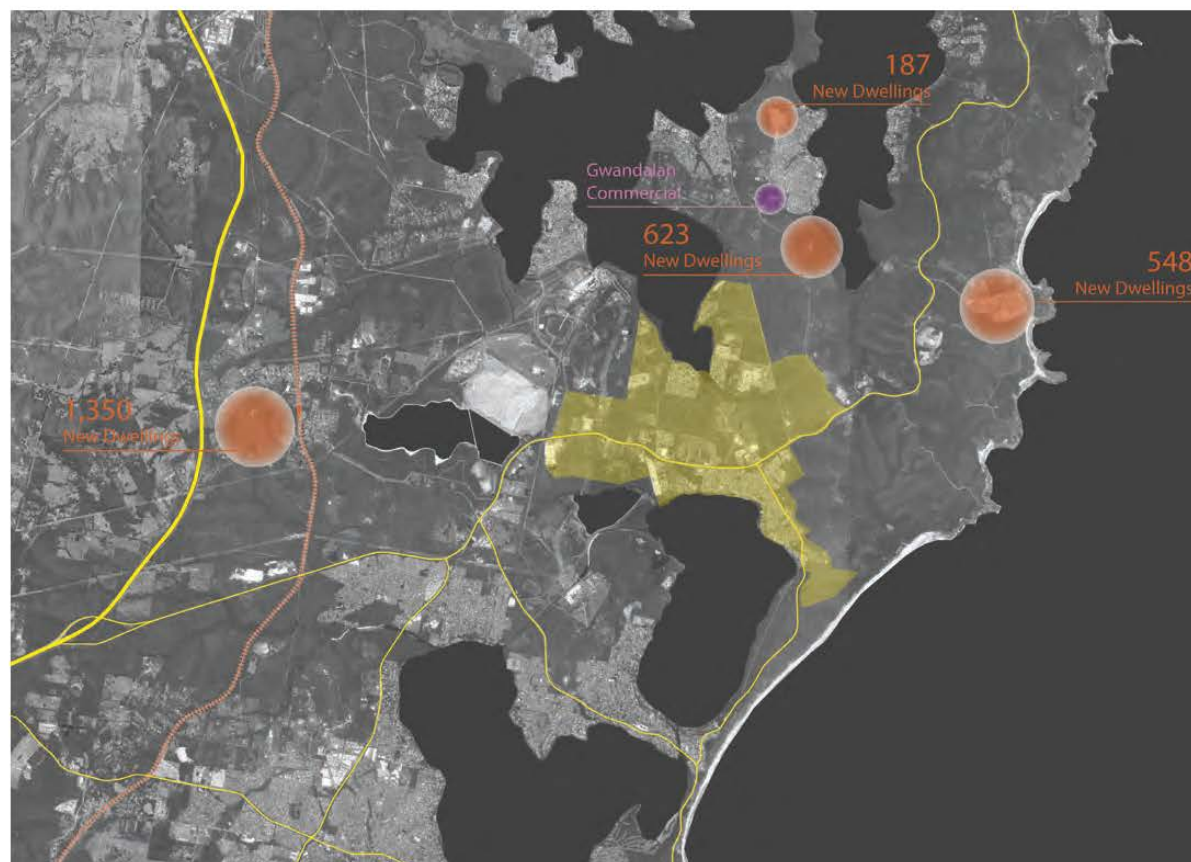


Figure S4: Current Development Activity outside Study Area

# Structure Plan - Greater Lake Munmorah

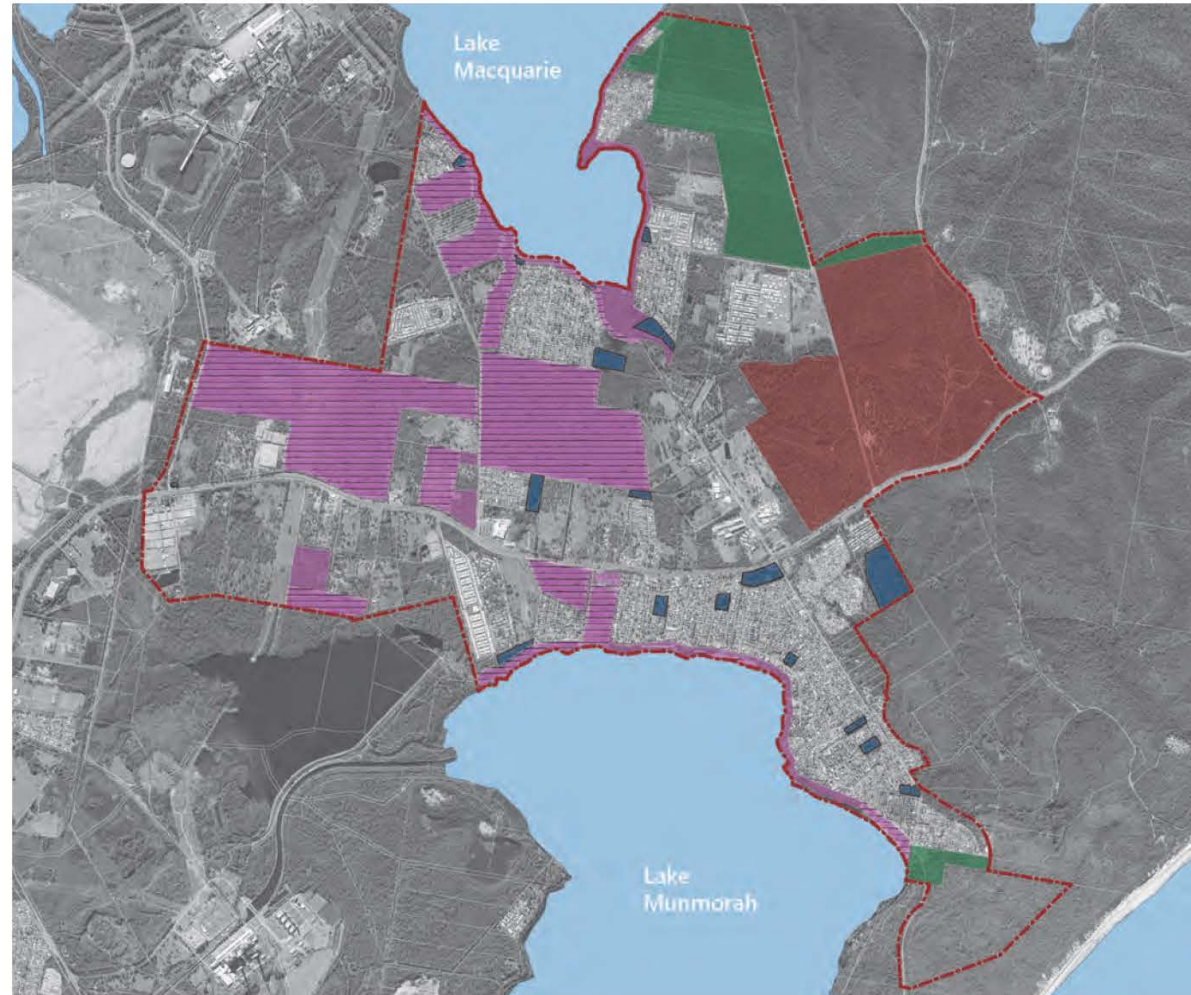
Existing Conditions

Land Use Conflicts

## Land ownership

There are significant large landholdings within the study area. The Crown possesses the largest area of land within this area, followed by smaller landholdings by Darkinjung Local Aboriginal Land Council and Council. The remainder of the study area is in private ownership; however there are large parcels of privately owned land, particularly in the north of the study area. Note that the majority of Crown lands in this area have been claimed by the DLALC and these claims are currently being assessed by the State Government. If granted, this change in ownership may have significant repercussions for the study area, particularly in terms of biodiversity conservation.

In particular, the Crown landholdings may be significant in terms of establishing more permanent and legible connections (including biodiversity corridor connections) between the areas to the north and the south of the Pacific Highway. Council also has a number of strategically located landholdings that have the potential to contribute to these connections, as well as potential for future civic purposes. It is also worth mentioning that 2 very significant landholdings adjoin the study area – being Vales Point Power Station and Lake Munmorah Power Station. Demolition of Lake Munmorah Power Station has already commenced, however Vales Point is still remain active until 2028. These sites will require separate Structure Plans/Masterplans due to the complexity of issues related to these sites.

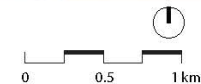


**LEGEND**

- NSW Crown Land
- Aboriginal Land Claims Pending
- NSW National Park & Wild life Service Land
- Central Coast Council Land
- Darkinjung Local Aboriginal Land Council Land

Figure 55: Significant Landholdings within Study Area

Study Area Boundary



## Structure Plan - Greater Lake Munmorah

Existing Conditions

Land Use Conflicts

### Mining and Resource Areas

The study area is located within the Swansea North Entrance mine subsidence district. The study area is subject to active mining leases, in particular consolidated coal lease (CCL 719), administered by Centennial Manning Coal Pty Ltd. Council is advised that plans have not yet been developed for CCL 719 and the resource is not a short or medium term priority with extraction not expected to occur before 2023. Centennial Manning Pty Ltd has advised that the majority of the potential future extraction within CCL 719 will likely occur within the Munmorah State Conservation Area.

Development within these areas could be affected by both past and future resource development operations in the adjacent resource areas. Subsidence Advisory NSW applies Surface Development Guidelines to certain areas within Mine Subsidence Districts, to prevent or minimise damage to buildings should subsidence occur. Such properties within mine subsidence districts require special consideration of the likely subsidence issues prior to approval of development.

Consequently, land use recommendations in the study area will need to account for surface development restrictions and extraction potential on these sites. In 2014, the Mine Subsidence Board advised the former Wyang Shire Council that surface development restrictions had been revoked for an area of land located with this Study Area (see figure below). Areas outside this area will continue to have surface development restrictions in place.

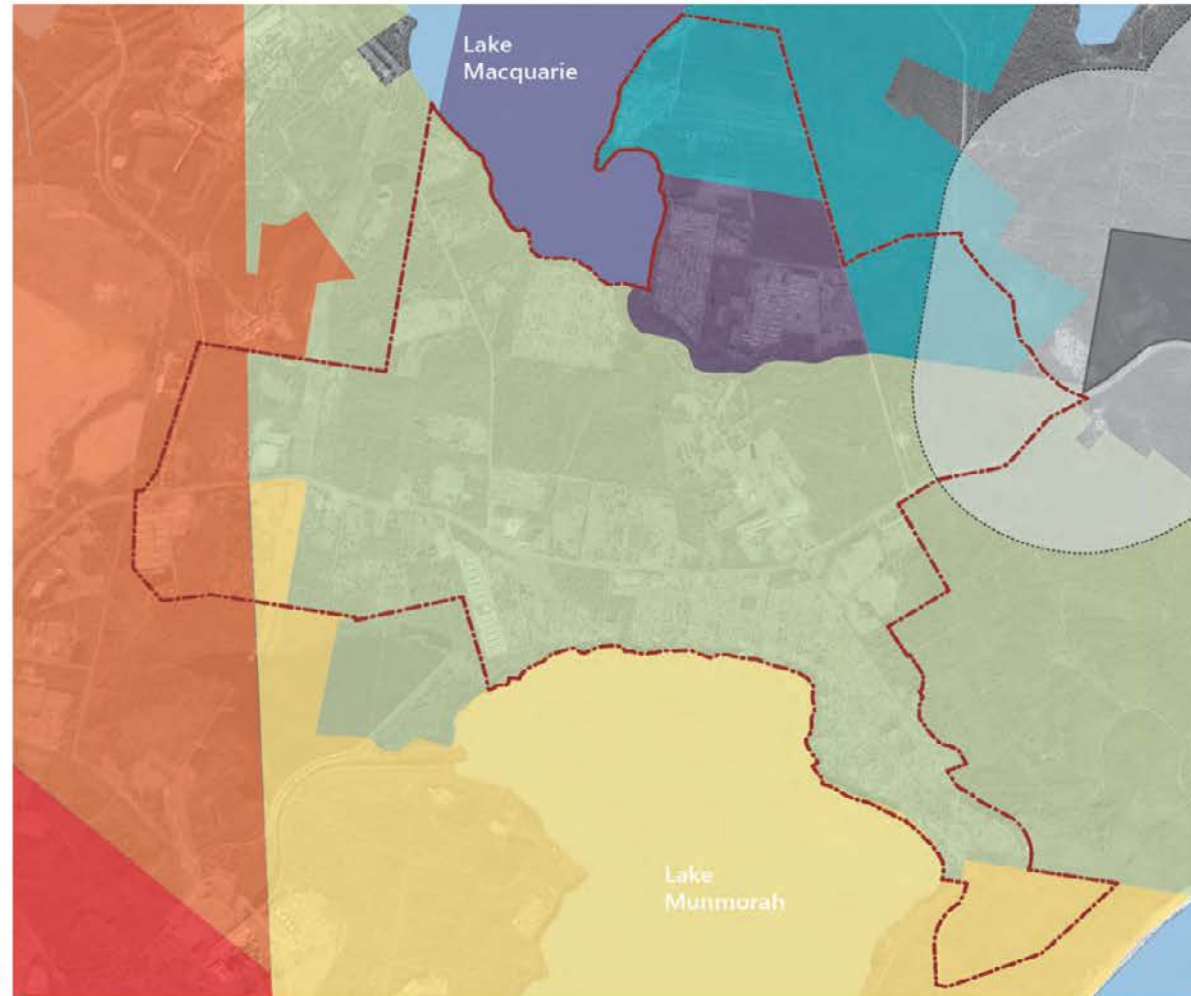
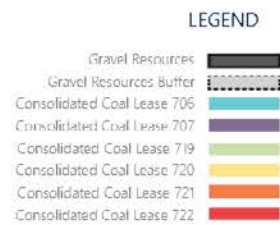


Figure 56: Resource Extraction Areas

 Study Area Boundary



## Structure Plan - Greater Lake Munmorah

Existing Conditions

Character

### Built Form

The built form within the study area is widely varied. The architectural character of the study area is generally mixed, with the residential area defined by low density dwellings constructed of varied materials, colours and textures, over a number of design styles. There are also a large number of manufactured home estates and caravan parks that tend to operate as separate residential enclaves, not integrated within the adjoining community. Commercial buildings within the Anita Avenue and Lloyd Avenue neighbourhood centres are modest low-rise structures, with no unifying colour or texture. The Lake Munmorah Local Centre on the Pacific Highway is consistent with contemporary supermarket and small specialty shop retail development.

### Public Domain

The Lake Munmorah Neighbourhood Centre and Chain Valley Bay Neighbourhood Centre are tired and in need of improvements. In particular:

- Due to level changes at the Lake Munmorah Neighbourhood Centre, access to individual shops is in need of improvement, as some shops rely on stairs for customers to gain access.
- The streetscape of these centres is drab and uninviting, with limited consistency and no defined character.
- Both centres are located in close proximity to their respective Lake foreshore areas, however due to private dwellings along the foreshore; these centres have no visual connectivity to the Lakes.
- There is no residential development within these centres, therefore no activity once shops close. Opportunities for improving the night economy will be investigated.



Figure S7: Example Built Form in Existing Residential Area



Figure S8: Example Built Form in Existing Residential Area

**Structure Plan - Greater Lake Munmorah**



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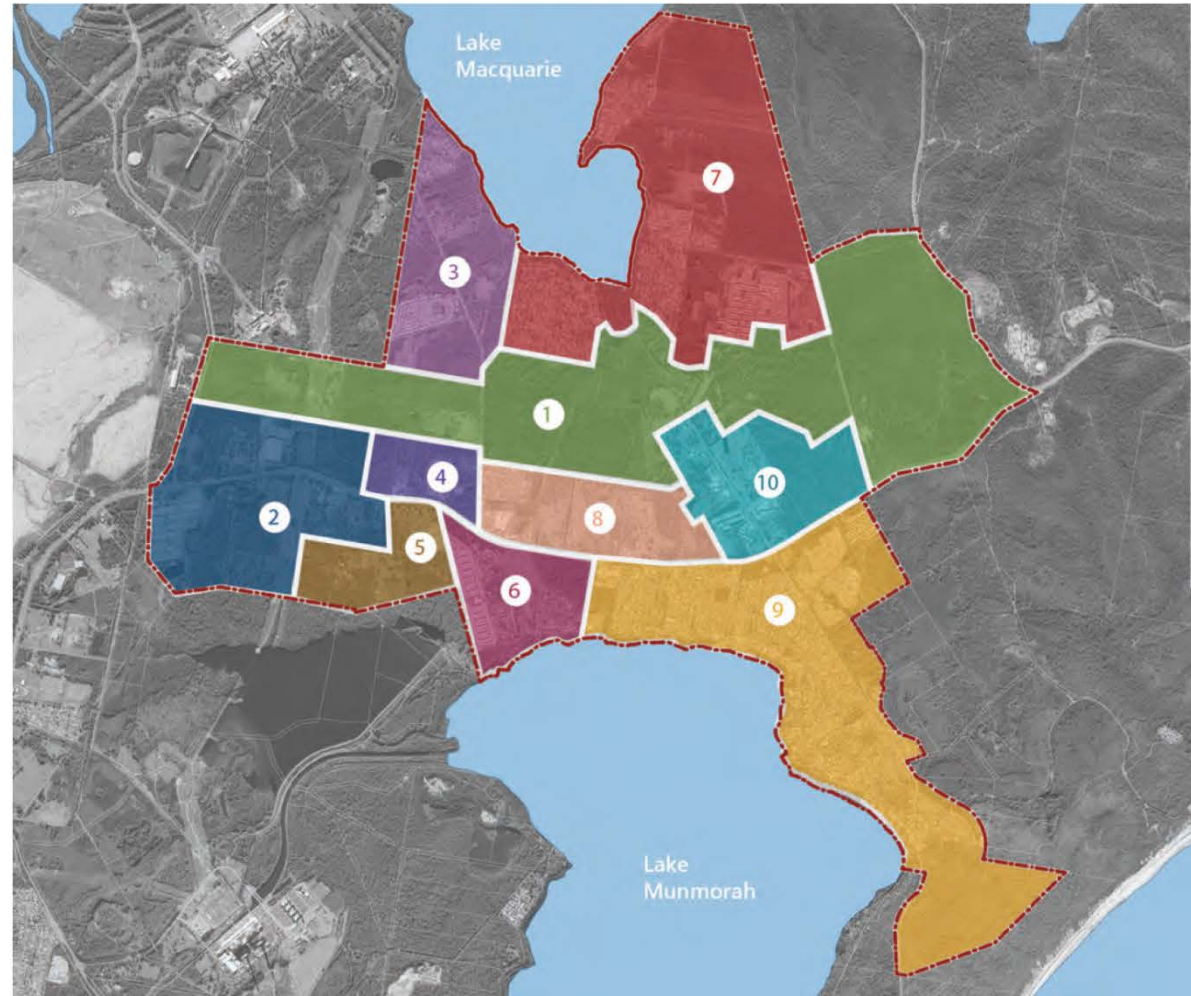
Precincts



# Structure Plan - Greater Lake Munmorah

## Precincts

*\* Please note that in order to keep the number of precincts to a manageable level, some areas of certain precincts may not fit the description of the Precinct. For example, land owned by the National Parks and Wildlife Service is included within this same precinct. This is in no way meant to be interpreted that this area is under review for any purpose other than National Park land. \**



- LEGEND**
- Precinct 1- Green Corridor ■
  - Precinct 2- Employment Lands ■
  - Precinct 3- Kingfisher Shores ■
  - Precinct 4- Sportsground ■
  - Precinct 5- Sallena Avenue ■
  - Precinct 6- Kamilaroo Avenue ■
  - Precinct 7- Chain Valley Bay ■
  - Precinct 8- Northern Lake Munmorah ■
  - Precinct 9- Southern Lake Munmorah ■
  - Precinct 10- Carters Road School Precinct ■

Figure 59: Study Area Precincts

## Structure Plan - Greater Lake Munmorah

## Precincts

### Precincts

The study area has 10 distinct precincts, identified based on existing and future predominant land use directions:

#### Precinct 1: Biodiversity Corridor

The biodiversity corridor is largely heavily vegetated land that is predominantly owned by the Crown, DLALC or Council. The majority of sites with an environmental zone are located in the northern portion of the study area, and within the Biodiversity Corridor. This Structure Plan will determine how the Biodiversity Corridor influences future land uses in this area.

#### Precinct 2: Employment Lands

Largely undeveloped land with areas of extensive vegetation. Utilised for agriculture on a larger scale than other precincts.

#### Precinct 3: Kingfisher Shores

Comprises largely undeveloped land with the exception of the small Kingfisher Shores residential area and a manufactured home estate. The land within this precinct is predominantly zoned RU6 Transition, utilised as a holding zone prior to investigations being carried out to determine suitability for future residential uses. The mining and resource restrictions in this area will also be addressed. This precinct also includes linear foreshore reserve along the Lake Macquarie foreshore area. This Structure Plan will review these areas and consider the role of each site within a broader recreation hierarchy for the study area.

#### Precinct 4: Sportsground

Includes the Crown-owned Gumbayah Oval sportsground, and 3 privately-owned, moderately vegetated properties. Gumbayah Oval is the only sportsground within the study area, and is in the care and control of Council. The land within this precinct is predominantly zoned RU6 Transition, utilised as a holding zone prior to investigations being carried out to determine suitability for future residential uses.

#### Precinct 5: Saliene Avenue

Largely undeveloped land with areas of extensive vegetation and a number of large allotments with single dwellings. The land within this precinct is zoned RU6 Transition, utilised as a holding zone prior to investigations being carried out to determine suitability for future uses.

#### Precinct 6 – Kamilaroo Avenue

Comprised of 2 large manufactured home estates, 2 undeveloped parcels of land and an area of existing low density residential development. The undeveloped land within this precinct is zoned RU6 Transition, utilised as a holding zone prior to investigations being carried out to determine suitability for future residential uses.

#### Precinct 7 – Chain Valley Bay

Low density settlement typified by a mix of one and two storey single dwellings in weatherboard, brick, and fibro. Chain Valley Bay North comprises a large area of undeveloped land, and 2 manufactured housing estates. This precinct also includes linear foreshore reserve along the Lake Macquarie foreshore area. This Structure Plan will review these areas and consider the role of each site within a broader recreation hierarchy for the study area.

A neighbourhood centre is located at Lloyd Avenue, Chain Valley Bay South. This small centre comprises a cafe, local convenience store and bottle shop. Due to the close proximity of the neighbourhood centre to the Lake Macquarie foreshore, the centre may continue to attract 'top-up' trade from local residents and visitors using the lakes for recreational purposes. This Structure Plan will consider the long-term role and function of the neighbourhood centre. Opportunities may exist for a small leisure and dining precinct in this area with connections to the Lake foreshore. This may serve as a point of difference to the Lake Munmorah Local Centre at Tall Timbers Road, and may improve long term viability.

#### Precinct 8 – Northern Lake Munmorah

Primarily contains single dwellings on large allotments; however 2 areas of existing low density residential development are also present. A large proportion of the precinct is zoned RU6 Transition, utilised as a holding zone prior to investigations being carried out to determine suitability for future uses.

The precinct also contains the Lake Munmorah Local Centre, the primary commercial centre for the study area, including a major supermarket. This site is zoned B2 Local Centre zone. This centre has become a key local retail centre for residents of the north-eastern Central Coast LGA and the south-east of Lake Macquarie LGA, providing both a supermarket and specialty shops. The zoning of this site enables further expansion of this centre to provide a wider range of services and facilities to cater for future population and employment growth. This Structure Plan will consider how this centre will evolve over time, including suitable adjacent land uses.

The CCRP encourages concentrations of medium density residential living around commercial centres which provides retail, health, business and other services. This Structure Plan will review residential densities in order to facilitate ageing in place and housing diversity.

#### Precinct 9 – Southern Lake Munmorah

Contains the major existing residential precinct within the study area, a low density settlement typified by a mix of one and two storey single dwellings in weatherboard, brick, and fibro. This precinct includes the Lake Munmorah Reserve which adjoins the Lake Munmorah foreshore. This site is owned by Crown lands, and is currently used only for passive recreation due to the gradient of the open space area being inappropriate for organised sports. This precinct also includes numerous small reserves within the residential areas and a linear reserve along the Lake Munmorah foreshore area. Visual and physical connection to the foreshore is limited. This Structure Plan will review these areas and consider the role of each site within a broader recreation hierarchy for the study area.

## Structure Plan - Greater Lake Munmorah

## Precincts

A neighbourhood centre is located at Anita Avenue, Lake Munmorah. This centre comprises retail and local business services. Due to the close proximity of the neighbourhood shops to the Lake Munmorah foreshore, the neighbourhood centre continues to attract 'top-up' trade from local residents and visitors using the lake for recreational purposes. This Structure Plan will consider the long-term role and function of the neighbourhood centre. Opportunities may exist for a small leisure and dining precinct in this area with connections to the lake foreshore. This may serve as a point of difference to the Lake Munmorah Local Centre at Tall Timbers Road, and may improve long term viability.

This Structure Plan will review opportunities for the provision of additional residential land within the precinct to allow for the short, medium and long term growth of the area.

### Precinct 10: Carters Road School Precinct

There are four schools located within the study area that form a precinct at Carters Road:

- Lake Munmorah Primary School
- St Brendan's Catholic Primary School
- Lake Munmorah High School
- St Brigids Catholic College.

These schools (with the exception of St Brigids Catholic College) are currently zoned SP2 Educational Establishment. This zoning has been applied as the general approach taken for infrastructure such as education sites to be zoned to a special use zone. St Brigids Catholic College is zoned RU6 Transition, reflecting its previous zoning of 10(a)(Investigation Precinct Zone).

The precinct also contains a number of large allotments with single dwellings. The undeveloped land within this precinct is predominantly zoned RU6 Transition, utilised as a holding zone prior to investigations being carried out to determine suitability for future residential uses. The mining and resource restrictions in this area will also be addressed as part of this process.

## Summary of Zoning Considerations

Key outcomes of this Structure Plan will be:

- To review the current zonings within the study area and determine appropriate zone changes based on current environmental, economic and social characteristics and associated land use opportunities and constraints, with a view to facilitating growth, encouraging ageing in place and retaining & enhancing the coastal village character.
- The mining and resource restrictions in this area will also be addressed as part of this process.
- To identify appropriate staging of precincts and facilitate the orderly development of land within the study area.



## Structure Plan - Greater Lake Munmorah

Opportunities

Environment

### Principle:

Ensure future development within this area is undertaken in a manner sensitive to the natural environment, and improving long term environmental outcomes.

#### ISSUES:

- Ecologically Endangered Communities and threatened species.
- Need for a defined regional biodiversity corridor.

#### OPPORTUNITIES:

- This Structure Plan presents an opportunity to determine appropriate boundaries for the biodiversity corridor. A suitable width depends on the purpose of the corridor, in this case the biodiversity corridor is a regional corridor. In 2002, Austeco Environmental Consultants (on behalf of the former Wyong Shire Council) prepared "Fauna Habitat Modelling and Wildlife Linkages in Wyong Shire". This document identifies that a corridor width of 1600m is desirable for a regional corridor, to enable optimum movement of species. Due to existing land use patterns, the proposed corridor is only 700m wide at the widest point. The remainder of the corridor is narrower, reducing to 300m-400m some areas, down to 30m at its narrowest point in the location of 103 Carters Road, Lake Munmorah. The figure to the right displays the anticipated boundaries of the corridor.
- Whilst the majority of the biodiversity corridor is situated on public land (predominantly NSW Crown land), privately owned land is also located within the biodiversity corridor. Landowners within the corridor will

be encouraged to review the NSW Government's new suite of biodiversity conservation legislation, in order to learn more about agreements that landholders can enter to protect and conserve biodiversity on their land, such as by fencing, weeding or other management activities. Landholders can receive payment for the sale of biodiversity credits created under such agreements, which can be used to offset development impacts elsewhere, as part of the Biodiversity Offsets Scheme. Landholders can also be eligible to receive payments to support site management.

- The Pacific Highway corridor represents a significant barrier to wildlife crossings, in particular at the location of the local biodiversity corridor in the vicinity of the Lake Munmorah Local Centre, crossing south across the Pacific Highway to Munmorah Reserve, where the crossing is approximately 50 metres wide. It is recommended that Council pursue installation of connectivity structures across the Pacific Highway, which could include aerial crossings such as rope and timber poles or underground crossings similar to drainage culverts which can be utilised by ground dwelling fauna. It is not uncommon for the RMS to incorporate 65 metre wide aerial connectivity structures in this regard, generally as part of new or upgraded road developments. However, there is an identified need to ensure that fauna crossings are maintained across the Pacific Highway, so installation of a number of these crossings should be encouraged at key locations such as the one described above. Connectivity structures will

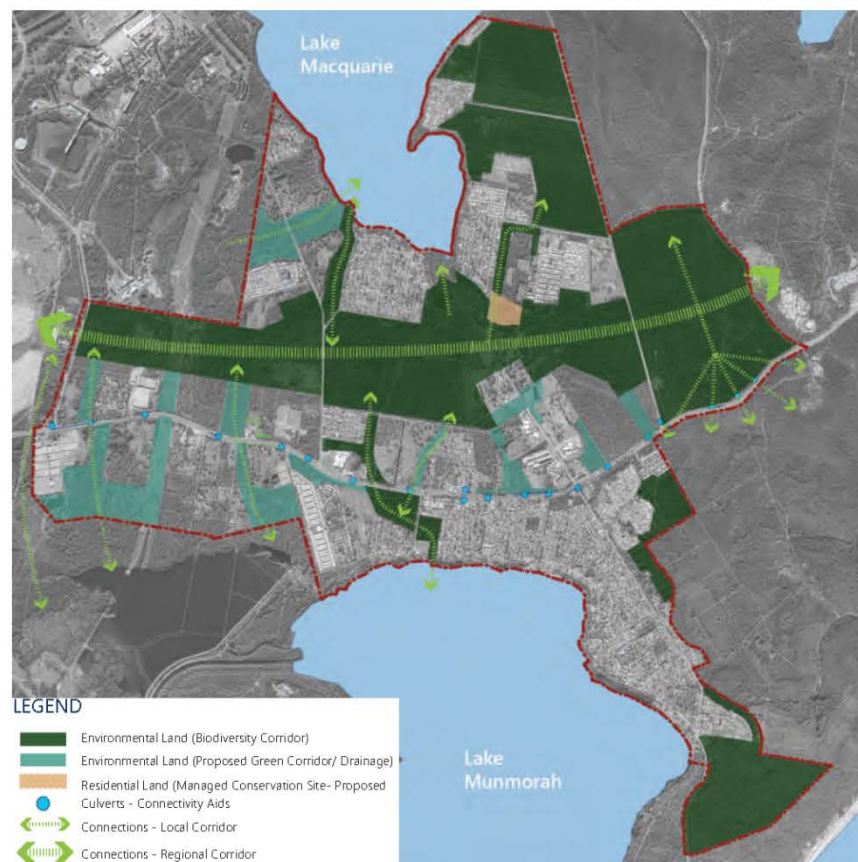


Figure 60: Biodiversity Corridor

## Structure Plan - Greater Lake Munmorah

Opportunities

Environment

also prevent and minimise road-kill incidents for fauna, particularly if utilised with exclusion fencing that direct fauna towards the structures. Street tree plantings along the wider parts of the median strip along the Pacific Highway corridor will also assist in safe crossing opportunities for arboreal glider species.

- It is recommended that the following issues be reviewed in conjunction with separate ecological studies, as part of precinct-based rezoning investigations:
  1. Consider the appropriateness of existing zones within the biodiversity corridor. It is noted that the RE1 Public Recreation zone over a large area of the corridor is inappropriate and should be resolved as part of an amendment to the future Central Coast LEP.
  2. Identify appropriate zoning changes to introduce environmental zones based on environmental attributes and the need to define the biodiversity corridor.
  3. Consider appropriate zones within the NWSSP 'strategically located constrained sites', and identify any appropriate zoning changes.



