



Wollongong City Council

Wollongong Industrial Lands Review

December 2023



Acknowledgement of Country

We acknowledge the Traditional Custodians of the land on which this city is built, the Aboriginal people of Dharawal Country. We recognise and appreciate their deep connection to this land, waters, and the greater community.

We pay respect to Elders past, present and those emerging and extend our acknowledgement and respect to all Aboriginal people who call this city home.

We recognise Aboriginal people as the first people to live in the area. We respect their living cultures and recognise the positive contribution their voices, traditions and histories make to this city.

Project and report	Date	Issue
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Executive Summary

Industrial land is a fundamental part of Wollongong's heritage with a long history associated with coal mining along the Illawarra Escarpment and steelmaking at Port Kembla. This heritage has provided a significant amount of land for industry to evolve and expand, and seen Wollongong play the key role in the provision of industrial services to our region and beyond. Wollongong's quantum and distribution of industrial land make it well placed to continue to provide important local services to our growing community, as well as meeting the evolving demands of industrial innovation across a range of emerging sectors.

This Review demonstrates the importance of industrial lands to the Wollongong Local Government Area (LGA) and the need to preserve them as well as promote greater efficiency.

The Review recommends several actions Council can take in relation to our industrial zoned lands including:

- continue to advocate for the delivery of servicing and critical enabling infrastructure;
- facilitate a larger range of industrial typologies by increasing development capacity on some land;
- unlock the latent capacity for industrial development on some land containing residential uses;
- retain a broad range of site sizes and preserve large sites for evolving industrial opportunities.
- simplify guidance for industrial development within the Wollongong DCP.

Scope and Purpose

'Industrial lands' include all land within Wollongong LGA zoned E4 General Industrial, E5 Heavy Industrial, E3 Productivity Support, W4 Working Waterfront and SP1 Special Activity¹ and IN3 Heavy Industrial (at the Port of Port Kembla). Additionally, the RU1 Primary Production zone has been separately reviewed as it is associated with existing or former mining operations.

Given the regulatory role of the SEPP (Transport and Infrastructure) 2021 over the Port of Port Kembla, and the significant strategic planning currently being undertaken by the Department of Planning and Environment, Bluescope and NSW Ports in this area, this Review does not seek to make detailed recommendations or duplicate the strategic processes already occurring. Although the Review includes the Port land within the scope of its analysis, its focus with respect to recommendations is on the Industrial Precincts which are regulated under the Wollongong LEP.

Wollongong's Industrial Lands were last reviewed by Council in 2006 through a study that informed the preparation of the draft Wollongong LEP 2009. This Review formally supersedes that study and aims to inform future land use planning directions for industrial lands across Wollongong including within the forthcoming 'Six Cities Region Plan'.

¹ Includes area of water in the Port of Port Kembla

Key findings

As of July 2022, there was 2,445 hectares of industrial land across Wollongong LGA spread across 42 precincts. There is a further 228 hectares of RU1 Primary Production land among six precincts, four with operational mines and two non-operational.

Since 2010, with the introduction of Wollongong LEP 2009 and Wollongong LEP (West Dapto) 2010, there has been a net increase in industrial zoned land (E4 and E5 zones) of approximately 85 hectares. Subsequent rezonings to date have increased this further by a net 6.4 Ha.

Wollongong contains over half of the Illawarra-Shoalhaven's zoned employment land and has a higher provision of industrial land per capita. Wollongong's industrial lands have a number of economic roles, including strategic land of national significance, focused in and around the international trade gateway of Port Kembla. There are also a number of important regional nodes across the network that service customers beyond the LGA and numerous local precincts that primarily service surrounding residents. This Review finds that Wollongong's industrial lands are adequately providing for 'urban services' which enable local residents to access everyday goods and services and support efficient supply chains.

A major challenge is that despite Wollongong having a significant supply of Industrial land, 85% is occupied with existing operations. The suitability of the remaining land for development is varied and only a very limited proportion would be considered available for development in the short term. There are number of challenges, primarily flooding, contamination, a lack of infrastructure servicing and coordination between landowners, that has to date prevented the 'unlocking' of regionally significant precincts at Kembla Grange and Tallawarra. Achieving this remains an objective of a number of strategic documents as does delivery of critical supporting infrastructure, including the upgrade of the Port of Port Kembla to a container terminal, freight and passenger rail connectivity to Western Sydney and positioning Wollongong as a hub for clean energy investment.

There is relatively little industrial land in Wollongong LGA that is undeveloped and serviced. This is evidence that once land is brought to market there is strong demand and further supported by the feedback received through engagement with local commercial agents and businesses. Wollongong's industrial land prices have risen strongly over the last four years, particularly since the onset of the COVID-19 pandemic. In Wollongong, demand has been high across a range of industrial and logistics activities, however, it has been particularly strong for strata industrial warehousing, including a trend towards accommodating non-traditional industrial businesses such as those in leisure and lifestyle industries.

The vast majority of Wollongong's industrial lands contain lots that are less than one hectare in size, however, across both the E4 and E5 zones there a small number of very large lots. Further, a significant portion of lots for both zones are already below their Minimum Lot Subdivision Size (MLS). For lots remaining that are larger, the Review adopts the position that it is important to retain them to enable flexibility into the future to meet demand for existing business expansion as well as emerging industries that may have larger land requirements. This is important in supporting Council's ambition to grow 10,500 net new jobs in Wollongong LGA by 2028 including within the Advanced Manufacturing, Defence and Clean Energy sectors.

The Review explores existing and emerging trends and influences that are playing out across both Greater Sydney and Wollongong LGA. These include increasing industrial land prices, increased rezoning pressures to alternate uses, the evolving nature of activities on industrial land and changing building requirements towards larger warehousing. The Review also discusses the challenge of

inadequate infrastructure and servicing as well as considerations around amenity in industrial precincts, contested planning policies and controls and the increased focus on sustainability and decarbonisation.

The Review includes a comparative planning analysis of key controls in the Local Environmental Plans (LEPs) and Development Controls Plans (DCPs) of 15 other LGAs and finds that Wollongong has relatively restrictive height and FSR controls for the (then) IN2 Light Industrial zone (now E4 General Industrial) noting also that recent amendments to SEPP (Exempt and Complying Development) 2008 have allow for significantly higher heights for complying development in this zone. In contrast, Wollongong's heavy industrial zone is relatively unrestricted with no height ² and FSR controls and a lower MLS than in the other LGAs that contained this zone.

The Review explores the recently updated Land Use Tables for industrial land via the Department of Planning and Environment's Employment Zones Reforms and recommends a number of minor changes to improve alignment of land use permissibility and the zone objectives and/or remove redundant land uses. The Review reiterates Council's existing position is to remove the Additional Permitted Use of 'shop top housing' within the E3 Productivity Support zone once further work is completed to determine the required amount of this zone in Flinders Street, North Wollongong, and transition the remaining land to a mix of MU1 Mixed Use and R3 Medium Density Residential, reflecting existing residential development.

The Review makes a number of findings about Wollongong DCP Chapter B5 Industrial Development including that its requirements are detailed and prescriptive when compared with industrial DCP chapters from a number of LGAs. The Review recommends Council review Chapter B5 to rationalise it, reduce length and avoid duplication with other parts of the DCP. The Review identifies areas of focus including requirements around setbacks, car parking standards (external chapter), landscaping and residential interfaces.

The Review includes a detailed precinct analysis for each of the 42 industrial lands precincts as well as the six primary production precincts. Precincts were determined based geographical function and zoning and includes high level information on known constraints. The analysis considers existing planning controls and identifies future changes to land uses and development standards within a number of precincts, subject to further investigation. The Review also proposes Council adopt six planning directions to guide future strategic decisions concerning industrial lands.

² The only exception is Shellharbour Road, Port Kembla, where there is a 20 metre height limit for the IN3 zone.

Summary of Recommendations

The draft Review makes a range of recommendations for consideration. The recommendation range for minor housekeeping amendments to more significant investigations which would require specialist studies if they were to progress. It is intended that through the public exhibition process the community, landowners and industry will have an opportunity to give feedback on these recommendations. This feedback, along with Council's resourcing and budgetary constraints, will inform the progression and prioritisation of these recommendations.

The Review recommends the adoption of seven industrial lands planning principles as well as changes in relation to zoning, land use tables, development standards and DCP controls.

Planning Directions

The Review proposes to adopt the following planning directions to guide future strategic planning for industrial lands as well as primary production zones across Wollongong LGA.

- 1 Recognise the importance of industrial land to supporting jobs, economic development, and urban services by retaining lands in locations that support these outcomes.
- 2 Recognise, retain, and promote the Port of Port Kembla and surrounds as an area of critical economic importance focused on employment generation in heavy industry, port operations as well as supporting clean energy investment. Alternative employment uses that provide opportunity for growth and evolution of employment generating sectors will be supported through rigorous precinct scale master planning and strategic evaluation processes.
- 3 Retain a mix of lot sizes, including larger lots that accommodate diverse business requirements and support expansion for existing and future industries.
- 4 Where appropriate, allow for increased density on industrial land to accommodate changing building requirements for warehousing.
- 5 Promote agglomeration of industrial activity within well-defined precincts with efficient transport connectivity and appropriate buffers from surrounding residential.
- 6 Continue to advocate for provision of servicing to industrial lands and critical enabling infrastructure.
- 7 Collaborate with landowners to plan for the eventual transition of mining lands.

It is recommended that these directions be incorporated into Council's Local Strategic Planning Statement.

Land Use Zoning

The Review recommends Council to adopt the following land use directions:

- Investigate the possible rezoning of multiple lots within four industrial lands precincts (Woonona, Figtree, Unanderra, and Port Kembla).
- Investigate minor rezonings of split lots and/or portions of lots with environmental constraints across a number of industrial lands precincts.
- Investigate the rezoning the RU1 Primary Production zone to alternate land uses within the two non-operational mining precincts (Coalcliff and Bulli), reflecting environmental constraints. For the four precincts that contain operational mines, begin considering the long-term eventual land use transition for these areas.

Development Standards

Regarding development standards, the Review recommends that Council investigate:

- Increasing density (HOB and/or FSR controls) for the E4 General Industrial zone within 14 industrial lands precincts. This will provide flexibility to allow for changing building requirements, primarily accommodating a trend towards larger warehousing.
- Increasing MLS to preserve existing large lots and support industrial expansion opportunities for existing and future industries. This applies to a number of precincts that contain E4 General Industrial and E5 Heavy Industrial zones, noting the latter already has a larger control in place.

LEP Land Use Tables

Adopt the following land use table recommendations.

Zone	Action
E3 Productivity Support	<ol style="list-style-type: none"> 1 Remove 'Heavy industrial storage establishment' 2 Add 'Goods repair and reuses premises'
E4 General Industrial	<ol style="list-style-type: none"> 1 Add 'Timber yard' 2 Replace 'Self storage premises' with 'Storage premises'
E5 Heavy Industrial	<ol style="list-style-type: none"> 1 Add 'Waste or resource management facility' 2 Remove 'Offensive storage establishment' (redundant due to permissibility of 'Heavy industrial storage establishments') 3 Remove 'Hazardous storage establishment' (redundant due to permissibility of 'Heavy industrial storage establishments') 4 Remove 'take away food and drink premises'.

LEP Clauses for adoption

Adopt the following changes to Clauses within Wollongong LEP 2009.

No	Action
1	Remove 'Schedule 3: Complying Development – Part 1 Types of development – Alterations and additions to industrial and warehouse buildings in industrial zones' as it is now superseded by SEPP (Exempt and Complying Development) 2008.

LEP Clauses for investigation

No	Action
1	Investigate increasing the size of 'kiosk' permitted uses via Clause 5.4(6) of Wollongong LEP 2009.

Wollongong Development Control Plan 2009

The Review recommends the following actions in relation to the Wollongong DCP 2009.

No	Action
1	Review DCP Chapter B5 with a view to rationalising it through reducing its length and where appropriate, investigate simplification of controls that are duplicative or already covered in other chapters of the DCP.
2	Review DCP Chapter B5 – Investigate options to provide for improved amenity within industrial precincts and development on industrial zoned lots.
3	Review DCP Chapter B5 – Review setback controls following completion of Council's Integrated Transport Strategy and further understanding of the functioning of industrial road networks.
4	Review DCP Chapter B5 – Review controls in relation to 'kiosks' to encourage uptake and appropriately regulate their operation.
5	Investigate the necessity of highly specific controls compared with adopting more generalist principles as well as the inclusion of subsections that are very specific to certain industries (e.g. motor vehicle repair workshops, abrasive blasting industries); relate to matters that are already addressed elsewhere in the DCP (e.g., riparian corridors, utility infrastructure services, road design and construction) or detailed landscaping requirements.
6	Investigate including separate parking requirements for indoor recreation land uses in a future update of Wollongong DCP Chapter E3.
7	Review requirements around residential interfaces in industrial lands. Include requirements for residential development adjoining Industrial land to mitigate impacts such as noise.
8	Consider how the DCP can support the objectives of the incoming Sustainable Buildings SEPP (October 2023) and improve outcomes for development which is exempt.



1. Introduction

1.1 Purpose of the Review

This Industrial Lands Review (the 'Review') aims to provide a comprehensive overview of Wollongong's industrial lands, uses and related controls.

Council needs to ensure that our planning controls in industrial settings are appropriate for our community and economy and identify if they are creating any barriers to delivering sustainable employment outcomes under Council's Economic Development Strategy 2019-29.

The Review is informed by a range of State and Council Policies. It supports our community's goals to:

- attract business investment and support local business
- support growth sectors to assist in the ongoing transition of Wollongong's economy and facilitate sustainable and green industries
- maintain the unique character of Wollongong
- support future communities with facilities and spaces
- provide communities with access to quality local spaces that are safe, clean and inviting

The findings of this Review will inform strategic planning and future planning policy amendments including:

- Wollongong Local Strategic Planning Statement (LSPS) Review
- Wollongong Local Environmental Plan (LEP) 2009
- Wollongong Development Control Plan (DCP) 2009 Chapter B5 Industrial Development
- Draft Wollongong Integrated Transport Strategy (in preparation)
- Planning Proposals review and Neighbourhood Planning processes (ongoing)

The Review also aims to inform future work from the NSW Department of Planning and Environment as well as the Greater Cities Commission.

This Review formally supersedes the existing Wollongong Employment Lands Study (2006).

1.2 Study Area

The scope of this Review is all land across the Wollongong Local Government Area (LGA) zoned for industrial purposes as well as the E3 Productivity Support zone as it allows for light industrial, warehousing and/or distribution uses.

The SP1 Special Activity and IN3 Heavy Industrial land at the Port of Port Kembla is also included within the Review, as is land zoned RU1 Primary Production, being lands associated with mining infrastructure.

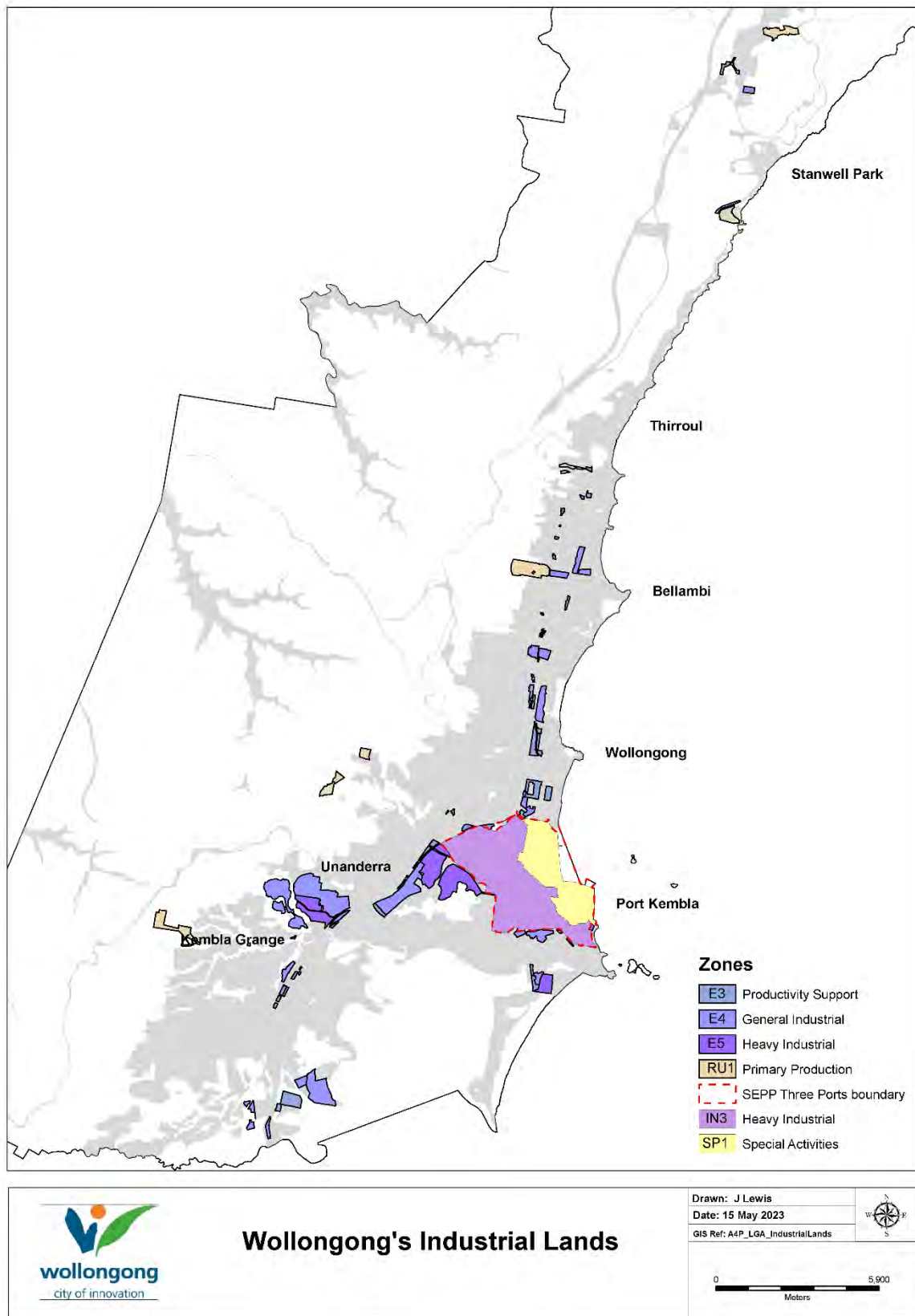


Figure 1.1: Zoned land in scope of the Review

1.3 Methodology

Council requires an understanding of the current and future industrial and urban services needs of the LGA to appropriately deliver more sustainable local employment opportunities, economic productivity and convenient access to goods and services, for an increasing and evolving population. A 20-year horizon from 2021 – 2041 has been selected for the purpose of this Review.

To develop this understanding, Council took a combined quantitative and qualitative approach, using a mix of methods to establish a sound evidence base, and make recommendations moving forward. The approach to research and analysis was informed by the questions posed at each stage of the project. These are outlined in Table 1.1.

The following data sources were used:

- ABS 2021 Census
- ANZSIC codes
- Id consulting (community profile, forecast population & economy)
- Department of Planning and Environment policies, guidelines and Employment Lands Development Monitor (ELDM), including additional servicing data from Sydney Water
- NSW Planning Portal - ePlanning Spatial Viewer (planning controls for various LGAs)
- Transport for NSW Travel Zone Projections (TZP22) – Employment projections
- Building footprints (Geoscape – December 2022, various capture dates).
- NSW Valuer-General - land price information

Relationship with Council's Housing Strategy and Retail and Business Strategy

In addition to this Industrial Lands Planning Review, Council has recently adopted two significant LGA-wide land use strategies – the Wollongong Housing Strategy 2023 and the Retail and Business Centres Strategy 2023.

These strategies make recommendations regarding land availability and capacity for development. They also all seek to balance the interests of economic growth and employment; greater housing diversity; the provision of adequate public open spaces; and access to public transport modes.

The Housing Strategy endorsed the continuation of the following strategy to 'retain industrial zoned land for employment opportunities, not for residential outcomes.'

