

6

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- Saliens 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 60: Study Area 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 Gumbuyah Oval sportsground, and 3 privately-owned, moderately vegetated properties. Gumbuyah 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: Saliena 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 café, 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.

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.



7

Opportunities



Principle:

Ensure future development 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 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-

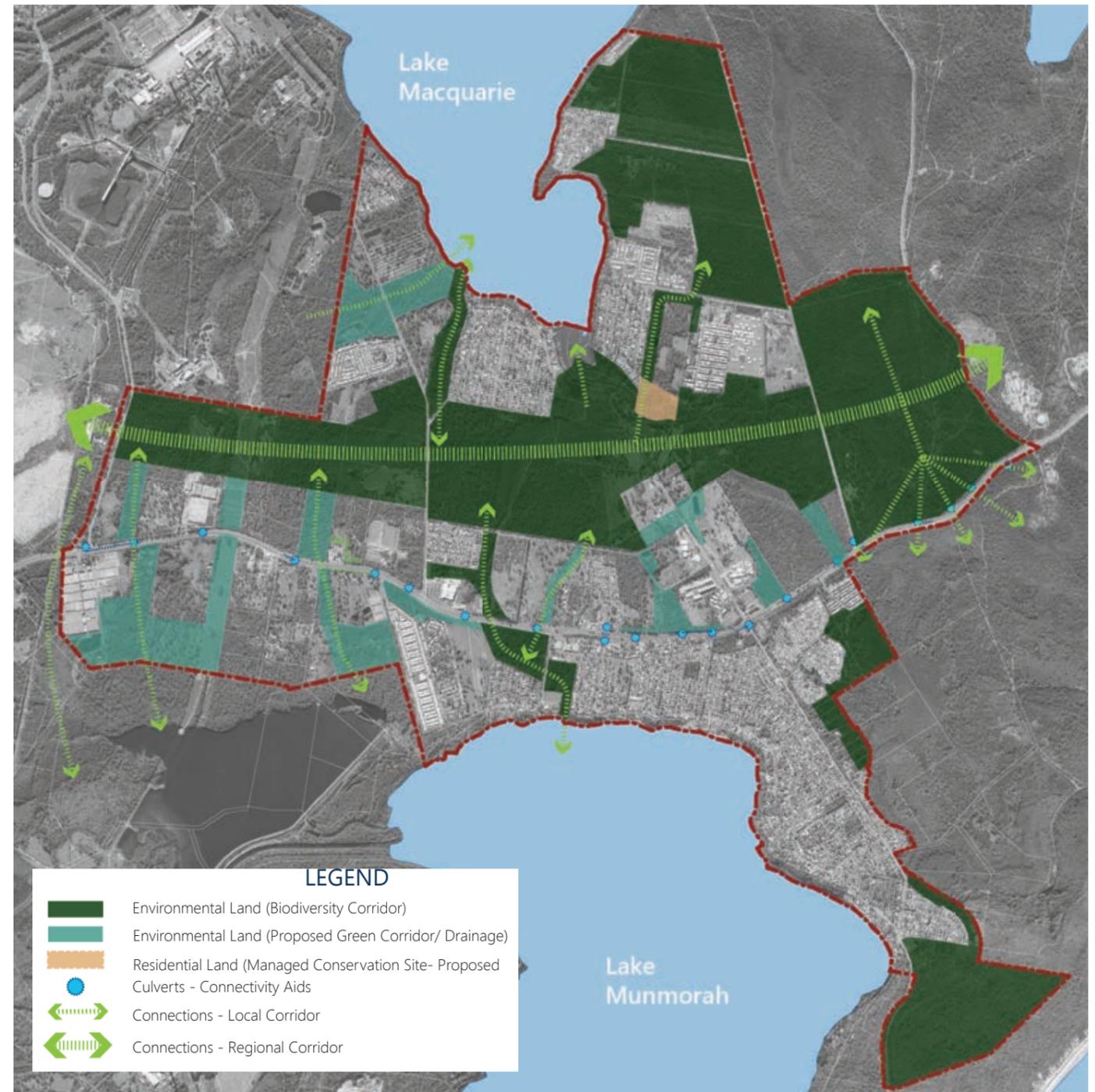


Figure 61: Biodiversity Corridor

Principle:

Ensure future development is undertaken in a manner sensitive to the natural environment, and improving long term environmental outcomes (Continued).

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 62: 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

Principle:

Ensure future development is undertaken in a manner sensitive to the scenic amenity of the area.

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.

- 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.

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.



Figure 63: 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

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 64: 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

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 65: 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

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 66: 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

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 67: Electricity easement - Tall Timbers Road, Lake Munmorah

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

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

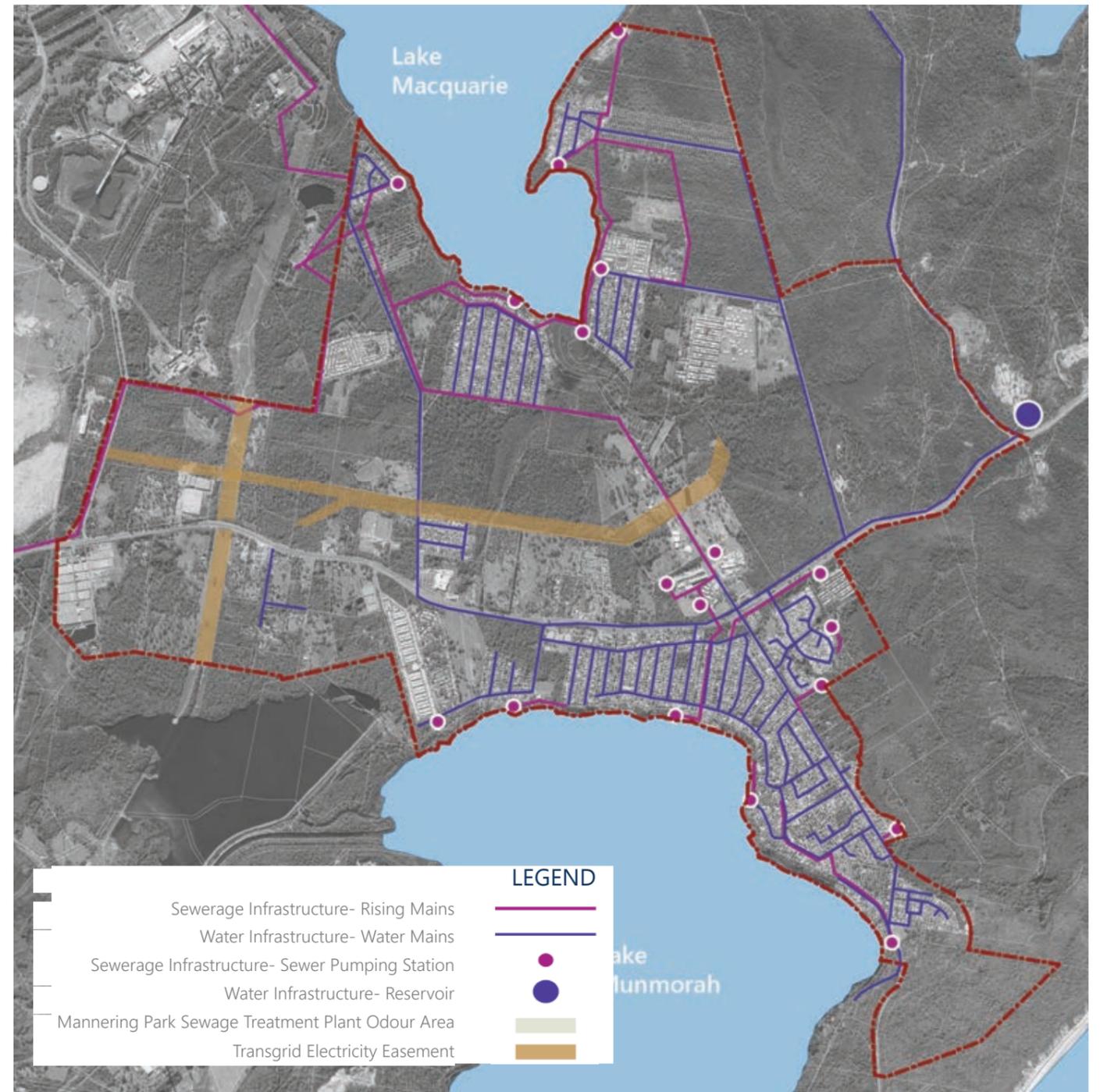


Figure 68: Electricity Transmission Easements, Odour Buffer Zone and Water & Sewer Servicing

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 Mannering 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.'