Figure 61: Aerial connectivity structure - Central Coast Highway, Wamberal

Project	Responsibility	Timing
Review land zoning within the biodiversity corridor, as part of precinct-based rezoning investigations.	Developer	Ongoing
Pursue installation of biodiversity crossing structures and exclusion fencing across the Pacific Highway corridor, to reduce the barrier to fauna crossing the Pacific Highway, whilst reducing roadkill incidents.	Council / RMS	Medium
Pursue a program of street tree plantings along the wider parts of the Pacific Highway median strip, which will assist in safe crossing opportunities for fauna.	Council / RMS	Medium

## Structure Plan - Greater Lake Munmorah

Opportunities

Environment

### Principle:

Ensure future development within this area is undertaken in a manner sensitive to the natural environment, and improving long term environmental outcomes.

#### ISSUES:

- No and/or limited visual connections along public streets to the lake foreshore.
- Cluttered visual landscape which often interferes with the natural beauty of the area.

#### OPPORTUNITIES:

- Enhance visual connection to the foreshore (in particular to Lake Munmorah Reserve) to improve amenity as well as passive surveillance. This may require purchase of strategically located dwellings to ensure access ways and vistas are widened. Council should consider purchase and removal of a small number of dwellings along the foreshore to improve this visual connection to the foreshore and increase public amenity. Older, unimproved properties would be favoured to reduce costs.
- Improve the quality of access paths to the Lakes by providing footpaths and beautification measures.
- Encourage the under-grounding of existing electricity supply infrastructure in high profile locations. All new electricity supply infrastructure must be provided underground, where possible.
- Undertake a sign audit and remove old and redundant signs, replace with new or consolidated signs where possible, and provide a consistent style. Limit the proliferation of signs to avoid visual clutter.
- Facilitate the provision of appropriately designed and sited way-finding

signs, including consistent way-finding signage to improve visual connections to the Lakes,

- Provision of green spaces, landscaped buffers and appropriate street planting will assist in softening the visual impacts associated with urban development in this area. As part of new developments, a vegetated reserve must be provided to the Pacific Highway, to provide a highway buffer for residents, as well as to improve visual amenity of the area.



Figure 62: Typical Access to Foreshore at Chain Valley Bay and Lake Munmorah

Project	Responsibility	Timing
Undertake a sign audit and remove old and redundant signs, replace with new or consolidated signs where possible, and provide a consistent style.	Council	Medium Term
Review suitability of purchasing strategic sites to improve access and visual connection to the Lake Munmorah foreshore.	Council	Long Term
As part of new developments, a vegetated reserve must be provided to the Pacific Highway, to provide a highway buffer for residents, as well as to improve visual amenity of the area	Developer	Ongoing

**Structure Plan - Greater Lake Munmorah** Opportunities Hazards

Principle:

Ensure future planning for this area is undertaken with a sound knowledge of the natural hazards affecting the area.

ISSUES:

- Significant bushfire hazard.
- Potential land contamination - Properties identified on Council's contaminated land register
- Prevalence of dispersive soils, particularly on the land to the south of Karignan Creek.

OPPORTUNITIES:

**Bushfire**

Where possible, ensure future development areas are not situated within high hazard bushfire areas. New development will be directed into locations of lower bushfire risk and is designed and constructed to mitigate the risks from bushfire, for example by minimising the number of properties with direct exposure to the biodiversity corridor. This can be done by ensuring that new residential subdivisions incorporate roads as buffers between private properties and the vegetation in the biodiversity corridor. This will ensure that bushfire protection measures such as Asset Protection Zones (APZs) do not require removal of significant vegetation and biodiverse habitats.

This will also result in beneficial outcomes in relation to vegetation management, emergency service access and passive surveillance.

**Contamination**

Mitigate risks associated with potential contamination issues. Be mindful of potential contamination issues on various identified sites when recommending rezoning of these sites. Contamination studies may need to be carried out for certain sites proposed for residential or certain business uses, however it is likely that these studies will not be required until the Planning Proposal stage.

**Dispersive soils**

These soils erode easily and lead to sedimentation concerns in Lake Macquarie. This may also be a problem elsewhere in the study area and a geotechnical study may be necessary to develop on these sites, at Planning Proposal stage.



Figure 63: Lake Munmorah Bushland

Project	Responsibility	Timing
Geotechnical studies may be necessary to develop on sites subject to dispersive soils.	Developer/ Council	Ongoing
Ensure that new residential subdivisions incorporate roads as buffers between private properties and vegetation in the biodiversity corridor.	Developer/ Council	Ongoing



## Structure Plan - Greater Lake Munmorah

Opportunities

Hazards

### Principle:

Ensure future planning for this area is undertaken with a sound knowledge of the natural hazards affecting the area.

#### ISSUES:

- Significant flood hazard

#### OPPORTUNITIES:

##### Flooding

Ensure future development areas are not situated within high hazard flood prone areas.

##### Drainage

In terms of stormwater flow, this Structure Plan recommends/requires that overland flow paths be retained in most instances. This is the most cost efficient way of addressing stormwater overland flows, and also provides visually pleasing landscape features for the local neighbourhood and flora/ fauna to enjoy. Reducing the direct connection of stormwater pipes to these waterways, through the use of water sensitive urban design and the construction of wetlands/detention basins will be important techniques in reducing the overall stormwater load on our natural waterways.



Figure 64: Chain Valley Bay Foreshore Area

Project	Responsibility	Timing
Retain overland flow paths in most instances, rather than piping.	Developer/ Council	Ongoing
Ensure future development areas are not situated within high hazard flood prone areas.	Developer/ Council	Ongoing

# Structure Plan - Greater Lake Munmorah

Opportunities

Hazards

## Principle:

Ensure future planning for this area is undertaken with a sound knowledge of the natural hazards affecting the area.

### ISSUES:

- Preparing for climate change

### OPPORTUNITIES:

#### Increased hot days

- Increase shade trees to roadways, pathways and parklands to increase comfort for pedestrians and cyclists, by implementing a street tree planting program on targeted streets. This Structure Plan proposes a street tree planting program on the following key road connections:
  - Pacific Highway (subject to RMS approval)
  - Tall Timbers Road
  - Carters Road
  - Elizabeth Bay Drive
  - Chain Valley Bay Road
- Carters Road in particular is an ideal location to implement a street tree planting project, given the proximity to 4 schools in this area. A tree-lined street would provide school children with shaded areas to walk, cycle or play.
- New road connections identified within this Structure Plan will also incorporate street tree plantings, in particular the roads that will connect Tall Timbers Road and Carters Road, and Carters Road and Chain Valley Bay Road.

#### More intense rain events

- Retrofit roadside kerb and gutter systems using water sensitive urban design.
- Require new developments to utilise water sensitive urban design for kerb and gutter systems, as well as the construction of wetlands/detention basins. These measures will be important techniques in reducing the overall stormwater load on our natural waterways.
- Overland flow paths need to be retained wherever possible. Council supports the retention of surface overland flow paths over the piping of flows underground. Overall this will support better outcomes for the community and provide increased habitat for flora and fauna within the study area.



Figure 65: Lake Munmorah Foreshore

Project	Responsibility	Timing
Implement a street tree planting program on the following streets: 1. Pacific Highway (subject to RMS approval) ; 2. Tall Timbers Road; 3. Carters Road; 4. Elizabeth Bay Drive; 5. Chain Valley Bay Road	Council/ Developer	Short Term
Ensure that Water Sensitive Urban Design is integrated into new development	Council/ Developer	Ongoing
Overland flow paths to be retained wherever possible. Piping of flows is generally not supported.	Council/ Developer	Ongoing

## Structure Plan - Greater Lake Munmorah

Opportunities

Servicing

### Principle:

Ensure future planning for this area is undertaken in a sequence that minimises lead-infrastructure costs.

#### ISSUES:

- Sequencing of development – Increased costs for development out-of-sync with NWSSP timeframes.
- Sequencing of development – Who is responsible for lead-in infrastructure?

#### OPPORTUNITIES:

A development sequencing plan has been developed, based on a number of criteria, including the level of difficulty involved in the provision of water and sewer servicing. This issue was considered a major criterion, and the rankings were more heavily weighted towards precincts that were considered the most cost-effective to service. See the "Precincts" section of this chapter for more information.

- Ensure future planning for this area is undertaken with a sound knowledge of the capacity of current and future servicing infrastructure within the area.
- Infrastructure and services required to meet the needs of development within the study area include:
- In order to ensure that lead-in and other essential infrastructure is not delayed unnecessarily, Council will review the Development Servicing Plan (DSP) for this area, and prepare a Development Control Plan (DCP) chapter for this area, taking into account this Structure Plan, and incorporating any parts of the study area that have previously not been included within the DSP.

Infrastructure Required	Funding Mechanism
Local roads including intersection and traffic management	Developers / RMS
Local shared pathways	Developers / VPA
Local bus stop infrastructure	Developers / VPA
Landscaping of roadsides, including appropriate street trees	Developers / VPA
Drainage infrastructure, including pipes and culverts.	Developers / VPA
Water and sewerage infrastructure, including any required works to STP to reduce odour.	Developers / VPA
Fencing	Developers
Electricity, gas, and telecommunications infrastructure.	Utility service providers.
Construction of/improvements to active/passive open space.	Developers / VPA / Council.



Figure 66: Electricity easement - Tall Timbers Road, Lake Munmorah

Project	Responsibility	Timing
Review Development Servicing Plan for the study area.	Council	Short Term

# Structure Plan - Greater Lake Munmorah

Opportunities

Servicing

## Principle:

Ensure future planning for this area is undertaken in a sequence that minimises lead-infrastructure costs.

### ISSUES:

- Sewer Servicing – Capacity constraints
- Sewage Treatment Plant – Odour issues for certain precincts
- Easements – Significant TransGrid transmission line easement within the study area.

### OPPORTUNITIES:

#### Sewer Servicing

The topography of the study area divides the potential development precincts into several Sewage Pumping Station (SPS) catchments with capacity constraints within the majority of those catchments. This requires a combination of gravity main upgrades, sewage pumping station upgrades and rising main upgrades in addition to the construction of new sewage pumping stations/rising mains to service proposed developments. A hydraulic sewer model for these catchments will need to be prepared by Council, to undertake a holistic capacity review and refine the existing high level capacity assessments previously undertaken as part of Council's Development Servicing Plan.

#### Odour

Council utilises a specific mapped odour contour to determine areas that are likely to be experience significant odour issues as a result of proximity to sewerage treatment plants (STPs). Development within this contour should be restricted to ensure that future residents are not subjected to odours that will interfere with quality of life. Precincts 17 and Precinct 18 are affected by this odour contour, and development should be precluded from these sites, unless odour mitigation measures can be identified, and implemented at the developer's expense, as a way to reduce odour impacts within this odour contour.

#### Electricity Easements

Two significant transmission line (TL) easements, up to 100m in width, runs in an east-west and north-south direction through the study area (refer to figure). This Structure Plan incorporates the transmission line easements, and ensures that no inappropriate development is proposed within the easement.

Project	Responsibility	Timing
Prepare a hydraulic sewer model for sewer catchments to ensure a holistic capacity review and refine Development Servicing Plan.	Council	Short Term
Ensure that rezoning applications are not approved within the odour contour area, without a Voluntary Planning Agreement (or similar) committing to mitigating odours for future residents.	Developer	Ongoing
Ensure that no inappropriate development is permitted within the transmission line easements.	Council	Ongoing

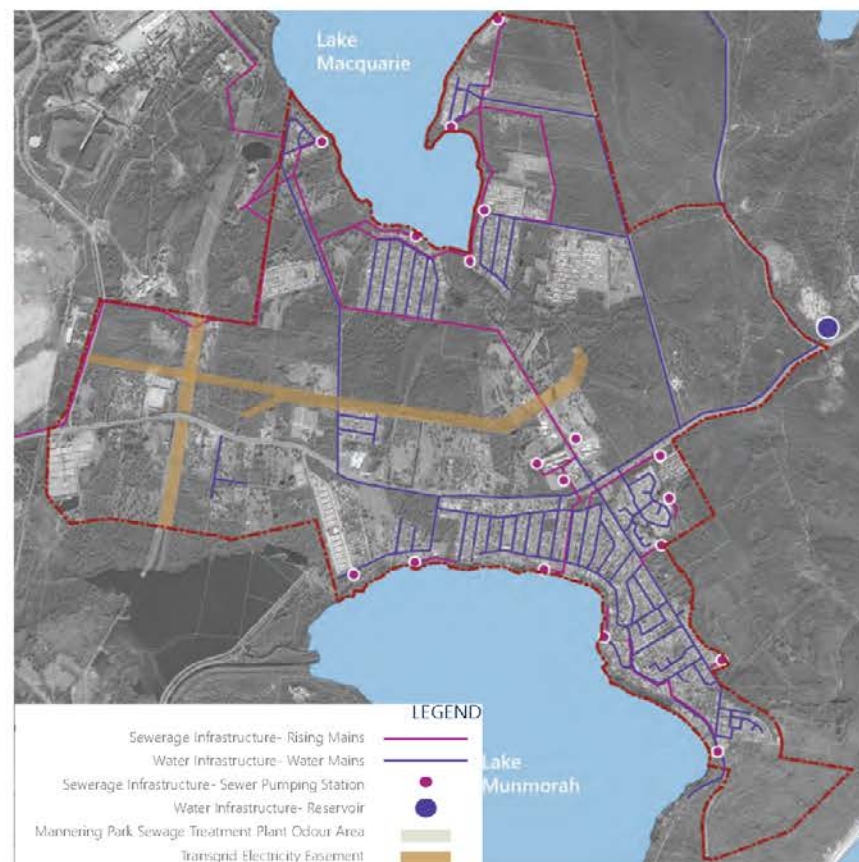


Figure 67: Electricity Transmission Easements, Odour Buffer Zone and Water & Sewer Servicing

# Structure Plan - Greater Lake Munmorah

Opportunities

Transport

## Principle:

### Improve private and public transport links within the study area

#### ISSUES:

- Transport issues associated with lack of connection between the north and south of the study area due to the Pacific Highway.
- Carters Road intersection issues during peak school times.

#### OPPORTUNITIES:

##### Additional roads to meet employment growth

Additional roads will be required to accommodate population growth within the development precincts. This Structure plan identifies the approximate location for suitable future major road connections, based on future residential and employment growth, as well as the impacts of this growth on the existing road network and traffic flows. The provision of additional road connections and upgrades to the existing network is critical to facilitating future development. The following road connections are proposed:

- Tall Timbers Road - Carters Road. This road will be critical to approval for development of Precinct 8, as this precinct will exacerbate the under pressure Carters Road intersection. Potential funding sources to pursue may be Housing Acceleration Fund, Federal Assistance Grants and Roads to Recovery.
- Tall Timbers Road - Rutleys Road. This road will become necessary only as the development of the employment lands proceed. This road will also be the location of an important shared pathway linking Manning Park to Lake Munmorah, providing a safer pedestrian/cycle connection.
- Chain Valley Bay Road - Carters Road. Subject to approval of a current Planning Proposal for development of land owned by the Darkinjung Local Aboriginal Land Council (DLALC), to the east of the Carters Road school precinct. This will assist in alleviating the intersection delays currently experienced at the Carters Road intersection during peak school hours.

- Signalised intersection - Chain Valley Bay Road/Pacific Highway junction. Modelling of this intersection shows that right hand turn movements onto the Pacific Highway from Chain Valley Bay Road currently operate with unsatisfactory delays.
- Signalised intersection - Colongra Bay Road/Precinct 8 junction. The exact location of this intersection is subject to change, and will depend on the most appropriate location for an intersection in this vicinity.

The former Wyong Shire Council's 'Transforming the NSW Central Coast' was used as a key lobbying tool in the lead up to the 2015 State Election, and identified the need for Structure Planning the northern growth areas of the former Wyong LGA, and in particular the greater Lake Munmorah area. 'Transforming the NSW Central Coast' states the following:

*'The northern part of Wyong Shire has been earmarked (by the NSW State Government) in the Central Coast Regional Development Strategy 2008 and the North Wyong Shire Structure Plan 2012 for high population growth, with 17,000 additional dwellings and 37,400 new residents expected by 2031. Lake Munmorah is central to this area of the Shire and a series of new, critical pieces of economic and social infrastructure are required, together with the careful planning of environmental areas to cater for this major growth corridor.'*

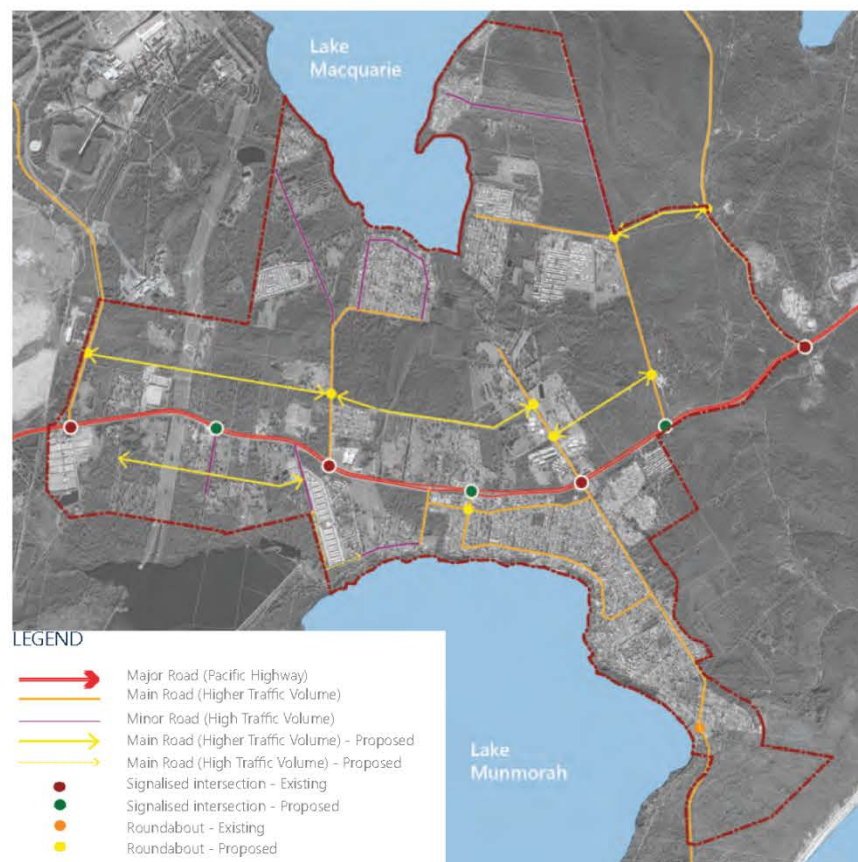


Figure 68: Proposed Road Network

# Structure Plan - Greater Lake Munmorah

Opportunities

Transport

This document addresses a number of issues in the study area, including:

### Link Road from Chain Valley Bay Road to Kanangra Drive

A 700m long gravel road through the Lake Munmorah State Conservation Area (SCA), linking Chain Valley Bay North to Gwandalan and Summerland Point. Council has requested that this land be transferred to Council to create a public road reserve, as well as funding to upgrade this road to a bitumen sealed surface.

### Carters Road – Extend to Scaysbrook Avenue, Chain Valley Bay South

Council has requested funding from the State Government to upgrade Carters Road and extend this road to connect with Scaysbrook Avenue, Chain Valley Bay South. This will reduce traffic on the Carters Road/Pacific Highway intersection, and provide an alternative access to Chain Valley Bay South which is currently restricted to one access.

### Carters Road – Extend to Teragalin Drive, Chain Valley Bay North

Council has requested funding from the State Government to extend Carters Road to connect with Teragalin Drive, Chain Valley Bay North. This will reduce traffic on the Carters Road/Pacific Highway intersection, and provide an alternative access to Chain Valley Bay North which is currently restricted to one access.

Ongoing measures to ensure improved public and private transport links for the area include a requirement for subdivision staging to provide for the timely connection of road links to the satisfaction of Council and the Roads and Maritime Services (RMS). For example, Precinct 8 should be required to complete construction of the

road connection of Tall Timbers Road and Carters Road, to ensure that alternative ingress and egress to Carters Road is provided, to alleviate the peak-hour intersection delays currently experienced. These road connections can be subject to change if the performance and function of the road network is maintained or improved subject to the approval of the RMS.



Figure 69: Carters Road, Lake Munmorah

Project	Responsibility	Timing
Provide a connector road between Tall Timbers Road and Carters Road to service Precinct 8.	Developer	Medium Term
Provide a connector road between Rutleys Road and Tall Timbers Road to service the employment lands precinct.	Developer	Long Term
Provide a connector road between Chain Valley Bay Road and Carters Road, subject to the approval of the rezoning of land owned by Darkinjung Local Aboriginal Lands Council.	Developer	Long Term
Provide a signalised intersection, including pedestrian crossing, at the junction of Chain Valley Bay Road/Pacific Highway to service Precinct 7 and proposed Darkinjung Local Aboriginal Land Council development.	Developer/ RMS	Long Term
Provide a signalised intersection, including pedestrian crossing, along the Pacific Highway Corridor in the vicinity of the junction of Acadia Road and the new development Precinct 8.	Developer/ RMS	Long Term
Incorporate the necessary portion of funds required to construct these roads into a Section 7.11 Development Contributions Plan (if necessary).	Council	Medium Term

# Structure Plan - Greater Lake Munmorah

Opportunities

Transport

## Principle:

### Close the Gap between north and south of the Pacific Highway

#### ISSUES:

The Pacific Highway acts as a significant severance between the areas to the north and south. This Structure Plan can assist in improving this situation by advocating for a number of opportunities, including:

#### OPPORTUNITIES:

##### 1. Incorporate more pedestrian crossings

At present, only 2 formal crossings exist, at Tall Timbers Road and Carters Road, separated by 1.9km. This encourages informal crossing of the corridor which can be extremely dangerous due to the 80km/hr speed limit on the Pacific Highway. By incorporating more pedestrian crossings, coinciding with new signalised intersections along the highway corridor, more appropriate crossing opportunities will be provided, and safety will be improved. This will also encourage more pedestrian and cyclist activity, rather than the community relying on vehicular travel.

##### 2. Street tree planting

Improving the amenity of pedestrian facilities can encourage utilisation, with shade an important factor in increasing amenity for pedestrian and cyclists. An opportunity exists to improve utilisation rates for shared pathways adjacent to the Pacific Highway corridor, via a program of tree planting. Tree plantings will provide shade for pedestrians and cyclists, as well as a minor buffer to the Pacific Highway. Tree plantings could also occur in suitably wide locations within the median strip of the Pacific Highway, in order to create a tree boulevard along this corridor, improving visual amenity and also improving flora/fauna crossing opportunities between the north and south of the corridor. Liaison with, and approval of, the RMS will be required prior to planting.

##### 3. Lighting improvements

Improving lighting along the Pacific Highway between Tall Timbers Road and Carters Road will assist in improving connectivity and usability for residents and visitors. In particular, ensure that intersections are well lit to ensure that pedestrians and cyclists are visible to motorists, which will improve safety for all road users.

##### 4. Maximum speed reduction

The maximum speed along the Pacific Highway corridor is 80km/hr, although vehicles routinely travel at higher speeds. This makes pedestrian and cycle activity dangerous and undesirable, and most residents instead rely on vehicular travel for local shopping trips and school drop-off/pick ups. Safety and usability can be improved by reducing the maximum speed limit. A reduced speed limit will also be more appropriate for the future development of this area as a major urban growth area. Council will pursue a speed limit reduction along the Pacific Highway within the study area, in consultation with the RMS.



Figure 70: Pacific Highway overpass, Lake Munmorah

Project	Responsibility	Timing
Prepare a package of proposed improvements for the Pacific Highway corridor, for lodgement with the RMS: <ul style="list-style-type: none"> <li>Improve lighting along the Pacific Highway between Carters Road and Tall Timbers Road to ensure that the safety and usability is improved for the community.</li> <li>Reduce maximum speed limit to 60km/hour at a minimum.</li> <li>Implement a program of street tree plantings, including median plantings, to provide shaded spaces and a small degree of buffering to the Pacific Highway for shared pathway users.</li> <li>Incorporate bus transport infrastructure along the Pacific Highway corridor.</li> </ul>	Council/ RMS	Long Term

# Structure Plan - Greater Lake Munmorah

Opportunities

Transport

## Principle:

### Improve private and public transport links within the study area

#### ISSUES:

- Limited access to public transport services.

#### OPPORTUNITIES:

##### Provision of Public Transport

Access to public transport needs to be enhanced, and improved provision of more frequent bus services to this area to encourage more public transport patronage. This will be partly achieved by the demands of increased population moving into the area as the precincts develop. However, Council can assist in achieving increased public transport usage by requiring that:

- Housing and subdivision designs are to integrate with land use, transport and access, both pedestrian and vehicular.
- Walking and cycling networks are aligned with public transport routes to improve accessibility to public transport.
- Bus stops are provided in locations as nominated by the relevant authority.
- A bus interchange is provided as part of the Lake Munmorah Local Centre expansion.

Parts of Precinct 16(a) and 16(b) are situated to benefit from proximity to the Lake Munmorah Local Centre, and as a result may

be considered for medium density residential development. In particular, shop-top housing as part of the expansion of the Local Centre, as well as townhouse-style development in the above-mentioned precincts. This will ensure that any higher density of population is situated a short walk from the future bus interchange at the Lake Munmorah Local Centre.

In addition, discussion with Busways indicates that considerations relating to future road design in new development areas should consider the manoeuvrability requirements of buses to access areas, which will allow ease of serviceability for future bus route expansions.

##### Encourage more public transport usage

Public transport usage in this area is very low. Improved usage rates could be encouraged by incorporating bus pick up and drop off locations along the Pacific Highway corridor, ideally coinciding with signalised intersections, to ensure that public transport patrons are able to safely cross the Pacific Highway to either board or alight from the public transport vehicle. Bus shelters should also be appropriately located along this corridor to reduce inconvenience and improve the desirability of travelling by public transport. Such bus infrastructure may need to be incorporated into the development contributions plan for the area, to ensure that funding is available.



Figure 71: Bus shelter, Lake Munmorah

Project	Responsibility	Timing
Council to encourage access to public transport services through ensuring that: <ul style="list-style-type: none"> <li>• Housing and subdivision designs are to integrate with land use, transport and access, both pedestrian and vehicular.</li> <li>• Walking and cycling networks are aligned with public transport routes to improve accessibility to public transport.</li> <li>• Bus stops are provided in locations as nominated by the relevant authority.</li> <li>• A bus interchange is provided as part of the Lake Munmorah Local Centre expansion.</li> </ul>	Council	Ongoing



Structure Plan - Greater Lake Munmorah

Opportunities

Recreation

Principle:

Ensure that the community has ease of access to both active and passive recreation opportunities

ISSUES:

- Limited physical connections to Lake Macquarie and Lake Munmorah foreshore.
- Discontinuous walking and cycling networks.

OPPORTUNITIES:

This Structure Plan recommends a number of new shared pathways, with the aim to improve pedestrian and cyclist connections between both existing and future residential areas and the main attractors in the study area. These proposed connections will be important components in ensuring that the growing community in the study area has ease of access to the local schools, local centre and neighbourhood centres, as well as sporting grounds and playgrounds. This will extend the network and strengthen the connection between the northern and southern areas of the study area.

However, additional signalised intersections will improve the safety of this crossing and encourage increased usage by the community.

In addition, visual amenity and connection to open space opportunities is important to the success of shared pathway networks and therefore opportunities for new and improved networks incorporating these principles should also be identified in the future. See figure to the right. There are limited opportunities to extend the shared pathway along the Lake Munmorah foreshore, due to topographic issues along the eastern foreshore, and land ownership issues along the site of the now decommissioned power station site on the western foreshore. As a result, this Structure Plan does not propose any extension to the shared pathway along the Lake Munmorah foreshore. There may be an opportunity to construct a shared pathway along the Lake Macquarie foreshore to the north of the study area, to connect Mannering Park to Chain Valley Bay North and South, however cost issues will need to be resolved prior to this option being supported.

Project	Responsibility	Timing
<p>Council can improve walking and cycling networks in the study area by ensuring:</p> <ul style="list-style-type: none"> <li>• Walking and cycling networks are incorporated into subdivision design and constructed by developers as part of subdivision works.</li> <li>• Walking and cycling networks must be designed to ensure safe, amenable and convenient pedestrian and cycle connections.</li> <li>• Footpath and cycle path widths are increased in areas expecting higher usage such as near schools, community centres, neighbourhood centres, local centres, public transport interchanges and bus stops.</li> <li>• Pedestrian and cycle crossings are provided at all relevant intersections and along key desire lines</li> </ul>	Developer	Medium Term



Figure 72: Existing and Proposed Shared Pathway Network (Including Open Space Corridors)

# Structure Plan - Greater Lake Munmorah

Opportunities

Recreation

## Principle:

Ensure that the community has ease of access to both active and passive recreation opportunities

### ISSUES:

- Limited pedestrian access to playground facilities.
- Limited access to sportsground facilities.

### Parkland:

- 5.4 hectares of small parks (30%);
- 3.6 hectares of large parks (20%);
- 1.8 hectares of semi-natural open space (10%)

### Sportsground:

- 5.4 hectares of sports field (a complex comparable to Hamlyn Terrace sports field) (30%);
- 1.8 hectares of playing courts (10%).

### OPPORTUNITIES:

#### Required Provision of Recreation Facilities

A general rate of 3 hectares per 1,000 residents is the standard approach to open space provision. Utilising this standard, the total developed open space required for the projected 6,256 additional residents generates demand for an additional 18 hectares of open space. This can be split into the following categories:

Project	Responsibility	Timing
Investigate options for the following recreation facilities:	Council	Short Term
<ul style="list-style-type: none"> <li>• Colongra Bay Reserve playground – either replace old facilities or incorporate new facilities.</li> <li>• Liaise with NPWS to coordinate delivery of a play-space at Elizabeth Bay Dr (Munmorah State Conservation Area).</li> <li>• Consider opportunities to encourage more public use for the reserve at the end of Greenacre Avenue.</li> <li>• Continue to coordinate the delivery of the play-space adjacent to Gumbayah Reserve on Tall Timbers Road.</li> </ul>		

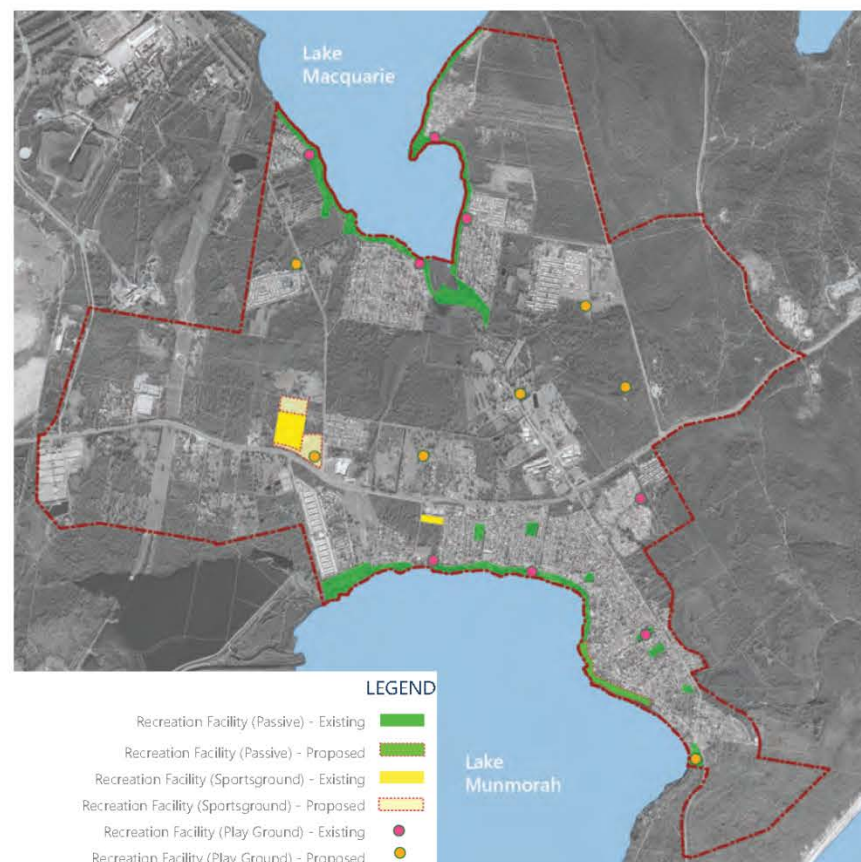


Figure 73: Existing and Proposed Recreation Network

# Structure Plan - Greater Lake Munmorah

## Opportunities

## Recreation

### Parks and Semi-Natural Open Space

The projected population increase of 5,000 people will generate a demand for at least 10 hectares of parkland. This Structure plan therefore identifies that a number of new parks will be required as part of future precinct based developments. Whilst the total area of these parks is yet to be determined, the figure will be in excess of 10 hectares, given that there are large areas identified as biodiversity/drainage corridors that will also have recreation functions in many cases. Council can ensure adequate provision within the study area by:

- Requiring precinct based rezonings to incorporate playgrounds into concept plans.
- Coordinating the embellishment of Colongra Bay Reserve playground. This may require either replacement of old equipment or incorporating new facilities.
- Liaising with the National Parks & Wildlife Service to deliver a play-space at Elizabeth Bay park. This park is well located, co-located with the foreshore/boat ramp.
- Investigate options for the reserve at the end of Greenacre Avenue to encourage more public use. This foreshore reserve is underutilised at present.
- Coordinating the delivery of a regional play-space adjacent to Gumbuyah Reserve

### Sportsfields and Courts

Based on the projected population increase of 5,000 people, demand for at least 7 hectares of sports field and courts will be generated as a minimum requirement. This represents a sportsground comparable to Hamlyn Terrace or Woongarra. There are identified benefits to co-locating sports fields near schools, community facilities and commercial areas, as well as suitable transport links. Council can ensure adequate provision of sports grounds within the study area by:

- Investigating the existing Gumbuyah Oval as the most desirable site for a future sports field expansion. This site, is of a suitable size to accommodate a large sports field complex, and is also appropriately located in close proximity to the major attractors within the study area – the Local Centre and the future Skate Park and Play-space.
- Coordinating the embellishment of the basketball and tennis courts at Acacia Avenue, Lake Munmorah. This site is part of a significant recreation area, being collocated with the Lake Munmorah reserve on Colongra Bay Road and the Lake Munmorah Bowling Club. This facility is essential for the local community, however is tired and in need of a facelift. Improved landscaping and pathways would provide a more inviting, attractive and safe environment. Provision of other supporting infrastructure such as lighting, drinking water access and park furniture should also be reviewed.