Table 1.1: Approach and Methods

Phase	Questions	Methods
Background and Context	<p>What is the history of industrial lands in Wollongong?</p> <p>What is our community and how are we projected to grow?</p> <p>What is the economic role of industrial lands and how do they support employment?</p> <p>What are our priorities as defined by our key planning strategies?</p> <p>What are the key planning documents to be reviewed?</p> <p>What has our community told us about their concerns and aspirations for industrial lands?</p> <p>What are the relevant transport and environmental considerations?</p>	<p><i>Strategic context:</i> review of relevant policies and studies to inform the aims and objectives of the Review.</p> <p><i>Population and economic data analysis:</i> to understand the current and future demographic and economic data relevant to industrial lands.</p> <p><i>Engagement with technical staff:</i> to establish key stakeholders for consultations and collate current issues.</p>
Existing Industrial Land Appraisal	<p>What is the existing industrial lands network in Wollongong (amount of zoned land and number of lots)?</p> <p>Where is this land located within Wollongong LGA?</p> <p>How does Wollongong's industrial land fit into the broader region?</p> <p>How much land provides for urban services?</p> <p>How much land is undeveloped and/or unserved?</p> <p>How much land is zoned for mining purposes?</p>	<p><i>GIS land audit:</i> an audit of current industrial lands including all lots and associated planning controls.</p> <p><i>Building footprint data:</i> allocating and analysing data on building footprints to precincts.</p> <p><i>Employment Lands Development Monitor:</i> Analysing latest data provided by NSW Government</p>
Planning Analysis	<p>What is the existing planning framework for industrial lands?</p> <p>How do key development standards and DCP requirements for industrial lands in Wollongong compare with other LGAs?</p>	<p><i>Planning framework:</i> existing planning framework for industrial lands including Ministerial Directions, SEPPs, the Wollongong LEP and DCP.</p> <p><i>Comparative planning analysis:</i> Using data from the NSW Planning Portal, comparison of key development standards between Wollongong and 15 selected LGAs. Further, analysis of selected DCP requirements for industrial lands.</p> <p><i>Recent Development Activity:</i> Analysis of DA data for industrial lands including variations.</p>
Trends and Feedback	<p>What's happening with industrial lands more broadly and how will this inform their future?</p> <p>How do our planning controls relate to those in comparable LGAs?</p> <p>How are industrial buildings changing?</p>	<p><i>Engagement with the property industry and the business community:</i> targeted engagement as well as business survey.</p> <p><i>Desktop research:</i> to determine relevant trends impacting Wollongong's industrial lands</p>
Precinct Analysis	<p>What is the size of each industrial precinct (area, number of lots and size distribution)?</p> <p>Are there any affectations that limit industrial development?</p> <p>What is the general character of an existing precinct?</p> <p>Is the precinct suitable for intensification?</p>	<p><i>Analysis</i> of a precinct's characteristics against a set planning principles and determining its strategic direction.</p>
Draft Recommendations	<p>What needs to change in the way we define and structure our industrial lands?</p> <p>What changes are needed to development standards?</p> <p>Recommendations for changes to the DCP Chapter B5 – Industrial Development,</p> <p>Recommendations for changes to the Wollongong LEP 2009</p>	<p>Formulated from the findings of the Planning and Precinct Analysis as well as collation and evaluation: of all previous recommendations from adopted Town and Village Plans, strategic direction of allied LGA wide land use plans and strategies.</p>



2. Context

2.1 Place

The Wollongong LGA has an area of approximately 714 km² and is located 85km south of Sydney CBD. The LGA is bound by significant natural landscapes including: the Tasman Sea; the Royal National Park and the Sydney Drinking Water Catchment.

Wollongong is located on Dharawal Country. Aboriginal people have been caring for Country here for tens of thousands of years, engaging in ceremony, trading and making efficient use of the area's resources. Camps, settlements and meeting places were located on the coast and near waterbodies, places which were rich in fish, crustacea and water birds, where fishing and trading activities occurred. In some locations, like Hill 60 and Red Point these activities developed into industries such as commercial fishing post European settlement.

Europeans began to make their mark on Wollongong in the early 1800s. During this time the landscape began to change dramatically, as timber cutters, grazers, agriculturalists and later dairy farmers began to use the area for its resources. With these industries and agriculture established, Europeans began to settle in the area in the 1820s and 1830s.

Wollongong Township was planned in 1834, connecting business, government and community activities to the growing activity in Wollongong Harbour. As the coal industry moved in during the 1840s, villages were established in relationship with the mines, 'pit townships' developed, generally in alignment with established traditional Aboriginal travel routes¹. In many cases, the alignment of our now established roads is based on these traditional routes.

From the 1860's, a network of early tramway routes ran from the Escarpment Collieries east to jetties in harbours and ports, to allow for the transportation of raw materials to Sydney. These original railways also influenced future transportation routes. Bellambi village was originally established the junction of the Illawarra Railway and the South Bulli Colliery tramway lines.

As urban settlement was expanded, intercity connections strengthened in the late 1880s when the Illawarra railway was completed, running between Macdonaldtown in Sydney, to Kiama. The route for the trainline was largely dictated by topography and in most cases sat parallel and at a distance to established travel routes and towns.

As steelmaking was added to Wollongong's industry in the 1920s, new towns were established. Cringila, or 'Steel Town' as it was originally known, was released as a subdivision in the same year the steelworks opened.

In 1913, Port Kembla was connected to Wollongong by rail, providing an important freight function, then a passenger service some years later. As on the existing Illawarra line, the rail stations on the new extension were misaligned from the locations of the town centres, being located instead to service the Port, mining and steelmaking operations. Some of the Town Centres along these routes have experienced times of boom and decline, as residential and worker populations have fluctuated.

The most significant period of urban expansion occurred after World War II when successive waves of overseas immigration occurred to meet labour force needs associated with industrial expansion. This saw towns like Port Kembla grow significantly, along with surrounding villages at Lake Heights and Cringila. The expansion of Port Kembla industrial area resulted in the loss of some residential streets.

Wollongong has seen some established industrial areas transition to other land uses. In the main, these have included discrete sites with legacy industrial uses that have come to the end of their

profitable life. The end of these industrial uses provides an opportunity to consider the appropriateness of these uses in their context. In many cases, continuing industrial use is no longer considered appropriate within the surrounding land use context, and a transition to another use occurs. For example, the former Woonona and Bulli Brickworks, former Corrimal Cokeworks and McCauley's Estate at Thirroul.

Significant additions to our industrial zoned land have also occurred. Since the 2000s, urban growth has been planned for West Dapto and Tallawarra. Planning for this land release includes detailed structure plans which specify the type and distribution of employment lands to serve the growing population and meet the economic and employment goals of the region. The development of these new employment lands has been slow due to a range of constraints, including utilities servicing and specific landowner priorities.

2.2 People

The 2021 Australian Census provides an updated snapshot of Wollongong's population and workforce characteristics.

- Wollongong's Estimated Resident Population was 214,656.
- Wollongong has a labour force of 103,041 residents, including 98,019 (95.1%) residents in employment, with just over half (51.7%) working full time.
- Wollongong has a diverse and skilled workforce with the highest qualifications achieved being:
 - Bachelor or Higher degree (43,343 residents, 24.5%)
 - Advanced Diploma or Diploma (16,438 residents, 9.3%)
 - Vocational (39,749 residents, 24.4%).
- Wollongong's residents are increasingly becoming more skilled. Since 2016, an additional 10,056 (+4.6 pp.) residents achieved a Bachelor or Higher degree; a further 3,145 (+2.5 pp.) residents achieved a vocational education and 1,450 (+9.3 pp.) residents an Advanced Diploma or Diploma.
- The top five occupation categories in Wollongong are Professionals (25.1%), Technicians and Trades Workers (14%), Community and Personal Service Workers (12.9%), Clerical and Administrative Workers (12.5%) and Managers (11.6%).
- By industry, the top five sectors are Health Care and Social Assistance (17.3%), Education and Training (11.2%), Construction (9.2%), Retail Trade (8.5%) and Public Administration and Safety (7.2%)
- Relevant to industrial lands, Wollongong has a significant number of residents employed in the following sectors: Professional, Scientific and Technical Services (6,598 persons), Manufacturing (5,621 persons), Transport, Postal and Warehousing (4,377 persons), Mining (1,795 persons), Wholesale trade (1,654 persons) and Electricity, Gas, Water and Waste Services (992 persons).

By 2041, Wollongong's population is expected to increase to 278,744 residents².

2.3 Economy

Industrial lands play a crucial role within a local economy, supporting jobs and economic development, the provision of essential urban services and the functioning of local supply chains.

The economic role of various industrial lands precincts can be understood in part by considering the size and shape of the total land, size and orientation of lots, current zoning, surrounding land uses, the presence of physical constraints and importantly proximity to critical transport infrastructure. It is

also useful to examine the existing mix of businesses that currently operate within a precinct, whilst acknowledging precincts usually contain a wide variety of businesses.

Conceptually, Wollongong's industrial lands can be understood to have three broad economic roles:

- 1) Strategic precincts** – these are well-defined, large in total area with larger lots and in close proximity to major transport infrastructure. The predominate zoning is E5 Heavy Industrial as well as IN3 Heavy Industrial and SP1 Special Activity within the Port Kembla SEPP boundary.

Business operations generally are not focused on servicing demand within a local or regional catchment but rather on exporting to state, national or even international customers. Example businesses are those engaged in large scale manufacturing and heavy industry or freight and logistics utilising the Port of Port Kembla. The provision of major transport and energy infrastructure is critical to their ongoing operations as is the need for 24/7 operations and separation from other land users.

The Port of Port Kembla and its surrounds, being an international trade gateway, provides this critical economic role within Wollongong with support predominately from land at Unanderra. In the future, the NSW Government identifies an emerging strategic role for the West Dapto Employment Lands at Kembla Grange and those at Tallawarra, although there are current challenges in unlocking the full economic potential of these precincts, due in part to a lack of servicing and physical constraints.

Shellharbour Airport, located within the adjoining Shellharbour Local Government Area, also has a key part to play in the economic outcomes of the region as envisaged in the Shellharbour Airport Regionally Significant Employment Precinct Profile. The Profile identifies that *'the economic and employment growth outlook for the airport precinct is immense'* which will have positive outcomes for numerous industrial precincts throughout the region.

- 2) Regional/Sub-regional precincts** – these are also well-defined and of sufficient size with agglomeration of business activity. Lot sizes will vary but they are generally accommodative to a number of activities including warehousing or local manufacturing. The predominate zoning is E4 General Industrial and there is usually reasonable access to major transport nodes.

Business operations include those whose customer base normally extends beyond local residents of the LGA to a broader regional catchment (for example, the Illawarra Shoalhaven or into Southern Sydney). Businesses may be involved in some state-wide or national export activity however this is not their primary focus. Examples are wide ranging and include concrete batching, construction depots, equipment hire, suppliers of various trades, building and landscaping products, distribution premises, car sales and self-storage facilities. Often these businesses are critical suppliers to other nearby local businesses.

Example precincts include land at Bellambi/Woonona, Fairy Meadow, North Wollongong, Coniston, and Warrawong.

- 3) Local precincts** – these are often less defined, smaller in scale and in some instances may be isolated. The level of transport connectivity varies considerably and the presence of physical constraints and/or proximity to other land uses may limit intensification. Zoning is either E4 General Industrial or E3 Productivity Support.

Business operations are focused on providing everyday goods and services to local residents within a smaller catchment and usually not involved in exporting. These businesses generally locate on various pockets of land across the LGA and may include businesses such as motor mechanics and smash repairs as well as those providing indoor recreation facilities.

Example local precincts include land at Helensburgh, Bulli, Figtree, Corrimal, and Dapto.

It is noted that the term 'urban services' is often used to collectively describe businesses considered to be providing essential services to the operation of a city and its residents (for example, concrete batching, motor vehicle repairs and the provision of utilities). Although these services can occur across all three types of precincts, the role that smaller scale precincts can play in supporting urban services is becoming increasingly recognised, even if they do not provide high levels of job density.

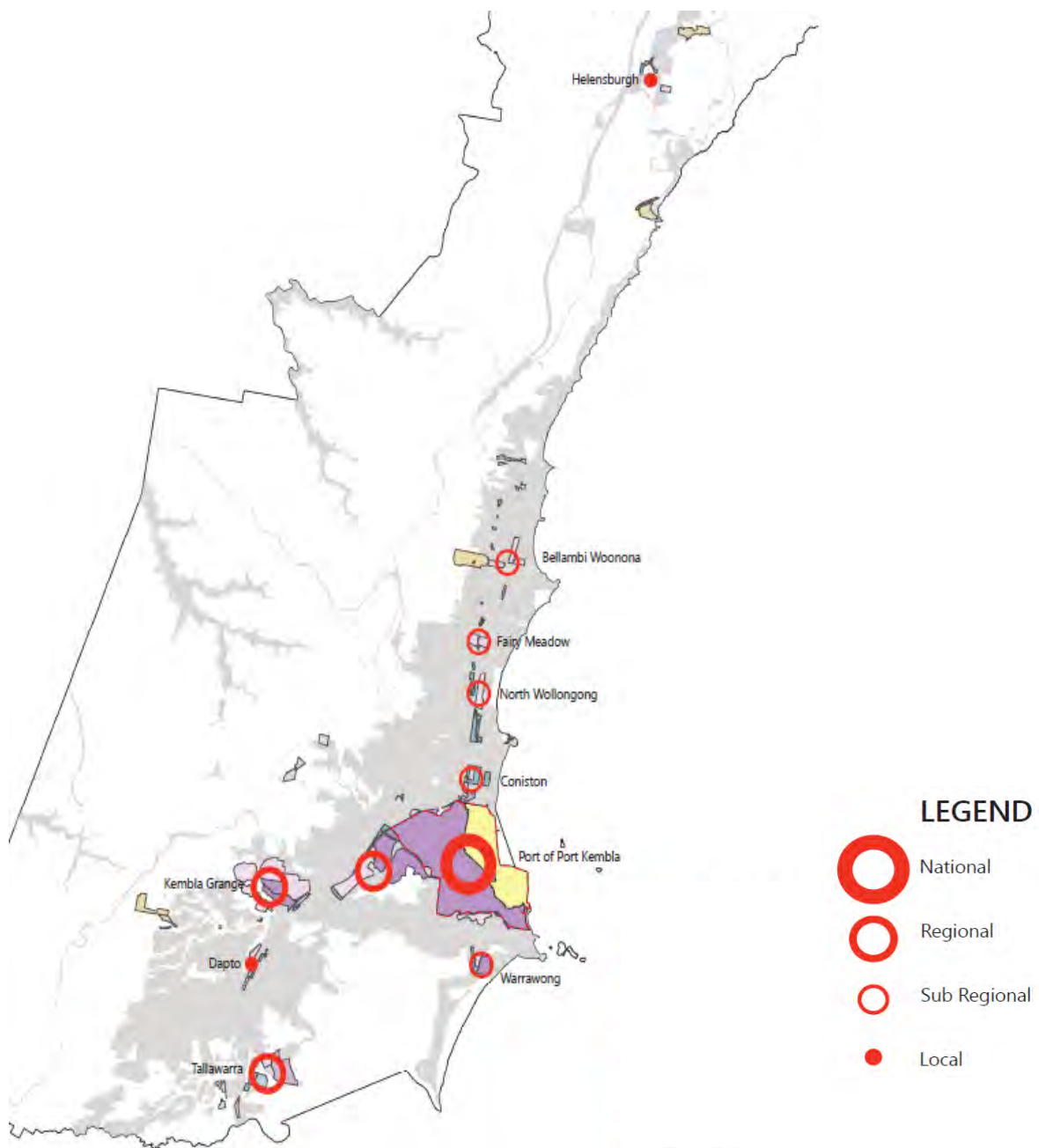


Figure 2.1: The economic role of Wollongong's industrial lands

Employment trends

The structure of Wollongong's economy has changed over the last two decades.

Wollongong's economy has shifted from a traditional focus on goods production anchored around steel manufacturing, to a broader services-based economy. The services economy has seen growth in population servicing industries as well as the knowledge economy.

Over the last two decades the proportion of full-time equivalent (FTE) manufacturing jobs in Wollongong LGA has declined from 18.2% to 9.2% (Figure 3). For context, in 2001/02, the equivalent proportion for NSW overall was only 11.5%, demonstrating that Wollongong was well above the state average for manufacturing employment (+6.7 p.p.). By 2021/22, NSW's proportion had declined to 6.6% with Wollongong now only 2.6 p.p. higher. Although manufacturing's role in local employment has fundamentally changed, it remains a critical economic sector. Manufacturing is the largest contributor to Wollongong's exports and continues to evolve towards more advanced production methods. Manufacturing is forecast to grow modestly in employment numbers over the next two decades³.

Like most LGAs, the largest increase in number of local FTE jobs in Wollongong over the last two decades has occurred in mostly population serving sectors such as Health Care and Social Assistance (+5,494) and Education and Training (+2,692). Public Administration and Safety (+1,755) has also seen a relatively strong increase in employment, as has Construction (+1,721) and Professional, Scientific and Technical Services (+1,377).

Since 2001/02, both Retail Trade (-1,394) and Wholesale Trade (-915) have seen a decline in local FTE employment, although levels in both sectors have been volatile over time, with Retail Trade currently sitting at the same level seen in 2015/16. Employment in both sectors has likely been affected by the ongoing shift to e-commerce, a trend that is not unique to Wollongong.

Whilst local FTE employment in the Mining sector is around 500 jobs higher than the level in 2001/02, employment in Mining has been declining over the last decade since its peak in mining boom of 2011/12. Looking ahead, Mining is also the only sector forecast to moderately decline through to 2041. Despite declining employment, in 2021/22, Mining remained Wollongong's second largest export sector (\$1.9 B), ahead of Education and Training (\$1.4 B), although considerably lower than Manufacturing (\$5.8 B).

Council is committed to supporting growth in local employment opportunities including within the industrial sector. Council's *Economic Development Strategy 2019-29* includes an aspirational jobs target of 10,500 net new jobs in Wollongong LGA by 2028. Council, in partnership with the NSW Government and the University of Wollongong, is actively seeking to deliver on the jobs target through an advocacy and investment attraction program known as 'Invest Wollongong'. A number of target sectors have been identified which include Advanced Manufacturing, Defence and Clean Energy, all of which require suitable industrial land.

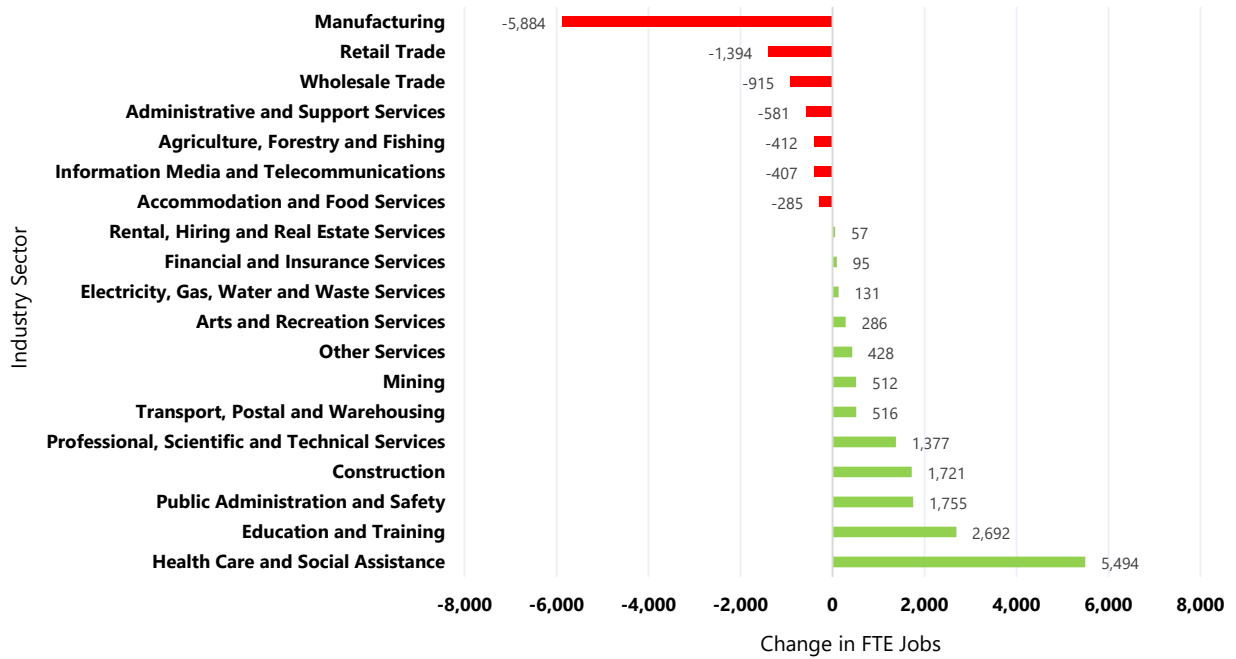


Figure 2.2: Change in Employment (FTE) by Industry, 2002 - 2022, Wollongong LGA

Employment forecasts

According to the NSW Government, Wollongong LGA had an estimated 102,727 local jobs in 2021. By 2041, these jobs are forecast to grow by 22,072 (21.5%), which equates to a growth rate of about 1% per annum.

