

Understanding Greater Warnervale

Appendix A - Background Report

Shaping the future of Greater Warnervale



Acknowledgment of Country

We acknowledge the Traditional Custodians of the land on which we live, work and play.

We pay our respects to Darkinjung country, and Elders past and present. We recognise the continued connection to these lands and waterways and extend this acknowledgement to the homelands and stories of those who also call this place home. We recognise our future leaders and the shared responsibility to care for and protect our place and people.



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Overview

The Understanding Greater Warnervale - Background Report (this report) provides an environmental, economic and social understanding of the existing conditions of the Study Area. It includes a detailed analysis of current conditions, observations and opportunities of the Study Area including strategic context, demographics, the environment, hazards, servicing, transport, economy, open space and recreation, community, land use conflicts and built environment.

The content of this report has been informed by site observations, desktop analysis and review of existing strategies and plans of relevance to Greater Warnervale. The Structure Plan (provided under separate cover) involved analysing the findings of this Background Report and responding to the aspirations of the community, government agencies and industry to guide the future growth of the Study Area.

The Study Area

The Study Area is an extensive area (3,900 hectares) that covers the suburbs of Warnervale, Wadalba, Hamlyn Terrace, Woongarra, Wallarah and Halloran together with parts of Wyong, Kanwal, Wyongah Tuggerawong, Tacoma, Charmhaven and Jilliby (see Figure 1).

Legend

Study Area Boundary	
Railway Line	
Warnervale Railway Station	
Central Coast Airport	

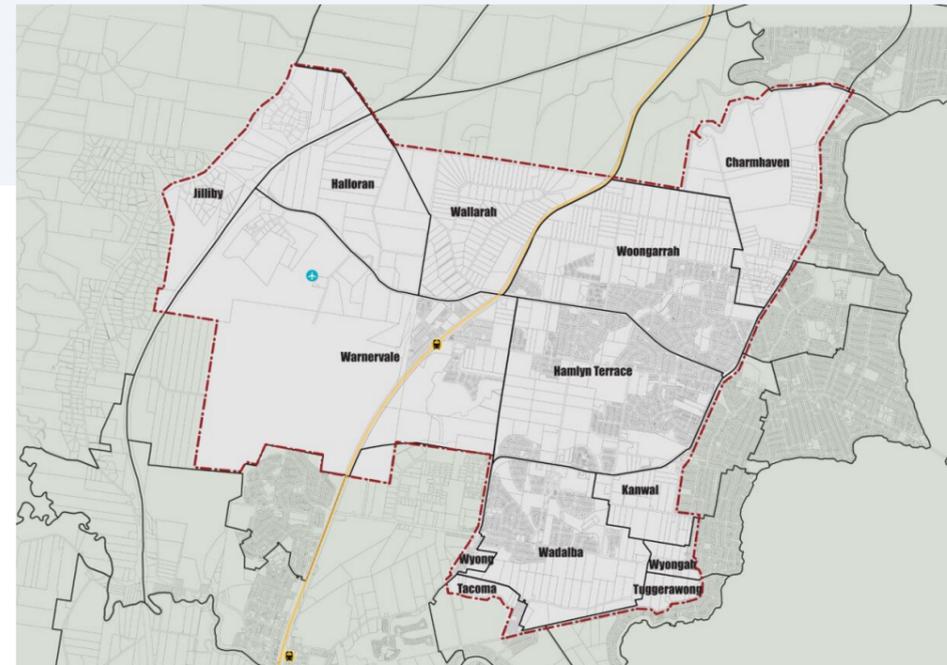


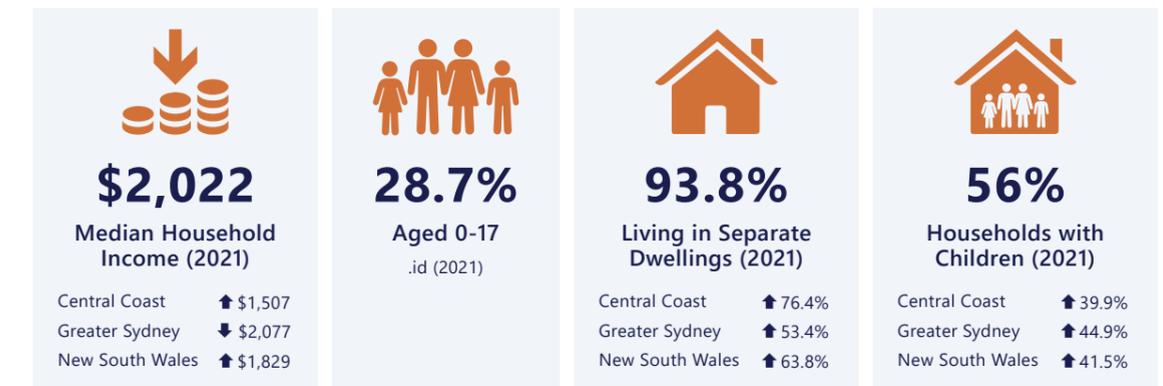
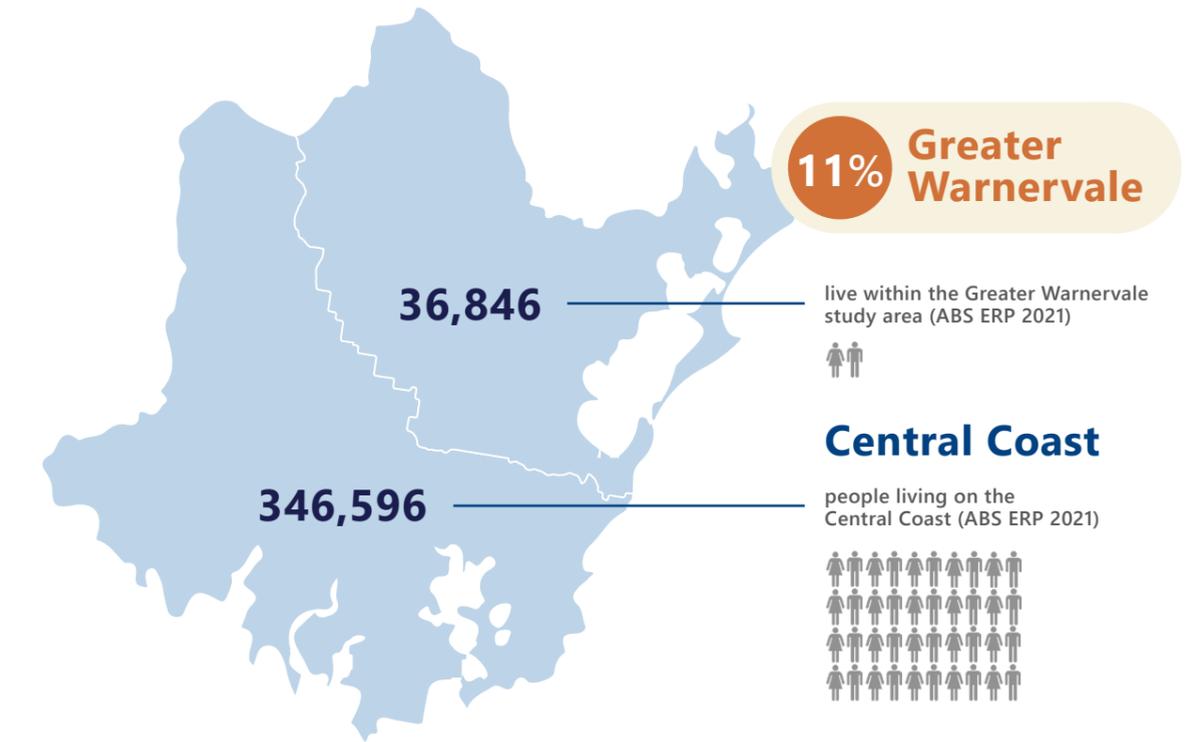
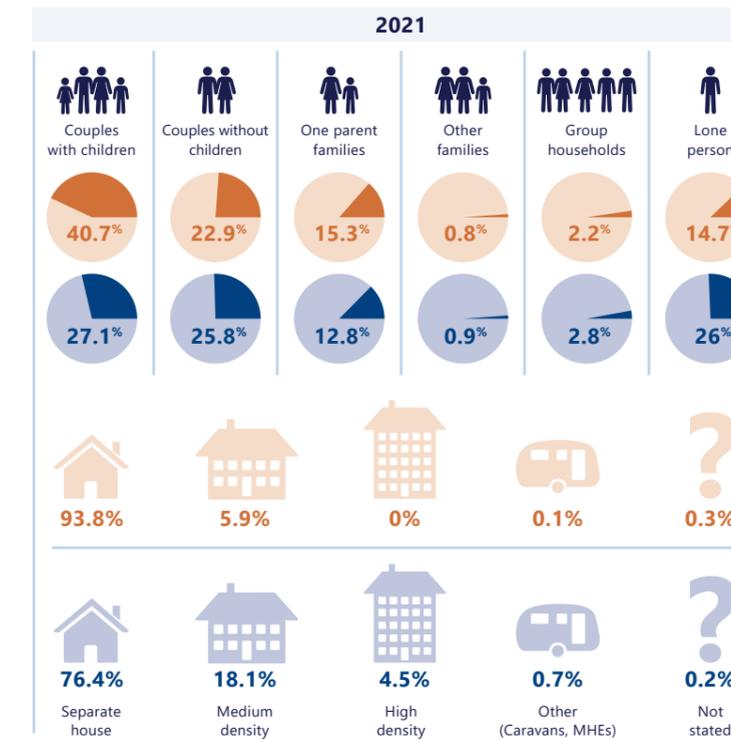
Figure 1 - The Study Area

A profile of Greater Warnervale

Chapter 3 discusses the community and economic profile of the study area including age structure, household composition, education, employment and income.

Note: Unless otherwise stated, data has been sourced from Australian Bureau of Statistics, Census of Population and Housing 2021. Compiled by .id, the population experts.

Households and Dwellings ● Warnervale ● Central Coast



Existing Conditions

Setting the scene for Greater Warnervale

Chapter 4 provides an overview of the key strengths and weaknesses identified for this Structure Plan Study Area, which leads into Chapter 6 - Opportunities to address these issues.



Figure 2 - Warnies Café

Environmental

- Ecologically Endangered Communities and threatened species
- Need to define local biodiversity corridors
- The need to protect the largest freshwater wetland on the Central Coast.
- Cluttered visual landscape which often interferes with the natural beauty of the area.

Hazards

- Significant bushfire hazard.
- Potential for land contamination and properties identified on Council's contaminated land register.
- Significant flood hazard.
- Preparing for climate change

Servicing

- Sequencing of development – Increased costs for development out-of-sync with Development Servicing Plan timeframes.

- Sequencing of development – Who is responsible for lead-in infrastructure?
- Sewer Servicing – Capacity constraints.
- Sewage Treatment Plant – Odour issues for certain precincts.

Transport

- The need for investment in transport infrastructure to support population growth.
- Lack of connection between the north and south of the Study Area due to Sparks Road and the Pacific Highway.
- Lack of connection between the east and west of the Study Area due to the location of the Northern Railway Line.
- Limited access to public transport services.
- Need for upgrades to the existing railway station to support population and employment growth.

Economy

- No commercial centre to act as a community hub.
- Limited access to local employment opportunities.

Open Space and Recreation

- Discontinuous walking and cycling networks.
- Limited pedestrian access to playspace facilities.
- Maintaining access to sportsground facilities for the growing population.

Community

- Lack of modern multi-purpose community facilities to meet current and future needs.
- Increasing demand for primary and secondary education facilities.
- No tertiary education opportunities.
- Increasing demand for aged care facilities that are well located and well designed to meet the needs of

ageing population across the Central Coast.

- Lack of housing choice with a high proportion of separate dwellings.
- Lack of affordable housing options.

Land Use Conflicts

- Potential for land use conflicts due to mining leases and fragmented land ownership.

Character

- Certain precincts dominated by housing development.
- Includes a mix of residential, commercial, industrial, environmental and open space land.

Opportunities

As part of the analysis of existing conditions the following opportunities were identified and have informed the Structure Plan:

Environmental

- Protect and enhance existing remnant vegetation, wetlands on floodplain and biodiversity corridors.
- Increase width of biodiversity corridors and identify appropriate zoning changes based on environmental attributes.
- Protect Porters Creek Wetland and Tuggerah Lakes through stormwater management and retention of vegetated buffers.
- Manage stormwater runoff from new and existing development through networked system of constructed wetlands.
- Apply Urban Interface Areas (UIA's) to manage urban edge effects where new development adjoins environmental lands.

Hazards

- Proponents of proposals to undertake flood modelling with consideration given to the PMF, 1%AEP, 0.02%AEP to avoid catastrophic impacts from extreme flooding.
- Ensure Bushfire Assessments are prepared for planning proposals or development applications on land within a Bushfire Buffer Area.
- Assess the suitability of land for proposed development and undertake remediation as part of the rezoning process.
- Strengthen tree removal and replacement processes to avoid the net loss of tree canopy cover.

Servicing

- Ensure development is undertaken with sound knowledge of the capacity of current and future servicing infrastructure.
- Review and refine Council's Development Servicing Plan 2019.
- Identify an adequate buffer to protect sensitive receivers from the STP's odour impacts.
- Group rezoning proposals together by the relevant precinct and sequence development that is appropriate and cost effective in terms of provision of essential infrastructure.

Transport

- Support growth around existing public transport nodes such as Warnervale Station and skey transit corridors.
- Identify opportunities for new and upgraded roads to enhance local connectivity and improve traffic flow and movement.
- Continue to advocate for improvements to the State Road network and Warnervale Railway Station.
- Identify gaps in the existing network to create a continuous and connected cycling network to improve movement, functionality and connectivity between precincts.

Economy

- Prepare, exhibit and finalise the draft Central Coast Airport Masterplan.
- Investigate opportunities to drive regional economic development, employment and tourism.
- Complete the Central Coast Employment Lands Strategy.

Community

- Work with Schools Infrastructure NSW to ensure that the growing population has access to all levels of educational opportunity.
- Co-ordinate the delivery of community facilities in accordance with Warnervale District Development Contributions Plan 2021.
- Establish multi-purpose community facilities in central locations co-located with other community facilities, playing fields and schools.
- Provide a mix of lot sizes and housing types to meet diverse housing needs including affordable housing options.

Land Use Conflicts

- Prioritise the avoidance of land use conflict with coal mining licence holders to minimise the risk of future land use conflict.
- Undertake appropriate noise, air, and odour impact assessments to prevent or mitigate the risk of impacts on residential uses in proximity to industrial activities

Character

- Explore opportunities to diversify housing typologies and densities.
- Create 15-minute neighbourhoods where people can walk and cycle to meet daily needs and services – increasing social cohesion and activating the street.



Figure 3 - Greenfield development

The Precincts

The Study Area has been divided into 10 distinct precincts based on logical boundaries such as topography, roads, rail infrastructure and desired future land use. Section 5.0 provides an overview of each precinct including its role and function and identifies key issues to be considered as part of the Structure Plan.

The 10 precincts include:

- Precinct 1**
Wyong Employment Zone
- Precinct 2**
Warnervale Village
- Precinct 3**
Walarah Residential
- Precinct 4**
Warnervale Local Centre
- Precinct 5**
Wadalba Residential
- Precinct 6**
Hamlyn Terrace Residential
- Precinct 7**
Woongarra Residential
- Precinct 8**
Wadalba East Residential
- Precinct 9**
Health and Medical
- Precinct 10**
Charmhaven

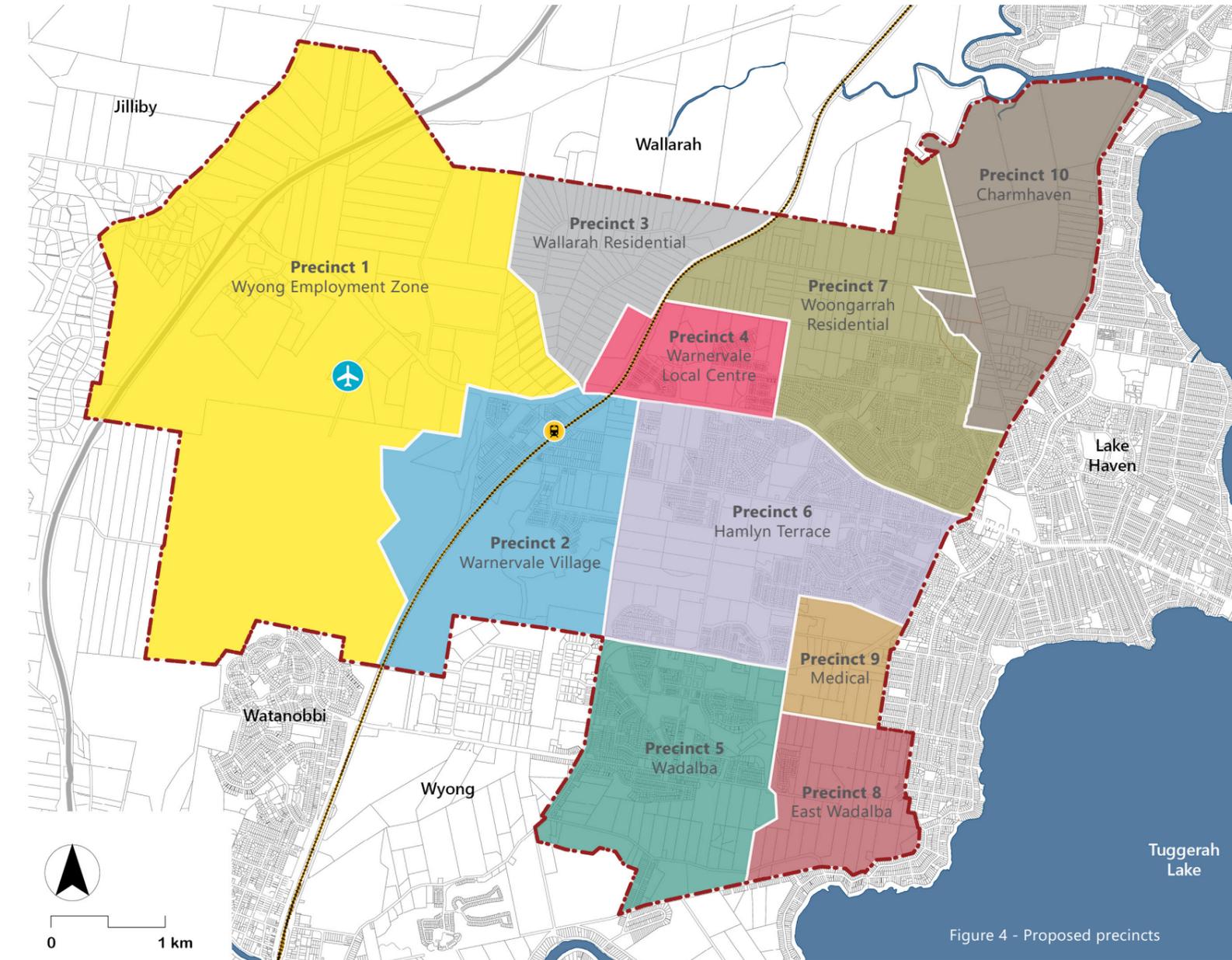


Figure 4 - Proposed precincts

Chapter 1

1.0 Introduction



1.1 Acknowledgment of Country

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We recognise our future leaders and the shared responsibility to care for and protect our place and people.

1.2 Purpose of Background Report

This Background Report supports the Greater Warnervale Structure Plan and provides a detailed analysis of the current social, economic, natural and built environment conditions of the Study Area. The findings of this report have informed the vision, opportunities, constraints and key directions of the Structure Plan to help guide growth and change in Greater Warnervale as it develops over the next 20 years.

1.3 Why a Structure Plan

The Greater Warnervale Structure Plan (the Structure Plan) project has commenced as a result of an identified need to plan for population and employment growth in the north of the Central Coast Council Local Government Area (LGA). The State Government's North Wyong Shire Structure Plan (NWSSP) was the previous strategic plan guiding growth and development within the northern part of the former Wyong Local Government Area. The NWSSP is now over ten years old and was repealed by the NSW Central Coast Regional Plan 2041 (CCRP 2041). It is appropriate that elements of the NWSSP be reviewed to reflect current developments trends as they relate to the Greater Warnervale area.

Greater Warnervale has been developing as an urban release area for over 20 years. Council recognises the importance of developing a vision for the future development of Greater Warnervale, to ensure that growth and development of this area reflects the importance of the northern part of the LGA and is coordinated with other key regional plans affecting this locality. A plan that considers the Study Area (see Figure 5) in its entirety is needed to ensure best outcomes for current and future residents and that development occurs in an orderly and desirable manner supported by infrastructure. A detailed Structure Plan of the Greater Warnervale area has therefore been prepared in consultation with the community, agency and interested stakeholders.

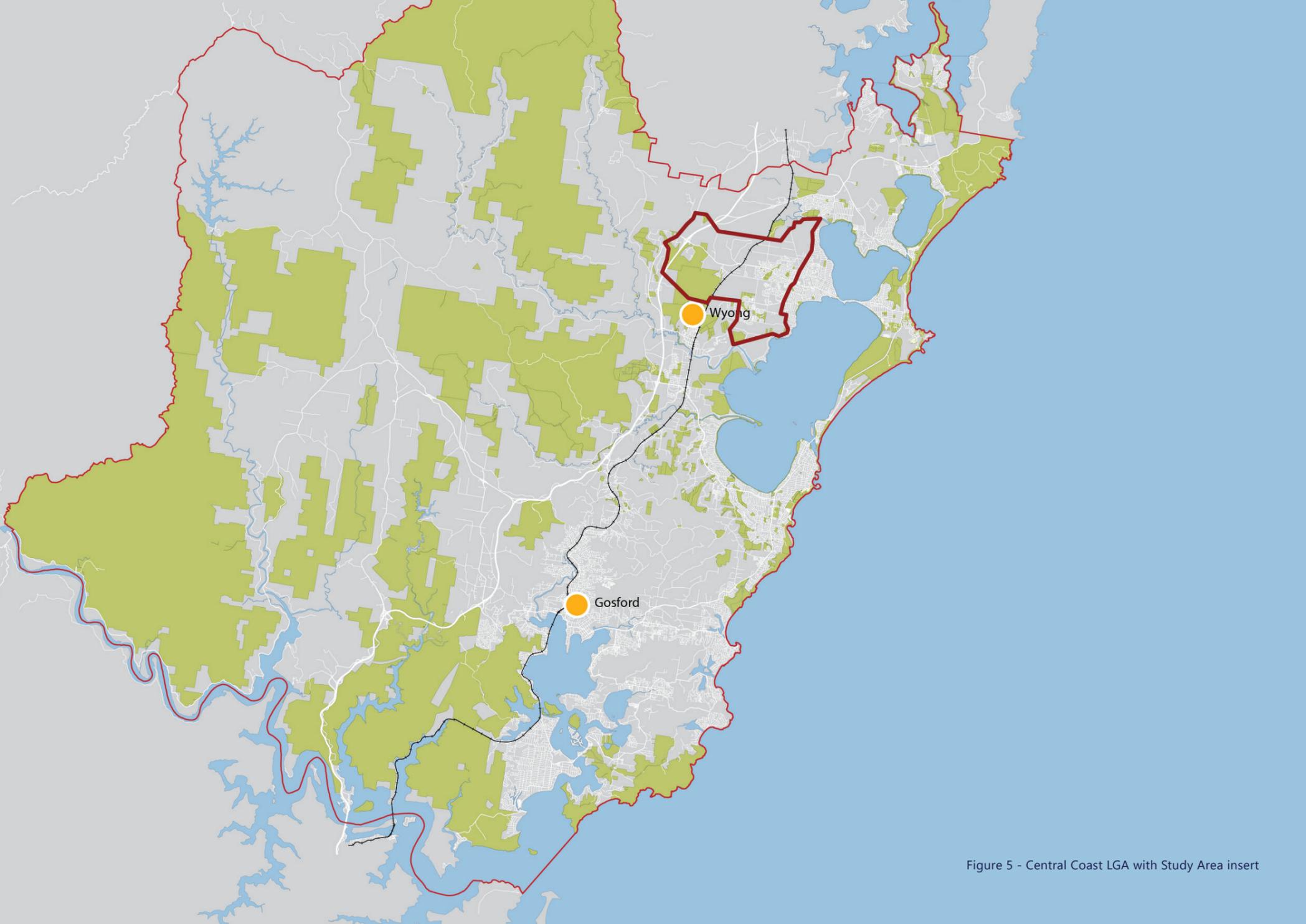


Figure 5 - Central Coast LGA with Study Area insert

1.4 Purpose & Objectives

The purpose of the Structure Plan is to develop a strategic vision for Greater Warnervale, informed by community, agency and industry feedback. The Structure Plan will inform local strategic planning, local environmental plans and the assessment of planning proposals within the Study Area.

The Structure Plan has been developed in response to a key action of the CCRP 2041. CCRP 2041 is the regional plan that sets out the strategic land use framework for economic growth and revitalisation of the Central Coast LGA. Planning Priority 1 of the CCRP 2041 is to “accelerate housing and employment growth in identified precincts”. The Structure Plan has been prepared by Council to implement this planning priority and to ensure the Study Area meets anticipated population and employment growth for the next 20 years.

The Structure Plan sets a coherent framework for development within the Study Area and will:

- Propose land use recommendations to support sustainable long-term growth of the Study Area;
- Provide certainty to the community, local government and industry groups on the desired location of future development and conservation areas;
- Identify and protect important environmental assets, landscapes and natural resources;
- Identify key infrastructure requirements to support development;
- Provide opportunities for passive and active recreation;
- Identify an appropriate environmental and open space network;
- Review options for the future development of Warnervale Local Centre (formerly known as Warnervale Town Centre);
- Establish an appropriate environmental and open space network; and,
- Ensure new development contributes to infrastructure costs.

1.5 Regional Context

Greater Warnervale is located in the north of the Central Coast Council LGA and is a gateway to one of the largest growth areas in the region. It is one of the few remaining areas that has significant capacity for growth. CCRP 2041 identifies Greater Warnervale within the Central Lakes District which is emerging as the primary growth front between the Central Coast and Greater Newcastle. The Central Lakes District will be home to many more people in the future, in a mix of suburban and urban places and housing choices in and around Warnervale. The Central Coast LGA population is forecast to grow from 346,596 (ABS 2021) to 400,878 by 2041. Of the additional 54,282 people by 2041, the Study Area is expected to accommodate approximately 50% of this growth (27,198 people).

1.6 Study Area

Greater Warnervale is located approximately 30km north of Gosford, 10km north of Wyong, 70km south of Newcastle and over 100km north of Sydney. For the purposes of this Structure Plan, Figure 6 identifies the boundaries of the Study Area.

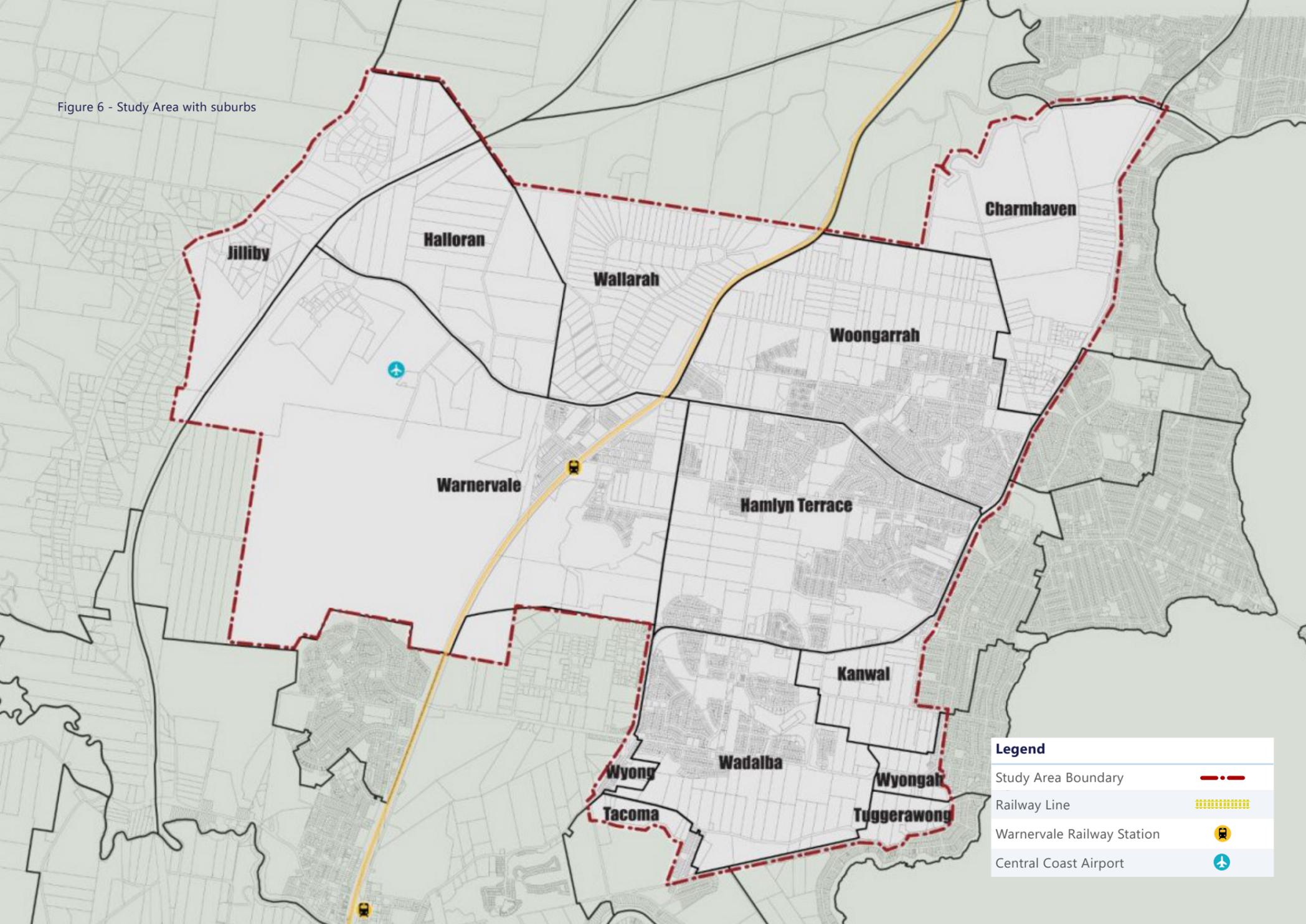
The Study Area is 3,900 hectares in size and comprises the suburbs of Jilliby, Halloran, Warnervale, Wallarah, Woongarra, Hamlyn Terrace, Wadalba and parts of Charmhaven, Kanwal, Wyongah, Tuggerawong, Tacoma and Wyong.

The Study Area is serviced by the main northern line with services to Sydney and Newcastle departing from Warnervale Station. It is bound by four significant transport corridors – the M1 Motorway to the west, Sparks Road and the Northern Railway Line through the middle and the Pacific Highway to the south and east.

The Study Area includes greenfield areas that have previously been identified for future urban development under the former North Wyong Shire Structure Plan and the Wyong Shire Settlement Strategy. Such areas include the Wyong Employment Zone, parts of Hamlyn Terrace, Wadalba, Woongarra and Warnervale.

There are also key strategic sites that will play an important role in shaping this growth area including Warnervale Local Centre (formerly known as Warnervale Town Centre), Wyong Hospital, the Central Coast Airport and the business precinct site near Warnervale Station. The development of these precincts will have a transformative impact on the economy, education and social interaction in the region.

Figure 6 - Study Area with suburbs



Chapter 2

2.0 Strategic Context



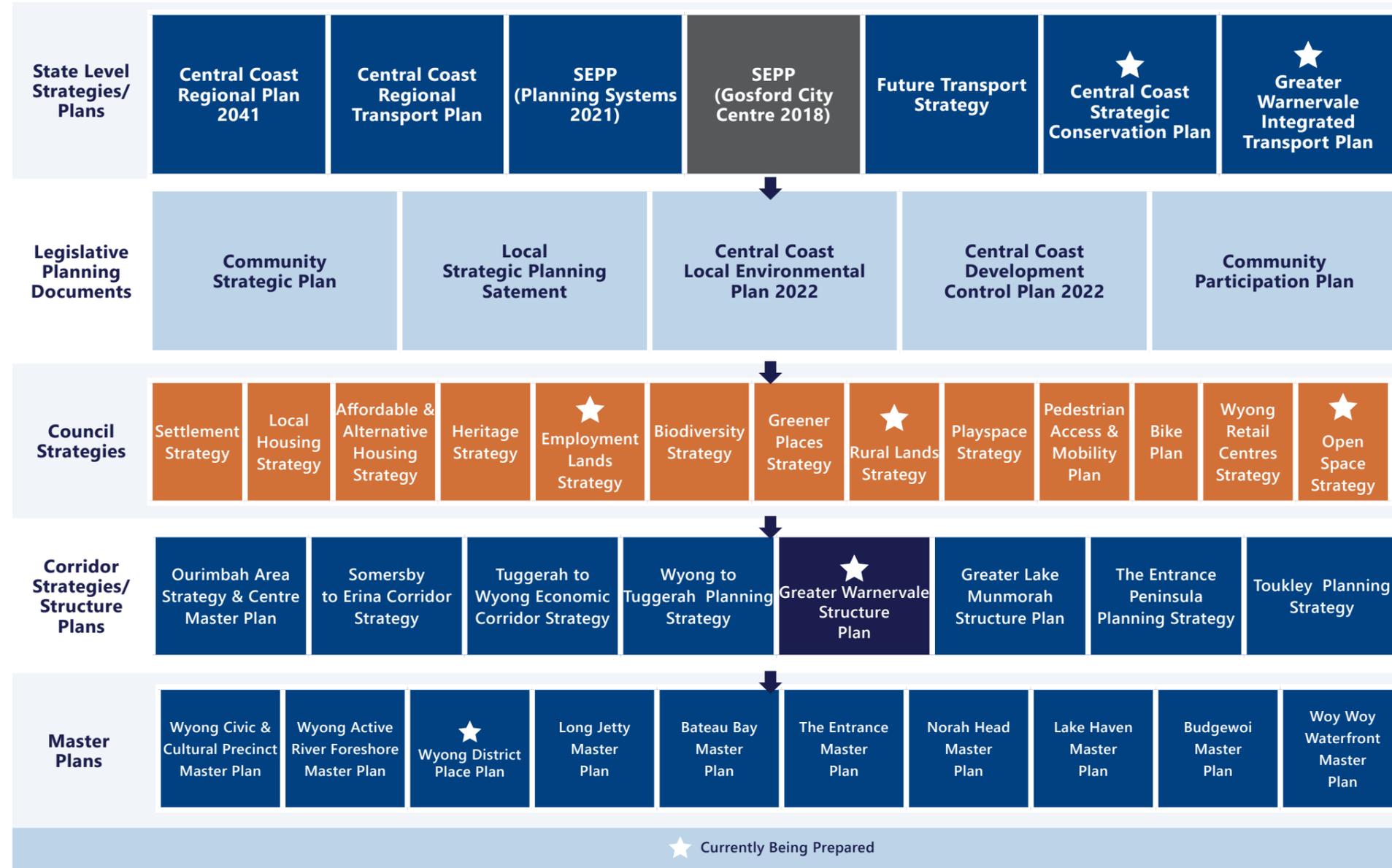


Figure 7 - Strategy Hierarchy as it relates to Greater Warrnervale Structure Plan

2.2 Central Coast Regional Plan (2041)

The *Central Coast Regional Plan 2041* (CCRP 2041) outlines the NSW Government’s land use vision for the Central Coast. The CCRP 2041 seeks to ensure the ongoing delivery of infrastructure, housing and jobs to cater for future population growth and to create vibrant, liveable, connected urban centres with green spaces and protected biodiversity.

The CCRP 2041 identifies Warrnervale as a ‘regionally significant growth area’ and is the first step in implementing Planning Priority 1 of the CCRP 2041 which seeks to “accelerate housing and employment growth in identified precincts.”

The precinct boundaries in CCRP 2041 differ to those within this Structure Plan. The CCRP 2041 precinct boundaries (see **Figure 8**) reflect those in the now repealed North Wyong Shire Structure Plan. As part of the structure plan process, the precinct boundaries within this plan have been amended and are based on land ownership, topographic features and location. The land use recommendations within the Structure Plan are generally consistent with those in the CCRP 2041.

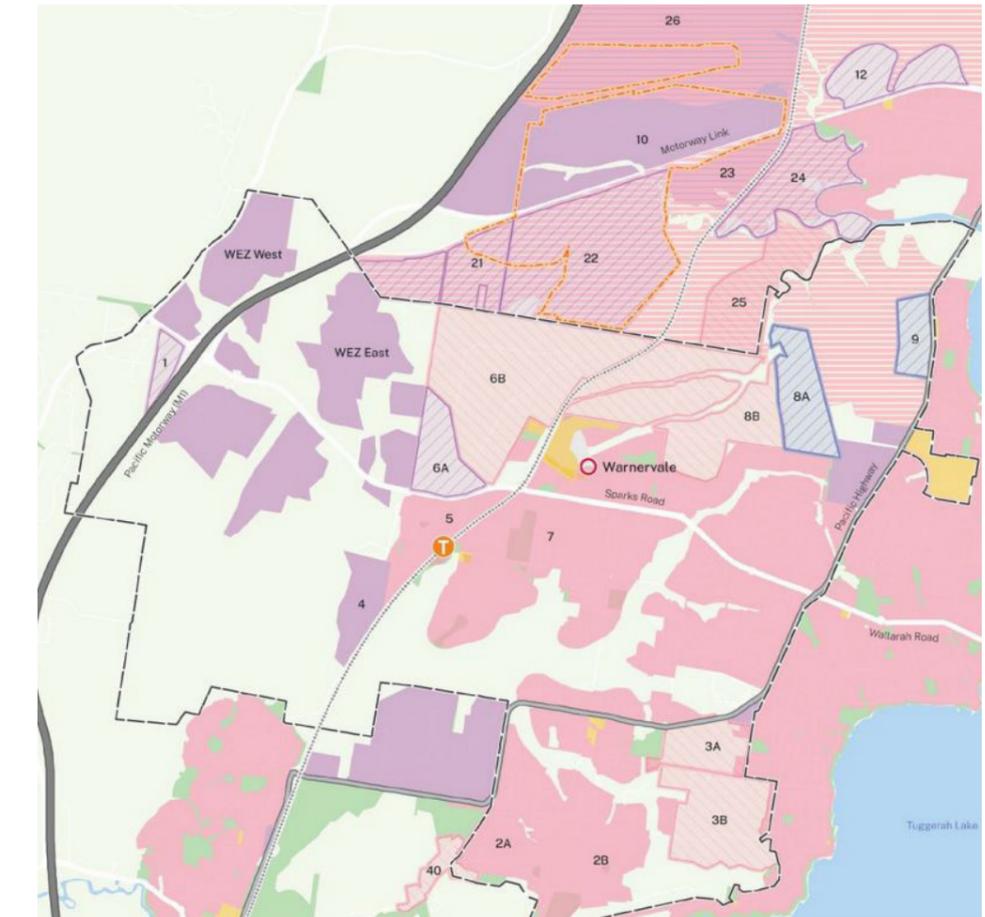


Figure 8 - Greater Warrnervale precincts for future jobs and homes (Source: CCRP 2041)

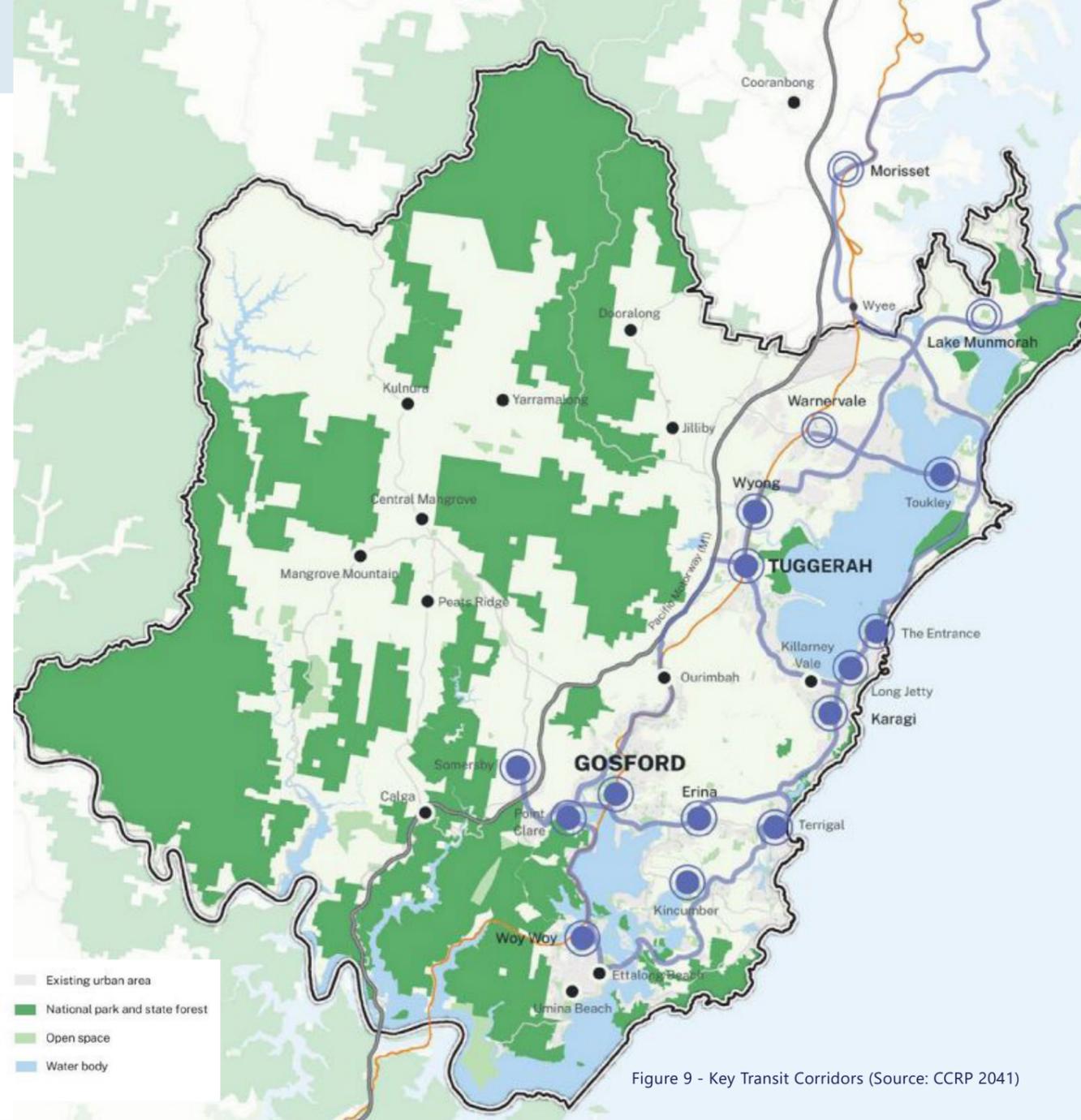


Figure 9 - Key Transit Corridors (Source: CCRP 2041)

CCRP Objective

How the Structure Plan responds

OBJECTIVE 2:
Support the right of Aboriginal residents to economic agency

At the time of writing this Plan, there is no applicable land owned by Darkinjung Local Aboriginal Land Council (DLALC) within the Study Area. There are opportunities for the Connecting with Country Framework to inform the planning, design and delivery of future development within the Study Area. A guiding principle of the Connecting with Country Framework is the need to connect and collaborate meaningfully with, Aboriginal peoples. The local Aboriginal land Council (Darkinjung) will continue to be consulted with on rezoning and development proposals within the Study Area and be invited to provide comment. Council's Local Housing Strategy incorporates designing with Country principles and these will influence future developments in the Study Area. Future precinct rezonings will be required to undertake a detailed site analysis, considering the surrounding landscape and investigate ways to protect landscape systems and ecology.