Project	Responsibility	Timing
Require precinct based rezonings to incorporate playground/park space into concept plans.	Developer	Ongoing
Coordinate the delivery of a new sports field at Tall Timbers Road (north of Gumbuyah Oval) as follows:	Council	Medium/ Long Term
Coordinate the embellishment of the basketball and tennis courts at Acacia Avenue, Lake Munmorah.	Council	Long Term

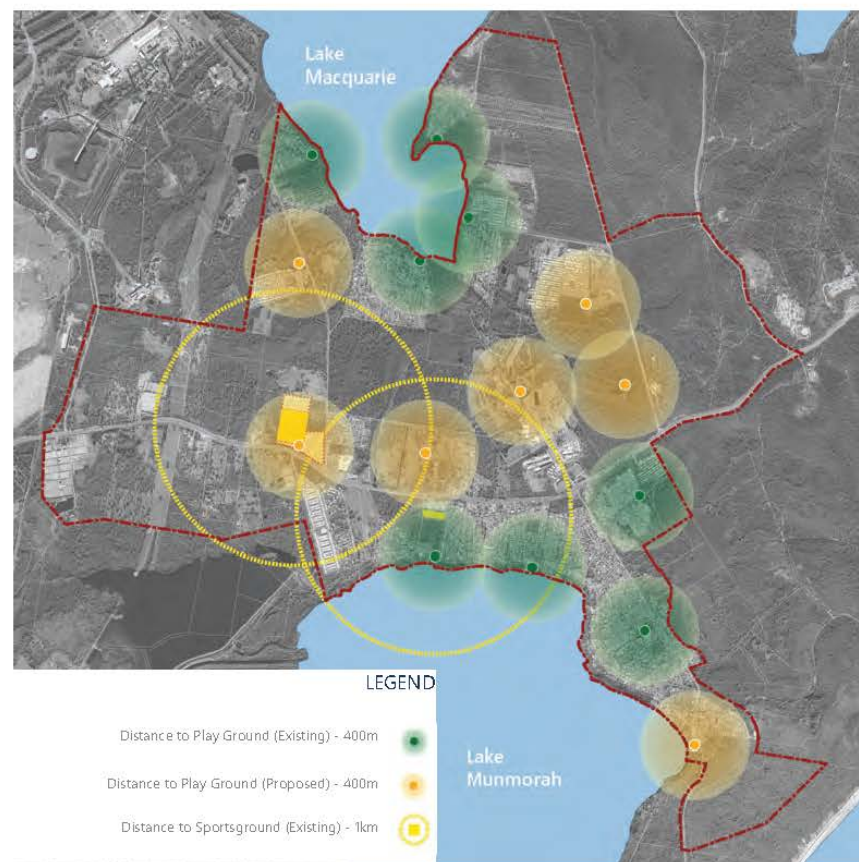


Figure 74: Accessibility to Existing and Proposed Playground and Sportsground Recreation Sites

# Structure Plan - Greater Lake Munmorah

Opportunities

Community

## Principle:

### Establish a Multi-Purpose Community Facility in proximity to Lake Munmorah Local Centre, creating a community hub

#### ISSUES:

- Many residents are isolated from services and facilities
- Ageing population, with areas of socio-economic disadvantage
- Existing Community Facilities limited in use and functionality.
- Lack of modern, multi-purpose community centres to address community needs.

#### OPPORTUNITIES:

##### New Multi-Purpose Community Facility

A new multi-purpose Community Centre will be required to cater for the anticipated population increase of 5,000 people. This Community Centre shall incorporate a learning precinct and a senior's leisure/learning centre. The ideal location for this facility is co-located with the regional play-space and district skatepark, adjacent to Gumbuyah Oval. Shopping centres are key attractors where people prefer to congregate. Locating the Community Centre adjacent to

the Lake Munmorah Local Centre will ensure that the facility can act as a community hub, activating the area and addressing community needs, enabling access to essential and higher order services and facilities. Co-location also has the benefit of convenience, increased safety and public transport accessibility.

#### Existing Facilities

- Lake Munmorah Colongra Bay Hall

The site is scenically located on the shores of Lake Munmorah, which presents an opportunity to embellish this facility to target an identified niche market for weddings and other functions. Council plans to develop a cafe on site to service this market as well as the playground.

- Lake Munmorah Senior Citizens Centre

Council plans to rationalise this site by incorporating centre functions as part of the proposed multi-purpose Lake Munmorah Community Centre. This is an important service for the local community and will be even more valuable as the population continues to age.

- Chain Valley Bay Community Centre

Retain centre as is. No improvements proposed at this time.

Project	Responsibility	Timing
Upgrade Lake Munmorah Colongra Bay Hall in accordance with the recommendation of the North Wyong Shire Community Facilities Plan 2015.	Council	Short Term
Investigate a suitable location for the multi-purpose community facility in proximity to the Lake Munmorah Local Centre.	Council	Short Term



Figure 75: Proposed Location for New Multi-Purpose Community Centre

# Structure Plan - Greater Lake Munmorah

## Opportunities

## Economy

### Principle:

Provide a Town Centre that serves as a focus for the community.

#### ISSUES:

- No single Town Centre to act as a community hub

#### OPPORTUNITIES:

##### Potential for a New Town Centre

The study area lacks a single commercial/civic Town Centre that serves as a focus for the community. At present, none of the existing centres function as a community focal point. Four sites have been reviewed to determine the most appropriate location for a future single Town Centre that will serve as a civic centre to this growing area:



Figure 76: Lake Munmorah Local Centre

##### Option 1 - Munmorah Sportsground

Pros	Cons
Single owner	Significant clearing required
Close to existing Neighbourhood centre	Endangered Ecological Communities (EEC) - limits expansion.
Waterfront access	Existing passive recreation area
Highest level of visual amenity	Needs to be rezoned to commercial

##### Option 2 - Gumbayah Oval

Pros	Cons
Single owner	Drainage line
Highly accessible - Tall Timbers Rd	Proposed residential under NWSSP
Surrounded by development precincts under NWSSP	Angophora inopina (vulnerable species)
Opposite existing Lake Munmorah Local Centre	Existing active recreation area
	Needs to be rezoned to commercial

##### Option 3 - Land within Carters Road Education Precinct.

Pros	Cons
Single owner	Drainage line & Dam present
Cleared land with few improvements	Proposed residential under NWSSP
Close to schools – potential for community hub	110m wide TransGrid Easement through centre of site
	Limited exposure to Pacific Highway
	Traffic issues at intersection
	Needs to be rezoned to commercial

##### Option 4 - Existing Lake Munmorah Local Centre

Pros	Cons
Single owner	Drainage line present on site
Highly accessible – Tall Timbers Rd	
Predominantly cleared land with few improvements	
Zoned for commercial development.	
Close to existing and future recreation uses	

# Structure Plan - Greater Lake Munmorah

## Opportunities

## Economy

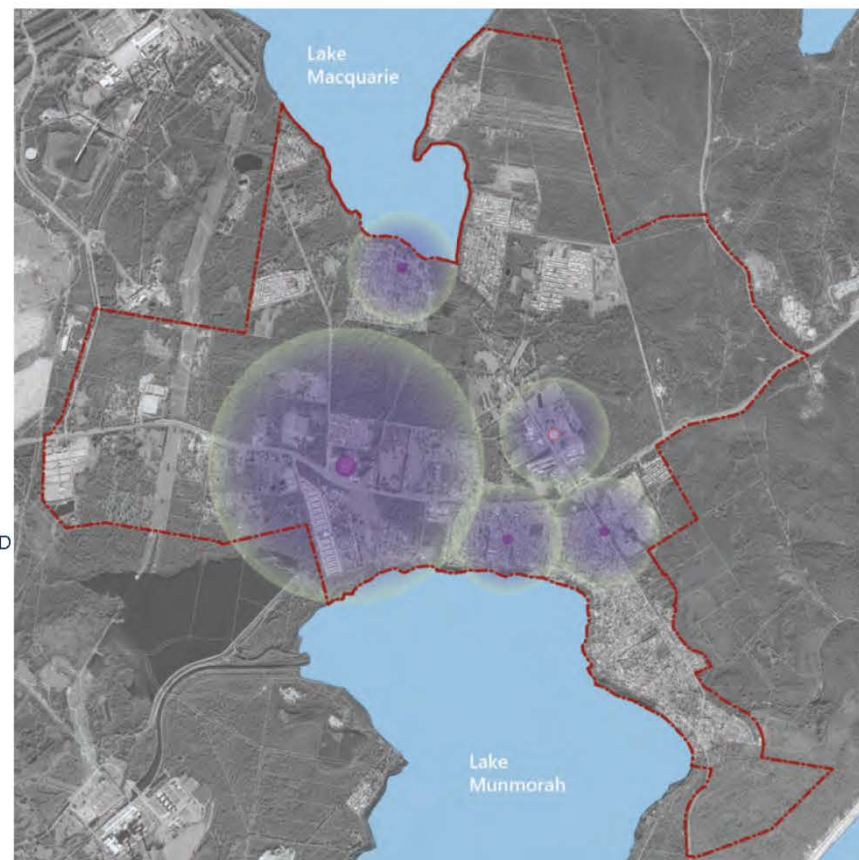
### CONCLUSION

Whilst other options were deemed attractive in terms of location (Carters Road) or scenic amenity (Munmorah Sportsground), the existing Lake Munmorah Local Centre has been determined the most appropriate location to encourage development of a Town Centre. These are:

- Existing 3ha of B2 Local Centre zoned land that is ready for development when the population expands.
- Appropriately located to serve the current and future population.
- Site expansion can be designed so that the centre has the amenity to attract residents and visitors in order to create a thriving town centre. As the site is in single ownership, it is well placed to establish an attractive and unified town centre that will act as an attractor.
- The site can be connected to future residential areas via pedestrian and cyclist connections. There is also an opportunity to improve pedestrian connections between the commercial precinct and the Carters Road school precinct.
- The likely location of the future skate park and play-space is adjacent to this site – co-location will attract visitors to the town centre.

- There may also be potential to incorporate residential development (shop-top housing) on this site, due to the site's strategic location.
- The potential for a new commercial centre also needs to be reviewed in the current and future economic context, including consideration of the existing commercial centres within the study area and future commercial centres in the vicinity of the study area. As a result, it is most realistic to encourage town centre development at the existing Lake Munmorah Local Centre.
- The identification of the Lake Munmorah Local Centre has been supported by an Economic Analysis prepared for Council by Hill PDA.

Based on the preferred location, a Master Plan will be prepared for a Town Centre with public spaces and community facilities.



### LEGEND

- Commercial Facility - Existing - 400m radius
- Commercial Facility - Proposed - 400m radius
- Commercial Facility - Existing - 1km radius

Project	Responsibility	Timing
Liaise with owners of the Lake Munmorah Local Centre site to discuss options for developing the adjacent vacant land as a Town Centre to cater for the growing population.	Council	Short Term
Prepare a Master Plan for the Lake Munmorah Local Centre, in consultation with the landowner.	Council	Medium Term

Figure 77: Lake Munmorah Local Centre

# Structure Plan - Greater Lake Munmorah

Opportunities

Economy

## Principle:

Re-invigorate neighbourhood centres to improve character and amenity to encourage more retail spending by community

### ISSUES:

- Tired Neighbourhood Centres that lack aesthetic amenity and character.
- No single Town Centre/Civic Centre that acts as a community hub

### OPPORTUNITIES:

#### Activate Existing Commercial Centres

- Explore residential uses in the commercial centres to activate these centres both day and night:
  - Mixed use development (shop top housing) is permissible in both the B1 Neighbourhood Centre and B2 Local Centre zones subject to the current Wyong LEP 2013, and subject to the draft Central Coast LEP.

- Shop-top housing should be encouraged at all centres as part of any redevelopment plans. Encouraging shop-top housing in commercial centres will increase passive surveillance and activity within the centre, particularly in the evening.
- Medium density residential development should be encouraged both within the expansion area of the Lake Munmorah Local Centre (in the form of shop top housing) as well as the areas surrounding the neighbourhood centres in the study area.
- Encourage provision of leisure and entertainment facilities within the retail centres, including cinemas, gymnasiums, clubs, and hotels. These uses support the viability of centres and extend hours of activity.
- Co-locate the Multi-Purpose Community Facility adjacent to the Lake Munmorah Local Centre to ensure that the facility activates the new Town Centre area. Co-location also has the benefit of increased safety, public transport accessibility, as well as convenience.
- These provisions should be incorporated into future Master Plans for these centres.

Project	Responsibility	Timing
Prepare a Masterplan for the Lake Munmorah Local Centre	Council	Medium Term
Prepare a Public Domain Plan for the Lake Munmorah Neighbourhood Centre	Council	Short Term
Prepare a Masterplan for the Lake Munmorah Local Centre	Council	Short Term



Figure 78: Lake Munmorah Neighbourhood Centre



Figure 79: Chain Valley Bay Neighbourhood Centre

Structure Plan - Greater Lake Munmorah

Opportunities

Economy

Principle:

Facilitate growth of employment generating development in the western portion of the Study Area, to increase access to local employment opportunities.

ISSUES:

- Limited access to local employment

OPPORTUNITIES:

The future employment land areas located within the study area will provide much needed employment opportunities within this growing area. However, an Economic Feasibility Analysis prepared as part of this Structure Plan indicates that it is unlikely that the Study Area's population growth will demonstrate demand for the large area of employment land proposed as part of the State Government's NWSSP. Successful employment land development is more likely to occur in close proximity to larger population catchments AND transport routes such as Somersby and Warnervale.

Further, additional development of industrial lands in the Study Area runs the risk of fragmenting the LGA's existing employment areas, negatively impacting the performance of employment zones such as the WEZ. At present there is very little demand for additional employment land anywhere in the LGA.

This provides an opportunity to identify additional residential land within the study area to enable additional housing options within the study area. This Structure Plan identifies land to the west of Saliena Avenue, Lake Munmorah for residential purposes, as opposed to the employment land uses proposed by the NWSSP.

It is considered that there remains sufficient lands set aside for future employment generating purposes to cater for improved local and regional employment outcomes, and this is supported by the Economic Feasibility Analysis.

Employment lands within the study area should:

- Focus on warehousing, logistics, food manufacturing and other innovative enterprises. In other words, uses that benefit from larger parcels.
- Not compete with the LGA's existing employment lands at Somersby or the WEZ. It is therefore important to delay rezonings until after significant take up of existing employment lands has occurred.
- To ensure the amenity of the area is retained, employment land uses with a frontage to the highway should incorporate significant levels of landscaping, locate parking to the rear of the building and provide screening of any service areas.



Figure 80: View to Vales Point Power Station from Chain Valley Bay

Project	Responsibility	Timing
Rezoning of land for employment uses to be identified as long term, in order to ensure take-up of the WEZ lands is not discouraged.	Council	Long Term
Employment land uses with a frontage to the Pacific Highway should incorporate significant levels of landscaping, locate parking to the rear of the building and provide screening of any loading or service areas.	Developer	Short Term



**Structure Plan - Greater Lake Munmorah** Opportunities Character

Principle:

Establish a defined character for the study area

ISSUES:

- No defined character for this area due to haphazard development patterns

OPPORTUNITIES:

- The public realm can be improved through a range of methods such as landscaping, paving and street furniture upgrades. A Public Domain Plan is the best method to identify appropriate upgrades for this area, and these should be prepared for Lake Munmorah Neighbourhood Centre and Chain Valley Bay Neighbourhood Centre. These plans shall identify ways to enhance the existing public domain and identify opportunities for improved connectivity, including stronger linkages to the foreshore and between areas to the north and the south of the Pacific Highway.
- The Public Domain Plans should include:
  - Urban design guidelines for improved building form and function.
  - Potential improvements that can be made to visually connect the 2 centres to their respective outlooks of Lake Munmorah (Lake Munmorah Neighbourhood Centre) and Lake Macquarie (Chain Valley Bay Neighbourhood Centre).
  - Suitable building heights taking into account this Structure Plan's recommendation to encourage shop-top housing in these locations.
  - Public domain improvements including seating, paving, lighting, shade structures, building façade treatments, and landscaping/street planting design.
  - A preliminary cost estimate, including ongoing maintenance costs.

- As the Lake Munmorah Local Centre is pegged as the future Town Centre for this area, it is recommended that a Masterplan be prepared for this site, to provide guidance for the future expansion of this site. The Masterplan should identify:
  - Building bulk and heights.
  - Vehicular circulation – Including location for a bus interchange on this site.
  - Car parking requirements.
  - Pedestrian/cyclist connections – New or upgraded facilities.
  - Residential densities – The Masterplan may recommend higher densities in the Town Centre or suitable nearby locations.

As the area develops, site-specific chapters of the future Central Coast Development Control Plan (DCP) will be required to guide development. These provisions will be progressively compiled into one DCP chapter.



Figure 81: Neighbourhood Centre, Chain Valley Bay

Project	Responsibility	Timing
Prepare a Masterplan for the Lake Munmorah Local Centre	Council	Medium Term
Prepare a Public Domain Plan for the Lake Munmorah Neighbourhood Centre	Council	Short Term
Prepare a Public Domain Plan for the Chain Valley Bay Neighbourhood Centre	Council	Short Term
Prepare chapters of the future Central Coast DCP for the future development precincts, as necessary.	Council	Ongoing

## Structure Plan - Greater Lake Munmorah

Opportunities

Land Use Conflicts

### Principle:

Ensure that future development within the study area is orderly and does not interfere with resource extraction

#### ISSUES:

- Underground mining, resource land and surface development restrictions.
- Simultaneous proposals for rezoning, out-of-sync with development timeframes set by the NWSSP.
- Large area of land zoned RU6 Transition causing uncertainty around future uses and staging of development.

#### OPPORTUNITIES:

##### Surface development restrictions

- This Structure Plan takes into account the surface development restrictions that affect certain land within the study area, as discussed in Part 5 - Issues. The sequencing plan reflects that certain precincts remain under these restrictions (longer term precincts), whilst other precincts are no longer subject to any surface restrictions (shorter term precincts).

##### Precinct Staging

- This Structure Plan addresses this issue by refining the NWSSP precincts into smaller precincts, based on land ownership, topographic features and location. The aim of this approach is to encourage landowners in particular precincts to join together to

prepare a cohesive rezoning proposal, in accordance with this Structure Plan. Sequencing will also maintain competition in the land market.

- Staging of these precincts is essential. Staging is important so as not to create circumstances in which new residents will be isolated from commercial and community facilities or public transport for an extended time.
- Development staging also needs to be integrated with adjoining developments, including the timely provision of connecting streets and walking / cycling paths.
- This Structure Plan therefore assigns development timeframes to each of these precincts, in an attempt to ensure that the study area is developed in an orderly manner.

##### RU6 Transition zoned land

- Land within the study area that is zoned RU6 Transition Zone has been zoned to the most appropriate "holding" zone under Wyong LEP 2013. This zone is the best fit for land that will be subject to further investigations to support a rezoning. Such investigations will need to include Ecological Reports, Traffic Studies, Bushfire Risk Assessments, Flooding and Stormwater Studies and so on. This is therefore beyond the scope of this Structure Plan, and can instead be reviewed as part of future rezoning investigations.



Figure 82: Boral Clay Mine, former Wyong LGA.

Project	Responsibility	Timing
Implement a staged program of Planning Proposals to ensure the study area is developed in a responsible and sustainable manner.	Council	Ongoing

## Structure Plan - Greater Lake Munmorah

### Opportunities

### Land Use Conflicts

#### Principle:

Refine North Wyong Shire Structure Plan precincts to enable the area to develop in an orderly and positive manner.

#### ISSUES:

- Further refinement is required for NWSSP precincts and staging of development.

#### OPPORTUNITIES:

- The parts of the study area identified as potential development precincts within the NWSSP have been further divided into smaller precincts, based on land ownership, topographic features and location. See figure to the right.
- Development proponents will be required to group rezoning proposals and subdivision applications together by the relevant refined precinct, with the exception of Precinct 7 – Chain Valley Bay due to the size and complexity of the development areas within this precinct.
- It is anticipated that this refinement of precincts will enable more positive development outcomes for the area, enabling Council to more holistically assess development proposals, rather than on a piecemeal basis which may have eventuated otherwise.
- These precincts have been ranked to ensure that the sequencing of development occurs in a way that is appropriate and cost effective in terms of provision of essential infrastructure.
- Controlling the sequencing of development has the following benefits:
  - Appropriate sequencing ensures that development occurs in a way

that is appropriate and cost effective in terms of provision of essential infrastructure.

- Appropriate sequencing ensures that development does not create circumstances in which residents will be unreasonably isolated from commercial, community or recreational facilities, or access to public transport for an extended time period.
- Appropriate sequencing ensures that development is integrated with adjoining developments, including the timely provision of connecting streets and walking / cycling paths.
- Appropriate sequencing will also maintain competition in the land market.
- A development sequencing plan has therefore been developed, based on the following criteria:

#### Major criteria

1. Impact on existing roads/traffic – Minor, moderate or major.
2. Vegetation clearing required – Minor, moderate or major.
3. Surface development restrictions – Restrictions placed on the land by Subsidence NSW, to ensure that future development does not limit extraction potential for coal resources in the area.

#### Minor criteria

1. Sewer Servicing provision – Any sewer system for this area will need to be developed in consultation with Council with due consideration of the impacts on the adjoining systems that will be connected to. These may require further upgrading than identified in the DSP as they would not currently consider a load from these areas. This restriction will need to be incorporated into this Structure Plan for this area.
2. Land use conflict (e.g. Land claims, recreation uses, odour issues)
3. Integration with current development patterns – 1km proximity to schools, local centre etc.
4. Number of landowners – Fewer landowners generally results in fewer complexities in coordinating rezonings.
5. Landholder readiness – Based on feedback received from landowners.

Project	Responsibility	Timing
Implement a staged program of Planning Proposals to ensure the study area is developed in a responsible and sustainable manner.	Council	Ongoing

# Structure Plan - Greater Lake Munmorah

Opportunities

Precincts

## Staging

Utilising the above criteria, the following sequencing plan has been prepared for the residential land release areas:

Precinct	Rank	Timeframe
Precinct 1: Biodiversity Corridor	n/a	n/a
Precinct 2: Employment Lands	n/a	n/a
Precinct 3: Kingfisher Shores	5	Long-term
Precinct 4: Sportsground	6	Long-term
Precinct 5: Sallena Avenue	1	Short-term
Precinct 6: Kamilaroo Avenue	1	Short-term
Precinct 7: Chain Valley Bay	4	Medium-term (South of Mulloway Road); Long-term (North of Mulloway Road)
Precinct 8: Northern lake Munmorah	2	Short-term
Precinct 9: Southern lake Munmorah	n/a	n/a
Precinct 10: Education	3	Medium-term

**LEGEND**

- Stage 1 █
- Stage 2 █
- Stage 3 █
- Stage 4 █
- Stage 5 █
- Stage 6 █
- Not Applicable █

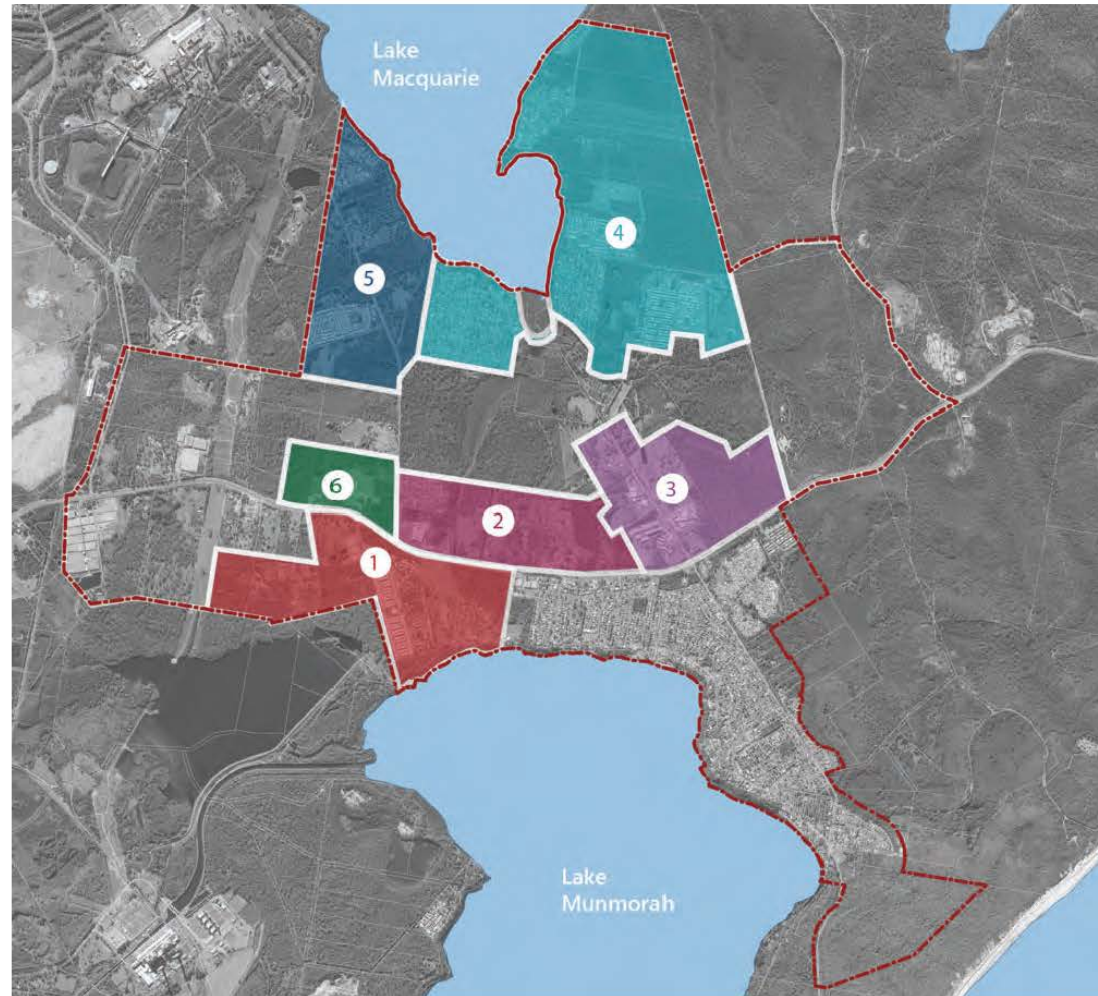


Figure 83: Staging of Development Precincts

Study Area Boundary



# Structure Plan - Greater Lake Munmorah

## Opportunities

## Precincts

### Precinct 1 Biodiversity Corridor

Area	474 hectares
Estimated Lot Yield	n/a
Estimated Population	n/a
Estimated Jobs	n/a

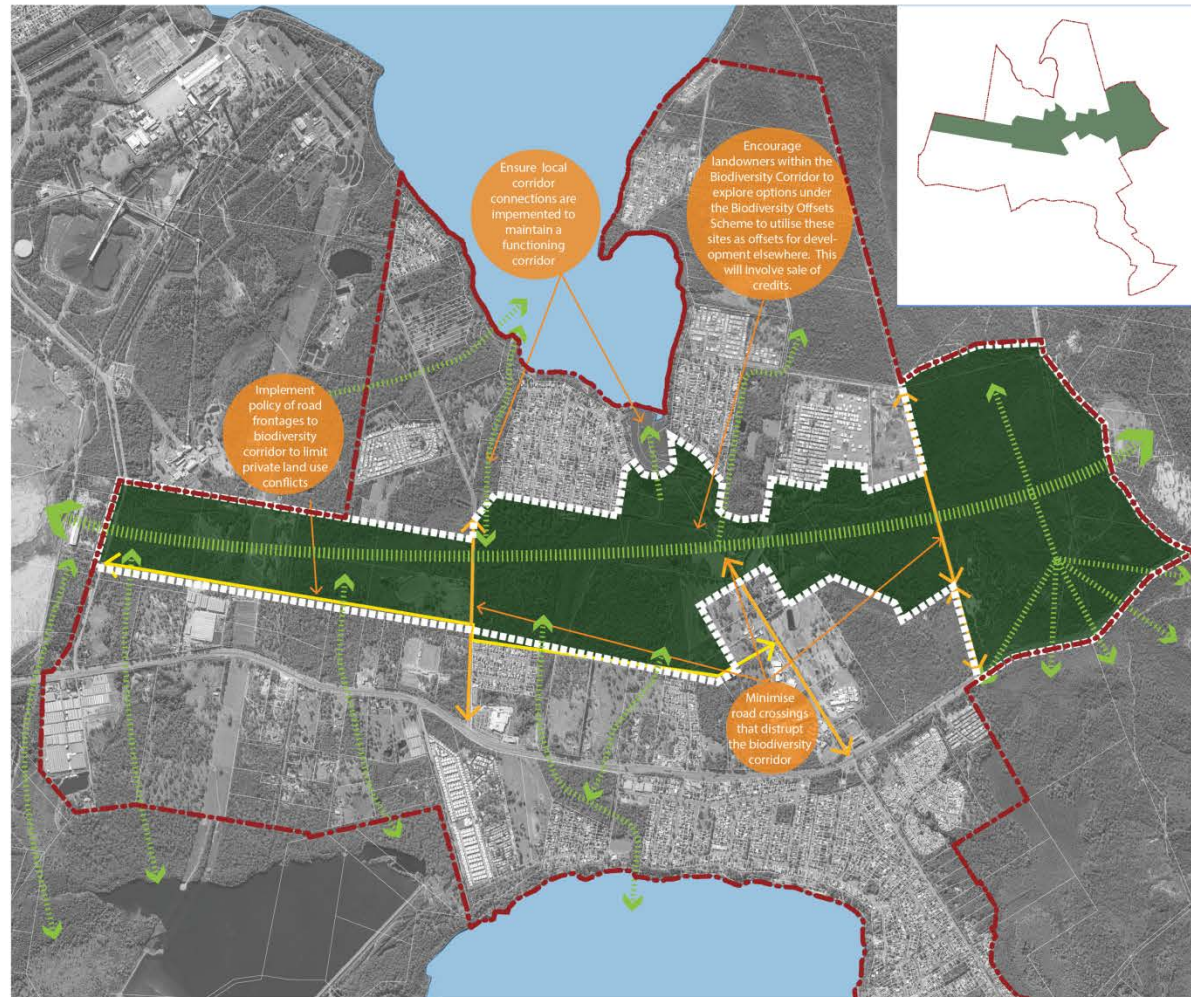


Figure 84: Precinct 1- Biodiversity Corridor

Study Area Boundary

# Structure Plan - Greater Lake Munmorah

Opportunities

Precincts

## Precinct 2 Employment Lands

Area	171 hectares
Gross developable area	91.7 hectares
Net developable area*	82.53hectares
Estimated Lot Yield	n/a
Estimated Population	n/a
Estimated Jobs	825 @ 10 jobs / hectare

\* NDA calculated at 90% of total area identified for development.