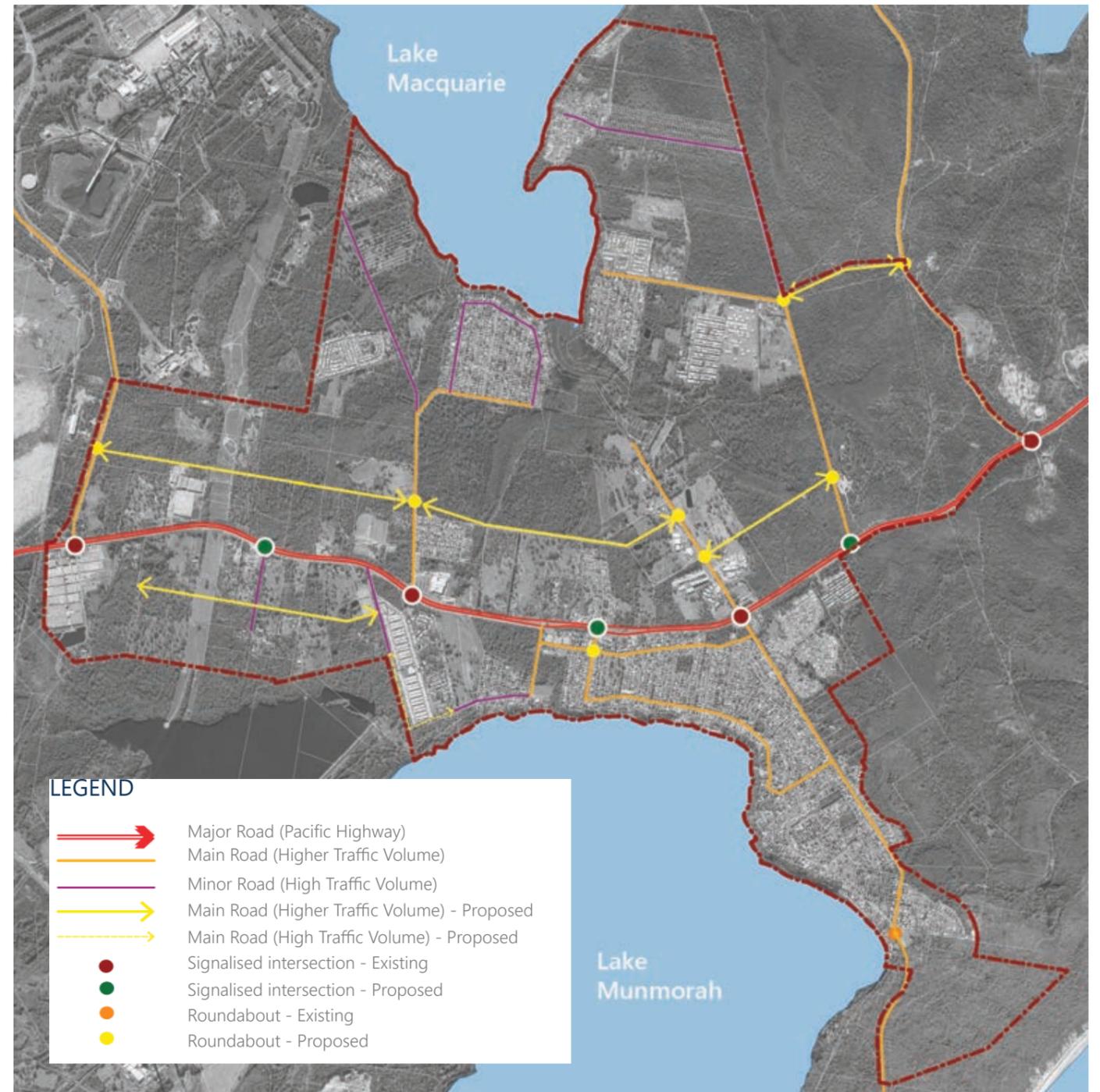


Figure 69: Proposed Road Network

Principle:

Improve private and public transport links within the study area (Continued).

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 70: 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 Acacia 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

Principle:

Close the Gap between land to the 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 treed 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 71: 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"> 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. Reduce maximum speed limit to 60km/hour at a minimum. 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. Incorporate bus transport infrastructure along the Pacific Highway corridor. 	Council/ RMS	Long Term

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 72: Bus shelter, Lake Munmorah

Project	Responsibility	Timing
<p>Council to encourage access to public transport services through ensuring that:</p> <ul style="list-style-type: none"> • 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. 	Council	Ongoing

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"> • Walking and cycling networks are incorporated into subdivision design and constructed by developers as part of subdivision works. • Walking and cycling networks must be designed to ensure safe, amenable and convenient pedestrian and cycle connections. • 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. • Pedestrian and cycle crossings are provided at all relevant intersections and along key desire lines. 	Developer	Medium Term