OBJECTIVE 3:
Create 15-minute neighbourhoods to support mixed, multi-modal, inclusive and vibrant communities

The Structure Plan includes initiatives to assist in the creation of 15-minute neighbourhoods. An underlying theme throughout the Structure Plan is to encourage a mode shift from car dependency to public and active transport in combination with the development of movement networks that connect key services, public open space area and transport hubs within the Study Area. The majority of precincts earmarked for residential and employment growth are located within 15 minutes of retail and services either inside or outside the Study Area:

- Wadalba Local Shops
- Wyong Shopping Village
- Lake Haven Shopping Centre
- Warnervale Local Centre (formerly classified as a Town Centre)
- Proposed local centre at Warnervale Village (i.e. adjoining Warnervale Station)
- Kanwal Local centre
- Wyong Employment Zone area when developed in the future.

The Structure Plan seeks to create two new local centres (i.e. Warnervale Local Centre and Warnervale Village – west of Warnervale Station). With the northern railway station no longer proceeding, fostering a two centres approach will ensure improved access to services and facilities for the two northern and southern parts of the Study Area. There is a strong focus on encouraging growth near the existing Warnervale Station, advocating for more frequent bus and train services and creating a network of safe and accessible walking and cycling links between the precincts. There are also opportunities to support more active transport links as part of future contribution plans. Widened footpaths, lighting, shade and shelter are all elements of good design that play a significant role in influencing people's choice to walk, cycle or use public transport. These are key elements of the Central Coast Bike Plan which will guide the ongoing provision of an active transport network within the Study Area. Focus areas of public open space to the south of Sparks Road are to be well serviced by an interconnected movement network, with a similar focus in residential development in the northern areas around the Warnervale Local Centre and Hilltop Park. Given the extent of the biodiversity corridors throughout the Study Area, access to green spaces will be generous for residential areas. Please refer to Chapter 6 for opportunities and strategies to achieve 15-minute neighbourhoods and promote active transport.

CCRP Objective	How the Structure Plan responds
<p>OBJECTIVE 4: An inter connected Central Coast without car-dependent communities</p>	<p>Car dependency is a key issue for both the Study Area and broader LGA. Shifting towards walking, cycling and public transport requires investment in both existing and new infrastructure as well as a significant behavioural shift in the way people choose to move throughout the area. To reduce car dependency, the Structure Plan proposes the following:</p> <ul style="list-style-type: none"> • Work with Transport for NSW and Busways to improve frequency and routes of bus and train services. • Advocate for upgrades to the existing Warnervale Rail Station. • Support growth around public transport. • Improve commuter parking provision. • Review parking requirements in areas serviced by frequent public transport. • Co-locate key land uses such as schools, hospitals and shops along key walking and cycling corridors. • Align walking and cycling networks with public transport routes to improve accessibility to public transport. • Improve movement, functionality and connectivity between precincts. <p>Future precinct-specific DCP chapters will be prepared to support precinct based rezonings and could include provisions identifying opportunities for new through-site links for walking and cycling, reduced car parking rates, increased on-site bike storage requirements, car share programs, accessibility requirements etc.</p>
<p>OBJECTIVE 5: Plan for ‘nimble neighbourhoods’, diverse housing and sequenced development</p>	<p>The majority of land within the Study Area available for future rezoning/development is greenfield. Opportunities for infill housing are limited as the urban release area is in early stages of the lifespan of the established housing stock. Notwithstanding this, as part of the Local Housing Strategy, density targets will be reviewed around centres and within R1 and R2 zones in accessible locations. This will assist with long term planning for meeting these benchmarks.</p> <p>The majority of precincts within the Study Area are already zoned or developed for residential purposes and support a mixed zoning and development standards to promote housing diversity. There are opportunities for infill housing and more diverse housing options (i.e. apartments, townhouses) around key transport nodes such as Warnervale Station and Warnervale Local Centre. The Structure Plan identifies opportunities for infill housing and diverse housing options within these two areas and will complement the work to be done following adoption of the Local Housing Strategy.</p>
<p>OBJECTIVE 7: Reach net zero and increase resilience and sustainable infrastructure</p>	<p>As per CCRP 2041, planning proposals within the Study Area will be required to demonstrate how the following outcomes are achieved:</p> <ol style="list-style-type: none"> 1. Communities are designed and equipped to be safe, hazard-resilient places. 2. Neighbourhoods have inbuilt flexibility and adaptability to accommodate new uses and users in the long term. 3. The effects of climate change are managed to optimise safety and resilience for communities and the natural environment. 4. Development is located away from high-risk areas to avoid community exposure to natural hazards as far as is practical. 5. Places are designed to support the goal of net zero emissions by 2050 and opportunities for mitigation and adaptation to a changing climate and environment. <p>The Structure Plan includes key principles and objectives to guide where development occurs however detailed technical investigations will need to be undertaken as part of future planning proposals.</p> <p>Residential development is encouraged in areas located in low-risk flood and bushfire areas and diversity of housing and land uses are encouraged to allow flexibility and adaptability. The movement towards 15-minute neighbourhoods will also promote walking and cycling rather than car dependency and contribute towards a net zero future.</p>
<p>OBJECTIVE 8: Plan for businesses and services at the heart of healthy, prosperous and innovative communities</p>	<p>The Structure Plan proposes land use changes to develop healthy, liveable and viable centres that provide a mix of land uses and activities. The Plan identifies locations suitable for mixed use and increased housing density to support local business and enhance pedestrian activity. The neighbourhoods will be compact, fine-grained and built to human scale. The streets will be places for people with a focus on prioritising pedestrians over cars.</p>

CCRP Objective	How the Structure Plan responds
Central Lakes	
<p>PLANNING PRIORITY 1: Accelerate housing and employment growth in identified precincts</p>	<p>CCRP 2041 identifies precincts earmarked for residential and/or employment growth. The Structure Plan precinct boundaries differ to the precinct boundaries in CCRP 2041 however are generally consistent with the land uses proposed.</p>
<p>PLANNING PRIORITY 2: Plan for alternative land uses for former power stations and mining sites</p>	<p>There are no former power station sites within the Study Area. Notwithstanding this, parts of the Study Area are subject to existing mining leases. Council will work with individual landowners on suitable alternative land uses and consult with Subsidence Advisory NSW as part of rezoning proposals.</p>
<p>PLANNING PRIORITY 3: Retrofit suburban areas to enhance quality of life</p>	<p>A large portion of the Study Area is greenfield however the Structure Plan also proposes changes to density and land use within existing infill areas. The intent is to promote development within existing local centres serviced by public transport, active transport connections and shops and services to reduce car dependency and create more diverse and mixed-use communities.</p>
<p>PLANNING PRIORITY 4: Enhance the blue and green grid</p>	<p>The Central Lakes District blue and green grid links urban parks, bushland, farms, drinking water catchments, lakes and beaches. A key objective of the Structure Plan is to maintain the health and integrity of the blue and green grid by protecting and enhancing waterways, biodiversity corridors and the natural landscape. Development within existing and new growth areas will need to maintain the integrity of biodiversity corridors and not compromise the movement of wildlife between the mountains and the ocean. The Structure Plan includes various objectives such as reinforcing the landscape and visual setting of the natural environment for urban development.</p>
<p>PLANNING PRIORITY 5: Promote sustainable use of mineral and energy resources</p>	<p>Parts of the Study Area are located within a declared Mine Subsidence District (MSD) and contain consolidated coal leases, exploration licences, or Mining or Production Applications. Future proposals will be required to provide appropriate land use buffers between these areas and future development to manage land use conflict.</p>

Place Delivery Program

The Place Delivery Group program applies to areas moving from strategic planning to construction. It aims to realise the vision of the Central Coast Regional Plan 2041. A proponent, council or government agency can nominate a site to be considered by the Urban Development Program (UDP). Successful nominations will then be progressed through a Place Delivery Group (PDG) program. The UDP supports the delivery of infrastructure and new development by improving the coordination of the various stakeholders responsible for development and infrastructure delivery, and by actively managing a pipeline of future development.

CCRP recommends a Place Plan be prepared for Warnervale. At the time of preparing this Structure Plan, a Place Plan for Warnervale will not be prepared. This Structure Plan will guide development within the Study Area and future rezoning proposals will be submitted on a precinct-by-precinct basis.

There is currently one place strategy nomination within the Study Area. The place strategy relates to 176ha of land at Charmhaven. Should a future Place Plan be endorsed, the land use recommendations of this Structure Plan may change. The final recommended land uses in the endorsed Place Plan may also impact future recommend land uses in areas adjoining the Place Plan boundaries.

2.3 One - Central Coast

The *Central Coast Council Community Strategic Plan 2018* is 10-year plan developed through engagement with the community. The Plan aims to enhance the day-to-day lives and opportunities of the Central Coast community by setting priorities, strategies and activities that achieve the community's desired outcomes for the future. It identifies five priority focus areas that reflect the values and needs of the people who live in the region – belonging, smart, green, responsible and liveable.

The Structure Plan seeks to set the framework to deliver liveable communities that support infrastructure investment and development, enhance quality of life, maintain and enhance natural assets. The Structure Plan includes actions that contribute to achieving the following objectives:

- A growing and competitive region;
- Environmental resources for the future;
- Cherished and protected natural beauty;
- Good governance and great partnerships;
- Delivering essential infrastructure;
- Balanced and sustainable development;
- Reliable public transport connections;
- Healthy lifestyles for a growing community.

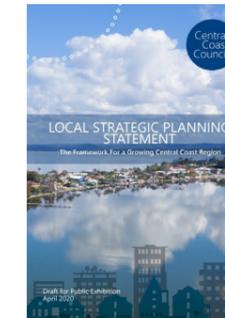
CSP Themes & Objectives	CSP implementation
<p>BELONGING OBJECTIVES</p> <p>B4 Activate spaces and places to complement activity around town centres, foreshores, lakes and green spaces for families, community and visitors</p>	<p>Once implemented, the GWSP will enable enhanced community safety in our open public and community spaces. In creating vibrant and active centres there will be improved passive surveillance and safety in our shared places.</p>
<p>SMART OBJECTIVES</p> <p>C1 Target economic development in growth areas and major centres and provide incentives to attract businesses to the Central Coast</p> <p>C3 Facilitate economic development to increase local employment opportunities and provide a range of jobs</p>	<p>The GWSP supports and enables employment opportunities within the study area supported by improved transport connections, public domain and transit orientated development providing incentives to stimulate growing industries on the Coast.</p>
<p>GREEN OBJECTIVES</p> <p>F1 Protect our rich environmental heritage by conserving beaches, waterways, bushland, wildlife corridors and inland areas and the diversity of local native species.</p> <p>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)</p>	<p>The GWSP proposes actions to ensure protection of the areas unique environmental heritage as well as promoting greening of the study area by protecting and enhancing our natural assets.</p>

CSP Themes & Objectives	CSP implementation
<p>RESPONSIBLE OBJECTIVES</p> <p>H1 Solve road and drainage problem areas and partner with State Government to improve road conditions</p> <p>H2 Improve pedestrian movement safety, speed and vehicle congestion around schools, town centres, neighbourhoods, and community facilities</p> <p>H4 Plan for adequate and sustainable infrastructure to meet future demand for transport, energy, telecommunications and a secure supply of drinking water</p> <p>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</p> <p>I2 Ensure all new developments are well planned with good access to public transport, green space and community facilities and support active transport</p> <p>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</p> <p>I4 Provide a range of housing options to meet the diverse and changing needs of the community including adequate affordable housing.</p>	<p>The GWSP sets the framework to delivering essential infrastructure and balanced and sustainable development by ensuring we have adequate capacity to service our growing population.</p>

CSP Themes & Objectives	CSP implementation
<p>LIVEABLE OBJECTIVES</p> <p>J2 Address commuter parking, drop-off zones, access and movement around transport hubs to support and increase use of public transport</p> <p>J4 Design long-term, innovative and sustainable transport management options for population growth and expansion</p> <p>K1 Create a regional network of interconnected shared pathways and cycle ways to maximise access to key destinations and facilities</p> <p>K2 Design and deliver pathways, walking trails and other pedestrian movement infrastructure to maximise access, inclusion and mobility to meet the needs of all community members</p> <p>K3 Provide signage, public facilities, amenities and playgrounds to encourage usage and enjoyment of public areas</p> <p>L1 Promote healthy living and ensure sport, leisure, recreation and aquatic facilities and open spaces are well maintained and activated</p> <p>L4 Provide equitable, affordable, flexible and co-located community facilities based on community needs</p>	<p>The GWSP identifies the need to prioritise better transport and connections within and between our centres.</p>

2.4 Interim Local Strategic Planning Statement

The Interim Central Coast Local Strategic Planning Statement (LSPS) provides a long-term vision and land use planning priorities for the region over the next 20 years. It aligns both the state planning goals provided in the CCRP 2041, and local strategic planning goals and directions of *One Central Coast Community Strategic Plan 2018*. The LSPS identifies Warnervale as an 'emerging strategic centre' and identifies the following growth corridors:



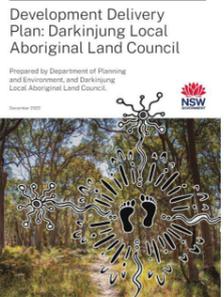
- Area 1 from Tuggerah to Wyong will be a focus for local employment and enable primary commercial and economic centres on the Central Coast.
- Area 2 Greater Warnervale will be a focus for new greenfield housing and employment.

The Structure Plan will help implement the vision of the LSPS which is to focus housing and employment in Greater Warnervale and grow the Central Coast in a manner that ensures increased residential density is supported by improved accessibility to public transport, amenities, services and employment.

The LSPS is currently under review to ensure it reflects the community's changing views on the future desired state for the Central Coast. It will continue to inform future strategic planning.

2.5 State Environmental Planning Policy (Planning Systems) 2021

In 2019, a suite of planning measures known as the Darkinjung Delivery Framework was introduced by the NSW Government. The objective of the framework was to bring greater self-determination for the Darkinjung Local Aboriginal Land Council (DLALC) community and encourage better social and economic results from its land.

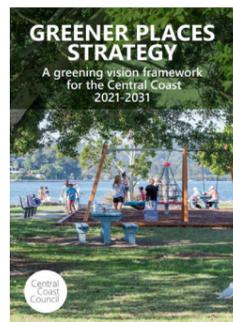


These measures will assist in implementing Objective 2 of the CCRP 2041: "Support the right of Aboriginal residents to economic self-determination." This framework applies to land owned by the DLALC throughout the Central Coast Local Government Area and at the time of writing there is no applicable land in the Structure Plan.

2.6 Central Coast Greener Places Strategy

The *Central Coast Greener Places Strategy* provides a holistic framework for urban greening in the region. The Strategy seeks to promote, maintain and enhance urban greening across the Central Coast by planting and maintaining trees in public areas. Specific objectives of relevance to this Structure Plan include:

- Identify opportunities for greening;
- Strengthen tree removal and replacement processes to avoid the net loss of tree canopy cover;
- Establish processes for the replacement of removed private trees where practicable;
- Develop operational plans for public tree planting across the key priority suburbs;
- Promote improved liveability through using plants in urban design to mitigate Urban Heat Island Effects



2.7 Central Coast Biodiversity Strategy

Biodiversity is a broad term for the many species and ecological processes that are essential in maintaining the amenity of the Central Coast and its landscapes. *The Central Coast Biodiversity Strategy* presents a roadmap for the future of biodiversity of the Central Coast. A desired outcome of the Structure Plan is to protect and enhance the landscape and biodiversity values of the Central Coast.



The Biodiversity Strategy identifies priority conservation areas and includes actions for further assessment as part of the LEP process. The following objectives are of relevance to this Structure Plan:

- Comprehensively plan for the management of biodiversity in Council’s natural areas;
- Improve biodiversity in Council’s natural areas;
- Improve the long term protection status of Council’s natural areas;
- High biodiversity value areas are appropriately identified, protected and restored as part of future land use planning investigations.

The Structure Plan provides broad strategic direction on biodiversity actions and priorities, and associated mapping. Council has mapped local biodiversity corridors as the first step in providing protection for connectivity through the planning process. This Structure Plan provides an opportunity to identify and strengthen future biodiversity corridor connections.

As part of future planning proposals, Council supports the implementation of appropriate planning controls to protect biodiversity and will seek to ensure the CCLEP 2022 strengthens protection of biodiversity in the Study Area.

2.8 Central Coast Strategic Conservation Plan

The Department of Planning, Housing and Infrastructure (DPHI) is undertaking strategic conservation planning in the Central Coast region to balance expected urban growth with the protection of biodiversity at a landscape scale. The Central Coast Strategic Conservation Plan (CCSCP) covers land identified for future development under the CCRP 2041 and the Darkinjung Development Delivery Plan.

The CCSCP seeks to resolve land use tensions between biodiversity values and development, with the aim to support growth, provide planning certainty and streamline biodiversity approvals, and achieve long-term biodiversity outcomes on Central Coast.

The preparation of a CCSCP to support urban development while protecting plants, animals, and their habitats, is underway. The work involves assessing impacts on biodiversity from future urban growth within nominated areas and developing a conservation program to avoid, mitigate and offset these impacts.

The CCSCP will seek biodiversity approvals under both the NSW Biodiversity Conservation Act 2016 and the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 for land within the nominated areas considered suitable for development.

Council will continue to liaise with DPHI on the CCSCP and will consider the outcomes of the CCSCP in updates and reviews of the Structure Plan.

2.9 Draft Central Coast Employment Lands Strategy

Council is preparing a *Central Coast Employment Lands Strategy* that seeks to unlock employment land to attract new business and enable business expansion. The Strategy will inform future amendments to CCLEP 2022 and guide future decision making by Council in relation to planning proposals for employment lands.

Council’s draft Employment Lands Strategy proposes a number of preliminary actions that apply to GWSP employment lands and future growth areas. These include:

- Planning for Warnervale to accommodate industrial, manufacturing, logistics and warehouse land uses, and progress circular economy and sustainable industries.
- Protect opportunities for larger logistics businesses in Warner Business Park by establishing a minimum subdivision size of at least 2,000m² and zoning as E4 General Industrial.
- Develop Wyong Hospital and surrounds as a regional health and medical precinct.
- Explore the feasibility of infrastructure delivery within Wyong Employment Zone and consider public coordination and subsidisation if the land is not feasible for private delivery.
- Prepare a staging and master plan development for the Central Coast airport to attract ancillary aviation businesses. Investigation required capital works needed at the Charmhaven Sewage Treatment Plan to minimise odour impacts and allow for additional development opportunity.
- Provide frequent and easy access to the Warnervale station from key destinations such as schools, hospitals, shops.
- Create safe, well connected, and accessible walking and cycling routes to destinations in the Tuggerah to Wyong corridor on the Pacific Highway, connecting to existing facilities at the Wyong Road intersection.
- Strengthen and promote inter regional connection by completion of the Pacific Highway upgrades and Link Road from Wyong to Warnervale.

2.10 Central Coast Local Housing Strategy

The Central Coast Local Housing Strategy (LHS) provides an understanding of the supply of housing on the Central Coast, the types of housing that are needed now and in the future, and potential barriers to meeting those needs. It sets out a strategy to meet the housing needs of the growing population.

The Structure Plan is consistent with the key objectives of the LHS such as encouraging the provision of new housing in locations that support the 15-minute communities objective in the CCRP 2041, managing the development of greenfield release areas so that new residents are supported by infrastructure delivery and have access to a range of housing options and supporting housing growth in the key centres.

The following growth priorities are of relevance to Greater Warnervale:

Opportunity: Established local centres with amenity and potential for character-led infill.
Action: Support CCRP’s proposed retrofit of Charmhaven and Lake Haven to 15-minute neighbourhoods.

Opportunity: Growth being guided under CCRP, Greater Warnervale Structure Plan and Greater Lake Munmorah Structure Plan. Existing local centres identified for retrofit/renewal.

Action: Monitor take-up under UDP. Introduce greater housing diversity (Strategy 3.1). Investigate actions that could improve the ability of the Lake Munmorah area to operate as a 15 minute neighbourhood.

Opportunity: Continue to support growth areas under North Wyong Shire Structure Plan and Greater Warnervale Structure Plan
Action: Monitor take-up under UDP. Introduce greater housing diversity (Strategy 3.1).

2.11 Draft Central Coast Regional Transport Plan

The draft Central Coast Regional Transport Plan is closely aligned with CCRP 2041. It provides a blueprint for how Transport for New South Wales (TfNSW) will improve safety, connectivity, productivity and resilience of the transport network in the Central Coast Region. The Plan identifies the following initiatives for Warnervale (**see Figure 10**):

0-10 years

- Investigation of Pacific Highway upgrade between Charmhaven and Watanobbi
- Investigation of duplication of Sparks Road between M1 Pacific Motorway and Albert Warner Drive

5-10 years

- Warnervale Link Road, Albert Warner Drive to Pacific Highway

Council will continue to work with TfNSW on upgrades to the existing road network to support the projected population growth. The Draft Central Coast Regional Transport Plan presents opportunities for Council to advocate for:

- More frequent and direct bus services between residential and employment areas and centres;
- Investment in public and active transport by State Government will improve access to public and active transit for residents and workers;
- Local pedestrian and cycling network connections to major transport hubs;
- Increased train frequencies from Warnervale Station.

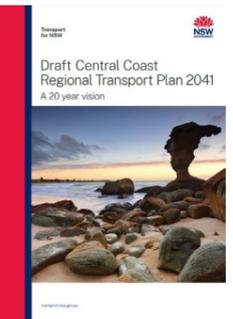




Figure 10 - Map of the transport vision (Source: Draft Central Coast Regional Transport Plan)

2.12 Greater Warnervale Integrated Transport Plan

TfNSW is currently preparing an Integrated Transport Plan (ITP) for Greater Warnervale, benchmarking the current performance of transport networks and identifying initiatives to support the future land use vision for the area as well as achieve the outcomes articulated in TfNSW strategies and policies such as Future Transport Strategy. The purpose of the ITP is to better understand the changing transport needs of the area with planned increases to population and employment. This will inform better future decision making and investment.

TfNSW have established a working group for the ITP. Council is a member of the working group formed to develop these initiatives and help shape the future transport networks for the Warnervale area.

2.13 Future Transport Strategy

The Future Transport Strategy sets the strategic directions for Transport for NSW to achieve world-leading mobility for customers, communities, businesses and people. It is part of a suite of government strategies, policies and plans that integrate and guide land use and transport planning across NSW.

2.14 Regional NSW Services and Infrastructure Plan

The *Regional NSW Services and Infrastructure Plan (2018)* includes initiatives to deliver a world-class transport network in regional NSW. The plan outlines projects that will connect coastal and inland communities and support regional economies. Services and initiatives affecting the Central Coast region include:

- Development of an integrated public transport network hierarchy,
- Improved access to the northern and southern growth corridors with frequent public transport connections.
- Improving the accessibility of the Central Coast to Greater Sydney and to the Global Gateway City of Greater Newcastle
- Supporting urban renewal and increased accessibility and liveability of key centres through improved transport connections.
- Providing for the diverse travel needs of transport customers.
- Development of active transport networks.
- Addressing pinch points in the road network and informing the program of road network optimisation improvements to support the maintenance of 30-minute catchments for car journeys.
- Undertaking a car parking review to evaluate and prioritise car parking availability and use within centres and at key interchanges.

2.15 Active Transport Strategy

The *Active Transport Strategy* supports the Future Transport Strategy and outlines the NSW Government’s commitment towards delivering safe and connected walking and cycling outcomes for the people of NSW. The Structure Plan is consistent with the vision of the Active Transport Strategy which is to encourage a shift towards more sustainable modes of transport (i.e. walking and bike riding).

The following ‘priority moves’ are of relevance to the Structure Plan:

- Enable 15-minute neighbourhoods
 - Deliver connected and continuous cycling networks
 - Provide safer and better precincts and main streets
 - Promote walking and riding and encourage behaviour change
 - Support our partners and accelerate change
- The Structure Plan identifies opportunities, principles and actions to encourage people to choose walking or bike riding for everyday journeys.

A draft Central Coast Future Transport Plan is also being developed as a supporting plan, discussing in more detail the transport future for the Central Coast region. **Figure 11** illustrates the infrastructure initiatives for the Central Coast and specifically Warnervale:

- Warnervale Link Road, Albert Warner Drive to Pacific Highway is committed 0-10 years.

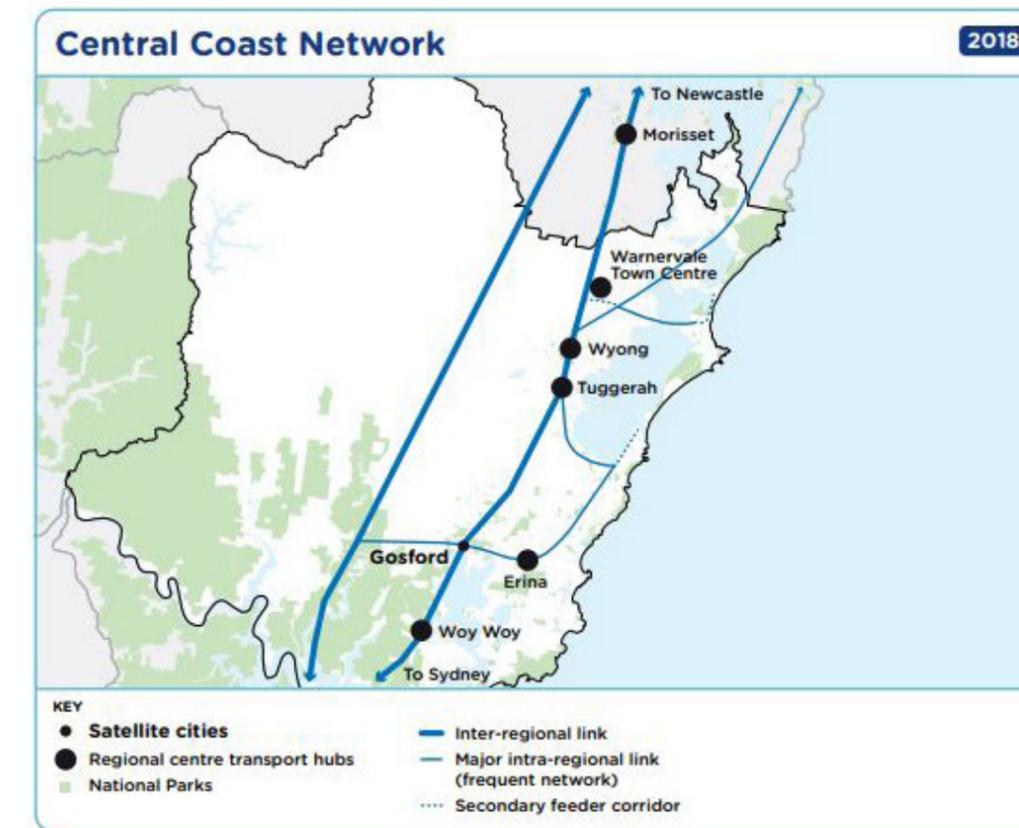


Figure 11 - Network hierarchy for Central Coast



2.16 Older Persons Transport and Mobility Plan

The *Older Persons Transport and Mobility Plan* explores the interaction between mobility and transport as our customers age. The Study Area has an ageing population and contains a number of aged care and retirement facilities. In particular, the precinct adjoining Wyong Hospital is earmarked for a health and medical precinct. This Structure Plan seeks to encourage use of active and public transport by lobbying for increased frequency of services and improving connections, the pedestrian environment and road network to make it easier for people of all ages to move throughout the Study Area.

2.17 NSW Electric and Hybrid Vehicle Plan

NSW's Electric and Hybrid Vehicle Plan reflects Transport for NSW's growing focus on future mobility and technology. The NSW government and TfNSW have set a vision to reach zero emissions by 2050. This requires investment in electric vehicles and services to help TfNSW reach their goal. TfNSW want to accelerate the adoption of electric vehicles to promote a cleaner future for our customers.

Council is currently preparing an Integrated Transport Plan. At the time of writing this Structure Plan, there is no mandatory requirement for developers to install electric vehicle charging infrastructure though it has typically been commercially driven within private developments. Council's experience has been that the need/delivery of electric charging stations is very much driven by demand/market.

2.18 NSW Freight and Ports Plan

The *NSW Freight and Ports Plan 2018-2023* (the Plan) supports the Future Transport 2056 strategy and aligns with other key NSW Government plans, including the State Infrastructure Strategy, NSW Regional Plans and Greater Sydney Commission District Plans. The Plan identifies key matters that local councils need to consider and incorporate into land use and infrastructure planning.

The Central Coast region has one of the most significant manufacturing activities outside of the Greater Sydney region. The NSW Government is investigating, or has committed to, a number of infrastructure projects that will focus on improving rail freight capacity in areas where it currently depends on the shared network through segregation of freight and passenger lines. The Northern Sydney Freight Corridor Stage 2 has been identified for investigation. It will create additional freight capacity between Sydney and the Central Coast (5-10 years).

2.19 Road Safety Plan 2026

The *2026 Road Safety Action Plan* builds on the effective road safety initiatives delivered through the Road Safety Plan 2021. It is guided by the Future Transport Strategy. The plan will deliver on 5 priority areas:

- Creating safer country roads and urban places
- Enhancing road safety in local communities
- Increasing the safety of light vehicles, heavy vehicles and protective equipment
- Making safer choices on our roads
- Ensuring the safety of vulnerable and other at-risk road users.

A key objective of the Structure Plan is to implement the Safe System approach and identify what road safety measures could prevent the outcome in the future to inform future strategic planning.

2.20 Movement and Place Framework

Movement and Place is a cross-government framework for planning and managing our roads and streets across NSW. The framework delivers on NSW policy and strategy directions to create successful streets and roads by balancing the movement of people and goods with the amenity and quality of places. Movement and Place principles will apply to future projects within the Study Area to ensure the needs of all users (including those who walk, cycle, drive etc) can move around safely and efficiently (see **Figure 12**).

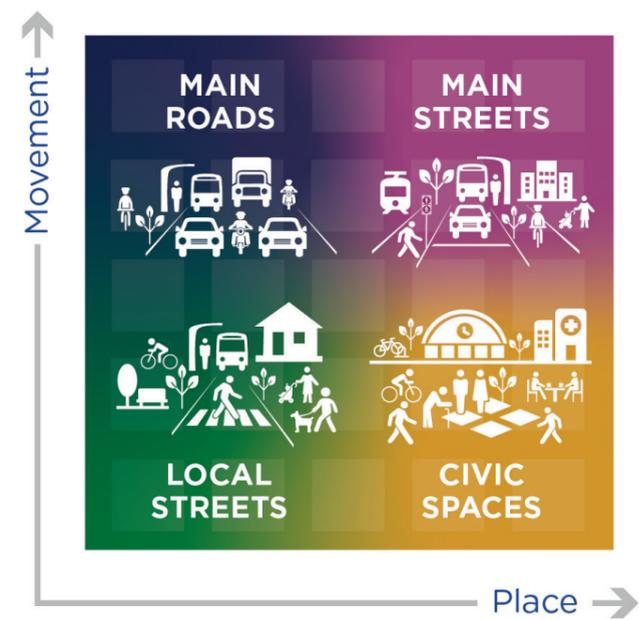


Figure 12 - Movement and Place Network

2.21 Central Coast Local Health District – Caring for the Coast Strategy

The Central Coast Local Health District (CCLHD) seeks to enhance the health and wellbeing of the community by making health services accessible, high quality and integrated. As per the Strategy, most of the future population growth is expected to occur in the northern area of the Coast, with the population in the former Wyong area predicted to exceed the Gosford area. Over the next decade, the most rapid population growth is expected among those aged 70 years and older. Precinct 9 is planned to develop into a health and medical precinct centred around Wyong Hospital which continues to develop and expand as the regional hospital for the north of the Central Coast. It will provide a range of supporting health functions to service the region.

2.22 Central Coast Council Bike Plan 2019-2029 and Central Coast Council Pedestrian Access and Mobility Plan

Central Coast Council has developed two new planning documents: a Pedestrian Access and Mobility Plan (PAMP) and a Bike Plan. Together, these documents guide Council's ongoing provision of an active transport network for Central Coast residents and visitors over the next ten years. This PAMP outlines the steps and investment required to achieve Council's vision to:

"Provide a safe, high-quality and well-connected network that enables pedestrians of all abilities to move efficiently and conveniently throughout the Central Coast."

The Structure Plan is consistent with the objectives of the PAMP which is to develop a safe, connected and convenient active transport network in high pedestrian demand areas. Through the implementation of the PAMP and Structure Plan, Council's vision is to provide a safe, high-quality and well-connected sustainable active transport network that enables pedestrians of all abilities to move efficiently and conveniently throughout the Central Coast. Currently there are no priority PAMP routes for the Greater Warnervale area.

The Central Coast Bike Plan outlines the type of centres and priority cycling distances for the Central Coast. Warnervale is identified as an emerging Strategic Centre with a priority cycling trip length/time of 2.5km/10 minutes. Linking the strategic centres of Tuggerah and Warnervale with the local centres on the coast is a desirable longer-term outcome. Warnervale Town Centre has been identified as it is a future centre. Strategic bike connections have not been developed to the east and west but have been proposed, connecting to the railway station and to the Lake Haven and Toukley centres. Further connections should be investigated further as this area develops.

Connections from the strategic centres along the railway line to the local centres on the coast (e.g. Warnervale to Toukley) should be considered as longer-term priorities, once the growth corridor centre connections are established.

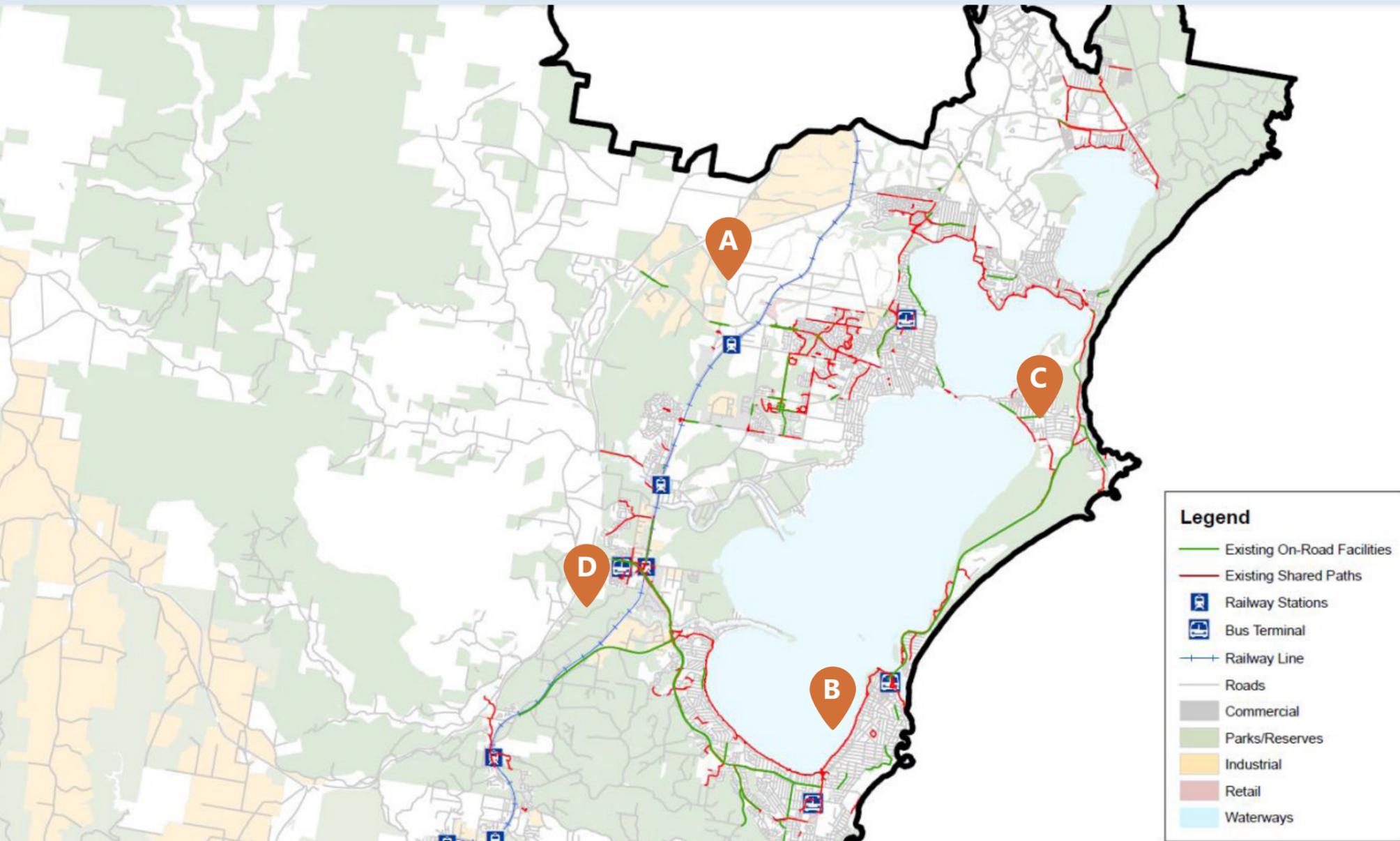


Figure 13 - Greater Wyong area existing bike network (Source: Central Coast Bike Plan).

STATUTORY

2.23 Central Coast LEP 2022

The key planning controls applying to land within the Study Area are identified in the *Central Coast Local Environmental Plan 2022 (CCLEP 2022)*. CCLEP 2022 determines what type of development can be undertaken on land and is supported by mapping, including land use zones, minimum lot sizes and height of building controls.

The Structure Plan outlines proposed land use recommendations and provides a framework for future planning proposals to rezone land. Such planning proposals would seek to amend the provisions applying to land under CCLEP 2022.

Amendments to other development controls such as height of buildings, lot sizes and floor space will also be considered as part of future planning proposals to facilitate preferred land use and development outcomes.

2.24 Central Coast DCP 2022

Central Coast Development Control Plan (CCDCP) 2022 provides detailed planning and design guidelines to support the planning controls in CCLEP 2022. DCP provisions include controls relating to building design, road layout, car parking, landscaping, amenity etc. As part of the planning proposal process to rezone land, specific development control plans will be prepared for each precinct. These provisions will be considered as part of the preparation and assessment of future development applications within each precinct.

2.25 Development Contributions Plans and Planning Agreements

Warrnervale District Contributions Plan 2021

Development contributions (also known as local infrastructure contributions) are charged by Council when new development occurs. These contributions fund local infrastructure needed to support an increased number of residents in the area.

Warrnervale District Contributions Plan 2021 is the relevant contribution plan applying to development within the Study Area. The Plan sets out contributions required from new development to fund local infrastructure to support the growing population. The contribution plan will be amended to ensure infrastructure is appropriately funded and delivered as a result of the increased population projected to live within the Study Area.

For most of the infrastructure facilities, Council is funding the full cost from developer contributions.

Housing and Productivity Contribution

The Housing and Productivity Contribution commenced on 1 October 2023. It is a development charge that will help fund the delivery of infrastructure in high-growth areas. It will apply to all new residential, commercial and industrial development applications within the Study Area. The program will operate like a grants program where nominations can be made each year.

There are opportunities for Council to nominate infrastructure projects within the Greater Warrnervale area that will act as a catalyst for development.

Chapter 3

3.0 Greater Warnervale Now



By 2041 it is anticipated that Greater Warnervale will need to house more than 27,198 additional people.

3.1 Community Profile

Population Projection

Census data is categorised into Statistical Areas Level 1 (SA1s) which are geographic areas designed to represent the functional extent of each area. Greater Warnervale is a rapidly growing area, incorporating the following SA1 areas - Warnervale, Wadalba, Kanwal, Wyong, Wallarah, Halloran, Hamlyn Terrace, Woongarra, Charmhaven, Tuggerawong, Wyongah, Tacoma, and Jilliby.

In 2021, the estimated resident population of these combined areas was 36,846 people. The Study Area has experienced a significant increase in population over the last five years and will be the focus area for growth over the next 15 years within the Central Coast. In 2021, the estimated resident population of these combined areas was 36,846 people. The Study Area has experienced a significant increase in population over the last five years and will be the focus area for growth over the next 15 years within the Central Coast. The Study Area is projected to grow to 64,044 people by 2041 (Source: Australian Bureau of Statistics (ABS) Census 2021, Population, and household forecasts, 2021 to 2041, prepared by .id (informed decisions), May 2024.

In 2021, the Central Coast LGA population was 346,596 (ABS 2021) and forecast to grow to 400,878 by 2041. Of the additional 54,282 people by 2041, the Study Area is expected to accommodate approximately 50% of this growth (27,198 people).

Age structure

Dominant Groups

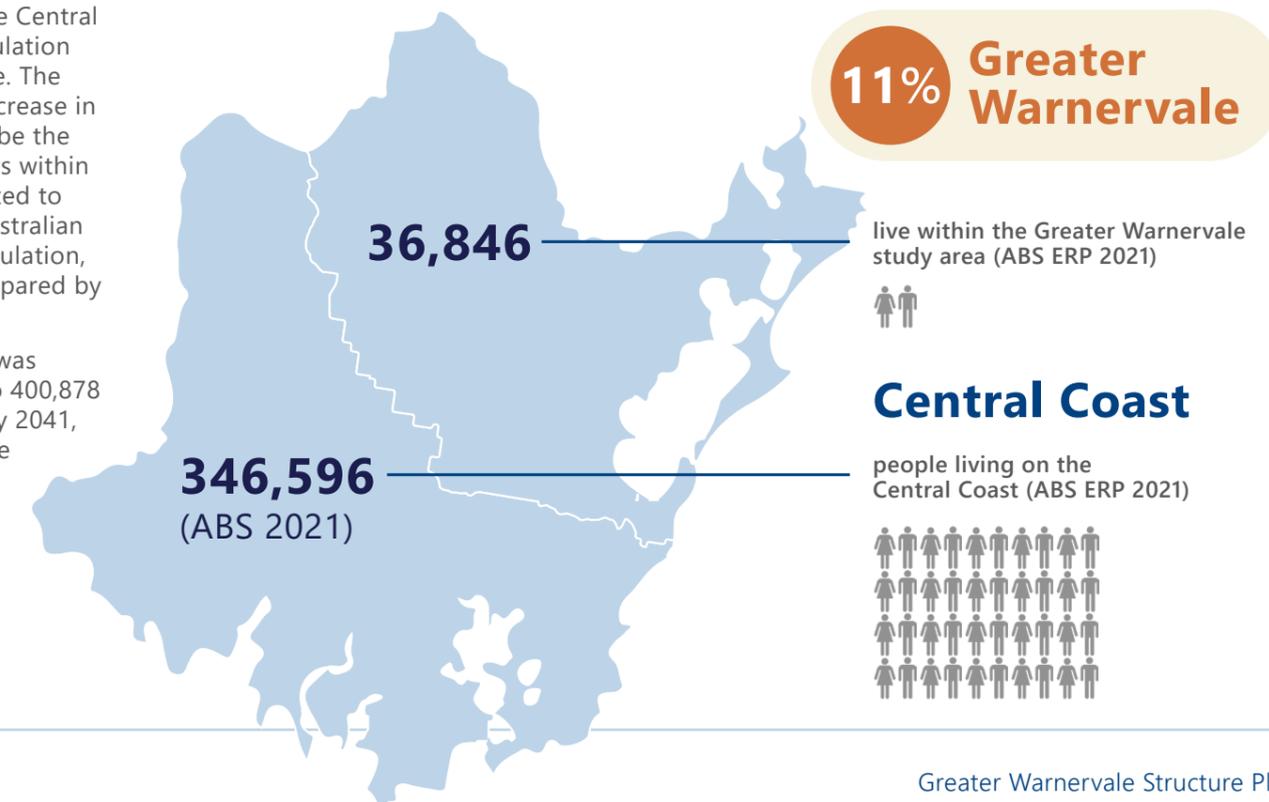
Approximately 20% of the population are parents and home builders (35-49) indicating that the area is a popular home to young families. The second largest age groups are young workforce (25 to 34) at 14% and older workers and pre-retirees (50 to 59) comprising 14.9% of the population.

Analysis of the age groups of the Study Area in 2021 compared to the Central Coast Council area shows that there was a higher proportion of younger age groups (18 to 49 years) and a lower proportion of older age groups (70+ years). Overall, 47.6% of the population were aged between 18 and 49, and 17%

were aged 70 years and over. Compared with 38% and 17% respectively for the Central Coast Council area.