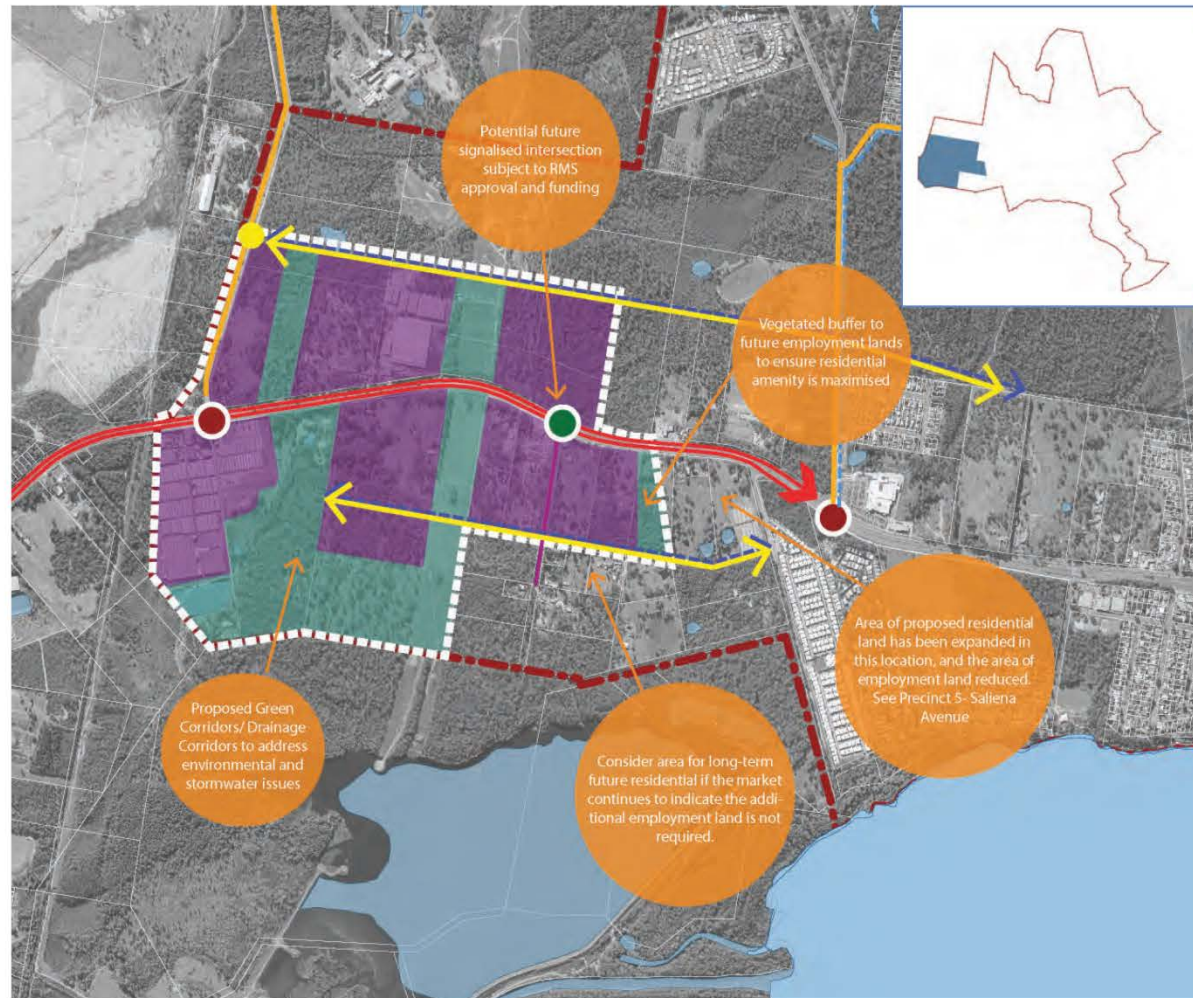


Figure 85: Precinct 2- Employment Lands

----- Study Area Boundary

- LEGEND**
- Employment Land- Proposed
  - Environmental Land (Proposed Green Corridor/ Drainage Corridor)
  - Major Road (Pacific Highway)- Existing
  - Main Road (High Traffic Volume)- Existing
  - Minor Road (Higher Traffic Volume)- Existing
  - Main Road (Higher Traffic Volume)- Proposed
  - Shared Pathways- Proposed
  - Signalised Intersection - Existing
  - Signalised Intersection - Proposed
  - Roundabout/ Other Intersection Treatment- Proposed

# Structure Plan - Greater Lake Munmorah

## Opportunities

## Precincts

### Precinct 3 Kingfisher Shores

Area	91 hectares
Gross developable area	33 hectares
Estimated Lot Yield *	508 lots
Estimated Population	1,158 @ 2.28 per dwelling
Estimated Jobs	n/a
* Lot yield calculated at 15 dwellings / hectare	

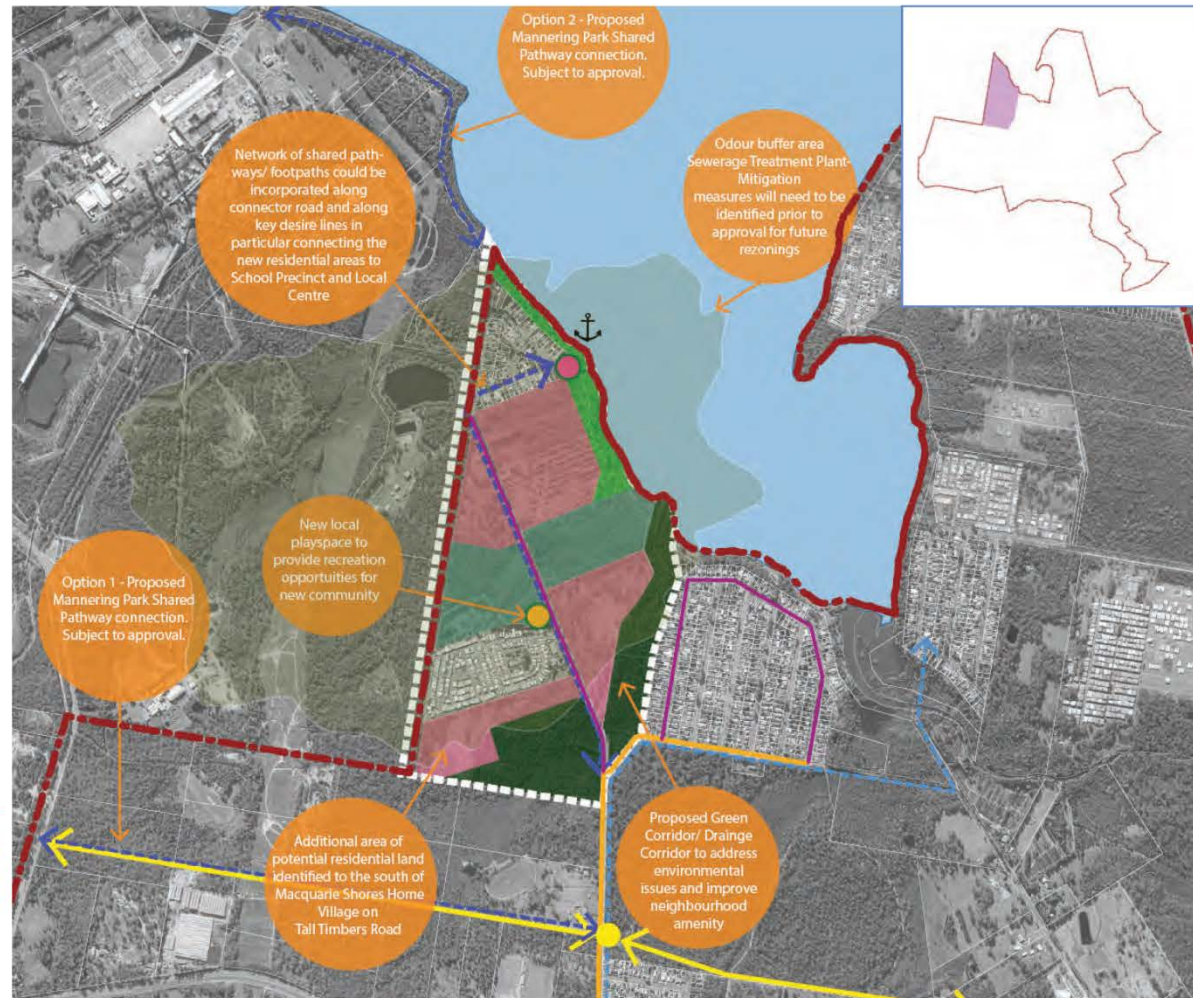


Figure 86: Precinct 3- Kingfisher Shores

Study Area Boundary

# Structure Plan - Greater Lake Munmorah

## Opportunities

## Precincts

### Precinct 4 Sportsground Precinct

Total Area	21.5 hectares
Gross developable area	8.76 hectares
Estimated Lot Yield	135 lots
Estimated Population	307 @ 2.28 per dwelling
Estimated Jobs	n/a
* Lot yield calculated at 15 dwellings / hectare	



Figure 37: Precinct 4- Sportsground Precinct

Study Area Boundary



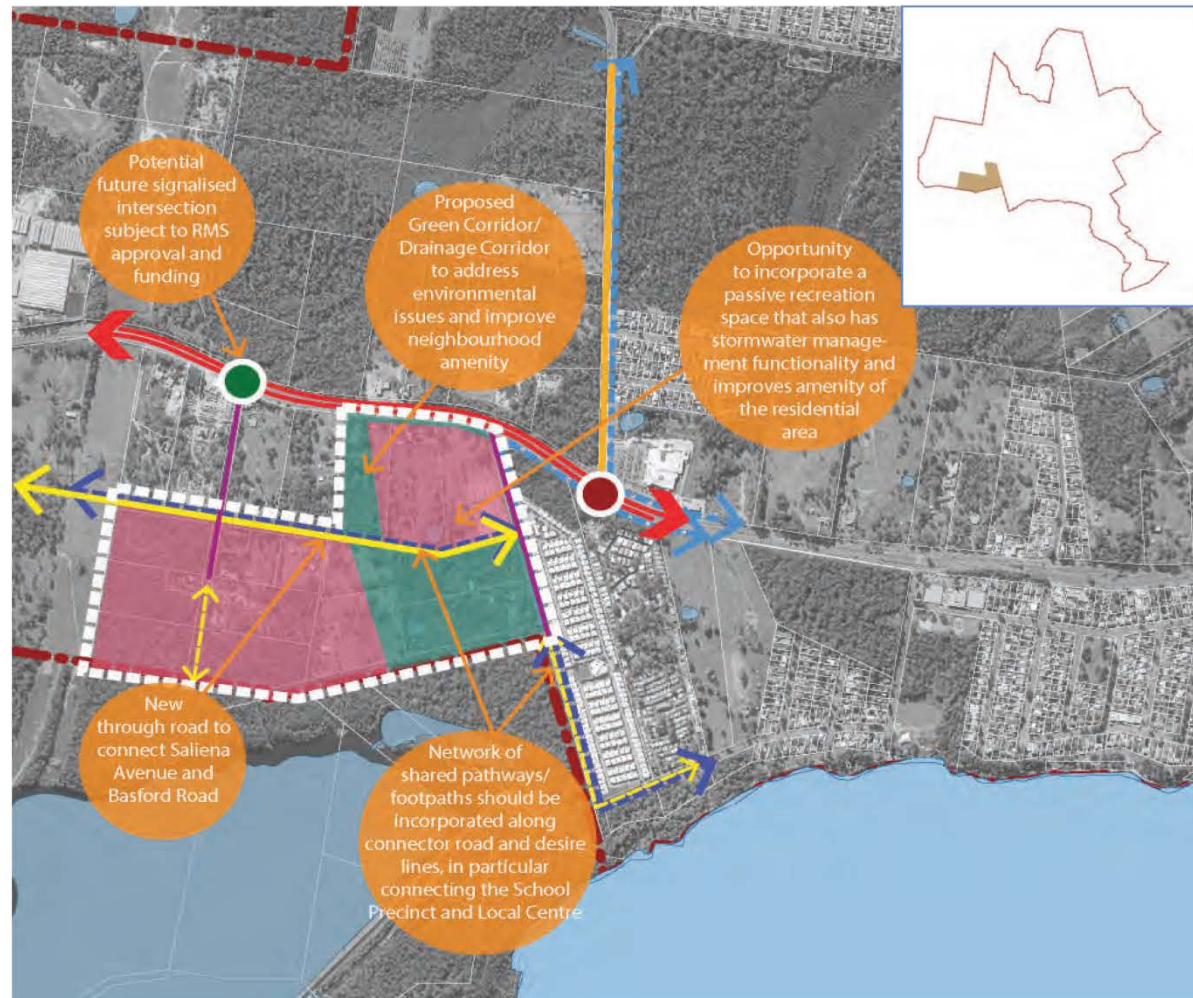
# Structure Plan - Greater Lake Munmorah

Opportunities

Precincts

## Precinct 5 Saliena Avenue

Total area	41 hectares
Gross developable area	32.5 hectares
Estimated Lot Yield *	500 lots
Estimated Population	1,140 @ 2.28 per dwelling
Estimated Jobs	n/a
* Lot yield calculated at 15 dwellings / hectare	



- LEGEND**
- Residential Land- Proposed Low Density
  - Environmental Land (Proposed Green Corridor/ Drainage Corridor)
  - Major Road (Pacific Highway)- Existing
  - Main Road (Higher Traffic Volume)- Existing
  - Minor Road (Higher Traffic Volume)- Existing
  - Main Road (Higher Traffic Volume)- Proposed
  - Minor Road (High Traffic Volume)- Proposed
  - Shared Pathways- Existing
  - Shared Pathways- Propose
  - Signalised Intersection - Existing
  - Signalised Intersection - Proposed

Figure 88: Precinct 5 - Saliena Avenue

Study Area Boundary

# Structure Plan - Greater Lake Munmorah

Opportunities

Precincts

## Precinct 6 Kamilaroo Avenue

Total Area	54 hectares
Gross developable area	8.5 hectares
Estimated Lot Yield	131 lots
Estimated Population	298 @ 2.28 per dwelling
Estimated Jobs	n/a
* Lot yield calculated at 15 dwellings / hectare	



Figure 89: Precinct 6- Kamilaroo Avenue

Study Area Boundary

# Structure Plan - Greater Lake Munmorah

Opportunities

Precincts

## Precinct 7 Chain Valley Bay

Total Area	279 hectares
Gross developable area	28 hectares
Estimated Lot Yield *	431 lots (excluding seniors housing)
Estimated Population	982 @ 2.28 per dwelling
Estimated Jobs	n/a (with exception of potential for expansion of Neighbourhood Centre)
* Lot yield calculated at 15 dwellings / hectare	

**LEGEND**

Residential Land- Proposed Low Density	
Environmental Land (Biodiversity Corridor)	
Recreation Land (Passive Recreation) - Existing	
Residential Land- Managed Conservation Site - Proposed	
Main Road (Higher Traffic Volume)- Existing	
Minor Road (High Traffic Volume)- Existing	
Main Road (Higher Traffic Volume)- Proposed	
Minor Road (High Traffic Volume)- Proposed	
Shared Pathways- Existing	
Shared Pathways- Proposed	
Signalised Intersection - Existing	
Signalised Intersection - Proposed	
Recreation Land : Play Space- Existing	
Recreation Land : Play Space- Existing	
Roundabout/ Other Intersection Treatment - Proposed	
Community Infrastructure- Existing	
Swimming Area	
Boat Ramp (Council)- Existing	
Jetty (Council)	

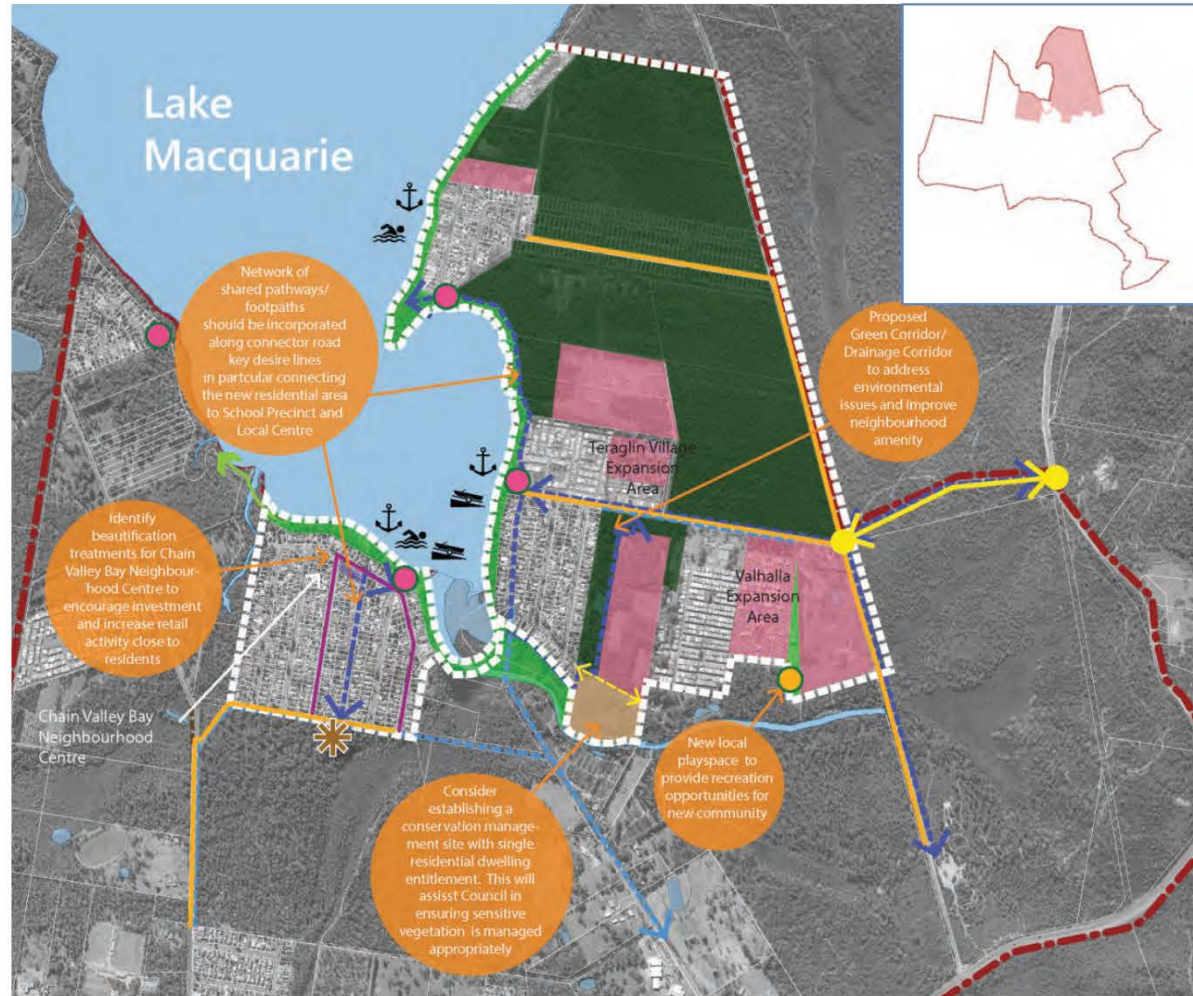


Figure 90: Precinct 7 - Chain Valley Bay

Study Area Boundary

# Structure Plan - Greater Lake Munmorah

Opportunities

Precincts

## Precinct 8 Northern Lake Munmorah

Total Area	63 hectares
Gross Developable Area	33.1 hectares
Estimated Lot Yield *	509 lots
Estimated Population	1,161 @ 2.28 per dwelling
Estimated Jobs	Expansion of Local Centre
* Lot yield calculated at 15 dwellings / hectare	

**LEGEND**

Residential Land- Proposed Low Density	
Environmental Land (Proposed Green Corridor/ Drainage Corridor)	
Environmental Land (Biodiversity Corridor)	
Commercial Land- Existing	
Commercial Land- Proposed/ Opportunity	
Major Road (Pacific Highway)- Existing	
Main Road (Higher Traffic Volume)- Existing	
Minor Road (High Traffic Volume)- Existing	
Main Road (Higher Traffic Volume) - Proposed	
Shared Pathways - Existing	
Shared Pathways - Proposed	
Signalised Intersection - Existing	
Signalised Intersection - Proposed	
Recreation Land: Play Ground - Proposed	
Roundabout/ Other Intersection Treatment - Proposed	

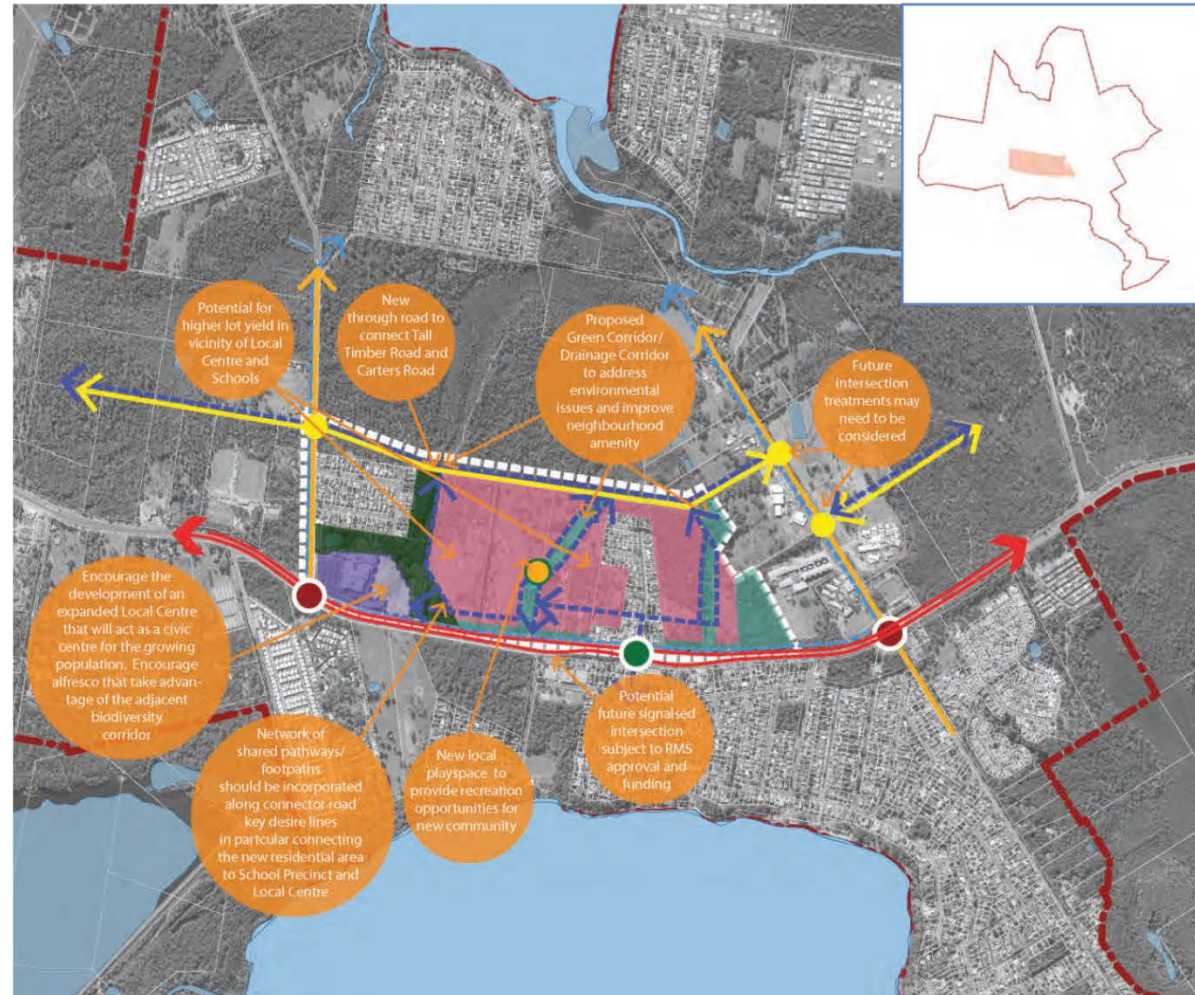


Figure 91: Precinct 8 - Northern Lake Munmorah

Study Area Boundary

# Structure Plan - Greater Lake Munmorah

Opportunities

Precincts

## Precinct 9 Southern Lake Munmorah

Total Area	252 hectares
Gross Developable Area	n/a
Estimated Lot Yield	n/a with exception of existing vacant lots
Estimated Population	n/a with exception of increasing density
Estimated Jobs	n/a

**LEGEND**

Residential Land- Proposed Low Density	
Residential Land- Proposed Low/ Medium Density	
Environmental Land (Biodiversity Corridor)	
Recreation Land: Passive Recreation - Proposed	
Recreation Land: Passive Recreation - Existing	
Recreation Land: Sports Ground - Existing	
Commercial Land - Existing	
Major Road (Pacific Highway) - Existing	
Main Road (Higher Traffic Volume) - Existing	
Minor Road (High Traffic Volume) - Existing	
Shared Pathways - Existing	
Shared Pathways- Proposed	
Signalised Intersection - Existing	
Signalised Intersection - Proposed	
Recreation Land: PlayGround - Existing	
Recreation Land: Play Ground - Proposed	
Roundabout - Existing	
Community infrastructure - Existing	
Community infrastructure - Proposed	
Swimming Area	
Boat Ramp (Council) - Existing	
Jetty (Council)	

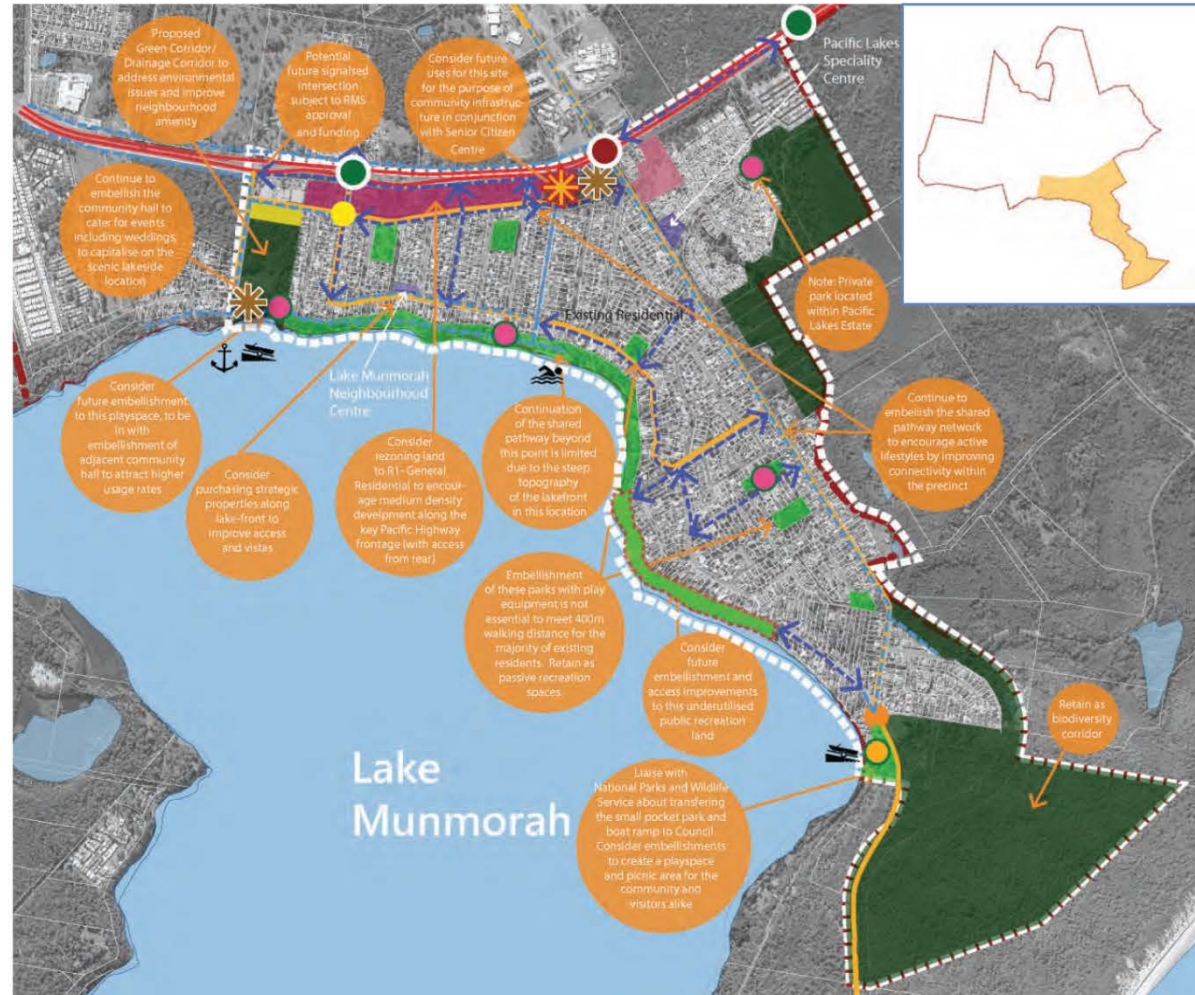


Figure 92: Precinct 9-Southern Lake Munmorah

Study Area Boundary

# Structure Plan - Greater Lake Munmorah

Opportunities

Precincts

## Precinct 10 Education Precinct

Total Area	76 hectares
Gross Developable Area*	34.5 hectares
Estimated Lot Yield **	531 lots
Estimated Population	1,210 @ 2.28 per dwelling
Estimated Jobs	n/a (with exception of potential for expansion of Neighbourhood Centre)
* GDA estimate includes area of land subject to a Planning Proposal by Darkinjung Local Aboriginal Land Council. Actual GDA yet to be determined.	
** Lot yield calculated at 15 dwellings / hectare.	