Table 2.1: Employment projections by 19 industry sectors, 2021 – 2041, Wollongong LGA

Broad Sector	Industry Sector	2021	2026	2031	2036	2041	Change 2021 2041	%
PS	Accommodation and Food Services	7,668	7,502	7,847	8,787	9,254	1,586	21%
KI	Administrative and Support Services	3,406	3,768	3,999	4,428	4,630	1,224	36%
IN	Agriculture, Forestry and Fishing	209	193	232	256	283	73	35%
PS	Arts and Recreation Services	1,495	1,677	1,746	1,852	1,970	475	32%
PS	Construction	9,336	9,564	9,596	10,082	10,626	1,290	14%
HE	Education and Training	11,872	13,176	13,664	14,735	15,103	3,231	27%
IN	Electricity, Gas, Water and Waste Services	953	1,026	1,060	1,114	1,172	219	23%
KI	Financial and Insurance Services	3,902	4,264	4,530	4,952	5,375	1,473	38%
HE	Health Care and Social Assistance	18,285	19,175	19,756	19,888	20,834	2,549	14%
KI	Information Media and Telecommunications	772	667	738	807	865	93	12%
IN	Manufacturing	7,684	7,194	7,902	8,405	8,931	1,246	16%
IN	Mining	1,406	1,541	1,520	1,329	1,177	230	-16%
PS	Other Services	4,524	4,988	5,220	5,705	5,966	1,442	32%
KI	Professional, Scientific and Technical Services	6,867	8,705	8,803	9,121	9,592	2,725	40%
KI	Public Administration and Safety	6,207	6,829	6,929	7,560	7,533	1,326	21%
KI	Rental, Hiring and Real Estate Services	1,500	1,659	1,721	1,823	1,920	420	28%
PS	Retail Trade	9,872	10,467	10,513	11,344	11,911	2,039	21%
IN	Transport, Postal and Warehousing	5,149	5,049	5,279	5,597	5,775	626	12%
IN	Wholesale Trade	1,617	1,642	1,707	1,798	1,881	264	16%
	Total Employment	102,727	109,086	112,759	119,583	124,798	22,072	21%

The Greater Cities Commission (GCC) breaks these employment forecasts into the following four broad industry categories:

- **Health and Education (HE)** – Health Care and Social Assistance and Education and Training
- **Industrial (IN)** - Agriculture, Forestry and Fishing; Electricity, Gas, Water and Waste Services; Manufacturing; Mining; Transport, Postal and Warehousing and Wholesale Trade.
- **Knowledge Intensive (KI)** – Administrative and Support Services; Financial and Insurance Services; Information Media and Telecommunications; Professional, Scientific and Technical Services; Public Administration and Safety and Rental, Hiring and Real Estate Services.
- **Population Serving (PS)** – Accommodation and Food Services; Arts and Recreation Services; Construction; Other Services and Retail Trade.

Within the Industrial sector, the major drivers are manufacturing (1,246 jobs, 47%), Transport, Postal and Warehousing (626 jobs, 23%). The remaining jobs growth is forecast to come from Wholesale Trade (264 jobs, 10%), Electricity, Gas, Water and Waste Services (219 jobs, 8%) and Agriculture, Forestry and Fishing (73 jobs, 3%). The mining sector is the only sector forecast to decline by 219 jobs (-9%).



Figure 2.3: Change in employment by industrial sector, 2021 – 2041, Wollongong LGA

Industrial land is also occupied by other employment sectors. This includes population serving sectors that provide urban services such as Other Services (includes businesses engaged in repair and maintenance activities like automotive mechanics and machinery repairs) as well as Professional, Scientific and Technical Services which includes engineering services and other scientific services. Further, Retail Trade, particularly specialised retail premises (including bulky goods), occupies some E3 Productivity Support zoned land.

Figure 2.4 shows the change in local jobs by broad industry sector through to 2041. While Wollongong's industrial sector is expected to grow by 2,199 jobs, this represents only a 10% share of the total growth in employment. In comparison, the largest share is in Knowledge Intensive jobs (33%), expected to grow by 7,261 jobs.

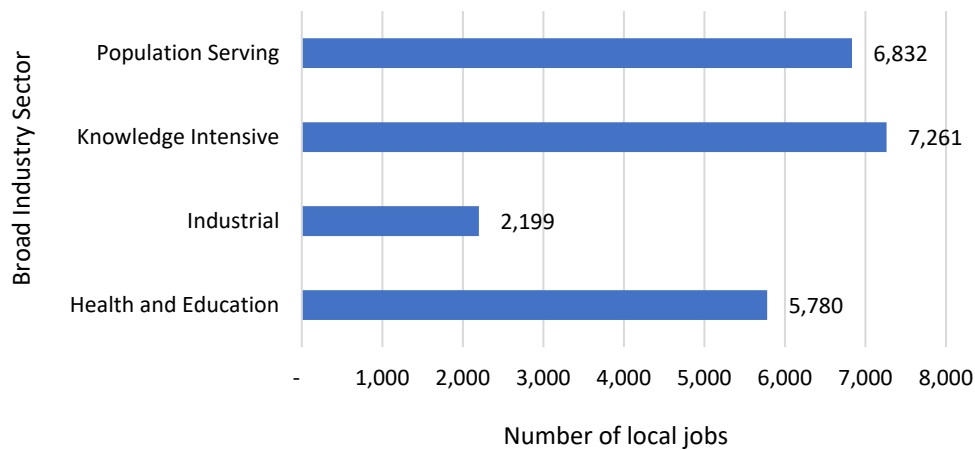


Figure 2.4: Change in employment by broad industry sector, 2021 – 2041, Wollongong LGA

2.4 Transport

Arguably one of the most important factors for the success of industrial lands is an efficient transport network with the ability to move freight.

Transport for NSW's Freight and Ports Plan 2018-2023⁴ ('FPP') recognises that an increasing number of freight distribution sites as well as growing populations will result in more traffic throughout Wollongong.

The Illawarra Shoalhaven Regional Plan 2041⁵ includes strategies related to protecting road and rail connectivity to the Port of Port Kembla, protecting connectivity that facilitates mining industries and optimising the efficiency and effectiveness of freight handling and the logistics network across Wollongong LGA.

Subsequently, the Illawarra Shoalhaven Regional Transport Plan⁶ (IS RTP) includes objectives related to productivity including promoting efficient road and rail networks and resolving 'first and last mile' barriers when it comes to distribution. The IS RTP outlines how the regional freight task will continue to grow over the next 20 years, particularly with the Port of Port Kembla identified as a future container terminal and potential hub for hydrogen production and export. To support this expansion, surrounding road and rail networks will need to embrace technology-driven solutions, and address first mile/last mile limitations.

According to the IS RTP, existing barriers to the expanded use of High Productivity Vehicles (HPV), particularly in the southern part of the region, means that larger road freight accessing the region must approach from the north via either the M1 Princes Motorway or the M31 Hume Motorway and Picton Road. There is also a need to improve rail connectivity between the region and Western Sydney to accommodate this growing freight task.

Council as well as local business and industry networks have identified that the need for efficient, reliable, and safe connectivity between Wollongong and Greater Sydney will continue to grow, with the connection to Western Sydney increasing in importance as the Western Sydney Aerotropolis expands.

In November 2022 Council resolved to make a submission to the Greater Cities Commission for their consideration in response to the Discussion Paper for the Six Cities Region, release in September 2022. The submission identified Council's infrastructure priorities noting their critical importance of a resilient transport network to our Port and region. Council advocated for strategic investment in:

- Direct rail connection to South-West Sydney - South-West Illawarra Rail Link (SWIRL) /Maldon Dombarton.
- Bridge clearance heights across the road freight network to accommodate movements of oversized and over mass products.
- Inland bulk goods receipt facilities needs to be examined for optimisation of Port functions.
- Road infrastructure, including Picton Road upgrade / duplication and the Mt Ousley interchange, should be high delivery priority.

Council continues to collaborate with the GCC, including in the preparation of this Review.

Road network

The Illawarra region is serviced by an extensive road network, which includes the north-south corridor of the Princes Highway/M1 Princes Motorway and the major external access points of Macquarie Pass,

Picton Road, Mount Ousley Road, Bulli Pass, Shellharbour Road, and the Royal National Park which connect the region to Sydney and the South Coast, and the Southern Highlands.

Several of the roads listed above are part of the NSW Oversize Overmass Load Carrying network of approved roads, including Princes Highway/M1 Princes Motorway (with travel conditions), Picton Road, Shellharbour Road, Five Islands Road, Flinders Street, Memorial Drive, the Old Princes Highway and Bellambi Lane. These roads are the legally enforceable network for vehicles that exceed general access mass or dimension limits.

Under existing conditions, the car is the dominant mode of travel across the Illawarra-Shoalhaven. For many people across the region, a lack of access to viable alternatives to the private vehicle amplifies this trend. The need to increase modal choice for more people, more often will deliver a future that is both more customer-focused and sustainable.

Increased consumer deliveries place pressure on road network (urban congestion) with the estimate that every five years e-commerce sale will double. This was pre pandemic and may now be an underestimate. The IS RTP has increasing access for High Productivity Vehicles (HPVs) as a key focus area for the region.

There are several key road projects in various stages of development that support improved industrial lands connectivity. These include:

- **Picton Road Upgrade**

- Picton Road connects the M1 Princes Motorway near Mount Ousley in the east, with the M31 Hume Motorway at Wilton and Picton in the west and is an integral link to the urbanising areas to the west of Wollongong at Wilton and Camden, and to the larger area of rapidly changing western Sydney. In the future, it will be a major freight link to the Aerotropolis precinct that surrounds the new Western Sydney Airport (WSA).
- As one of the state's busiest freight corridors, it carries a high proportion of heavy vehicles with few comparisons in NSW. The annual growth of traffic, including heavy vehicles, has been significant and is set to continue for both passengers and freight, with the planned population increase at Wilton and the development of the WSA and Aerotropolis. It is expected to reach capacity by the mid-2020s.
- Upgrades to Picton Road propose (among other objectives) to improve freight connectivity from Port Kembla and the broader Illawarra region.
- The Australian and NSW Government have funded over \$60 million in safety improvements on Picton Road since 2010. In November 2020, the NSW Government announced a further \$44 million to plan for an upgrade of Picton Road between the Wilton Growth Area and the M1 Princes Motorway and in 2022 the Federal Government committed a further \$95.6 million towards the planning works for Picton Road Upgrades and Picton Bypass.
- In February 2019, Infrastructure Australia added the need to address capacity and safety issues on Picton Road to their Infrastructure Priority List.
- The NSW Government has subsequently completed a strategic business case (Stage 2 of Infrastructure Australia's Assessment Framework), although it has not yet been submitted to Infrastructure Australia⁷.

- **Mt Ousley Interchange**

- The project is an interchange on the M1 Princes Motorway at the base of Mount Ousley, replacing the existing intersection which currently experiences long queues and delays during peak periods.

- According to Infrastructure Australia, the Mount Ousley interchange project proposes to improve road safety, travel times and accommodate the efficient movement of future traffic and freight growth. This will include separation of heavy vehicles and cars with a proposed heavy vehicle only bypass lane for southbound travel and two new heavy vehicle safety ramps⁸.
- \$300 million has been allocated jointly by the Federal and NSW Governments and major construction is anticipated to begin in 2024.
- **West Dapto Ring Road**
 - Council's West Dapto Vision and Structure Plan (2018) includes a proposed major road network to service the West Dapto Urban Release Area. The West Dapto Ring Road is the main north-south arterial road through the release area, running between Yallah Rd in the south to Northcliffe Dr in the north. It provides an important link for all travel modes including walking, cycling and public transport, connects proposed new town centres, allows for closure of an existing railway level crossing and connects the Kembla Grange employment/industrial area to the M1 motorway and Port Kembla. This will mean more local residents are able to work within 30 minutes of where they live.
 - This project has the ability to deliver an innovative multi modal transport corridor that can be showcased nationally and to the rest of the world. It has the ability to provide a 15-minute neighbourhood, which is international best practice and can showcase NSW on the world stage.
- **Stage 3 of the Albion Park Rail Bypass - Tallawarra Interchange**
 - The Tallawarra interchange is the final stage (Stage 3) of the Albion Park Rail Bypass. It consists of both north facing ramps and a new southbound on ramp to the M1. It will provide direct M1 access for the Tallawarra Lands development area, West Dapto and the southern parts of the existing Dapto area. It is important to allow access to the M1 south for the West Dapto community and to reduce through traffic impacts on existing roads.
 - The project is included in the Illawarra-Shoalhaven Special Infrastructure Contribution (SIC) plan, however there is no indication regarding the likely timeframe for delivery.
 - This project is important to provide access for not only light vehicles, but heavy vehicles to/from the Dapto area that are currently forced to use lower order roads and travel through areas with sensitive adjacent land uses, resulting in reduced amenity and safety concerns.
- **Outer Sydney Orbital Stage 2**
 - In February 2016, Infrastructure Australia added 'Corridor preservation for Outer Sydney Orbital road and rail/M9, and Castlereagh Connection' its Infrastructure Priority List recognising the need for long term planning to accommodate future traffic demands between Western Sydney as well as areas to the north and south of Sydney (including the Illawarra).
 - In March 2018, the NSW Government publicly exhibited a planning study to identify a preferred alignment for the first stage of the corridor, between Richmond Road and the Hume Highway. This is envisaged to be a multi-modal transport corridor in Western Sydney, comprising a motorway, a north-south freight rail line, and, where practical, integrating a north-south passenger rail line.
 - Investigations are ongoing for the remaining stages to Illawarra (Outer Sydney Orbital Stage 2) and the Central Coast (Outer Sydney Orbital Stage 3)⁹.

Rail network

There are currently two rail lines in Wollongong relevant to industrial lands.

1. South Coast Line services the LGA from Helensburgh to Dapto (and beyond to Bomaderry) and Port Kembla and caters for suburban, interurban (Sydney) and freight rail services.
2. The Moss Vale – Unanderra Line provides a freight link between Port Kembla and the Main South Line at Moss Vale in the Southern Highlands. In February 2021, the 'Mount Murray Loop Extension' was completed which has expanded freight capacity on the line due to accessibility for longer freight trains ¹⁰.

South West Illawarra Rail Link (SWIRL)

Increasingly, freight on the South Coast Line is becoming constrained by passenger services. It has been estimated by the University of Wollongong, that by 2036, the South Coast Line will be at capacity for passengers and freight; the Port Kembla Container Terminal will be only five years away and population growth at Wilton will necessitate the construction of a station and a rail connection to the Main Southern Line, delivered most cost-effectively by the SWIRL ¹¹.

Council as well as local business and industry stakeholder groups have advocated for the NSW Government to undertake a detailed business case related to a proposed dual track passenger and freight line known as the 'South West Illawarra Rail Link' (SWIRL). The proposal involves utilising the pre-existing (though unfinished and single track) 35 km long Maldon-Dombarton rail corridor to connect Wollongong with South West Sydney. The base option also includes the electrification of the 7 km long section of the existing Moss Vale-Unanderra Line between Dombarton and Unanderra. Freight trains would mainly travel between Port Kembla, using the South Coast Line between Coniston and Unanderra, then onto the SWIRL and arrive at Maldon. There have also been two complementary extensions to the first proposal, including:

- SWIRL- Western Sydney Airport (WSA): a 30 km long extension of SWIRL towards the future WSA, electrified, dual purpose (passenger and freight) line.
- SWIRL- St Marys: an 18 km long extension of SWIRL-WSA to St Marys and the future Western Sydney Freight Terminal and a dual purpose, dual track electrified connection to the Main Western Line for passengers.

This project is included on Infrastructure Australia's priority list project, with a medium term timeframe of 5-10 years. It is still at stage one of the process 'early stage proposal' with the recommendation that the NSW Government identify and analyse potential investment options as part of stage 2 of the assessment framework ¹².

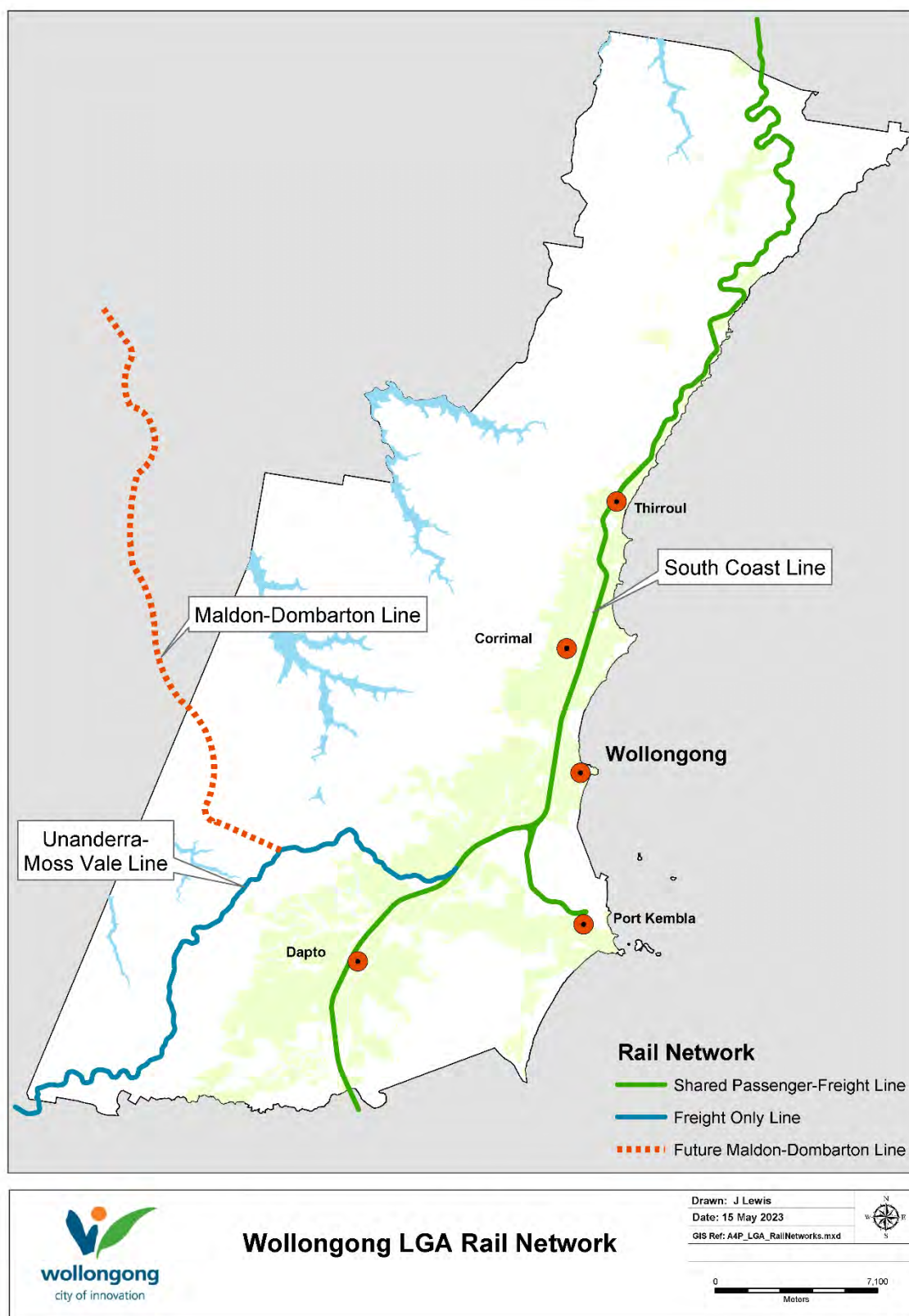


Figure 2.5: Wollongong's regional rail network

Public and active transport connectivity

Although freight movement is a primary concern of industrial lands, there are also important considerations around transport connectivity for workers and customers.