The major differences between the age structure of the Study Area and Central Coast Council LGA were:

- A larger percentage of 'Parents and homebuilders' (35 to 49) (20% compared to 18.3%)
- A larger percentage of 'Young workforce' (25 to 34) (11.5% compared to 11.0%)
- A larger percentage of 'Primary schoolers' (9.3% compared to 8.6%)
- A smaller percentage of 'Empty nesters and retirees' (60 to 69) (10.4% compared to 12.4%)
- A smaller percentage of 'Seniors' (70 to 84)' (11% compared to 13.2%)



Emerging groups

Between 2011 to 2021, the Central Coast population increased by 8,817 people. This represents an average annual population change of 3.9% per year over the ten-year period. The largest changes between 2011 and 2021 were in the following age groups:

- Young workforce (25 to 34) (+1,575 people)
- Parents and homebuilders (35 to 49) (+1,157 people)
- Seniors (70 to 84) (+1,573 people)
- Older workers and pre-retirees (50 to 59) (+1,178 people).
- Tertiary education & independence (18-24) (+1,131 people)

For the purposes of this Structure Plan, data from the Warnervale-Wadalba and Warnervale-Wallarah-Bushells Ridge planning districts has been used and unless otherwise stated, has been sourced from Australian Bureau of Statistics Census of Population and Housing 2021 compiled by id, the population experts.



3.2 Household Profile

Dwellings

Dominant groups

In 2021 there were 13,066 dwellings in the Study Area. Approximately 90.2% of dwellings were separate houses, 9.4% were medium density dwellings and there were no high-density dwellings, compared with 76.4%, 18.1% and 4.5% for the Central Coast respectively.

Emerging groups

Between 2011 and 2021, the total number of dwellings in the Study Area increased by 2,978. The largest changes in the type of dwellings found were:

- Separate house (+ 2,820 dwellings)
- Medium density (+ 396 dwellings)
- Caravans, cabins (- 238 dwellings).

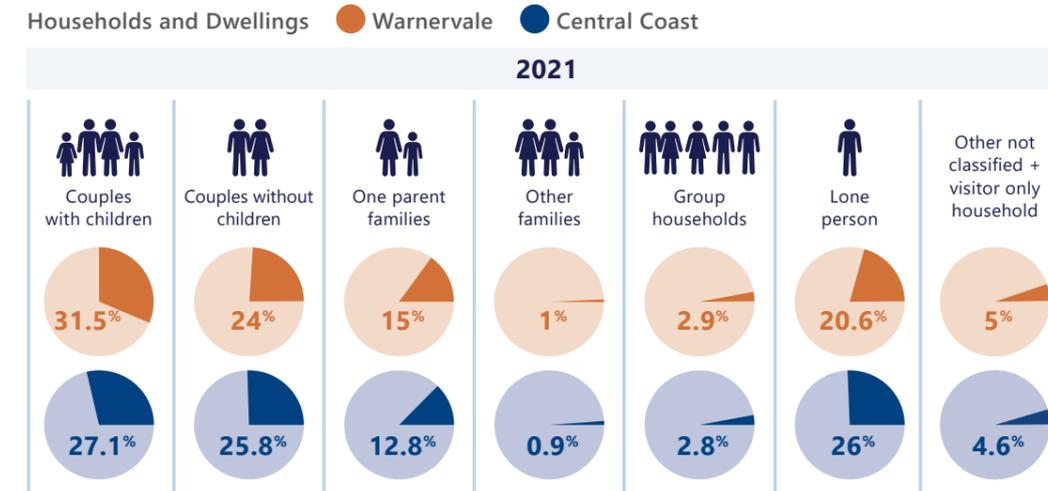


Figure 14: Household Types

Greater Warnervale is dominated by larger households with 4 or more persons, living in separate dwellings.

Households

Dominant groups

The family and household structure of the population is an indicator of the residential role and function of the area, particularly with regards to the types of housing markets attracted to the area. It provides key insights into the level of demand for services and facilities as most services are age and household specific.

The Study Area is characterised by a high proportion of couple families with children and a high proportion of one parent families. 31.5% of households were made up of couples with children and 15% were one parent families compared to 27.1% and 12.8% respectively for the Central Coast.

Reflective of the younger age profile, there is a lower proportion of lone person households (20.6% compared to 26.0% for the Central Coast) and lower

Households and Dwellings ● Warnervale ● Central Coast



Figure 15: Dwelling Types

3.3 Demographic Profile

Cultural Diversity

In 2021, 78% of the population were born in Australia. This compares to 79% for the Central Coast. Overall, 14.8% of the population were born overseas compared to 16.1% for the Central Coast. 7.9% of people spoke a language other than English at home compared to 7.1% for the Central Coast. Between 2011 and 2021 the number of people born overseas increased by 2,042.

In 2021, 6% of the Study Area's population were Aboriginal & Torres Strait Islander in comparison to 4.7% for the Central Coast and 3.2% for NSW.

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 2021, the Study Area scored 8756.2 on the SEIFA index of disadvantage. This compares well to the Central Coast (994) and NSW (1001.0).

3.4 Economic Profile

Education

Education qualifications, labour force status, occupation and income indicators help evaluate the economic opportunities and socio-economic status of an area.

In 2021 the population in the Study Area had a lower proportion of people with formal qualifications (Bachelor or higher degree, Advanced Diploma or Diploma, or vocational qualifications) and a higher proportion of people with no formal qualifications in comparison to both the Central Coast and NSW.

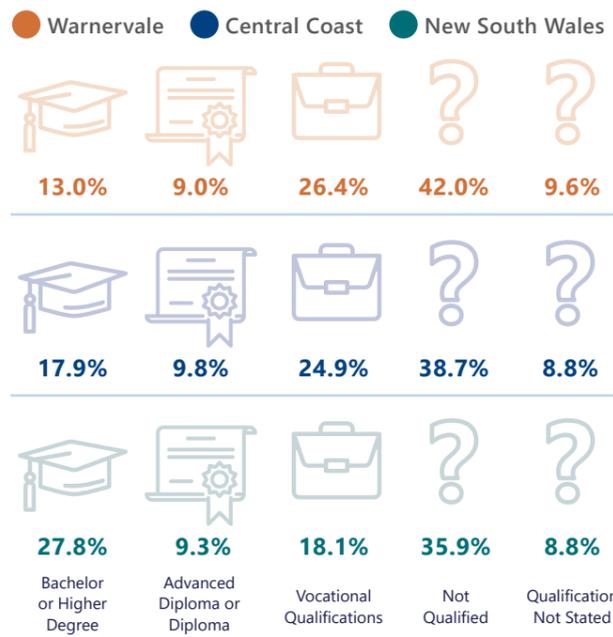


Figure 16: Educational Qualifications

Overall, 57.1% of the population aged 15 and over held educational qualifications and 42% had no qualifications. The major differences between qualifications held by the population of the Study Area and New South Wales were:

- More vocational qualifications (26.4% compared to 18.1%)
- More people with no qualifications (42.0% compared to 35.9%)
- Fewer Bachelor or Higher degrees (13.0% compared to 27.8%).

Employment Rates

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

Dominant groups

In 2021, 16,172 people living in the Study Area were employed, of which 54% worked full-time and 33% part-time and 13% away from work. In comparison to NSW there was a similar proportion in employment (94% compared with 95%) and a higher proportion unemployed (5.1% compared with 4.9%).

Emerging groups

Between 2011 and 2021, the number of people employed in the Study Area showed an increase of 4,728, and the number unemployed showed a decrease of 10. In the same period, the number of people in the labour force showed an increase of 4,718 or 29.1%.

Employment Sectors

Most people in the Study Area are employed in health care and social assistance (20.7%), retail trade (12.8%) and construction (12.6%). In combination, these three industries employed 7,472 people in total or 46.2% of the total employed resident population.

The major differences between the jobs held by the population of the Study Area and NSW were:

- More people employed in health care and social assistance (20.7% compared to 14.4%)
- More people employed in retail trade (12.8% compared to 9.0%)
- Fewer people employed in professional, scientific and technical services (4.9% compared to 8.9%)
- Similar people employed in education and training (8.0% compared to 8.7%).

Occupations

Dominant groups

In 2021, the three most popular occupations in the Study Area were:

- Professionals (16.0%)
- Community and Personal Service workers (14.7%)
- Technicians and Trades Workers (14.3%)

The major differences between the jobs held by the population of the Study Area and NSW were:

- More Community and Personal Service workers (14.7% compared to 10.6%)
- More Technicians and Trades Workers (14.3% compared to 11.9%)
- More Labourer Workers (11.0% compared to 8.2%)
- Fewer Professionals (16.0% compared to 25.8%).

Emerging groups

The number of employed people in the Study Area increased by 4,738 between 2011 and 2021. The largest changes in resident occupations between 2011 and 2021 were for those employed as:

- Community and Personal Service Workers (+2,792 persons)
- Professionals (+1,051 persons)
- Technicians and Trades Workers (+511 persons)
- Sales Workers (+471 persons)

Dominant groups

In 2021, 16,172 people living in the Study Area were employed, of which 54% worked full-time and 33% part-time. In comparison to Central Coast area there was a similar proportion in employment (94.6% compared with 95.3%) and a higher proportion unemployed (5.2% compared with 4.7%).

Household Income

In 2021, 19% of households in the Study Area earned an income of \$3,000 or more per week (high income) and 23.1% of household earned below \$800 per week (low income). In comparison to the Central Coast and NSW, the area has a lower proportion of low-income households and higher income households (25.5% and 18.8%) for the Central Coast and 16% and 25.8% for NSW respectively.

The major differences between the household incomes of the Study Area and Central Coast area were:

- More households earning \$ \$1,750 to \$2,999 (25% compared to 22.6%)
- Fewer households earning \$0- \$799 (23.1% compared to 25.5%)

Travel to Work

In 2021, the majority of employed residents travelled to work in a private car (70.6%), 2% travelled by public transport and 0.12% rode a bike or 1.5% walked, 25.8% worked at home. Fewer residents travelled by public transport compared to the wider Central Coast LGA (8.7%) and NSW (15.9%).

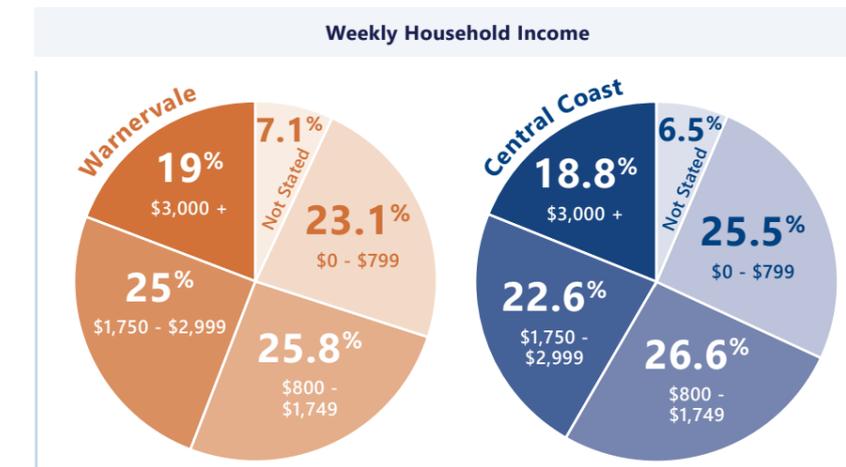


Figure 18: Weekly Household Incomes

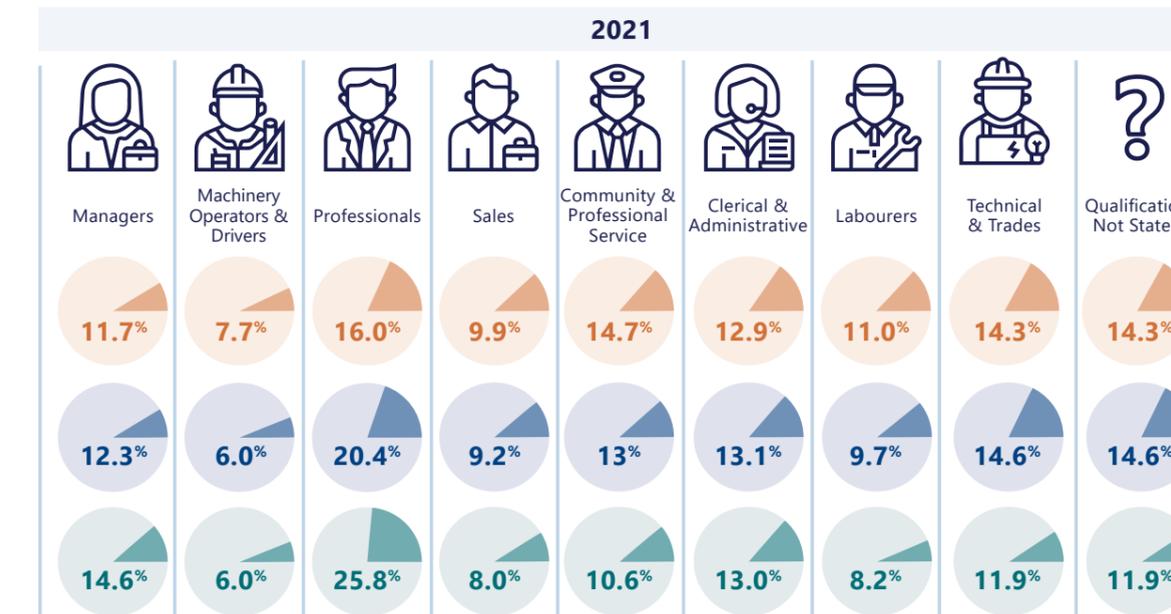


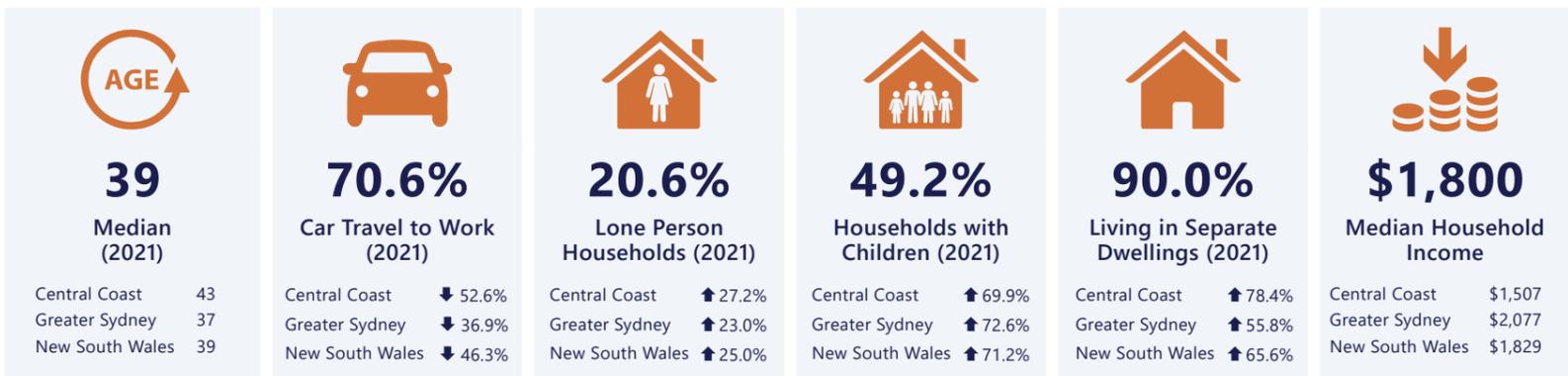
Figure 17: Employment Sectors

3.5 Summary

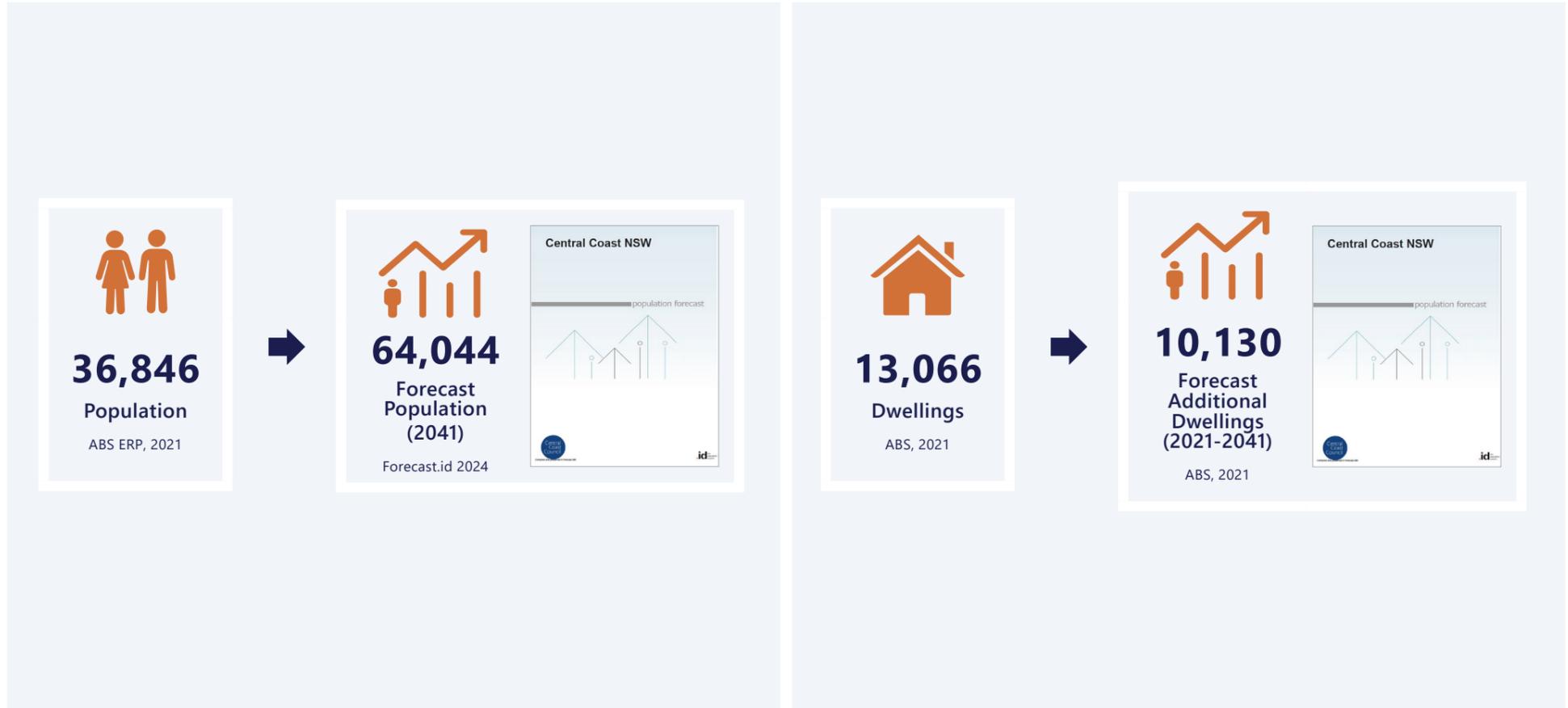
3.5.1 Profile Summary



3.5.2 Points of Difference



3.5.3 Study Area Growth Targets



Chapter 4

4.0 Existing Conditions



4.0 Existing Conditions

4.1 Environment

4.1.1 Topography

“The topography of a particular area is its physical shape, including its hills, valleys, and rivers”
 - Collins Dictionary

The topography of the Study Area is diverse and incorporates several high points that allow for views and vistas (see Figure 24). The scenic amenity of the Study Area lies mainly in the mountain vistas to the west, vegetated ridgelines, native bushland and significant wetlands of Porters Creek. Despite flooding constraints, the waterways also provide a key source of visual and scenic amenity.

Key high points within the Study Area include:

- Reservoir site at Sirocco Drive, Wadalba - 70m AHD
- Lexington Avenue hilltop, Wadalba - 60m AHD
- Mountain View Drive, Woongarrah - 50m AHD
- Proposed Hill Top Park and proposed park on the western side of railway line, Warnervale Local Centre - 50m AHD
- North-west Bruce Crescent, Wallarah - 50m AHD

The natural landscape and visual quality of the mountains and landscape provide a sense of place, character and legibility. Views, vistas and scenic areas all contribute to quality of life and enhance the liveability of a place. Some of these sites have pedestrian and cycle linkages such as the proposed Hill Top Park at Warnervale Town Centre, and opportunities for recreation, such as the Mountain View Drive Park at Woongarrah. However, the other high points generally provide no formalised access. Low-lying parts of the study area include Warnervale floodplain, north of Wyong Industrial Estate.



Figure 20 - Hill Top Park site, Proposed Warnervale Town Centre



Figure 21 - Wadalba Reservoir



Figure 22 - Mataram Road park



Figure 23 - Warnervale Floodplain

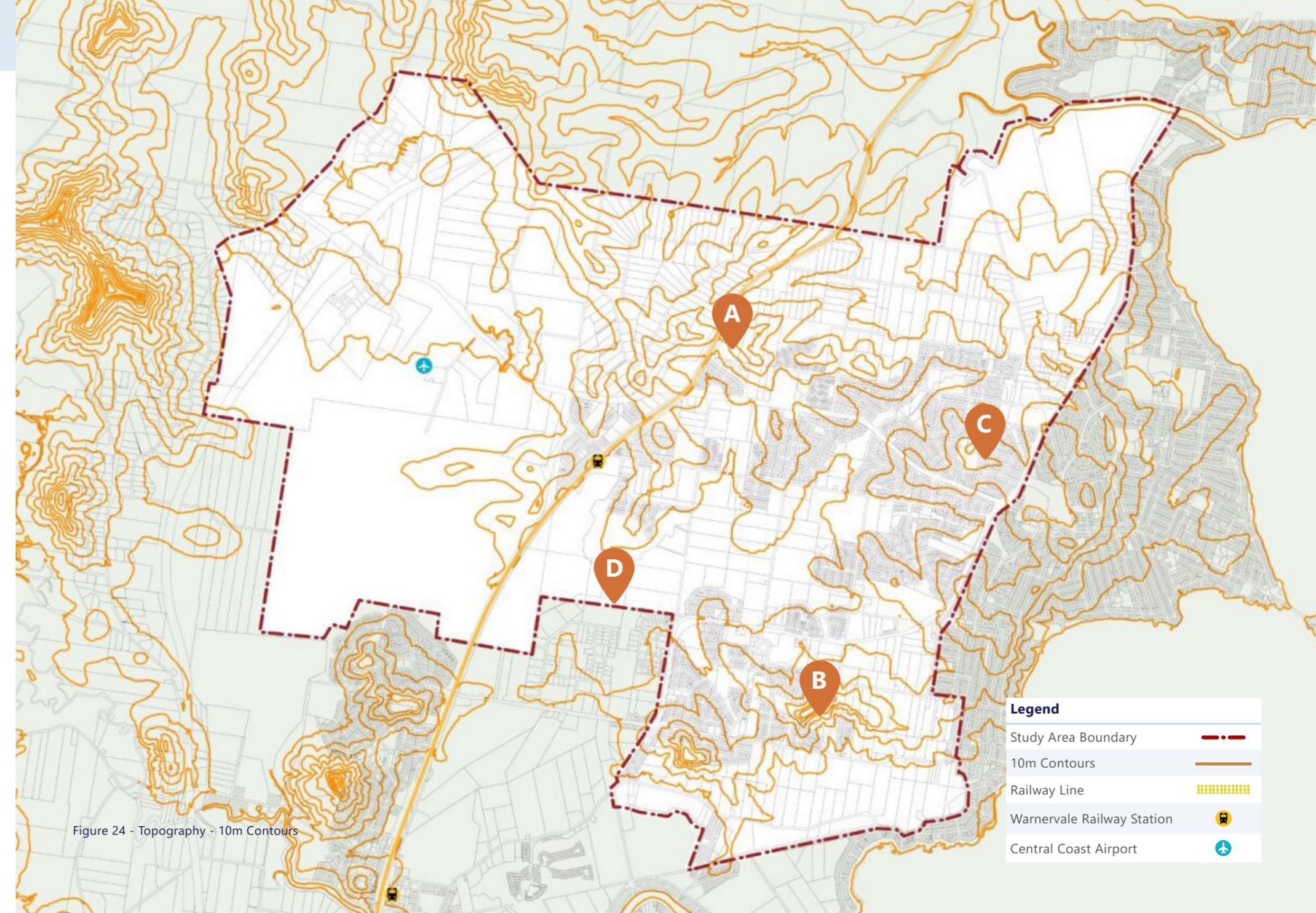


Figure 24 - Topography - 10m Contours

Legend	
Study Area Boundary	
10m Contours	
Railway Line	
Warnervale Railway Station	
Central Coast Airport	

4.0 Existing Conditions

4.1 Environment

4.1.2 Biodiversity

'Biodiversity is a broad term for the many species and ecological processes that are essential for maintaining our community's health and the amenity of the Central Coast and its landscapes. As well as having economic, social and quality of life benefits, nature has intrinsic values that need protection'

- Central Coast Council Biodiversity Strategy, Central Coast Council 2020

The Study Area is rich in biodiversity and supports a variety of flora and fauna. This is due to the high vegetation cover, the presence of State significant coastal wetlands, Porters Creek floodplain, Wadalba wildlife corridor and species listed on the Threatened and Critically Endangered Species Lists. These environmental assets are under strain from surrounding land uses and urban development. A key challenge and priority of this Structure Plan is to accommodate future population growth whilst protecting and restoring the biodiversity network through appropriate land use management and planning.

The Central Coast region contains 70% native vegetation cover and maintains a high diversity of flora and fauna. The Study Area contains 49 different threatened and critically endangered species including 14 threatened flora species and 35 threatened fauna species.

The One Central Coast - Community Strategic Plan 2018-2028 identifies the need to protect our rich environmental heritage by conserving beaches, waterways, bushland, wildlife corridors and inland areas and the diversity of local native species. Many of the flora and fauna species occurring within the region are threatened with extinction, thus require careful management to ensure they persist into the future.

Local biodiversity network

Maintaining and restoring connections between protected areas and areas of high biodiversity value is important to the landscape health and biodiversity of the Study Area. Council has mapped local biodiversity corridors as a first step in providing protection for connectivity through the planning process. **Figure 26** identifies:

- wildlife corridors – areas of remnant vegetation sometimes referred to as 'green corridors' or 'wildlife movement' corridors.
- core habitat – typically large remnants of vegetation in moderate to good condition that present opportunities for wildlife movement corridors between them.
- gaps – gaps in the network of linkages can occur as cleared paddocks and roads and present opportunities for rehabilitation or wildlife crossing structures, if appropriate.

Regional biodiversity network

CCRP 2041 maps the regional biodiversity network at a very broad scale. The biodiversity network identified in **Figure 27** includes large areas of remnant native vegetation known as core habitat, corridors connecting areas of core habitat and wildlife corridors that join discontinuous patches of vegetation and continuous strips of vegetation along riparian areas and connect to core habitat areas or regional and locally important corridors (Source: CCRP 2041).

The links extend from the western side of the M1 Pacific Motorway in the WEZ, proceeding in a south-easterly direction across the Motorway, through Porters Creek wetland, the Warnervale floodplain, the Wadalba corridor and towards Tuggerah.



Figure 25 - Natural bushland, Charmhaven

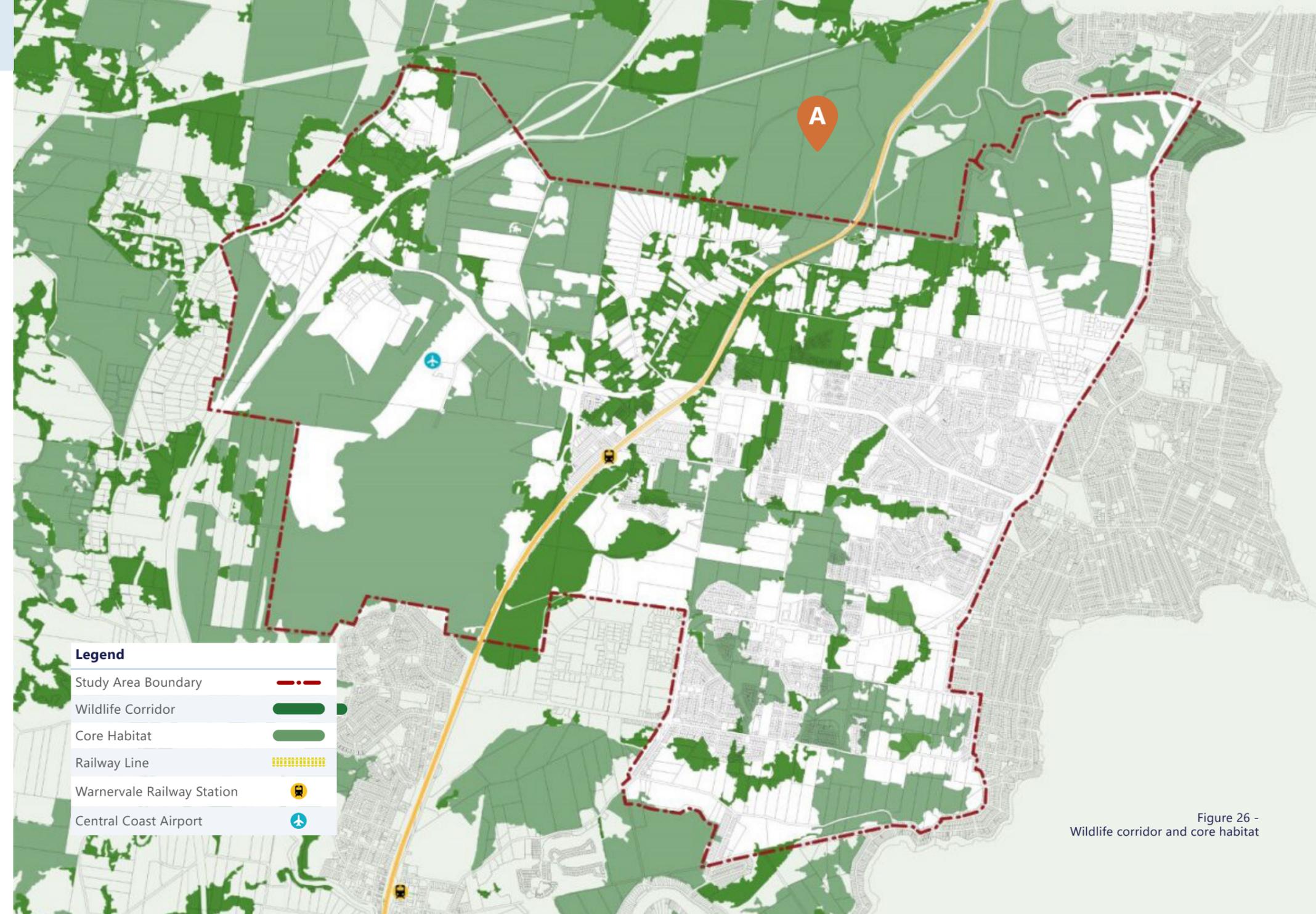


Figure 26 - Wildlife corridor and core habitat

4.0 Existing Conditions

Protection and management

The *Biodiversity Conservation Act 2016* and *Biodiversity Conservation Regulation 2017* outlines the framework for addressing impacts on biodiversity associated with development and clearing. The Biodiversity Offsets Scheme is a framework to avoid, minimise and offset impacts on biodiversity and to ensure land used to offset impacts is secured in perpetuity.

As per the *Central Coast Biodiversity Strategy*, rezoning proposals are to ensure biodiversity values are fully considered and impacts to listed entities avoided at the rezoning stage of developments. Early consultation with Council's ecologist is important when rezoning land that has the potential to impact core habitat and wildlife corridors.

The Structure Plan identifies existing corridors and potential future links at a very broad scale. Planning proposals on land suitable for biodiversity connections may need to give consideration to the ongoing functionality of the corridor network which depends on both the structural integrity of the habitat patches and the strength of connectivity between the patches. The width of wildlife corridors has a significant influence on the overall effectiveness of a corridor. Increased width of biodiversity corridors is vital to minimise edge effects such as changes in light and wind, increased predation and increased degradation on the edges and should be considered when rezoning land.

Biodiversity corridor connections can be improved by securing corridors in conservation zones or revegetating corridor gaps as part of a biodiversity stewardship agreements. In perpetuity legal conservation agreements afford the highest level of on-going protection.

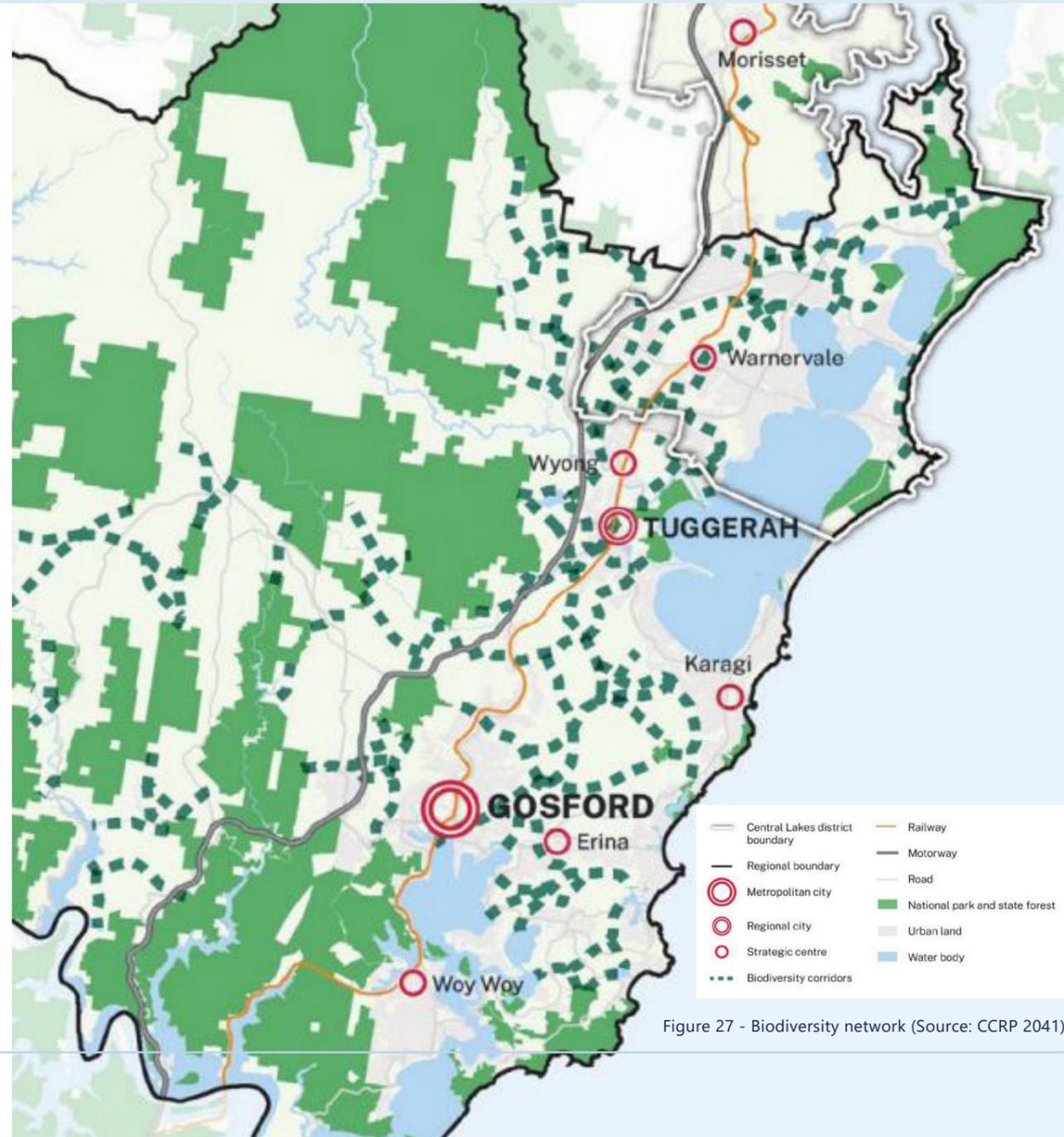


Figure 27 - Biodiversity network (Source: CCRP 2041)

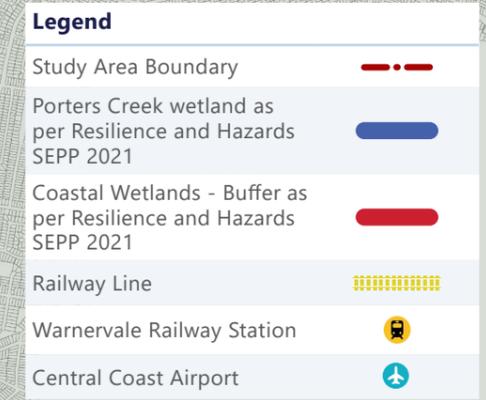
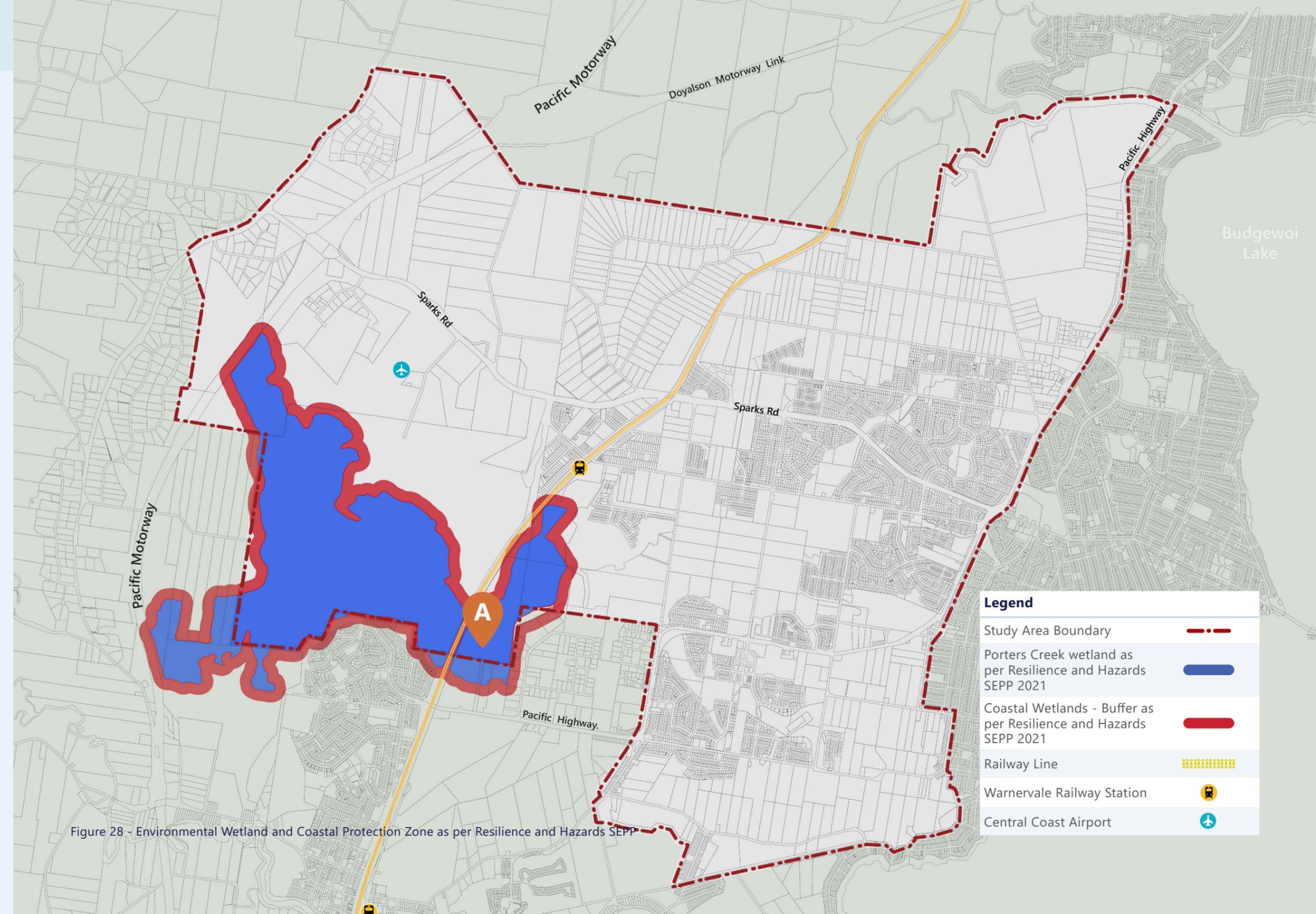


Figure 28 - Environmental Wetland and Coastal Protection Zone as per Resilience and Hazards SEPP

4.0 Existing Conditions

4.1 Environment

4.1.3 Porters Creek Wetland

There are many coastal wetlands in the Central Coast region. Wetlands are significant in that they provide habitat for plants and animals, filter nutrients, improve water quality, reduce the impact of flooding and increase visual amenity. The vegetation community types associated with these wetlands are diverse and, in most cases, have been declared threatened ecological communities.

Porters Creek Wetland is the largest remaining freshwater wetland on the Central Coast and provides habitat for many species (See **Figure 28** which depicts Porters Creek wetland and coastal wetlands buffer as per the Resilience and Hazards SEPP). The wetland filters stormwater from the catchment and acts as a 'kidney' for Tuggerah Lakes. The wetland floods regularly and is significant for flood mitigation for the lower Wyong River. Porters Creek Wetland is also significant due to its rare and endangered swamp forest communities and high species diversity including a number of threatened flora and fauna species. It includes five Endangered Ecological Communities listed under the Biodiversity Conservation Act 2016 and has high conservation value. It is linked by biodiversity corridors to other areas of high environmental value within and outside the Study Area.

State Environmental Planning Policy (Resilience and Hazards) 2021 applies to the wetland area, with Coastal Wetlands identified within the areas of "Swamp Sclerophyll Forest on Coastal Floodplain" communities.



Figure 29 - Porters Creek wetland EEC (Source: blueplanet.nsw.edu.au)

"Porters Creek Wetland is the largest remaining freshwater wetland on the NSW Central Coast. Water flowing in from its upper catchment is filtered by the swamp forest communities of the wetland before flowing into the Wyong River and Tuggerah Lake."

- blueplanet.nsw.edu.au (2020)

Tuggerah Lakes

The precincts within the south-east of the Study Area flow directly towards Tuggerah Lakes estuary. Tuggerah Lakes estuary is a wetland of national significance and a unique environment rich in biodiversity. Over the years, the natural function and condition of the estuary has been influenced by many different human activities around the foreshores and throughout the catchment.



4.0 Existing Conditions

4.1 Environment

4.1.4 Coastal Protection Zone

The coastal management framework includes:

- the Coastal Management Act 2016
- the Resilience and Hazards SEPP (Chapter 2)
- funding support, including grants which governments and other stakeholders can apply for, to plan and carry out coastal and estuary projects.

The Coastal Management Act 2016 establishes the strategic framework and objectives for managing coastal issues in NSW. The aim of the Act is to manage development in the coastal zone and protect the environmental assets of the Central Coast. This includes freshwater wetlands such as Porters Creek wetland and the small areas of coastal zone land within the Study Area (see Figure 31).

State Environmental Planning Policy (Resilience and Hazards) 2021 – also known as the Resilience and Hazards SEPP provides a coordinated approach to assessing development in NSW. Chapter 2 of the Resilience and Hazards SEPP covers how development proposals are assessed if they are in a coastal zone and is supported by detailed mapping.

Coastal Wetlands

The Coastal Management Act 2016 identifies Coastal Wetlands that coincide with areas of “Swamp Sclerophyll Forest on Coastal Floodplain” endangered ecological communities, in the western part of the Study Area, which represents the significant Porters Creek wetland and the significant wetland located in the southern part of the Study Area at Wadalba and Tuggerawong.

Coastal Protection Zone

Only a small portion of the Study Area is located within the Coastal Protection Zone – specifically a portion of Precinct 10 – Charmhaven and the area in proximity to the lake foreshore in the southern Wadalba area. A small pocket of southern Wadalba is identified as a Sensitive Coastal Location.

The SEPP specifies the development controls which will apply to particular forms of development or

within particular coastal management areas (see Figure 31). It also specifies the consent requirements for public authorities and private individuals who propose to construct coastal protection works. This Structure Plan and future proposals are to have regard for the provisions under *State Environmental Planning Policy (Resilience and Hazards) 2021*, specifically Chapter 2.