**LEGEND**

Residential Land- Proposed Low Density	
Environmental Land (Biodiversity Corridor)	
Environmental Land (Proposed Green Corridor/ Drainage Corridor)	
Education Land- Existing	
Commercial Land- Proposed/ Opportunity	
Major Road (Pacific Highway)- Existing	
Main Road (Higher Traffic Volume)- Existing	
Main Road (Higher Traffic Volume)- Proposed	
Shared Pathways- Existing	
Shared Pathways- Proposed	
Signalised Intersection- Existing	
Signalised Intersection- Proposed	
Roundabout/ Other Intersection Treatment- Proposed	
Recreation Land: Play Space- Proposed	
Recreation Land: Play Space- Existing	

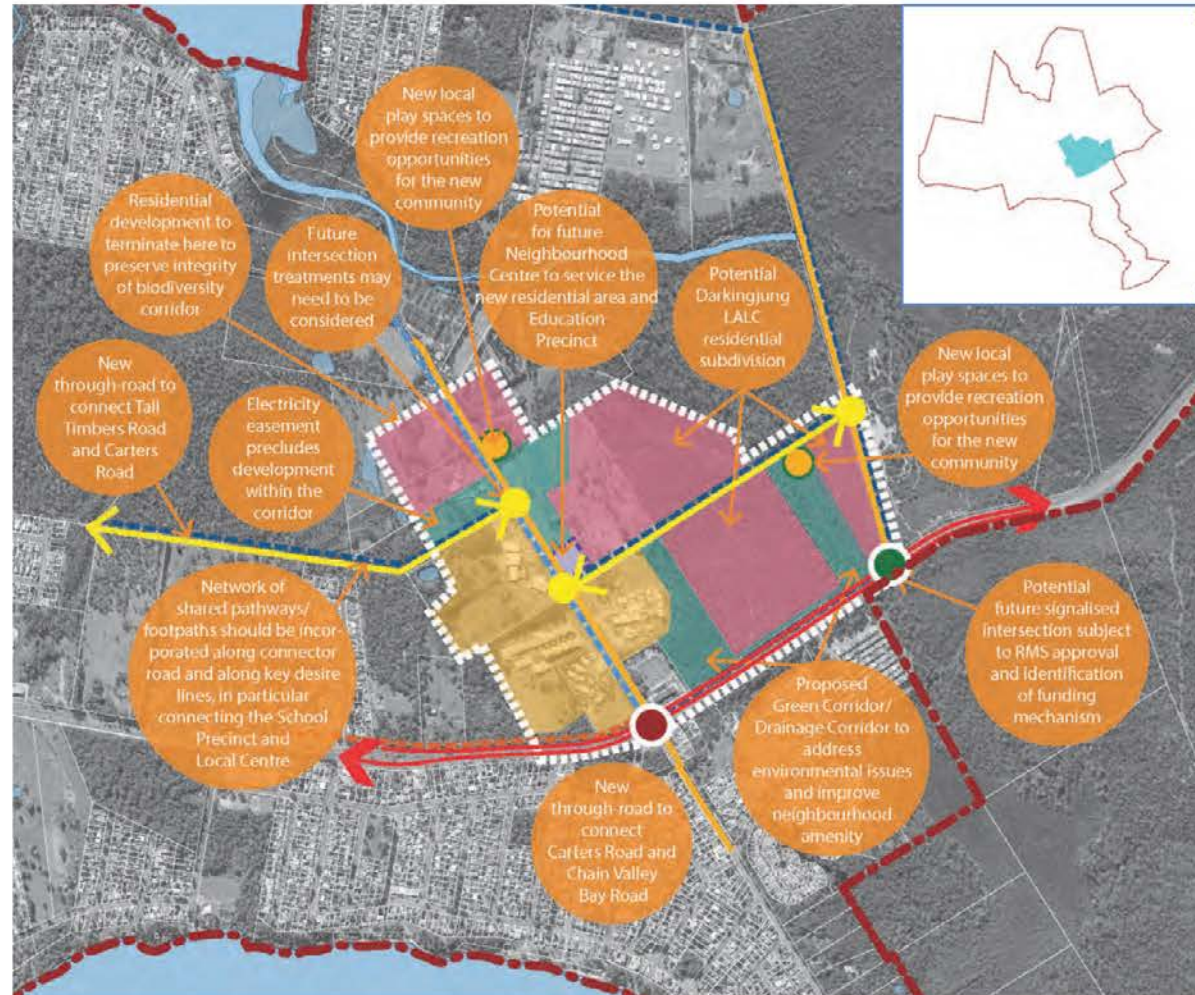


Figure 93: Precinct 10- Education Precinct

Study Area Boundary

**Structure Plan - Greater Lake Munmorah** Opportunities Summary

Composite Structure Plan

The composite structure plan is a consolidation of the key opportunities outlined in the previous sections of this report.

The Greater Lake Munmorah Structure Plan identifies opportunities for approximately:

- 2,744 additional residential dwellings
- 6,256 additional residents, and
- 825 additional jobs.

<b>Size of Study Area</b>	1,523.5 ha
<b>Population</b>	
Current Population (2017)	8,449
<b>Future Additional Population based on Greater Lake Munmorah Structure Plan single dwellings x 2.28</b>	<b>6,256</b>
Future Additional Population based on Forecast ID projections	6,879
Future Additional Population based on NWSWP x 2.28	6,010
<b>Dwellings</b>	
Current Dwellings (2017)	3,883
<b>Future Additional Dwellings based on Greater Lake Munmorah Structure Plan single dwellings</b>	<b>2,744</b>
Future Additional Dwellings based on Forecast ID projections	3,347
Future Additional Dwellings based on NWSWP projections	2,636
<b>Jobs</b>	
Current Jobs(2017)	1,737 *
<b>Future Additional Jobs based on Greater Lake Munmorah Structure Plan Employment Lands</b>	<b>825</b>

\* Includes suburb of Mannering Park (outside Greater Lake Munmorah Structure Plan study area) - Sourced from economy.id.com.au based on ABS statistics.

Structure Plan - Greater Lake Munmorah

Opportunities

Summary

- LEGEND**
- Residential Land - Proposed Low Density
  - Residential Land - Proposed Low/ Medium Density
  - Residential Land- Managed Conservation Site- Proposed
  - Commercial Land- Existing
  - Commercial Land- Proposed
  - Employment Land- Proposed
  - Education Land- Existing
  - Recreation Land: Sports Ground- Existing
  - Recreation Land: Sports Ground- Proposed
  - Environmental Land (Biodiversity Corridor)
  - Environmental Land (Proposed Green Corridor/ Drainage Corridor)
  - Recreation Land: Passive Recreation- Proposed
  - Recreation Land: Passive Recreation- Existing
  - Major Road (Pacific Highway)- Existing
  - Main Road (Higher Traffic Volume)- Existing
  - Minor Road (High Traffic Volume)- Existing
  - Main Road (Higher Traffic Volume)- Proposed
  - Minor Road (High Traffic Volume)- Proposed
  - Shared Pathways- Existing
  - Shared Pathways- Proposed (by Structure Plan)
  - Signalised Intersection - Existing
  - Signalised Intersection - Proposed
  - Roundabout- Existing
  - Roundabout/ Other Intersection Treatment- Proposed
  - Recreation Land: Play Space- Existing
  - Recreation Land: Play Space- Proposed
  - Community Infrastructure- Existing
  - Community Infrastructure- Proposed/ Opportunity
  - Swimming Area
  - Boat Ramp (Council)- Existing
  - Jetty (Council)

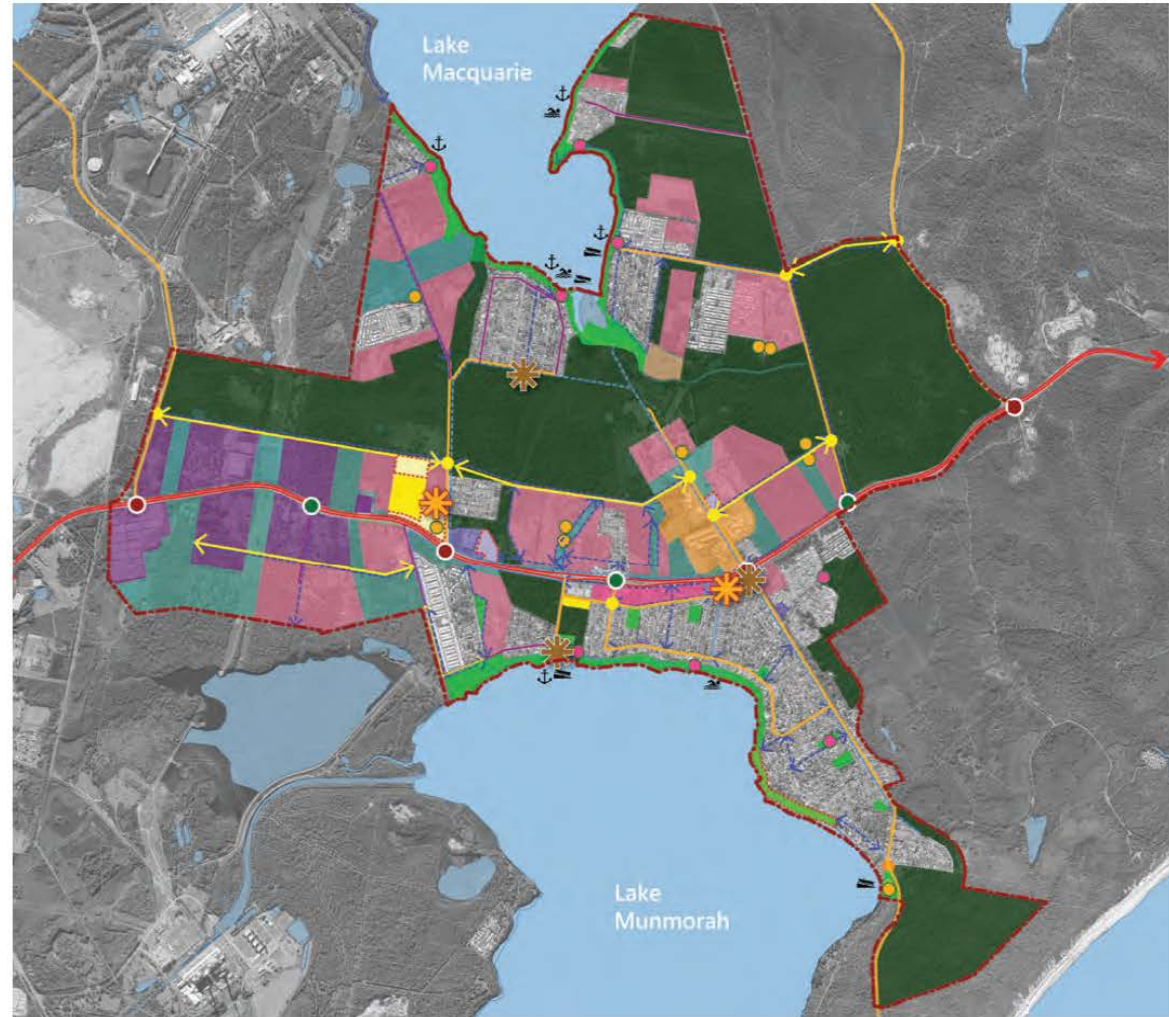


Figure 94: Greater Lake Munmorah Structure Plan

Study Area Boundary







## Structure Plan - Greater Lake Munmorah

## Implementation

### Precinct Planning

This Structure Plan seeks to inform the community of the future direction and vision for the study area over the next 30 years. It is a high level framework that is not intended to resolve all issues associated with the study area. Current planning controls such as zoning, minimum lot sizes and building heights constrain the proposed development identified in this Structure Plan and will need to be amended to enable development. This Structure Plan does not amend these controls. Instead, it is anticipated that the outcomes of this Structure Plan will be implemented through local planning proposals, prepared by land owners to amend the zoning and/or planning controls that apply to their land.

The parts of the study area identified as potential development precincts within the NWSSP have been further divided into smaller precincts, based on land ownership, topographic features and location. Development proponents will be required to group rezoning proposals and subdivision applications together by the relevant refined precinct. It is anticipated that this refinement of precincts will enable more positive development outcomes for the area, enabling Council to more holistically assess development proposals, rather than on a piecemeal basis which may have eventuated otherwise.

A number of technical studies will be required, relating to traffic and transport, flooding and drainage, contamination and remediation, hazards and risk, open space, social infrastructure, ecology, odour, infrastructure servicing and so on. The next steps will involve drafting new planning controls in response to the vision in the Land Use and Infrastructure Strategy and the outcome of the technical studies. Planning proposals will need to be generally consistent with this Structure Plan. However, it is recognised that additional studies undertaken may require this Structure plan to be varied. For example, a review of overland flow of stormwater may require larger or smaller drainage corridors than identified in this Structure Plan. This is acceptable provided it is justified.

### Supporting Documents

A development control plan chapter, masterplans and a public domain strategy will also be developed to guide the future development of the study area.

### Next Steps

- Assess Planning Proposals as they come in.
- Liaise with significant landowners.
- Liaise with relevant Council staff.

### Action Plan

The following tables present a consolidated action plan for implementing the Urban Design Framework, incorporating the objectives and actions discussed in the preceding chapters. The following timelines apply to the priorities:

- Immediate : within 6-12 months of Plan adoption
- Short : 1-2 years
- Medium : 3-5 years
- Long : 6 years plus
- On-going : continual / As needs arise

## Structure Plan - Greater Lake Munmorah

Implementation

### Ongoing actions and advocacy (To be finalised after exhibition)

Item	Responsibility Agencies
nil	n/a

### Capital works and new initiatives (To be finalised after exhibition)

Item	Responsibility Agencies
nil	n/a



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Attachment 1 - *Conditions - DA54832/2018***1. PARAMETERS OF THIS CONSENT****1.1. Approved Plans and Supporting Documents**

Implement the development substantially in accordance with the plans and supporting documents listed below as submitted by the applicant and to which is affixed a Council stamp "Development Consent" unless modified by any following condition.

**Architectural Plans by Tyrells Architects**

<b>Drawing</b>	<b>Description</b>	<b>Sheets</b>	<b>Issue</b>	<b>Date</b>
DA000	Cover Sheet / Location Plan	000	B	11/12/18
DA001	Site Analysis Plan	001	A	27/03/18
DA002	Site Plan	002	C	26/11/18
DA003	Cut & Fill Plan	003	B	07/11/18
DA004	Lighting and Illumination Concept Plan	004	A	27/03/18
DA005	Staging Plan	005	A	27/03/18
DA007	Bin Store Details	007	C	06/12/18
DA100	Cottage 1 & 2 – Floor Plan	100	A	27/03/18
DA101	Cottage 1 & 2 – Elevations	101	A	27/03/18
DA102	Cottage 3 & 4 – Floor Plan	102	A	27/03/18
DA103	Cottage 3 & 4 – Elevations	103	A	27/03/18
DA104	Cottage 5 & 6 – Floor Plan	104	B	07/11/18
DA105	Cottage 5 & 6 – Elevations	105	B	07/11/18
DA106	Cottage 7 & 8 – Floor Plan	106	A	27/03/18
DA107	Cottage 7 & 8 – Elevations	107	B	07/11/18
DA110	Colour Schedule	110	A	27/03/18
DA120	Typical Accessible Cottage Floor Plan	120	A	27/03/18
DA200	Boundary Elevations	200	B	07/11/18

**Landscape Plans by Indesco for Tyrells Architects**

<b>Drawing</b>	<b>Description</b>	<b>Sheets</b>	<b>Issue</b>	<b>Date</b>
001	Landscape Plan Sheet 1 of 2	001	B	11/03/18
002	Landscape Plan Sheet 2 of 2	002	A	26/03/18
003	Landscape Details & Planting Schedule	003	A	26/03/18
004	Landscape Palette	004	A	26/03/18

**Supporting Documentation**

<b>Document</b>	<b>Title</b>	<b>Date</b>
BASIX	BASIX Certificate Number 910235M prepared by Tyrells Plans and Approvals	23 March 2018
Waste	Waste Management Plan (WMP) Revision C, prepared by Tyrells Architects	23 November 2018
Survey	Detail and Contour Survey prepared by Stephen Thorne & Associates Pty Ltd Plan No. 7760A	06/02/18
Stormwater	Water Cycle Management Plan (WCMP) prepared by Halcrow and Associates	21/03/18
Engineering	Stormwater Concept Plan DA 1 of 3; Driveway Concept Plan DA2 of 3; Erosion & Sedimentation Plan DA3 of 3 prepared by Halcrow and Associates	05/02/18
Shadow	Shadow Diagrams – Winter Solstice DA300B prepared by Tyrells Architects	07/11/18
Shadow	Shadow Diagrams – Equinox DA301A prepared by Tyrells Architects	27/03/18
Shadow Study	Shadow Study to 5 Fox Glove CI - Winter Solstice DA303A prepared by Tyrells Architects	07/11/18
Privacy Study	Privacy Study - Cottage 1 to 12 Caldwell CI, DA304B prepared by Tyrells Architects	06/12/18
Privacy Study	Privacy Study - 6 & 8 Guss Cannon CI DA306A, prepared by Tyrells Architects	07/11/18
Survey	Site Plan and Longitudinal Section of Footpaths from Lot 7, Plan 7760A prepared by Stephen Thorne & Associates	19/09/18
Letter	Response to Section 88B Instrument Ref: GMC:DT:mm:22850, prepared by McKees	29/11/18
Access	Access Report prepared by Halcrows and Associates	March 2018
Traffic	Traffic Impact Assessment Ref: 0095r01v02 prepared by PDC Consultants	27/11/18

- 1.2. Carry out all building works in accordance with the Building Code of Australia.
- 1.3. Comply with all commitments listed in the BASIX Certificate for the development as required under clause 97A of the Environmental Planning and Assessment Regulation 2000.
- 1.4. Approval is granted for the development to be carried out in two (2) stages in the following manner:
  - Stage 1 – Construct Cottages 1-4, Landscaping, Carpark, Retaining Walls and Drainage. Bulk Earthworks & Site Stabilization to Southern Part of Site.

- Stage 2 – Construct Cottages 5-8 and Landscaping.

## 2. PRIOR TO ISSUE OF ANY CONSTRUCTION CERTIFICATE

- 2.1. All conditions under this section must be met prior to the issue of any Construction Certificate.
- 2.2. No activity is to be carried out on-site until the Construction Certificate has been issued, other than:
  - a) Site investigation for the preparation of the construction, and / or
  - b) Implementation of environmental protection measures, such as erosion control and the like that are required by this consent
  - c) Demolition
- 2.3. Comply with the access and usability standards outlined in Schedule 3 of *State Environmental Planning Policy (Housing for Seniors and People with a Disability) 2004* for the development. Details of compliance are to be submitted to the Accredited Certifier for approval.
- 2.4. Submit an application to Council under Section 138 of the *Roads Act, 1993*, for the approval of required works to be carried out within the road reserve.

Submit to Council Engineering plans for the required works within a public road that have been designed by a suitably qualified professional in accordance with Council's Civil Works Specification and Gosford DCP 2013 Chapter 6.3 - Erosion Sedimentation Control. The Engineering plans must be included with the Roads Act application for approval by Council.

Design the required works as follows:

- a. 1.2m wide reinforced (SL72 steel fabric, 100mm thick) concrete footpath in an approved location across the full frontage of the site in Caldwell Close.
- b. Heavy-duty vehicle crossing that has a minimum width of 5.5m and constructed with 200mm thick concrete reinforced with 1 layer of SL72 steel fabric top and bottom.
- c. All redundant dish crossings and / or damaged kerb and gutter must be removed and replaced with new kerb and gutter.
- d. The piping of stormwater from within the site to Council's drainage system.
- e. Erosion and sedimentation control plan.

The Roads Act application must be approved by Council.

A fee for the approval of engineering plans under the *Roads Act 1993* applies. The amount of this fee can be obtained by contacting Council's Customer Services on (02) 4325 8222.

- 2.5. Submit a dilapidation report to Council with the Roads Act application and / or Construction Certificate application. The report must document and provide photographs that clearly depict any existing damage to the road, kerb, gutter, footpath, driveways, street trees, street signs or any other Council assets in the vicinity of the development.
- 2.6. Pay a security deposit of \$15,120 into Council's trust fund. The payment of the security deposit is required to cover the cost of repairing damage to Council's assets that may be caused as a result of the development. The security deposit will be refunded upon the completion of the project if no damage was caused to Council's assets as a result of the development.
- 2.7. Submit design details of the following engineering works within private property:
  - a. Driveways / ramps and car parking areas must be designed according to the requirements of AS2890: *Parking Facilities* for the geometric designs, and industry Standards for pavement designs.
  - b. A stormwater detention system must be designed in accordance with the Gosford DCP 2013 Chapter 6.7 - *Water Cycle Management* and Council's Civil Works Specification. The stormwater detention system must limit post development flows from the proposed development to less than or equal to predevelopment flows for all storms up to and including the 1% AEP storm event. A runoff routing method must be used. An on-site stormwater detention report including an operation and maintenance plan must accompany the design. On-site stormwater detention is not permitted within private courtyards, drainage easements, and/or secondary flowpaths.
  - c. Nutrient/pollution control measures must be designed in accordance with Gosford DCP 2013 Chapter 6.7 - *Water Cycle Management*. A nutrient / pollution control report including an operation and maintenance plan must accompany the design.
  - d. On-site stormwater retention measures must be designed in accordance with Council's DCP Chapter 6.7 - *Water Cycle Management*. A report detailing the method of stormwater harvesting, sizing of retention tanks for re-use on the site and an operation and maintenance plan must accompany the design.
  - e. Piping of all stormwater from impervious areas within the site via an on-site stormwater detention structure to Council's drainage system.
  - f. Open type fences in flood affected areas that are of a height and type as not to restrict the flow of water or cause an accumulation of debris.

These design details and any associated reports must be included in the construction certificate.



- 2.8. Submit engineering details prepared by a practising structural engineer to Council for structures constructed adjacent to a Council stormwater system and/or drainage easement and within the zone of influence. Engineering details must have footings designed in accordance with Council's "Guidelines for Building Adjacent to a Drainage Easement" and be approved and form part of the Construction Certificate.
- 2.9. Pay to Council a total contribution amount of **\$111,288.00** that may require adjustment at the time of payment, in accordance with the relevant Council Contribution Plans No. 42A, 42B & 42C Erina/Terrigal/Green Point.

Roadworks - Capital	C	(Key No 735)	\$20,520.00
Roadworks - Land	C	(Key No 734)	\$488.00
Open Space - Land	A	(Key No 736)	\$46,500.00
Recreation - Embellishment	A	(Key No 830)	\$11,944.00
Community Facilities - Capital	A	(Key No 737)	\$3,316.00
Drainage - Land	B	(Key No 732)	\$4,624.00
Drainage - Capital	B	(Key No 733)	\$23,896.00
TOTAL AMOUNT			\$111,288.00

The total amount must be indexed each quarter in accordance with the Consumer Price Index (All Groups Index) for Sydney issued by the Australian Statistician as outlined in the contributions plan.

Contact Council's Contributions Planner on Tel 4325 8222 for an up-to-date contribution payment amount.

Any Construction Certificate must not be issued until the developer has provided the Accredited Certifier with a copy of a receipt issued by Council that verifies that the contributions have been paid. A copy of this receipt must accompany the documents submitted by the certifying authority to Council under Clause 104/Clause 160(2) of the *Environmental Planning and Assessment Regulation 2000*.

A copy of the Contribution Plan may be inspected at the office of Central Coast Council, 49 Mann Street Gosford or on Council's website: [Development Contributions - former Gosford LGA](#)

- 2.10. Arrange release or modification of the following Terms in the Section 88B Instrument for Deposited Plan (DP) 1240791 registered on 15 March 2018 with the Authority Empowered to release, vary or modify the restrictions and positive covenants:

Term	Easement, Restriction or Positive Covenant	Lots or Authority Burdened	Lots or Authority Benefited	Authority Empowered to release, vary or modify
2	Easement to drain water	7	8	Owner of Lot 8 DP1240791

11	Restriction on Use of Land regarding Permitted Structures and Materials and Finishes	7 and 8	7 and 8	Salvation Army or lots having common boundaries
16	Positive Covenant – Rain water tank of 10,000 litres	7 and 8	Central Coast Council	Central Coast Council

Submit, to the Principal Certifying Authority, copies of registered title documents showing the release or modifications to the restrictive and positive covenants.

- 2.11. Provide certification to the Principal Certifying Authority that the structural engineer's details have been prepared in accordance with the recommendations of the geotechnical report listed under Term 18 in the Section 88B Instrument for Deposited Plan (DP) 1240791 registered on 15 March 2018.
- 2.12. Submit an application to Council under Section 305 of the *Water Management Act 2000* to obtain a Section 307 Certificate of Compliance. The *Application for a 307 Certificate under Section 305 Water Management Act 2000* form can be found on Council's website [www.centralcoast.nsw.gov.au](http://www.centralcoast.nsw.gov.au). Early application is recommended.

A Section 307 Certificate must be obtained prior to the issue of any Construction Certificate.

- 2.13. Development constructed near or over Council's sewer main and/or adjacent to the water main must comply with Council's guidelines for 'Building Over or Near Council Sewer and Water Mains'. Details prepared by a practising structural engineer must be submitted to and approved by the Water Authority (Council) in accordance with the *Water Management Act 2000* prior to the issue of a Construction Certificate.

### 3. PRIOR TO COMMENCEMENT OF ANY WORKS

- 3.1. All conditions under this section must be met prior to the commencement of any works.
- 3.2. Appoint a Principal Certifying Authority for the building work:
- The Principal Certifying Authority (if not Council) is to notify Council of their appointment and notify the person having the benefit of the development consent of any critical stage inspections and other inspections that are to be carried out in respect of the building work no later than two (2) days before the building work commences.
  - Submit to Council a Notice of Commencement of Building Works or Notice of Commencement of Subdivision Works form giving at least two (2) days' notice of the intention to commence building or subdivision work. The forms can be found on Council's website: [www.centralcoast.nsw.gov.au](http://www.centralcoast.nsw.gov.au)

- 3.3. Erect a sign in a prominent position on any work site on which building, subdivision or demolition work is being carried out. The sign must indicate:
- a) The name, address and telephone number of the Principal Certifying Authority for the work; and
  - b) The name of the principal contractor and a telephone number at which that person can be contacted outside of working hours; and
  - c) That unauthorised entry to the work site is prohibited.
  - d) Remove the sign when the work has been completed.

- 3.4. Submit both a Plumbing and Drainage Inspection Application, with the relevant fee, and a Plumbing and Drainage Notice of Work in accordance with the *Plumbing and Drainage Act 2011* (to be provided by licensed plumber). These documents can be found on Council's website at: [www.centralcoast.nsw.gov.au](http://www.centralcoast.nsw.gov.au)

Contact Council prior to submitting these forms to confirm the relevant fees.

This condition only applies if installation/alteration of plumbing and/or drainage works are proposed (excludes stormwater drainage)

- 3.5. Provide and maintain a garbage receptacle at the work site until the works are completed. The garbage receptacle must have a tight fitting lid and be suitable for food scraps and papers.
- 3.6. Install run-off and erosion controls to prevent soil erosion, water pollution or the discharge of loose sediment on the surrounding land by:
- erecting a silt fence and providing any other necessary sediment control measures that will prevent debris escaping into drainage systems, waterways or adjoining properties, and diverting uncontaminated run-off around cleared or disturbed areas, and
  - preventing the tracking of sediment by vehicles onto roads, and
  - stockpiling top soil, excavated materials, construction and landscaping supplies and debris within the lot.
- 3.7. Erect a temporary hoarding or temporary construction site fence between the work site and adjoining lands before the works begin and must be kept in place until after the completion of the works, if the works:
- a) could cause a danger, obstruction or inconvenience to pedestrian or vehicular traffic, or
  - b) could cause damage to adjoining lands by falling objects, or
  - c) involve the enclosure of a public place or part of a public place.

**Note 1:** A structure on public land or on or over a public road requires the prior approval of the relevant authority under the *Local Government Act 1993* or the *Roads Act 1993*, respectively.

**Note 2:** The *Work Health and Safety Act 2011* and *Work Health and Safety Regulation 2011* contain provisions relating to scaffolds, hoardings and other temporary structures.

- 3.8. Provide or make available toilet facilities at the work site before works begin and maintain the facilities until the works are completed at a ratio of one toilet plus one additional toilet for every twenty (20) persons employed at the site.

Each toilet must:

- a) be a standard flushing toilet connected to a public sewer, or
- b) have an on-site effluent disposal system approved under the *Local Government Act 1993*, or
- c) be a temporary chemical closet approved under the *Local Government Act 1993*.

#### 4. DURING WORKS

- 4.1. All conditions under this section must be met during works.
- 4.2. Carry out construction or demolition works during the construction phase of the development only between the hours as follows:

- 7.00am and 5.00pm Monday to Saturday

No construction or demolition works associated with the development are permitted to be carried out at any time on a Sunday or a public holiday.

- 4.3. During the construction phase of the development, if any Aboriginal object (including evidence of habitation or remains), is discovered during the course of the work:
- a) All excavation or disturbance of the area must stop immediately in that area, and
  - b) The Office of Environment and Heritage must be advised of the discovery in accordance with section 89A of the *National Parks and Wildlife Act 1974*.

**Note:** If an Aboriginal object is discovered, an Aboriginal heritage impact permit may be required under the *National Parks and Wildlife Act 1974*.

- 4.4. Implement and maintain all erosion and sediment control measures at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.

4.5. Keep a copy of the stamped approved plans on-site for the duration of site works and make the plans available upon request to either the Principal Certifying Authority or an officer of Council.

4.6. Notify Council when plumbing and drainage work will be ready for inspection(s) and make the work accessible for inspection in accordance with the *Plumbing and Drainage Act 2011*.

This condition only applies if installation/alteration of plumbing and/or drainage works are proposed (excludes stormwater drainage)

4.7. Place all building materials, plant and equipment on the site of the development during the construction phase of the development so as to ensure that pedestrian and vehicular access within adjoining public roads, footpaths and reserve areas, is not restricted and to prevent damage to public infrastructure. Further, no construction work is permitted to be carried out within the road reserve unless the works are associated with a separate approval issued under the provisions of the Roads Act 1993.

4.8. Connect downpipes and the associated stormwater disposal system to the site stormwater connection point immediately after the roof materials are positioned in order to prevent erosion of the site from roof water run-off. The Principal Certifying Authority for the development must not issue a mandatory critical stage Compliance Certificate for framing unless connection of the site stormwater (or temporary system) has occurred.

4.9. Do not access the development site through a public reserve unless approval for temporary access over the public reserve is obtained from the council as the Land Manager. A copy of the approval must be available for viewing on-site at all times during work.

4.10. Construct the works within the road reserve that required approval under the Roads Act. The works must be constructed in accordance with Council's Civil Works Specification and Gosford DCP 2013 Chapter 6.3 - Erosion Sedimentation Control.

4.11. Re-use, recycle or dispose of all building materials during the demolition and construction phase of the development in accordance with the Waste Management Plan signed by Tyrells Architects, dated 23 November 2018, Rev C.

## 5. PRIOR TO ISSUE OF ANY OCCUPATION CERTIFICATE

5.1. All conditions under this section must be met prior to the issue of any Occupation Certificate.

5.2. Submit a Certificate of Compliance for all plumbing and drainage work and a Sewer Service Diagram showing sanitary drainage work (to be provided by licensed plumber) in accordance with the *Plumbing and Drainage Act 2011*.

This condition only applies if installation/alteration of plumbing and/or drainage works are proposed (excludes stormwater drainage).

- 5.3. Prior to the occupation or use of the building/structure, an application for an Occupation Certificate for the development must be submitted to and approved by the Principal Certifying Authority. The Occupation Certificate application is to satisfy all of the requirements of the *Environmental Planning and Assessment Regulation 2000*.
- 5.4. Complete the landscaping works.
- 5.5. Provide the Principal Certifying Authority with written certification from a qualified landscape designer certifying that landscaping has been implemented in accordance with the approved landscape plan as amended by any conditions of this consent.
- 5.6. Revegetate and stabilise all areas disturbed by construction activities associated with the development so as to prevent erosion and dust nuisance occurring.
- 5.7. Execute an instrument under the *Conveyancing Act 1919* for the following restrictive covenants with Council having the benefit of these covenants and having sole authority to release and modify.

The approved development is only to be occupied by:

- a) people aged 55 years or over or people with a disability as defined by the provisions of *State Environmental (Housing for Seniors or People with a Disability) 2004*
  - b) people who live with such people as defined in sub-clause above; and
  - c) staff employed to assist in the administration of and provision of services to housing provided in this development.
- 5.8. Erect a 1.8 metre high fence along the length of the side and rear boundaries behind the building line.
  - 5.9. Consolidate LOT: 7 DP: 1240791, LOT: 8 DP: 1240791 into a single allotment under one Certificate of Title.  
  
Documentary evidence of the lodgement of the Consolidation Plan with the NSW Land and Property Information can be accepted by the Principal Certifying Authority as satisfying this requirement.
  - 5.10. Provide mail receptacles appropriately numbered for each dwelling unit in the development, as well as for the managing body, in consultation with Australia Post.
  - 5.11. Provide fold-away clothes lines for clothes drying purposes that must not extend above courtyard fencing.
  - 5.12. Complete the building in accordance with the relevant provisions and requirements of the National Construction Code Series.
  - 5.13. Complete works within the road reserve that required approval under the Roads Act. The works must be completed in accordance with Council's Civil Works Specification and Gosford

DCP 2013 Chapter 6.3 - Erosion Sedimentation Control, and documentary evidence for the acceptance of such works must be obtained from the Roads Authority.

- 5.14. Rectify any damage not shown in the dilapidation report submitted to Council before site works had commenced. Any damage will be assumed to have been caused as a result of the site works undertaken and must be rectified at the applicant's expense.
- 5.15. Complete the internal engineering works within private property in accordance with the plans and details approved with the construction certificate.
- 5.16. Amend the Deposited Plan (DP) to:
  - Include an Instrument under the *Conveyancing Act 1919* for the following restrictive covenants; with the Council having the benefit of these covenants and having sole authority to release and modify. Wherever possible, the extent of land affected by these covenants must be defined by bearings and distances shown on the plan.
    - a. Create a 'Restriction as to User' over all lots containing an on-site stormwater detention system and/or a nutrient/pollution facility restricting any alteration to such facility or the erection of any structure over the facility or the placement of any obstruction over the facility.