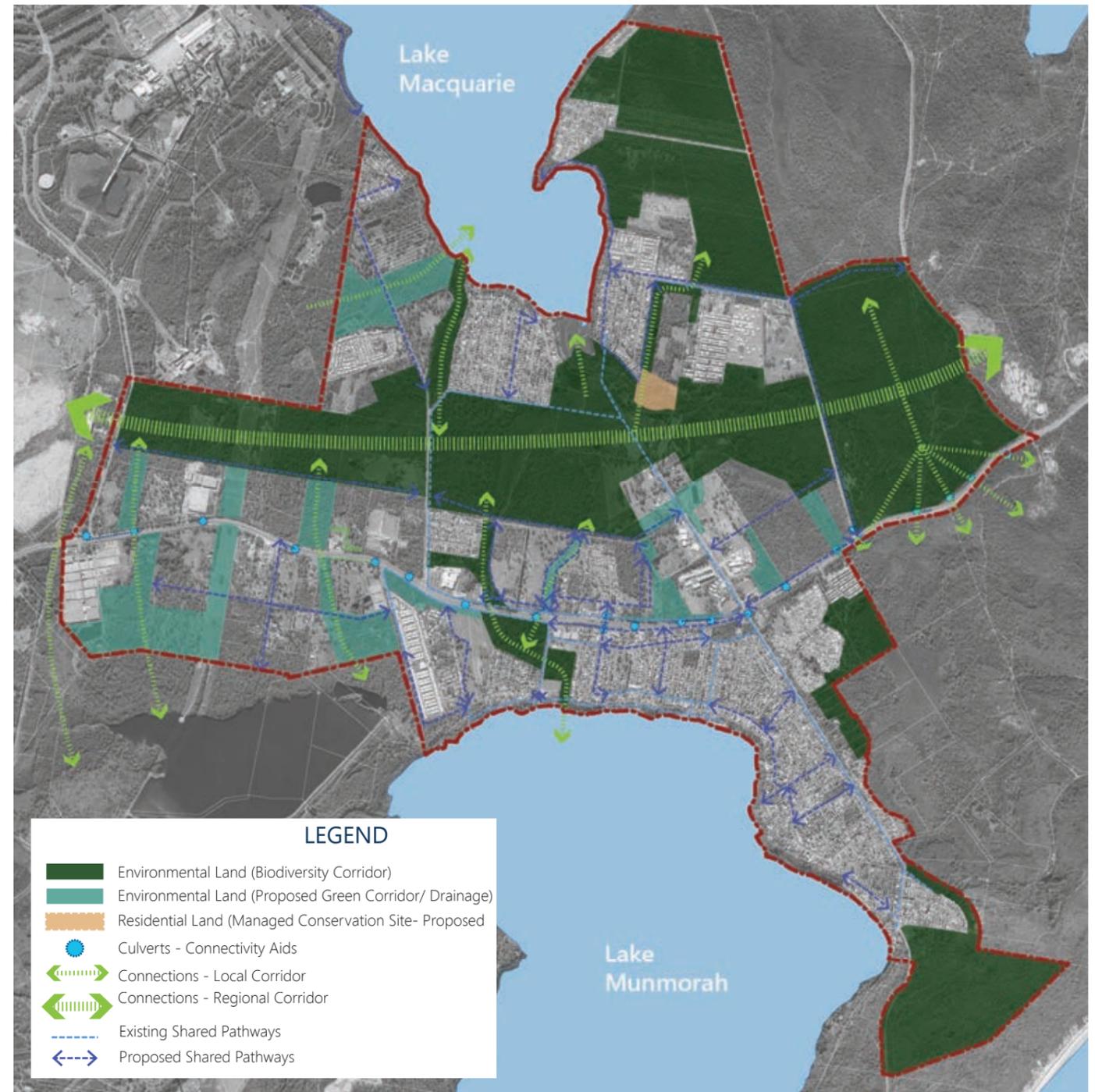


Figure 73: Existing and Proposed Shared Pathway Network (Including Open Space Corridors)

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.

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:

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%).

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

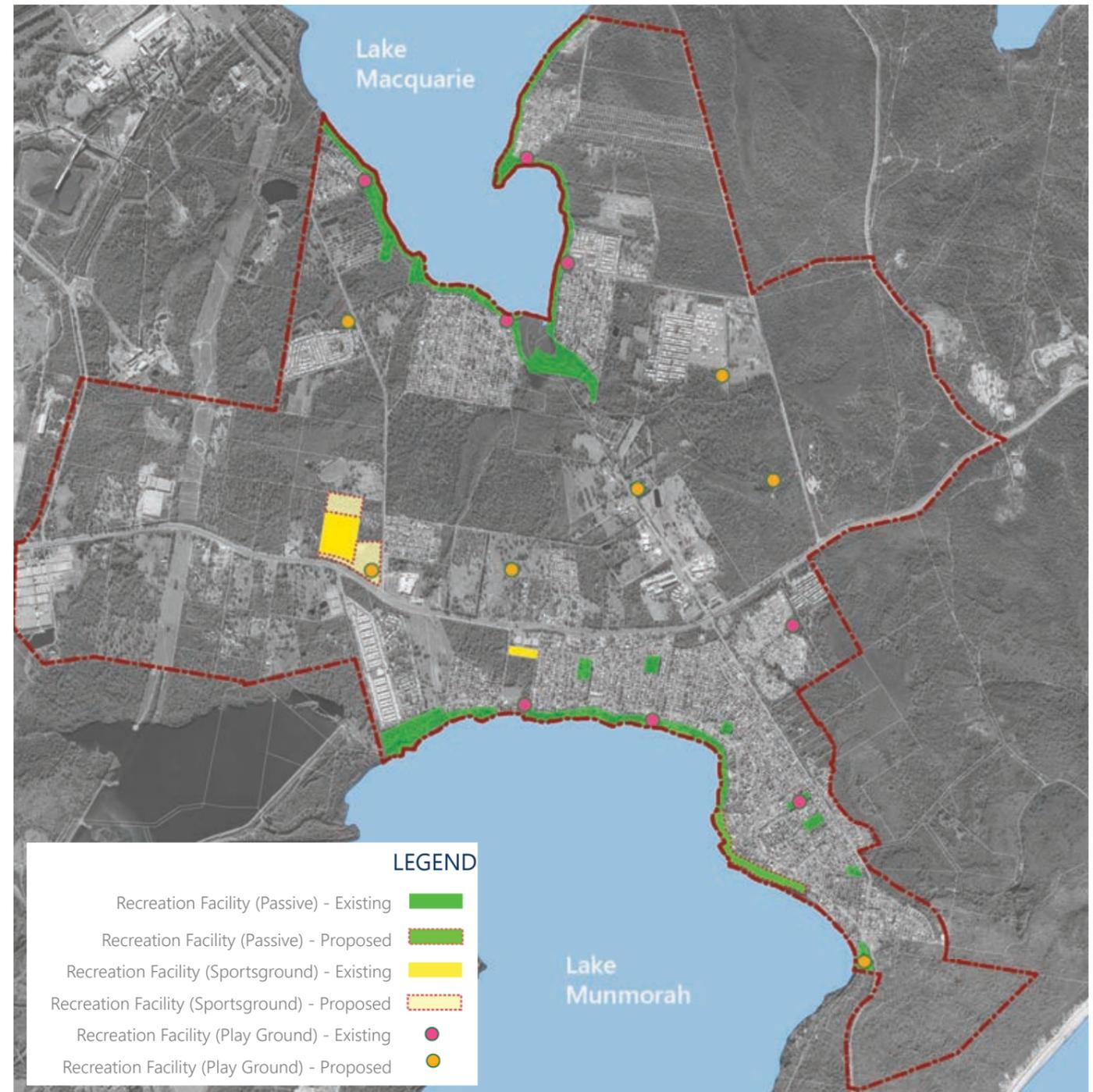


Figure 74: Existing and Proposed Recreation Network

Principle:

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

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 likely have recreation functions. 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 sportsfield 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 sportsfields 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 colocated 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).	Council	Medium/ Long Term
Coordinate the embellishment of the basketball and tennis courts at Acacia Avenue, Lake Munmorah.	Council	Long Term



Figure 75: Accessibility to Existing and Proposed Playground and Sportsground Recreation Sites

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 café 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