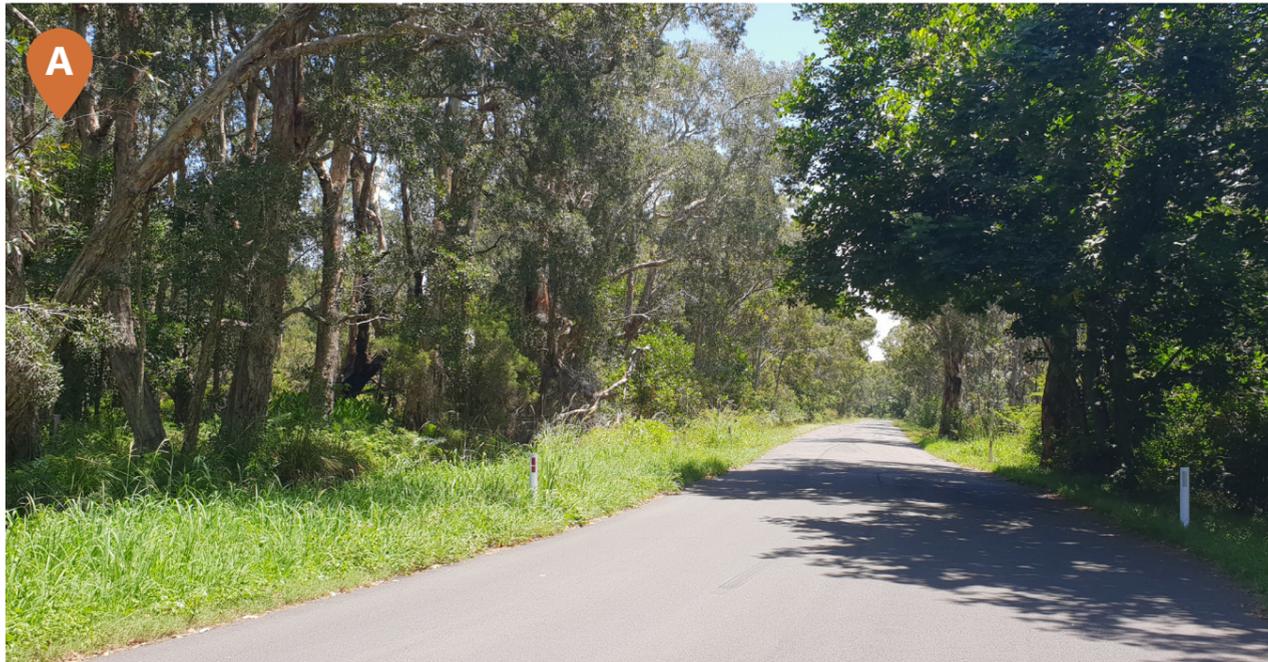


Figure 30 - Wadalba Wetlands

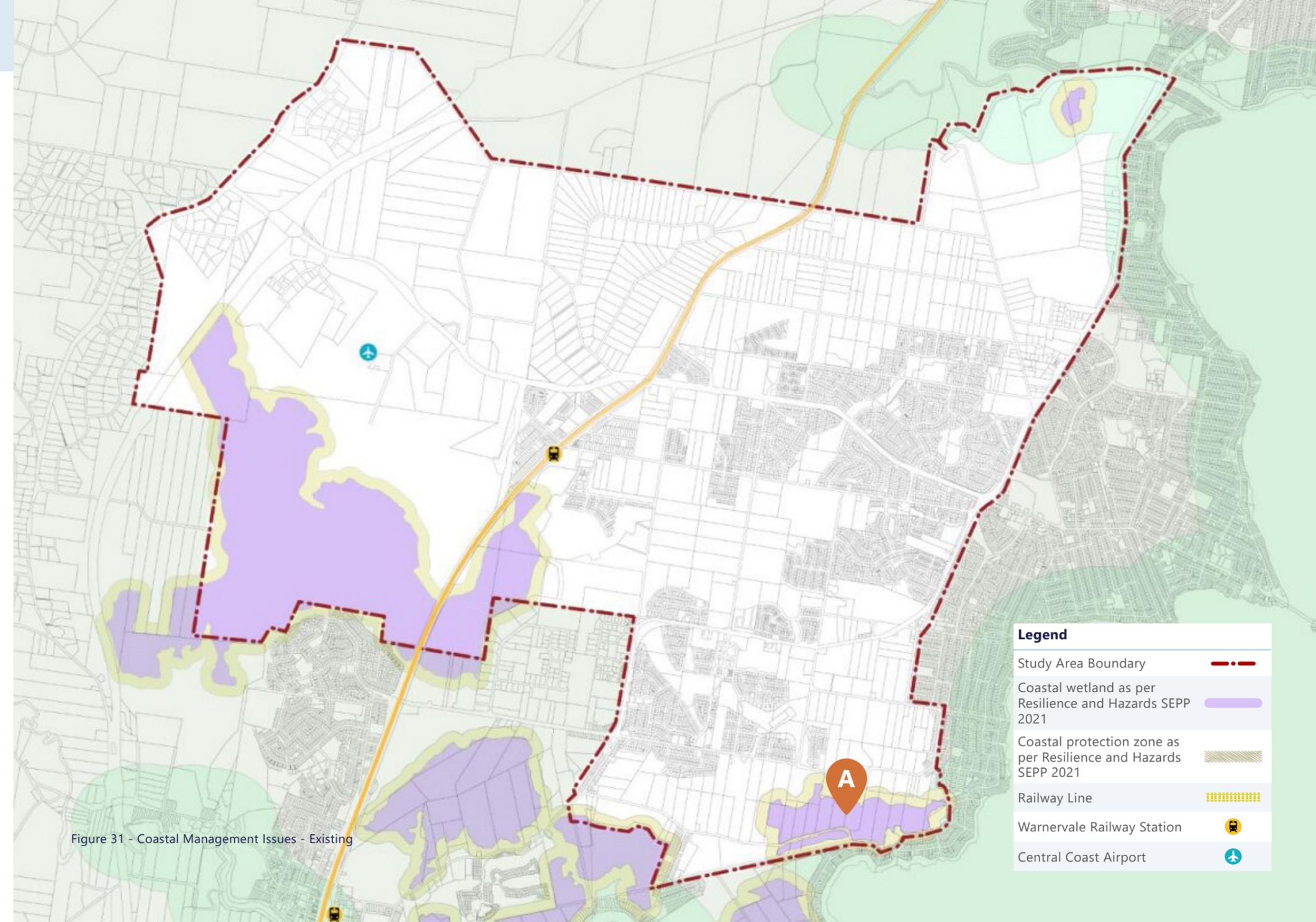


Figure 31 - Coastal Management Issues - Existing

Legend

Study Area Boundary	---
Coastal wetland as per Resilience and Hazards SEPP 2021	■
Coastal protection zone as per Resilience and Hazards SEPP 2021	▨
Railway Line	—
Warnervale Railway Station	🚂
Central Coast Airport	✈️

4.0 Existing Conditions

4.1 Environment

4.1.5 European and Aboriginal Heritage

'Heritage consists of those things we have inherited and want to keep. These places and objects give us a sense of the past and of our cultural identity.'

NSW Heritage Office, 2005

The Study Area contains three European heritage items listed under Central Coast LEP 2022 (see Figure 35). These items include:

- the former Warnervale Regional Uniting Church at 271-273 Warnervale Road, Hamlyn Terrace
- Warnies Railway Cafe and General Store at Warnervale.
- a dwelling at 70 Jensen Road

Each of these items are listed as items of local significance. Further information on the significance of each item is provided in Schedule 5 of CCLP 2022. There are no state heritage items located within the Study Area.

There are a number of known Aboriginal sites identified within the Study Area. Further sites may be identified in future investigations, particularly in areas adjacent to local water bodies and contributing food sources. Areas of Aboriginal Heritage are protected or managed in accordance with the provisions of the National Parks and Wildlife Act 1974.



Figure 32 - Warnervale Regional Uniting Church



Figure 33 - Warnies



Figure 34 - 70 Jensens Road, Wadalba

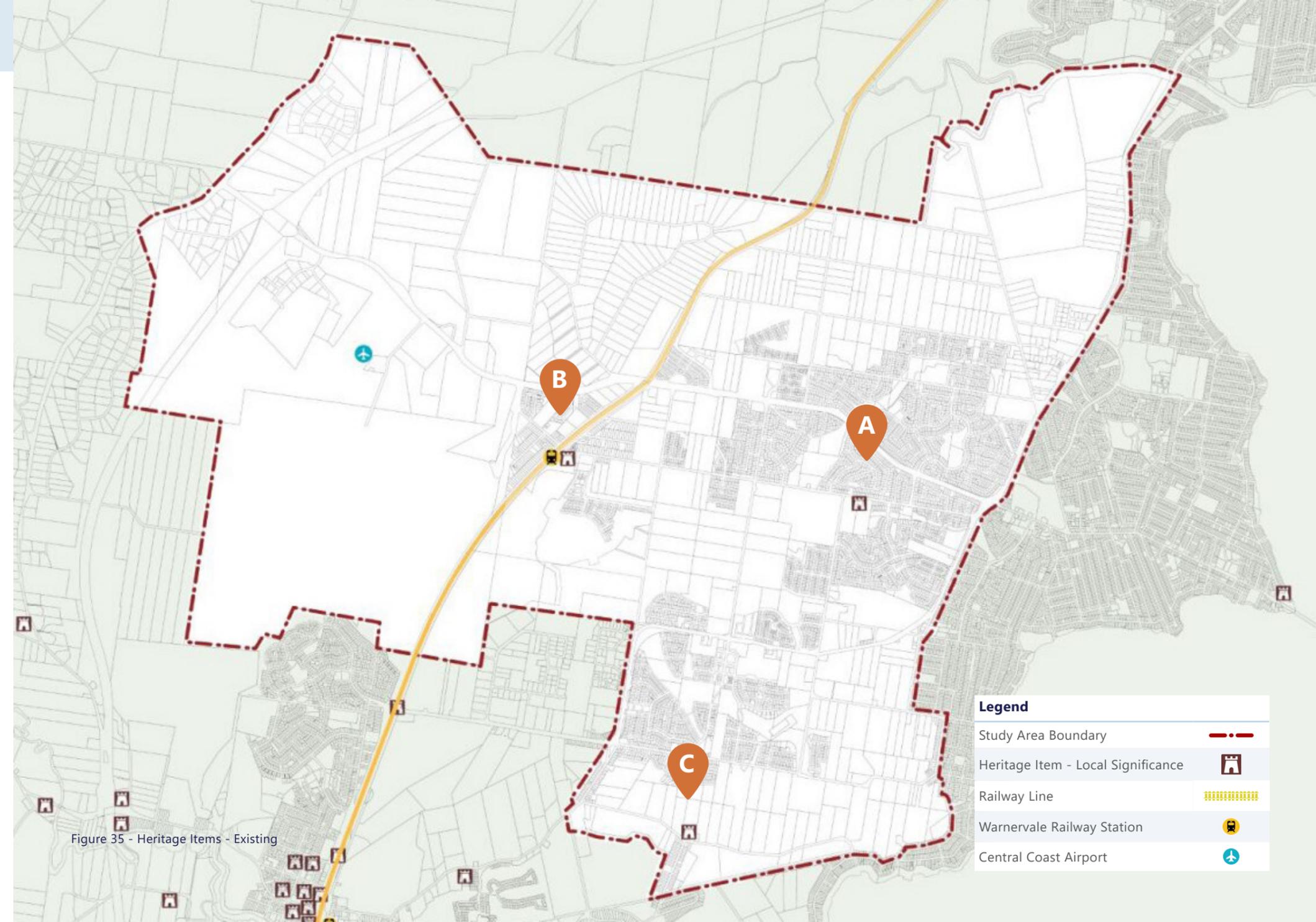


Figure 35 - Heritage Items - Existing

Legend	
Study Area Boundary	
Heritage Item - Local Significance	
Railway Line	
Warnervale Railway Station	
Central Coast Airport	

4.0 Existing Conditions

4.1 Environment

4.1.6 Scenic Amenity

The scenic amenity of the Study Area lies mainly in the mountain vistas to the west, and the native bushland, significant wetlands and rural-residential land uses that surround the area to the west and south-west (see **Figure 39**). In particular, the vegetated ridgelines of the Jilliby State Conservation area to the west provide a striking and attractive backdrop to the Study Area. The Study Area also encompasses the *State Environmental Planning Policy (Resilience and Hazards) 2021* Coastal Wetland to the south of the Warnervale Airport site, significant for its size and ecological values.

The sparsely vegetated floodplains to the south of Warnervale Road and to the north of North Wyong Industrial Estate also provide a semi-rural backdrop and acts as a visual buffer to the industrial area. Other key landscape features include Buttonderry Creek in the north-west, Spring Creek and Wallarah Creek in the north-east, and the Wyong River in the south. The natural environs around these waterways contain significant natural and biodiversity values, as well as recreation opportunities for the community to enjoy.

It is important to manage future population and employment growth in a way that retains and enhances these landscape values. Future proposals will need to be sensitive to the existing scenic amenity and character of the Study Area.



Figure 36 - Looking towards Lexington Avenue hill top, Wadalba

The landscape of the Central Coast creates a cultural identity for the community, with scenic amenity providing a dramatic backdrop and setting for development. New development needs to respect the scenic values and character of different places.

(Source: Department of Planning, housing and Infrastructure, CCRP 2041).



Figure 37 - Looking downhill from Hiawatha Road (east of Warnervale Local Centre)



Figure 38 - Vista from Lexington Avenue, Wadalba (Source: Google Images)

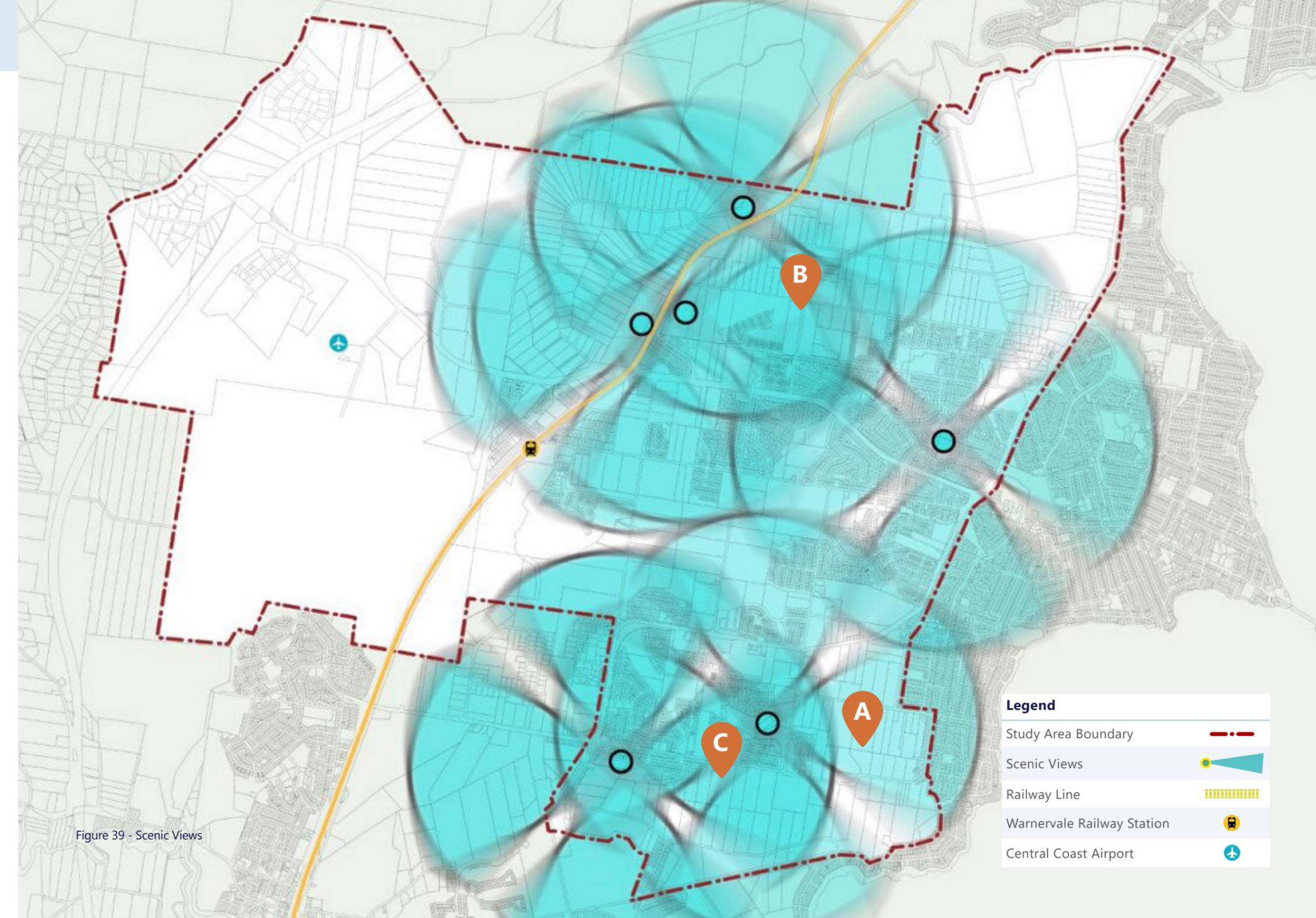


Figure 39 - Scenic Views

4.0 Existing Conditions

4.2 Hazards

4.2.1 Flooding & Water Catchment Management

Riverine Flooding

Areas affected by high-hazard flooding include the Warnervale floodplain, Porters Creek Wetland and the Wyong River floodplain in the south (see Figure 41). Small areas of land along Buttonderry Creek in the WEZ and Spring Creek in the north are also subject to high-hazard flooding. These areas are not suitable for development due to the high-hazard nature of the flooding. The remaining areas of flood-prone land typically coincide with riparian corridors. The Flood Prone Land Policy and Flood Risk Management Manual guide local government in managing flood risk in their communities.

Overland Flow and Stormwater

Due to the low-lying areas of the Study Area, the emergence of hard built form, impervious surfaces and demand for further development overland flow and local stormwater catchment flooding is likely to constrain development opportunities and add to infrastructure costs. Consideration will need to be given to the capacity of the land to manage overland flow and locally occurring stormwater particularly in flood affected areas.

Stormwater management systems, including flood management and water quality treatment methodologies, will need to be provided within development areas to protect downstream properties. Some catchment wide studies are available and will inform further detailed flooding investigations and modelling for specific land uses.

Chapter 3.1 of Central Coast Development Control Plan provides guidance to ensure pre-development flows are maintained and nutrient control is employed. Large land release may need to incorporate retention measures on site and prepare detailed design to demonstrate Water Sensitive Urban Design.

Riparian Land

Riparian land represents the interface between land and a river or stream. Riparian vegetation provides an important resource for a range of specialised aquatic and terrestrial fauna that feed along waterways. Woongarra Creek, in the centre-north of the Study Area, represents the main riparian land within the Study Area. Core riparian zones may require a vegetated buffer to limit access to riparian areas and filter and improve the quality of the water entering the waterbodies.



Figure 40: Warnervale Floodplain

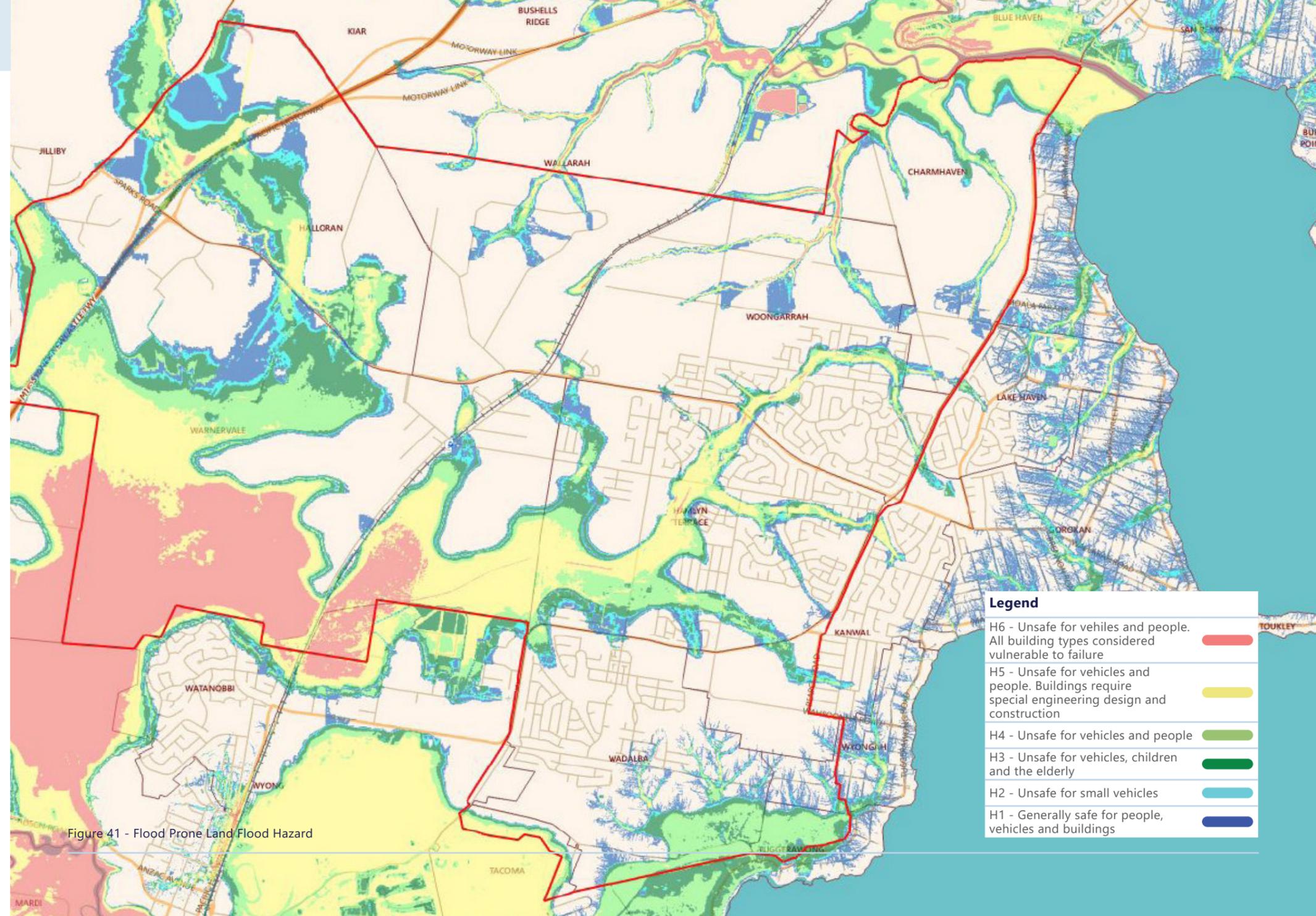


Figure 41 - Flood Prone Land Flood Hazard

Various parts of the Study Area are affected by flooding, including but not limited to, the Warnervale floodplain and the Wyong River floodplain in the south (see Figure 41). Development should not be intensified in areas that could be at risk from increased flooding. Detailed flooding investigations will need to be undertaken as part of future planning proposals and development applications.

4.0 Existing Conditions

4.2 Hazards

4.2.2 Contaminated Lands

Due to past land uses, a large number of properties within the Study Area are identified on Council's contaminated land register as being subject to potential contamination as a consequence of former land uses such as quarry or agricultural uses (see **Figure 43**). While some existing sites have had previous site audits undertaken, further studies may need to be carried out for land where changes to land use warrant further investigation. Site audits and investigations are to be in accordance with Chapter 4 of the Resilience & Hazards SEPP.

4.2.3 Acid Sulfate Soils

Acid Sulfate Soils present within the Study Area generally coincide with coastal estuarine environments in:

- Porters Creek Wetland in the south west,
- In the vicinity of Wyong Creek and the Wadalba floodplain in the south, and
- In the vicinity of Wallarah Creek and Spring Creek in the north east of the Study Area

The best way to manage acid sulfate soil is to avoid exposing affected soils to oxygen. Where exposure of affected soils is not possible, an adaptive management approach should be implemented and is to be considered at the rezoning or development application stage.



Figure 42 - Warnervale floodplain - subject to acid sulphate soils

Acid sulfate soils are natural sediments that contain iron sulfides. They are common along the NSW coast. When disturbed or exposed to air these soils can release acid, damaging built structures and harming or killing animals and plants.

- Environment and Heritage NSW, 2024

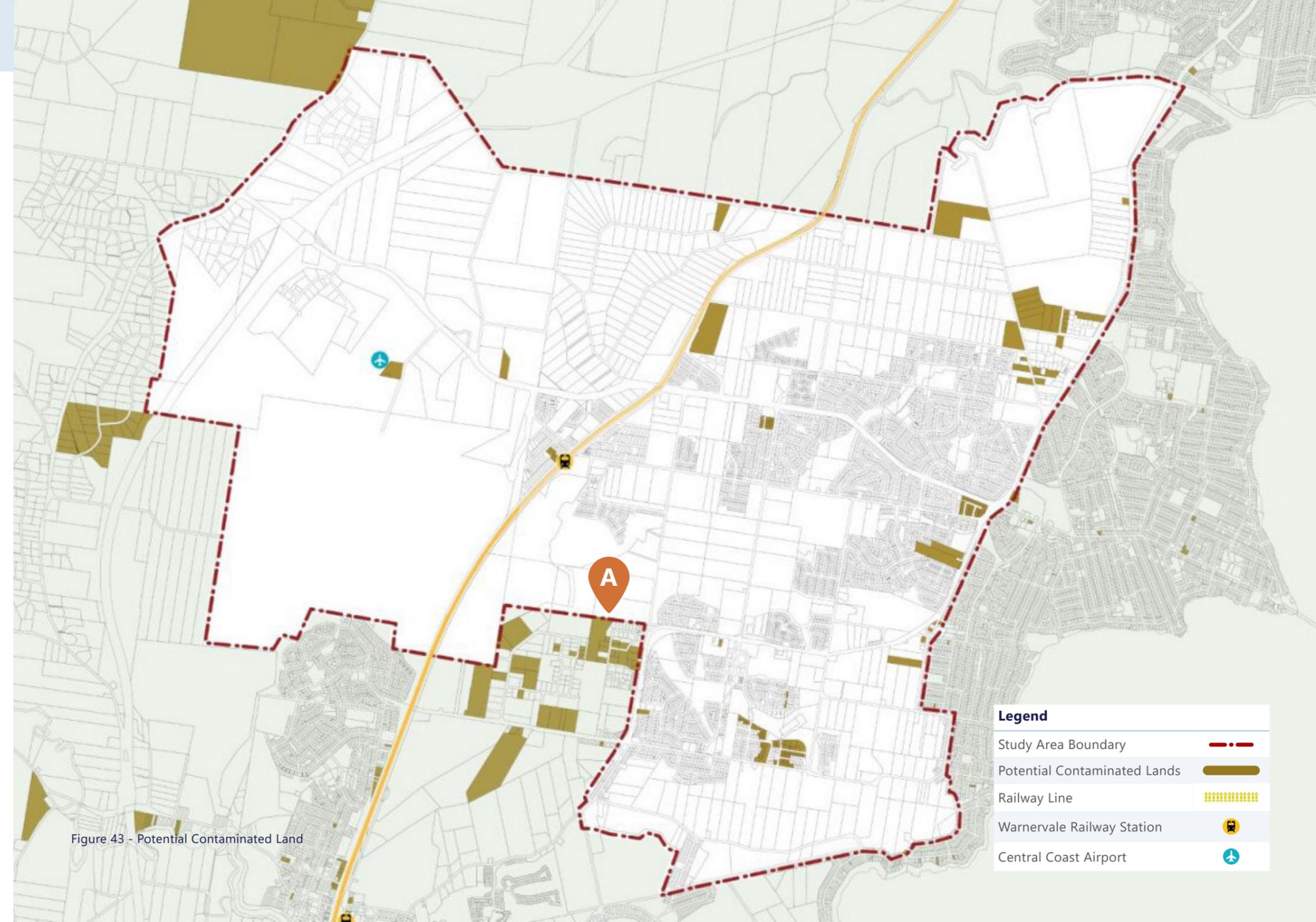


Figure 43 - Potential Contaminated Land

4.0 Existing Conditions

4.2 Hazards

4.2.4 Bushfire

Bushfire is a major hazard in the Study Area due to the presence of vegetated areas (see **Figure 46**). Protection measures are typically governed by the degree of threat posed to a land use and Council is required to ensure that occupants of any building have adequate protection for life and property. Bushfire prone land is mapped in accordance with the Rural Fires Act 1997 and separated into categories based on the vegetation type, fuel loads, topography and potential risk.

Bushfire prone areas are subject to planning controls designed to improve the bushfire safety of structures that face greater risk of bushfire threat. Council is required to consider the ability to provide defensible space Asset Protection Zones (APZ),

'In a bush fire context, strategic planning needs to ensure that future land uses are in appropriate locations to minimise the risk to life and property from bush fire attack.'

- **Planning for Bushfire Protection, RFS (2018)**

fire fighting facilities and access for fire fighting equipment. Development must comply with the provisions of Planning for Bush Fire Protection 2019 ("PBP"). The PBP provides the planning considerations for development on sites likely to be affected by bushfire events.

The Study Area presents the following challenges for bushfire management:

- Managing areas that have a direct interface between private property and publicly owned bushfire prone lands (such as parks and reserves);
- Overall evacuation of existing and emerging precincts must facilitate evacuation of persons in a fire event and access for fire fighting vehicles. Transport movement networks are reliant on established road networks in some areas that pre-date the establishment of bushfire planning criteria and identify potential blockages to evacuation;
- Transition between rural areas and emerging greenfield land release to ensure infrastructure is in place to enable fire fighting measures.



Figure 44 - Bushland with evidence of burnt vegetation



Figure 45 - Green waste dumping in Council reserves increases bushfire

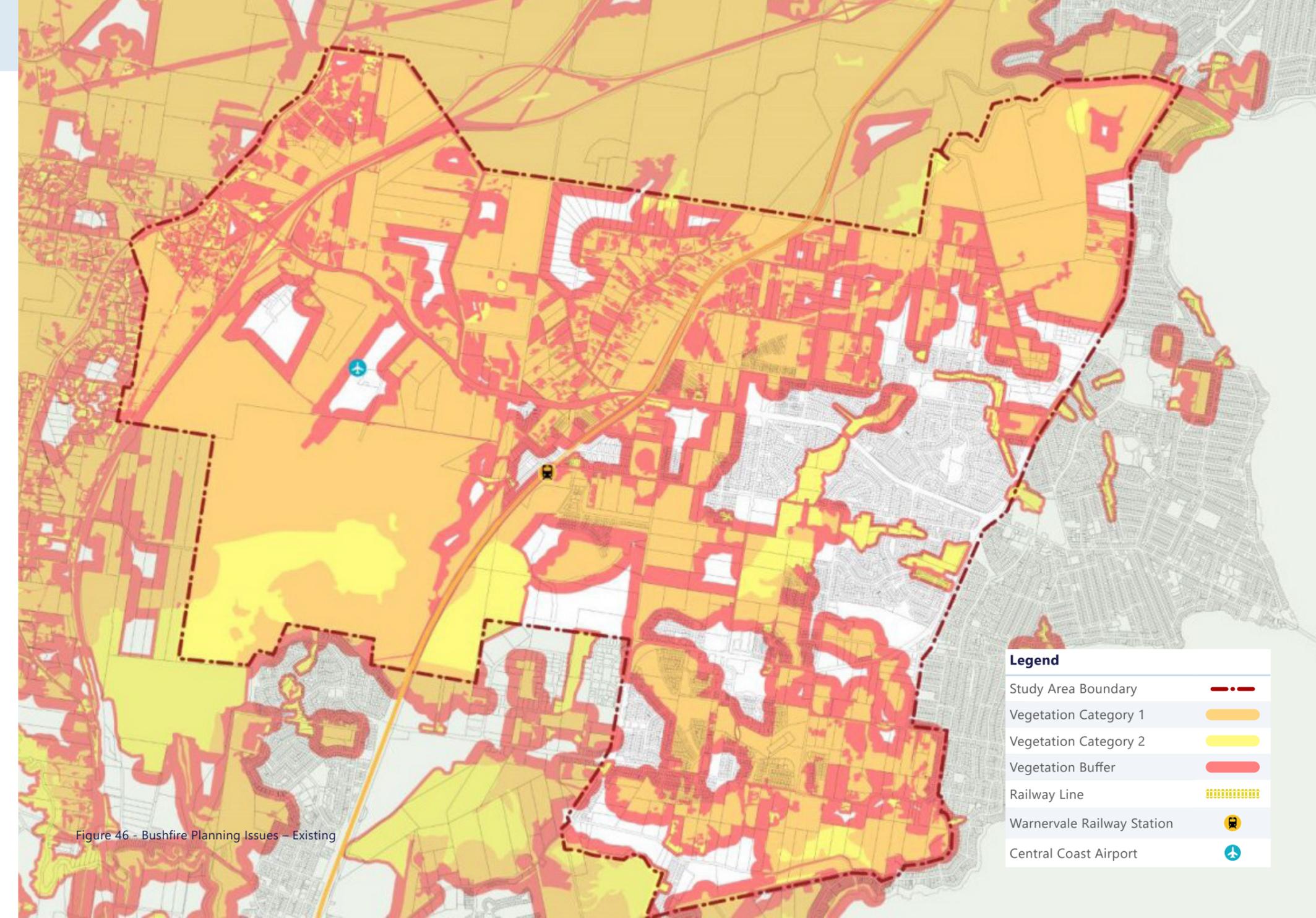


Figure 46 - Bushfire Planning Issues – Existing

4.0 Existing Conditions

4.3 Servicing

4.3.1 Water and Sewer

Delivery

Planning and delivery of water, sewer and drainage infrastructure is shared between State Government agencies, Council, developers, and private sector investors. Generally, water and sewer assets are provided as follows:



Council's *Development Servicing Plan 2019 (DSP)* provides a high-level servicing strategy for the servicing of development precincts within the Study Area in anticipation of expected growth in the areas. Long term planning will assist Council in planning for the future needs of the Study Area to ensure integrated planning for infrastructure, services and land use. The 2019 DSP is required to be reviewed in 2024.

Each individual existing precinct or new precinct will be required to refine any existing servicing strategy (detailed design) or prepare a new servicing strategy for the new precinct area. Proposals outside the recommended development timeframes, will need to take into account required infrastructure provision, such as water, sewer, electricity and gas and be supported by service provider confirmation that these services can be provided as part of any future rezoning or development application.

Water

Existing trunk water mains running along the length of the Pacific Highway and Sparks Road provide sufficient bulk water to service development within the Study Area until 2026. By this time the proposed Mardi to Warnervale Pipeline (M2WP) will need to be in service to boost supply to the Kanwal Reservoir and provide provisions for the future Kiar Ridge Reservoir. The existing water supply network within the Study Area is shown in **Figure 47**.

Development within the north and north west Warnervale Local Centre cannot be reliably serviced from Kanwal reservoir and will be serviced by a booster temporary water pumping station, pending construction of the M2WP, which will allow it to be serviced by the Kiar Ridge reservoir. Servicing land to the west of the M1 Pacific Motorway requires the extension of a new water main across the M1 corridor, with future extension of the main to the north into Bushells Kiar Ridge required as part of development of that area.

Council is currently working with Transport for NSW (TfNSW) for development to the west of M1 Motorway to have the required infrastructure installed in a manner that complements necessary M1 Motorway upgrades as part of the development servicing requirements for the new Warner Industrial Precinct at Jilliby.

Sewer

Council's adopted Sewer Strategy identifies the need for Sewage Pumping Stations (SPS) via extensions of gravity reticulation mains to existing gravity trunk sewers. Where this cannot be achieved rising mains may need to be employed.

While a significant portion of the Study Area (mainly in the east) is serviced or can be readily serviced by water and sewer, much of the area in the west around the WEZ and in the south around the Wadalba release areas, are not currently serviced. The existing sewer servicing network is shown in **Figure 47**.

The following infrastructure will be required to provide sewer servicing to these parts of the Study Area:

Precinct 1 - Wyong Employment Zone

Existing sewerage services are limited to the southern side of Sparks Road. Servicing north of Sparks Road will require the provision of three new trunk mains, and two additional regional SPS's to service the land in this precinct.

Precinct 3 - Wallarah and Precinct 7 - Woongarra Residential

This precinct has a large area of un-serviced land in north Woongarra and Bruce Crescent, Wallarah area. Infrastructure required to service this area comprises a combination of new trunk gravity mains, new sewage pumping stations and new rising mains.

Precinct 4 - Warnervale Town Centre

Warnervale Local Centre - Sewerage servicing requires the provision of new SPS's to service the northern half of the WTC.

Precinct 8 - East Wadalba and Precinct 9 - Medical

A combination of new trunk gravity mains, new sewage pumping stations and new rising main will be required to service this area. North Wadalba can access existing gravity trunk mains via the provision of new reticulation mains from the respective development sites. East Wadalba will require the provision of a new SPS and associated rising main to transfer sewage north into the gravity mains constructed as part of the development of North Wadalba.

Precinct 10 - Charmhaven

Assets to service future development comprise new sewage pumping stations and new rising mains.

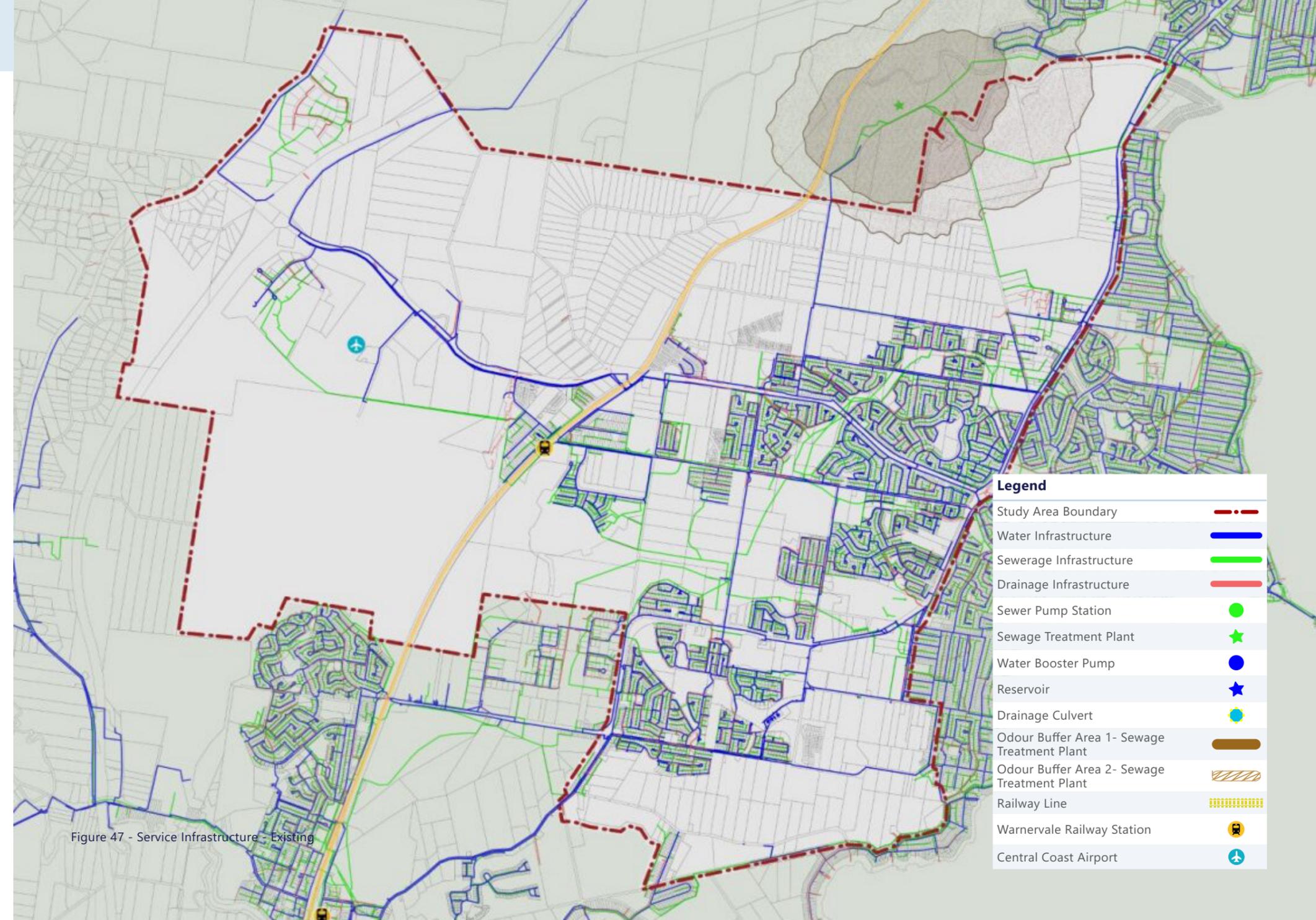


Figure 47 - Service Infrastructure - Existing

4.0 Existing Conditions

4.3 Servicing

4.3.2 Sewer Odour Buffer

Sewage collected from connected properties within the Study Area is conveyed to Charmhaven Sewage Treatment Plant (STP) for treatment. Charmhaven STP has a current capacity of approximately 40,000 Equivalent Persons (EP). The next planned upgrade to Charmhaven STP to accommodate future population growth will increase capacity to 75,000 EP. The design of this upgrade also noted a potential future ultimate capacity for Charmhaven STP in the order of 150,000 EP to be achieved through a future staged upgrade. Council will deliver future upgrades to Charmhaven STP as required and in line with actual population growth.

Capacity for a STP considers both biological and hydraulic performance. While biological capacity is largely dependent on the number of people within the catchment, hydraulic capacity is a function of the flowrate delivered by the connected Sewage Pumping Stations (SPS). Changes to incoming SPS pump rates based on alternate land use or density could trigger earlier upgrades to an STP compared to the population trigger.

The provision of an adequate odour buffer zone is required to minimise the risk of the community being subjected to potentially offensive odour from the STP, both now and in the future. The last Odour Assessment Report for the Charmhaven STP was prepared in 2015 and provided an assessment of current odour impacts and identification of a potential odour buffer zone.

Council's current Buffer Zone Policy (June 2020) states that the buffer zone for Charmhaven STP is yet to be formalised and will be reviewed in consideration

of future rezoning requests and the Department of Planning, Housing and Infrastructure guidance material. Council is currently finalising the concept design for the above-mentioned major augmentation to Charmhaven STP which the 2015 odour study identified as having potential to increase odour generation from of the site. Measures are being planned for the upgrade that would reduce odour impacts however uncertainty on the final outcomes of the upgrade with respect to odour will exist until the new works are commissioned. Any interim odour modelling/forecasting would need to consider the current plants seasonal variation in odour generation and the various potential changes associated with future upgrades that are yet to be the subject of an approved business case to proceed to construction.

4.3.4 Electricity

AusGrid currently supplies electricity to the Study Area, with an electricity substation located within the precinct at 760 Pacific Highway, Woongarra. The Wyong electricity substation is located just south of the Study Area and services part of the Study Area. At present, these substations are operating at:

- Charmhaven: 80-85% capacity under peak conditions
- Wyong: 80-85% capacity under peak conditions
If the Study Area was to fully develop then the substations would exceed capacity, and upgrades to existing substations may be required, or construction of a new substation.

AusGrid's current forecasts do not predict a shortfall in capacity at these substations within the next 20 years, and both substations have been constructed with provision for additional equipment which would double the capacity at each substation.