According to the NSW Government's Movement and Place *Built Environment Indicators* ¹³, the majority of Wollongong's industrial lands rate low for public transport accessibility. This is not surprising, as industrial lands are generally vehicle dominated environments, although some are located near passenger rail or bus stops. Further, there is a general lack of active transport connectivity, including cycling infrastructure and footpaths for pedestrians. As the nature of activity on industrial lands continues to diversify, including non-traditional customer facing businesses such as breweries, gyms and other indoor recreation facilities, public transport accessibility and active transport links are likely to grow as an important consideration.

It is noted that the ISRTP's vision includes one in five trips across the region (work, education, health, retail, or recreation) by walking, cycling or public transport by 2041 and is equally applicable to industrial lands as it is to other locations such as Town Centres.

2.5 Energy

A success factor for industrial lands is availability of reliable and affordable power for industry.

Currently, the bulk of electricity used in Wollongong is generated at coal powered power stations located in other parts of the State. The electricity is transported at high voltages to bulk supply points over the transmission line network system operated by TransGrid.

A gas-fired power station is located at Tallawarra which supplies electricity to the grid during periods of high demand. A second power station (Tallawarra B), proposed to be Australia's first dual fuel gas-hydrogen peaking plant, is currently under construction. Tallawarra A is also planned for an upgrade to dual fuel capability during 2024.

In February 2023, the NSW Government formally declared a Renewable Energy Zone (REZ) in the Illawarra (Figure 2.6) ¹⁴.

REZs form part of the NSW Government's Electricity Infrastructure Roadmap with the purpose to group new wind and solar power generations into locations where it can be efficiently stored and transmitted across NSW. The Illawarra is one of five declared zones across the State. Wollongong and Shellharbour LGAs are included in the zone with Figure 2.6 showing the existing power transmission network and locations of proposed offshore wind investment.

According to EnergyCo's *Energising the Illawarra* fact sheet ¹⁵, the Illawarra REZ will utilise rehabilitated industrial land, port and transport infrastructure, and local skilled workforces to help drive a 50 per cent reduction in emissions by 2030 under the State's Net Zero Plan and also support the implementation of the NSW Hydrogen Strategy. The following opportunities have been identified for the Illawarra REZ:

- Utilise existing and rehabilitated industrial sites to host energy infrastructure.
- Utilise port and transport infrastructure to access export markets for green hydrogen, ammonia, and metal production.
- Develop an offshore wind industry in the region, creating new skilled job opportunities and growth of emerging technologies.
- Support large energy users, including emerging technologies such as green hydrogen, ammonia, and green metal production, with cheap, reliable, and clean electricity.
- Leverage the region's highly skilled workforce, supply chains and experience in manufacturing to participate and thrive in a renewable energy future.

It is recognised that the Illawarra REZ requires complex planning and extensive consultation to understand the region's existing and future energy needs.

In 2022, EnergyCo commenced local industry engagement around the design of the Illawarra REZ with a Registration of Interest (ROI). The ROI attracted a significant response with 44 projects registered, representing over \$43 billion in potential investment and potentially delivering over 17 gigawatts of generation and storage capacity. This includes:

- 10 wind generation projects with 8 located offshore,
- 5 solar projects,
- 16 energy storage projects including 11 batteries,
- 4 pumped hydro projects,
- 4 hydrogen production and 2 hydrogen electricity generation projects, and
- 3 new load projects including green steel manufacturing.

The REZ declaration sets out the intended network capacity for network infrastructure in the Illawarra REZ of 1 gigawatt. According to EnergyCo, this will provide sufficient transfer capacity for existing and committed generation in Southern NSW and the Illawarra to dispatch into the electricity grid. Importantly, the capacity of the Illawarra REZ may increase over time with the growth of emerging industries such as offshore wind, green hydrogen, and green steel manufacturing.



Figure 2.6: Declared Illawarra Renewable Energy Zone, Feb 2023, EnergyCo

2.6 Environment

Wollongong's natural environment and geography creates a context of complex constraints. The increasing impacts of climate change is adding to this complexity.

Climate change

Wollongong is a city committed to action to address climate change and promote a clean energy future. Recent plans and activities include:

- In August 2017, Council became a signatory to the Global Covenant of Mayors for Climate and Energy (GCoM), which commits Council to a series of activities to achieve a resilient and low-emission society.
- In August 2019, Council declared a State of Climate Emergency that requires urgent action by all levels of government. As part of the GCoM, Council set a target of net zero emissions by 2050 for the City of Wollongong and also recognised the significance of its own contribution to the city's emissions setting a target of net zero emissions by 2030 for its own operations.
- In January 2020, Council joined the City Power Partnership Program (CPP) to help reduce emissions and to promote opportunities to our community and businesses. This program supports the Wollongong's transition to a clean energy future by providing access to a range of resources to help evaluate and monitor actions and opportunities to collaborate and share knowledge with other Councils
- On 16 November 2020, Council adopted the Climate Change Mitigation Plan 2020 and Sustainable Wollongong 2030: A Climate Healthy City Strategy.
- On 27 November 2023, Council adopted the Climate Change Mitigation Plan 2023-2030.

Council's strategic documents recognise the significant potential to increase sustainability and climate resilience through improved and effective development controls and supporting instruments, and the role that development and town planning will play in contributing to net zero.

Industrial processes and product uses contributed 4,478,000 tonnes of CO₂ into the atmosphere between 2020 and 2021. Industrial emissions from electricity use amounted to 1,690,000t, and gas 42,000t. Combined this equates to 6,210,000t of CO₂, or ~78% of our total emissions¹⁶.

Council is actively exploring how it can work with the community, businesses, and industry to achieve community net zero carbon emissions targets by 2050. Energy efficient design, construction and ongoing operations is a key area relevant to Industrial lands.

Physical constraints

Industrial land can also have a number of physical constraints such as contamination, flooding, biodiversity, and slope that may prohibit or severely limit development outcomes. In 2014, the NSW Government prepared an Illawarra Industrial Land Study that undertook constraints mapping and found that 70% of vacant employment land in Wollongong LGA was affected by at least one physical constraint¹⁷.

In particular, flooding is a major challenge for industrial land across Wollongong LGA and Council is continuously updating its flood risk management plans to guide safe and sustainable development outcomes into the future.

2.7 Strategic Policy

The NSW State Government sets high-level strategic priorities through Ministerial directions, plans and policies. Local Governments – such as Wollongong City Council – are responsible for the application of State Plans locally through Local Strategic Planning Statements; LGA wide strategies; and updates to local planning instruments (Wollongong LEP and DCP). Together this suite of documents helps us to plan for the future.

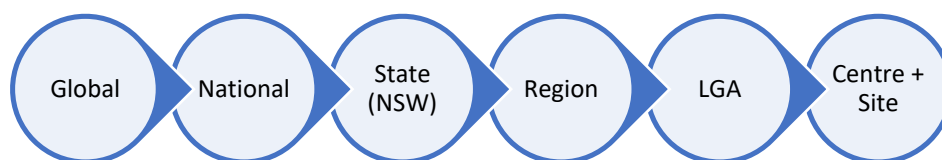


Figure 2.7: Relationship between strategic plans

An example of a global strategic plan is the United Nation's Sustainable Development Goals whilst there are numerous plans at the Federal and State Government level applying across a range of areas, including the economy and the environment. The Illawarra Shoalhaven Regional Plan 2041 is the principal regional level plan and Council then sets out the community's 10-year aspirations within its over-arching Community Strategic Plan for Wollongong LGA. Council further prepares supporting strategies at the LGA level with a recent example being the Wollongong Retail and Business Centres Strategy. Finally, Council also prepares a number of Town and Village Plans such as the Port Kembla 2505 Revitalisation Plan 2018-2043 as well as site specific plans.

Wollongong LGA is also part of the newly formed 'Six Cities' regional planning framework overseen by the Greater Cities Commission (GCC). It is expected that a Six Cities Region Plan will be released in the first half of 2023 followed by an Illawarra Shoalhaven City Plan during FY2023-24.

The GCC has recognised the importance of industrial lands as vital economic infrastructure which support efficient supply chains across cities productivity, functioning and economic resilience of cities. To achieve this, industrial lands need to be located close to the businesses and communities they serve and linked to critical infrastructure such as airports, ports through road and rail. The GCC has stated that the Six Cities Region Plan will include an industrial lands policy, and this will be informed by their recent review of the 'Retain and Manage' policy approach across Greater Sydney.

State Government plans recognise the importance of activating regionally significant employment land across the Illawarra Shoalhaven, including the Port of Port Kemba, West Dapto Employment Lands and at Tallawarra. A key objective is protecting the economic functioning of the Port of Port Kembla as an international gateway for freight and logistics including the plan for Port Kembla to become the state's next container terminal once Port Botany reaches capacity. The importance of critical infrastructure projects that improve connectivity to the Port (road and rail), including links to Western Sydney and the new Aerotropolis, has been identified. The importance of managing traffic congestion throughout Wollongong and promoting efficient movement of local freight as well as public and active transport is also recognised.

State Government plans also identify the need to protect areas of mineral and energy resources potential including through infrastructure that facilitates efficient mining operations. There is also a focus on promoting the clean energy transition, including opportunities in hydrogen, as well as circular economy.

Council's plans articulate the need to grow more local employment opportunities in Wollongong and promote diversification of Wollongong's economy. Council, via the Invest Wollongong partnership with the NSW Government and the University of Wollongong, is seeking to attract investment and jobs growth relevant to industrial lands such as Advanced Manufacturing, Defence and Clean Energy. Council has set an aspirational jobs target of 10,500 net new jobs in Wollongong LGA from 2018 to 2028 and recognises that activation of significant employment lands as well as improved connectivity between the Port and Western Sydney will be critical in achieving this.

Council is also committed to addressing challenges around climate change, promoting urban greening and improved amenity, public and active transport as well as employment opportunities within the West Dapto Urban Release area some of Council's priorities that are relevant to industrial lands.

Appendix 1 Review of Strategic Policy explores a range of Strategic Policies in further detail and highlights the relevant implications for this Strategy. Core Planning Documents including Ministerial Directions, SEPP (Exempt and Complying Development Codes) 2008, the Wollongong LEP 2009 and the Wollongong DCP 2009 are discussed in more detail in Section 4.1 Planning Framework.



3. Our Industrial Lands

This section provides a comprehensive analysis of Wollongong's industrial lands using data from a range of sources including the NSW Government's Employment Lands Development Monitor and Council's own spatial, property and development data.

3.1 Illawarra Shoalhaven Region

The NSW Government Employment Lands Development Monitor (EDLM)¹⁸ provides an annual snapshot of employment land supply and demand across several regions including the Illawarra Shoalhaven.

The EDLM defines 'employment lands' as land that is zoned for industrial or similar purposes in planning instruments and includes the same zones as the scope of this Review (excluding RU1 lands).

Table 3.1 shows that Wollongong LGA contains just over half (51%) of the total zoned employment land in the region. When considering only zoned industrial land (E4 and E5), this proportion rises to 72%, highlighting the importance of Wollongong in supporting industry across the region³.

Wollongong has a much higher provision of industrial zoned land per capita than the other LGAs. As discussed further in this section, provision of at least 3 sqm per person of industrial land is considered the minimum requirement for urban services provision. In the case of Kiama LGA (2 sqm per person), it is likely that residents are needing to access urban services in other LGAs across the region, and that the LGA has very limited provision of broader industrial businesses.

Table 3.1: Zoned employment land stocks by LGA (January 2022)

LGA	Total Zoned Employment Land (Ha)					
	B Zones	IN Zones	SP Zones	Total	Population (2021)	Industrial Land Per Capita (sqm)
Kiama	14.4	4.7	-	19.1	22,961	2
Shellharbour	25.6	104.8	96.3	226.7	76,443	14
Shoalhaven	191.9	607.9	1,118.8	1,918.6	108,497	56
Wollongong	154.0	1,841.9	261.4	2,257.3	214,657	86
Total	385.9	2,559.3	1,476.5	4,421.7	422,558	61

Note: This data is based on zoning that prior to the DPE Employment Zone Reforms

3.2 Wollongong LGA

As of July 2022, there were 2,447 lots (2,432 distinct lots) representing approximately 2,445 hectares of industrial land across Wollongong LGA⁴. This includes all industrial zoned land (E4 and E5) as well as E3 Productivity Support and SP1 Special Activity (including an area of water) and IN3 Heavy Industrial at the Port of Port Kembla.

³ Total area for Wollongong LGA varies from the figure provided in the ELDM, due in part to timing, but also choices around the exclusion of railway infrastructure, inclusion of the inner harbour at Port Kembla, and the ELDM including SP1 land at the Wollongong University Innovation Campus.

⁴ The number of distinct lots is lower than the totals shown as there are a small number of lots that have split zoning and separating the table by zoning counts the same lot twice. All figures are rounded to one decimal place.

Table 3.2 below provides a summary of zoned area for the LGA (including by Ward ⁵).

Table 3.2: Summary of industrial land, Wollongong LGA

Zone	Ward 1		Ward 2		Ward 3		LGA	
	Lots	Area (Ha)	Lots	Area (Ha)	Lots	Area (Ha)	Lots	Area (Ha)
E3	74	14	684	81	128	63	886	158
E4	381	85	163	46	504	501	1,048	632
E5	-	-	-	-	278	279	278	279
IN3	-	-	-	-	165	919	165	909
SP1[^]	-	-	-	-	69	465	69	465
W4	-	-	1	3	-	-	1	3
Total	455	98	848	130	1,144	2,217	2,447	2,445

[^] Includes two zoned lots (approximately 220 Ha) that are part of the inner harbour and water. The amount of 'dry land' is approximately 246 Ha, although it is noted land has been progressively reclaimed over time.

Although different to industrial land, this Review also includes consideration of the RU1 Primary Production zone, some of which translated over from the previous 4c Extractive Industry zone under the Wollongong LEP 1990. Table 5 below provides a summary of this zone.

Table 3.3: Summary of RU1 Primary Production land, Wollongong LGA

	Ward 1		Ward 2		Ward 3		LGA	
	Lots	Area (Ha)	Lots	Area (Ha)	Lots	Area (Ha)	Lots	Area (Ha)
RU1	26	144	8	35	5	49	39	228

To understand Wollongong's industrial and primary production land at a more granular level, lots have also been grouped into 48 distinct precincts based on their location. This includes 42 industrial lands precincts and as six primary production precincts. Precincts have been separated into sub-areas where there are more than two zones present within a precinct.

Appendix 30 contains the full details of each industrial precinct including the number of lots, area, average lot size, key streets, planning controls, affectations as well as estimated site coverage based on building footprint data.

Section 6 of this Review provides detailed analysis of each precinct including maps.

General Comments

- While Wollongong's industrial land is dispersed from north to south, 90% of total area is concentrated in Ward 3, which contains all three regionally significant employment precincts: the Port of Port Kembla and surrounds; West Dapto Employment Lands and Tallawarra.
- Heavy industrial zoning is the largest component of industrial land in Wollongong LGA and only exists within Ward 3. This includes the newly created E5 zoning (result of the DPE Employment Zone Reforms translations) and the remaining IN3 zoning within the Port Kembla SEPP boundary.

⁵ A small portion of the B6 zoning in the southern part of Fairy Meadow is intersected by the Ward boundary. To keep the grouping as a precinct, all B6 in this area has been allocated to Ward 2, in which the majority of the precinct lies.

- Ward 3 also includes the only SP1 zone that allows for industrial purposes, also within the Port Kembla SEPP boundary. This Special Activities zone has a specific role to facilitate port related activities.
- E3 Productivity Support and E4 General Industry are more evenly dispersed and present within each Ward. Approximately half of the total E3 occurs within Ward 2, reflecting its core role as a precinct to support business (includes key precincts at Fairy Meadow, Flinders Street North Wollongong and South Wollongong).
- The Working Waterfront zone is very small and only present in Ward 2 around Belmore Basin at Wollongong Harbour.
- Primary Production land is most common in Ward 1 although there are large quantities present in Ward 2 and Ward 3. These lands do not have uniform characteristics and are uniquely related to the location of mineral resources and subsequent mining operations (whether current or ceased).
- The ratio of industrial land to population shows ample provision to meet Wollongong's urban services needs.

Access to urban services

As previously defined, the term 'urban services' is used collectively to describe a wide range of industries that enable the City to develop and its businesses and residents to operate. While these businesses are not always high employers, on a square kilometre basis, they provide an important operational role and function throughout the City. Examples of urban services include concrete batching, waste recycling and transfer, printing, motor vehicle repairs, construction depots, and utilities (electricity, water, gas supply) ¹⁹.

It is important to consider the ability for residents of each ward to access these services, particularly in the context of limited industrial land and forecast population growth.

Although the exact amount of zoned land being used urban services is unknown, the Greater Cities Commission ²⁰ identifies a minimum benchmark for provision of urban services to be 3 sqm of industrial land per person.

Table 3.4 provides the amount of industrial land per person for each ward and the LGA to give a sense for whether the minimum benchmark for provision of urban services is currently achievable. Note this is just a theoretical capacity and not an indication of whether urban services are available on this land.

Table 3.4: Ratio of industrial land to population, Wollongong LGA

	Population (2021)	Industrial Land (Ha)	Industrial Land Per Capita (sqm)
Ward 1	71,838	98	14
Ward 2	72,949	130	18
Ward 3	69,868	2,008	287
LGA	214,655	2,236	104

All Wards are currently meeting the benchmark. There are considerable differences in the ratios between Ward 3 and the other two Wards, due to the significantly higher proportion of industrial land in Ward 3. It is noted that much of the land in Ward 3 is also unlikely to be used to provide urban services as it is strategic land associated with heavy operations and port activity.

Distribution of Lot Sizes

Lot size analysis for industrial zones was undertaken to further understand the spatial characteristics of each industrial zone with the overall result presented in the Table 3.5 and visualised in Figure 3.1.

Table 3.5: Lot size distribution, industrial zones, Wollongong LGA

	Zone			
	E3 Productivity Support	E4 General Industrial	E5 Heavy Industrial	IN3 Heavy Industrial
Lot Size (sqm)				
0-9	2	2	0	0
10-49	7	5	1	2
50-99	3	6	1	1
100-199	8	10	2	4
200-249	7	2	0	0
250-299	15	31	0	0
300-349	3	14	0	3
350-449	25	12	0	2
450-549	88	51	4	4
550-699	302	189	1	29
700-999	187	100	1	25
1,000-1,499	77	119	6	15
1,500-1,999	49	113	36	6
2,000-2,999	37	146	93	9
3,000-3,999	14	46	24	7
4,000-4,999	8	41	21	0
5,000-5,999	12	24	11	3
6,000-9,999	25	49	20	17
10,000-19,999	11	46	32	15
20,000-39,999	2	20	12	11
40,000-49,999	0	4	4	1
50,000+	4	18	9	11
Total	886	1,048	278	165

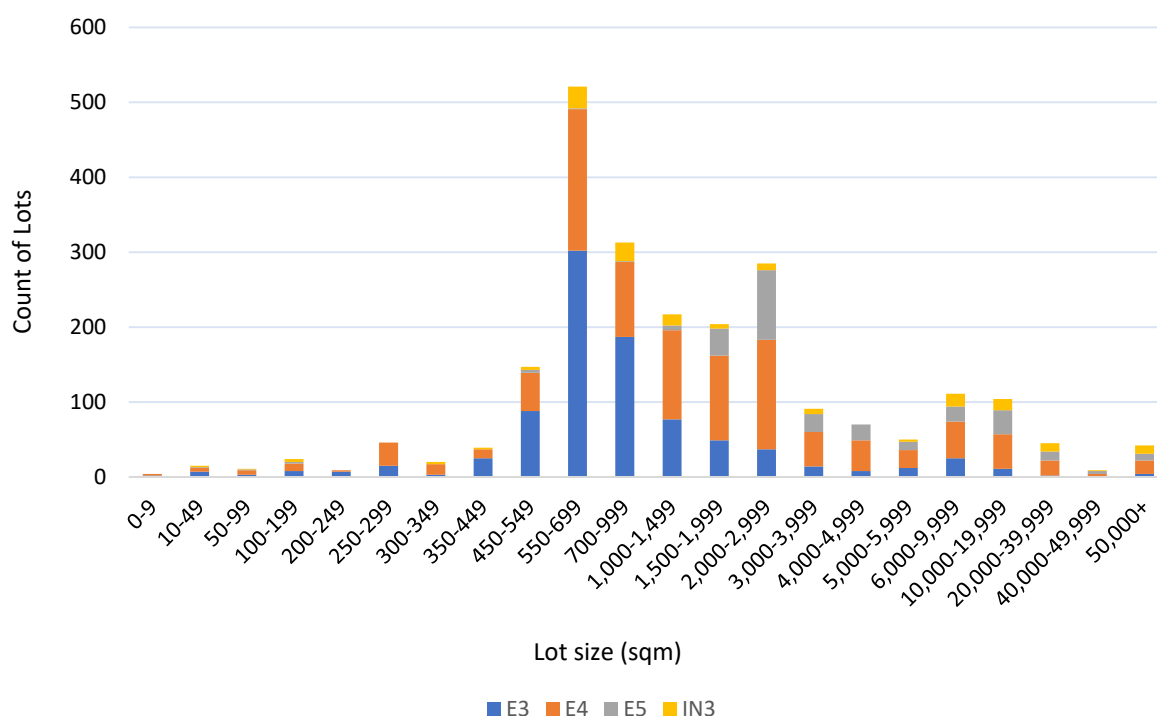


Figure 3.1: Distribution of total lots by size and zone, Wollongong LGA

E3 Zone (formerly B5, B6 and B7 zones)

- The E3 Productivity Support zone has a significant number of lots (886) compared with its overall smaller amount of zoned land. This reflects smaller lots sizes being dominant in this zone.
- While each zone has dispersion in lot sizes, the E3 zone has a unimodal distribution with the majority of lots falling between 550-669 sqm. The next largest lot size is the 700-999 sqm range.