And,

- Include an instrument under the *Conveyancing Act 1919* for the following positive covenants; with the Council having the benefit of these covenants and having sole authority to release and modify. Contact Council for wording of the covenant(s).
  - a. To ensure on any lot containing on-site stormwater detention system and / or a nutrient / pollution facility that:
    - (i) The facility will remain in place and fully operational.
    - (ii) The facility is maintained in accordance with the operational and maintenance plan so that it operates in a safe and efficient manner
    - (iii) Council's officers are permitted to enter the land to inspect and repair the facility at the owners cost.
    - (iv) Council is indemnified against all claims of compensation caused by the facility.

Submit, to the Principal Certifying Authority, copies of registered title documents showing the restrictive and positive covenants.

- 5.17. Submit certification from a consulting engineer to Council stating that all slabs and / or footings within the zone of influence associated with the Council stormwater system and / or drainage easement have been constructed in accordance with the Construction Certificate.

## 6. ONGOING OPERATION

- 6.1. Maintain all perimeter fencing for the life of the development in the approved location.
- 6.2. Maintain the site landscaping for the life of the development.
- 6.3. Operate and maintain all external lighting so as not to impact on any adjoining property.
- 6.4. Maintain the on-site stormwater detention facility in accordance with the operation and maintenance plan.
- 6.5. Maintain the nutrient / pollution control facilities in accordance with the operation and maintenance plan.
- 6.6. Store all waste generated on the premises in a manner so that it does not pollute the environment.
- 6.7. No obstructions to the wheel out of the waste bins are permitted including grills, speed humps, barrier kerbs, etc.
- 6.8. Comply with all commitments as detailed in the Waste Management Plan signed by Tyrells Architects, dated 23 November 2018 Revision C.
- 6.9. Locate the approved waste storage enclosure / area as indicated on Drawing Number DA007, Revision C, dated 6 December 2018, prepared by Tyrells Architects.
- 6.10. Do not place or store waste material, waste product or waste packaging outside the approved waste storage enclosure.
- 6.11. The inspection fee for works associated with approvals under the Roads Act is calculated in accordance with Council's current fees and charges policy.
- 6.12. Payment of a maintenance bond may be required for civil engineering works associated with this development. This fee is calculated in accordance with Council's fees and charges.

## PENALTIES

Failure to comply with this development consent and any condition of this consent may be a **criminal offence**. Failure to comply with other environmental laws may also be a **criminal offence**.

Where there is any breach Council may without any further warning:

- Issue Penalty Infringement Notices (On-the-spot fines);
- Issue notices and orders;



- Prosecute any person breaching this consent, and/or
- Seek injunctions/orders before the courts to retain and remedy any breach.

### Warnings as to Potential Maximum Penalties

Maximum Penalties under NSW Environmental Laws include fines up to \$1.1 Million and/or custodial sentences for serious offences.

### ADVISORY NOTES

- Discharge of sediment from a site may be determined to be a pollution event under provisions of the *Protection of the Environment Operations Act 1997*. Enforcement action may commence where sediment movement produces a pollution event.
- The following public authorities may have separate requirements in the following aspects:
  - a) Australia Post for the positioning and dimensions of mail boxes in new commercial and residential developments
  - b) Jemena Asset Management for any change or alteration to the gas line infrastructure
  - c) Ausgrid for any change or alteration to electricity infrastructure or encroachment within transmission line easements
  - d) Telstra, Optus or other telecommunication carriers for access to their telecommunications infrastructure
  - e) Central Coast Council in respect to the location of water, sewerage and drainage services.
- Carry out all work under this Consent in accordance with SafeWork NSW requirements including the *Workplace Health and Safety Act 2011 No 10* and subordinate regulations, codes of practice and guidelines that control and regulate the development industry.
- Dial Before You Dig  
Underground assets may exist in the area that is subject to your application. In the interests of health and safety and in order to protect damage to third party assets please contact Dial Before You Dig at [www.1100.com.au](http://www.1100.com.au) or telephone on 1100 before excavating or erecting structures. (This is the law in NSW). If alterations are required to the configuration, size, form or design of the development upon contacting the Dial Before You Dig service, an amendment to the development consent (or a new development application) may be necessary. Individuals owe asset owners a duty of care that must be observed when working in the vicinity of plant or assets. It is the individual's responsibility to anticipate and request the nominal location of plant or assets on the relevant property via contacting the Dial Before You Dig service in advance of any construction or planning activities.

- Telecommunications Act 1997 (Commonwealth)  
Telstra (and its authorised contractors) are the only companies that are permitted to conduct works on Telstra's network and assets. Any person interfering with a facility or installation owned by Telstra is committing an offence under the *Criminal Code Act 1995 (Cth)* and is liable for prosecution. Furthermore, damage to Telstra's infrastructure may result in interruption to the provision of essential services and significant costs. If you are aware of any works or proposed works which may affect or impact on Telstra's assets in any way, you are required to contact: Telstra's Network Integrity Team on phone number 1800 810 443.
- Install and maintain backflow prevention device(s) in accordance with Council's WS4.0 Backflow Prevention Containment Policy. This policy can be found on Council's website at: [www.centralcoast.nsw.gov.au](http://www.centralcoast.nsw.gov.au)

This condition only applies if installation/alteration of plumbing and/or drainage works are proposed (excludes stormwater drainage).

# The Cottages - Caldwell Place, Green Point



The Cottages - Green Point is a continuation of the extraordinarily successful Erna Cottages development (photographed above)

## Specification notes

- all works are to be undertaken in accordance with the requirements of the National Construction Code (NCC), Australian Standards, Workcover Authority requirements, DA/CC conditions, Council requirements, Water & Sewer authority requirements, and any other applicable standards, codes or requirements.
- construction is to be in accordance with the requirements of the BASIX certificate.
- locations of services & existing site conditions are to be verified by the builder prior to commencement of works.
- all contour levels and reduced levels (RL's) are shown to Australian Height Datum (AHD)
- timber framed construction is to be in accordance with AS1684
- smoke alarms are to be installed in accordance with clauses 3.7.2.3 & 3.7.2.4 of the NCC, AS3786, and the manufacturers specification, and must be connected to mains power supply.
- stair construction must comply with the provisions of NCC part 3.9.1
- balustrades & handrails are to comply with the requirements of the NCC part 3.9.2 and Australian Standards.
- waterproofing of wet area's is to comply with the requirements of AS3740 or part 3.8.1.2 of the NCC
- glass & glazing is to be installed in accordance with AS1288 & be of adequate thickness for the terrain category & wind loading applicable
- termite protection is to be provided in accordance with AS3660.1
- doors to fully enclosed sanitary compartments are to comply with the provisions of part 3.8.3.3 of the NCC.
- all bathrooms/toilets/laundries with no access to natural ventilation or lighting are to be provided with mechanical ventilation and/or artificial lighting in accordance with the NCC and AS1668.2
- all laundries are to be provided with floor wastes
- the hot water installation shall deliver hot water not exceeding 50°C at the outlets, excluding kitchen sinks & laundry tubs.
- all newly constructed pedestrian paths within the building will be minimum 1m wide, have non-slip finish, not be steep, & comply with AS1428.1 & 1428.2
- see tyrells.com Trouble Free Building <http://www.tyrells.com/pdf/troublefree.htm>

## Base Thermal Comfort Commitments - all dwellings

- Concrete slab on ground construction. No requirement for insulation to slab. Default floor coverings specified.
- Framed suspended construction for upper floors (enclosed subfloors where applicable)
- 102mm (ie. 5mmFC/95foam/4FC) SIP panels to external walls
- 90mm SIP panels to internal partition walls
- Concrete panel with plasterboard party walls between dwellings
- Roof colour ranges as nominated (Dark - Monument) (Medium - Basalt) (Light - Slate Grey & Surfmat)
- Vertical Corrosion 200mm roof panels (R4.9 equivalent)
- Standard clear glazing in aluminium frames, toughened or opaque where required. U<sub>g</sub>=-6.7, SHGC=0.70 (+/-10%) (for sliding, louvre and fixed units)
- Draft seals to all external doors and windows
- Floor coverings as per plans
- Ceiling penetrations for downlights as per plans - standard fittings



Location

Legend  
■ Compliant  
■ Non-compliant

## Area calculations

Site Area	2029.19m <sup>2</sup>
Floor area	765m <sup>2</sup>
<b>FSR</b>	<b>0.38:1</b>
<b>Landscaping</b>	
Landscaping	32% (650m <sup>2</sup> )
Deep Soil Area	16% (335m <sup>2</sup> )
<b>Parking &amp; Access</b>	
Site Area with <1:10 gradient	1111.19m <sup>2</sup> (55%)
Proposed number of dwellings	8
Number of dwellings to have disabled access	5 (62%)
Parking (Seniors)	8 + 1 Visitor

## Proposed

Site Area	2029.19m <sup>2</sup>
Floor area	765m <sup>2</sup>
<b>FSR</b>	<b>0.38:1</b>
<b>Landscaping</b>	
Landscaping	32% (650m <sup>2</sup> )
Deep Soil Area	16% (335m <sup>2</sup> )
<b>Parking &amp; Access</b>	
Site Area with <1:10 gradient	1111.19m <sup>2</sup> (55%)
Proposed number of dwellings	8
Number of dwellings to have disabled access	5 (62%)
Parking (Seniors)	8 + 1 Visitor

## SEPP

Site Area	2029.19m <sup>2</sup>
Floor area	765m <sup>2</sup>
<b>FSR</b>	<b>0.38:1</b>
<b>Landscaping</b>	
Landscaping	30% (608.76m <sup>2</sup> )
Deep Soil Area	15% (304.38m <sup>2</sup> )
<b>Parking &amp; Access</b>	
Site Area with <1:10 gradient	1111.19m <sup>2</sup> (55%)
Proposed number of dwellings	8
Number of dwellings to have disabled access	5 (62%)
Parking (Seniors)	8 + 1 Visitor

## Council

Zoning	R2
Bushfire	no
Flooding	no
Acid sulphate soils	5
Heritage	no
Vegetation	no
Scenic Quality & Character	North Avoca 2, Sandplain Bungalows

## LEP/DCP

Zoning	R2
Bushfire	no
Flooding	no
Acid sulphate soils	5
Heritage	no
Vegetation	no
Scenic Quality & Character	North Avoca 2, Sandplain Bungalows

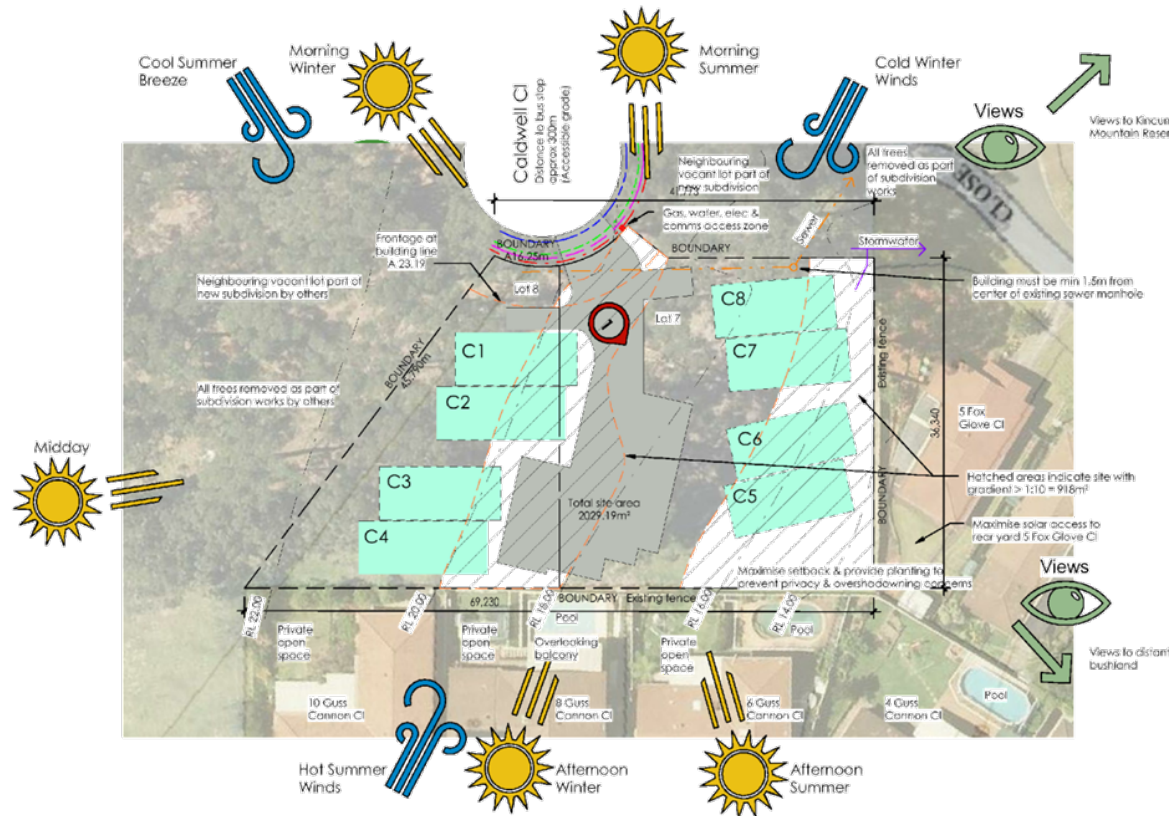
## NCC

Classification	1a
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## Drawings

- 000 Cover Sheet/ Location Plan
- 001 Site Analysis Plan
- 002 Site Plan
- 003 Cut & Fill Plan
- 004 Lighting & Illumination Concept Plan
- 005 Staging Plan
- 006 Draft Strata Plan
- 007 Bin Store Details
- 100 Cottage 1 & 2 - Floor Plan
- 101 Cottage 1 & 2 - Elevations
- 102 Cottage 3 & 4 - Floor Plan
- 103 Cottage 3 & 4 - Elevations
- 104 Cottage 5 & 6 - Floor Plan
- 105 Cottage 5 & 6 - Elevations
- 106 Cottage 7 & 8 - Floor Plan
- 107 Cottage 7 & 8 - Elevations
- 110 Colour Schedule
- 120 Typical Accessible Cottage Floor Plan
- 200 Boundary Elevations
- 300 Shadow Diagrams - Winter Solstice
- 301 Shadow Diagrams - Equinox 21st March/September
- 302 Photomontage & 3d View
- 303 Shadow Study to 5 Fox Glove Ct - Winter Solstice
- 304 Privacy Study - Cottage 1 to 12 Caldwell Ct
- 306 Privacy Study - 6 & 8 Guss Cannon Ct

revision			client	title	drawing number	revision
no.	description	date	<b>Tyrrells</b> project Cottages - Green Point 13-14 Caldwell Close Green Point Lot 7 & 8, DP 1240791	<b>Cover Sheet/ Location Plan</b>	<b>DA 000</b>	<b>B</b>
A	DA Submission	27.03.18		scale @ A3 1 : 1	drawn by AJ	
B	Drawing list updated	11.12.18		document date 11.12.18		
 <p>PO Box 337, Gladesville NSW 1675          p 1300 131 270          e plans@tyrells.com</p>			<p>Tyrrells Architects          ABN. 28 238 913 625</p>			

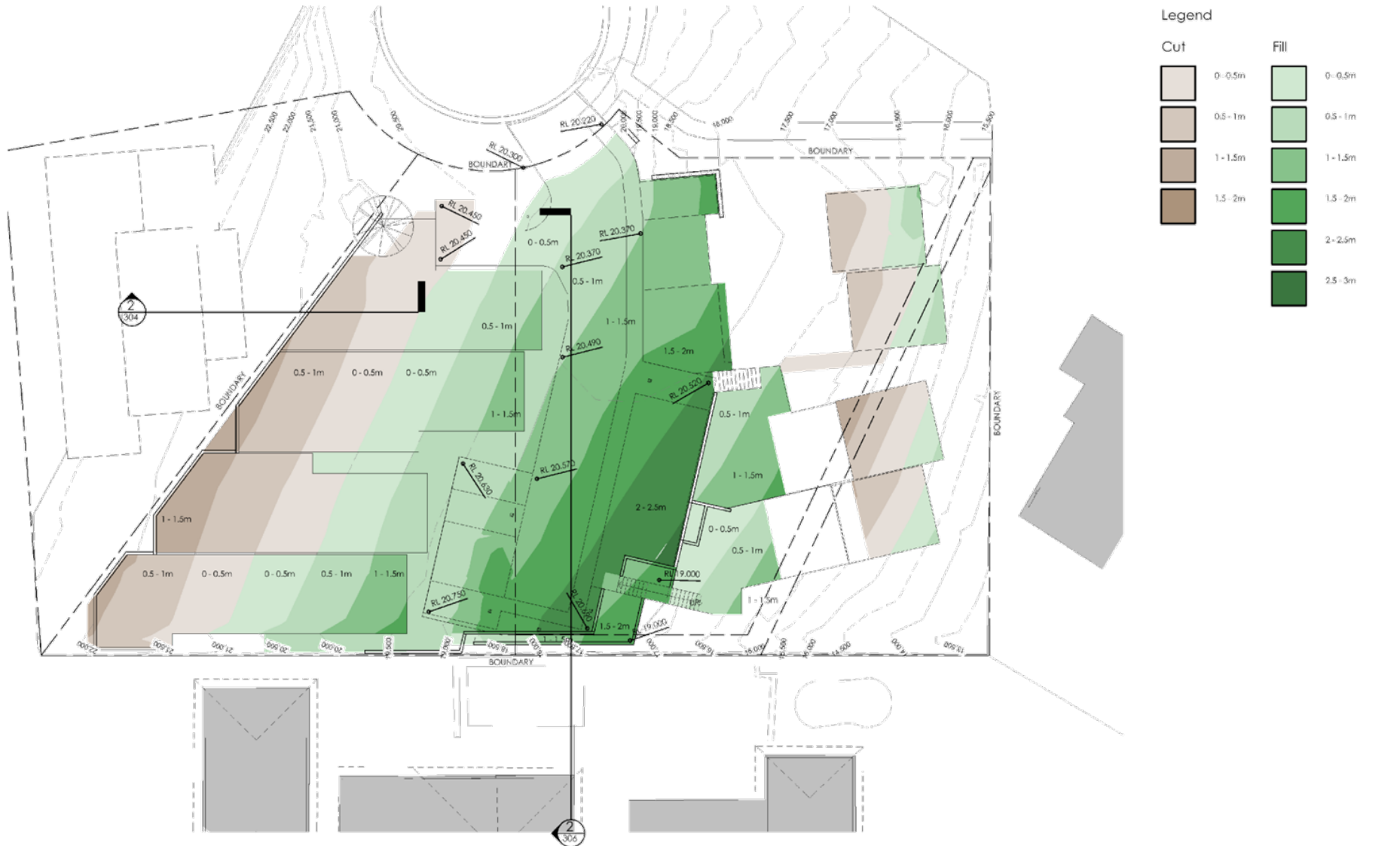


1 Panoramic view of subject site looking South West

revision		no.		description		date		client		title		drawing number		revision	
A		DA Submission		27.03.18		Tyrrells Architects		Tyrrells Architects		Site Analysis Plan		DA 001		A	
0m 5 10 20 30		tyrrells ARCHITECTS		PO Box 337, Gladesville NSW 1675 p 1300 131 270 e plans@tyrrells.com		Cottages - Green Point 13-14 Caldwell Place Green Point Lot 7 & 8, DP 1240791		scale @ A3 1 : 500		drawn by AJ		document date 27.03.18		Tyrrells Architects ABN: 28 238 913 625	



revision		client		title		drawing number		revision																	
n.o.	description	date	Tyrrells	Site Plan																					
A	DA Submission	27.03.18	Tyrrells Architects	scale @ A3	1:250	drawn by	AJ	document date	26.11.18																
B	Additional information to Council	07.11.18	13-14 Caldwell Close																						
C	Bin store revised	26.11.18	Green Point																						
			Lot 7 & 8, DP 1240791																						
<table border="1"> <tr> <th>no.</th> <th>description</th> <th>date</th> </tr> <tr> <td>A</td> <td>DA Submission</td> <td>27.03.18</td> </tr> <tr> <td>B</td> <td>Additional information to Council</td> <td>07.11.18</td> </tr> <tr> <td>C</td> <td>Bin store revised</td> <td>26.11.18</td> </tr> </table>		no.	description	date	A	DA Submission	27.03.18	B	Additional information to Council	07.11.18	C	Bin store revised	26.11.18			<p>PO Box 337, Gladesville NSW 1675 1300 131 270 plans@tyrrells.com</p>		<p>client <b>Tyrrells</b> project Cottages - Green Point 13-14 Caldwell Close Green Point Lot 7 &amp; 8, DP 1240791</p>		<p>title <b>Site Plan</b></p>		<p>drawing number <b>DA 002</b></p>		<p>revision <b>C</b></p>	
no.	description	date																							
A	DA Submission	27.03.18																							
B	Additional information to Council	07.11.18																							
C	Bin store revised	26.11.18																							
<p>Notes: 1. Refer to Civil Engineer's documentation for erosion &amp; sediment control plan &amp; stormwater management plan. 2. Refer to Landscape Architect's documentation for external finishes &amp; planting</p>																									



revision			 PO Box 337, Gladesville NSW 1673 p 1300 131 270 e plans@tyrrells.com	client	title	drawing number	revision
n.o.	description	date		<b>Tyrrells</b> project Cottages - Green Point 13-14 Caldwell Close Green Point Lot 7 & 8, DP 1240791	<b>Cut &amp; Fill Plan</b> scale @ A3 1:250	drawing by AJ	document date 07.11.18

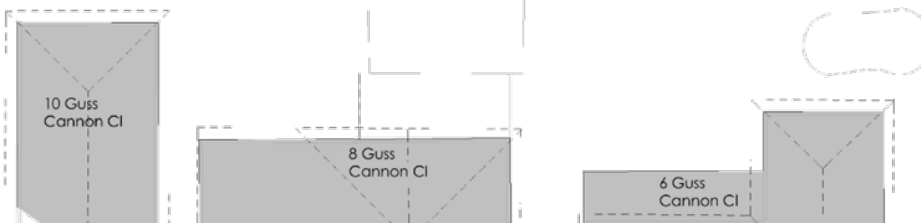
Figures contained in this plan are presented as advisory only. It is recommended that all construction work be carried out in accordance with the relevant Australian Standards. The client is responsible for ensuring that the plan is used in accordance with the relevant Australian Standards. The client is responsible for ensuring that the plan is used in accordance with the relevant Australian Standards. The client is responsible for ensuring that the plan is used in accordance with the relevant Australian Standards.



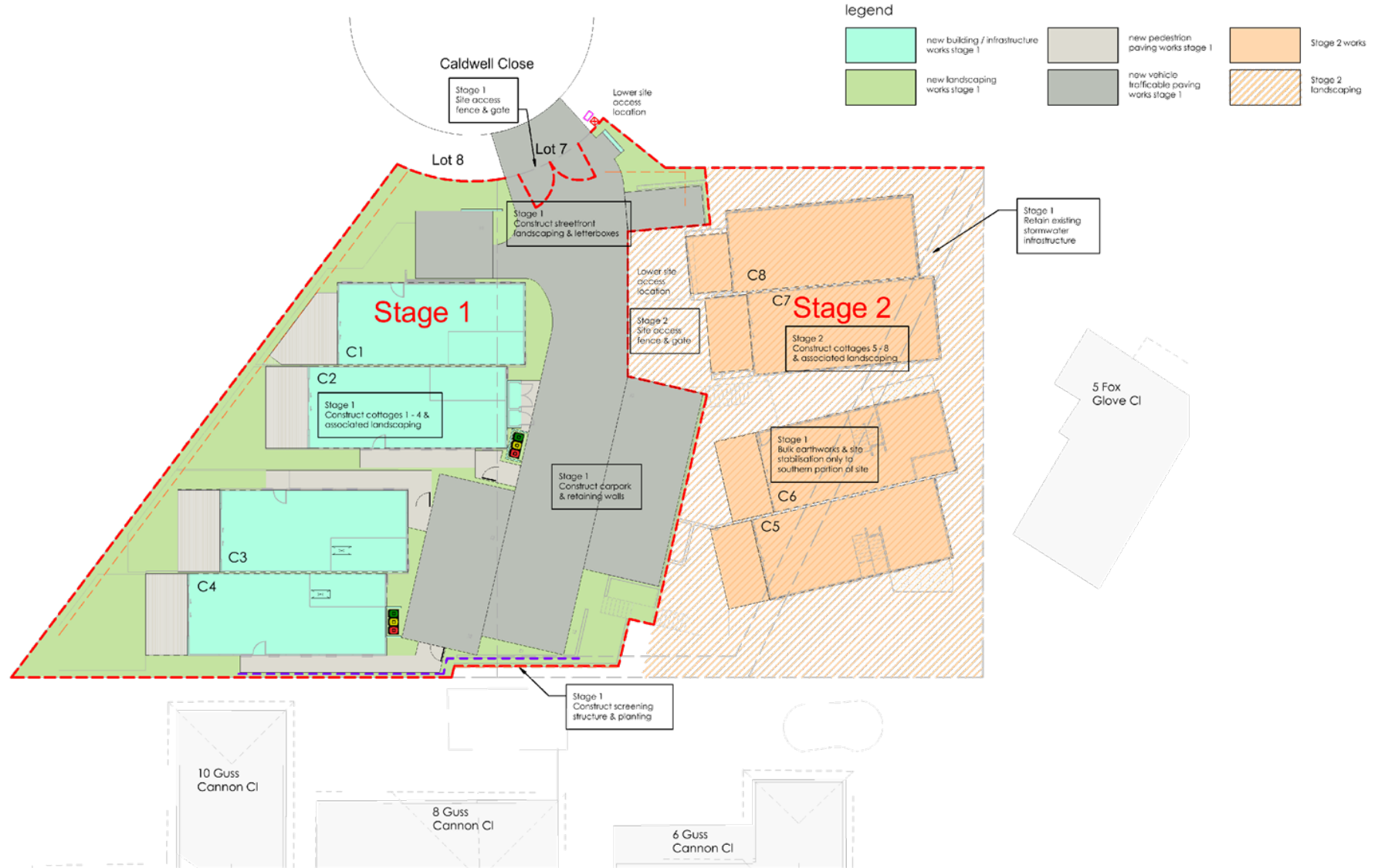
legend

- Foot lighting to stair
- BL Bollard light
- LP Light pole to provide general illumination to carpark
- ML Motion sensor light
- NL Low level number light
- PL Ceiling light privately operated by resident
- WL Wall light

Note:  
 • Lighting design to be confirmed by electrical consultant  
 • Lighting to provide min 20 Lux at ground level to all paved areas  
 • Light fittings, location & orientation installed to not cause glare to pedestrians & neighbouring dwellings



revision no. description date A DA Submission 27.03.18		 PO Box 337, Gladesville NSW 1675 p 1300 131 270 e plans@tyrrells.com	client <b>Tyrrells</b> project Cottages - Green Point 13-14 Caldwell Place Green Point Lot 7 & 8, DP 1240791	title <b>Lighting &amp; Illumination</b> Concept Plan scale @ A3 1:250	drawing number <b>DA 004</b>	revision <b>A</b>
			drawn by AJ	document date 27.03.18	Tyrells Architects ABN 28 238 913 625	



revision	no.	description	date	client	title	drawing number	revision
A	1	DA Submission	27.03.18	Tyrrells project Cottages - Green Point 13-14 Caldwell Place Green Point Lot 7 & 8, DP 1240791	Staging Plan	DA 005	A

scale @ A3  
1:250

drawn by  
AJ

document date  
27.03.18

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e plans@tyrells.com

Tyrrells ARCHITECTS

Figure dimensions to the location preferences to wording of drawings. All dimensions to be carefully checked on site prior to commencement of any works. © Copyright to all material contained by Tyrrells Architects and/or its licensee or reproduced. All permission is sought and hereby granted. All work is to conform to relevant Australian Standards and other codes as applicable, together with all other requirements and regulations.  
Tyrrells Architects ABN. 28 238 913 625







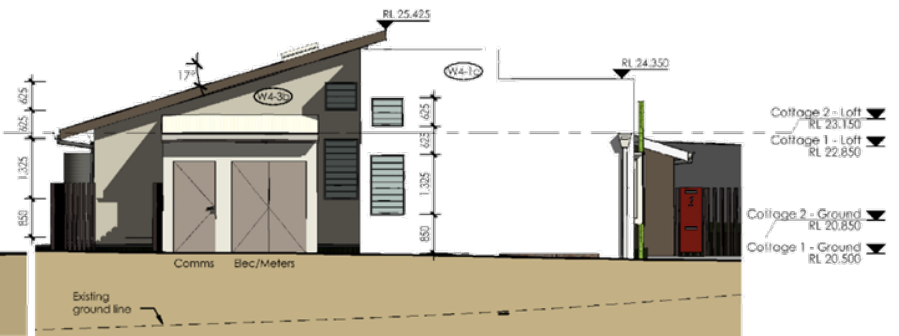
1 Cottage 1 & 2 - East Elevation  
1 : 100



2 Cottage 1 & 2 - North Elevation  
1 : 100



3 Cottage 1 & 2 - West Elevation  
1 : 100

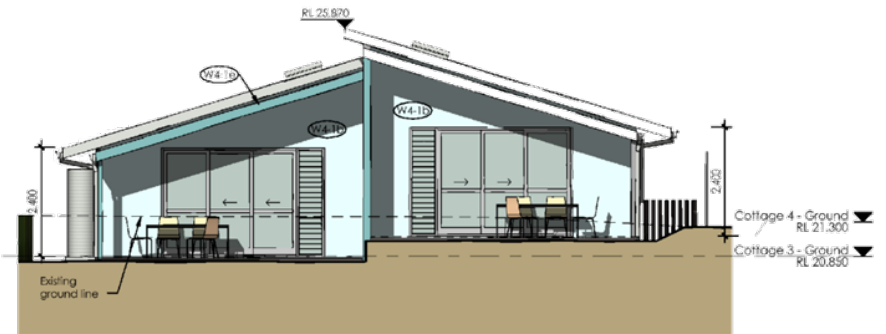


4 Cottage 1 & 2 - South Elevation  
1 : 100

revision	no.	description	date	tyrrells ARCHITECTS	client	title	drawing number	revision
A	1	DA Submission	27.03.18	 PO Box 337, Gladesville NSW 1675 p 1300 131 270 e plans@tyrrells.com	Tyrrells project Cottages - Green Point 13-14 Caldwell Place Green Point Lot 7 & 8, DP 1240791	Cottage 1 & 2 - Elevations  scale @ A3 1 : 100	DA 101 A  drawn by AJ document date 27.03.18	Tyrrells Architects ABN. 28 238 913 625



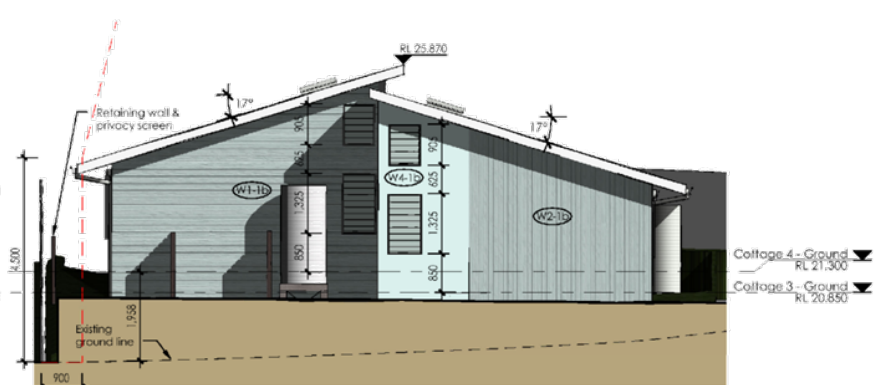
1 Cottage 3 & 4 - East Elevation  
1 : 100