Figure 48 - Charmhaven Sewage Treatment Plant



Figure 49 - Woongarra electricity substation

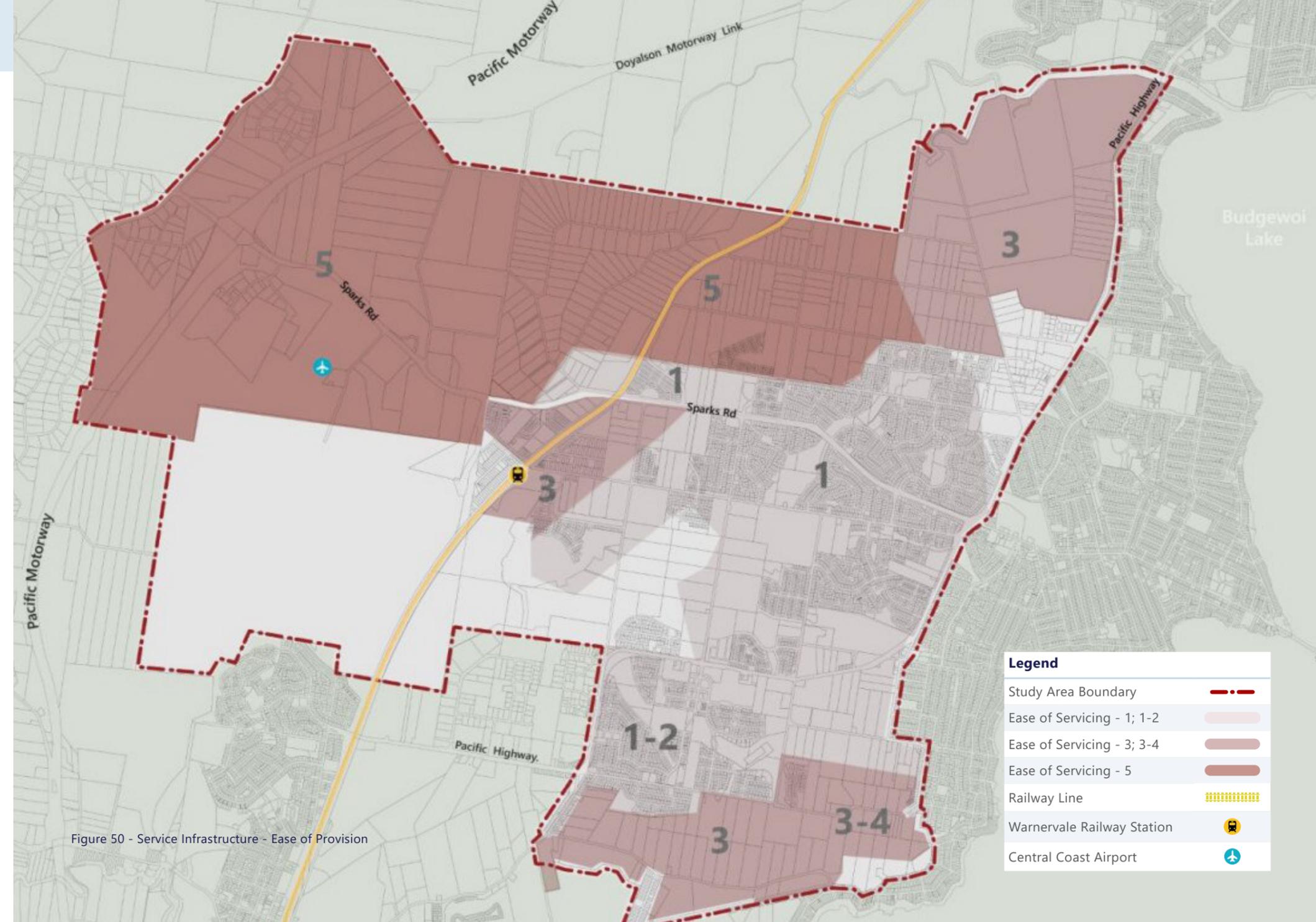


Figure 50 - Service Infrastructure - Ease of Provision

4.0 Existing Conditions

4.4 Transport

4.4.1 Existing Road Network

The Study Area is bound by four significant transport corridors – the M1 Motorway to the west, Sparks Road, the Northern Railway Line and the Pacific Highway (see Figure 49). Local traffic congestion is a major issue in the area caused by a car dominated environment and an over reliance on the local and State Road network.

Infrastructure projects required to support planned growth within the Study Area include:

- Upgrade of the Sparks Road and M1 Interchange.
- Extension of Warnervale Link Road north of Sparks Road.
- New and upgraded intersections along various arterial roads to service new development growth
- Upgrade of various sections of the Pacific Highway immediately to the south of the Study Area
- Warnervale Link Road – from Watanobbi to Warnervale Village

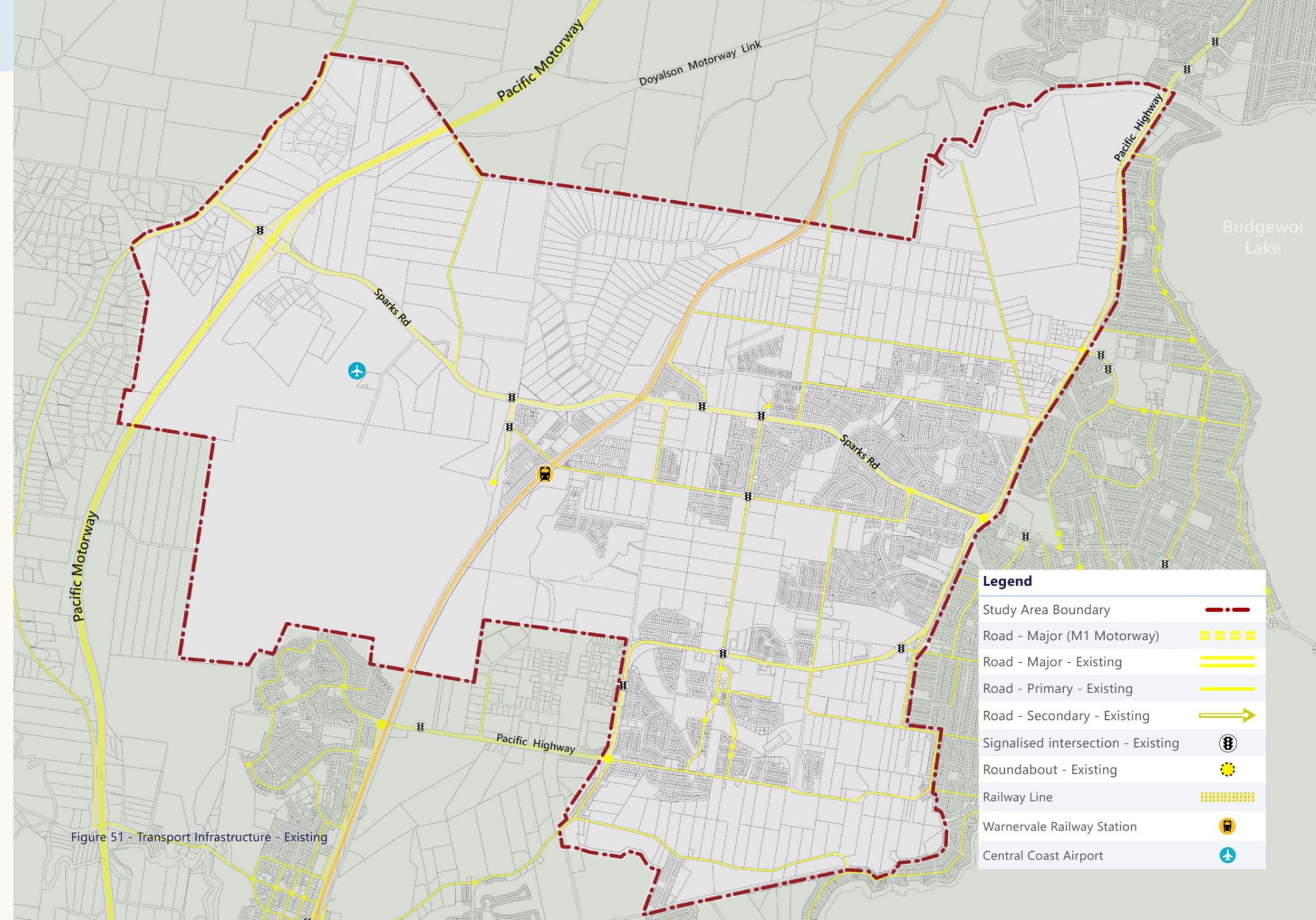


Figure 51 - Transport Infrastructure - Existing

4.5 Economy

4.5.1 Constraints/Opportunities

Council has engaged Hill PDA Consultants to prepare a draft Employment Land Strategy for the whole Central Coast LGA. This Strategy is yet to be finalised and publicly exhibited. The Strategy includes analysis of specific employment precincts within the Study Area. There are 29 employment precincts across the Central Coast LGA, varying in size and land zoning. In total, there is approximately 2,190 hectares of employment zoned land across the LGA. The majority of this land is zoned E4 – General Industrial and

accounts for approximately 1,903 ha or 87% of land stock. The next most common land stock zones are:

- E3 Productivity Support - 206 Ha or 9% of land stocks
- SP4 Enterprise - 81 Ha or 4% of land stocks
- W4 Working Waterfront - 1.2 Ha or 0.1% of land stocks.

Table 1 identifies the amount of land within the Study Area that is zoned for employment purposes:

Precinct	E3 Productivity Support	E4 General Industrial	W4 Working Waterfront	SP4 Enterprise	Total
Charmhaven	0.0	35.8	0.0	0.0	35.8
Wyong	0.0	339.3	0.0	32.5	371.8
Wyong Hospital	3.8	0.0	0.0	0.0	3.8

Table 1- Total land area in hectares by zoning for GWSP Employment Precincts

The draft Employment Lands Strategy is based on an analysis of several employment precincts within the Central Coast LGA. Three sub-precincts have been developed (south, central and north). Employment areas within the Study Area are located within the ‘north’ sub-precinct area.

The north sub-precinct contains eight employment precincts that extend from North Wyong in the south to Gwandalan in the north (see Table 2). The north sub-precinct is the largest employment zoned area comprising a total of 1,213ha. Despite the large landholding, 58% is undeveloped vacant land which contributes to the sub-precinct having the lowest amount of floorspace of approximately 611,000m².

Precinct	E3 Productivity Support	E4 General Industrial	W4 Working Waterfront	SP4 Enterprise	Total
Pacific Highway, Doyalson	0.0	1.3	0.0	0.0	1.3
Wyong Hospital	3.8	0.0	0.0	0.0	3.8
Gwandalan	0.0	1.0	0.0	0.0	1.0
Doyalson	0.0	11.7	0.0	0.0	11.7
Charmhaven	0.0	35.8	0.0	0.0	35.8
North Wyong	62.8	72.2	0.0	0.0	135.1
Wyong	0.0	339.3	0.0	32.5	371.8
Bushells Ridge	0.0	652.7	0.0	0.0	652.7

Table 2 - North sub-precinct employment precinct overview by land size

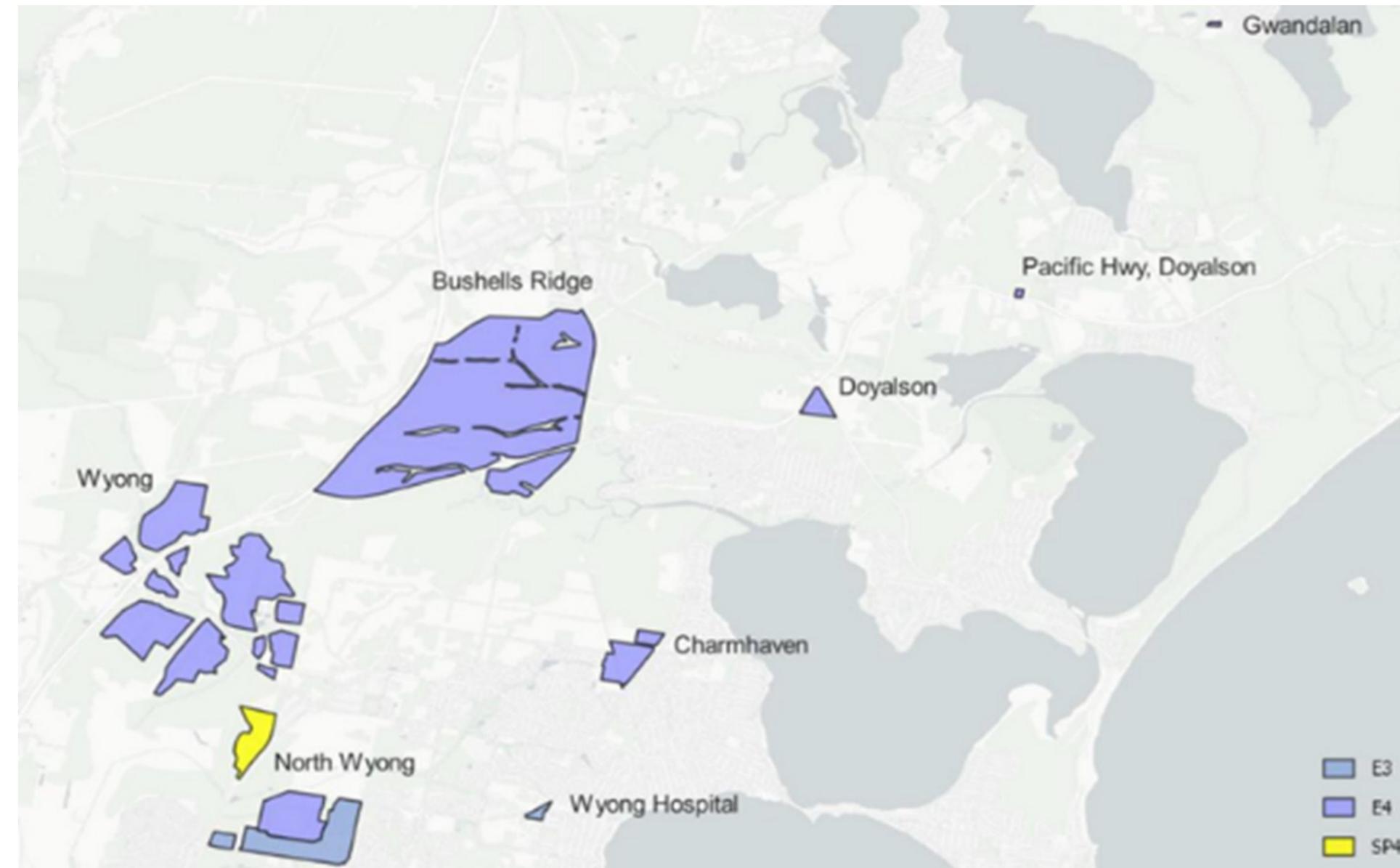


Figure 54 - North sub-precinct employment precinct overview (Resource ELS 2023)

“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”.

- Department of Planning, Housing and Infrastructure (DPHI) Employment Lands Development Monitor (ELDM)

Employment lands are vital to the functioning of urban areas, providing space for:

- Essential services such as waste and water management, repair trades and construction services
- Warehousing, logistics and distribution centres
- Areas for businesses that design, manufacture and produce goods and services.

Employment lands primarily encompass land zoned as E3 Productivity; E4 General Industrial; W4 Working Waterfront; and SP4 Enterprise.

4.5.3 Employment Land

Charmhaven:

Charmhaven Precinct provides 36 ha of E4 General Industrial zoned employment land.

Employment land in Charmhaven

Land use	Floorspace m2	%
Health/education	1,732	1%
Industrial	88,127	60%
Knowledge intensive	12,917	9%
Population serving	34,240	23%
Residential	594	0%
Vacant	9,152	6%
Total	146,763	100%
Land	ha	%
Developed/under construction	32.2	90%
Undeveloped/storage	3.6	10%
Total land area	35.8	100%

The precinct is characterised by urban services (primarily auto repair), wholesale, manufacturing and transport/distribution companies. In total, the precinct provides around 146,765m² of floorspace with industrial uses occupying 88,130m² or 60%. Industrial services are predominantly manufacturing uses (38%) followed by wholesale trade (32%), and transport and distribution services occupying 29% of the industrial floorspace. Population serving services occupy around 34,240m² or 23% of the floorspace.

This is comprised of urban services, retail and construction companies.

The precinct also contains a childcare centre and a learn to swim centre. Development activity was observed during the site over three developments, which will provide around 1,370m² of factory space and 450m² of general industrial space.

Key assets and opportunities for the precinct include its location along the Pacific Highway, available undeveloped land, developer interest and appropriate buffering from surrounding residential areas. The precinct is also in proximity to the Warnervale growth area and could help to serve its future needs.

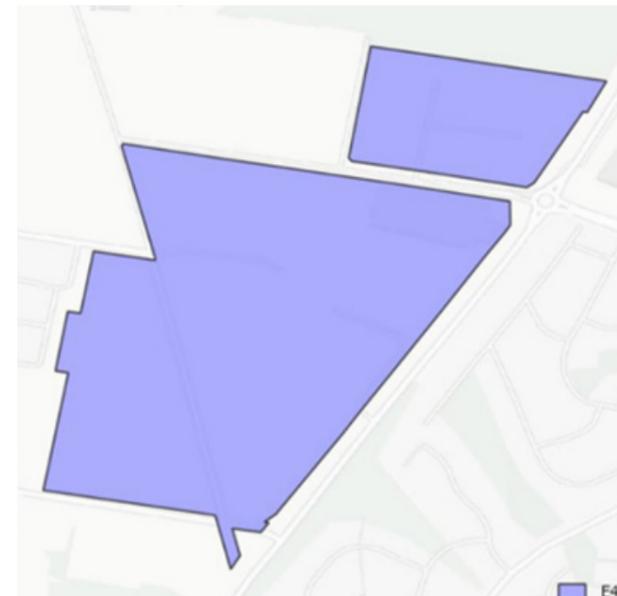


Figure 56 - Charmhaven Employment Precinct

Wyong:

Wyong Precinct provides around 370 hectares of employment zoned land. Most of this is zoned as E4 General Industrial (339 hectares) with the remaining 33 hectares zoned SP4 Enterprise zoning.

Employment land in Wyong

Land use	Floorspace m2	%
Health/education	-	0%
Industrial	124,013	79%
Knowledge intensive	11,719	7%
Population serving	19,303	12%
Residential	1,711	1%
Vacant	1,000	1%
Total	157,746	100%
Land	ha	%
Developed/under construction	217.7	59%
Undeveloped/storage	154.1	41%
Total land area	371.8	100%

The precinct is characterised by wholesale, manufacturing and transport/distribution companies. In total, the precinct provides around 15,745m² of floorspace with industrial uses occupying 124,015m² or 79%. Industrial uses are predominantly transport and distribution services (58%), with a large Woolworths distribution centre (around 54,000m²) located in the precinct. All the floorspace surveyed is located within the industrial component of the precinct, with the business park (SP4) portion being undeveloped.

The presence of the large Woolworths distribution centre, Warnervale Airport and the concrete batching plant increase the precinct’s regional significance. Key assets and opportunities for the precinct include its location at the junction of the Pacific Highway and Sparks Road, which give it good connectivity to all areas of the LGA and beyond. This is likely a key attractor to the various transport/distribution businesses. The precinct is well positioned to serve the future needs of the Warnervale locality, which is forecast to experience strong growth over the coming decade and has available zoned land for development. The precinct is somewhat fragmented by environmental zonings separating the various industrial zonings.

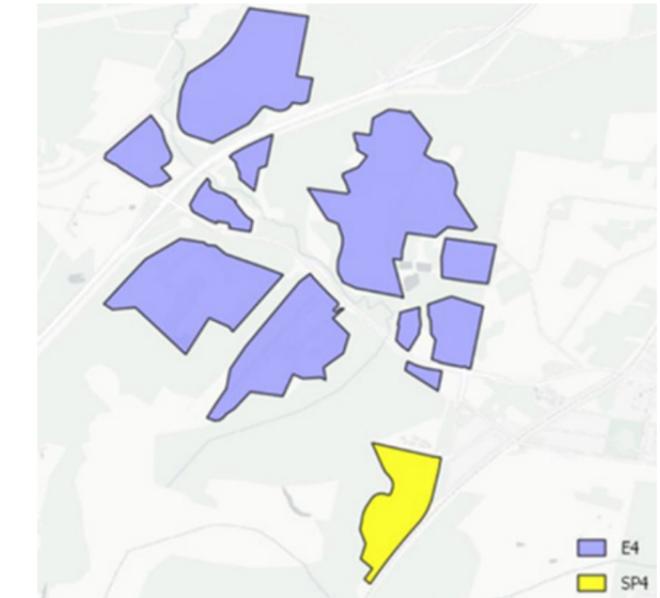


Figure 57 - Employment land in Wyong

4.0 Existing Conditions

Wyong Hospital:

The small employment precinct comprises around 4ha of E3 Productivity Support zoned employment land and provides around 5,855m² of floorspace. Recently Wyong Hospital has developed into this precinct and occupies 4,170m² or 71% of the total floorspace. A vet, service station and some residential properties are also located in the precinct. A large lot with two small residential buildings on it provides a good opportunity for precinct expansion.

Employment land in Wyong Hospital

Land use	Floorspace m2	%
Health/education	4,170	71%
Industrial	0	0%
Knowledge intensive	311	5%
Population serving	200	3%
Residential	1,115	19%
Vacant	60	1%
Total	5,856	100%

Land	ha	%
Developed/under construction	1.7	45%
Undeveloped/storage	2.1	55%
Total land area	3.8	100%

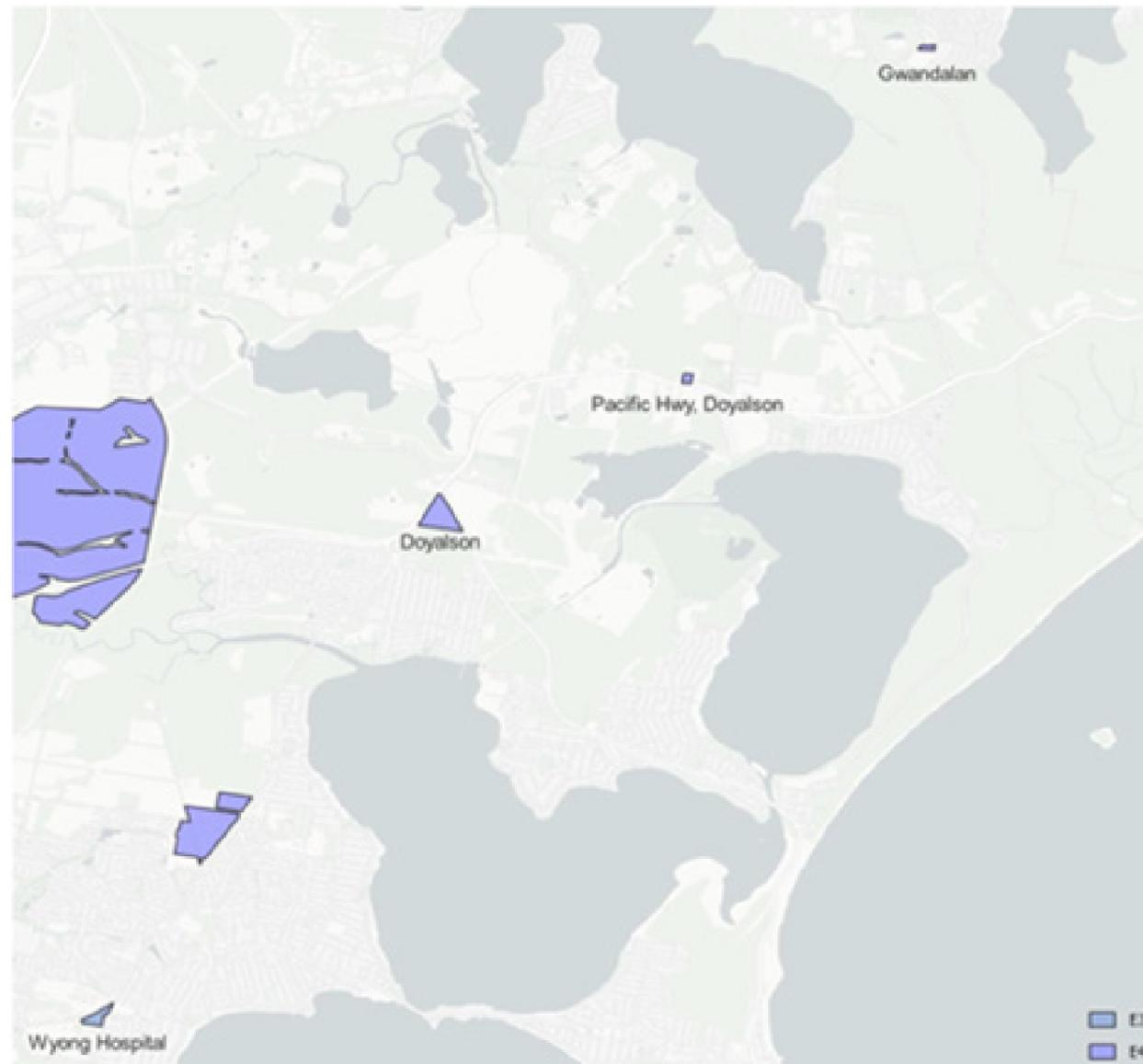


Figure 58 - Wyong Hospital employment land

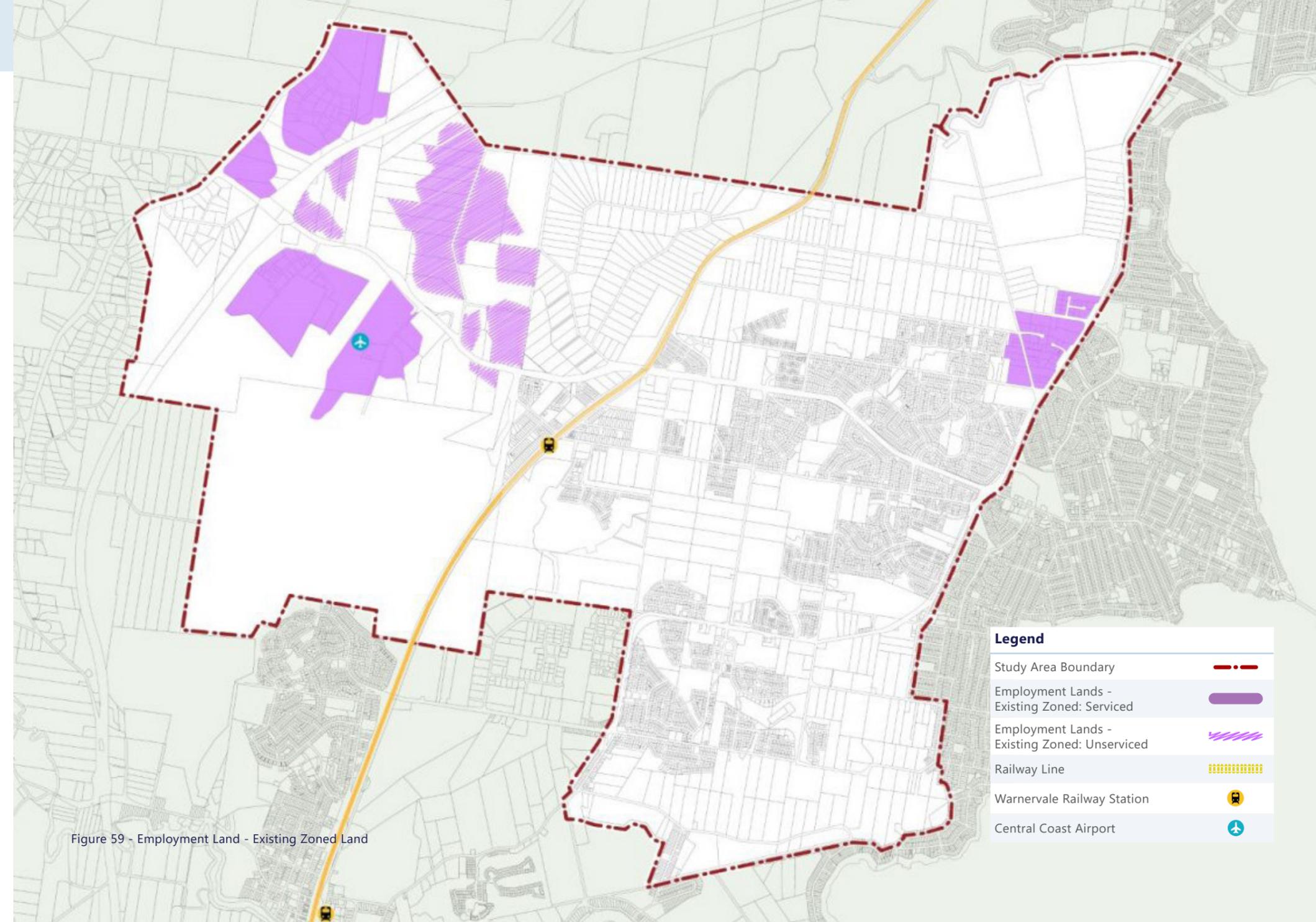


Figure 59 - Employment Land - Existing Zoned Land

4.0 Existing Conditions

4.6 Open Space & Recreation

4.6.1 Walking and Cycling Network

'Walkability is an essential feature of any healthy, liveable built environment.'

- Active Living NSW, 2018

A key objective of the Structure Plan is to increase walking and cycling infrastructure within the Study Area to ease traffic congestion, improve connections between local centres, build a healthier community and provide a safe environment to do so. Council has developed a Bike Plan and a Pedestrian Access and Mobility Plan (PAMP). Together, these documents guide Council's ongoing provision of an active transport network for Central Coast residents and visitors.

Figure 59 identifies existing footpaths and/or shared pathways within the Study Area. Shared paths can be used by bicycle riders and pedestrians. Some areas of the Study Area such as Wadalba are well connected by an existing pedestrian and shared pathway network. However, many areas earmarked for development have little to no pathway access.

There is an opportunity to consider how pedestrian and shared pathways can be better integrated within the Study Area as well as to wider attractors outside the Study Area. The Pacific Highway and Sparks Road represent barriers for pedestrian and cyclist connectivity between certain segments of the Study Area. This Structure Plan is an opportunity to identify strategic shared pathway connections to ensure that the network is functional, safe and encourages walking and cycling.



Figure 60 - Footpath Hamlyn terrace

The existing shared pathway network is already being improved as part of the Former 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 projects within the study area, which have been incorporated into this Structure Plan.

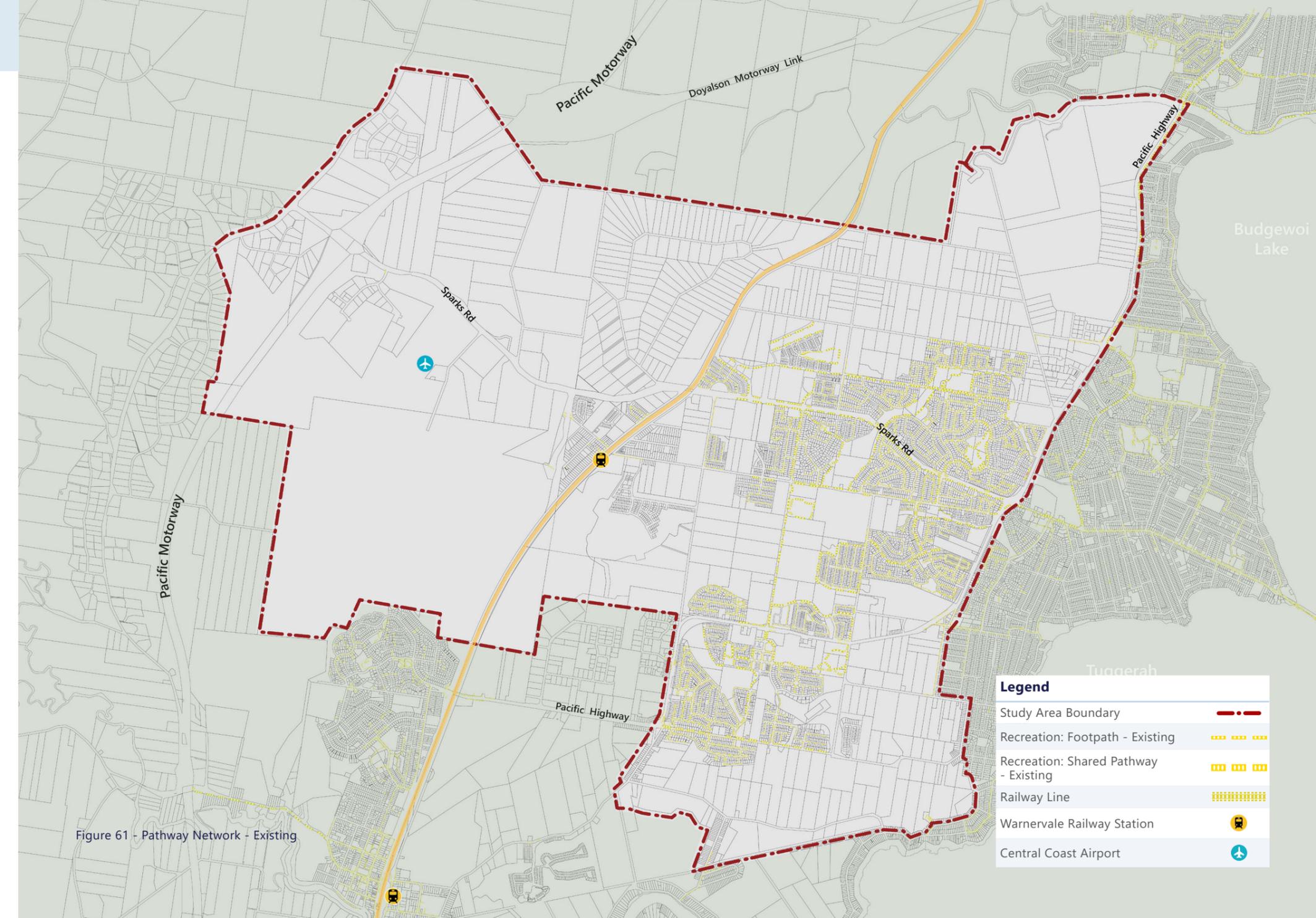


Figure 61 - Pathway Network - Existing

4.0 Existing Conditions

4.6 Open Space & Recreation

4.6.2 Public Open Space (Parks and Outdoor Recreation Facilities)

'The presence of multi-purpose open space encourages Active Living by facilitating both active and passive use of a place.'

- NSW Premier's Council for Active Living, 2010

Central Coast Playspace Strategy provides strategic direction for the development, and sustainable management of playspaces across the region. Open space areas that are accessible to local communities and within walking distance of homes, play a vital role in healthy and active communities. It is important to acknowledge the role greenspace plays in supporting and providing mental, physical, social, economic and ecological benefits.

The Central Coast is forecast to grow to a population of 400,878 by 2041 with the largest percentage age groups predicted to be the 5 to 9 years, and 40-44 years. The Warnervale-Wadalba District is forecast for the greatest increase in persons 0-14 years.

The draft Central Coast Open Space Strategy projected Warnervale would have a deficit of public open space for recreation and sporting land following population densities to 2041 for this location. The Study Area has several parks of different scales and functions.

Local Parks

Local parks (approx. 0.5 Ha) provide for regular use by local residents. A large number of small parks within the Study Area are located within a 400m catchment of existing residential areas. **Figure 63** identifies the location of existing playgrounds, and the location of these is suitable to provide adequate small scale recreation facilities within 400m to most existing residences. However, there are areas of Wadalba and Hamlyn Terrace that are not located within a 400m radius.

District recreation parks (1 - 4 Ha) attract and cater to the needs of a much broader population. The Study Area only has three large parks which cater to the needs of a broader population:

- Minnesota Road, Hamlyn Terrace Facilities - This park is considered significant due to the co-location of the community centre, shared pathways, public toilets, BBQ facilities, playground and sportsground.
- Hakone Road, Woongarra Facilities - This park is considered significant due to the co-location of shared pathways, public toilets, BBQ facilities, playground and sportsground.
- Louisiana Road, Wadalba Facilities - This park is considered significant due to the co-location of shared pathways, public toilets, BBQ facilities, playground and sportsground.

Figure 64 identifies that existing residential areas are generally well located (within 1km) to a park or outdoor sporting recreation area.



Figure 62 - Playground - Sorrento Way, Hamlyn Terrace

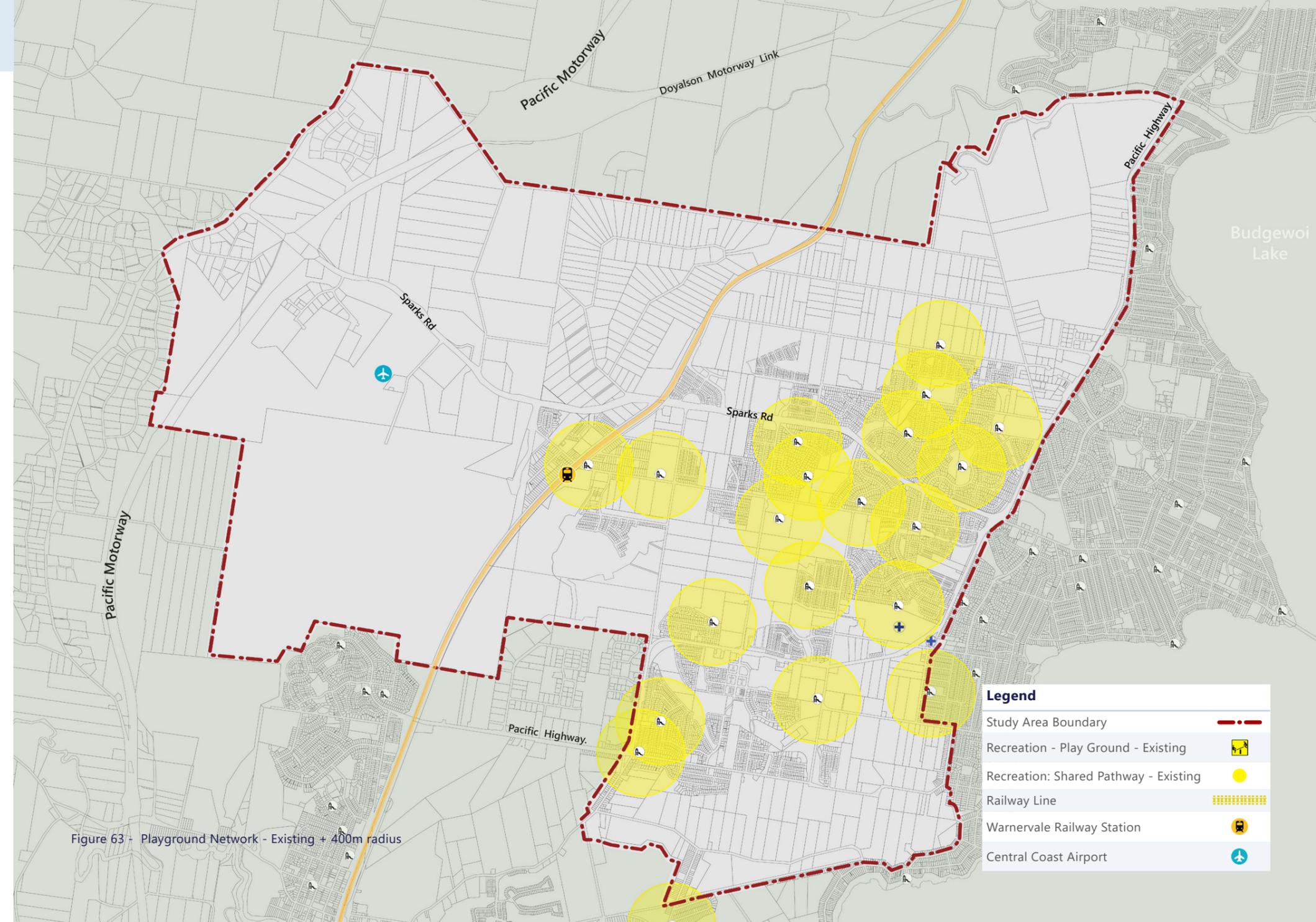


Figure 63 - Playground Network - Existing + 400m radius

Legend	
Study Area Boundary	
Recreation - Play Ground - Existing	
Recreation: Shared Pathway - Existing	
Railway Line	
Warnervale Railway Station	
Central Coast Airport	

4.0 Existing Conditions

Planned Parks

A planned district park known as "Hilltop Park" (5.29Ha) is proposed for the Warnervale Local Centre. Noting the size of the Study Area and population forecasts, the GWSP will need at least four district parks and two local recreation parks. Council's Contribution Plan for Warnervale proposes multiple new local parks within the Study Area, in addition to 'large' district level parks.

Open space recreation category	Area Type	Area Details	Total Area
Passive & Informal Active	Small Parks	Wadalba, Woongarrah & Hamlyn Terrace	9.37
	Large Parks	Wadalba, Woongarrah & Hamlyn Terrace	6.05
	Small and Large Parks	Precinct 7A	5.48
Formal Active	Large Parks	WTC – Ridge Park East & Ridge Park West	5.14
	Small & Large Parks	Wadalba South	3.65
	District Parks	Hill Top Park	4.59
Other	Playing Fields & Courts	Wadalba Sporting Complex & WWAHT Sports Fields Jensen Road Playing Fields	30.72
Other	Semi natural areas	Woongarrah	0.89
TOTAL PLANNED PROVISION			61.48
FOR AN EXPECTED POPULATION OF 36,218			=1.70 ha per 1,000 people

Recreation

Council has identified the need to provide an Indoor Recreation Centre within the Greater Warnervale District as a regional facility to provide prospective residents with the ability to satisfy a range of passive and active recreational needs. The principal components of the proposed Indoor Recreation

Centre are aquatic facilities, pools, health & fitness areas, amenities and external areas.

A Strategic Analysis Report prepared in 2018 reviewed and recommended the needs of the new aquatic and leisure facilities. It identified that the future Indoor Recreation Centre should

cater for a much larger catchment population and recommended that Council provide a regional size aquatic leisure centre that has the capacity to cater for 600,000 to 750,000 annual visits if operationally sustainable in a high-profile central catchment location.

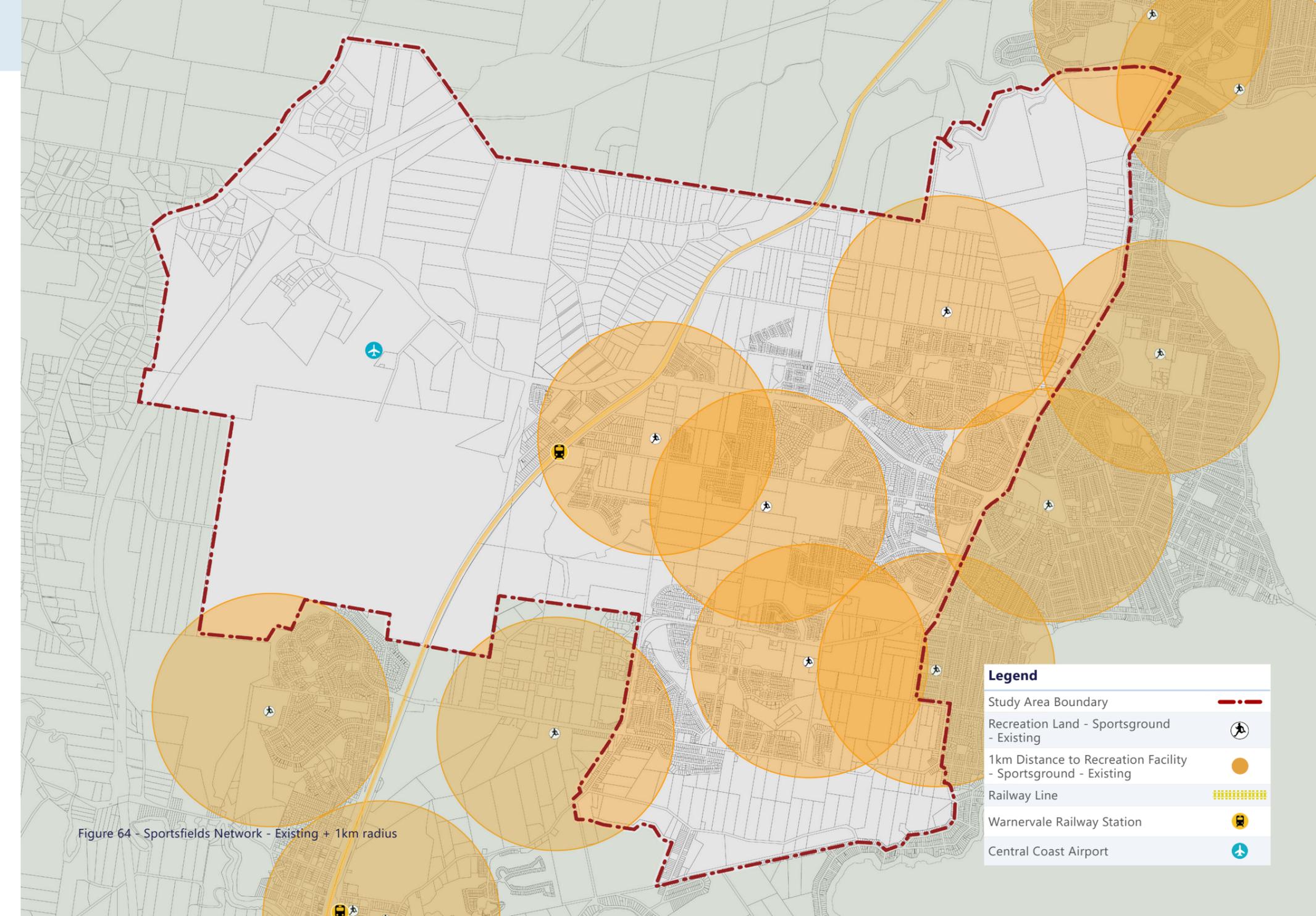


Figure 64 - Sportsfields Network - Existing + 1km radius

Legend	
Study Area Boundary	
Recreation Land - Sportsground - Existing	
1km Distance to Recreation Facility - Sportsground - Existing	
Railway Line	
Warnervale Railway Station	
Central Coast Airport	

4.0 Existing Conditions

4.7 Community

4.7.1 Community Facilities

Community facilities are public places where people can gather together for recreational, educational and social activities. The Study Area is located within the Warnervale/Wadalba social planning district. The Study Area currently contains the following community facilities (see Figure 67):

- Hamlyn Terrace Community Facility – located on Minnesota Road, Hamlyn Terrace
- Wadalba Community Centre – located within the Wadalba Community School
- Warnervale Hall – Warnervale Road, Warnervale (next to Warnervale Oval)

The following facilities are located outside the Study Area but easily accessible:

- Lakelands Community Centre (Literary Close, Kanwal)
- Gravity Youth Centre, Lake Haven Local Centre

The following community facilities are proposed in the Warnervale District:

- Warnervale Smart Hub - Hub comprises multipurpose community centre, youth space, arts/cultural space, customer service space, technology space and library.
- Indoor Recreation Centre - Facility includes aquatic hall & pools, health & fitness areas, amenities and external areas
- Additional Local Community Centre - Multipurpose centre in Jensen Road Wadalba – Co-located with proposed playing fields.