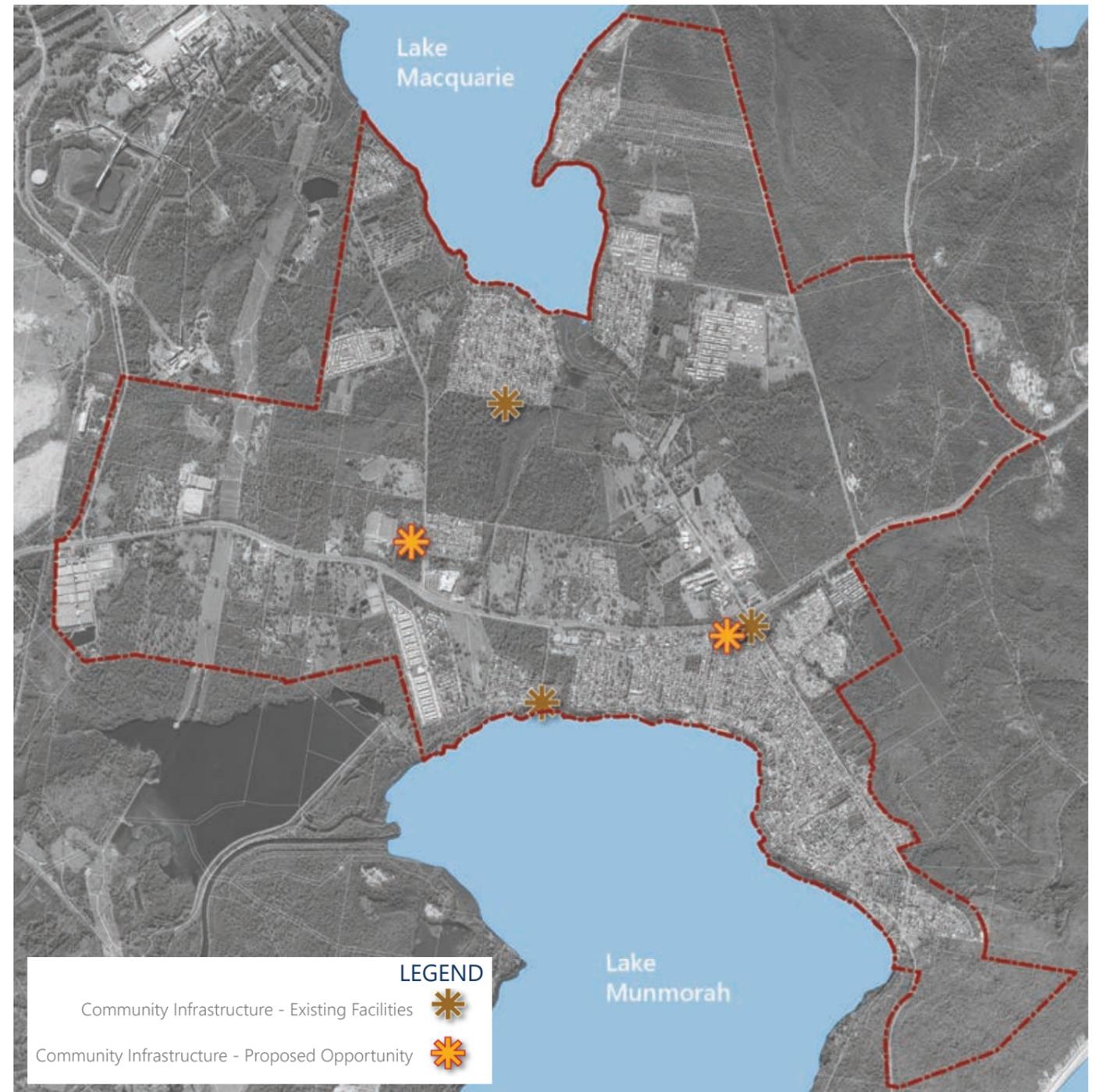


Figure 76: Proposed Location for New Multi-Purpose Community Centre

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 77: 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	

Principle:

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

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.

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

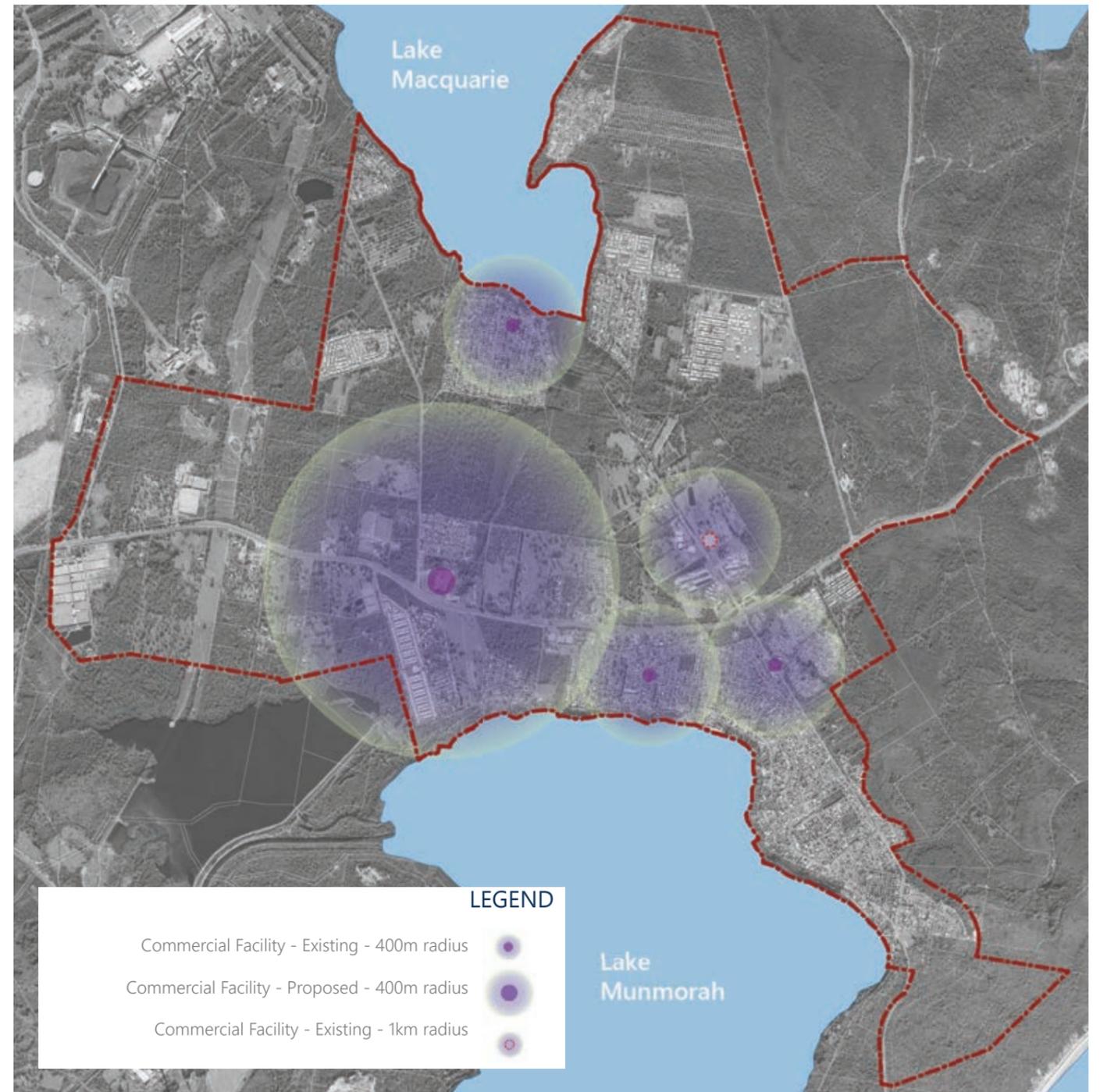


Figure 78: Lake Munmorah Local Centre

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 79: Lake Munmorah Neighbourhood Centre



Figure 80: Chain Valley Bay Neighbourhood Centre

Principle:

Facilitate 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 Saliene 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 81: 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

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 land-

scaping/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 82: 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

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.

- 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.

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).

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.

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.



Figure 83: 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

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 provi-

sion 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 criteria listed in the adjoining figure.

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.