E4 Zone (formerly IN1 and IN2 zones)

- The E4 zone, while having just over half the total combined area of E5 and IN3, has more than double the number of lots (1,048 v 443).
- While the most common lot size is 500-699 sqm, this zone has less of a peak in its distribution of lot sizes, with a large number of lots in the ranges of 700 sqm up to 3,000 sqm.
- Approximately 40% of lots fall below the typical Minimum Lot Size (MLS) of 0.1 Ha. It is noted that many of these lots are likely to have existed in their current form prior to the introduction of a MLS control and in some instances the Industrial zoning.
- A further 38% of lots are greater than or equal to 0.2 Ha in size, which based on the typical MLS of 0.1 Ha, represents the number of potential lots for which future subdivision may yet occur. This includes 12 very large lots (greater than 10 Ha) that are only located within the regionally significant employment lands at Kembla Grange and Tallawarra.
- Notably, the E4 zone has a higher or equal count of lots in each of the larger ranges (3,000 sqm up to 50,000+ sqm) than the E5 Heavy Industrial zone, which shows the diversity of lot sizes still available within this zone.

E5 and IN3 Zones

- When compared with E4, the E5 zone lacks smaller lots, with few lots below 1,500 sqm and the most common size being 2,000-2,999 sqm.
- This is expected, as heavy industrial zones require larger lot sizes to accommodate large operations with high land requirements which may also include the need for buffers on the lot to help with segregation from neighbouring land users.
- As noted above, there are a number of large lots, although they are surprisingly fewer in number within each range when compared with the E4.
- Approximately 61% of lots fall below the MLS of 0.4 Ha which again may reflect lot sizes that existed prior to the introduction of the MLS and in some instances the heavy industrial zoning.
- A further 23% of lots are greater than or equal to 0.8 Ha, which based on the typical MLS of 0.4 Ha, is indicative of potential subdivision that may yet occur. This includes five very large lots (greater than 10 Ha) located at Unanderra and Kembla Grange.
- As shown in Figure 3.2 below, when comparing the E5 zone against the IN3 zone (that now only remains within the Port Kembla SEPP area), there are some differences with the IN3 having several lots in the range of 550 sqm up to 999 sqm, but then much fewer in the mid-range, although there are similarly some very large parcels. It is also noted that lands within the IN3 zone contain a number of irregular shaped lots associated primarily with the Port Kembla Steelworks.

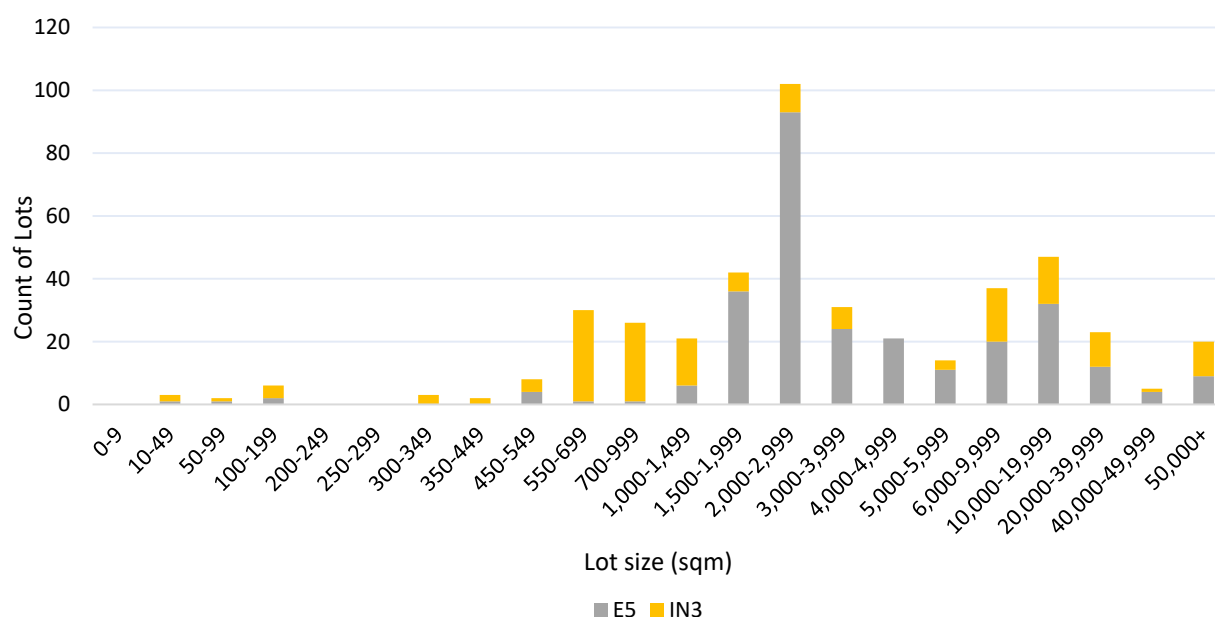


Figure 3.2: Lot size comparison, E5 and IN3 zones, Wollongong LGA

Conclusion

- Across the combined E4 and E5 zones, the vast majority (89%) of lots fall below 1 Ha in area. There are 27 lots greater than 5 Ha in size with a further 17 being very large (greater than 10 Ha).
- Generally, once larger parcels are subdivided, it is uncommon for them to be increased in size through amalgamation. **As such, it is important to consider the necessity to preserve existing large parcels from subdivision that may reduce the availability of large lots to support business expansion, particularly for manufacturing, which can have a larger land requirement.**
- Lot size profiles for specific precincts are included in Section 6 Precinct Analysis. Some Precincts offer a broad range of lot sizes and could cater for a commensurate range of

development typologies and scale needs. Other precincts by contrast, have a specific lot size profile, which is likely to attract a particular type of development, and discourage others.

Undeveloped land

The ELDM provides insight into Wollongong's undeveloped Employment Lands⁶ including quantifying how much of the undeveloped land is not serviced.

It is noted that undeveloped zoned land supply simply measures zoned land that is potentially available for development and does not consider the suitability for development including physical, economic, infrastructure and planning constraints.

Despite having a significant supply of Industrial Land in Wollongong, 85% of that land is occupied with existing operations. The suitability of the remaining land for development is varied and only a very limited proportion would be considered available for development in the short term.

There is relatively little land in Wollongong LGA that is both undeveloped and serviced. As shown in Table 8, around 348ha (15%) of total employment land in Wollongong LGA remains undeveloped, but only 63ha (18%) of that undeveloped land is serviced.

Table 3.6: Undeveloped zoned employment land by LGA (January 2022) ^

LGA	Undeveloped Zoned Employment Land				
	Serviced				Unserviced
	B Zones	IN Zones	SP Zones	Total	Total
Kiama	1.6	-	-	1.6	-
Shellharbour	-	7.3	1.3	8.6	10.5
Shoalhaven	81.3	242.3	91.1	414.7	491.2
Wollongong	4.2	43.0	15.5	62.7	285.0
Total	87.1	292.6	107.9	487.6	786.7

^ This data is based on zoning that prior to the DPE Employment Zone Reforms

Excluding Business zones and SP1 land at the Port of Port Kembla, there is only 43 Ha of industrial zoned land that is undeveloped and serviced, which represents around 2.3% of total land for those zones. This is indicative of strong demand to develop land once it is serviced.

Although the stock of undeveloped and serviced employment land stock has risen since 2018 (Table 3.7), this mostly reflects the inclusion into the ELDM of additional SP1 land at the Port of Port Kembla in 2020 to bring ELDM reporting for Port Kembla in line with Port Botany and Port of Newcastle.

Table 3.7: Undeveloped and serviced employment land, January 2018 - 2022, Wollongong LGA

LGA	Undeveloped and Serviced Employment Land (Ha)				
	Jan-18	Jan-19	Jan-20	Jan-21	Jan-22
Wollongong	27.8	41.1	55.8	58.5	62.8

⁶ 'Developed' land is defined as zoned employment land where development (construction or works) has commenced, or where there is a permanent structure in place at the time of data collection.

'Serviced' is defined as having access to water and sewer. For Kiama, Shellharbour, and Wollongong LGAs this means that a water and sewer connection is available whereas in Shoalhaven LGA this means within 225 metres of a water or sewer main. Across the region, where there is sewer available, it is assumed water is available.

Table 3.8 shows the breakdown of undeveloped land lots by size and zone as of January 2022. Notably, the (then) IN3 zone had the highest number of undeveloped lots and most of them are less than 0.5 Ha.

Table 3.8: Number of undeveloped employment land lots by size and zone (January 2022) ^

Zone	<0.1 ha		0.1-0.5 ha		0.5-1 ha		1-5 ha		5-10 ha		>10 ha		Total Area
	No. of Lots	Total area (ha)	No. of Lots	Total area (ha)	No. of Lots	Total area (ha)	No. of Lots	Total area (ha)	No. of Lots	Total area (ha)	No. of Lots	Total area (ha)	
IN1 General Industrial	2	0.1	1	0.2	-	-	-	-	-	-	2	75.9	76.2
IN2 Light Industrial	19	0.8	19	5.8	11	7.9	10	19.0	4	28.0	3	54.7	116.2
IN3 Heavy Industrial	29	1.9	24	5.4	6	4.0	5	12.4	2	13.4	1	35.1	72.2
IN4 Working Waterfront	-	-	-	-	-	-	-	-	-	-	-	-	0
B6 Enterprise Corridor	16	0.9	7	1.1	4	3.2	-	-	2	16.3	-	-	21.5
B7 Business Park	-	-	-	-	3	2.3	1	2.3	2	16.0	-	-	20.6
Other Zones*	4	0.2	7	2.1	3	2.0	5	16.0	1	5.8	1	14.9	41
Total	70	3.9	58	14.6	27	19.4	21	49.7	11	79.5	7	180.6	348

* Includes select SP1 Special Activities

^Note that the EDLM January 2022 uses the previous land use zone titles

Unserviced land

The NSW Department of Planning and Environment (DPE) has provided Council with suburb level data based on Sydney Water servicing provision.

The top five suburbs for unserviced employment lands are:

1. Yallah (122ha, 43%)
2. Kembla Grange (107.9ha, 38%)
3. Port Kembla (20ha, 7%)
4. Spring Hill (15ha, 5.3%)
5. Dapto (4%)

According to Sydney Water's *Growth Servicing Plan (2022 – 2027)*²¹, which sets out their infrastructure investment and priorities over the next five to 15 years, servicing of key industrial land in Wollongong LGA remains at the concept planning stage:

- **Kembla Grange Industrial (Part of West Dapto Stage 1)** is on hold. Infrastructure is to be delivered in FY 2024/2025; however, ultimate timing is subject to development demand.
- **Tallawarra Lands:** Package 1 trunk work to service central and southern precincts is subject to demonstrated growth and demand. Northern part of Tallawarra can be partially serviced.

The completion of this servicing is essential to unlocking the large tracks of undeveloped industrial land at West Dapto and Tallawarra (part of Yallah), both considered regionally significant employment precincts. Together, these precincts represent 81% of total unserviced industrial land in Wollongong LGA. Council will continue to advocate to Sydney Water for the timely delivery of sewer and water servicing in order to facilitate the development of these important lands.

Rezoning of Industrial Zoned Land

Since the previous 2006 Employment Lands Study, Wollongong has seen a net increase in the amount of industrial zoned land.

The Draft Wollongong LEP 2009 saw adjustments to light industrial precincts across Ward 1 (loss of approximately 8.7 Ha) which was more than offset by an increase in zoned industrial land at Tallawarra (+11.2 Ha of IN1, +75.1 Ha of IN2). The net result of these changes was an increase of more than 66 Ha in industrial zoned land.

As part of the Wollongong LEP (West Dapto) 2010 the area of heavy industrial land (IN3) decreased by 36.1 Ha largely being rezoned to C3 Environmental Management and there was a net increase in the light industrial land (IN2) of 55.5 Ha.

Table 3.9 includes rezonings of industrial land zoned since the Wollongong LEP 2009 was notified in 2010 (which included merging with Wollongong LEP (West Dapto) 2010 in 2014). This data shows that there has been a further net increase of approximately 6.4 Ha of industrial zoned land, with gains in light industrial offsetting a decrease in the heavy zone.

Table 3.9: Rezoning involving industrial zoned land since 2010, Wollongong LGA

Year	Name/Location	Zoning(s)	Size (Ha)
2011	Yallah Road, Yallah (Amendment 7)	IN2	6
2012	Malloy Street, Bulli (Amendment 10)	IN2	-0.1
2015	Helensburgh 7d Review (Amendment 19)	IN2	+8.3
2020	Corrimal Coke Works (Amendment 50)	IN3	-7.8

There are also two draft Planning Proposals currently under assessment:

1. BlueScope holdings at Kembla Grange (PP-2020/4) – proposes to rezone C3 Environmental Management and SP2 Infrastructure (railway land) to create a minor increase of E4 General Industrial and E5 Heavy Industrial. On 27 November 2023 Council resolved to finalise the Planning Proposal.
2. Fairwater Drive and Cleveland Road, West Dapto (PP-2020/6) – proposes to rezone 7.3 Ha of RU2 Rural Landscape to E3 Productivity Support land as part of the wider rezoning of Stage 3 of the West Dapto Urban Release Area. On 27 November 2023 Council resolved to finalise phase 1 of the Planning Proposal.



4. Planning for Industrial Lands

A strong and clear planning framework helps guide development to ensure Wollongong has sufficient Industrial Land to cater for a diverse and evolving range of development, whilst managing the interfaces between industrial precincts and other zoned land.

4.1 Planning Framework

The core planning framework includes the Environmental Planning and Assessment Act 1979, the Regulations 2021, Ministerial Directions, State Environmental Planning Policies, the Wollongong Local Environmental Plan 2009, and the Wollongong Development Control Plan 2009. Key aspects of these plans relevant to development on industrial lands are outlined below:

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 – Part 5A Industrial and Business Buildings Code

Key controls for Industrial development are set out under *Part 5A Industrial and Business Buildings Code*. These include (but are not limited to) the following:

- Building heights and setbacks
- Maximum Floor Space Ratio
- Car parking and access
- Loading facilities and driveways
- Landscaping
- Signage
- Change of Use
- Alterations and additions

The Code SEPP can take precedence over an LEP or defer to it. The following examples illustrate how the SEPP interfaces with Wollongong's LEP.

- **Height of Buildings:** the Code SEPP specifies that whichever is the greater of the height under the LEP or 18m applies. In Wollongong, this has the effect of allowing higher permissible heights than currently allowed under the LEP for light Industrial land, where heights currently range from nine to 11m.
- **Floor Space Ratio:** the Code SEPP defers to the LEP for maximum floor space ratio (FSR) and only in the absence of an LEP control does it set an FSR of 1:1. Most general industrial land in Wollongong has a lower FSR of 0.5:1, and whilst an increased height may be possible under the SEPP, the FSR cannot be increased in response. This outcome may open up options for taller, single floor development (such as logistics or warehousing) but would not provide sufficient capacity for taller developments which also require increased floor space (such as multi storey storage or general industrial buildings with mezzanine office floors).

State Environmental Planning Policy (Transport and Infrastructure) 2021 – Chapter 5 Three Ports

This SEPP applies only to the mapped area around the Port of Port Kembla which includes a Port Lease Area. In July 2022, the SEPP was amended to enable additional, essential, day-to-day

development, to be undertaken through a streamlined assessment pathway. Relevant to Port Kembla, the amendments included:

- Identifying additional exempt and complying development as well as land within the lease area of Port Kembla.
- Requiring the consent authority to consider impacts on port and industrial operations before approving the subdivision of land within the vicinity of the lease area.
- Introducing requirements to notify the port operator at Port Kembla in relation to development that may affect the shipping channel.
- Ensuring the policy remains up to date and effective through housekeeping and operational amendments.

There are two separate zones within the Port Kembla SEPP area – IN3 Heavy Industrial and SP1 Special Activities. At this stage the IN3 Heavy Industrial zone has not been replaced by the E5 Heavy Industrial Zone.

Table 4.1 outlines the intent and role of the two zones as well as land use permissibility.

Table 4.1: Land Use Table for Port Kembla SEPP Area

Zones	Intent and Role	Permitted with Consent
IN3 Heavy Industrial	<ul style="list-style-type: none"> • To provide suitable areas for those industries that need to be separated from other land uses. • To encourage employment opportunities. • To minimise any adverse effect of heavy industry on other land uses. • To provide transport infrastructure and intermodal facilities. • To allow a diversity of activities that will not significantly detract from the operation of existing or proposed industries. 	Depots; Food and drink premises ; Freight transport facilities; Heavy industries; Port facilities ; Roads; Transport depots; Warehouse or distribution centres; Waste or resource management facilities
SP1 Special Activities	<ul style="list-style-type: none"> • To provide for special land uses that are not provided for in other zones. • To provide for sites with special natural characteristics that are not provided for in other zones. • To facilitate development that is in keeping with the special characteristics of the site or its existing or intended special use, and that minimises any adverse impacts on surrounding land. • To maximise the use of waterfront areas to accommodate port facilities and industrial, maritime industrial, freight and bulk storage premises that benefit from being located close to port facilities. • To enable the efficient movement and operation of commercial shipping and to provide for the efficient handling and distribution of freight from port areas through the provision of transport infrastructure. • To provide for port related facilities and development that support the operations of Port Botany, Port Kembla and the Port of Newcastle. • To facilitate development that by its nature or scale requires separation from residential areas and other sensitive land uses. • To encourage employment opportunities. 	Capital dredging; Environmental facilities; Environmental protection works; Food and drink premises; Maintenance dredging; Navigation and emergency response facilities; Neighbourhood shops; Port facilities; Wharf or boating facilities Any other development not specified as Prohibited.

For the IN3, land uses that are not permitted within the E5 Heavy Industrial zone under Wollongong LEP 2009 are highlighted in bold. Key differences are:

- The IN3 permits 'Food and drink premises' whereas only 'Take away food and drink premises' are permitted in E5. Generally, the approach under the WLEP 2009 has been to limit retail activity in industrial zones (of which food and drink premises are a type) to only allow for the necessary provision of food to local workers and not undermine the role of centres with development of cafes, restaurants and/or bars which are non-permissible subcategories.
- The IN3 includes 'Waste or resource management facilities' which are not permitted in E5. This Review recommends this land use be permitted in E5 (see Table 4.3 for proposed land use table changes).
- The IN3 includes Port facilities which are not permitted in E5. This is considered appropriate given the specific location surrounding the Port of Port Kembla.