Where possible, it is desirable to co-locate or cluster community facilities in highly visible central locations with connectivity to complimentary land uses and public transport to enhance community access and safety and facilitate high levels of usage.



Figure 65 - Wadalba Community Facility



Figure 66 - Hamlyn Terrace community facility

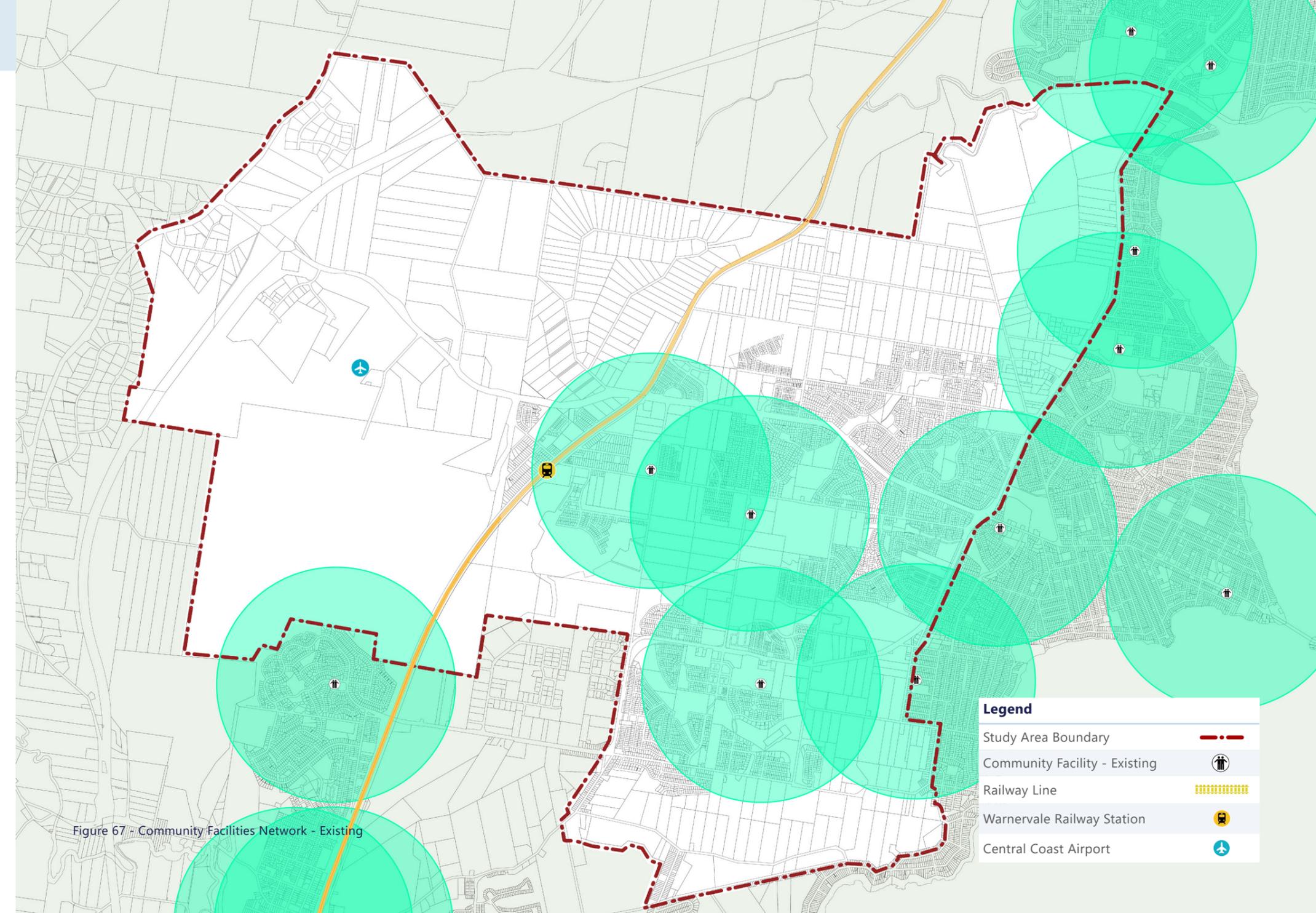


Figure 67 - Community Facilities Network - Existing

Legend	
Study Area Boundary	
Community Facility - Existing	
Railway Line	
Warnervale Railway Station	
Central Coast Airport	

4.0 Existing Conditions

4.7 Community

4.7.2 Education Facilities

Primary / Secondary Education

The Study Area includes a range of public and private primary and secondary schools (see Figure 69):

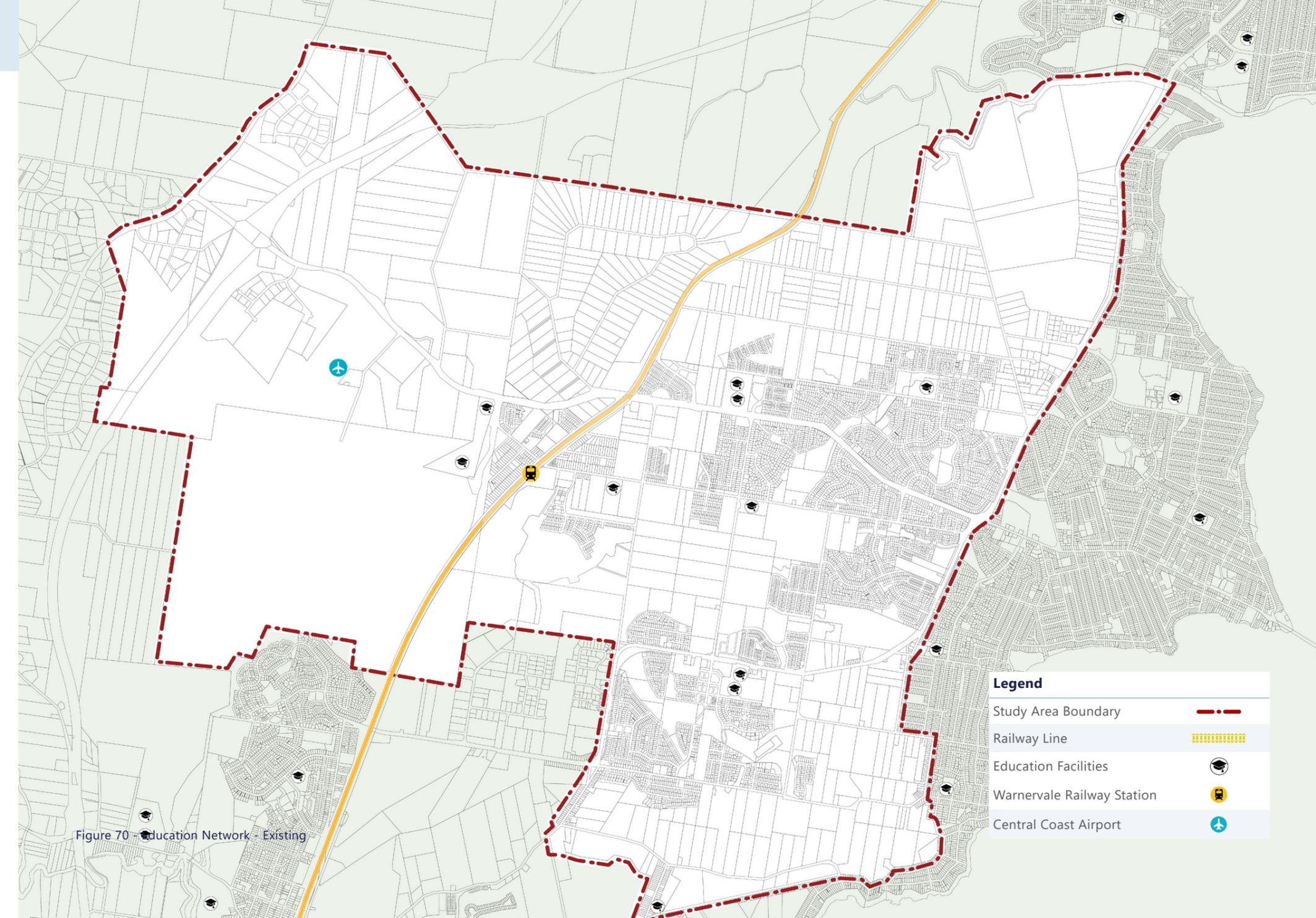
- MacKillop Catholic College – Kindergarten to Year 12
- Wadalba Community School – Kindergarten to Year 12
- Warnervale Public School - Kindergarten to Year 6
- Woongarra Public School - Kindergarten to Year 6
- Lakes Anglican Grammar - Kindergarten to Year 12
- Porters Creek Public School – Kindergarten to Year 6

Tertiary Education

The University of Newcastle is the only University facility on the Central Coast however this campus falls outside the Study Area. There are no other tertiary education facilities with the Study Area. Schools Infrastructure NSW is the development arm of the Department of Education and Training (DET). DET monitor growth areas such as Greater Warnervale to determine any capacity shortfalls in existing schools.



Figure 68 - Warnervale Public School



4.0 Existing Conditions

4.7 Community

4.7.3 Aged & Affordable Housing

Over the next ten years, the most rapid population growth is expected among those aged 70 years and older. Approximately 20% of the Central Coast population will be aged over 70 years by 2031 (Source: Caring for the Coast Strategy 2019–2024). It is important to provide a mix of housing types that cater to an ageing population, that can be adaptable in their use and that are not prohibitive to particular demographics.

There are a number of aged care facilities within the Study Area including:

- Hakea Grove Aged Care, Hamlyn Terrace
- Casuarina Grove, Hamlyn Terrace
- Uniting Starrett Lodge, Hamlyn Terrace
- Catholic Healthcare – Our Lady of Loreto Gardens, Hamlyn Terrace
- Lusso Estate, Wadalba
- Kanwal Gardens Care Community, Kanwal
- William Cape Gardens, Kanwal
- Arcare Aged Care, Kanwal
- Oak Tree Retirement, Kanwal
- Warnervale Gardens, Woongarra

Given the demographics of the Study Area, demands for additional aged care beds, independent living units and seniors housing will continue to grow. A variety of housing product types should be delivered to enable residents to remain in place with options ranging from low care independent living to high care housing options.

While the delivery of seniors housing is largely governed by the Housing SEPP review of zoning

land use tables in residential and employment zones should be considered to ensure the delivery of housing to support the aging population is enabled efficiently. Precinct 9 contains Wyong Hospital and is earmarked as a health and medical precinct. This precinct has potential to encompass a wide range of healthcare facilities and aged care facilities.

Affordable Housing

Data on dwelling tenure provides insights into the socio-economic status of an area as well as the role that the area plays in the housing market. The Study Area identifies the following contributors for greater need for affordable housing in this precinct;

The 2021 census data identified the following in the Warnervale-Wadalba district:

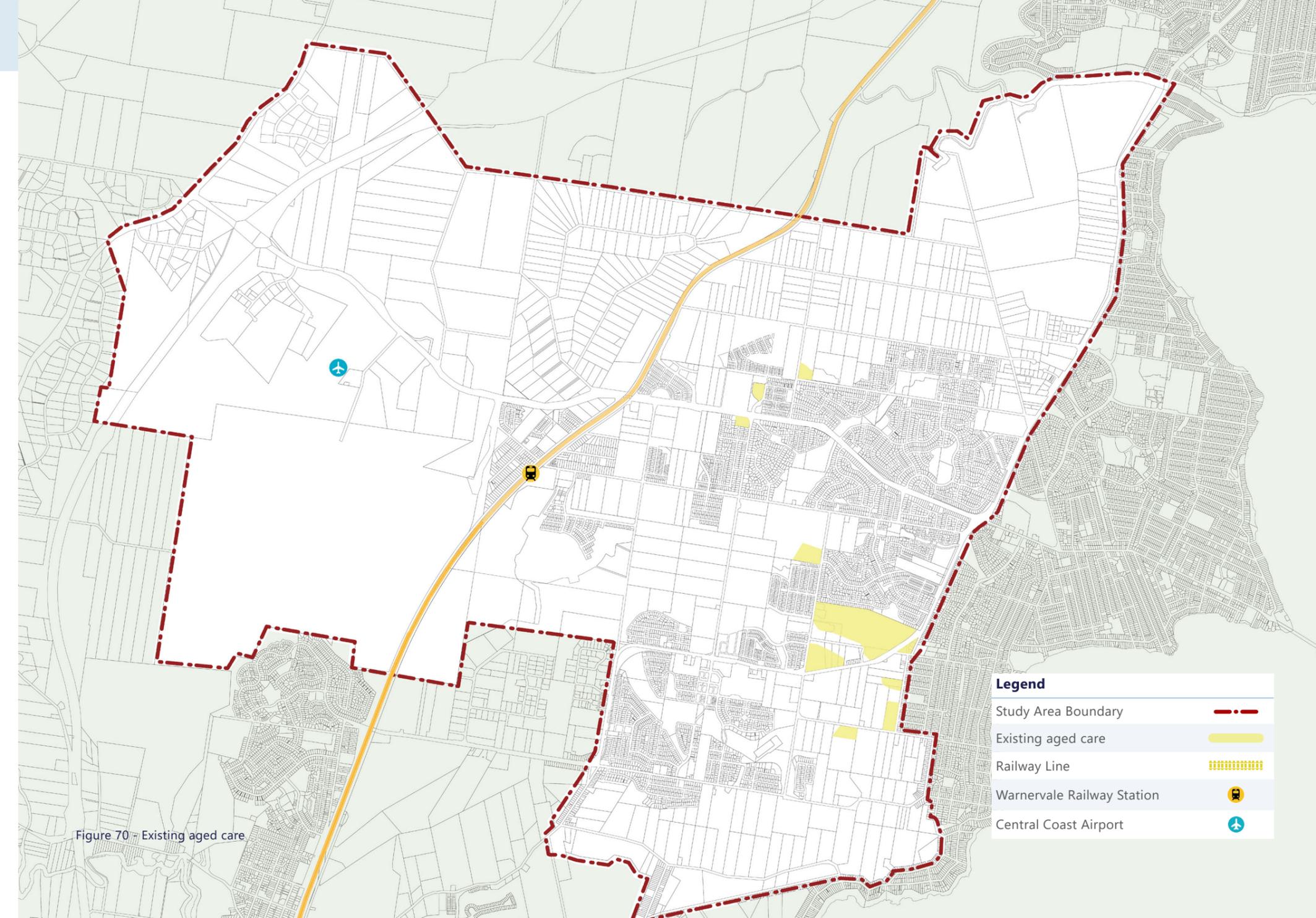
- 24.7% of households in Warnervale-Wadalba owned their dwellings compared to 34.5% of households on the Central Coast and 31.5% in New South Wales.
- 31.3% of households rented compared to 27.5% of households on the Central Coast and 32.6% in New South Wales.
- Weekly rents and median monthly loan repayments is indicative of the residential role and function of an area and may also be indicative of the level of households in the community under “housing stress”.
 - Median Weekly Rent – Warnervale-Wadalba \$495, Central Coast \$400, New South Wales \$420.

- Median Weekly Mortgage – Warnervale-Wadalba \$541, Central Coast \$500, New South Wales \$541 there was a larger proportion of households paying high mortgage repayments compared with the broader Central Coast region.

As evident above, there is a larger proportion of households paying higher rental payments compared to the rest of the Central Coast LGA and broader New South Wales.

This data suggests property values in the area are at the higher end of the market and reflects the impact the constrained supply of diverse housing options and private rental and social housing is having upon housing affordability in the context of a rapidly growing population. The rate of medium and higher density development in the Study Area is much lower than the Greater Sydney average and is impacting very low income renters and those more vulnerable in the local housing market.

A need for more affordable housing for Aboriginal communities is identified in the draft Local Housing Strategy along with collaboration with the Darkinjung Local Aboriginal Land Council to promote greater opportunity for social housing. This will include co-located planning with Darkinjung LALC to assist with the provision of social housing.



4.0 Existing Conditions

4.8 Land Use Conflicts

4.8.3 Mining & Resource Activity

Parts of the Study Area are located within a declared Mine Subsidence District (MSD) (see Figure 72). Future development within an MSD will require approval from Subsidence Advisory. Parts of the Study Area also overlie coal titles. For locations that overlie coal titles and are located within a mine subsidence district, future development may require Subsidence Advisory to consult with the title holder regarding mining impacts at the time of assessment.

For those parts of the Study Area not within a declared Mine Subsidence District, Subsidence Advisory approval is not required for development in areas outside a Mine Subsidence District under the Coal Mine Subsidence Compensation Act 2017 (the Act).

The Study Area contains the following consolidated coal leases (CCL); exploration licences (EL); or Mining or Production Applications (MLA):

- CCL 722 - Held by Centennial Munmorah Pty Ltd. This consolidated coal lease expires in June 2028.
- EL 4911 & EL 4912 - Held by Kores Australia Pty Ltd as part of Wallarah 2 Coal Project (W2CP). These coal exploration licences are due to expire in May 2026.
- ML 1789 - Held by Kores Australia Pty Ltd as part of W2CP. This coal mining licence is due to expire in June 2040.
- AUTH 405 - Held by Kores Australia Pty Ltd as part of W2CP. This mining authorisation is due to expire in August 2024.
- ALA 50 (Assessment Lease Application) - Application by Boral Montoro Pty Ltd. Assessment

Leases (ALs) are usually applied for when resources have been discovered and they are undergoing feasibility and/or other technical studies. This application is pending approval (grant).

The impact of underground mining activities on surface development can be managed by building

controls and staging of surface development to ensure that it occurs after extraction subsidence has largely occurred. Future planning proposals will need to account for mining restrictions and extraction potential at these sites, as well as the potential for land use conflicts.



Figure 71 - Extent of land fragmentation - Bruce Crescent, Wallarah

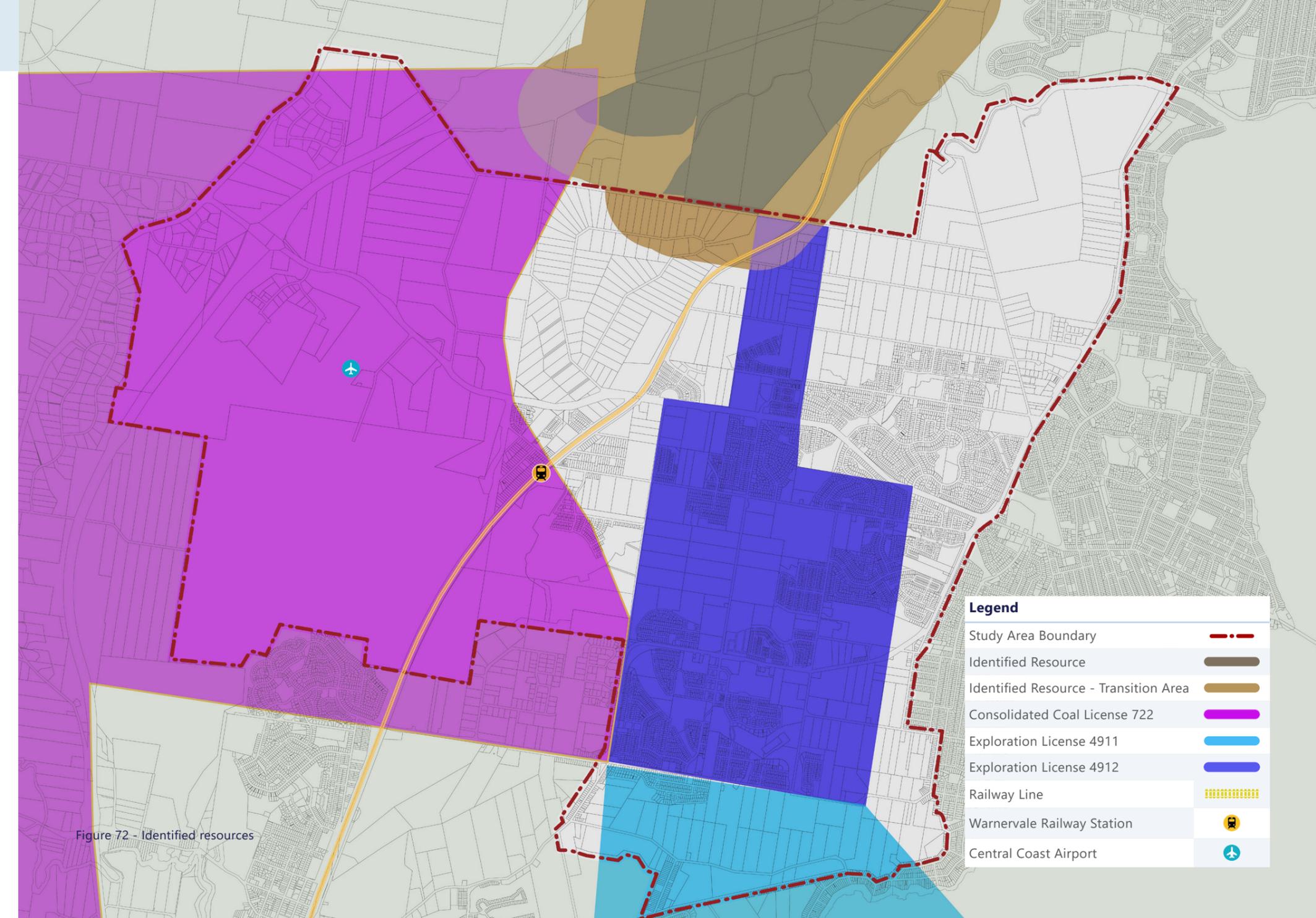


Figure 72 - Identified resources

Legend	
Study Area Boundary	
Identified Resource	
Identified Resource - Transition Area	
Consolidated Coal License 722	
Exploration License 4911	
Exploration License 4912	
Railway Line	
Warnervale Railway Station	
Central Coast Airport	

4.0 Existing Conditions

4.8 Land Use Conflicts

4.8.1 Land Ownership

There are no significantly large landholdings within the Study Area, with the exception of Council-owned land that is predominantly for environmental conservation, recreation or drainage purposes (see Figure 74). Land west of the Warnervale Local Centre is also owned by Minister for Planning & Environment. The remainder of the Study Area is highly fragmented and under private ownership. This presents an obstacle to development in the future, as the fragmented ownership requires numerous landowners to work together cooperatively to rezone, redevelop land and fund infrastructure.



Figure 73 - Extent of land fragmentation - Bruce Crescent, Wallarah

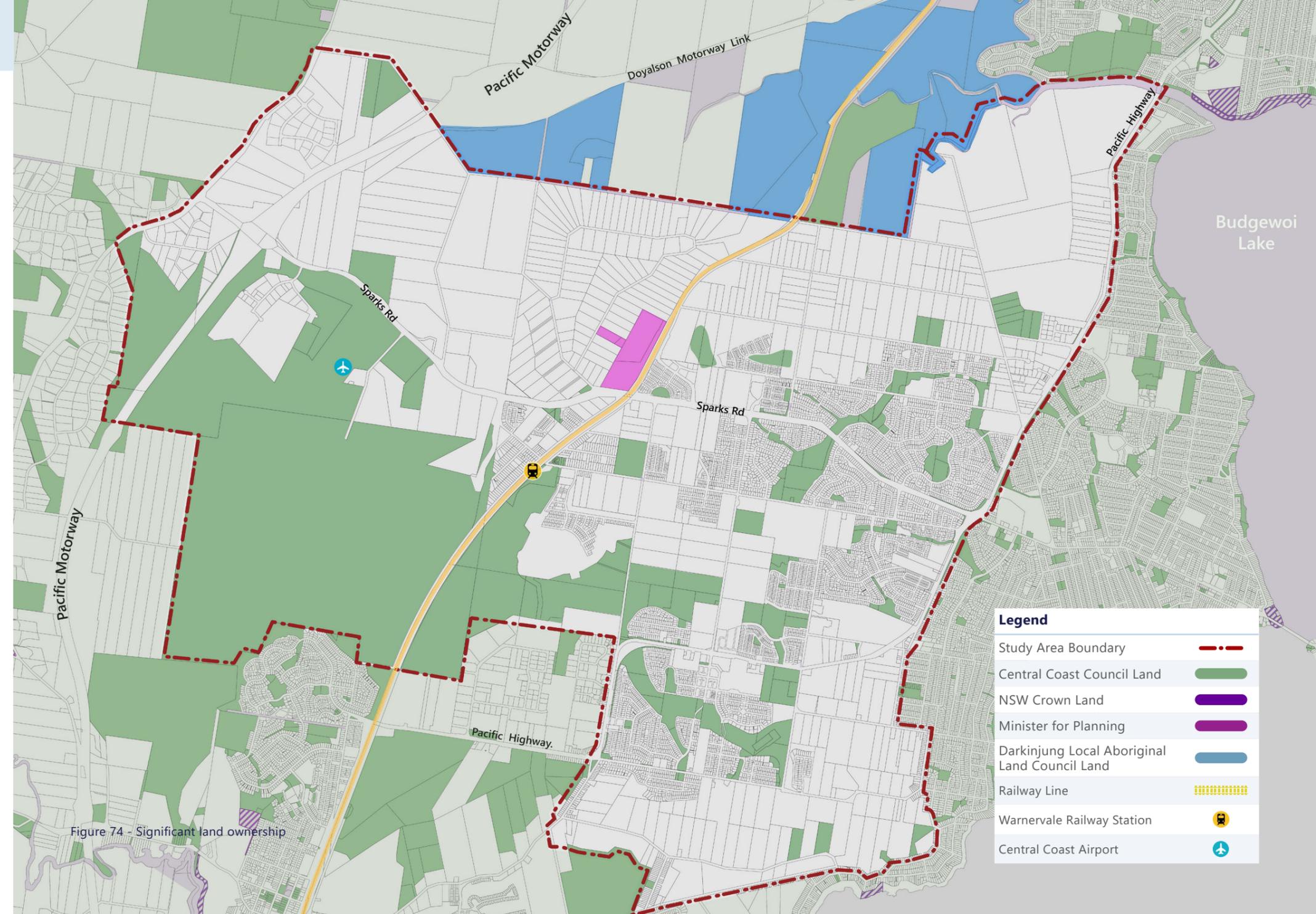


Figure 74 - Significant land ownership

4.0 Existing Conditions

4.9 Character

4.9.1 Built Environment

The built form within the Study Area is varied. The majority of land within the western portion of the Study Area remains rural in nature. There is minimal development with the exception of the industrial area near the M1 Motorway. The eastern portion of the Study Area comprises a mix of new residential release areas with a small area of industrial land on the eastern periphery. The new residential release areas are defined by low density detached dwellings.

The character of the new residential release areas is quite uniform in appearance, with the majority of housing constructed of brick veneer with a tiled roof. Colours, textures and landscaping are the main variations within this area. Lot sizes are generally small (450m² -500m²), with large dwellings which limits opportunities for landscaping and mature trees. Roads are often very narrow, which reduces the dominant nature of the roadway however limits movement and street parking. Garages tend to be a visually prominent feature of the new release areas, reducing visual amenity. Private gardens contribute to improving the visual character of the streetscape. This area contains a large number of street tree plantings and landscaped open space areas.

The Wadalba local centre on the Pacific Highway is consistent with contemporary supermarket and small specialty shop retail development. Warnies Cafe at Warnervale has local heritage significance and represents a unique building form for this area.



Figure 75 - Typical residential street in new-release area

Local Character' is a neighbourhood's unique identity, what makes it special. It is a combination of the landscape, people, built environment, history, culture and tradition, and looks at how these factors interact to create the character of an area.

- Central Coast Council, 2021



Chapter 5

5.0 Existing Precincts



The study area has 5 distinct precincts, identified based on existing and future predominant land use directions:

Precinct 1 - Wyong Employment Zone

Role and Function

The Wyong Employment Zone (WEZ) is a regional employment hub for the Central Coast. The WEZ is located halfway between Sydney and Newcastle, adjacent to the Sparks Road and M1 Pacific Motorway interchange. The WEZ is predominantly zoned IN1 General Industrial zone and C2 Environmental Conservation zone under Central Coast LEP 2022, reflecting the balance between generating employment within the region, and conserving the environment. These lands are generally flood affected and are understood to be of high biodiversity value.

The WEZ currently provides a range of economic and employment opportunities focused on manufacturing, warehouse and distribution and other supporting commercial and industrial land uses that require large floor plates. The WEZ supports the Central Coast Airport and supporting employment precinct to the west.



Figure 76 - Central Coast Airport

The airport caters for aircraft leisure flights with some training activities also carried out. The airport is bounded by significant environmental lands including the Porters Creek wetland.

Issues

- The establishment of biodiversity corridors as places for priority biodiversity offsets. A precinct approach should be taken to biodiversity offsetting to protect riparian and terrestrial biodiversity.
- There are large areas of IN1 General Industrial zoned land that are undeveloped and unserved by water and/or sewer infrastructure.
- Infrastructure funding will be required at both a local government and state government level, for:
- Water and sewer servicing, as well as roads and intersections.
- Offsetting to satisfy biodiversity conservation outcomes.

Precinct 2 - Warnervale Village

Role and Function

This Precinct is located adjacent Warnervale Station and is proposed to be one of two local centres in Warnervale. With the upscaling of this centre from a neighbourhood centre to a local centre, there is an opportunity to provide a mix of low and medium density housing supported by complementary retail, educational and recreational land uses.

The northeast and north west of the Precinct comprise existing residential development. The subdivision of these residential areas dates back to 1913, however the housing stock largely reflects project home development forms of the

1980's-1990's. Lakes Anglican Grammar is also located in the north west of this precinct.

The southeast portion of the precinct is a new-release area currently under construction. To the south of the new-release area is the extensive Warnervale floodplain which has recently been transferred to Council ownership and will offer important environmental and recreational opportunities.

The southwest portion of the precinct is zoned SP4 Enterprise under the Central Coast LEP 2022 and is subject to a future masterplan which will consider the highest and best use of the site. The masterplan will seek to stimulate the economy and provide a diverse range of jobs for the local community.

Issues

Funding will be required for:

- Upgrades to the existing Warnervale Railway Station;
- Extension of Warnervale Link Road including intersections for access to proposed Business Precinct;
- Improved cycle and pedestrian links.



Figure 77 - Warnies Cafe

Precinct 3 - Wallarah Residential

Role and Function

The Greenfield residential release area to the north-west of Warnervale Local Centre provides opportunities for residential housing to accommodate population growth. This Precinct includes the locality around Bruce Crescent, Wallarah which is currently utilised for large-lot rural residential development.

The majority of this land is earmarked for future employment. Subject to a review of employment lands and economic demand, this area may be investigated for future residential land use.

Planning for development in this precinct will place a priority on protecting environmental corridors and managing flood and bushfire hazards.

Issues

- Large amount of land fragmentation with high-value properties may limit development in the short to medium term.
- Potential noise issues associated with railway line.
- Servicing sequencing and planning.
- Road networks through to Sparks Road and barriers to movement created by the railway line.
- Community feedback on the long-term use of land.

Precinct 4 - Warnervale Local Centre

Role and Function

Warnervale Local Centre (former Town Centre) was designed to provide key services to the local population including commercial, civic and community services. The centre was originally planned on the assumption that a new railway station at North Warnervale would be constructed and the local centre designed around this precinct.

Transport for NSW has withdrawn plans for the future North Warnervale railway station. This has limited the nexus between the centre and civic services that can be provided in this location. At present, the proposed Warnervale Local Centre contains the following development:

- MacKillop Catholic College (Kindergarten - Year 12).
- GP Super Clinic.
- Small-lot residential development adjacent to MacKillop CC.
- Large areas of residential development throughout the remainder of the site.
- Large areas of employment and mixed-use lands earmarked for a supermarket use and supporting speciality shops.
- Hilltop Park located centrally within the precinct, smaller public open space areas, and connecting biodiversity corridors.
- State Government owned land on the western side of the railway line and the disconnection to the remaining local centre lands as a consequence of the changed infrastructure crossing the railway line. Servicing and movement networks for this land is constrained by the C2 zoned land and existing road network.

- At the time of preparing this Structure Plan, a State Significant Development Application for a neighbourhood shopping centre within this Precinct was under assessment. It includes a Woolworths supermarket with specialty retail and commercial uses (SSD-59074487). This forms the lower portion of the E1 zoned land and the remainder of the land is undeveloped.

Issues

Removal of the proposed railway station from State Government planning documents will have consequences for the future of the higher-density residential and commercial opportunities and supporting services.

- The future development of the employment and mixed use zones needs to be reconsidered in this context.
- Completion of the residential land release areas and associated road networks particularly at the northern perimeter roads.
- Sequencing of the local centre lands.



Figure 78 - Housing in Warnervale Local Centre

Precinct 5 - Wadalba Residential

Role and Function

Wadalba Local Centre

The Wadalba Local Centre provides two supermarkets together with specialty shops and services with a commercial footprint maintained at less than 7,000m2.

Wadalba South Residential Release Areas

The Greenfield residential release areas to the south of Wadalba Local Centre will provide significant opportunity for residential housing to accommodate population growth. The majority of growth is likely to take the form of detached housing. Planning for this area will focus on protecting environmental corridors and significant coastal wetlands and ensure flooding and bushfire hazards are managed.

Issues

- Entry and exit from the Pacific Highway will require review as the centre grows.
- Protection of biodiversity corridors
- Water catchment management and servicing



Figure 79 - Hamlyn Terrace new release area

Precinct 6 - Hamlyn Terrace Residential

Role and Function

The Greenfield residential release area to the south of the proposed Warnervale Local Centre provides the bulk of existing residential development, as well as some further opportunities for residential housing to accommodate population growth. The majority of this residential housing is detached housing, however recently there has been a small surge in small-lot housing which is encouraged to provide greater housing diversity in the Study Area. Subject to a review of infrastructure and servicing capacity, the potential exists to achieve higher residential densities and housing targets.

Planning for development in this precinct will place a priority on protecting the Warnervale floodplain and biodiversity corridors, together with ensuring flooding and bushfire hazards are accounted for in local planning.

Issues

- Entry and exit from the Pacific Highway will require review as the area grows.
- Purchase of land within the Warnervale floodplain for environmental conservation and stormwater management.
- Establishment, protection and management of biodiversity corridors

Precinct 7 - Woongarra Residential

Role and Function

The Greenfield residential release area to the northeast of the Warnervale Local Centre provides opportunities for residential housing. The majority of this residential housing will be in the form of detached housing. This existing part of the precinct is currently zoned for rural purposes and is predominantly utilised for large-lot residential development. Planning for development in this precinct will place a priority on protecting environmental corridors, servicing sequencing, road networks, together with ensuring flooding and bushfire hazards are accounted for in local planning.

Issues

- Large amount of land fragmentation may limit future development for the foreseeable future.
- The CCRP 2041 has added an area of mixed-use investigation area to this precinct.
- This precinct is affected by the Charmhaven sewer odour buffer. The upgrade has the potential to increase odour generation within the Study Area. Pending further odour studies and refinement of the odour buffer zone, this land may be suitable for residential or employment purposes.

5.0 Existing Precincts

Precinct 8 - Wadalba East Residential

Role and Function

The Greenfield residential release areas to the east of Wadalba Local Centre will provide significant opportunity for residential housing to accommodate population growth. This area will serve to support local commercial and employment precincts, including scope for a future Wadalba East Community Centre to service the proposed residential development and supplement residential lands to the east of the precinct. The majority of growth is likely to take the form of detached housing. The precinct supports biodiversity corridors and connectivity with regional corridors.

Issues

- This precinct contains significant core habitat and remnant endangered ecological communities. Planning for this area will focus on protecting environmental corridors and significant coastal wetlands, and ensure flooding and bushfire.
- The area also has potential for Aboriginal cultural heritage, which will be identified and appropriately managed through the planning process.



Figure 80 - Charmhaven industrial area

Precinct 9 - Health and medical

Role and Function

Wyong Hospital and Health Precinct

Wyong Hospital continues to develop and expand as the regional hospital for the north of the Central Coast. To the south and east of the Hospital is a growing Health Precinct, which will provide a range of support health functions to service the region.

Seniors Living Housing Precinct

The precinct to the south of the Wyong Hospital and Health Precinct has a number of seniors living and retirement housing precincts. This retirement living is able to leverage against the close proximity of the Hospital and Health Precinct to the north, as well as the existing Wadalba Local Centre.

Issues

- Planning for this area will focus on protecting environmental corridors and significant coastal wetlands and ensure flooding and bushfire hazards are managed.
- The area also has potential for Aboriginal cultural heritage, which will be identified and appropriately managed through the planning process.



Figure 81 - Charmhaven industrial area

Precinct 10 - Charmhaven

Role and Function

Precinct 10 is located in the north-west of the Study Area. This precinct is predominantly utilised for large lot residential, and industrial land uses. The new-release area within this Precinct is identified within the CCRP 2041 for Mixed-Use investigation purposes, however due to the prominent location alongside the Pacific Highway, may have the potential to develop in the long term for employment purposes, subject to the resolution of strategic constraints such as ecology and mining. This change of proposed future use will also require justification from an economic land use sense.

Issues

- Parts of the western and northern portion of Precinct 10 were revoked from Mine Subsidence Districts (MSD) on 1 July 2017. The eastern part of the Charmhaven precinct is affected by the North Entrance Swansea MSD. It is recommended that the proponent consult with the MSB concerning potential constraints.
- The northern and central portion of Precinct 10 contains significant ecological constraints, in particular there are some large populations of the threatened tree species *Angophora inopina*.
- Parts of this precinct are located within the Charmhaven sewerage treatment odour buffer. As per Council's Buffer Zone Policy (2020), the buffer zone for Charmhaven STP is yet to be formalised. The last odour assessment was prepared in 2015 and identified a potential buffer zone, however this zone may need to be increased in size if additional wastewater from this development needs to be treated at Charmhaven STP.

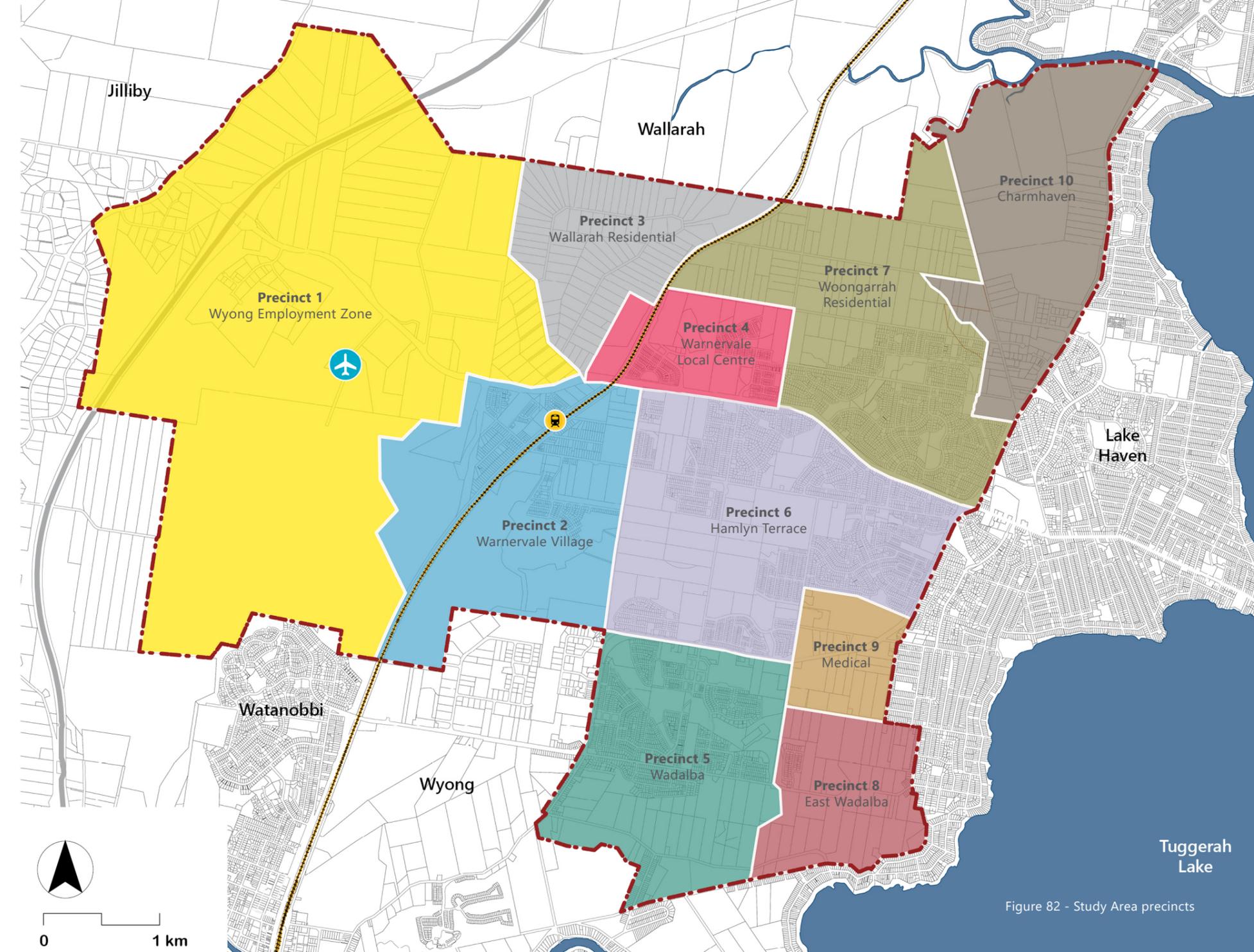


Figure 82 - Study Area precincts

Chapter 6

6.0 Opportunities



6.0 Opportunities

6.1 Environment

6.1.1 Biodiversity

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

Principle 1:

Protect, preserve and enhance the rich environmental heritage of the area including waterways, bushland and wildlife corridors.

ISSUES

- Endangered Ecological Communities and threatened species.
- Need to define local biodiversity corridors.
- Fragmented vegetation and broken biodiversity corridors.
- Ongoing security and management.