2 Cottage 3 & 4 - North Elevation  
1 : 100

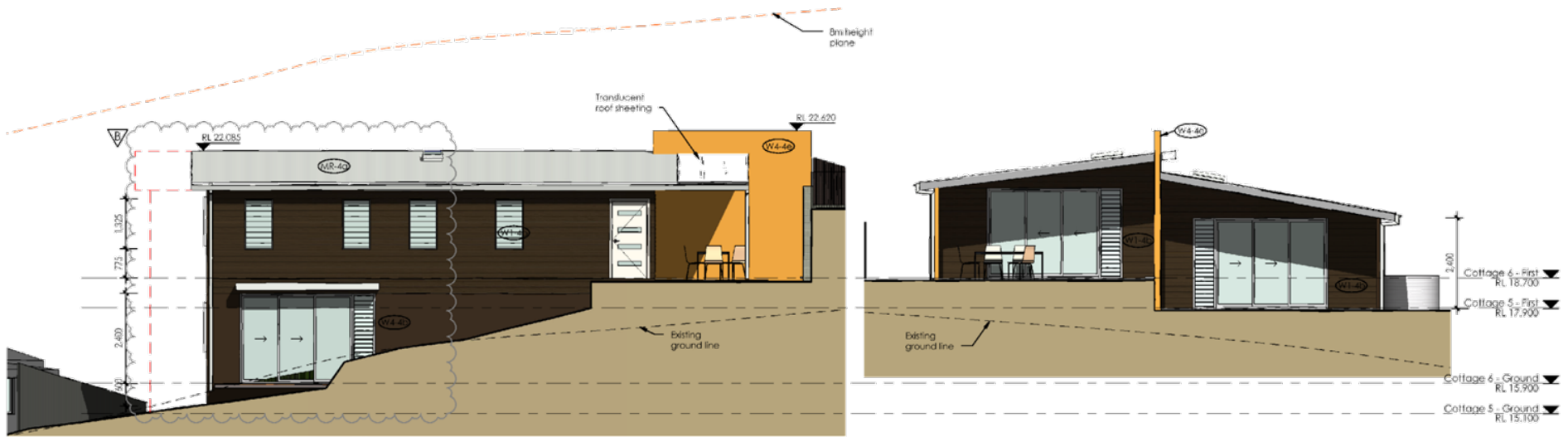


3 Cottage 3 & 4 - West Elevation  
1 : 100



4 Cottage 3 & 4 - South Elevation  
1 : 100

revision				client	title	drawing number	revision	
no.	description	date		 <p>PO Box 337, Gladesville NSW 1675 p 1300 131 270 e plans@tyrrells.com</p>	<p><b>Tyrrells</b> project Cottages - Green Point 13-14 Caldwell Place Green Point Lot 7 &amp; 8, DP 1240791</p>	<p><b>Cottage 3 &amp; 4 - Elevations</b></p> <p>scale @ A3 drawn by document date 1 : 100 AJ 27.03.18</p>	<p><b>DA 103</b></p> <p>Tyrrells Architects ABN. 28 238 913 625</p>	<p><b>A</b></p>
A	DA Submission	27.03.18						



1 Cottage 5 & 6 - East Elevation  
1 : 100

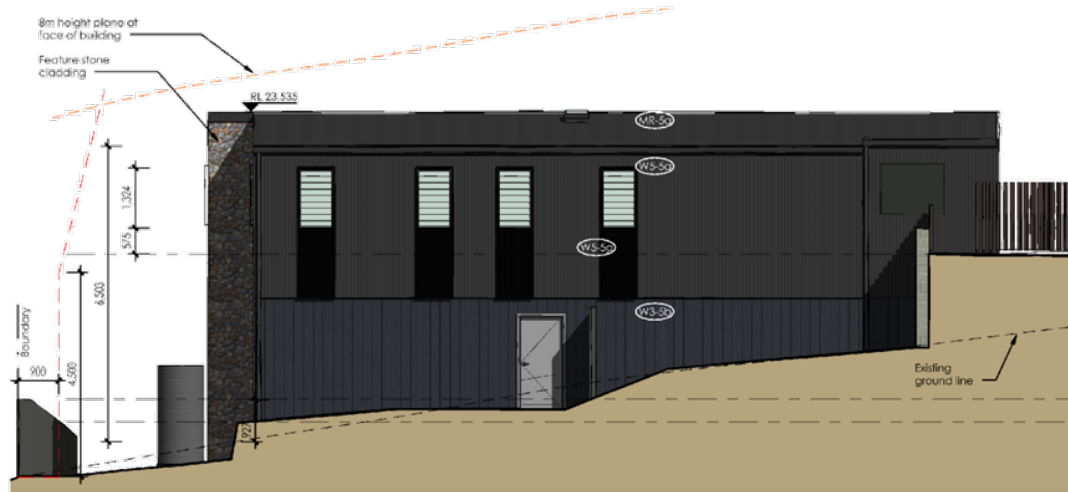
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1 : 100



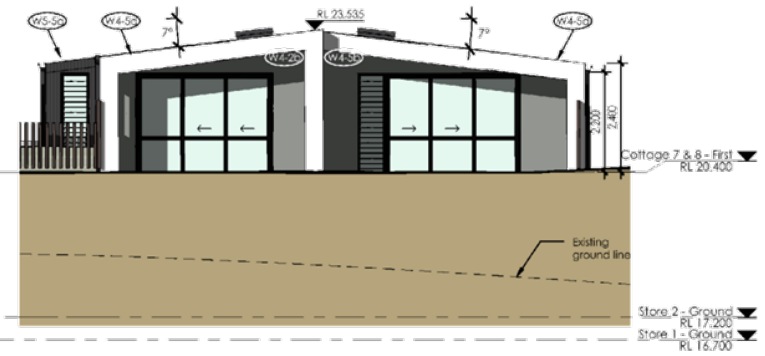
3 Cottage 5 & 6 - West Elevation  
1 : 100

4 Cottage 5 & 6 - South Elevation  
1 : 100

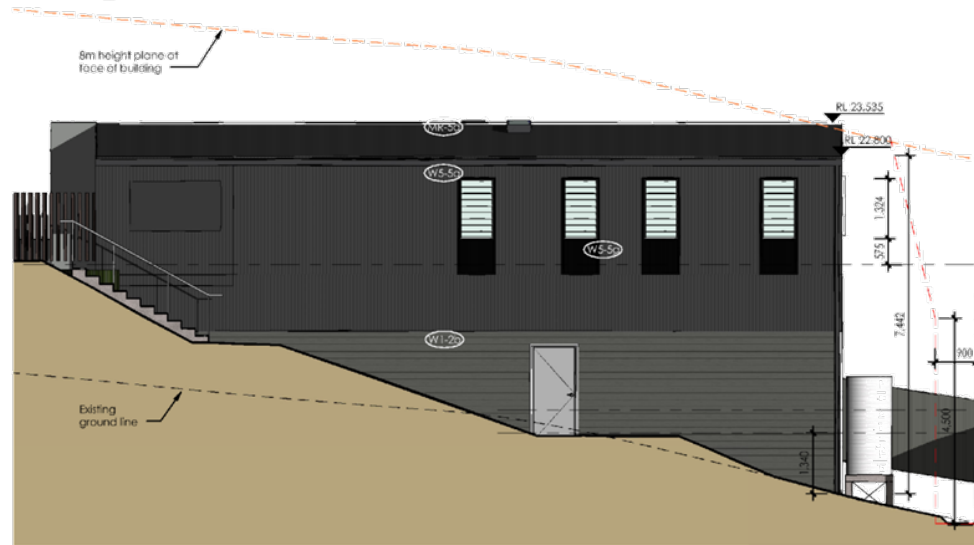
revision		 PO Box 337, Gladesville NSW 1675 p 1300 131 270 e plans@tyrrells.com	client	title	drawing number	revision
n.o.	description		date	Tyrrells project Cottages - Green Point 13-14 Caldwell Close Green Point Lot 7 & 8, DP 1240791	Cottage 5 & 6 - Elevations	DA 105
A	DA Submission	27.03.18		scale @ A3 1 : 100		
B	Additional information to Council	07.11.18		drawn by AJ		
				document date 07.11.18		
						<small>                     Figures contained in this plan are preliminary in nature and are subject to change. It is recommended that you carefully check all dimensions and levels against the site plan and any other relevant documents before construction. The client is responsible for ensuring that the information provided in this plan is accurate and complete. The client is also responsible for ensuring that the information provided in this plan is consistent with all other relevant documents and regulations.                 </small> Tyrrells Architects ABN: 28 238 913 625



1 Cottage 7 & 8 - East Elevation  
1:100



2 Cottage 7 & 8 - North Elevation  
1:100



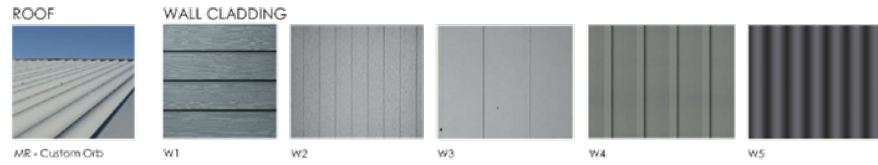
3 Cottage 7 & 8 - West Elevation  
1:100



4 Cottage 7 & 8 - South Elevation  
1:100

revision	no.	description	date	tyrrells ARCHITECTS	client	title	drawing number	revision
A	1	DA Submission	27.03.18	 <p>PO Box 337, Gladesville NSW 1675 p 1300 131 270 e plans@tyrrells.com</p>	<p>Tyrrells project Cottages - Green Point 13-14 Caldwell Close Green Point Lot 7 &amp; 8, DP 1240791</p>	<p>Cottage 7 &amp; 8 - Elevations</p> <p>scale @ A3 1:100</p> <p>drawn by AJ</p> <p>document date 07.11.18</p>	<p>DA 107</p> <p>ABN: 28 238 913 625</p>	<p>B</p>
B	2	Additional information to Council	07.11.18					

Cladding Profiles

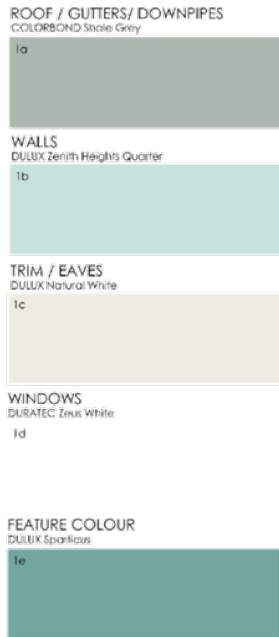


Landscaping Elements

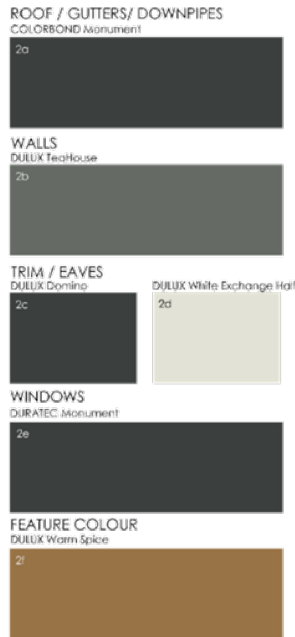


Colour Combinations

Cottage scheme 1



Cottage scheme 2



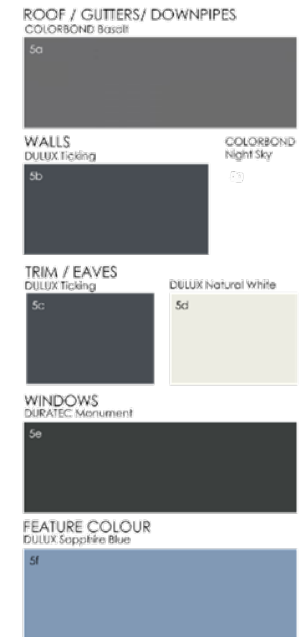
Cottage scheme 3



Cottage scheme 4

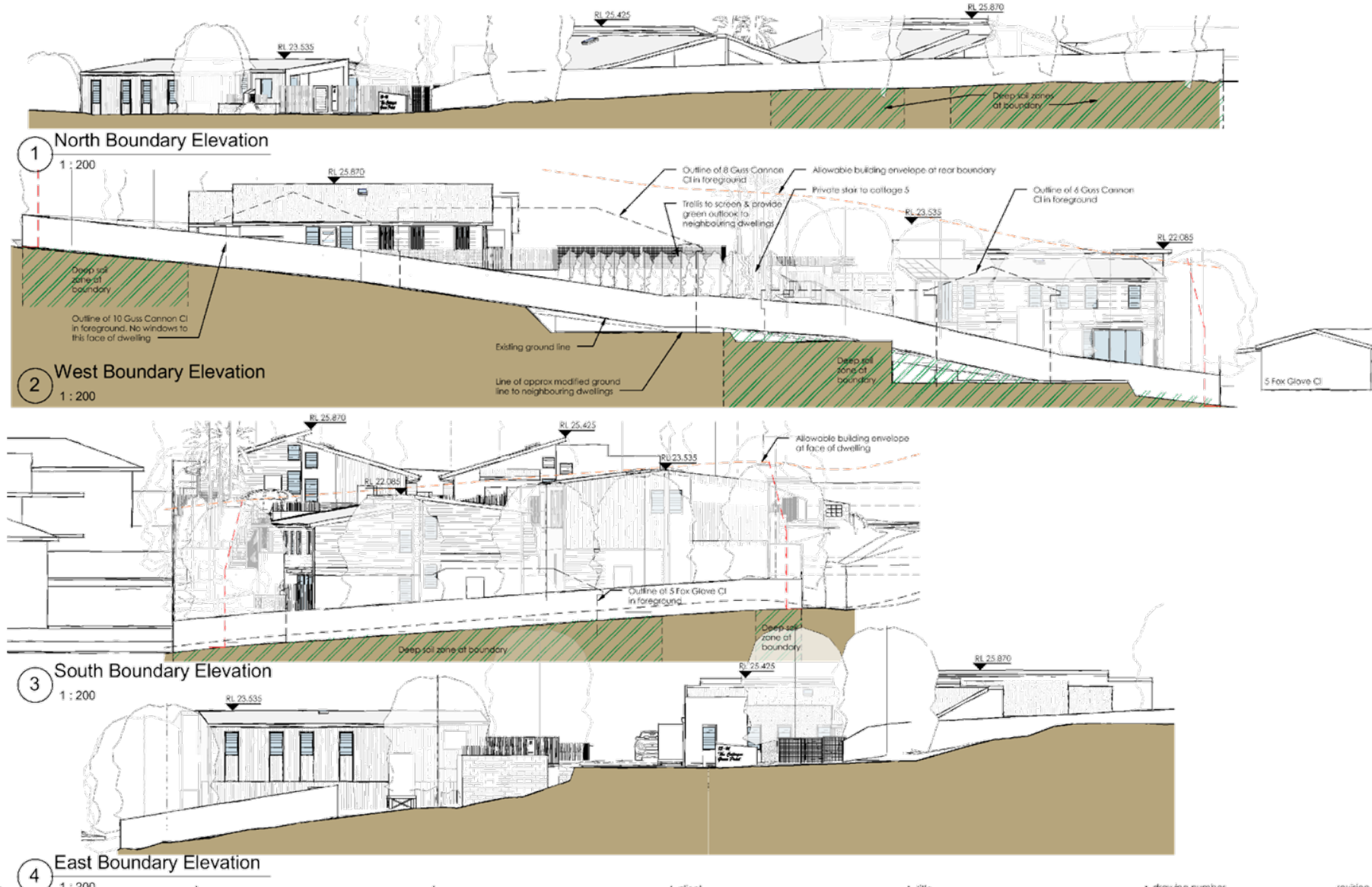


Cottage scheme 5



Note:  
Mix of panel type above may vary in the constructed buildings from the numbers shown on this plan

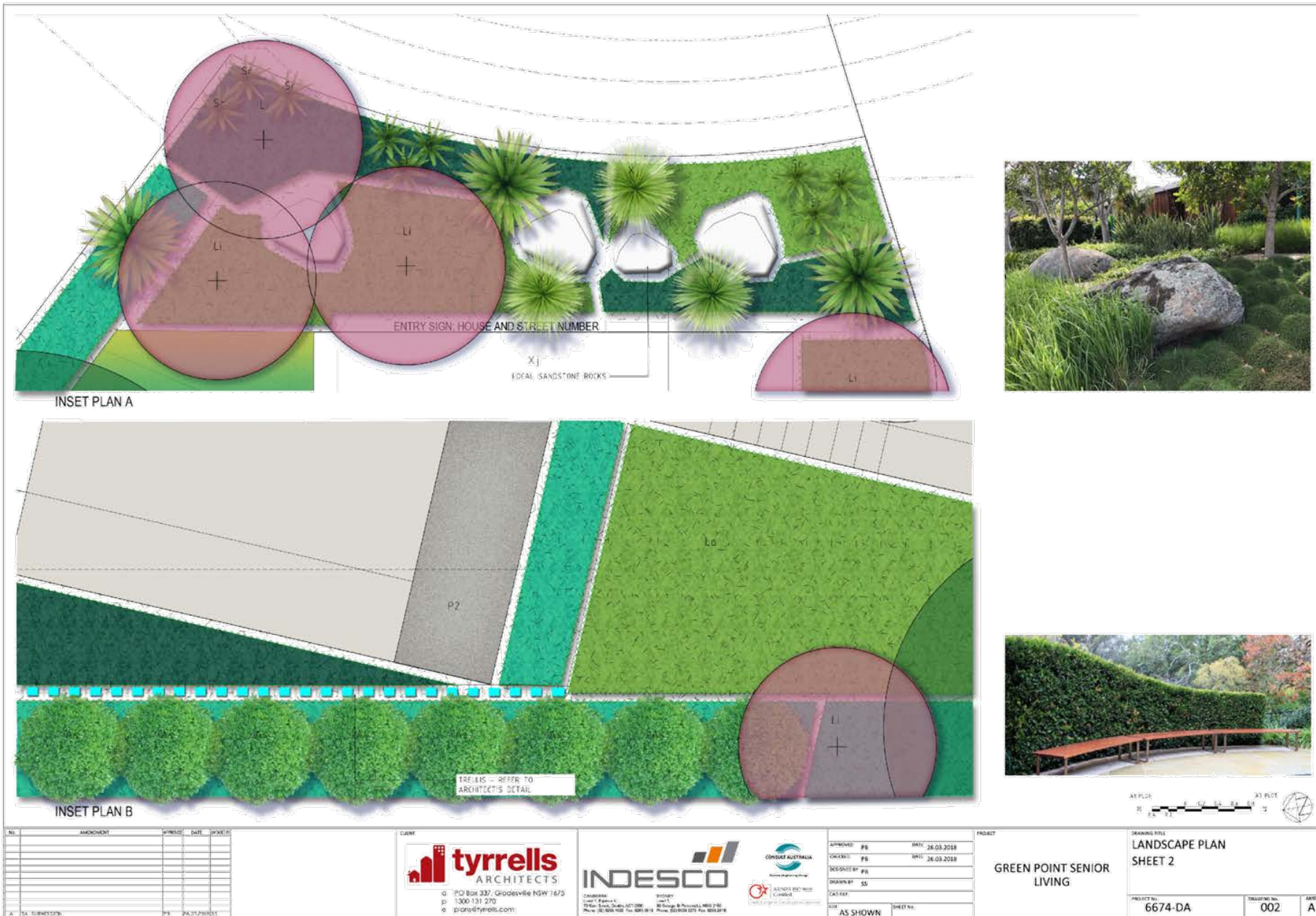
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no.	description	date					
A	DA Submission	27.03.18	<b>tyrrells</b> ARCHITECTS PO Box 337, Gladesville NSW 1673 p 1300 131 270 e plans@tyrrells.com	<b>Tyrrells</b> project Cottages - Green Point 13-14 Caldwell Place Green Point Lot 7 & 8, DP 1240791	<b>Colour Schedule</b> scale @ A3 drawn by AJ	document date 27.03.18	<b>DA 110</b> Tyrrells Architects ABN. 28 238 913 625
							<b>A</b>



revision	n.o.	description	date	client	title	drawing number	revision
	A	DA Submission	27.03.18	<b>Tyrrells</b> project Cottages - Green Point 13-14 Caldwell Close Green Point Lot 7 & 8, DP 1240791	<b>Boundary Elevations</b>  scale @ A3 1 : 200	<b>DA 200</b>	<b>B</b>
	B	Additional information to Council	07.11.18				







**TREE PLANTING SCHEDULE**

**LARGE TREES**

SYMBOL	BOTANICAL NAME	COMMON NAME
Bc	Backhausia citriodora	Lemon-scented myrtle
Bm	Backhausia myrtifolia	Grey Myrtle
Pc	Pyrus calleryana	Bradford
Sa	Syzygium paniculatum	Magenta Cherry
Tl	Tristaniaopsis laurina	Water Gum

**SMALL TREES**

SYMBOL	BOTANICAL NAME	COMMON NAME
Elr	Elaeagnus reticulatus	Blueberry Ash
Li	Lagerstroemia indica	Crepe Myrtle
Lp	Leptospermum petersonii	Coastal Tea Tree
ML	Magnolia 'Little Gem'	Dwarf Magnolia

**PALMS**

SYMBOL	BOTANICAL NAME	COMMON NAME
Aa	Archonathophoenix alexander	Alexander Palm
Hf	Howea forsteriana	Kentia Palm
La	Livingstonia australis	Cabbage Tree Palm

**PLANTING SCHEDULE**

**HEDGES/LARGE SHRUBS**

SYMBOL	BOTANICAL NAME	COMMON NAME
Am	Acmena Smithii var. Minor	Dwarf Lilly Pilly
As	Acmena Smithii	Lilly Pilly
Bl	Banksia integrifolia	Coastal Banksia
Ca	Correa alba	White Correa

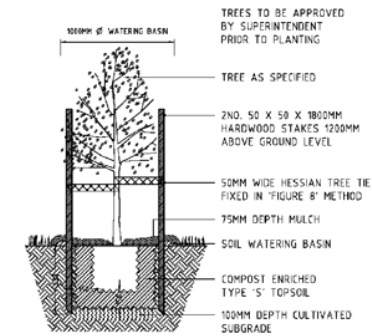
**SHRUBS AND GROUND COVERS**

SYMBOL	BOTANICAL NAME	COMMON NAME
Cc	Callistemon citrinus	Crimson bottlebrush
Dc	Dianella caerulea	Blue flax-lily
Db	Dietes bicolor	Fernight lily
De	Doryanthes excelsa	syme lily
Fg	Festuca Glauca	Blue Fescue
Hv	Hardenbergia violacea	Native Lilac
Mt	Macrozamia communis	Burrawang
Sr	Strelitzia reginae	bird of paradise
Wf	Westringia fruticosa	Coastal Rosemary
Xj	Xanthorrhoea australis	Black boy

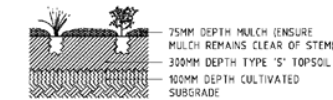
**TRELLIS**

SYMBOL	BOTANICAL NAME	COMMON NAME
Pj	Pandorea jasminoides	Bower Vine

**DETAILS**



**A** TREE PLANTING IN GRASS AREA  
003 1:20@A1 1:40@A3



**B** TYPICAL SHRUB PLANTING  
003 1:20@A1 1:40@A3

No.	AMENDMENT	APPROVED	DATE	PROJECT
1	DA SUBMISSION	PS	25.03.2015	

**tyrrells ARCHITECTS**

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50 George Street, Parramatta, NSW 2150  
Phone: (02) 9639 1000 Fax: (02) 9639 1018

**CONSULT AUSTRALIA**

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130 9000  
www.consultaustralia.com.au

APPROVED	PS	DATE	28.03.2015
CHECKED	PS	DATE	28.03.2015
DESIGNED BY	PS		
DRAWN BY	BS		
CAD FILE NAME:	Green Point Senior Living Landscape.dwg		
DATE	28.03.2015		
DATE	28.03.2015		
AS SHOWN			

**GREEN POINT SENIOR LIVING**

**LANDSCAPE DETAILS AND PLANTING SCHEDULE**

PROJECT NO. **6674-DA** DRAWING NO. **003** AMP' **A**

LARGE TREES



Bockhousia citriodora Bockhousia erythralia Pyrus celtica Syzygium paniculatum

SMALL TREES



Fuchsia sp. (var. Bourna) Lagerstroemia indica Eucalyptus tereticornis Leptospermum pete-solii

PALMS



Roystonea 'Little Gem' Archontophoenix alexandria Howea forsteriana

TRELLIS



Ligustrum australis Pandorea jasminoides

HEDGES / LARGE SHRUBS



Arctostaphylos Arctostaphylos var. Minar Banksia integrifolia Correa alba

SHRUBS AND GROUNDCOVERS



Dianella caerulea Dietes bicolor Dianella excelsa Festuca glauca Hardenbergia violacea Paspalum conjugatum Strelitzia reginae Westringia fraxinea Xanthorrhoea australis

MATERIALS



No.	AMENDMENT	APPROVED	DATE	INDEX BY

CLIENT

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 P 1300 131 270  
 E pcor@tyrrells.com

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 100/111 Pacific Hwy, Sydney NSW 1500  
 PHONE: (07) 4251 4000 Fax: (07) 4251 4018  
 WWW: WWW.CONSULTAUSTRALIA.COM

APPROVED: PS DATE: 26.03.2018  
 CHECKED: PS DATE: 26.03.2018  
 DESIGNED BY: PS  
 DRAWN BY: SS  
 CAD FILE: 1:100% Green Point Senior Living Landscape  
 Drawing: Landscape 04 - Landscape Palette - PA-004.dwg  
 DATE: 26.03.2018  
 AS SHOWN

PROJECT

GREEN POINT SENIOR LIVING

DRAWING TITLE

LANDSCAPE PALETTE

PROJECT No. 6674-DA DRAWING No. 004 AMOUNT A

## Attachment 3

SEPP HSPD Compliance Table DA54832/2018

SEPP Requirement	Proposed	Compliance
Chapter 1 Preliminary		
cl.2 Aims of Policy	<p>This Policy aims to encourage the provision of housing that will:</p> <p>(a) increase the supply and diversity of residences that meet the needs of seniors or people with a disability, and</p> <p>(b) make efficient use of existing infrastructure and services, and</p> <p>(c) be of good design.</p> <p>The proposed development is not inconsistent with these aims.</p>	Yes
cl.4 Land to which this policy applies	<p>Clause 4(1)(a) of SEPP HSPD provides the policy applies to land that adjoins land zoned primarily for urban purposes where dwelling houses are permitted.</p> <p>Clause (6)(a) of SEPP HSPD provides that this policy does not apply to land described in Schedule 1 (Environmentally Sensitive land). The subject site is not identified in another environmental planning instrument by any of the descriptors identified in Schedule 1 and therefore this Policy can be applied to the site.</p> <p>The land is zoned R2 Low Density under Gosford LEP 2014 (GLEP) where Seniors Housing is permitted.</p>	Yes
cl.5 Relationship to other environmental planning instruments	The permissibility of the development is sought through this SEPP which prevails over GLEP 2014. There is no inconsistency as seniors housing is permissible under GLEP 2014.	Yes
Chapter 2 Key Concepts		
cl.8 Seniors	<p><i>seniors</i> are any people aged 55 or more years, people who are resident at a facility at which residential care is provided, people who have been assessed as being eligible to occupy housing for aged persons provided by a social housing provider.</p> <p>The development will provide housing for people who are defined as "seniors" under the SEPP.</p>	Yes
Cl.10 Seniors Housing	<p>Seniors housing is residential accommodation to be used permanently for seniors or people with a disability consisting of:</p> <p>(c) a group of self-contained dwellings.</p> <p>The development will provide housing for seniors in the form of self-contained dwellings.</p>	Yes
Cl.13 Self-Contained Dwellings	<i>self-contained dwelling</i> is a dwelling or part of a building	Yes

	<p>(other than a hostel), whether attached to another dwelling or not, housing seniors or people with a disability, where private facilities for significant cooking, sleeping and washing are included in the dwelling or part of the building, but where clothes washing facilities or other facilities for use in connection with the dwelling or part of the building may be provided on a shared basis.</p> <p><i>in-fill self-care housing</i> is seniors housing on land zoned primarily for urban purposes that consists of 2 or more self-contained dwellings where none of the following services are provided on site as part of the development: meals, cleaning services, personal care, nursing care.</p> <p>As discussed above, the proposed development comprises self-contained dwellings. Furthermore, the dwellings are defined as "in-fill self-care housing" given that each apartment contains bedrooms, kitchens, bathrooms and a laundry.</p>	
Chapter 3 Development for Seniors Housing		
Part 1 General		
cl.16 Development consent required	Development for the purposes of seniors housing utilising the provisions of SEPP HSPD may be carried out with the consent of the relevant consent authority.	Yes
cl.18 Restrictions on occupation of seniors housing allowed under this Chapter	In the event the matter is determined by way of approval, a condition of development consent must be imposed to the effect that only the kinds of people referred to in subclause (1) of this provision may occupy any accommodation to which the development application relates. This will be achieved by way of a restriction as to user, registered against the title of the property on which development is to be carried out, in accordance with s.88E of the <i>Conveyancing Act 1919</i> .	Capable of complying via condition.
Cl.21 Subdivision	Strata subdivision does not form part of this application	NA
Part 1A Site Compatibility Certificates		
Cl.24 Site compatibility certificates required for certain development applications	The proposed development does not require a Site Compatibility Certificate	Yes
Part 2 Site-related requirements		
cl.26 Location and access to facilities	<p>Clause 26 (Location and Access to facilities) in <i>State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004</i>, namely Clause 26 (2)(b)(i), (ii) and (iii) provide:</p> <p><i>(b) in the case of a proposed development on land in a local government area within the Greater Sydney (Greater Capital</i></p>	Yes

	<p><i>City Statistical Area)—there is a public transport service available to the residents who will occupy the proposed development:</i></p> <p><i>(i) that is located at a distance of not more than 400 metres from the site of the proposed development and the distance is accessible by means of a suitable access pathway, and</i></p> <p><i>(ii) that will take those residents to a place that is located at a distance of not more than 400 metres from the facilities and services referred to in subclause (1), and</i></p> <p><i>(iii) that is available both to and from the proposed development at least once between 8am and 12pm per day and at least once between 12pm and 6pm each day from Monday to Friday (both days inclusive),</i></p> <p><i>and the gradient along the pathway from the site to the public transport services (and from the public transport services to the facilities and services referred to in subclause (1)) complies with subclause (3).</i></p> <p><u>Comment</u></p> <p>The subject site is serviced by bus stops on James Sea Drive which are located within 400m to the subject site. The Applicant provided a survey plan showing footpath gradients and distance from the site to the bus stops on James Sea Drive and bus route information which is shown under Figure 1 at the end of this Table and summarised below.</p> <p><i>Access to shops / services and facilities-</i> The subject site is located close to a bus stop on James Sea Drive, which allows access to bus routes 64, 65, 66A and 66C. The routes allow convenient direct travel to Gosford, Erina Fair, Green Point shops and Woy Woy. Intermediate stops on this route include the option to alight and join the bus along The Entrance Road allowing the option of many additional choices of shops, banks, medical centres, recreation facilities and community services.</p> <p><i>Access from site to public transport-</i> Access from the subject site to bus stop "James Sea Dr near Cooper Rd" is via a continuously sealed footpath. The length of travel from the subject site to the bus stop is 288.82m and the total rise is 10.16m. Therefore, the overall average gradient is 1:28, much less than the maximum of 1:14, allowing compliance. A survey plan submitted by the applicant confirms compliant access gradients.</p> <p><i>Frequency of bus services-</i></p>	
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	<p>There are a number of bus services allowing access to comply with Cl 26 2(b), which is 1 service each way between 8am and 12pm, and 1 service each way between 12pm and 6pm (Monday to Friday).</p> <p>A minimal selection of times using the route to and from Gosford City Centre via Erina Fair are listed below having a frequency of approximately every half hour -</p> <ul style="list-style-type: none"> <li>• James Sea Dr 8:46am to Gosford 9:13am</li> <li>• James Sea Dr 12:23pm to Gosford 12:48pm</li> <li>• Gosford 11:29am to James Sea Dr 11:53am</li> </ul> <p>The proposed development is compliant with this clause.</p>	
cl.27 Bush fire prone land	The subject sites are not identified on Council's Bushfire Prone Land Map	NA
cl. 28 Water and sewer	Council's reticulated water and sewer currently service the development site. Council's Water and Sewer Section have confirmed that the existing services can accommodate the additional load that will be generated by the development.	Yes
cl.29 Consent authority to consider certain site compatibility criteria for development applications to which clause 24 does not apply	<p>Clause 29(2) provides that a consent authority, in determining a development application to which this clause applies, must take into consideration the criteria referred to in clause 25 (5) (b) (i), (iii) and (v):</p> <p><i>cl. 25 (5) (b) (i): The natural environment (including known significant environmental values, resources or hazards) and the existing uses and approved uses of land in the vicinity of the proposed development</i></p> <p><u>Comment</u></p> <p>The site is generally unconstrained in terms of physical characteristics.</p> <p><i>cl. 25 (5) (b) (iii): The services and infrastructure that are or will be available to meet the demands arising from the proposed development (particularly, retail, community, medical and transport services having regard to the location and access requirements set out in clause 26) and any proposed financial arrangements for infrastructure provision</i></p> <p><u>Comment</u></p> <p>This matter has been addressed previously with regard to cl.26 of SEPP HSPD.</p> <p><i>cl. 25 (5) (b) (v): Without limiting any other criteria, the impact that the bulk, scale, built form and character of the proposed development is likely to have on the existing uses, approved uses and future uses of land in the vicinity of the development</i></p> <p><u>Comment</u></p>	Yes