Figure 84: Criteria used to determine staging plan

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

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: Saliens 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

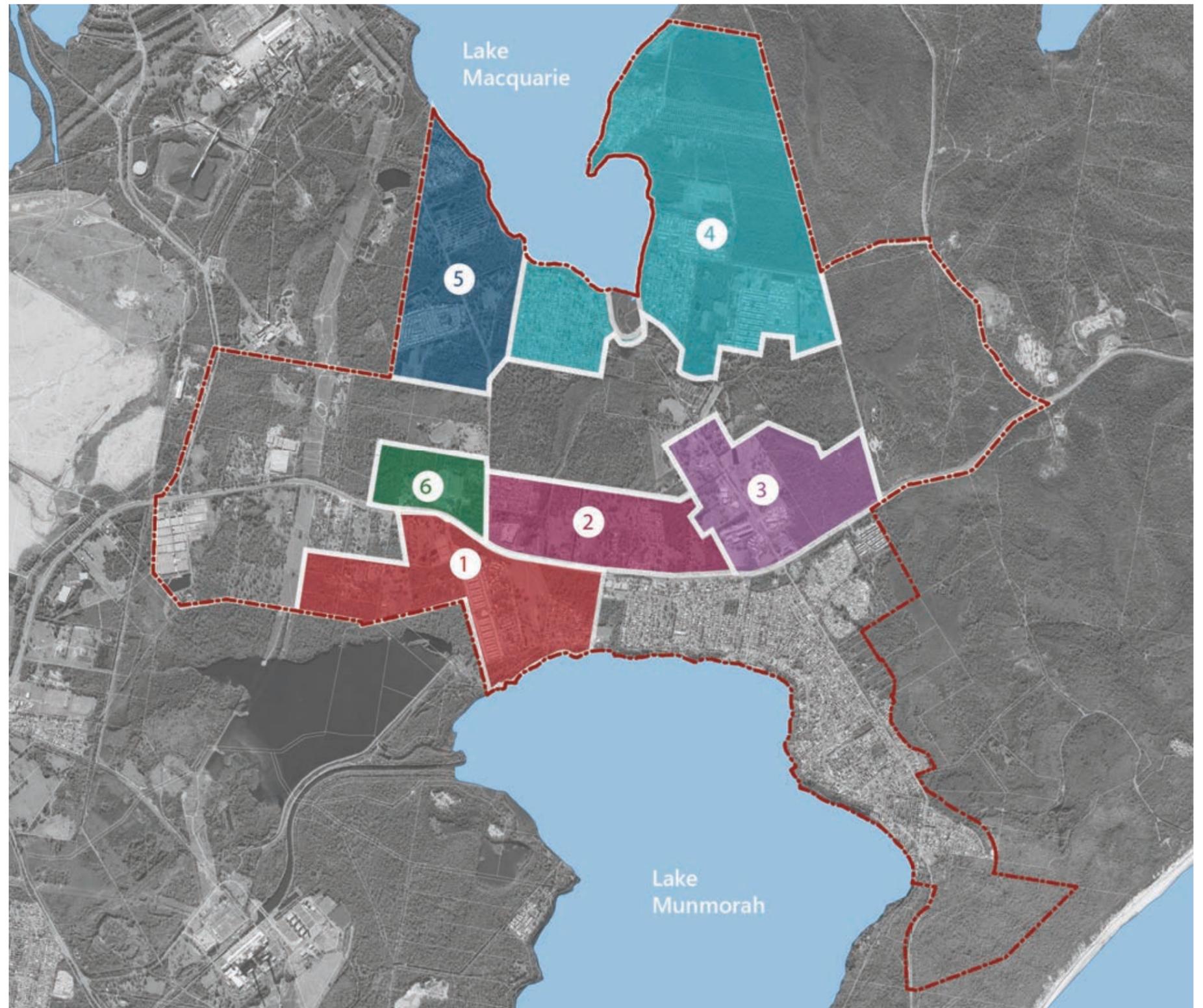


Figure 85: Staging of Development Precincts

--- Study Area Boundary

Precinct 1 Biodiversity Corridor

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

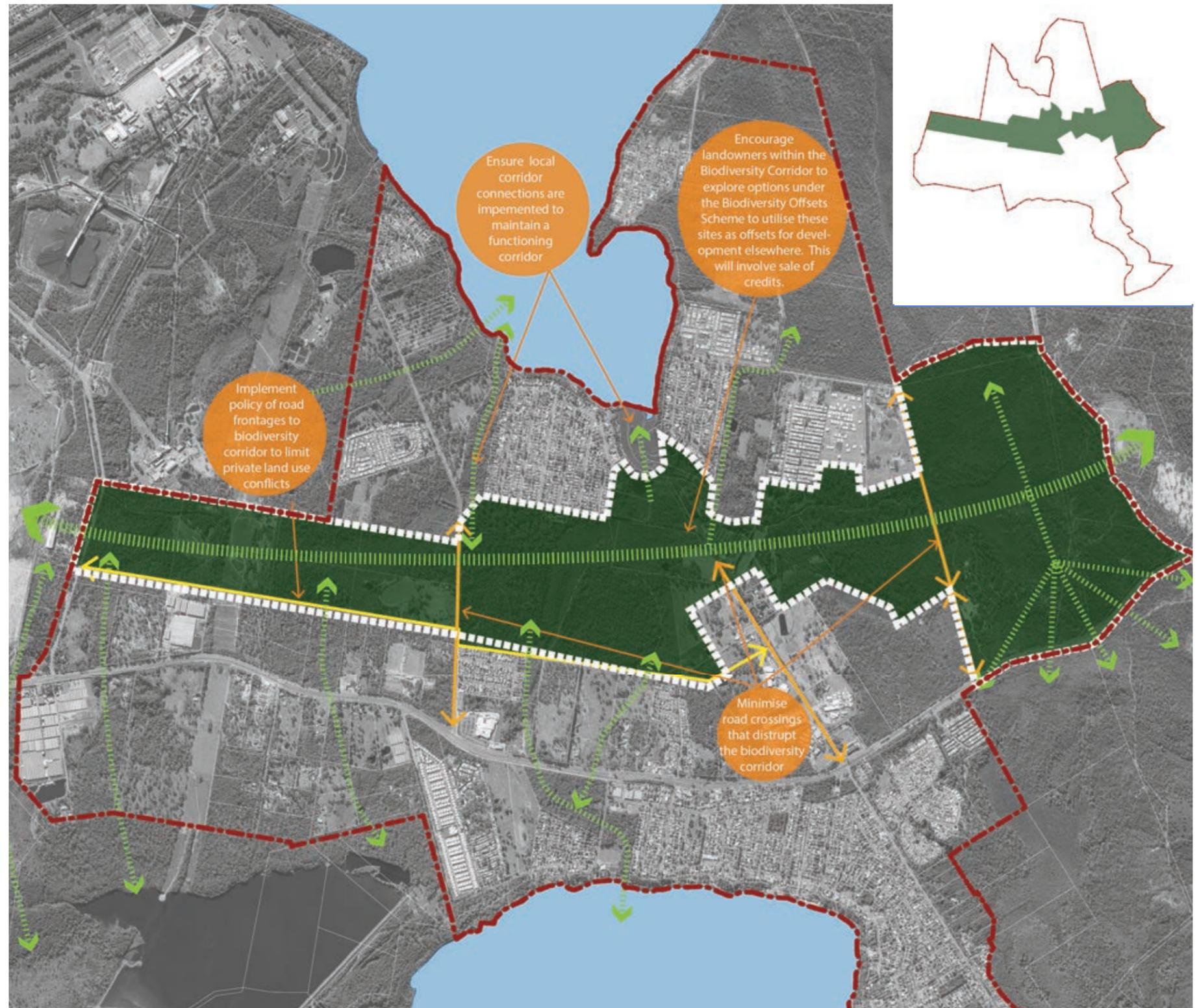


Figure 86: Precinct 1- Biodiversity Corridor

Study Area Boundary

Precinct 2 Employment Lands

Area	171 hectares
Gross developable area	91.7 hectares
Net developable area*	82.53 hectares
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 87: Precinct 2- Employment Lands