OPPORTUNITIES

Local Biodiversity Corridors

Developing a system of biodiversity corridors and habitat networks is important to restore landscape fragmentation, provide habitat and assist with the movement of species. Maintaining and restoring connections between protected areas and areas of high biodiversity value are vital to landscape health and biodiversity of the region.

Local corridors are linkages that connect remnant patches of vegetation and landscape features such as creek lines, wetlands and ridgelines. They are sometimes referred to as 'green corridors' or 'wildlife movement corridors.' This Structure Plan presents an opportunity to identify gaps and future connections that can be refined as part of future planning proposals.

Suitable corridor width depends on the purpose of the corridor – i.e. local vs regional corridor. The width should be maximised to provide greater habitat and foraging diversity and reduce impacts from adjoining land uses and associated edge effects such as weeds and predators.

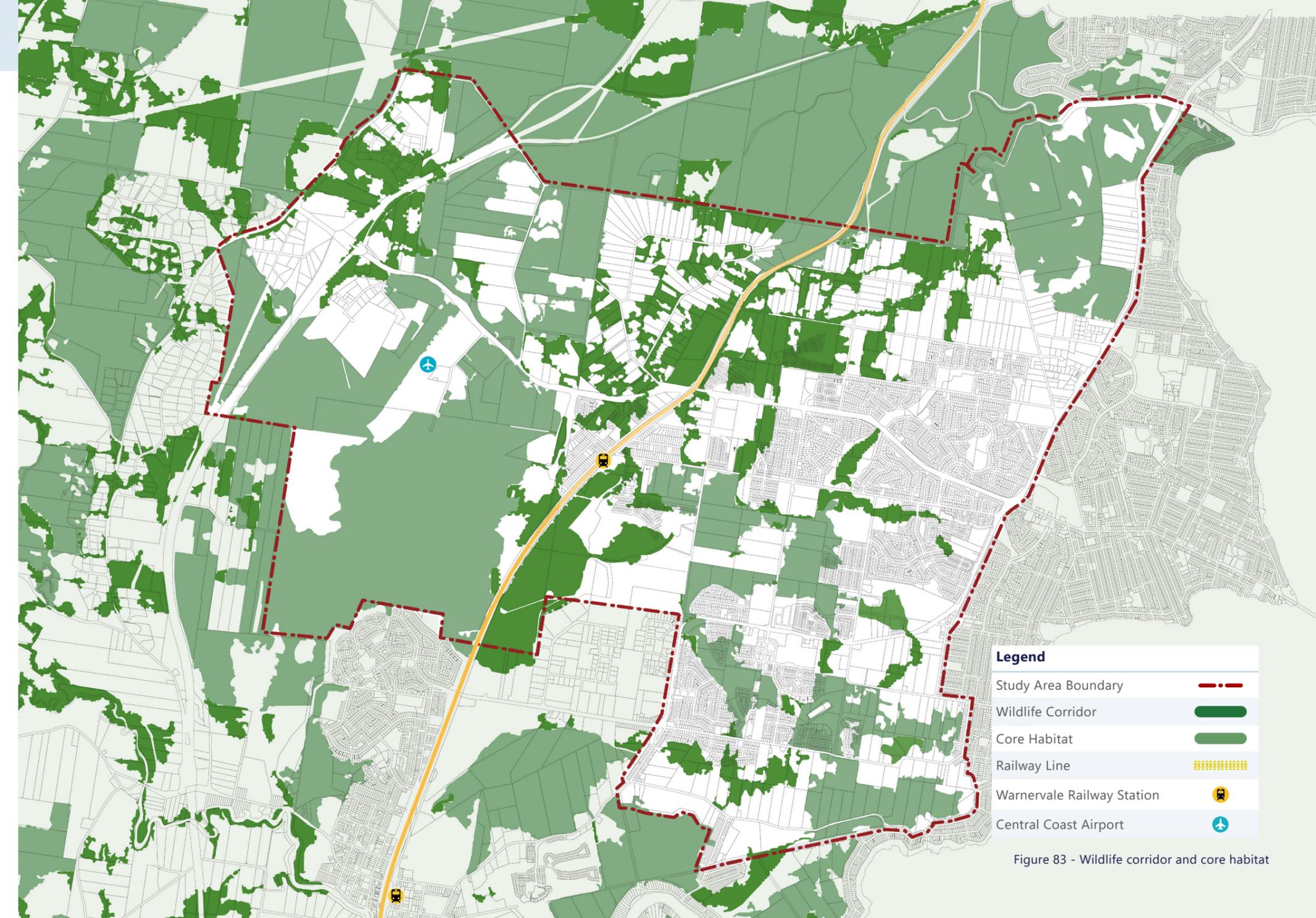
The majority of local biodiversity corridors in the Study Area are situated on private land. Landowners within the corridor are encouraged to review the NSW Government's suite of biodiversity conservation legislation, in order to learn more about agreements that landholders can enter to protect and conserve 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 may also be eligible to receive payments to support site management. There are opportunities to identify appropriate mechanisms to achieve rehabilitation and enhanced landscape connectivity through the rezoning and development assessment process.

Regional Biodiversity Corridors

The CCRP 2041 identifies regionally significant biodiversity corridors at a broad scale (see Figure 83). Planning proposals must ensure the biodiversity network is protected within an appropriate conservation zone unless an alternate zone is justified following application of the avoid, minimise, offset hierarchy.

The *Biodiversity Conservation Act 2016*, together with the Biodiversity Conservation Regulation 2017, outlines the framework for addressing impacts on biodiversity associated with development and clearing in NSW. The Biodiversity Offsets Scheme is a framework to avoid, minimise and offset impacts on biodiversity, and to ensure land that is used to offset impacts is secured in-perpetuity. Planning proposals should apply the 'avoid, minimise and offset' hierarchy.



Legend	
Study Area Boundary	---
Wildlife Corridor	■
Core Habitat	■
Railway Line	---
Warnervale Railway Station	🚂
Central Coast Airport	✈️

Figure 83 - Wildlife corridor and core habitat

6.0 Opportunities

6.1 Environment

It is recommended that the following issues be reviewed in conjunction with detailed ecological studies, as part of precinct-based rezoning proposals:

- Identify appropriate zoning changes to introduce environmental zones based on environmental attributes and the need to define the biodiversity corridors.
- Consider appropriate zones within the CCRP 'strategically located constrained sites' and identify any appropriate zoning changes.

Central Coast Strategic Conservation Plan

The Department of Planning, Housing and Infrastructure is undertaking strategic conservation planning (SCP) in the Central Coast region to balance expected growth with the protection of biodiversity at a landscape scale. The preparation of a Strategic Conservation Plan to support urban development while protecting plants, animals, and their habitats, is underway. The work involves assessing impacts on biodiversity from future urban growth on the Central Coast and developing a conservation plan to offset new development.

The intended outcome of the SCP will be to certify areas of land suitable for development. This will offer a streamlined biodiversity assessment process for areas of land within the Study Area that may currently be subject to ecological constraints. A conservation plan will be prepared to set out the avoidance, mitigation and offset measures to address impacts of development. The recommendations for new conservation areas may impact the future urban boundaries identified in this Structure Plan.

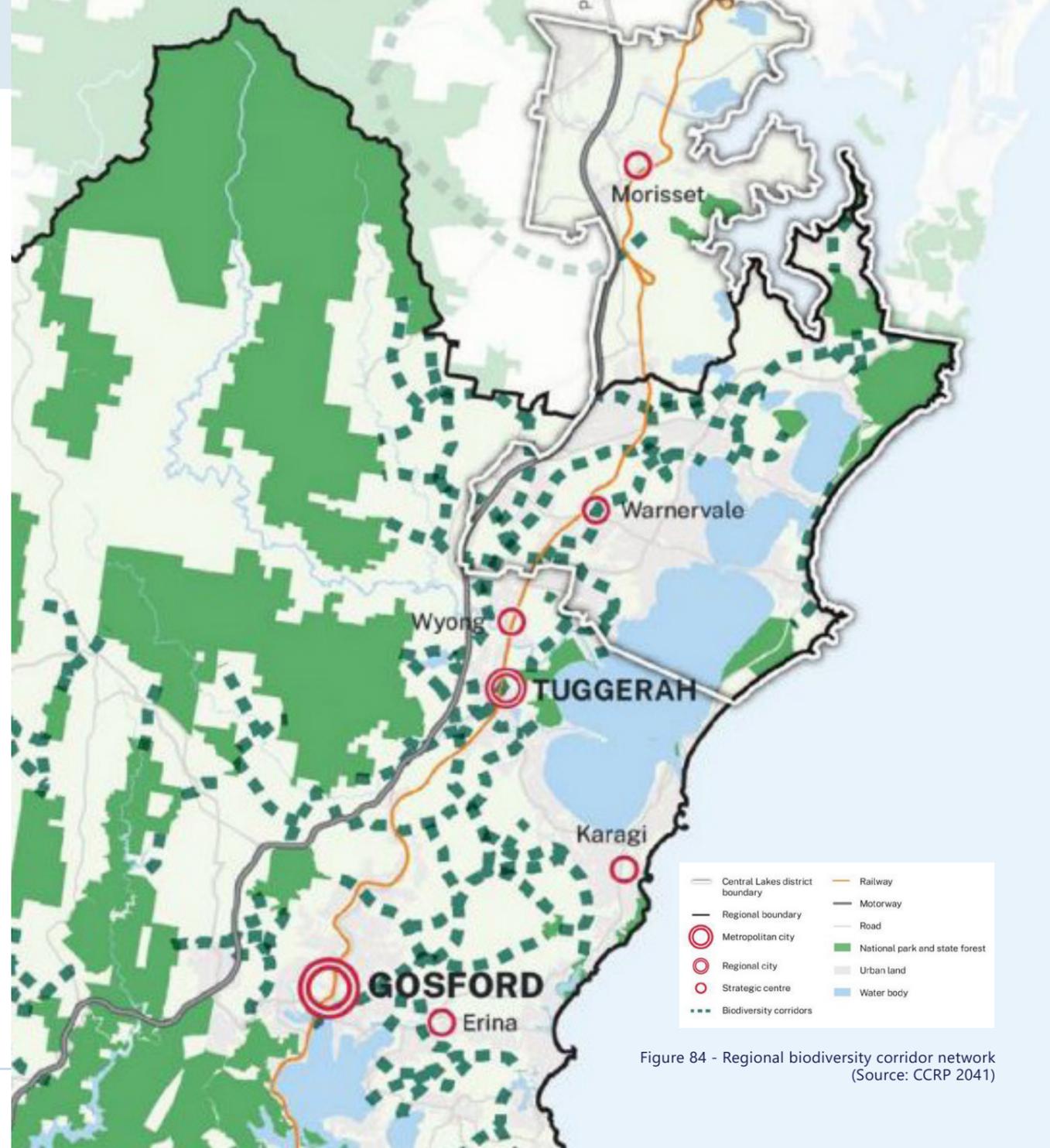


Figure 84 - Regional biodiversity corridor network (Source: CCRP 2041)



6.0 Opportunities

6.1 Environment

6.1.2 Porters Creek Wetland and Tuggerah Lakes

Principle:
Ensure future development within this area is undertaken in a manner that does not negatively impact the Porters Creek Wetland and Tuggerah Lakes Estuary.

ISSUES

- The need to protect the largest freshwater wetland on the Central Coast (Porters Creek) and Tuggerah Lakes estuary.

OPPORTUNITIES

Stormwater Treatment

Stormwater management in the form of Constructed Wetlands will be designed in a manner that increases their ecological value by providing or protecting habitat. These structures will slow the flow of stormwater into the wetland, as well as improve the quality of stormwater prior to it entering Porters Creek Wetland.

Re-vegetated Wetland Buffers and floodplains

The environmental values and functions of Porters Creek Wetland (See Figure 86 which depicts Porters Creek wetland and coastal wetlands buffer as per the Resilience and Hazards SEPP). conservation area will be protected by the retention of vegetated buffers where possible. It is also proposed that the existing cleared wetland buffer areas on the Warnervale Floodplain be re-vegetated which will reduce flow volumes and sediment/nutrient loads during heavy rainfall events. This will also enhance aesthetic value of the Wetland and increase biodiversity corridor connectivity.



Figure 85 - Warnervale Floodplain re-vegetation area

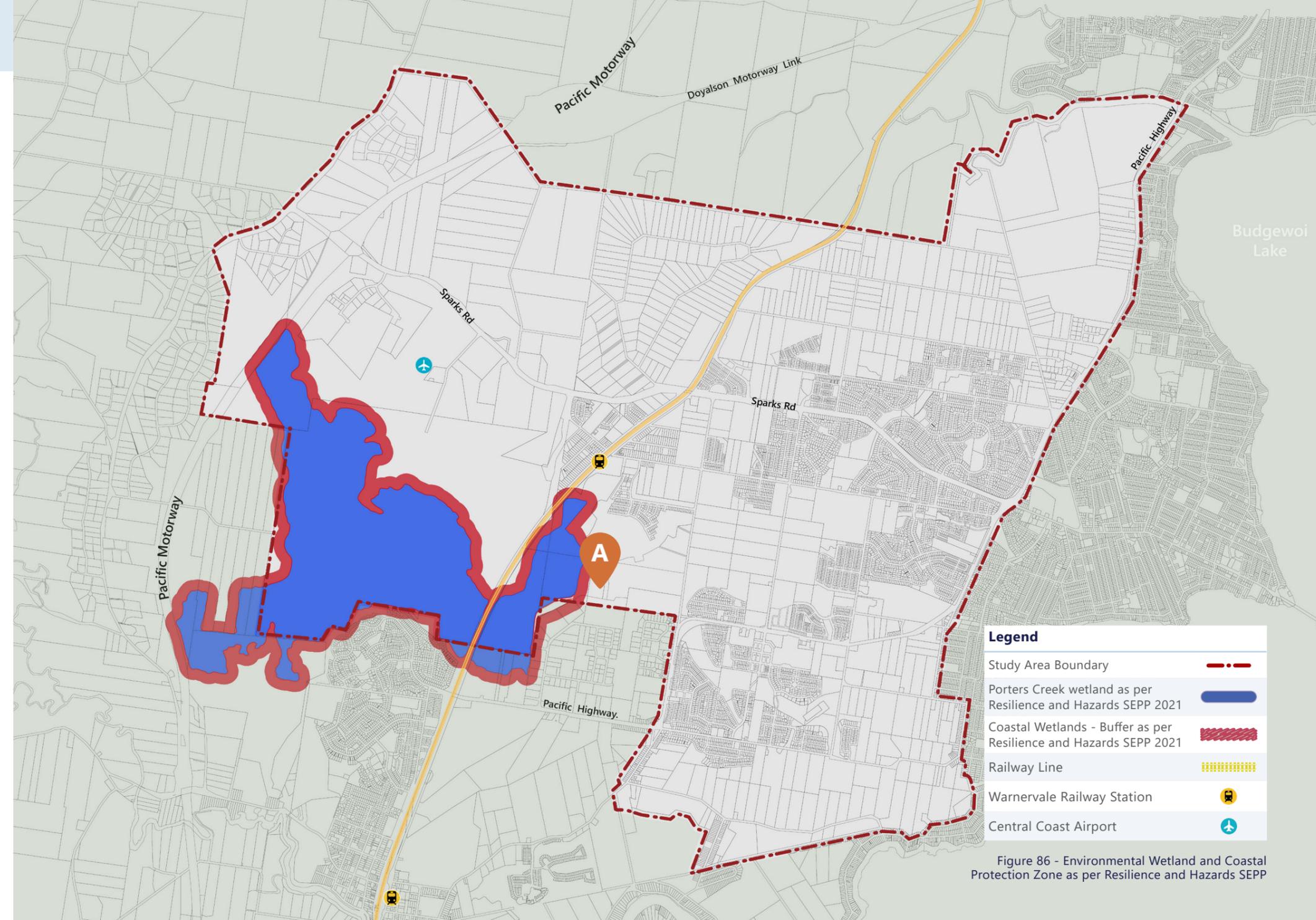


Figure 86 - Environmental Wetland and Coastal Protection Zone as per Resilience and Hazards SEPP

6.1 Environment

6.1.3 Scenic amenity and heritage

Principle:
Ensure future development is undertaken in a manner sensitive to heritage, the natural and built environment.

EXISTING CONDITIONS

- Cluttered visual landscape which often detracts from the natural beauty of the area.



Figure 87: Rural character - Jensens Road, Wadalba

OPPORTUNITIES

Scenic Amenity

- Encourage the under-grounding of existing electricity supply infrastructure in high profile locations. All new electricity supply infrastructure should 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.
- Provision of green spaces, landscaped buffers and appropriate street planting will assist in softening the visual impacts associated with urban development. As part of new developments, a vegetated reserve must be provided to the Pacific Highway and Sparks Road corridors, to provide a highway buffer for residents and improve visual amenity of the area.
- Ensure that development is visually integrated with the landscape elements to maintain or enhance scenic amenity values.
- Preserve natural vegetation.
- Where practicable, existing vegetation is to be maintained and enhanced, so as to provide buffers and landscaped visual relief within subdivisions and housing development.

Heritage

New development on sites containing heritage items or in the vicinity of heritage items are to be referred to Council's Heritage Officer. Proposals seeking to rezone land containing heritage items are to be supported by a Heritage Impact Statement.

6.2 Hazards

6.2.1 Bushfire, contamination and erosion

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

OPPORTUNITIES

Bushfire

Future rezoning proposals within the Study Area will be required to be supported by a Strategic Bushfire Study, prepared by a suitably recognised bush fire consultant for each of the areas of proposed rezoning, elaborating on the following strategic principles:

- Ensuring land is suitable for development in the context of bushfire;
- Ensuring new development on bush fire prone land will comply with Planning for Bush Fire Protection 2019;
- Minimising reliance on performance-based solutions;

- Providing adequate infrastructure associated with emergency evacuation and firefighting operations; and
- Facilitating appropriate ongoing land management practices.

In particular, proposals for new residential areas, schools, hospitals, and employment centres are to address the relevant requirements of Residential and Rural Residential Subdivisions, Special Fire Protection Purpose Developments, and Other Development as outlined in Chapters 5, 6, and 8 of Planning for Bush Fire Protection 2019 within any prepared bush fire consultant's report. New communities should not be built in isolation or have access issues through areas of dense vegetation or limited egress points through vegetation.

Where development is proposed to be staged, bushfire protection criteria should be able to be met during all stages of development. That is, bushfire risk management should not be conditional to a subsequent stage being developed. Any applicable staging plan, as well as local development plan, should ensure that development can be progressed, APZs can be established at a subsequent planning stage and the overall bushfire risk managed.

Where possible, ensure future development areas are not situated within high hazard bushfire areas. New development should occur in locations with low bushfire hazard and be designed and constructed to mitigate the risks from bushfire. This can be done by minimising the number of properties with direct exposure to bushland and 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 habitat. This will also result in

beneficial outcomes in relation to land management, emergency service access and passive surveillance.

The following should also be considered:

- Where community and street tree planting are identified, plants should be compliant with Planning For Bushfire Protection guidelines.
- Consider, where land is to be rezoned minimum APZ requirements in relations to Stream buffer requirements (Water Management Act). Depending on the stream order a minimum biodiversity buffer is required (generally between 10 – 40m) the required APZ however will be required to increase based on the total area of bushland. It should be ensured that sufficient space is retained.
- Sufficient access to biodiversity corridors should be maintained to ensure that APZs can be sufficiently managed at the urban interface and to provide access to fire fighting vehicles in emergency situations.
- In areas of new development and re-zoning, APZs should be on public roads and private property where possible to ensure they receive regular management.

With regards to bushfire management around existing properties, Council will continue to



Figure 88 - Arizona Road, Charmhaven

manage APZs and will work with the local RFS and consultants to implement APZ to existing development as identified and required.

Contamination

Proposals within the Study Area must mitigate risks associated with potential contamination issues. Contamination studies have not yet been carried out for land within the Study Area. These studies will need to be carried out for certain sites proposed for residential or certain business uses as part of future rezoning proposals and/or development applications. Reports on contamination must be prepared by certified consultants (see, the EPA's Contaminated Land Consultant Certification Policy (EPA). The EPA must be notified of any contamination identified which meets the triggers in the Guidelines for the Duty to Report Contamination (NSW EPA) (see s 60, CLM Act).

Erosion

Development along waterways can alter stream morphology and increase erosion and sedimentation processes. This is a particular concern in the Study Area due to potential environmental impact on the Porters Creek Wetland.

6.0 Opportunities

6.2 Hazards

6.2.2 Flooding

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

Future development areas should not be situated within high hazard flood prone areas. Development on land affected by flooding must be carried out in accordance with the Floodplain Development Manual (Department of Infrastructure, Planning and Natural Resources, 2005).

Drainage

This Structure Plan requires that overland flow paths be retained as part of future developments within the Study Area. Overland flows must be adequately directed so as to not to cause intensification, concentration or inappropriate flow over neighbouring properties. This is the most cost-efficient way to address stormwater overland flows, whilst also providing visually pleasing landscape features for the local neighbourhood and flora/fauna to enjoy.

Overland flow paths may be redesigned through the development process. Natural drainage solutions shall be applied (piping/hard engineering solutions will generally not be supported). Reducing the direct connection of stormwater pipes to these Lake Munmorah and Lake Macquarie 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 89 - Porters Creek Floodplain (Source: blueplanet.nsw.edu.au)



6.0 Opportunities

6.2 Environment

6.2.3 Climate change

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

Council's *Sustainability and Climate Action Plan 2022-2025* contains actions that seek to mitigate the effects of a changing climate. Central Coast Council's *Greener Places Strategy 2021-2031* also seeks to address climate change by supporting the protection of trees and vegetation.

Increased hot days

Increasing the number of shade trees to roads, pathways and parklands can increase comfort for pedestrians and cyclists on hot days. A strategic objective within the Central Coast Council's *Greener Places Strategy 2021-2031* is to improve urban amenity through landscaping. Strategies include:

Street Tree Planting

Require street tree plantings as part of new subdivisions. Council can also implement a street tree planting program on targeted streets, subject to satisfying Safe System principles. Key actions within the *Greener Places Strategy* include:

- Action 1.8 - amend planning controls to require that all new medium and high-density development to consider appropriate Urban Heat Island mitigation as part of the development.
- Action 2.1 - Mitigate urban heat islands in the 19 priority suburbs through planting canopy trees along high activity pedestrian routes
- Action 3.3 Review and update Council's planning controls to include consideration of Urban Heat Island Effects for all future subdivision and medium and high-density development.

Encourage tree planting on private properties

The majority of the urban trees which make up the Central Coast Urban Forest occur on private land and as such, the involvement of the community in protecting and expanding the urban forest is key. The 'Backyard Habitat Program' is a program where residents can receive free tube stock to be planted on their property along with advice and networking opportunities with other local residents.

A key action in the *Greener Places Strategy* is to develop educational programs to promote community involvement in greening initiatives. Landowners should be educated on the importance of neighbourhood tree plantings and encouraged to plant on private properties (particularly in front yards).

More intense rain events

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 increase habitat for flora and fauna within the Study Area.

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 are important techniques in reducing the overall stormwater load on our natural waterways. Development proposals should reference Council's *Water Sensitive Urban Design Manual* and *Civil Works Specification* to increase areas of non-forested habitat on both private lands and in new subdivisions.



Figure 90 - Constructed wetland, Woongarah

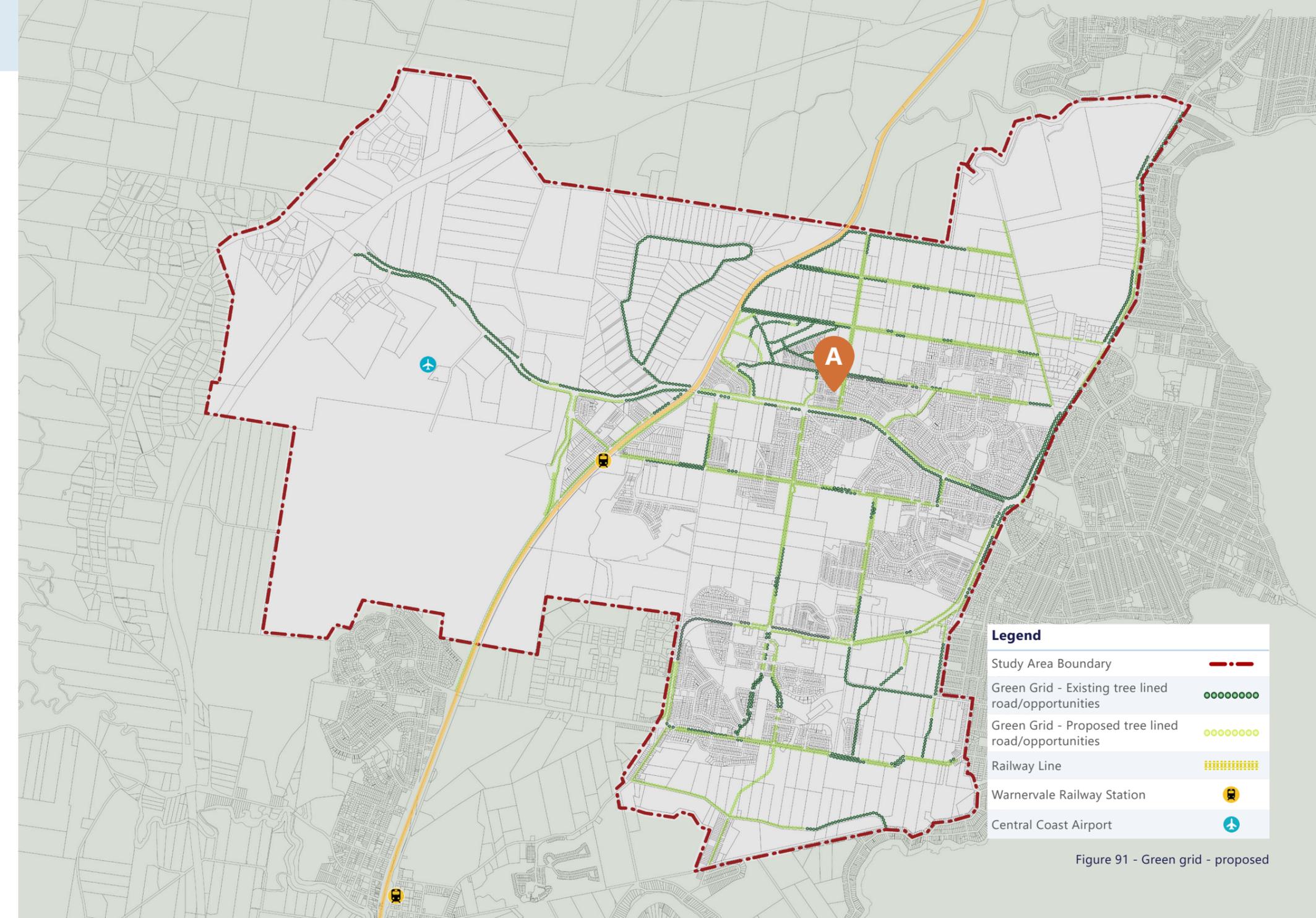


Figure 91 - Green grid - proposed

6.0 Opportunities

6.3 Servicing

6.3.1 Water and Sewer Sequencing

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 staging timeframes.
- Sequencing of development – Who is responsible for lead-in infrastructure?

OPPORTUNITIES

A development sequencing plan has been developed (see Figure 94). The plan is 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.

Future planning is to be undertaken with a sound knowledge of the capacity of current and future servicing infrastructure within the area. To ensure that lead-in and other essential infrastructure is not delayed unnecessarily, Council will review the Development Servicing Plan (DSP) 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.



Figure 92 - Mardi Reservoir



Figure 93 - Wadalba Reservoir

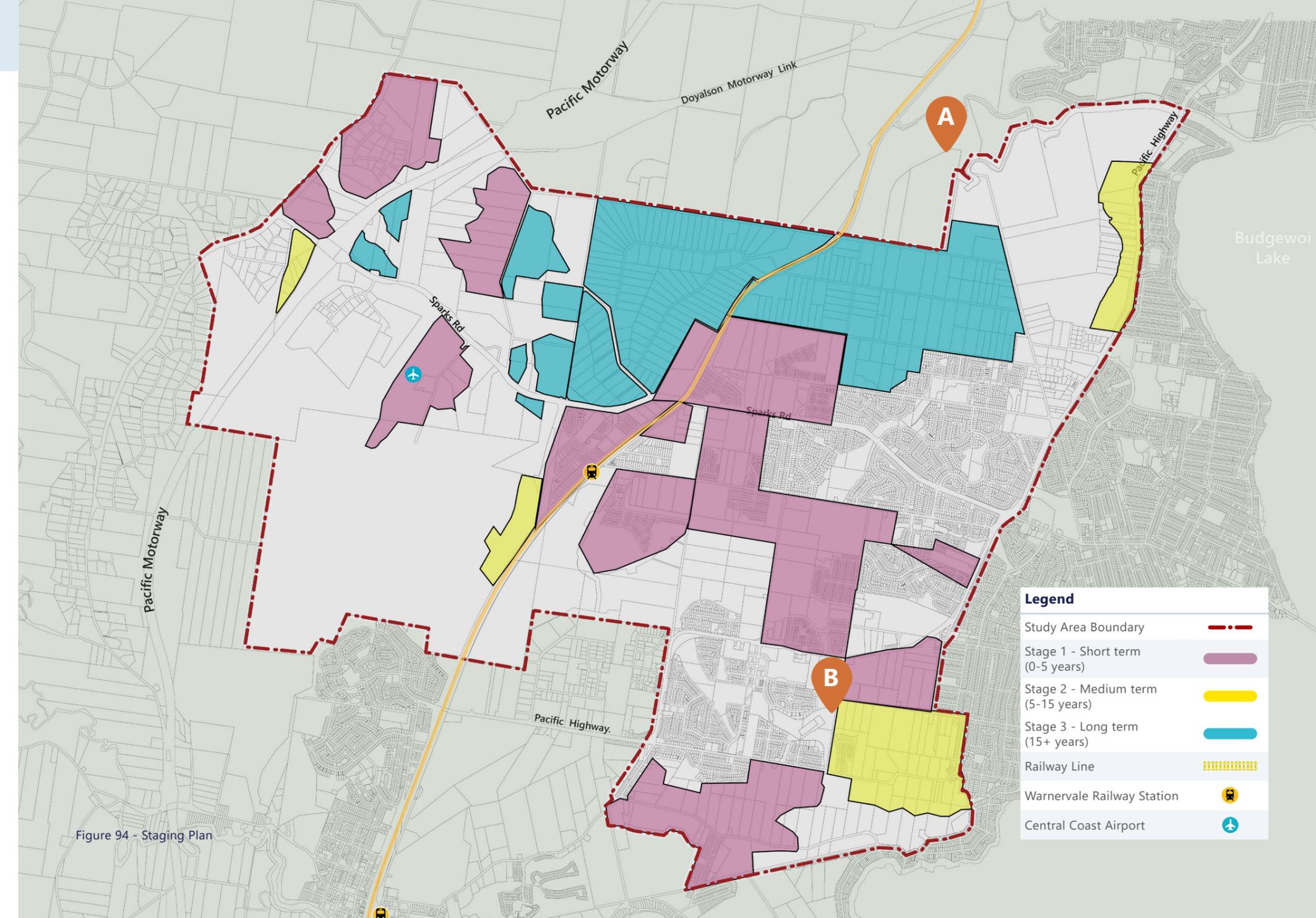


Figure 94 - Staging Plan

Legend	
Study Area Boundary	
Stage 1 - Short term (0-5 years)	
Stage 2 - Medium term (5-15 years)	
Stage 3 - Long term (15+ years)	
Railway Line	
Warnervale Railway Station	
Central Coast Airport	

6.0 Opportunities

6.3 Servicing

6.3.2 Water and Sewer 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

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.

A combination of gravity main upgrades, sewage pumping station upgrades and rising main upgrades are required in addition to the construction of new sewage pumping stations/rising mains to service proposed developments (see Figure 95).

A hydraulic sewer model will be required to undertake a holistic capacity review and refine the existing assessments undertaken as part of Council's Development Servicing Plan. This review will also inform the upgrade of Charmhaven Sewage Treatment Plant (STP) to continue to service growth.

Odour

Charmhaven Sewage Treatment Plant (STP) is located approximately 500m from Precinct 7 and 10. The STP is at capacity and Council are finalising the concept design for major augmentation to Charmhaven STP. The upgrade has the potential to increase odour generation within the Study Area. The provision of an adequate odour buffer zone is required to minimise the risk of the community being subjected to potentially offensive odour.

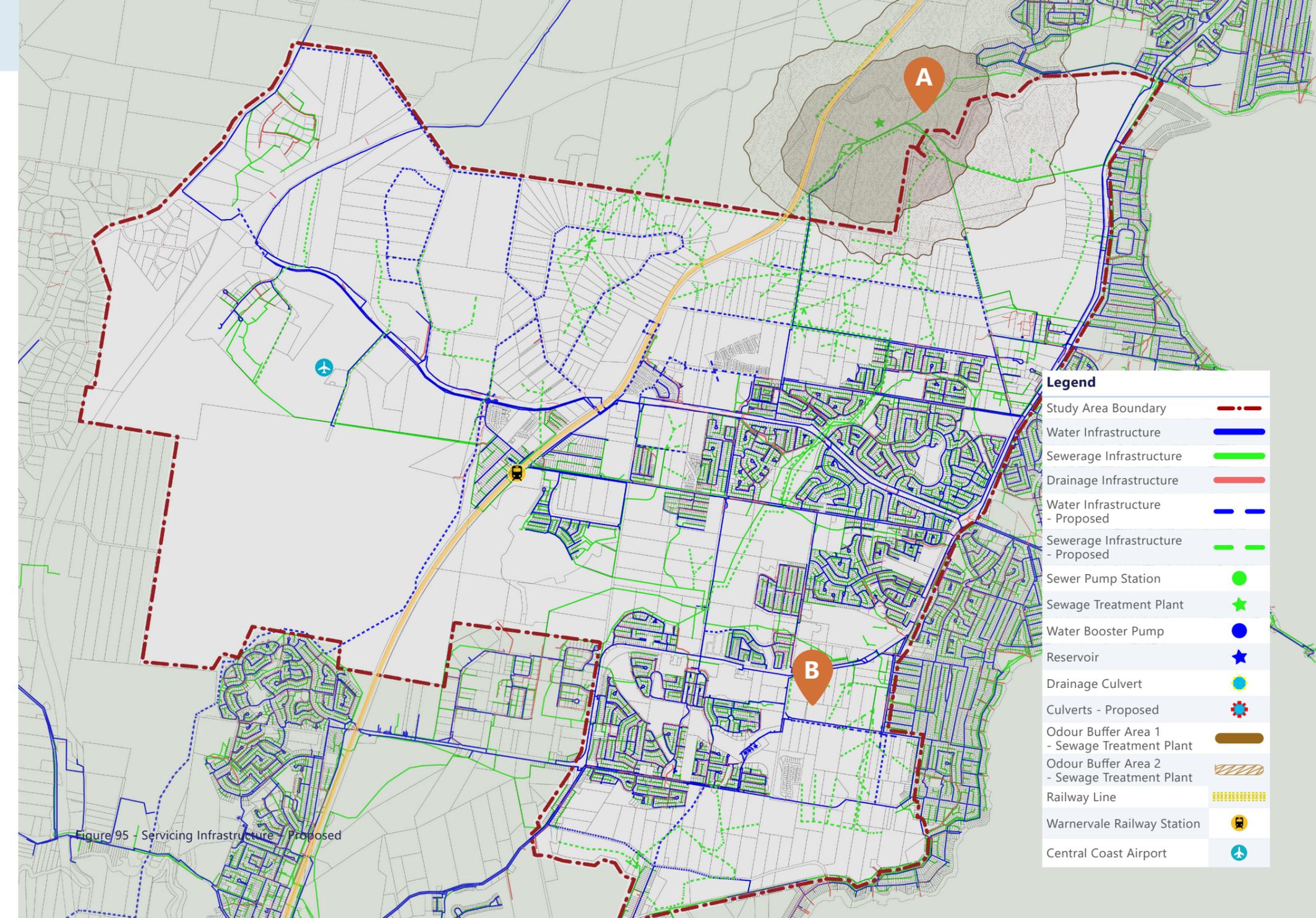
As per Council's Buffer Zone Policy (2020), the buffer zone for Charmhaven STP is yet to be formalised. The last odour assessment was prepared in 2015 and identified a potential buffer zone, however this zone may need to be increased in size if additional wastewater from this development needs to be treated at Charmhaven STP – particularly with the increase in dwellings proposed as part of this Place Plan.

Council is currently undertaking concept design for a major augmentation to Charmhaven Sewage Treatment Plant which has the potential to increase the odour generation potential of the site. Uncertainty on the final outcomes of the upgrade with respect to odour will exist until new works are commissioned.

Until this work is finalised, the suitability of residential development in the odour buffer zone is uncertain. This area should be identified a 'subject to further investigation' before determining what land use is appropriate. Depending on the outcomes of the investigations associated with the STP, Council's strategic planning team will continue to collaborate with Council's water and sewer and environmental health team to understand the suitability of development within the odour buffer.

Population of affected community	Odour assessment criteria (OU)
Rural single residence (≤ 2)	7.0
~ 10	6.0
~ 30	5.0
~ 125	4.0
~ 500	3.0
Urban area (≥ 2000) /schools /hospitals	2.0

Source: Technical framework: Assessment and management of odour from stationary sources in NSW (DEC - 2006)



Legend	
Study Area Boundary	--- (dashed red line)
Water Infrastructure	— (solid blue line)
Sewerage Infrastructure	— (solid green line)
Drainage Infrastructure	— (solid red line)
Water Infrastructure - Proposed	- - - (dashed blue line)
Sewerage Infrastructure - Proposed	- - - (dashed green line)
Sewer Pump Station	● (green circle)
Sewage Treatment Plant	★ (green star)
Water Booster Pump	● (blue circle)
Reservoir	★ (blue star)
Drainage Culvert	⊙ (blue circle with dots)
Culverts - Proposed	⊙ (red circle with dots)
Odour Buffer Area 1 - Sewage Treatment Plant	— (solid brown bar)
Odour Buffer Area 2 - Sewage Treatment Plant	▨ (hatched brown bar)
Railway Line	— (yellow dashed bar)
Warnervale Railway Station	🚂 (yellow train icon)
Central Coast Airport	✈️ (blue plane icon)

6.0 Opportunities

6.4 Transport

6.4.1 Transport Connections

Principle:
Improve private and public transport links within the study area.

ISSUES

- Over reliance on private vehicles.
- The need for investment in transport infrastructure to support population growth

OPPORTUNITIES

1. Road infrastructure to support population growth

Additional roads and upgrades to existing roads will be required to accommodate population growth within the development precincts. This Structure plan identifies the approximate location for suitable future road connections, based on future residential and employment growth, as well as 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 support future development. The following road connections are proposed:

- Upgrade of the Sparks Road and M1 Interchange (developer funded)
- Extension of Warnervale Link Road north of Sparks Road
- New and upgraded intersections along various arterial roads to service new development growth
- Upgrade of various sections of the Pacific Highway immediately to the south of the Study Area
- Warnervale Link Road – from Watanobbi to Warnervale Village. *Transport for NSW is investigating the feasibility of providing a link road between Wyong and Warnervale. Key benefits of a future road would include improved connectivity, traffic flow and travel times for motorists, improved pedestrian and cyclist access and improved safety for all road users.*

The Warnervale Contribution Plan also incorporates significant investment in the road network to cater for the needs of the new development in Warnervale District, and provides for:

- new and upgraded road links that meet the needs of the release area
- new intersections and upgrades to existing intersections;
- new cycleways to ensure the connectivity within precincts for new development, particularly to and from town centres and open space facilities.

2. Subdivision Requirement:

Ongoing measures to improve public and private transport links in the Study Area include a requirement for subdivision staging to provide for the timely connection of road links to the satisfaction of Council and TfNSW. As per the Future Transport Strategy (TfNSW), new neighbourhoods must be planned to support the 15-minute neighbourhood concept. TfNSW will work with the NSW Government and Council to improve the timing and allocation of responsibility for infrastructure delivery, and consider the early introduction of new bus routes and 15-minute walking and cycling networks at the time residents move in.

Early intervention is critical, starting at the strategic planning stage. Where possible, Council will ensure that public transport services are made available in the early stages of new subdivisions to encourage early mode shift.

3. Removal of level railway crossing:

Council will continue to advocate for improvements to Warnervale Railway Station including the removal of the level railway crossing due to safety concerns. As there is only one other road crossing of the railway line, this crossing will need to be replaced by an alternative crossing at either the same location or a nearby location.

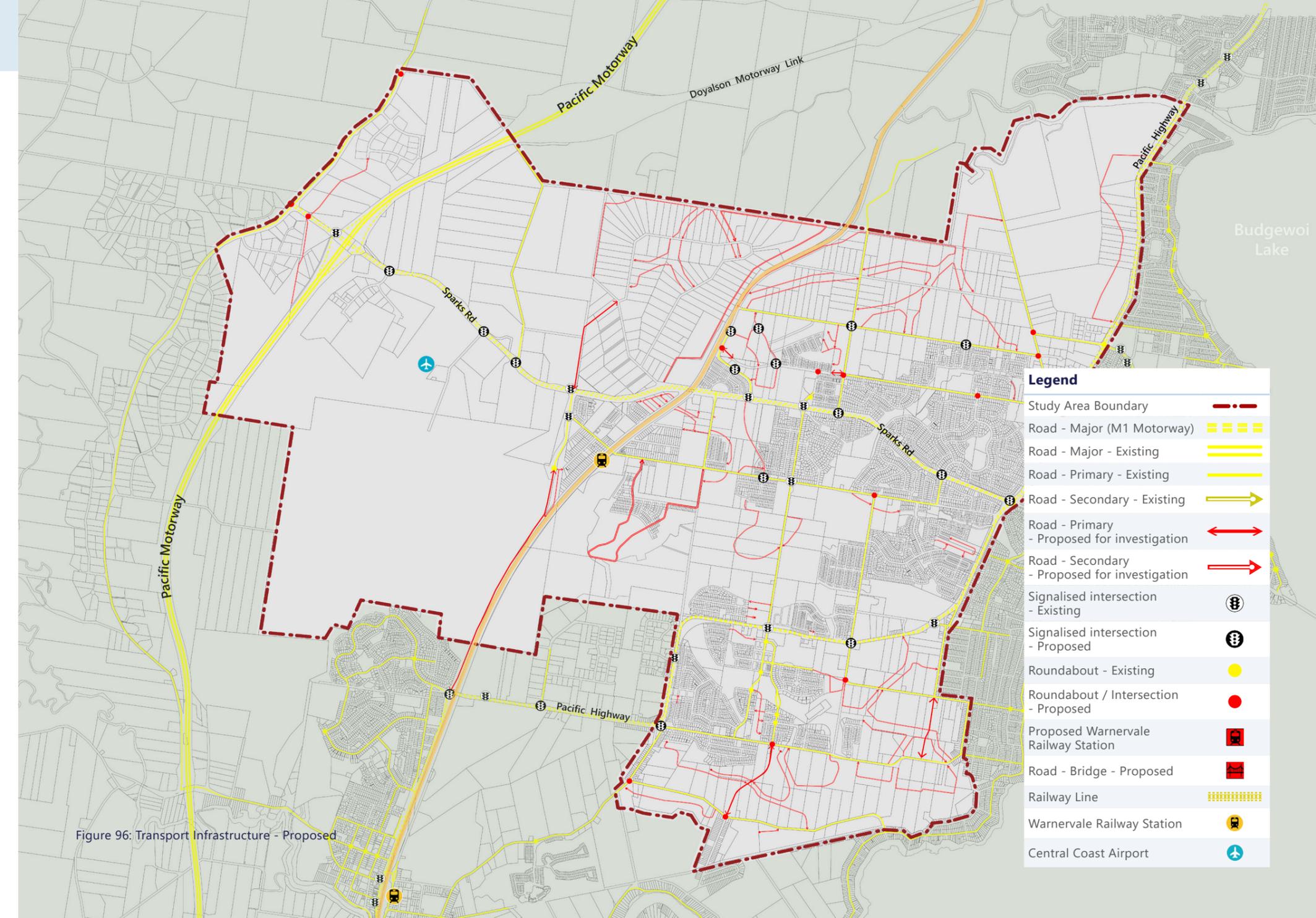


Figure 96: Transport Infrastructure - Proposed

6.0 Opportunities

6.4 Transport

6.4.1 Transport Connections

Principle:
Improve public transport links within the study area.