The SEPP also includes an 'Additional Permitted Uses' map which allows for development for the purposes of business premises, office purposes, community facilities, car parks, warehouse or distribution centres with consent at certain mapped sites within the BlueScope lands. The permissibility of these additional uses has lapsed, five years after the commencement of clause.

The SEPP also includes a listing of heritage items within the mapped area. These are contained within the list of heritage items in Appendix 2.

State Environmental Planning Policy (Resources and Energy) 2021 – Chapter 2

This SEPP applies to proposed resource projects which is relevant to land zoned RU1 Primary Production under the Wollongong LEP 2009. The SEPP aims to:

- Provide for the proper management and development of mineral, petroleum and extractive material resources for the purposes of promoting the social and economic welfare of the State.
- Facilitate the orderly and economic use and development of land containing mineral, petroleum and extractive resources.
- Promote the development of significant mineral resources.
- Establish appropriate planning controls to encourage ecologically sustainable development through the environmental assessment, and sustainable management, of development of mineral, petroleum and extractive material resources.
- Establish a gateway assessment process for certain mining and petroleum (oil and gas) development –
 - to recognise the importance of agricultural resources, and
 - to ensure protection of strategic agricultural land and water resources, and
 - to ensure a balanced use of land by potentially competing industries, and
 - to provide for the sustainable growth of mining, petroleum and agricultural industries.

Ministerial Directions

Ministerial Directions are issued by the Minister for Planning and Public Spaces to relevant planning authorities and apply to planning proposals lodged with the Department of Planning and Environment.

The Ministerial Directions include consistency provisions which allow for deviations subject to the meeting of certain conditions (for example, a rezoning is justified by an approved strategy or of minor significance), they nevertheless provide for important strategic direction.

The following Ministerial Directions (as of March 2022) have been highlighted as they are relevant to considerations around the potential rezoning of land to industrial.

4.1 Flooding

Objectives

The objectives of this direction are to:

- (a) ensure that development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005, and
- (b) ensure that the provisions of an LEP that apply to flood prone land are commensurate with flood behaviour and includes consideration of the potential flood impacts both on and off the subject land.

(2) A planning proposal **must not rezone land within the flood planning area from** Recreation, Rural, Special Purpose or Conservation Zones to a Residential, Business, **Industrial** or Special Purpose Zones.

7.1 Business and Industrial Zones

Objectives

The objectives of this direction are to:

- (a) encourage employment growth in suitable locations,
- (b) protect employment land in business and industrial zones, and
- (c) support the viability of identified centres

Direction 7.1

- (1) A planning proposal must:
 - (a) give effect to the objectives of this direction,
 - (b) **retain the areas and locations of existing business and industrial zones,**
 - (c) not reduce the total potential floor space area for employment uses and related public services in business zones,
 - (d) **not reduce the total potential floor space area for industrial uses in industrial zones,** and
 - (e) **ensure that proposed new employment areas are in accordance with a strategy that is approved by the Planning Secretary.**

9.1 Rural Zones

Objective

The objective of this direction is to protect the agricultural production value of rural land.

Direction 9.1

(1) A planning proposal must:

- (a) **not rezone land from a rural zone to** a residential, business, **industrial**, village or tourist zone.
- (b) not contain provisions that will increase the permissible density of land within a rural zone (other than land within an existing town or village).

Wollongong Local Environmental Plan 2009 (LEP)

The Wollongong LEP 2009 is the principal environmental planning instrument that applies across all of Wollongong LGA excluding the area around the Port of Port Kembla which is separately governed by the SEPP (Infrastructure and Transport) 2021.

The Wollongong LEP 2009 contains the following in relation to industrial lands:

- *Land Use Table Objectives*: these include encouraging economic and business development to increase employment opportunities and improving the quality of life and the social well-being and amenity of residents, business operators, workers and visitors.
- *Land Use Table – Uses Permitted with Consent*: Industrial Zones E4 and E5 and Business Zones E3, describe most of the objectives relevant to and land uses permitted, on industrial lands.
- *Part 4 – Principal development standards*: sets the Minimum Lot Size (MLS), Height of Buildings (HOB) and Floor Space Ratio (FSR) through reference to various maps.
- *Part 5 Miscellaneous provisions: 5.4 Controls relating to miscellaneous permissible uses* includes a range of controls which limit the scale of certain uses including industrial retail outlets and artisan food and drink premises within industrial zones.
- *Part 7 Local Provisions: 7.16 Tallawarra Power Station buffer area* specifies that development consent must not be granted for buildings on land within a buffer area of the Tallawarra Power Station unless the consent authority is satisfied that adverse impacts of noise and odour from the power station on persons using the building can be minimised.
- *Schedule 1 – Additional permitted uses*: A schedule of additional permitted land uses, some of which apply to industrial land.
- *Schedule 5 – Environmental Heritage - Part 1 – Heritage items*: A schedule of protected heritage items including those on industrial land.

Table 4.3 includes the objectives and permissible land uses for each zone within scope of this Review.

NSW Employment Zone Reforms

On 26 April 2023, the NSW Department of Planning and Environment (DPE) Employment Zone Reforms (EZR) commenced.

Relevant to industrial land, these changes saw the merging of the previous B6 Enterprise Corridor and B7 Business Park zones to form the new E3 Productivity Support zone as well as the merging of the previous IN1 General Industrial and IN2 zones to form the E4 General Industrial zone and the previous IN3 Heavy Industrial zone (outside of the applicable area for SEPP (Transport and Infrastructure) 2021 area at Port Kembla) changed to E5 Heavy Industrial zone. The previous IN4 Working Waterfront also changed to W4 Working Waterfront. These changes are shown in Table 4.3 as well as the new zone objectives and permissible land uses.

Prior to the EZR coming into effect, Council engaged with the DPE and identified several issues triggered by the initial proposed changes, including:

- The permissibility of *shop top housing* and *serviced apartments* in the existing B6 Enterprise Corridor zone is a conflicting land use and inconsistent with the objectives of the new E3 Productivity Support zone.
- The permissibility of heavy industries in the existing IN1 General Industrial and IN2 Light Industrial zones is inconsistent with the objectives of the E4 General Industrial zone, and more appropriate for the E5 Heavy Industrial zone.
- The permissibility of recreation facilities (indoor) in the existing IN3 Heavy Industrial zone is inconsistent with the objectives of the new E5 Heavy Industrial zone.

- The permissibility of *takeaway food and drink premises* in the existing IN3 Heavy Industrial zone is a conflicting land use and inconsistent with the objectives of the E5 Heavy Industrial zone (noting *kiosks* and *artisan food and drink industry* already permissible with consent in the zone).

The table below shows Council's recommended amendments and inclusions in the EZR translation, as relevant to Industrial lands. The table also shows whether those recommendations were adopted in the updated LEP on 26 April 2023.

Table 4.2: Status of Council Recommendations to DPE EZR

Recommendation	Status
Insert a new land use objective in the E5 zone to support and protect heavy industrial land.	The new E5 zone includes the objective "To support and protect industrial land for industrial uses."
Deletion of certain land use objectives in the E3, E4 and E5 zones.	The requested deletion of land use objectives has been undertaken for the new E3, E4 and E5 zones.
Remove shop top housing and serviced apartments as a permissible use with consent in the new E3 zone (permit Shop top housing and serviced apartments only within the E3 zoning at Flinders Street, North Wollongong).	Shop top housing and serviced apartments has been removed from the Land Use Table (LUT) in the new E3 zone, however, shop top housing is now an Additional Permitted Use (APU) in Schedule 1 for all previous B6 zones. Serviced apartments are also permitted through an APU but only on certain land at Flinders Street, North Wollongong).
Remove heavy industries as a permissible use with consent in the new E4 zone.	Removed. This land use is no longer permitted within the new E4 zone LUT.
Remove recreation facilities (indoor) and takeaway food and drink premises as a permissible use with consent in the E5 zone.	Removed. This land use is no longer permitted within the new E5 zone LUT.
Remove takeaway food and drink premises as a permissible use with consent in the E5 zone.	Not removed. This land use remains permissible within the new E5 zone LUT.
Prohibit local distribution premises in the new E5 zone.	Removed. This land use is no longer permitted within the new E5 zone LUT.

This Review proposes that once Council resolves through further investigation the required amount of E3 Productivity Support land at Flinders Street, North Wollongong, the remaining part of the precinct be transitioned to MU1 Mixed Use which will permit shop top housing and hence the APU be removed. This is to ensure that E3 zones are not compromised with residential living and also to not allow for inflation of land prices at the detriment of business and industrial users ⁷.

The Review also maintains Council's existing position that *takeaway food and drink premises* should be removed as a permissible use with consent in the new E5 Heavy Industry zone, noting that *kiosks* are already permitted and enable workers access to food services on a smaller scale without potentially compromising the heavy industrial character of the zone.

Discussed later in this chapter is other proposed amendments to the Land Use Tables as well as Clauses within Wollongong LEP 2009.

⁷ Note Council's adopted Retail and Business Centres Strategy includes an action item to review the E3 land along Flinders Street, North Wollongong, to determine how much land is required for business activity and whether there are opportunities to transition parcels to MU1 Mixed Use zoning. This would allow for the continued permissibility of 'shop top' housing at those locations.

Table 4.3: Objectives and Permissibility for Industrial Lands, Wollongong LEP 2009

New Zone	Previous Zones	Intent and Role	Permitted with Consent
E3 Productivity Support	B6 Enterprise Corridor	<ul style="list-style-type: none"> To provide a range of facilities and services, light industries, warehouses and offices. To provide for land uses that are compatible with, but do not compete with, land uses in surrounding local and commercial centres. 	Advertising structures; Animal boarding or training establishments; Boat building and repair facilities; Business premises; Car parks; Centre-based child care facilities; Community facilities; Depots; Entertainment facilities; Environmental facilities; Function centres; Garden centres; Hardware and building supplies; Heavy industrial storage establishments; Helipads; Home businesses; Hotel or motel accommodation; Industrial retail outlets; Industrial training facilities; Information and education facilities; Kiosks; Landscaping material supplies; Light industries; Local distribution premises; Markets; Mortuaries; Neighbourhood shops; Office premises; Oyster aquaculture; Passenger transport facilities; Places of public worship; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Research stations; Respite day care centres; Roads; Rural supplies; Service stations; Sex services premises; Specialised retail premises; Storage premises; Take away food and drink premises; Tank-based aquaculture; Timber yards; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Vehicle sales or hire premises; Veterinary hospitals; Warehouse or distribution centres; Wholesale supplies
	B7 Business Park	<ul style="list-style-type: none"> To maintain the economic viability of local and commercial centres by limiting certain retail and commercial activity. To provide for land uses that meet the needs of the community, businesses and industries but that are not suited to locations in other employment zones. To provide opportunities for new and emerging light industries. To enable other land uses that provide facilities and services to meet the day to day needs of workers, to sell goods of a large size, weight or quantity or to sell goods manufactured on-site. To allow some diversity of activities that will not significantly detract from the operation of existing or proposed development, or the amenity enjoyed by nearby residents, or have an adverse impact on the efficient operation of the surrounding road system. 	
E4 General Industrial	IN1 General Industrial	<ul style="list-style-type: none"> To provide a range of industrial, warehouse, logistics and related land uses. To ensure the efficient and viable use of land for industrial uses. To minimise any adverse effect of industry on other land uses. To encourage employment opportunities. To enable limited non-industrial land uses that provide facilities and services to meet the needs of businesses and workers. To allow some diversity of activities that will not significantly detract from the operation of existing or proposed development, or the amenity enjoyed by nearby residents or have an adverse impact on the efficient operation of the surrounding road system. 	Advertising structures; Agricultural produce industries; Animal boarding or training establishments; Boat building and repair facilities; Community facilities; Crematoria; Depots; Freight transport facilities; Garden centres; General industries; Goods repair and reuse premises; Hardware and building supplies; Helipads; Industrial retail outlets; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Liquid fuel depots; Local distribution premises; Mortuaries; Neighbourhood shops; Oyster aquaculture; Places of public worship; Plant nurseries; Recreation areas; Recreation facilities (indoor); Roads; Self-storage units; Service stations; Sex services premises; Take away food and drink premises; Tank-based aquaculture; Transport depots; Vehicle body repair workshops; Vehicle repair stations; Vehicle sales or hire premises; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water treatment facilities
	IN2 Light Industrial		

New Zone	Previous Zones	Intent and Role	Permitted with Consent
E5 Heavy Industrial	IN3 Heavy Industrial	<ul style="list-style-type: none"> To provide areas for industries that need to be separated from other land uses. To ensure the efficient and viable use of land for industrial uses. To minimise any adverse effect of industry on other land uses. To encourage employment opportunities. To support and protect industrial land for industrial uses. 	Advertising structures; Boat building and repair facilities; Data centres; Depots; Freight transport facilities; General industries; Hazardous storage establishments; Heavy industrial storage establishments; Heavy industries; Helipads; Industrial retail outlets; Industrial training facilities; Kiosks; Light industries; Offensive storage establishments; Oyster aquaculture; Recreation areas; Roads; Rural industries; Service stations; Storage premises; Take away food and drink premises; Tank-based aquaculture; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Warehouse or distribution centres; Water supply systems
W4 Working Waterfront	IN4 Working Waterfront	<ul style="list-style-type: none"> To retain and encourage industrial and maritime activities on foreshores. To identify sites for maritime purposes and for activities requiring direct foreshore access. To ensure that development does not have an adverse impact on the environment and visual qualities of the foreshore. To encourage employment opportunities. To minimise any adverse effect of development on land uses in other zones. To encourage development that is compatible with the characteristics of Wollongong Harbour and Belmore Basin. 	Aquaculture; Boat building and repair facilities; Boat launching ramps; Charter and tourism boating facilities; Food and drink premises; Information and education facilities; Jetties; Kiosks; Light industries; Marinas; Markets; Mooring pens; Roads; Signage
RU1 Primary Production	RU1 Primary Production	<ul style="list-style-type: none"> Encourage sustainable primary industry production by maintaining and enhancing the natural resource base, encourage diversity in primary industry enterprises and systems appropriate for the area, minimise the fragmentation and alienation of resource lands and minimise conflict between land uses within this zone and land uses within adjoining zones. 	Agricultural produce industries; Agriculture; Animal boarding or training establishments; Aquaculture; Business identification signs; Dwelling houses; Environmental protection works; Extractive industries; Farm buildings; Forestry; Intensive livestock agriculture; Intensive plant agriculture; Open cut mining; Roads; Roadside stalls

Wollongong Development Control Plan 2009 (DCP)

The Wollongong DCP provides a framework for the development of land across the Wollongong LGA.

The DCP is a set of Council policies that explain how developments are to be designed to meet the conditions of the Local Environmental Plan (LEP) and State-wide rules. The purpose of the DCP is to outline built form controls to guide development that are specific to a land use, locality or planning context. Amendments are made to the DCP on a chapter-by-chapter basis.

The Chapters most relevant to development on industrial land include:

- **B5 Industrial Development:** this chapter provides objectives and detailed planning controls for the subdivision of industrial land and industrial development. It applies to land zoned either IN1 General Industry, IN2 Light Industry, IN3 Heavy Industry, IN4 and any light industry or warehouse and/or distribution centre proposed upon land zoned B6 Enterprise Corridor.

The chapter objectives are:

- a) To preserve core industrial lands to meet the current and future needs of the Illawarra Region.
- b) To minimise the fragmentation of land in industrial areas, particularly the Port Kembla heavy industrial area and the Unanderra industrial area to enable the future establishment of port related industries and large-scale warehouse distribution facilities.
- c) To accommodate industrial development which produces a range of goods and provides employment without adversely affecting the amenity, health or safety of any adjoining residential area.
- d) To encourage a high standard of aesthetically pleasing and functional industrial developments that sympathetically relate to adjoining and nearby developments.
- e) To encourage modern forms of general industrial, light industrial, warehousing, high technology and research and the like development within industrial areas of the City.
- f) To reduce the visual impact of industrial development on the streetscape and surrounding areas.
- g) To ensure open storage areas are properly screened to minimise any adverse visual effects of the development.
- h) To ensure that fencing and walls for security purposes have positive impacts on the streetscape and public domain areas.
- i) To encourage water sensitive urban design measures, wherever practicable and to ensure stormwater run-off is satisfactorily catered for.
- j) To ensure that employment premises incorporate the principles of Ecologically Sustainable Development.

The chapter is extensive with the following sections that each include various sub-sections:

1. Introduction
2. Objectives
3. Factory/warehouse distribution centre building design requirements
4. Building design/façade treatment
5. Energy and water efficiency
6. Safety and security
7. Car parking requirements
8. Loading dock facilities, vehicular access and manoeuvring requirements

9. Landscaping requirements
10. Outdoor storage areas
11. Shipping container storage facilities
12. Motor vehicle repair workshops
13. Fencing
14. Use of factory/warehouse units
15. Abrasive blasting industry
16. Industrial development adjoining a residential zone
17. Retailing in industrial areas
18. Take away food and drink premises
19. Kiosks
20. Advertising structures/signs
21. Stormwater drainage requirements & flood study requirements
22. Riparian corridor management
23. Utility infrastructure services
24. Subdivision of industrial land
25. Road design & construction requirements – road types and characteristics for public roads
26. Restricted access to arterial or sub arterial roads
27. Street lighting
28. Strata subdivision of multi-unit factory/warehousing distribution centre complexes

The chapter also needs to be read in conjunction with other applicable chapters of the DCP such as Council's Subdivision Policy, which provides detail design and construction requirements for roads, stormwater drainage and other infrastructure works.

The DCP includes the following chapters in *Part D – Locality Based/Precinct Plan* that may be triggered depending on the location of proposed industrial development.

- **D1 Character Statements:** identifies the existing character and desired future character for each suburb, including recognising industrial character and history in several locations.
- **D2 Berkeley Road Industrial Estate:** applies to lands within the Berkeley Road Industrial Estate and lands adjoining the Berkeley Hills and seeks to encourage development which is sensitive to the scenic quality of the Berkeley Hills and encourage the preservation and enhancement of a landscaped backdrop to development in this location. Controls relate to:
 - Scenic environmental quality and built form
 - Landscaping
 - Access denial to Berkeley Road
 - Riparian Corridor Widths
 - Stormwater Management/Floodplain Management
 - Site Constraints – Electricity Transmission Lines and Water Supply Pipelines
 - Noise impact assessment
- **D16 West Dapto Urban Release Area:** is intended to provide structure and guidance for future development within the West Dapto Urban Release Area (WDURA) which contains a number of industrial lands precincts.

The chapter sets out eight groups of planning principles that are designed to outline expectations around elements for consideration while planning for development in the WDURA. These are Transport, Water management, Conservation, Open space, Community facilities (and Education), Town Centres, Employment and Housing. Although principles under many of these groups may be applicable to industrial land in West Dapto, the employment group of principles is most relevant, including:

- Principle 1: Support local sustainable and accessible employment
- Principle 2: Attract, facilitate and support industries, enterprises and business to locate in West Dapto
- Principle 4: Protect existing employment land
- Principle 5: Take advantage of and encourage employment innovations
- Principle 6: Improve employment opportunities and ensure a high standard

The DCP also includes a number of chapters in *Part E – General (City Wide) Controls* that provide design and environmental controls that need to be considered when undertaking industrial development. Depending on the nature of a proposed industrial development, including its location and context, the extent to which each of these chapters applies varies, however, chapters *E3 – Car Parking Access Servicing Loading Facilities* and *E13 – Floodplain Management* are considered to be commonly applicable for industrial lands and hence further detail is provided as follows.

- **Chapter E3: Car Parking, Access, Servicing/Loading Facilities and Traffic Management**

While sub-section 7 of Chapter B5 provides design guidance on car parking, Chapter E3 contains the required provision of car parking for various kinds of developments. Additionally, there are parking standards for bicycles and motorcycles as well as requirements for delivery vehicles.

Parking standards depend on the specific land use proposed and hence vary considerably across industrial developments. For example, the DCP has a standard of 1 space per 75 sqm of GFA for 'Industry' uses (this increases to 1 per 150 sqm of GFA for buildings greater than 5,000 sqm and meeting certain conditions), other uses have much higher parking standards such as light industrial retail outlets (1 space per 25 sqm GFA) or places of public worship (1 space per 20 sqm GFA).