	<p>The proposed development is located on two (2) residentially zoned sites with a consolidated lot area of 2029.1m<sup>2</sup>. It is considered that the proposed development is appropriate in terms of articulation, bulk and scale and responds to the topography of the site as addressed further with regards to cl. 31 of SEPP HSPD.</p>	
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Part 3 Design Requirements		
Division 1 General		
<p>cl.30 Site analysis</p>	<p>In accordance with the provisions of clause 30, the consent authority must be satisfied the applicant has taken into account a site analysis in accordance with clause 30 (1), (2), (3) and (4).</p> <p>It is considered the site analysis plan adequately addresses how the proposal achieves compliance with Clause 30 (1), (2), (3) and (4) of SEPP HSPD.</p>	<p>Yes</p>
<p>cl.31 Design of in-fill self-care housing</p>	<p>In determining a development application to carry out development for the purpose of in-fill self-care housing, a consent authority must take into consideration (in addition to any other matters that are required to be, or may be, taken into consideration) the provisions of the <i>Seniors Living Policy: Urban Design Guideline for Infill Development</i>, published by the Department of Infrastructure, Planning and Natural Resources in March 2004:</p> <p><u>Chapter 1: Responding to Context</u></p> <ul style="list-style-type: none"> <li>• Neighbourhood Character and Site Analysis: The subject site is located within a large parcel of land recently subdivided. The site is located within Green Point 8 Medium Density Estates Character Statement under GDCP 2013. The desired character encourages medium density development. Whilst the surrounding context is predominantly low density housing, the proposed development has been designed with a smaller building footprint. The proposed density is compatible with the existing surrounding development if compared to a 185m<sup>2</sup> floor plate on 550m<sup>2</sup> lot giving a floor space ratio (FSR) of 0.33:1.</li> <li>• Existing views from Caldwell Close are Kincumba Mountain Reserve to the south and Brisbane Water National Park in the distance to the west. These views will be impeded by all new development in Caldwell Close. By grouping the dwelling units into 4 buildings, the retention of the existing views will allow a view corridor through the centre of the site.</li> </ul> <p><u>Chapter 2: Site Planning and Design</u></p> <ul style="list-style-type: none"> <li>• Objectives and Design Principles: It is considered the</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p>



	<p>design and orientation of the buildings responds to environmental conditions. The proposal is setback from adjoining residential properties which assists with minimising the developments visual dominance.</p> <ul style="list-style-type: none"> <li>• Units 1/2 and Units 7/8 are located to the front of the site which gives the perception of 1 dwelling per lot providing street address and maintaining a low-density streetscape.</li> <li>• One (1) driveway crossing is proposed allowing the verge and front setback landscaping to be maximised.</li> <li>• Units 3/4 and Units 5/6 are concealed when viewed from public areas. Car parking and hard stand areas are open which minimises bulk and scale of the development.</li> <li>• The development requires a level of filling below the proposed central driveway. The maximum fill is 2m under the driveway at the western end of the site. This enables an accessible outcome across the site and focusses the filling to an area that is only occupied on a transient basis. A strong landscape contribution at this interface to the adjoining western properties is proposed which also includes stepped land form and screen trellis with reasonable setback from the western boundary to eliminate amenity impacts to the adjoining properties in Guss Cannon Close. Figure 2 located at the end of this table shows the proposed cut and fill to the site. Figure 3 provides a landscaping impression and amenity impact study for neighbouring properties in Guss Cannon Close in figure 3.</li> </ul> <p><u>Chapter 3: Impact of Streetscape</u></p> <ul style="list-style-type: none"> <li>• Objectives and Design Principles: Building separation and integrated landscaping presents a light weight appearance. Materials, colours and finishes are consistent with surrounding developments and the desired future character of the area.</li> </ul> <p><u>Chapter 4: Impact on Neighbours</u></p> <ul style="list-style-type: none"> <li>• Objectives and Design Principles: It is considered the development is adequately setback from adjoining residential properties so as to minimise any adverse impact associated with light spillage, headlight glare and a loss of visual or acoustic privacy.</li> <li>• The proposed development has been designed and orientated to reduce the impacts of overshadowing on adjoining developments.</li> </ul> <p><u>Chapter 5: Internal Site Amenity</u></p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
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	<ul style="list-style-type: none"> <li>The living areas of all dwelling units are orientated to the north with the living space adjacent to a covered deck and garden providing sufficient private outdoor space that is protected from the summer sun.</li> <li>Private outdoor spaces feature semi-open fences and screen planting to provide privacy from internal common areas. The open nature of the screening allows for casual surveillance of driveway and common areas.</li> <li>Pedestrian routes are shared with vehicle zones. Landscape areas are provided at the rear end of the driveway to minimise its harshness.</li> <li>It is considered the dwelling units have been orientated so as to minimise noise from living areas and outdoor terraces.</li> </ul>	
cl.32 Design of residential development	The proposal is consistent with the design principles specified in Division 2.	Yes
Division 2 Design principles		
cl.33 Neighbourhood amenity and streetscape	The proposed development is considered to contribute to the quality of the area by demonstrating a well-articulated building envelope. It should be noted the subject site does not contain any heritage items listed under Schedule 5 of GLEP 2014 and is not located within a heritage conservation area.	Yes
cl.34 Visual and acoustic privacy	<p><u>Visual Privacy</u></p> <p>Visual and acoustic privacy issues have been addressed by the orientation of the dwelling units; location of windows; private open space areas; the use of privacy screens to balconies and generous landscaping and screening to the site boundaries.</p> <p><u>Acoustic Amenity</u></p> <p>Parking areas are open and central to the site. Bedroom windows for all units face away from the driveway and parking areas. Living areas of Units 5 to 8 face towards the parking areas.</p> <p>Separation of habitable rooms from driveways and carpark areas is achieved by more than 1.2m landscaped buffer zone for Units 5 to 8 and is consistent with the requirements under Section 5 within the <i>Seniors Living Policy, Urban Design Guidelines for Infill Development</i> published by the Department of Infrastructure, Planning and Natural Resources in March 2004.</p>	<p>Yes</p> <p>Yes</p>
cl.35 Solar access and design for climate	Ensure adequate daylight to the main living areas of neighbours in the vicinity and residents and adequate sunlight to substantial areas of private open space	Yes

	<p>Comment:</p> <p>The proposed development has met the BASIX requirements for passive solar design and water and energy conservation.</p> <p>In excess of 70% of apartments within the proposed development receive 3 hours sun between 9am and 3pm during midwinter.</p> <p>The submitted shadow diagrams indicate that overshadowing from the development will be fall within the bounds of the site between 9am and 3pm during midwinter. At no time will any adjoining residential property be affected by a loss of solar access associated with the development.</p> <p>The neighbouring property to the south at No. 5 Fox Glove Close, Green Point will be shadowed in the am during the winter solstice. The main living area within the dwelling will start to receive sunlight from 11am. The rear yard will start to receive sunlight from 12pm and is reasonable.</p>	
<p>cl.36 Stormwater</p>	<p>Council's Development Engineer raises no objection to the proposal subject to the imposition of conditions.</p>	<p>Yes</p>
<p>cl.37 Crime prevention</p>	<p>The design of the proposed development has considered crime prevention through environmental design principles to minimise the opportunity for crime on and in proximity to the site. The development incorporates windows immediately adjacent to the front doors of dwelling units 1-4 which will allow for observation of approaches to the entry from inside each dwelling. Orientation of Units 5-8 to the central driveway facilitates casual surveillance of the central drive access.</p>	<p>Yes</p>
<p>cl.38 Accessibility</p>	<p>Internal footpaths and driveways link the site to Caldwell Close and James Sea Drive and nearby bus stops and services. These pathways link the proposed development to the remainder of the site and surrounds.</p>	<p>Yes</p>
<p>cl.39 Waste management</p>	<p>The fence enclosure of the bin storage area is 1500mm high above the finished floor level of the bin store. The height of this fence enclosure from the streetscape/front boundary and northern side boundary will be 950mm. Landscaping is proposed between this fence/screen and the front and northern side boundary to soften this element. It is considered that the bin storage screen enclosure will not detract from the desired character of the area and visually impact the neighbouring property at No. 12 Caldwell Close, Green Point.</p> <p>The Waste Management Plan (WMP) Revision C, prepared by Tyrells Architects, dated 23 November 2018, provides details of the waste management activities during the demolition and construction phases of the development including on-going waste management operations.</p>	<p>Yes</p>



	<p>c) Landscaped area - 30% of the site = 608m<sup>2</sup>                  Comment: Landscaped area 650m<sup>2</sup></p> <p>d) Deep Soil Zones - 15% of the area = 304m<sup>2</sup>                  Comment: Deep Soil = 335m<sup>2</sup></p> <p>e) Solar Access - 70% of units to have living rooms and POS to receive 3 hours direct sunlight between 9am &amp; 3pm on June 21st.                  Comment: &gt;70%, the building has been oriented to maximise solar access to POS and living rooms.</p> <p>f) Private Open Space - Ground floor units - not less than 15m<sup>2</sup> of POS per dwelling is to be provided, not less than 3m x 3m &amp; accessible from living area located on ground floor. Upper Levels – balcony not less than 10m<sup>2</sup>.                  Comment: POS for all units exceeds 15m<sup>2</sup>. All balconies provide minimum width of 3m.</p> <p>g) Repealed.</p> <p>h) Parking - 0.5 spaces per bedroom is required.                  Comment: 8 car spaces provided and 1 visitor car space.</p>	
Schedule 3 Standards concerning accessibility and useability for hostels and self-contained dwellings Part 1 Standards applying to hostels and self-contained dwellings		
cl.1-13	The proposal has been design in accordance with these requirements.	Capable of complying via condition.
Part 2 Additional standards for self-contained dwellings		
cl.14-21	The proposal has been design in accordance with these requirements.	Capable of complying via condition.

Figures

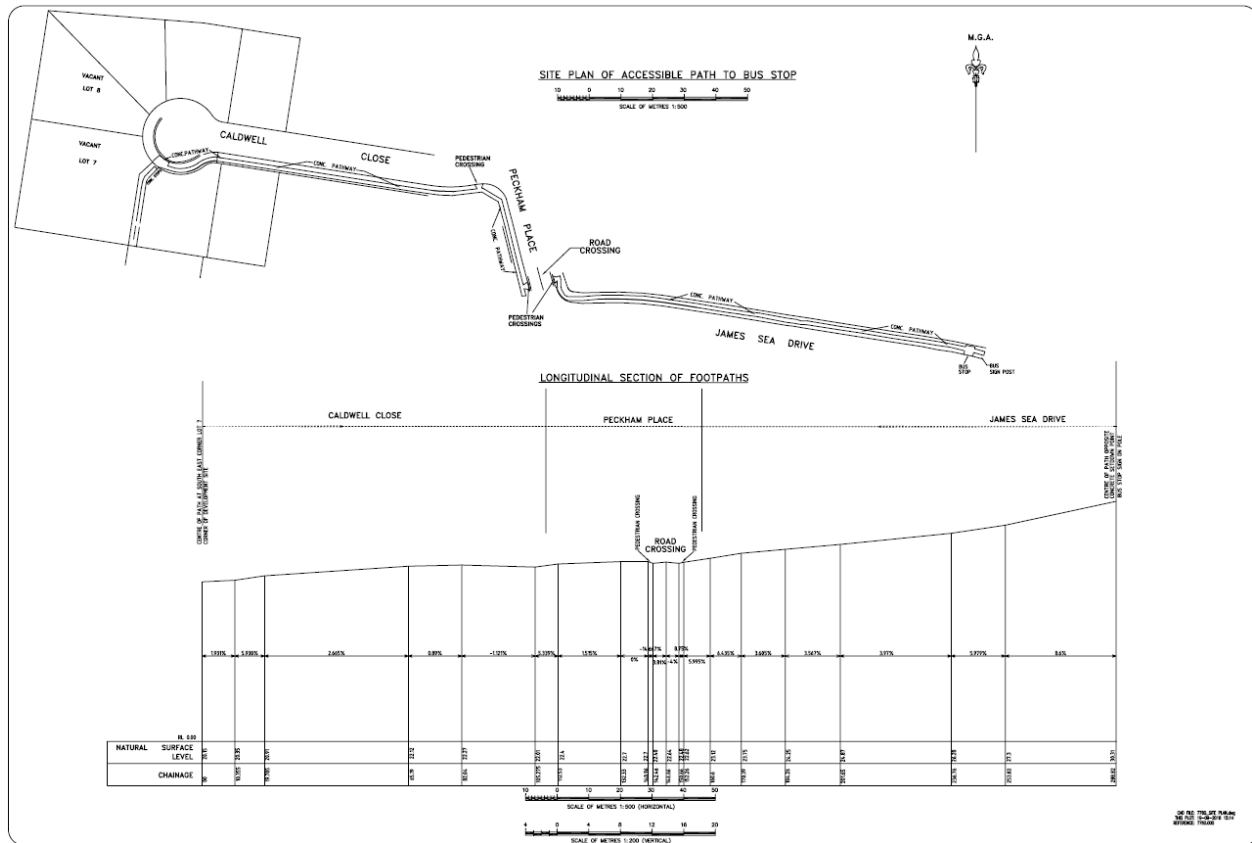


Figure 1 – Survey Plan of footpath gradients to bus stops on James Sea Drive

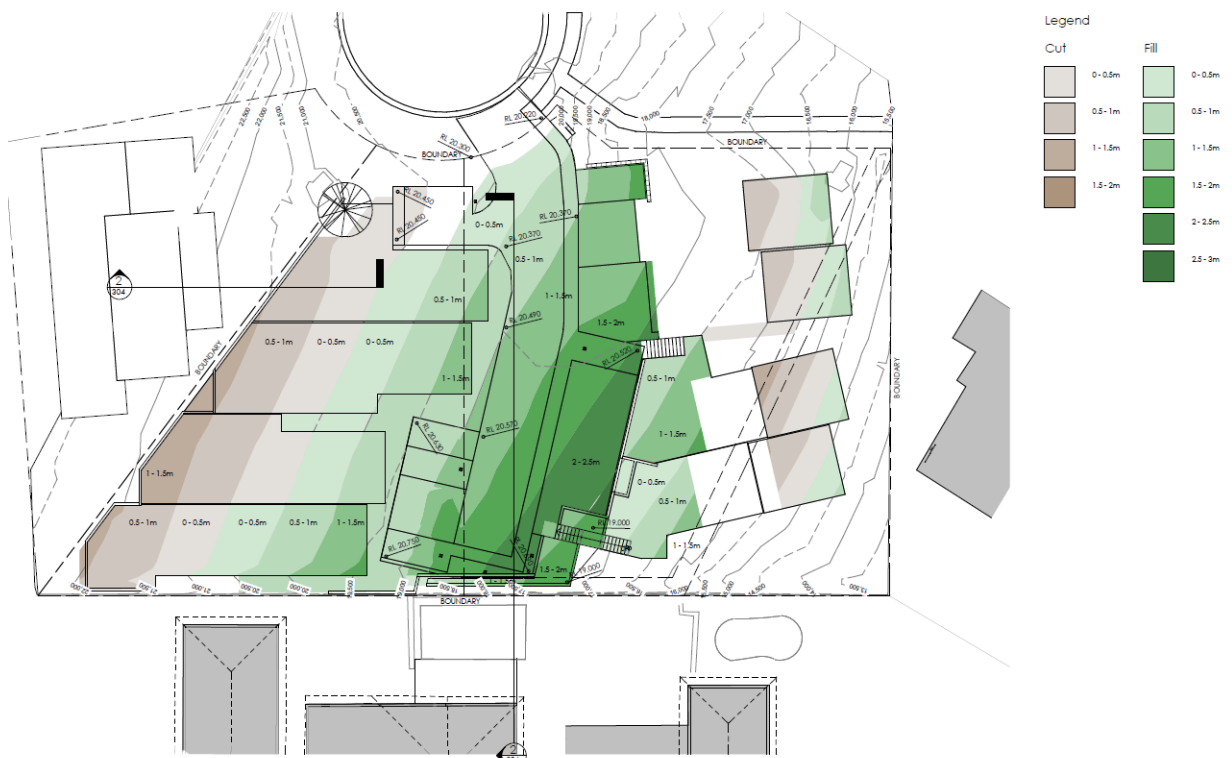
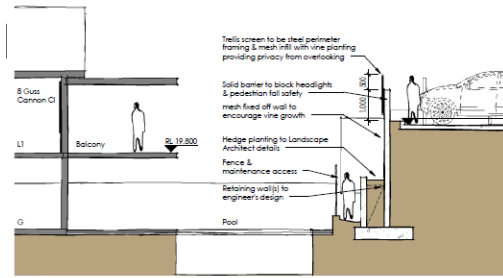


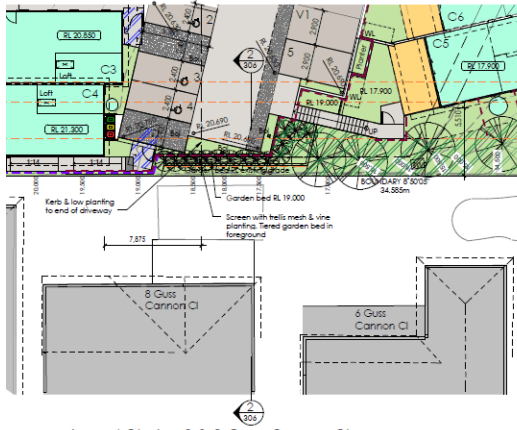
Figure 2 – Proposed Cut and Fill Plan



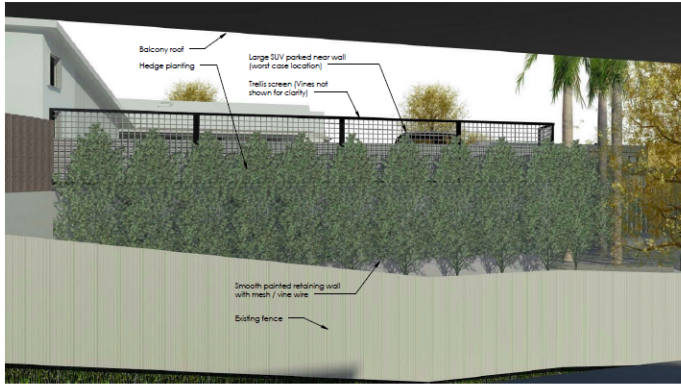
2 Impact Study - 8 Guss Cannon  
1 : 100



4 Impression of Landscaping from 6 Guss Cannon CI



1 Impact Study - 6 & 8 Guss Cannon Close  
1 : 250



3 Impression of Landscaping from 8 Guss Cannon CI

Figure 3 – Western elevation of site showing amenity impact study and landscaping impression for neighbouring properties in Guss Cannon Close

## Attachment 4

## GDCP 2013 Compliance Table DA54832/2018

Development Control	Required	Proposed	Compliance
<b>2.1 Character</b>	<p><u>Desired Character</u></p> <p>The main elements of the sites desired character are identified below:</p> <ul style="list-style-type: none"> <li>• These areas should remain medium-density residential estates that accommodate older people or people with a disability, where improved standards of amenity and urban design quality are achieved by new low-rise multi-unit buildings that are surrounded by leafy gardens to provide distinctive backdrops for Gosford city's town centres and major roads.</li> <li>• Avoid the appearance of long or continuous buildings by surrounding new developments with leafy gardens that retain natural slopes along all boundaries and provide space for shady trees and shrubs.</li> <li>• Plant a combination of trees and shrubs that are mostly-indigenous around courtyards as well as along all property boundaries, and use hedges or front fences that are low or see-through rather than tall and opaque</li> <li>• Ensure that new developments complement the siting, form and scale of nearby detached dwelling neighbourhoods, as well as maintaining reasonable levels of sunlight, privacy and amenity that are enjoyed by neighbouring dwellings and their private open spaces.</li> <li>• Minimise the height and scale of</li> </ul>	<p>The subject site is located within the Green Point Character Statement Area 8, Medium Density Estate. Having regard to the desired character for this area, no objection is made for the following reasons:</p> <ul style="list-style-type: none"> <li>• The proposed development comprises a medium density residential development for senior's accommodation. The building is one to two storeys in height and will be surrounded by landscaping.</li> <li>• The proposed building is separated from dwellings on adjoining sites such that it will have no adverse impact on privacy, overshadowing or amenity in general.</li> <li>• The building is strongly articulated and includes light weight wall cladding, stone wall finishes, timber and metal infill panels, and large eaves to accentuate this aspect, whilst variety is provided in materials and facade treatments to further enhance the appearance and built form of the development.</li> <li>• The two storey units are stepped to follow the slope of the site.</li> <li>• The garbage bin store area at the front of the site is surrounded by a 1.5m high screened wall that is surrounded by landscaping within the front and side boundary setbacks to hide this area from the street.</li> </ul>	<p>Yes</p>



Development Control	Required	Proposed	Compliance
	<p>new buildings by using strongly-articulated forms, including floor-levels that are stepped to follow natural slopes and facades that vary in shape and height.</p>		
<p><b>2.2 Scenic Quality</b></p>	<p>The subject site falls within the “East Brisbane Water” geographic unit which comprises the Green Point/Saratoga, Kincumber, Cockle Broadwater landscape unit. Within this unit, the site falls specifically within the Green Point/Saratoga Landscape Unit, which is characterised as follows:</p> <p><i>Comprises residential land use development adjacent to Brisbane Water, rural residential land use and an extensive natural/open space area which is associated with the Kincumba Reserve.</i></p> <p><i>The open space and rural residential areas provide a visual backdrop to the unit as well as providing a natural visual separation between developed areas within the unit.</i></p> <p><i>The area fronts onto Brisbane Water and comprises part of a broad visual catchment. The existing development is generally confined to the foreshore areas, midslopes and some higher slopes with the ridges and waterways containing and visually dominating the development areas.</i></p>	<p>The proposal is subject to the provisions of GDCP 2013 Chapter 2.2 – Scenic Quality.</p> <p>The development includes a higher density of residential development than that existing in the area. However, it is considered the transition between neighbouring development and the proposed development is acceptable. The use of landscaping on boundaries and roof areas of the proposal enhances the scenic quality of the area.</p> <p>Overall the development does not propose a bulk and scale that will adversely affect the scenic quality of the area. Views will be maintained around and through the site.</p> <p>The proposal is <b>consistent</b> with the stated objectives of GDCP 2013 Chapter 2.2 - Scenic Quality.</p>	<p>Yes</p>
<p><b>6.3 Erosion and Sediment Control</b></p>	<p>Plans required.</p>	<p>Complies</p>	<p>Yes</p>
<p><b>6.7 Water Cycle Management</b></p>	<p>Minimise the impact of the development on the natural predevelopment water cycle.</p>	<p>In accordance with Chapter No. 6.7 – Water Cycle Management, a Water Cycle Management Plan Strategy and Concept Stormwater Plan (WCMP) for the proposed development has been prepared by Halcrow &amp; Associates, dated March 2018.</p>	<p>Yes</p>

Development Control	Required	Proposed	Compliance
		<p>The development will modify the existing on-site stormwater detention (OSD) and nutrient control systems. This is satisfactorily covered in the WCMP Strategy.</p> <p>Council's Development Engineer reviewed the submitted WCMP and raised no objection.</p> <p>Appropriate conditions confirming compliance are recommended for imposition.</p>	
<p><b>7.2 Waste Management</b></p>	<p>Waste Management Requirements</p>	<p>The bin storage area is located at the front of the property to allow access for bin collection by Council's Waste Services. The location of and access to the bin storage area complies with the DCP requirements.</p> <p>The fence enclosure of the store area is 1500mm high above the finished floor level of the bin store. The height of this fence enclosure from the streetscape/front boundary and northern side boundary will be 950mm. Landscaping is proposed between this fence and the front and northern side boundary to soften this element. It is considered that the bin storage screen enclosure will not detract from the desired character of the area and visually impact the neighbouring property at No. 12 Caldwell Close, Green Point.</p> <p>A Waste Management Plan (WMP) Revision C, prepared by Tyrells Architects, dated 23 November 2018, accompanies the development application. The Plan provides details of the waste management activities during the demolition and constructions phases of the development including on-going waste management operations.</p> <p>This report and the proposed location of the bin storage area has been reviewed by Council's Waste Officer and found acceptable.</p>	<p>Yes</p>

<b>Development Control</b>	<b>Required</b>	<b>Proposed</b>	<b>Compliance</b>
		Appropriate conditions confirming compliance are recommended for imposition.	

**Attachment 5**Section 88B Instrument Compliance Table DA54832/2018

The Applicant provided a written justification on how they intend to comply, release or modify the Terms 2, 9, 10, 11, 13, 16, 17 and 18 within the Section 88B Instrument for DP1240791 registered on 15 March 2018.

The table below addresses the relevant terms for Lots 7 and 8 within the instrument and how the applicant intends to address them.

Summary Table of Section 88B Instrument for DP1240791 relating to Lots 7 and 8

<b>Term</b>	<b>Easement, Restriction or Positive Covenant</b>	<b>Lots or Authority Burdened</b>	<b>Lots or Authority Benefited</b>	<b>Compliance/Release/Modification</b>
2	Easement to drain water	7	8	Release by Condition of Consent – Lots 7 and 8 are owned by the same person and this term can legally be released. Central Coast Council is the empowering authority to release this term. Council's Development Assessment Engineer supports the release of this easement. Refer to Condition 2.10.
9	Restriction on Use of Land	7 and 8	Central Coast Council	Compliance can be achieved.
10	Positive Covenant	7 and 8	Central Coast Council	Compliance can be achieved.
11	Restriction on Use of Land regarding Permitted Structures and Materials and Finishes (11a to 11m)	7 and 8	7 and 8	Release or modification can only occur by Salvation Army or lots having common boundaries. This is a Private restriction. See comments below.
13	Restriction on the Use of the Land – Floor Level	7	Central Coast Council	Compliance can be achieved.
16	Positive Covenant – Rain water tank of 10,000 litres	7 and 8	Central Coast Council	Released by Condition of Consent. Central Coast Council is the empowering authority to release this term. Council's Development Assessment Engineer supports the release of this covenant. Refer to Condition 2.10.
17	Easement to permit encroaching structure	7 and 8	Lot 97 in DP 746595	Compliance can be achieved
18	Restriction on the Use of Land	7	Central Coast Council	Compliance can be achieved. Compliance by Condition of Consent. Refer to Condition 2.11

Term 11 - Restriction on Use of Land regarding Permitted Structures and Materials and Finishes

Term 11 is a private restriction benefiting and burdening all lots except for Lots 44 and 45. The Salvation Army (New South Wales) Property Trust for such time as the Salvation Army

(New South Wales) Property Trust owns any lot or thereafter the proprietor of the lot(s) in the plan having common boundaries with the proprietor of the lot(s) seeking to release, vary or modify the restrictions hold the empowerment.

In relation to the subject site, the proprietor of the lot having a common boundary with the subject site is empowered to release, vary, or modify the restrictions in Term 11.

Private restrictions cannot be used to restrict permissible development which is proposed in accordance with the Environmental Planning and Assessment Act 1979 (The Act).

Section 3.16 of the Act states that:-

### **3.16 Suspension of laws etc by environmental planning instruments**

*(1) In this section, regulatory instrument means any Act (other than this Act), rule, regulation, by-law, ordinance, proclamation, agreement, covenant or instrument by or under whatever authority made.*

*(2) For the purpose of enabling development to be carried out in accordance with an environmental planning instrument or in accordance with a consent granted under this Act, an environmental planning instrument may provide that, to the extent necessary to serve that purpose, a regulatory instrument specified in that environmental planning instrument shall not apply to any such development or shall apply subject to the modifications specified in that environmental planning instrument.*

Clause 7 of the SEPP HSPD states that:-

### **7 Suspension of certain agreements and covenants**

*(1) For the purpose of enabling development to be carried out in accordance with this Policy or in accordance with a consent granted under the Act, any agreement or covenant imposing restrictions on any such development, to the extent necessary to serve that purpose, does not apply to the development.*

Clause 1.9A of GLEP 2014 states that:-

### **1.9A Suspension of covenants, agreements and instruments**

*(1) For the purpose of enabling development on land in any zone to be carried out in accordance with this Plan or with a consent granted under the Act, any agreement, covenant or other similar instrument that restricts the carrying out of that development does not apply to the extent necessary to serve that purpose.*

*(2) This clause does not apply:*

*(a) to a covenant imposed by the Council or that the Council requires to be imposed, or*

The subject application is made in accordance with the Act, SEPP HSPD, and GLEP 2014. The above legislation enables development to be carried out. The covenants imposed by Council

are supported to be released or modified by Council subject to conditions of development consent.

Term 11 being a private restriction is required to be released, modified or varied by the Applicant in accordance with the Section 88B Instrument requirements. Non-compliance with the private restrictions under the 88B Instrument for DP1240791 cannot be used to refuse a development application.

The following Terms under the private restriction are not fully met by the Applicant within the proposed development. The terms are matters that a planning assessment can provide comment on and thus an assessment of those terms are provided below.

Term 11e – The proposed development does not comply with the required finishes of brick veneer or harditex. Weatherboard, vertical cladding and flat finished fibre cement and metal cladding in neutral and grey tones is proposed for the external finishes to the buildings. Such materials are considered to be a reasonable selection as they provide a light weight appearance to a development and promote a well-articulated façade to reduce the bulk and scale of the development. The proposed colours and tones will blend with the natural surrounding environment. The Applicant will be required to have this term varied or released under separate legal request outside the development application process.

Term 11 f – This term restricts the type of roof covering and no roof is to have a pitch of less than 10 degrees. The proposed developments roof covering complies with this term. The roof pitch at 7 degrees does not. However, from a planning perspective, the roof pitch is acceptable and preferred given the style of housing that is proposed. The Applicant has confirmed that the roof pitch of 7 degrees has been used to protect the amenity of the neighbouring properties. The Applicant will be required to have this term varied or released under separate legal request outside the development application process.

Term 11j – The terms restricts the size of a building on the lot to be no less than 185m<sup>2</sup>. There will be four (4) buildings on the site that each building will contain two (2) dwellings. Each building has an area of 160m<sup>2</sup> to 164m<sup>2</sup>. A planning assessment considers gross floor area against the site area to determine the floor space ratio. The proposed development complies with the floor space ratio requirement under the SEPP HSPD. It is considered that the intent of this term was to ensure larger style buildings are provided on lots within the DP 1240791. This is not considered to be a planning assessment matter. The Applicant will be required to have this term varied or released under separate legal request outside the development application process.

Term 11l – No fencing is required within the front setback or on the front boundary. The proposed bin storage area will have a screen fence that faces Caldwell Close. This fence will be located behind proposed landscaping and be 950mm high above the natural ground level as seen from the street frontage. This building element is required to screen the bin storage area to comply with Chapter 7.2 under Gosford DCP 2013. The Applicant has cut-in the bin storage area to be 500mm below the natural ground level to further hide this area from the street frontage and to protect the amenity of the neighbouring property to the north. It is common practice for bin storage areas to be located within 6m of the front boundary of the site so that the Waste Services Operators are able to wheel the bins in and out of the storage area for collection. Conditions of consent are recommended to ensure

that the bin storage area does not create odour and amenity concerns for residents and neighbouring sites. The Applicant will be required to have this term varied or released under separate legal request outside the development application process.

No fencing is proposed on the front boundary.