--- Study Area Boundary

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	

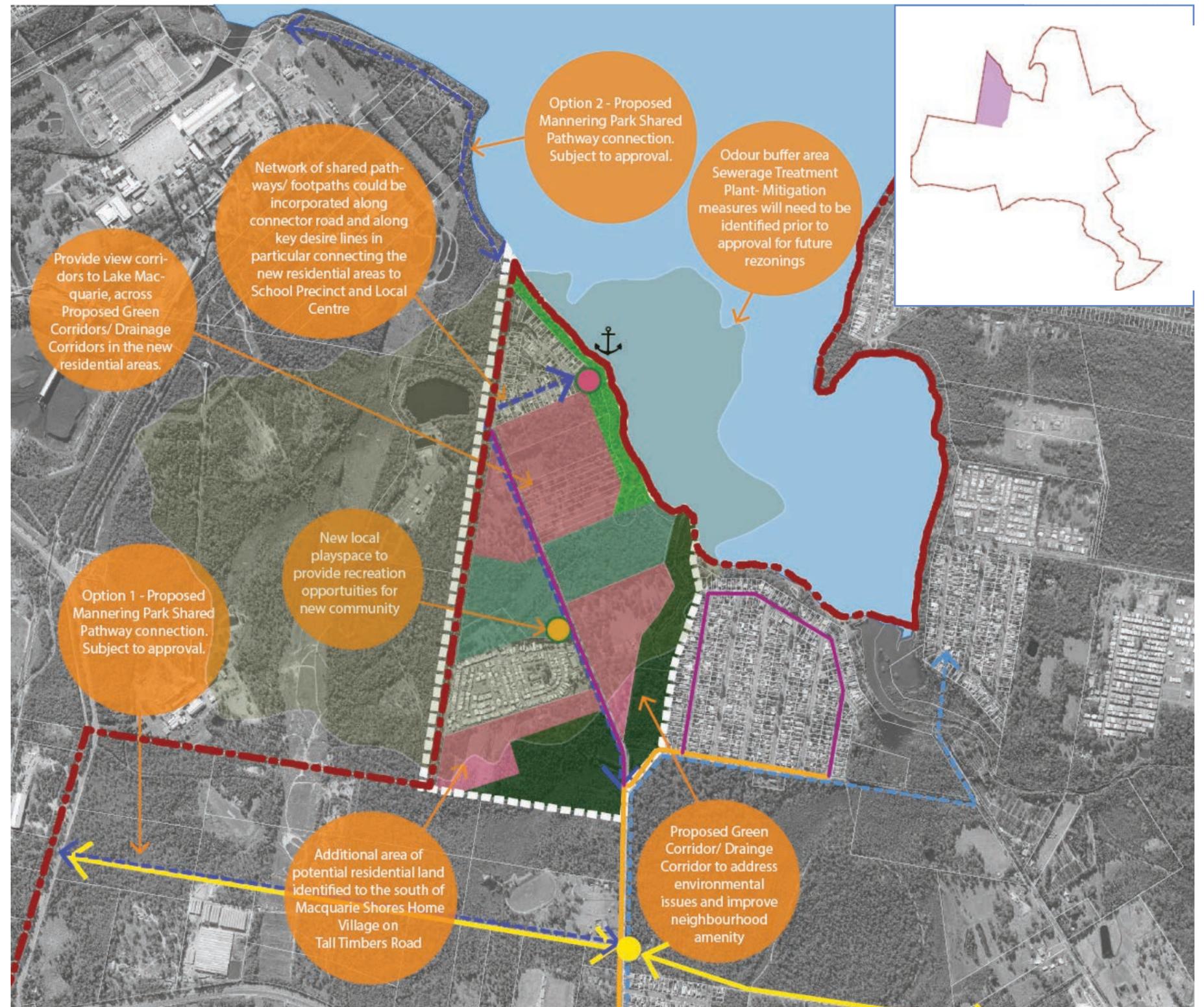


Figure 88: Precinct 3- Kingfisher Shores

----- Study Area Boundary

LEGEND

- Residential Land- Proposed Low Density ■
- Recreation Land (Passive) - Existing ■
- Environmental Land (Proposed Green Corridor/ Drainage Corridor) ■
- Mannering Park Sewer Treatment Plant Odour Area ■
- Main Road (Higher Traffic Volume)- Existing —
- Minor Road (High Traffic Volume)- Existing —
- Main Road (Higher Traffic Volume)- Proposed ↔
- Shared Pathways - Existing - - -
- Shared Pathways - Propose - - - - -
- Recreation Land- Play Ground- Existing ●
- Recreation Land- Play Ground- Proposed ●
- Jetty (Council) ⚓