ISSUES

- Limited access to public transport services.
- Need for new or upgraded railway station to support population and employment growth.

OPPORTUNITIES

Public transport infrastructure to support population growth

Improvements to access and frequency of public transport is needed to encourage greater use of the bus and rail network. This will partly be achieved by the demands of an increased population moving into the area as the precincts develop. Council can assist in increasing public transport usage by considering the following during subdivision design/assessment stage:

- 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.

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.

Medium density residential development

Medium density development is encouraged in areas nearest to public transport or key transit corridors such as Warnervale Station and Warnervale Local Centre. Building density around these public transport nodes will enable more convenient access to education, employment and health services. Designing smarter medium density development within walking distance of public transport and local centres can create network efficiencies and place making opportunities such as walkable neighbourhoods and improved accessibility and liveability for residents.

Improve bus transport infrastructure.

Improved usage rates could be encouraged by incorporating bus pick up and drop off locations along key transit corridors such as Sparks Road and the Pacific Highway. Ideally, these should coincide with signalised intersections, to ensure that public transport patrons are able to safely cross the Pacific Highway to either board or alight from the bus. Bus shelters should also be appropriately located along this corridor to improve the desirability of traveling 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.

Improve rail transport infrastructure.

Transport for NSW recently made the decision to withdraw plans for the delivery of a new Warnervale Town Centre Railway Station. As a result upgrades will be required to the existing Warnervale Railway Station such as increased commuter carparking spaces and frequency of train services.



Figure 97 Warnervale Railway Station

6.0 Opportunities

6.4 Transport

6.4.1 Transport Connections

Principle:
Close the Gap between East and West of the Railway Line/North and South of Sparks Road - Pacific Hwy.

ISSUES

- Lack of connection between the north and south of the Study Area due to Sparks Road and the Pacific Highway.
- Lack of connection between the east and west of the study area due to the location of the Northern Railway Line.

OPPORTUNITIES

Improve North-South connection

Incorporate more pedestrian crossings

A lack of formal crossing opportunities encourages informal crossing of the Sparks Road and Pacific Highway corridor, which can be difficult due to the 70km/hr speed limit. By incorporating more pedestrian crossings, coinciding with new signalised intersections along the corridor, more appropriate crossing opportunities will be provided, and safety will be improved. This will also encourage more pedestrian and cyclist activity, rather than reliance on vehicles.

- Pacific Highway: At present, there are only three signalised pedestrian crossings along the Pacific Highway corridor within the Study Area. Development of signalised intersections along the corridor will assist in increasing safe pedestrian crossing opportunities.
- Sparks Road: At present, there are only three signalised pedestrian crossings along the Sparks Road corridor within the Study Area. Development of signalised intersections along the corridor will assist in increasing safe pedestrian crossing opportunities.

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 and Sparks Road corridor, via a tree planting program. This will provide shade, and a minor buffer to the roadway. TfNSW approval will be required prior to planting and should be in accordance with safe system principles so as not to impact on sightlines or road safety.

Lighting improvements

Improving lighting along the Pacific Highway and Sparks Road will assist in improving the safety and useability for residents and visitors. In particular, intersections should be well lit to ensure that pedestrians and cyclists are visible to motorists, which will improve safety for all road users.

Improve East-West connection

Removal of level railway crossing

Due to safety concerns, Council will advocate for removal of the level railway crossing at Warnervale Railway Station. As there is only one other road crossing of the railway line, this crossing will need to be replaced by an alternative crossing at either the same location or a nearby location. A pedestrian crossing will need to be incorporated into any new design.

Improved pedestrian railway crossings

The existing crossing over the railway line on Sparks Road is a narrow, two-lane bridge. No pedestrian or cyclist lanes are provided. Council will advocate for improvements for pedestrians and cyclists.

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

ISSUES

- 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 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. 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.



6.0 Opportunities

6.5 Economy

6.5.1 Commercial Facilities

Principle:
Provide a Commercial Centre that serves as a focus for the community.

ISSUES

- No commercial centre to act as a community hub.

OPPORTUNITIES

Potential for new local centres

New centres need to be reviewed in the current and future economic context (see Figure 98). In particular, consideration needs to be given to the existing commercial centres within and/or adjacent to the Study Area. Lake Haven Shopping Centre, combined with additional retail development at Wadalba Local Centre, takes up the bulk of commercial activity for the local community. This has undermined prospects for the success of the former Warnervale Town Centre (now Warnervale Local Centre). The removal of the North Warnervale Railway Station from future planning by the State Government has limited the chances of developing a viable Town Centre.

As a result, the Structure Plan proposes the following new centres:

- Warnervale Local Centre (formerly Warnervale Town Centre)
- Warnervale Village (adjoining Warnervale Station)

With the northern railway station no longer proceeding, fostering a two centres approach will ensure accessibility and sustainable servicing of the two northern and southern parts of the Study Area.

Warnervale Village contains 5,700sqm of existing B1 Neighbourhood Centre zoned land, in and around the vicinity of Warnies General Store. There is an additional 1.2 hectares of B1 zoned land located 70m to the east on Warnervale Road. These sites are separated by flood prone land that was deemed unsuitable for commercial use. The site is well located in proximity to the Warnervale Railway Station, however safety issues with the level railway crossing as well as flooding concerns limit the suitability of this site for significant further expansion of commercial development.

The topography of the former Warnervale Town Centre, combined with a lack of commitment by the State Government to construct the proposed railway station, and the wider economic context for the Study Area, has resulted in a reticence by the landowner to develop the proposed Warnervale Town Centre.

The undeveloped area to the east of the railway line is zoned with the intention of being the retail/commercial core. This central location in the precinct allows for good connections to the large open space area proposed at Hilltop Park, provides opportunity for higher densities surrounding the service centre and will transition through to the residential lands to the east that are already developed.

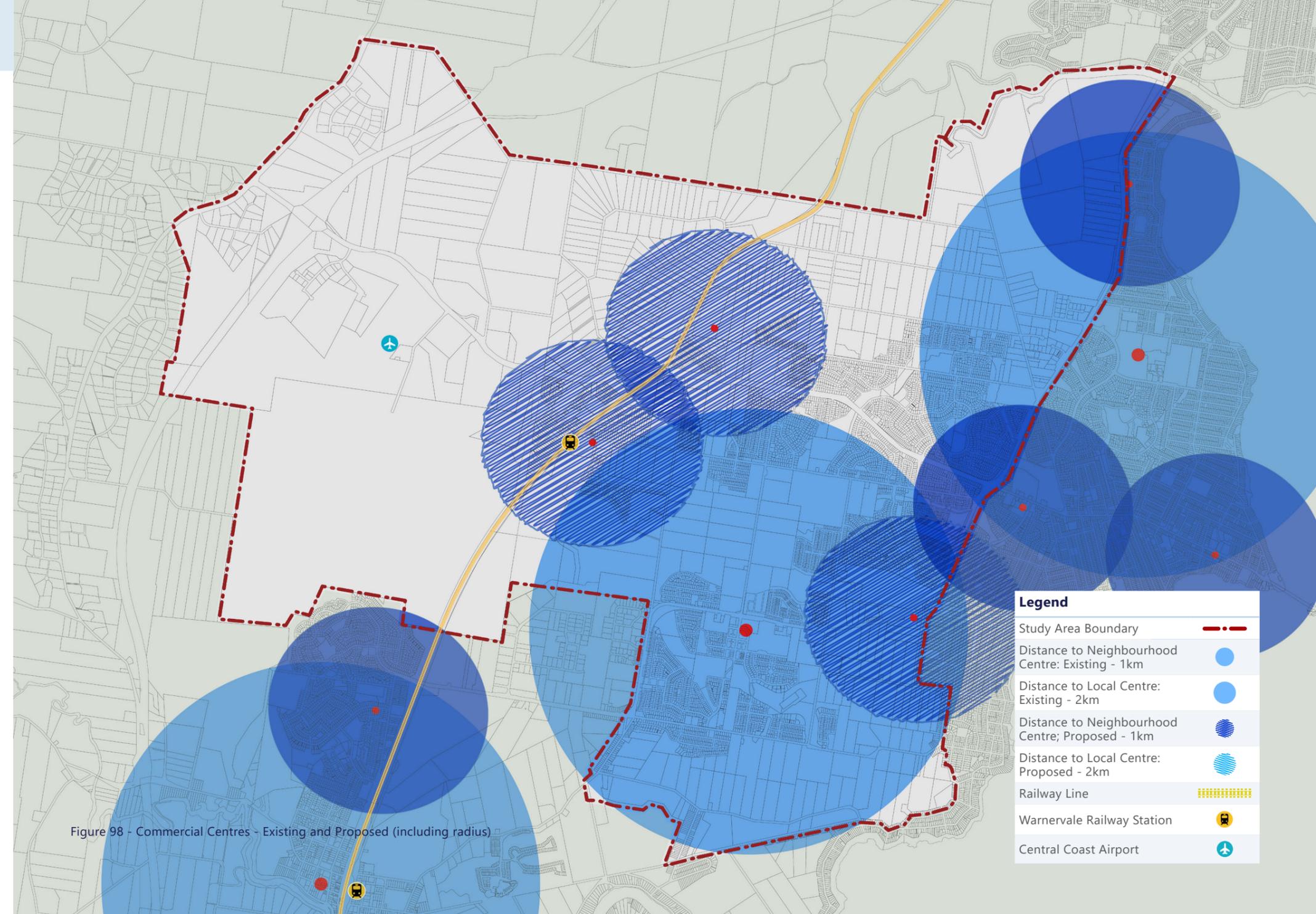


Figure 98 - Commercial Centres - Existing and Proposed (including radius)

6.5 Economy

6.5.2 Employment Opportunities

Principle:
Facilitate employment generating development to increase access to local employment opportunities

ISSUES

- Limited access to local employment opportunities.
- Employment zoned land constrained by infrastructure servicing / biodiversity.

OPPORTUNITIES

Future employment lands located within the Study Area will provide much needed employment opportunities for the growing population.

Council has engaged Hill PDA Consultants to prepare a draft Employment Land Strategy for the whole Central Coast LGA. This Strategy is yet to be finalised and publicly exhibited. The Strategy includes analysis of specific employment precincts within the Study Area. There are 29 employment precincts across the Central Coast LGA, varying in size and land zoning. In total, there is approximately 2,190 hectares of employment zoned land across the LGA. The majority of this land is zoned E4 – General Industrial and accounts for approximately 1,903 ha or 87% of land stock. The next most common land stock zones are:

- E3 Productivity Support - 206 Ha or 9% of land stocks
- SP4 Enterprise - 81 Ha or 4% of land stocks
- W4 Working Waterfront - 1.2 Ha or 0.1% of land stocks.

Council's draft Employment Lands Strategy proposes a number of draft actions that apply to GWSP employment lands and future growth areas. These include:

- Planning for Warnervale to accommodate industrial, manufacturing, logistics and warehouse land uses, and progress circular economy and sustainable industries.
- Protect opportunities for larger logistics businesses

in Warner Business Park by establishing a minimum subdivision size of at least 2,000m² and zoning as E4 General Industrial.

- Develop Wyong Hospital and surrounds as a regional health and medical precinct.
- Explore the feasibility of infrastructure delivery within Wyong Employment Zone and consider public coordination and subsidisation if the land is not feasible for private delivery.
- Prepare a staging and master plan development for the Central Coast airport to attract ancillary aviation businesses. Investigation required capital works needed at the Charmhaven Sewage Treatment Plan to minimise odour impacts and allow for additional development opportunity.
- Provide frequent and easy access to the Warnervale station from key destinations such as schools, hospitals, shops.
- Create safe, well connected, and accessible walking and cycling routes to destinations in the Tuggerah to Wyong corridor on the Pacific Highway, connecting to existing facilities at the Wyong Road intersection.
- Strengthen and promote inter regional connection by completion of the Pacific Highway upgrades and Link Road from Wyong to Warnervale.

As part of this analysis, the following opportunities have been identified:

Opportunity – An affordable alternative

There is a discrete and finite supply of industrial land available in Greater Sydney, in particular the North District in which the Study Area is located. The Central Coast provides an attractive alternative for industrial and business premises due to strong motorway connections, the available skilled and unskilled labour force, and more affordable land prices.

Opportunity – Growth corridor identification

New release employment areas within the growth corridors provide an opportunity for a diversity of businesses. The provision of a mix of lot sizes within subdivisions will encourage a greater diversity of uses. The Urban Development Program identified by the State Government in the CCRP 2041, seeks to manage land and housing supply and assist infrastructure coordination. This will provide clarity around when and where infrastructure delivery is delivered.

Opportunity – Significant infrastructure investment

Significant infrastructure investment has been delivered and is planned for delivery by the State Government and Council in the Central Coast. There is an opportunity to leverage this substantial infrastructure investment to prioritise employment growth in areas with strong transport connections and utility capacity. The north and south growth corridors have been identified for significant residential, employment and infrastructure investment, including public and active transport.

Opportunity – Prime location for freight and distribution

Located just over ten hours' driving time from Brisbane and Melbourne, and just over an hour from Sydney, Central Coast employment precincts are well positioned to support distribution, manufacturing, agribusiness and warehousing requirements for the eastern seaboard of Australia.

Opportunity – Provide greater clarity and differentiation between the zones

The rollout of the new employment zone reform creates an opportunity to review and clarify the role and function of employment lands across the Central Coast. There is opportunity to further differentiate between zones to reinforce a hierarchy and provide further clarity around planning expectations.

Opportunity – Tailoring education and employment opportunities

Attracting a greater diversity of employment and learning opportunities can assist in unlocking jobs and upskilling local residents. Tailoring education courses and formulating pathways into local industries can boost the jobs containment rate of the LGA. Fostering an environment of learning and collaborating can be attractive to businesses and encourage greater investment and business establishment.

Opportunity – Leveraging aviation facilities

There is an opportunity to leverage existing aviation facilities and intensify industrial and ancillary aviation uses around the Central Coast Airport. Council's Economic Development Strategy identifies opportunities to catalyse growth in a variety of industries including aviation, manufacturing, maintenance, and service operations around the airport.

6.0 Opportunities

6.6 Open Space & Recreation

6.6.1 Pedestrian / Cycling Connections

Principle:
Ensure that the community has ease of access to active transport options.

ISSUES

- Discontinuous walking and cycling networks.

OPPORTUNITIES

This Structure Plan recommends new shared pathways, with the aim to improve pedestrian and cyclist connections between existing and future residential areas and key facilities within the Study Area (see Figure 99). These proposed connections are important in ensuring that the growing community in the Study Area has ease of access to local schools, centres, sporting grounds, playgrounds and recreational areas.

Additional signalised intersections are also required to improve pedestrian safety and encourage more walking and cycling. Visual amenity and connection to open space opportunities are also critical to the success of shared pathway networks and therefore opportunities for new and improved networks incorporating these principles should be identified in the future.

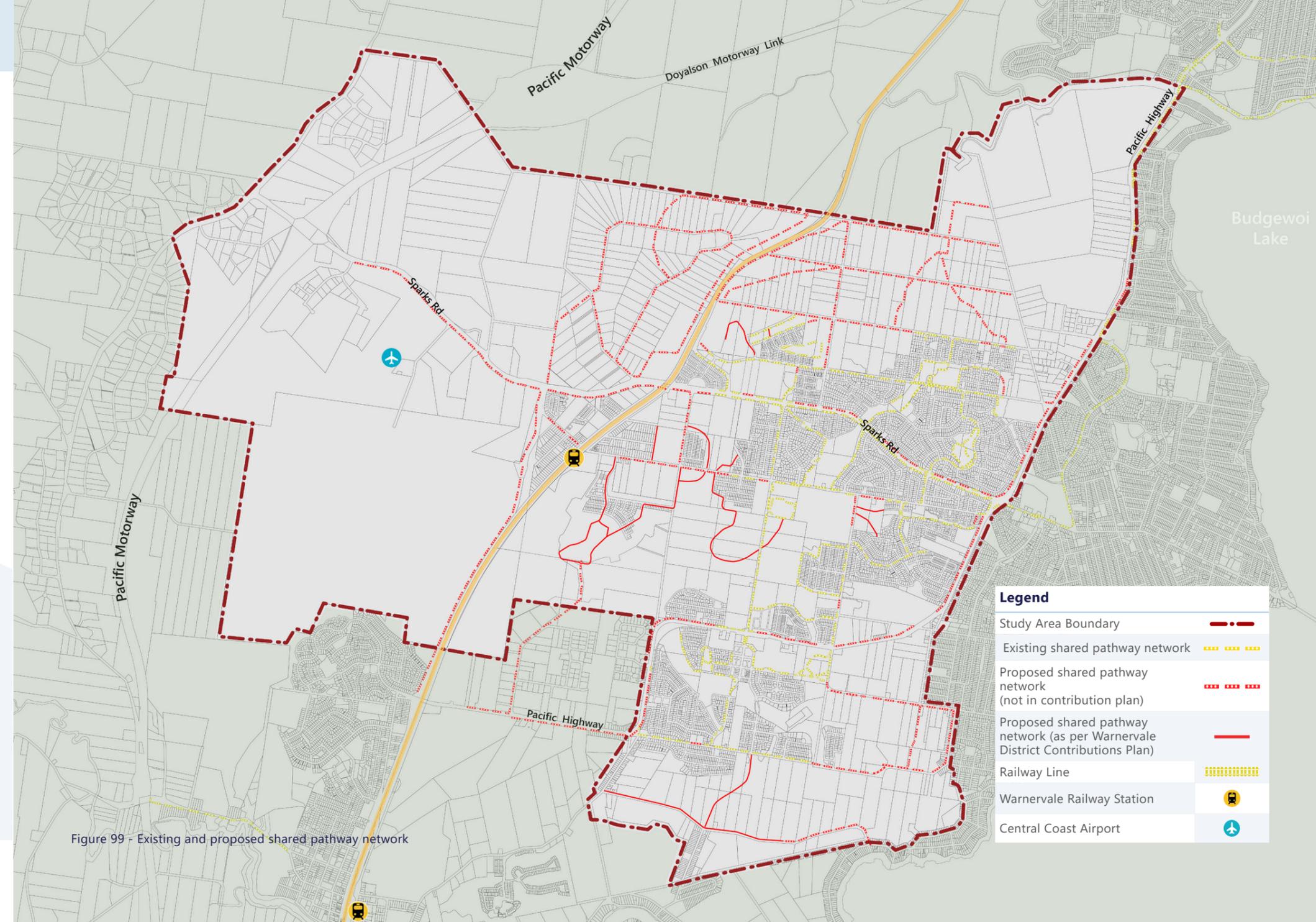


Figure 99 - Existing and proposed shared pathway network

6.6 Open Space & Recreation

6.6.2 Active Recreation Facilities

Principle:

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

ISSUES

- Equitable access to sportsground facilities for the growing population.

OPPORTUNITIES

A rate of 3 hectares per 1,000 residents is the standard approach to open space provision in NSW. Utilising this standard, the total developed open space required for the projected 35,282 additional residents generates demand for an additional 105 hectares of open space. In terms of sportsground and courts, this represents a requirement for the following:

- 31.5 hectares of additional sportsground (30%);
- 10.5 hectares of additional playing courts (10%).

Opportunities for new Sportsgrounds and Playing Courts

Based on the projected population increase of 35,282 people, demand for at least 105 hectares of sportsfields and courts will be generated as a minimum requirement. More facilities will need to be provided in order to meet the demand of the growing population.

There are clear benefits to co-locating sportsfields near schools, community facilities and commercial areas, as well as transport links. Council can ensure adequate provision of sportsgrounds within the Study Area by:

- Investigating the existing Woongarah Sports Facility as the most desirable site for a future sportsground expansion to service the northern end of the Study Area. This site is of a suitable size to accommodate a large sporting complex and is also well located to service the Study Area. This site could provide approximately 6 hectares of additional sportsground area.
- Investigating the expansion of the Warnervale Sports Facility for a future sportsground. This site could provide approximately 5.5 hectares of additional sportsground area.
- Co-ordinate the upgrading of the Wadalba Sports Complex to serve as a high-level district multi-use facility.
- Co-ordinate the delivery of a sports facility in the southern part of the Study Area at Johns Road, Wadalba. This site is more than 11 hectares and can contribute a significant proportion of the sportsground needs for the growing population.
- Coordinate the delivery of an Aquatic and Leisure Centre in a location suitable to service the Study Area. Utilising the Peninsula Leisure Centre in the southern end of the LGA for the purpose of calculating the area required for such a facility, it is estimated that such a facility will provide approximately two hectares of additional sportsground area.
- This will result in a total additional sportsground and playing courts area of 24.5 hectares.

Opportunities for embellishing existing sportsgrounds

There are opportunities to embellish existing sportsground facilities to support district level facilities and/or a broader range of uses. Council can seek contributions from developers through development contributions or Planning Agreements for the acquisition and embellishment of sportsground facilities.

For example, Wadalba Sports Facility is part of a significant recreation area and is co-located with sporting fields and Wadalba skate park. This facility is essential for the local community, however needs an upgrade. 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 considered.

Council will also continue to assist the Office of Sport NSW Government to implement outcomes as listed in the Central Coast Sport and Active Recreation Plan.

Opportunities for shared use of School recreation facilities

Joint use arrangements involve school using an asset during school hours and a third party outside of hours.

Within the Central Coast, there are current examples of joint/shared use of school recreation facilities. This can function well given that most sporting activity takes place outside of school hours. Council is looking for further opportunities to expand this model to assist in meeting the recreation needs of our community.

This aligns with Strategy 4.6 of the NSW Office of Sport’s Central Coast Sport and Active Recreation Plan 2018-2023 which seeks to conduct an audit on school facilities suitable for sport participation either for training or playing. Council will continue to work with local clubs/associations and NSW Department of Education to develop these facilities for use.

Legend

Study Area Boundary	
Recreation Facility: Sportsground - Existing	
Recreation Facility: Sportsground - Proposed	
Recreation Facility: Aquatic Centre - Proposed	
Recreation Facility: Aquatic Centre - Proposed - 5km radius	
Recreation Facility: Sportsground - Existing - 1km radius	
Recreation Facility: Sportsground - Proposed - 2km radius	
Recreation Facility: Sportsground - Proposed - 1km radius	
Railway Line	
Warnervale Railway Station	
Central Coast Airport	

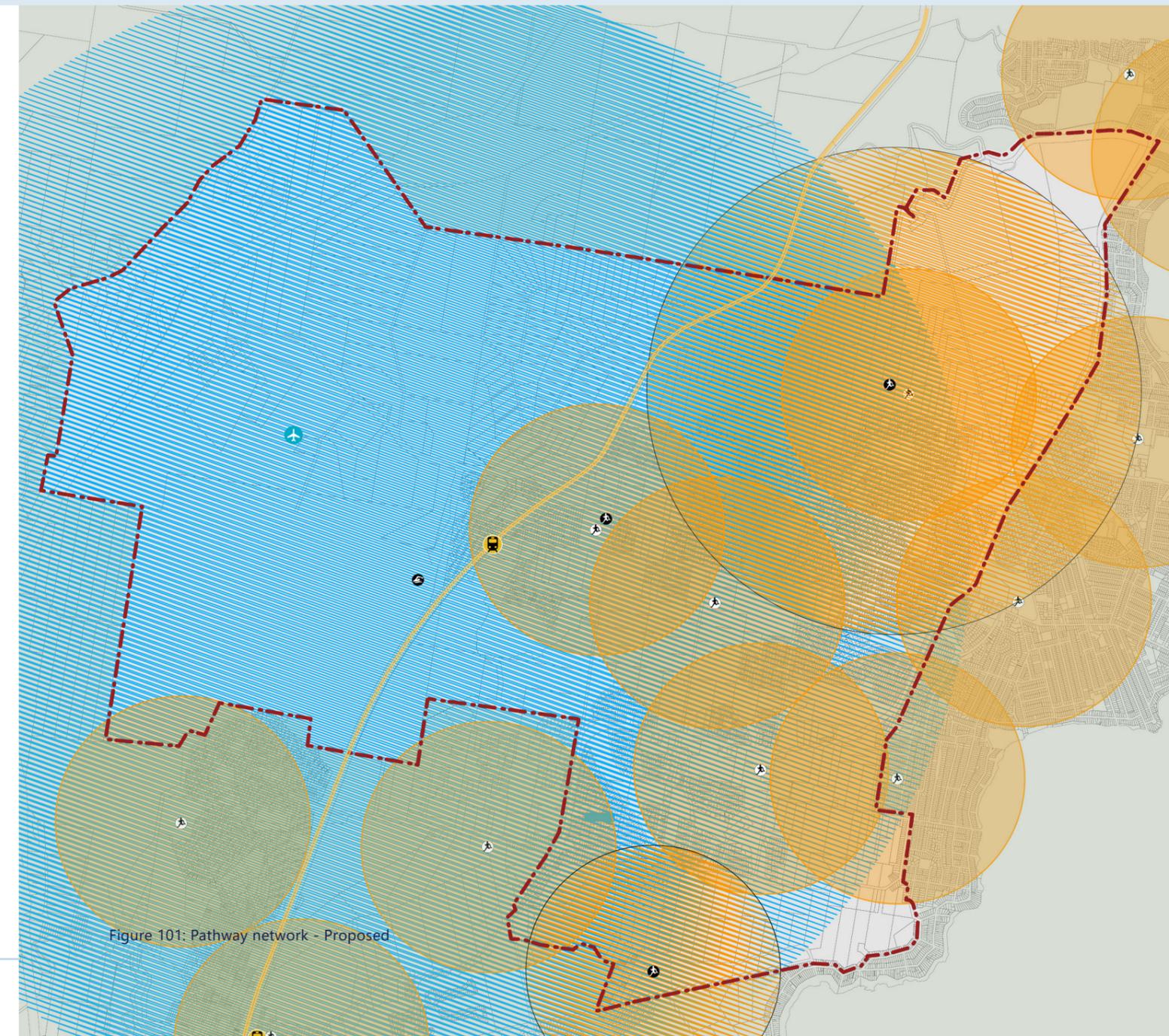


Figure 101: Pathway network - Proposed

6.0 Opportunities

6.7 Community

6.7.1 Community Facilities

Principle:
Establish a Multi-Purpose Community Facility in a central location and co-located with other facilities.

ISSUES

- Lack of modern multi-purpose community facilities to meet current and future needs.

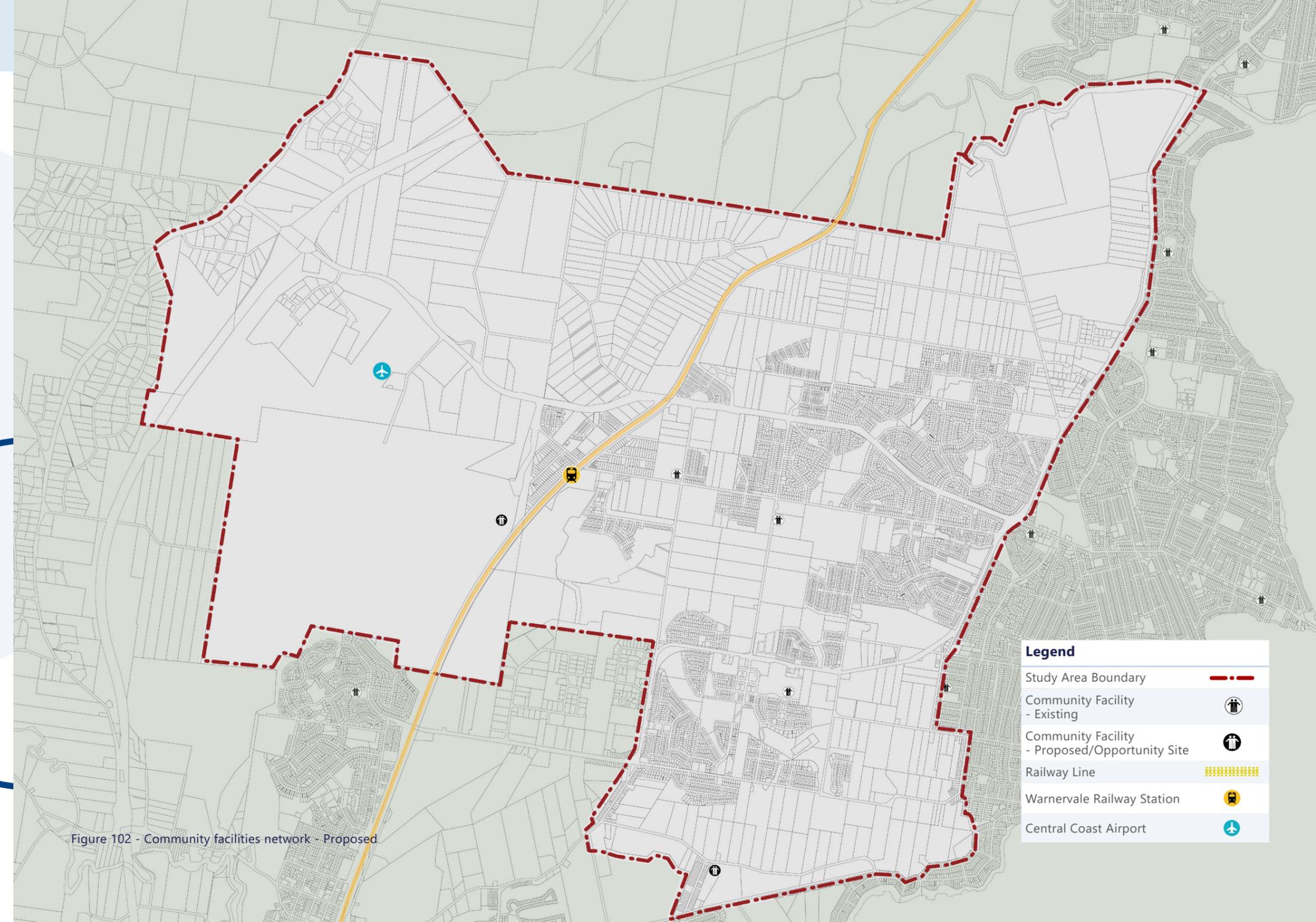
OPPORTUNITIES

New Multi-Purpose Community Facility

A new district level multi-purpose Community Hub will be required to cater for the needs of the current and future projected population (see **Figure 102**). The Community Hub will include a multi-purpose community centre, art and cultural space, youth space, customer service space, library and technology space. Ideally this facility will be co-located with the proposed Indoor Aquatic and Recreation Centre (Warnervale Village Precinct) and in close proximity to Warnervale Station to increase activation and access to essential and higher order services and facilities. Co-location also has the benefit of convenience, increased safety and public transport accessibility.

New Community Facility at Wadalba

A new local level multi-purpose community centre, similar in size and function to the Hamlyn Terrace Community Centre, will be required to cater for the anticipated population increase in this part of the Study Area. The proposed location for this facility is on Jensen Road, co-located with the proposed Sportsground and adjacent to Tacoma School.



6.0 Opportunities

6.7 Community

6.7.2 Education

Principle:
Ensure that the growing population has access to all levels of educational opportunity.

ISSUES

- Increasing demand for primary and secondary education facilities.
- No tertiary education opportunities.

OPPORTUNITIES

New Primary / Secondary Education Opportunities

Schools Infrastructure NSW (SINSW) have reviewed the existing education infrastructure and the projected demand expected to result from the Structure Plan. Additional school infrastructure will likely be required to support this growth.

Increased demand for new primary and/or secondary education facilities will be generated with the anticipated population increase. SINSW will continue to monitor the capacity of its existing school sites to accommodate the student demand anticipated to result from this Structure Plan. Future school sites will have regard to SINSW's 'School Site Selection and Development Guidelines' which outline the site-based requirements for new school sites.

Porters Creek Public School recently opened in Warnervale with capacity for 460 students. A public High School will also be required in the future. At present, high schools across the wider area have existing spare capacity to meet current and short-term enrolment demand.

New Tertiary Education Opportunities

There are presently no tertiary education facilities in the Study Area. The closest facility is the Hunter TAFE - Wyong campus.

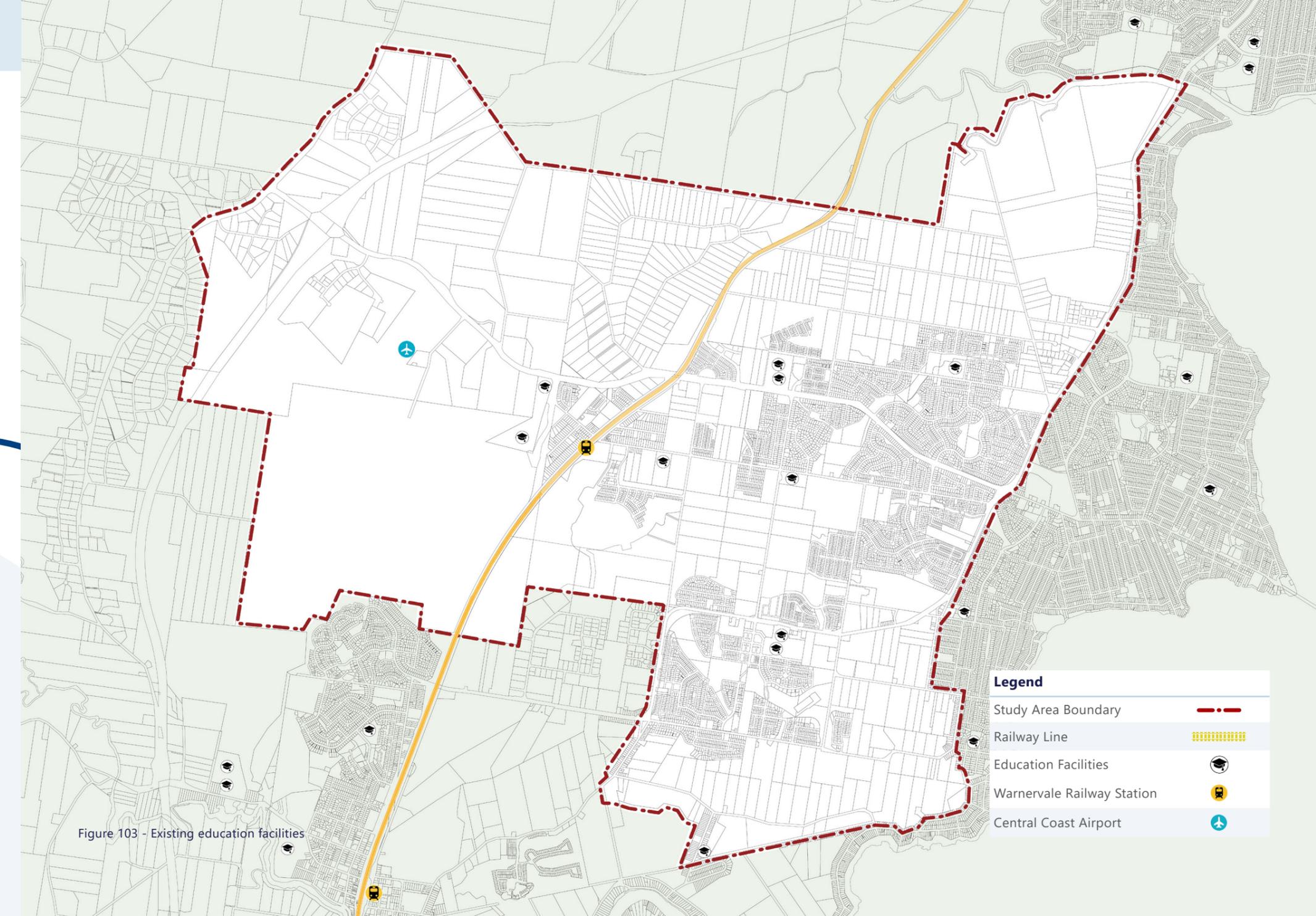


Figure 103 - Existing education facilities

6.0 Opportunities

6.7 Community

6.7.3 Aged and Affordable Housing

Principle:

Provide a mix of lot sizes and housing types to meet diverse housing needs including affordable housing options.

ISSUES

- Increasing demand for aged care facilities that are well located and designed to meet the needs of an ageing population across the Central Coast.
- Lack of housing choice with a high proportion of detached dwellings.
- Lack of affordable housing options.

OPPORTUNITIES

Aged Housing / Care Hub

The Structure Plan identifies a health and medical precinct in Precinct 9. Development for aged care and housing will also be encouraged in this precinct given its proximity to Wyong Hospital and healthcare facilities.

Affordable Housing

There is a growing trend for small lot housing within the Study Area. For example, new developments within the Warnervale Town Centre site include lots as small as 250m², and a new development at Gillis Lane, Hamlyn Terrace includes lots as small as 225m². Council is examining ways to influence the supply of affordable housing through different planning controls and implementation of the Central Coast Affordable and Alternative Housing Strategy.



6.0 Opportunities

6.8 Land Use Conflicts

6.8.1 Staging

Principle:
Refine the staging plan to ensure development is orderly and efficient.

ISSUES

- Further refinement is required for the staging of infrastructure delivery in each precinct.

OPPORTUNITIES

The parts of the Study Area identified as potential development precincts have been further divided into smaller precincts, based on land ownership, topographic features and location. Proponents will be required to group rezoning proposals and subdivision applications together by the relevant precinct. Depending on the size and complexity of the development areas, flexibility may be required.

It is anticipated that the ongoing refinement of precincts will enable more positive development outcomes for the area and enable Council to holistically assess development proposals, rather than on a site-by-site basis. 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 (see Figure 104).

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 criteria below.

Major criteria

- Impact on existing roads/traffic – Minor, moderate or major.
- Vegetation clearing required – Minor, moderate or major.
- Land use conflict (e.g. Land claims, recreation uses, odour issues)
- 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.

Minor criteria

- 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.
- Integration with current development patterns – 1km proximity to schools, local centre etc.
- Sensitive Coastal Location – Presence of or proximity to coastal wetlands.
- Sensitive Vegetation – Presence of Endangered Ecological Communities.

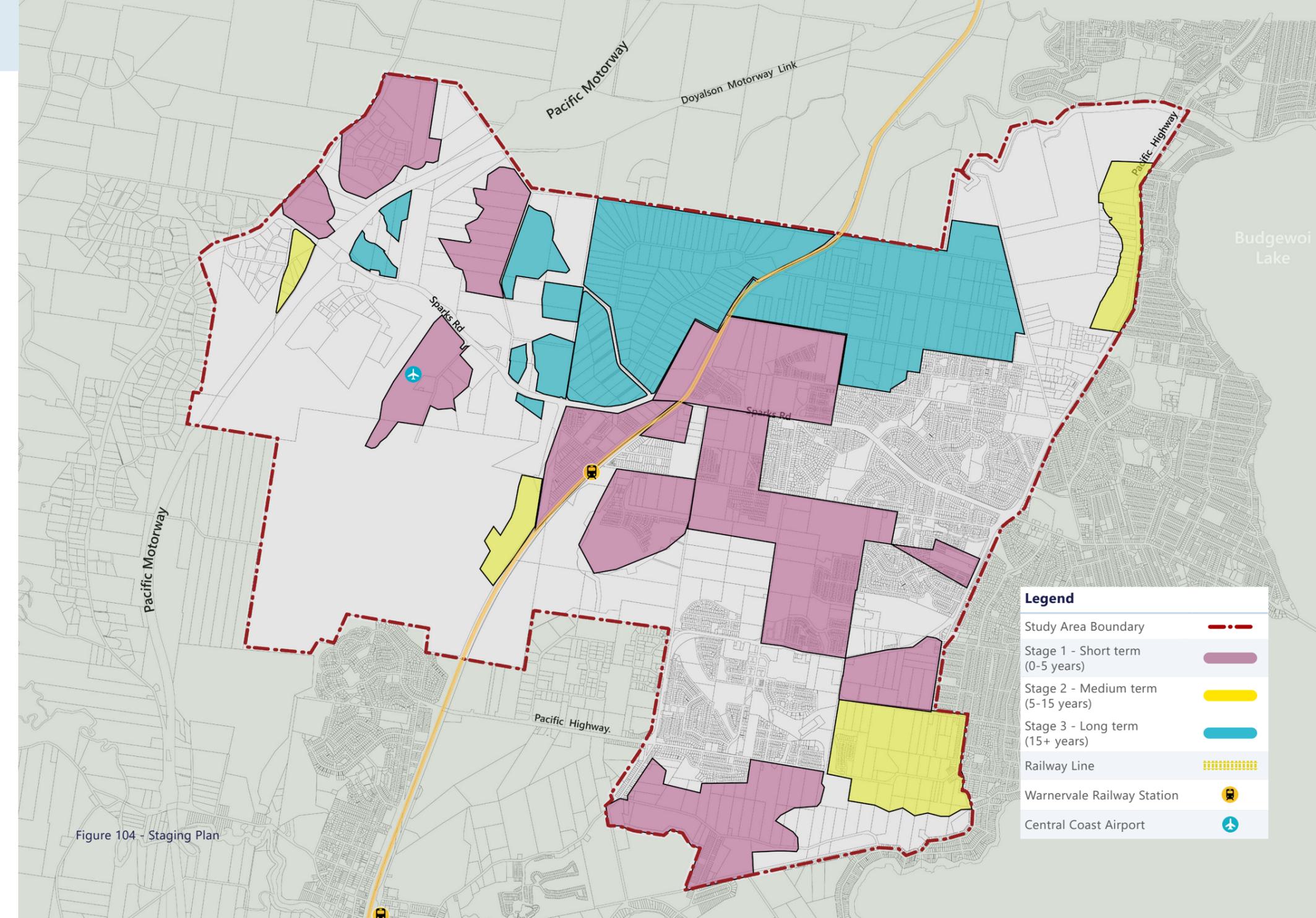


Figure 104 - Staging Plan

Chapter 7

7.0 Conclusion



7.1 Summary

As evident by the findings of this report, Greater Warnervale is a large and diverse area with a variety of constraints that present both opportunities and challenges. From an environmental perspective, the Study Area has access to a range of significant natural assets including wetlands, wildlife corridors and bushland. The challenge is protecting and enhancing these environmental assets whilst facilitating growth in a sustainable way without encroaching on natural habitats and biodiversity.

Conversely, many areas within the Study Area are subject to flooding, bushfire, contamination and land use conflicts – all of which need to be managed to ensure the safety and amenity of existing and future residents.

As the population continues to grow, improvements to transport, services, open space and recreation, education and community infrastructure is required to ensure a high quality of life, amenity and liveability is provided to those living within Greater Warnervale. This requires a collaborative effort between Council, State Government and government agencies to deliver such improvements and cater for the projected population growth.

7.2 Where to from here?

This Background Report provides an environmental, economic and social understanding of the existing conditions of the Study Area. It includes a detailed analysis of current conditions, observations and opportunities of the Study Area including strategic context, demographics, the environment, hazards, servicing, transport, economy, open space and recreation, community, land use conflicts and built environment.

The content of this report has been informed by site observations, desktop analysis and review of existing strategies and plans of relevance to Greater Warnervale. The findings of this Background Report have informed the land use vision and objectives of the Greater Warnervale Structure Plan (provided under separate cover). The formation of the Structure Plan involved two stages:

- **Stage 1 (this report)** involved understanding the Study Area (subject of this Background Report). This stage sought to develop an understanding of the environmental, social and economic conditions of the Study Area to understand the key opportunities and constraints to future growth.
- **Stage 2 (Structure Plan)** involved analysing the findings of the Background Report and outcomes of public exhibition to develop a land use structure plan underpinned by key principles and objectives.

7.3 How to use this document?

The intent of this Background Report is to provide a reference document for landowners and proponents of Planning Proposals to defer to when seeking information on the environmental, economic and social context of land within the Study Area. It forms the basis of the vision, objectives and land use strategy for the Structure Plan.

The Structure Plan (provided under separate cover) is the long-term plan that establishes a vision and land use planning framework for Greater Warnervale. It summarises the key observations, opportunities and challenges of the Study Area. It outlines the vision and objectives for each development precinct within the Study Area and makes land use recommendations. This provides guidance on where growth and development may occur, ensures development is appropriately located and sequenced and supported by the necessary infrastructure and services required to meet the needs of existing and future residents.



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