It is noted that not all permissible land uses have specified requirements. In the context of multi-tenanted industrial unit developments, this can present challenges as the variety of potential tenants such as gyms can have a significant impact on parking demand and are not necessarily known at the time of development.

- **E13 Floodplain Management:** provides Council's requirements for development upon flood prone land and land below the flood planning level within Wollongong LGA.

Chapter E13 outlines the suitability of land uses on flood prone land and a range of requirements that apply to development. The requirements mainly relate to:

- Floor level
- Building components and method
- Structural soundness
- Flood affectation
- Evacuation
- Management and Design
- Filling

For all high flood risk precincts other than for Allans Creek catchment area, a high risk flood affectation means that an Industrial Land Use is unsuitable on the land. Portions of the Port Kembla and Unanderra Industrial Precincts are in the Allans Creek catchment's high flood precinct. For Industrial uses in *high flood risk* precincts, generally, floor levels must be equal to or above 1% AEP. A range of other requirements apply.

Industrial development is considered a suitable land use in all *low* and *medium flood risk* precincts. A range of requirements still apply to manage the flood risks on that development and adjacent land.

Council is in the process of reviewing its floodplain risk management studies and plans in view of the new Australian Rainfall and Runoff guidelines (AR&R 2019). Therefore, Flood risk precincts that were identified in previous floodplain risk management plans are currently under review.

Where flood risk precincts have not been identified through a council's adopted floodplain risk management plan. Flood risk precinct mapping should be informed by a flood study undertaken by suitably qualified engineer.

Outside of industrial land, the following DCP chapters are applicable to mining lands that are zoned RU1 Primary Production.

- **Chapter C8: Extractive Industries:** this chapter outlines Council's requirements for the establishment of an extractive industry and needs to be read in conjunction with the Wollongong LEP 2009 as well as state legislation applicable to extractive industries.

The chapter contains a number of objectives including to provide an effective barrier between quarrying or mining operations and other land uses as well to promote appropriate environmental outcomes, such as ensuring that extractive industry sites are progressively rehabilitated to enhance the environmental and scenic quality of a locality. Controls relate to:

- Minimum setbacks
- Access roads
- Traffic impact assessment
- Soil and water management
- Stormwater run-off
- Tailing (sludge) pond measures
- Water resources and quality issues
- Air quality issues
- Noise impact assessment issues
- Economic issues
- Cumulative issues
- Justification of proposed development
- Staging of extraction
- Progressive rehabilitation of an extraction site
- Development Application requirements

4.2 Key development standards

In the context of industrial development, the following are the key LEP development standards used to shape building envelopes (height and FSR) as well as subdivision patterns (MLS).

- **Height of Building (HOB)**

- HOB limits are set to permit building heights that encourage high quality urban form and ensure buildings and public areas continue to have views of the sky and receive exposure to sunlight.
- Traditionally, industrial buildings have been single storey, often with large floor plates and high floor to ceiling heights. This building form allows for the placement of large machinery and the manufacturing and construction of products in an internal setting.
- Industrial processes also often require particular tall elements like smokestacks, fixed cranes or conveying equipment. Heavy Industrial areas often have no height limit to accommodate these very tall elements. Light and General Industrial areas, which are more likely to interface with residential zones, and less likely to accommodate the taller elements associated with heavy industry, generally include controls which limit structures to a height appropriate to the range of uses and compatible with the urban form of the surrounding area.
- As will be demonstrated in Section 4.3, there is no uniform approach to height controls for industrial land across the NSW planning system.

- **Floor Space Ratio (FSR)**

- Floor space ratios are used to control the bulk of a development.
- Generally, FSR has a more uniform outcome when applied to residential or office buildings that have common building typologies. In the context of industrial development, it is more ambiguous given the variation in industrial activities and requirements.
- According to HillPDA in a background report to Campbelltown City Council on strategic employment land (2020, pg. 101) ²²:

"Typically, across Sydney industrial zoned land has an average FSR of 1:1 while business zoned employment lands can have a higher FSRs of say between 1-2:1. Despite these lands having these higher FSRs, typically, the building area of industrial, business enterprise and park developments do not encompass the entirety of the developable land of the parcel they reside within (assuming shop-top housing is not permitted). This is as a result of the specific site requirements typical of these occupiers which require setbacks from property boundaries and the need for truck turning areas, large parking areas, loading and unloading areas, for example."

- Alternatively, SGS Economics and Planning in scenario testing for Newcastle City Council's Employment Land Strategy ²³ have assumed an FSR of 0.8:1 for industrial land with this representing generally single storey industrial developments with some mezzanines and high site coverage.
- As will be demonstrated in Section 4.3, there is no uniform approach to FSR for industrial land across the NSW planning system.

- **Minimum Subdivision Lot Size (MLS)**

- The purpose of a MLS control is to ensure that subdivision of land does not create inappropriately sized parcels that compromise the land use objectives of a zone.

- As will be demonstrated in Section 4.3, although is no uniform approach to MLS for industrial land across the NSW planning system, the general approach is to set a higher MLS for heavier industrial zones that likely require the preservation of larger land parcels.

4.3 Comparative Planning Analysis

A comparison of key planning controls across 15 NSW Local Government Areas (LGAs) was undertaken to understand how Wollongong's planning controls for Industrial land benchmark with other LGAs. LGAs were selected based on their holdings of industrial land and/or proximity to Wollongong.

Figure 4.1 illustrates the comparative quantity of industrial zoned area across the selected LGAs. Wollongong has the largest area of IN3 Heavy Industrial area, and the 3rd highest amount of industrial land overall, after Blacktown and Penrith (prior to the 2023 Employment Zone Reforms zone name changes).

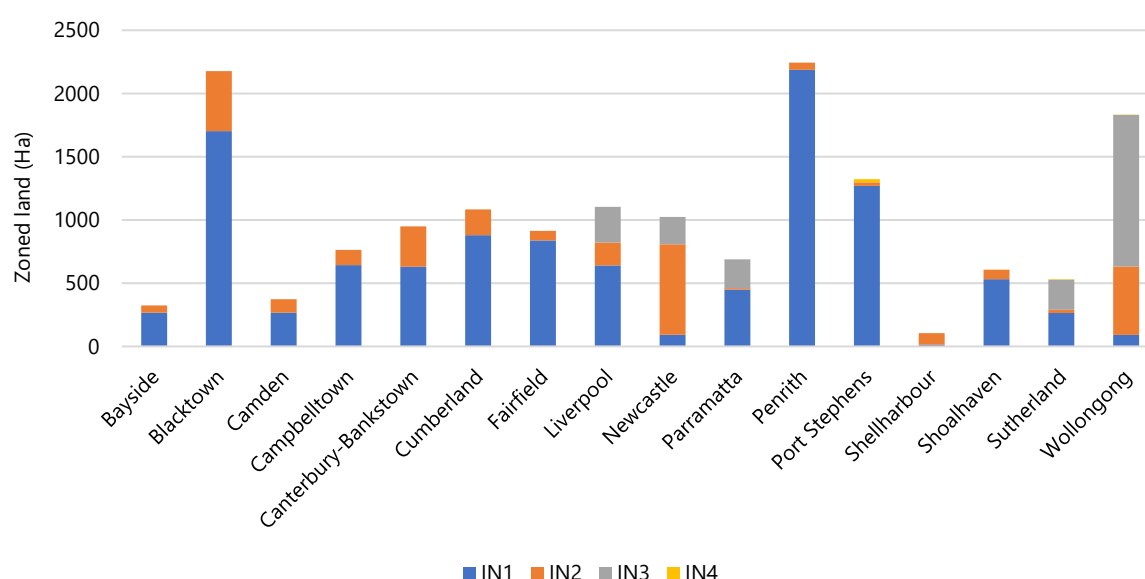


Figure 4.1: Quantity and distribution of zoned industrial land across selected LGAs

LEP controls considered in the comparison included Height of Building (HOB), Floor Space Ratio (FSR) and Minimum Lot Size (MLS). Selected Development Control Plan (DCP) chapters were also compared against Wollongong's 2009 DCP.

The comparison outlines the range of controls in place, but does not outline place specific influences, the frequency of a particular control occurring within an LGA or additional requirements that influence development outcomes from a Development Control Plan (DCP).

It is noted that even though changes to zone naming and permissibility via the new employment zones have come into effect (26 April 2023), planning controls including HOB, FSR and MLS, that related to previously separate zones such as IN1 and IN2, remain in place. The previous zone names are used in this section for clarity and to reflect the data at the time of testing.

Each LGA and their controls are listed in detail in Appendix 3.

Local Environmental Plan Controls

IN1 General Industrial

- Across the selected LGAs, there is considerable variation in controls (including within the LGAs themselves).
- Four LGAs had no HOB limit in place and a further seven have at least one precinct where no HOB limit is applied.
- Excluding instances where no HOB applies, the range of heights is from 8.5 metres (Shoalhaven, one precinct only) to 30 metres (Liverpool).
- In Wollongong, heights for IN1 range from 11-20 metres. Shellharbour had the lowest overall HOB limits with a uniform 11 metres.
- Similarly, there are seven LGAs with no FSR on IN1 and a further seven included at least one precinct with no FSR applied. Wollongong applied a uniform control of 0.5:1 FSR for all IN1 land. Of those LGAs that have an FSR in place, Wollongong is the only one with an FSR of less than 1:1.
- There is no consistency in MLS between LGAs with most having a range instead of one uniform value. Generally, MLS falls between Nil⁸ to 1 Ha, although there are a few higher values. Wollongong has a range from Nil to 0.4 Ha.

IN2 Light Industrial

- Similar to IN1, there is considerable variation among controls for IN2 between LGAs and in many cases within LGAs themselves.
- Most LGAs have a range in their height limits for IN2 precincts, some include at least one precinct with no height limit, and five LGAs have no HOB limits at all.
- In Wollongong, height limits on IN2 land range from nine metres to Nil. Approximately, 14 IN2 precincts (48%) have 11 metres; 12 (41%) have nine metres, one (3%) has lots split between nine and 11 metres; one has 16 metres, and one has no limit.
- Six out of the 16 LGA's did not apply an FSR control to their IN2 land. Most LGAs had at least one IN2 precinct with no FSR control. Of those LGA's that apply an FSR control to IN2 land, all except Wollongong and Fairfield apply a ratio of 1:1 or higher. Wollongong applies a uniform control of 0.5:1, with the exception of only a few outlier lots which have no control.
- As with IN1, MLS varies considerably. Most MLS controls are well under 1 Ha. Shellharbour is an outlier among the selected LGAs, applying a uniform 2.7Ha control across all precincts.
- Wollongong also includes a small number of lots at Helensburgh with 39.99 Ha MLS, which are an extreme outlier in the LGA, whereas most IN2 zones have an MLS of 0.1 Ha.

IN3 Heavy Industrial

- Of the selected LGA's, only Wollongong, Newcastle, Liverpool, Parramatta, and Sutherland have IN3 Heavy Industrial zoning – and all apply different planning controls to these lands.
- Wollongong has IN3 land under both the Wollongong LEP 2009 and the SEPP (Transport and Infrastructure) 2021 (at the Port of Port Kembla). Under both planning instruments, IN3 land has no height or FSR controls, with the exception of a 20 metre height limit in Wollongong LGA on land located at Shellharbour Road, Port Kembla. The most common MLS applied to IN3 land is 0.4Ha, although land within the Port Kembla SEPP area has no MLS and land at Kembla Grange has 9.99 Ha.
- Newcastle has a uniform 0.4 Ha MLS and does not apply a HOB limit or an FSR.
- Liverpool limits HOB to 30 metres and applies no FSR. A MLS requirement of 0.2 Ha is consistently applied for all IN3 land.

⁸ Where the term 'Nil' is used it refers to there being no control applied, rather than there being a control equal to zero.

- In Parramatta, IN3 land has a much more restrictive height limit of 12 metres, a 1:1 FSR and no MLS.
- In Sutherland, IN3 land is only located at Kurnell and includes a range of height limits from Nil to 16 metres. An FSR of 1.5:1 and MLS of 1 Ha also applies.

SP1 Special Activity

- Bayside, Newcastle and Wollongong are the only LGAs with port infrastructure, known collectively as the 'Three Ports' (Botany, Newcastle and Port Kembla). These lands are zoned SP1 Special Activity and regulated by SEPP (Transport and Infrastructure) 2021.
- Other than height limits imposed by the airport at Port Botany, these lands have no height, FSR or MLS planning controls.

Conclusions

- Among the selected LGAs:
 - There is considerable variation in planning controls for industrial zones. This often includes differences in controls between precincts within an LGA (thus creating a range) and difference in those ranges between the LGAs.
 - The vast majority only have IN1 and/or IN2 zones, with IN1 being the most common by zone land area. In contrast, IN3 land is not common, with Wollongong among only five LGAs to have this zone as well as a much greater amount (over four times more IN3 land than of the other LGAs).
 - Comparing Wollongong and Newcastle, although Wollongong has significantly more heavy industrial land, although the amount of SP1 port land in Newcastle is approximately five times larger than in Wollongong.
 - Across all LGAs, height limits are more commonplace than FSR controls.
 - For the IN1 General Industrial zone, Wollongong
- For both the general and light industrial zones, Wollongong is relatively restrictive on its height limit and FSR control compared with many other LGAs, including Canterbury Bankstown, Fairfield, Newcastle, Port Stephens, and Shoalhaven⁹, which all have limited and/or no planning controls.
- This is particularly true for the light industrial zone. Wollongong's usual height limit of between nine to 11 metres would typically only accommodate single storey warehousing and limit development of larger premises that require higher ceilings. An FSR of 0.5:1 restricts the ability to develop for businesses that require additional floorspace for uses such as offices, often provided as a mezzanine level.
- In contrast, Wollongong MLS is relatively less restrictive and within the typical range of other LGAs, including allowing for no minimum lot size control in some precincts. The typical MLS for light industrial land is 0.1 Ha.
- For heavy industrial land, Wollongong is among the least restrictive. It is also the only LGA to have a range in its MLS for this zone. Having an appropriate MLS in place for heavy industrial land is important to control against inappropriate subdivision that may limit opportunity for larger industry.
- The absence of height or FSR controls on heavy industrial land may incentivise development of higher density outcomes in the E5 zone. This could lead to a proliferation of strata unit or

⁹ While the Shoalhaven LEP has almost no mapped controls on industrial land, the DCP does impose height and FSR limits in this instance.

self-storage developments within this zone, and limit land available for manufacturing uses requiring large sites (but not necessarily large amounts of floorspace).

Development Control Plans

The following DCP's were used to undertake the comparative analysis:

Table 4.4: List of DCPs used in comparative analysis

DCP	Industrial Chapter (or relevant section)
Botany Bay Development Control Plan 2013*	Part 6 Employment Zones
Rockdale Development Control Plan 2011*	Part 5.5 Industrial
Blacktown Development Control Plan 2015	Part E Development in the Industrial Areas
Camden Development Control Plan 2019	6.3 Industrial Land Uses
Bankstown Development Control Plan 2015**	Part 3 Industrial Precincts
Canterbury Development Control Plan 2012**	Part E Industrial Development
Cumberland Development Control Plan 2021	Part D Development in Industrial Zones
Fairfield Citywide Development Control Plan 2013	Chapter 9 Industrial Development
Liverpool Development Control Plan 2008	Development in Industrial Areas
Newcastle Development Control Plan 2012	Section 3.3 Industrial Development
Parramatta Development Control Plan 2011	Part 3 Development Principles
Penrith Development Control Plan 2014	D4 Industrial Development
Port Stephens Development Control Plan 2014	Chapter C Development Types (C3 Industrial)
Shellharbour Development Control Plan 2013	Part 2 Chapter 9 Industrial Development
Shoalhaven Development Control Plan 2014	G20 Industrial Development
Sutherland Shire Development Control Plan 2015	Chapters 28 – 31 (IN1 – IN4 zones)
Wollongong Development Control Plan 2009	Chapter B5 Industrial Development

Note: * DCPs now part of Bayside City Council; ** DCPs now part of Canterbury Bankstown Council

General comments

- Although DCP chapters on industrial development vary in both their detail and coverage, sections common to most DCPs reviewed included guidance or requirements for building design, setbacks, landscaping, fencing, outdoor storage, and car parking/access.
- Many DCPs, including Wollongong, contain site specific controls or dedicated subsections of their industrial chapter for particular precincts.
- The Sutherland Shire is unique in having separate DCP chapters for each industrial zone.
- The Newcastle DCP applies to land within the Port of Newcastle SEPP area including the SP1 Special Activity zone whereas the Wollongong DCP does not. Newcastle has a site specific subsection in their industrial chapter providing controls on this area.
- DCP chapters vary considerably in style and readability as well as included visual elements such as example photographs and diagrams.
- DCP chapters also vary considerably in their objectives. Some place emphasis only on design elements, whereas others include objectives such as the need to promote economic and/or employment outcomes whilst balancing adverse impacts.
- Most DCP chapters address to varying degrees residential interfaces as well as other issues such as ancillary land uses within industrial areas (such as industrial retail outlets).
- The Penrith DCP includes a statement around building heights that proposed industrial development needs to achieve a scale and height in keeping with the existing and desired future character. In that regard, development may not be permitted up to the maximum

height specified in the LEP if it will have an adverse impact on views of significance or heritage.

- The Penrith DCP also includes a 'lifting the bar' section that outlines additional principles proponents may wish to adopt to demonstrate commitment to the principles of the DCP. Demonstration of this commitment may lead to Council considering variation of development controls. The principles are:
 - Improved sustainability outcomes.
 - Increased landscape setbacks, landscape areas, street tree planting, green roofs, and improved streetscape outcomes.
 - High quality building design that is visually attractive, innovative, integrated into the landscape and articulated to reduce scale and bulk.
 - No impacts on sensitive adjacent land uses.
 - Conversation and adaptive reuse of industrial buildings listed as heritage items.

Building setbacks

Along with height restrictions and floor space ratios, setbacks are a key control in setting the overall development envelope of a building.

As shown in Table 4.5, there is considerable variation among DCP setback requirements between Councils. Key observations include:

- Most Councils require a front setback that generally ranges from five to 10 metres. This setback is often related to the road classification and in some DCPs it is specific to particular locations. For corner sites, there are usually also setback requirements for secondary frontages (these are not listed in the table).
- Setbacks are also often guided by the dominant setback of the existing streetscape and a desire to preserve prevailing character.
- Whilst most Councils do not mandate side or rear setbacks, certain triggers such as proximity to residential zones will make this a requirement to protect privacy and solar access.
- If a side or rear setback is required, most Councils do not specify an exact amount but rather subject it to a merit-based assessment as well as requirements under the Building Code of Australia (BCA).
- Wollongong's primary setback has a large range (7.5-20m) although it is not unique in this regard and the upper limit would only apply in very limited circumstances.
- Wollongong is among the minority of Councils reviewed that align setbacks to the road classification. There is an opportunity for Council to consider reviewing this control for local and collector roads to ensure it is contemporary and not unnecessarily restricting industrial development.

Table 4.5: Primary setback requirements, industrial development, selected DCPs

DCP	Front Setback	Side Setback	Rear Setback
Bankstown	3 – 15m	May be required	May be required
Botany Bay	9m	2-3m (depends on adjoining residential and/or impact on streetscape)	Nil to 3m
Blacktown	7.5-20m (dependent on road classification)	May be required	May be required
Camden	7.5m	Assessed on merit of the application	Assessed on merit of the application
Campbelltown	10-30m (dependent on road classification and/or specified roads)	N/A	N/A
Canterbury	5m+ (minimum, depends on whether there is front car parking)	N/A	N/A
Cumberland	5m	Nil, except for specified circumstances (E.g., screening required for adjoining residential)	Nil, except for specified circumstances (e.g., screening required for adjoining residential)
Fairfield	10m (5m to be used for landscaping unless otherwise specified in certain locations)	N/A	N/A
Liverpool	5-20m (dependent on road/specified location)	N/A	N/A
Newcastle	5m	6m (sites greater than 10,000m ²)	6m (sites greater than 10,000m ²)
Parramatta	Correspond to existing building line where there is a defined built edge (continuous setback to the street desirable)	Dependent on impact on amenity of adjoining development	Nil where there will be no impact on streetscape or amenity of adjoining development
Penrith	9-20m	N/A	N/A
Port Stephens	6m	Set in accordance with the BCA	Merit based approach, 1.5m buffer zone
Rockdale	Must respond to dominant street setback and character (at least 7.5m if opposite a Residential Zone and not separated by a Classified Road)	4.5m (if a common boundary with residential zone)	6m (if a common boundary with residential zone)
Shellharbour	7m plus half the building height for sites with frontage to a main road, otherwise 5m plus half the building height for all other sites.	Where an industrial building has a frontage to more than one street, the setback from the secondary street must be 4 metres minimum	Merit based assessment, subject to BCA.
Shoalhaven	10m+	N/A	N/A
Sutherland	9-20m (varies based on zone/location as well as for corner properties)	Nil is permitted	Nil is permitted
Wollongong	7.5 – 20m (dependent on road type)	Nil, unless building abuts residential zone	Nil, unless building abuts residential zone

Car parking

Accommodating car parking can have a significant impact on the overall footprint of a building. Car parking requirements are intertwined with other requirements around setbacks and landscaping.