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	

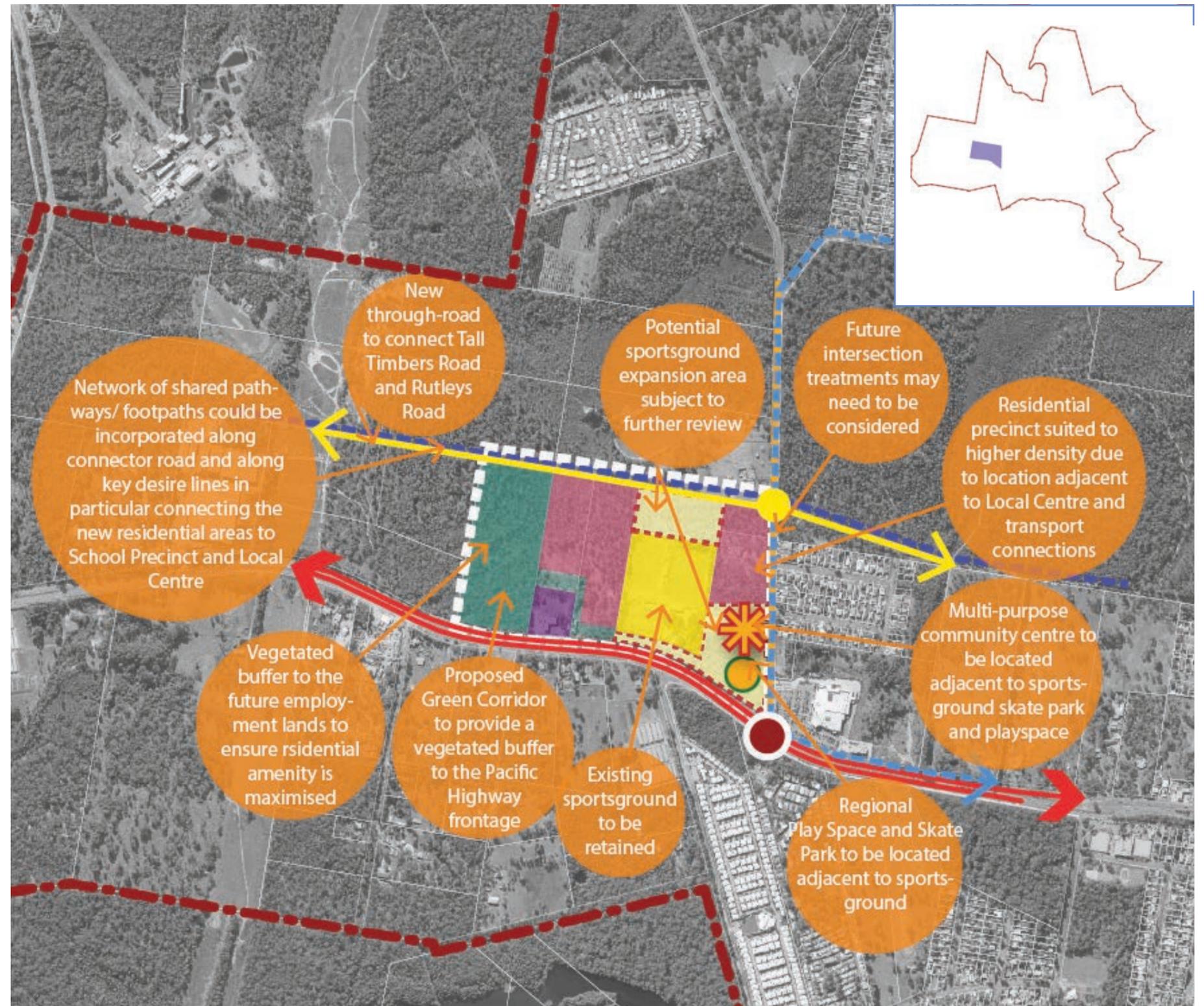


Figure 89: Precinct 4- Sportsground Precinct

----- Study Area Boundary

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	



Figure 90: Precinct 5 - Saliena Avenue

----- Study Area Boundary

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 91: Precinct 6- Kamilaroo Avenue

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
* 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 92: Precinct 7 - Chain Valley Bay

--- Study Area Boundary

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	



Figure 93: Precinct 8 - Northern Lake Munmorah

--- Study Area Boundary

Precinct 9 Southern Lake Munmorah

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

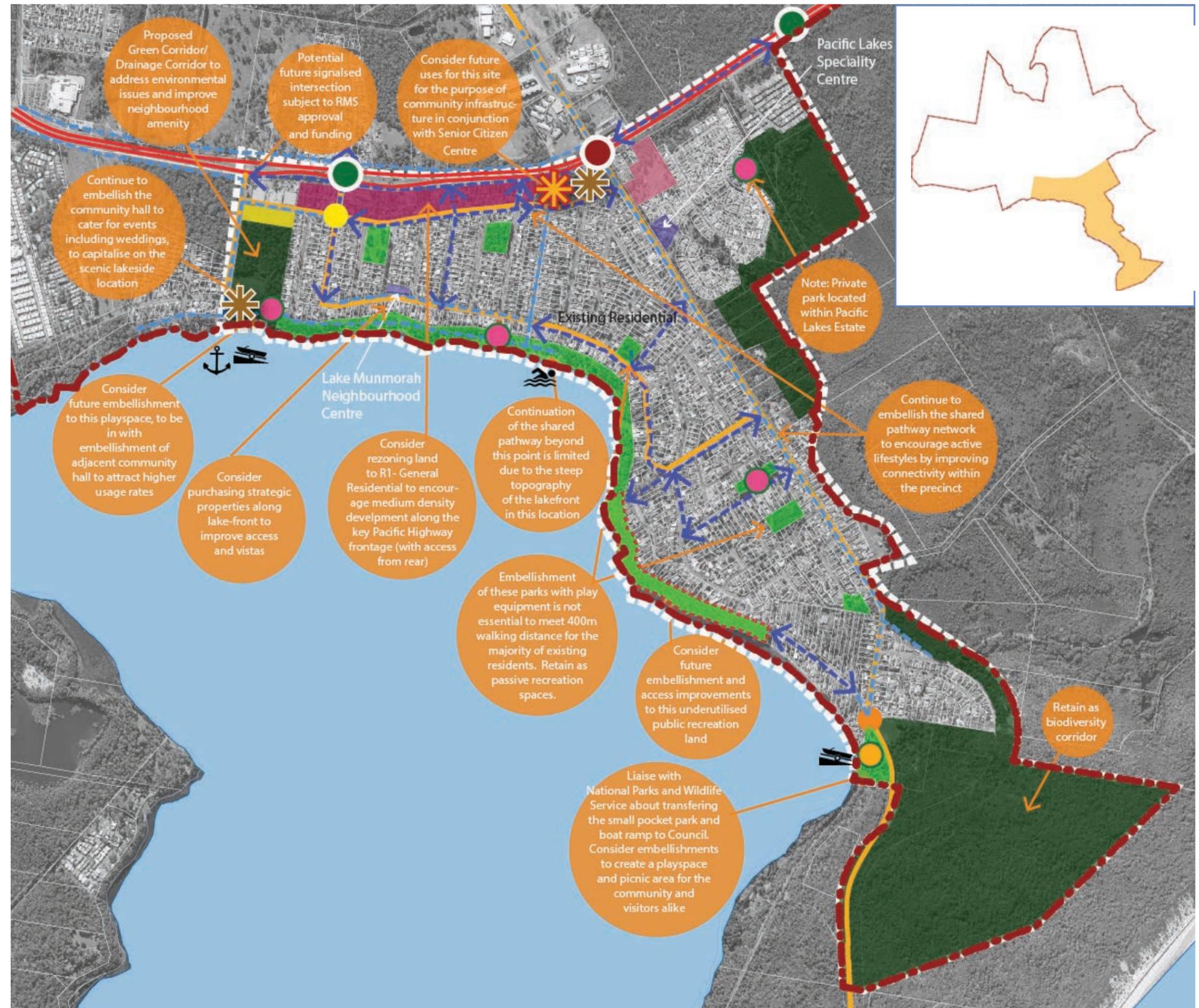


Figure 94: Precinct 9-Southern Lake Munmorah

Study Area Boundary

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 ●

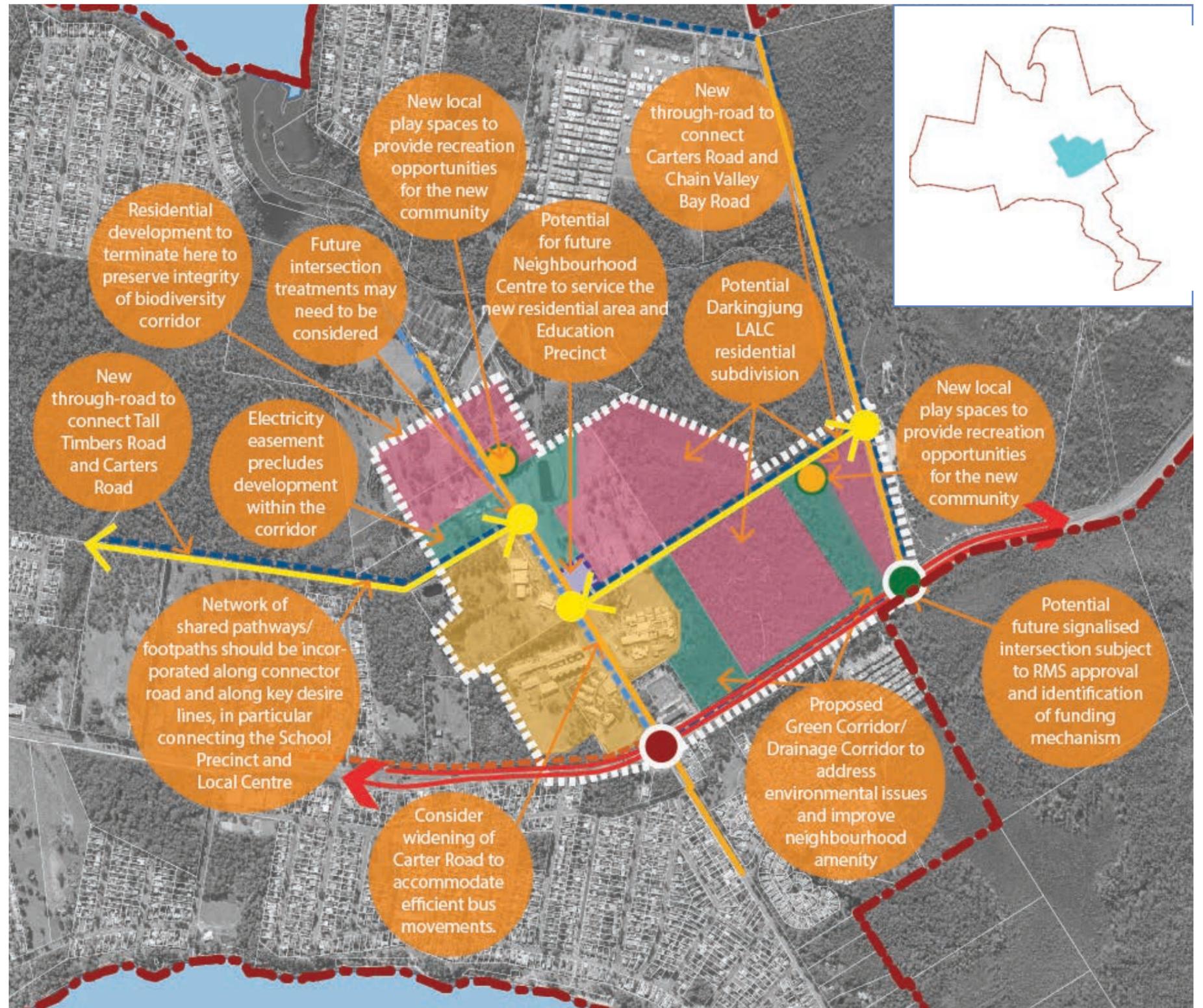


Figure 95: Precinct 10-Education Precinct

--- Study Area Boundary

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.

Size of Study Area	1,524 ha
Population	
Current Population (2017)	8,449
Future Additional Population based on Greater Lake Munmorah Structure Plan single dwellings x 2.28	6,256
Future Additional Population based on Forecast ID projections	6,879
Future Additional Population based on NWSSP x 2.28	6,010
Dwellings	
Current Dwellings (2017)	3,883
Future Additional Dwellings based on Greater Lake Munmorah Structure Plan single dwellings	2,744
Future Additional Dwellings based on Forecast ID projections	3,347
Future Additional Dwellings based on NWWSP projections	2,636
Jobs	
Current Jobs(2017)	1,737 *
Future Additional Jobs based on Greater Lake Munmorah Structure Plan Employment Lands	825

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

- 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)

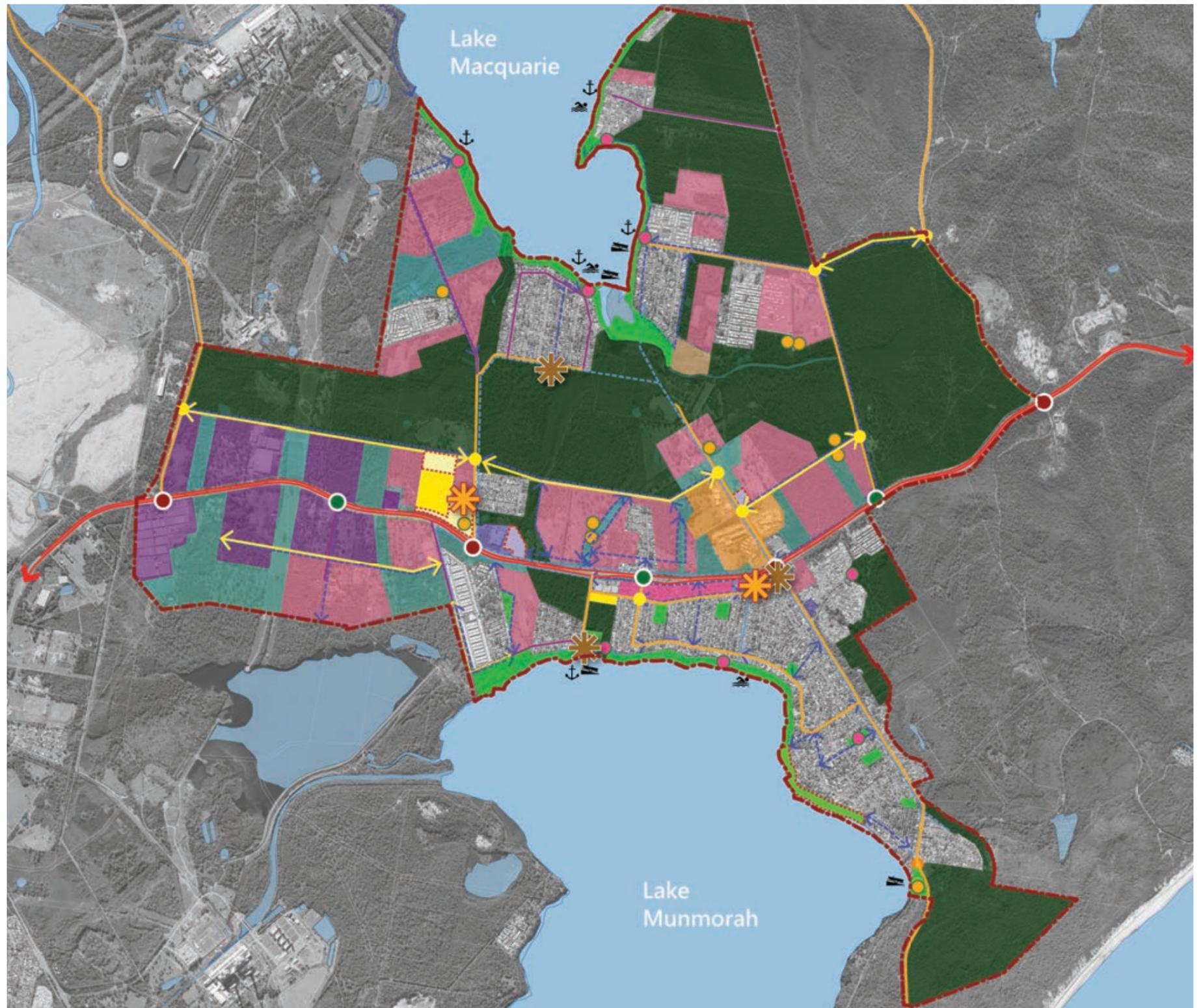


Figure 96: Greater Lake Munmorah Structure Plan

----- Study Area Boundary

8

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

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



centralcoast.nsw.gov.au



[CentralCoastCouncil](https://www.facebook.com/CentralCoastCouncil)



[@CCoastCouncil](https://twitter.com/CCoastCouncil)



[@thisisthecentralcoast](https://www.instagram.com/thisisthecentralcoast)

Council Offices 2 Hely St Wyong / 49 Mann St Gosford | 8.30am - 5.00pm, Monday to Friday | T 4350 5555 / 4325 8222