Key observations:

- Across the selected DCPs, car parking standards often vary based on different land use types, making direct comparison of rates between DCPs too complex.
- Many LGAs refer, at least in part, to the Road and Traffic Authority's *Guide to Traffic Generating Developments*. This document, as well as applicable Australian Standards, is a reference for not only the suggested car parking rate but also guidance on carpark layout and design.
- Most DCPs advise to refer to the specific car parking chapter in their DCP rather than keeping all controls contained in the industrial chapter.
- Car parking is generally required to be accommodated off the street.
- A few DCPs mentioned stacked car parking outlining that they were either not permitted, used only for the purpose of built facility, or for the use of employee car spaces only.
- Bicycle parking and end of trip facilities are often required or at the very least encouraged.
- DCP industrial chapters address multi-unit industrial development parking in different ways.
 - For example, the Botany Bay DCP industrial chapter requires a minimum of two car parking spaces per industrial unit. The Campbelltown DCP also sets this as a base requirement and then has additional requirements based on gross floor area (GFA).
- Wollongong's B5 chapter provides advice around car parking design. Car-parking standards for Industry, Warehouses, Light Industrial Retail Units and other uses permitted in Industrial precincts are outlined in Chapter E3 of the DCP.
- It is noted that some types of development, notably indoor recreation uses such as gyms, martial arts or dance studios do not have a specified parking standard.
- It is also noted that the parking rates for uses permitted in Industrial precincts can differ substantially (e.g., an industrial use versus a place of worship)
- The popularity of Industrial Unit developments has introduced challenges as businesses may only become a tenant of a new warehouse once it is built.
- In that case, the standard parking rate for warehouses is 1 car parking space per 75 sqm (or 1 car parking space per 150m² GFA for buildings greater than 10,000m² of GFA, where the facility is purpose built for a particular business and where it can be demonstrated that employee car parking is satisfactorily catered for). This does not account for higher parking requirement users such as gyms or places of worship.
- As such, there is an opportunity for Council to consider the necessity of specifying a rate for indoor recreation uses in a future review of Chapter E3.

Landscaping

Landscaping controls generally have several objectives related to enhancing the appearance and amenity of developments and the broader streetscape through the planting of suitable trees and vegetation. Further, landscaping is often used to provide screening (visual and noise) as well as improve environmental outcomes concerning biodiversity, air pollution, heat, and water management.

Landscaping controls need to work in conjunction with building design, setback, car parking and fencing requirements. Landscaping requirements and guidance are often integrated within these other controls. Sometimes landscaping controls delineate between 'soft' requirements (vegetation materials) and 'hard' requirements (building materials).

Key observations:

- Various DCPs (including Wollongong) specify:
 - a minimum requirement for landscaped site coverage that may require a minimum area of deep soil planting.
 - requirements for planter beds including dimensions as well as positioning in relation to boundaries, car parks, driveways, or front setbacks.
 - small shrub controls including when and where it is appropriate to use shrubs to the sites advantage (for example, to avoid graffiti, for screening, ground coverage and to use a achieve a mixture of height scales amongst plants).
 - specific requirements for trees that may include minimum provision rates, canopy spread, mature height requirement, positioning in both car parks and relation to buildings as well as the type of species.
- Like with car parking, Wollongong has specialised areas for landscaping in accordance with road types (for example, arterial or sub-arterial road relating back to their building setback controls).
- Campbelltown, Liverpool, Parramatta, and Wollongong request the inclusion of a Landscape Plan accompanying a development application. Further, Campbelltown and Wollongong require an Arborist Report.
- Cumberland DCP specifies that landscape plant species used in the public domain shall be predominately native, including local indigenous species. They should also be drought tolerant.
- Sutherland Shire includes assessment principles that explain what council will assess regarding whether the landscaping design is high quality or not (for example, requirements around species mixture; the size, shape, and orientation of spaces allocated for landscaped areas; scale of trees and screening of walls).
- Some DCPs specify that landscaped strips should not interfere with passive surveillance as well as obstruct views of entries and exits.
- Some DCPs such as Parramatta provide few landscaping controls specific to industrial development, whereas Wollongong has very detailed controls as does Liverpool. Examples of in Wollongong include specifying that external shaded seating area be provided for worker's meal breaks as well as requirements around contrasting paving.

Conclusion

- Although there are some commonalities, industrial DCP chapters vary widely in their breadth and level of detail for different controls, including the extent to which referencing external chapters is required.
- Some DCPs are one document and only include an industrial chapter which is generally more brief and less self-contained. Others, including Wollongong, have chapters as a separate document and in general these are more detailed although still require external referencing.
- DCPs also vary considerably in their style and presentation including presence of visual elements and explanation of controls.
- Generally, when compared with the other DCPs, Wollongong's B5 Industrial Development Chapter is comprehensive and prescriptive. Although references to other chapters are required, Wollongong's chapter contains detailed controls.
- There is an opportunity for Council to:
 - Review Wollongong DCP Chapter B5 with a view to:

- Rationalising the chapter, reducing its length and where appropriate consider simplification of controls that are duplicative or already covered in other chapters of the DCP.
 - Reviewing setback controls following completion of Council's Integrated Transport Strategy and further understanding of the functioning of industrial road networks.
 - Considering the necessity of highly specific controls compared with adopting more generalist principles as well as the inclusion of subsections that are very specific to certain industries (e.g. motor vehicle repair workshops, abrasive blasting industries); relate to matters that are already addressed elsewhere in the DCP (e.g. riparian corridors, utility infrastructure services, road design and construction) or detailed landscaping requirements.
 - Considering objectives and/or controls that delineate between industrial zones (such as Sutherland), specific controls to apply within the Port Kembla SEPP Area (Newcastle) and a set of 'lifting the bar' principles (Penrith).
 - Consider broadening the applicability of subsection 16 Industrial Development Adjoining a Residential Zone from 'new factory/warehouse distribution building' to all new development on industrial land. Further, the requirements of this subsection need to be reviewed in light of the requirements under SEPP (Exempt and Complying Development) 2008, including the *NSW Noise Policy for Industry* (2017), which is deferred to in the Code SEPP.
- Consider including separate parking standards for indoor recreation land uses in a future update of Wollongong DCP Chapter E3.

4.4 Development Activity

Having established the existing planning framework and controls for industrial land in Wollongong, this section provides insight on historical development activity as well as highlighting the diversity of land uses occurring with a sample of recent DAs including those that received an approved variation.

Historical Analysis

Historical data¹⁰ relating to approved development applications on industrial and B6 zoned land and with determination dates between January 2010 to December 2021 has been analysed. The tables below provide a count of DAs by decision date, zone, development category and suburb.

Table 4.6: Approved DAs by zone, Wollongong LGA

Decision Date	B6	B7	IN1	IN2	IN3	IN4	Total
2010	20	2	4	25	16		67
2011	23		2	25	15		65
2012	18		3	30	6		57
2013	16		6	30	6	1	59
2014	19	1	1	31	5	1	58

¹⁰ Note:

The analysis is based on zoning prior to the DPE Employment Zone Reforms and relied only on the text description recorded for a development application as well as internal classification into development categories. Results may be affected by human error and changes over time in classification. Complying development is not included and Modifications of DAs have been removed to avoiding double counting.

Decision Date	B6	B7	IN1	IN2	IN3	IN4	Total
2015	13	2	1	25	6		47
2016	24	3	1	25	19		72
2017	13	2	2	28	18		63
2018	16		3	31	13		63
2019	17		3	27	18		65
2020	18		1	19	9		47
2021	20		3	21	5		49
Total	217	10	30	317	136	2	712

Table 4.7: Approved DAs by Development Category and Zone, Wollongong LGA

Development Category	B6	B7	IN1	IN2	IN3	IN4	Total
Commercial Retail Office	113	6	15	81	13	1	229
Community Facility	4	1	1	3			9
Industrial	12		6	139	90		247
Infrastructure			1		3		4
Mixed	5				1		6
Other	63	2	6	65	22	1	159
Residential - Alterations & Additions	16			17			33
Residential - New Multi-Unit	1						1
Residential - Other	2			1			3
Residential - Single New Dwelling	1			1			2
Subdivision Only		1	1	10	7		19
Total	217	10	30	317	136	2	712

Table 4.8: Approved industrial DAs by Zone and Suburb, Wollongong LGA

Suburb	B6	IN1	IN2	IN3	Total
BELLAMBI			6		6
BERKELEY				10	10
BULLI			3		3
CONISTON		4			4
CORRIMAL			6		6
CRINGILA			1	1	2
DAPTO	1		7		8
FAIRY MEADOW	3		7		10
FERNHILL			2		2
HELENSBURGH	1		28		29
KEMBLA GRANGE			7	3	10
NORTH WOLLONGONG			10		10
PORT KEMBLA			11	37	48
RUSSELL VALE	1				1
SPRING HILL		1	3	1	5
UNANDERRA	3		34	38	75
WARRAWONG			1		1
WOLLONGONG	3	1	2		6
WOONONA			9		9
YALLAH			2		2
TOTAL	12	6	139	90	247

Overall

- There were a total of 712 approved DAs, averaging 60 per year. This includes all categories of development including alterations and additions, new developments and change of use.
- IN2 is the most active zone with (317 DAs, 45% of total) followed by B6 (217 DAs, 30% of total). IN2 averaged approximately 25 DAs per year over this period compared with 18 in B6.
- Of the 712 DAs, 247 were categorised as 'Industrial', averaging 12 per year. 56% occurred in IN2, 36% in IN3 and 5% in B6.
- The category of 'Other' mostly involves applications for signage.

B6 zone (now part of the E3 zone)

- Has not seen high levels of light industrial and/or warehousing development with only 12 approved DAs (5%) classified as 'Industrial' during this time. This may suggest that challenges with development feasibility for industrial activity in B6 or the characteristics of B6 precincts are not considered attractive for this kind of development.
- Approximately 12% of DAs in B6 relate to residential (including a small number of larger shop top housing developments classified as 'Mixed') and 6% of DAs in Light Industrial. Most of the activity relates to alterations and additions and is due to the presence of residential dwellings in both zones.
- Although there have been few developments, shop top housing remains permissible in the new E3 Productivity Support zone as an 'Additional Permitted Use' (APU).

IN2 zone (now part of the E4 zone)

- Has seen an increase in the number of applications related to indoor recreation.
- Some development activity in IN2 as well as B6 is related to housing (particularly alterations and additions).
- DA-2022/1072 proposing a 54 lot Torrens title industrial subdivision at Kembla Grange on E4 zoned land has been lodged for assessment with Council. This is the largest industrial subdivision proposed for E3 zoned land in the past five years. The application is still under assessment at the time of finalising this Review.
- Of the 247 DAs classified as industrial, 56% occurred in IN2, 36% in IN3 and 5% in B6.

IN3 zone (now the E5 zone)

- Comparatively, the IN3 zone saw lower levels of development activity (136 DAs or 19%). IN3 averaged around 11 DAs per year over this period but with a larger range with some years seeing only 5 DAs and in others up to 19.

B7 and IN4 zones (now part of the E3 and W4 zones, respectively)

- B7 and IN4 zones had very limited development activity given they make up a very small amount of zoned land.

Locations

- The top three suburbs for industrial categorised development activity were:
 - 1) **Unanderra** (75 DAs, 30%)
 - 2) **Port Kembla** (48 DAs, 19%)
 - 3) **Helensburgh** (29 DAs, 12%)
- Most of these DAs also occurred on IN2 zoned land.

- The position of Helensburgh reflects the delivery of industrial units and subsequent occupation by different businesses. Some other areas such as North Wollongong and Fairy Meadow had lower levels of activity over the decade to 2021 which may indicate that there is less turnover of businesses in these locations and lower levels delivery of newer industrial units.

Descriptions of Recent Development Activity

The following table provides examples of recently approved development applications across a number of broad categories by zone, suburb and whether they were within the Port Kembla SEPP Area. The purpose is to demonstrate the wide variety of land uses being proposed, particularly within the B6 and IN2 zones.

Table 4.9: Sample of recent approved development applications on industrial land

DA	Zone	Suburb	SEPP	Address	Description
Industrial units, warehousing, and self-storage					
DA-2017/620	IN2	Bellambi	No	6 Bellambi Lane	Light industrial development - demolition of existing structures, construction of 87 units and associated car parking
DA-2021/1503	IN2	Bellambi	No	6 Bellambi Lane	Industrial - change of use to engineering workshop with an ancillary office space (Unit 76)
DA-2016/1731	IN3	Berkeley	No	13 Warehouse Place	Construction of warehouse and use as self-storage facility with strata subdivision into 186 lots
DA-2020/1432	IN2	Cringila	No	133-141 Five Islands Road	Industrial - construction of an industrial warehouse complex comprising 23 light industrial units
DA-2022/189	IN2	Dapto	No	31 Hamilton Street	Industrial - demolition of existing structures, construction of two (2) warehouse units to use as storage and Subdivision - Strata title
DA-2019/1234	B6	Fairy Meadow	No	10 McGrath Street	Industrial - demolition of existing structures, construction of new warehouse and distribution centre
DA-2018/160	B6	Helensburgh	No	177 Princes Highway	Construction of light industrial units
DA-2021/736	IN2	Kembla Grange	No	88 West Dapto Road	Staged development - subdivision of site into two (2) lots, construction of a service station, 12 light industrial warehouse units and associated civil works
DA-2020/25	IN2	Port Kembla	No	55 Shellharbour Road	Light industrial – additional 69 self-storage units
DA-2022/168	IN2	Port Kembla	No	79 - 83 Military Road	Construction of five (5) warehouse units
DA-2020/787	IN1	Spring Hill	No	2 Drummond Street	Change of use and fit out of Units 12, 13 & 14 for a warehouse or distribution centre
DA-2017/190	IN2	Unanderra	No	10 Sylvester Avenue	Industrial units - 46 units with associated car parking - phased development
DA-2017/922	IN3	Unanderra	No	16-18 Wayne Place	Light industrial - 25 units
DA-2017/1263	IN3	Unanderra	No	5-7 Wayne Place	Industrial estate comprising 49 units and one take away food outlet, pylon sign, hard stand carpark area and Subdivision - Strata title - 50 lots
DA-2017/1376	IN2	Unanderra	No	19-23 Doyle Avenue	Industrial - demolition of existing structures and construction of a new light industrial building comprising of 29 units and associated parking
DA-2017/1152	IN3	Unanderra	No	28 Lady Penrhyn Drive	Industrial - minor demolition and the construction of five (5) warehouse factory units

DA	Zone	Suburb	SEPP	Address	Description
DA-2019/951	IN2	Woonona	No	9/8 Pioneer Drive	Mezzanine level and Change of Use to Warehouse and Distribution Centre
DA-2021/238	IN2	Yallah	No	105 Yallah Road	Industrial - 32 units including kiosk/takeaway food premises, earthworks, installation of infrastructure, removal of trees, signage, and subdivision - strata title - 33 lots
Artisan food and drink industry					
DA-2021/554	IN2	Bellambi	No	14/6 Bellambi Lane	Light industrial - micro distillery (artisan food and drink industry) including internal fit out and construction of a new mezzanine (Unit 14)
DA-2021/684	IN2	Bellambi	No	16 Bellambi Lane	Partial change of use to artisan food and drink industry
DA-2021/889	B6	Fairy Meadow	No	103 Princes Highway	Change of use to craft brewery and internal fit out
DA-2022/977	IN2	North Wollongong	No	3/50 Montague Street	Fit out and change of use for artisan food and drink industry
DA-2020/542	B6	Wollongong	No	102 Smith Street	Change of use to microbrewery
Manufacturing, Energy and Engineering					
DA-2018/994	IN2	Helensburgh	No	201 Parkes Street	Light Industrial – use of Tenancy 1 for food product manufacturing, use of Tenancy 2 for clothing printing, construction of accessible sanitary facility and demolition/removal of unauthorised structures
DA-2022/936	IN3	Port Kembla	Yes	5-9 Flinders Street and Old Port Road	Industrial - bulk liquid storage tank
DA-2021/1019	IN3	Port Kembla	Yes	Lot 1 Old Port Road	Demolition of existing buildings and hard stand area, construction of heavy industrial building containing two (2) warehouse units, loading bay, on-site car parking and landscaping, tree removal and stormwater drainage
DA-2021/1217	IN3	Port Kembla	Yes	10 Darcy Road	Industrial - alterations and additions to an existing industrial building and change of use to a waste storage and resource recovery facility
DA-2017/1411	IN3	Port Kembla	Yes	Lot 2 Foreshore Road	Industrial - construction of a 3000-tonne silo (addition to existing cement processing plant)
DA-2022/788	IN3	Port Kembla	No	1 Darcy Road	Change of use to Hydrogen Electrolyser Research & Development Lab including signage
DA-2022/216	IN3	Unanderra	Yes	13 Marley Place (BlueScope Stainless Products)	Industrial - installation of a new Pipe and Tube Manufacturing Line and associated product storage areas within existing Warehouses 3 and 4, alterations to Warehouses 2, 3 and 4, construction of acoustic barrier, internal alterations to existing office and amenities building within warehouse complex
DA-2017/1735	IN3	Unanderra	No	23 Waynote Place	Industrial - industrial building with associated car parking and General Industrial Use - marine engine manufacturing
Other					
DA-2022/236	IN2	Bellambi	No	69/6 Bellambi Lane	Dog training in industrial warehouse unit
DA-2022/931	IN2	Bellambi	No	85/6 Bellambi Lane	First use of industrial unit to depot and high technology industry (Unit 85)
DA-2019/1296	B6	Dapto	No	80 Prince Edward Drive	Business Premises - change of use to light industry (caravan servicing)

DA	Zone	Suburb	SEPP	Address	Description
DA-2021/1136	IN2	Fairy Meadow	No	20 Princes Highway	Retail/Industrial - fit-out and use of premises for motorcycle repair and sales
DA-2021/1258	IN2	Unanderra	No	5 Sirius Road	Industrial - demolition of unauthorised buildings, alterations, and additions to existing industrial building, and change of use to light industry and industrial retail outlet
Recreation (Indoor)					
DA-2020/703	IN2	North Wollongong	No	122-126 Montague Street	Recreational facility (indoor) - construction of new warehouse to be used as a bouldering gym, associated parking and landscaping areas
DA-2020/814	IN2	North Wollongong	No	1/50 Montague Street	Recreation Facility - change of use to create boxing gym (Unit 1)
DA-2022/112	IN2	Unanderra	No	16/7 Waynote Place	Change of use of industrial warehouse unit to indoor recreation
DA-2019/1033	IN2	Unanderra	No	14 Investigator Drive	Industrial - change of use to a dance studio including alterations and additions, enclosure of rear awning entry area, changes to car parking and shed extension.
DA-2019/1195	IN1	Wollongong	No	398 Keira Street	Change of use to recreation facility (indoor) and internal fit out

Relevant development variations

Clause 4.6 of the Wollongong LEP 2009 provides flexibility in the application of development standards and Council is permitted to allow variations under certain circumstances.

The following table lists variations to development standards relevant to industrial lands determined in the decade through to December 2022.

Table 4.10: Recent Clause 4.6 variations, industrial lands, Wollongong LGA

	Development Application	Decision & Determination Date	Address	Zone	Description
	DA-2021/1112	Approved 1/08/2022	1 Beach Street, 25 Beach Street and 208-212 Corrimal Street Wollongong	B6	Commercial - construction of a vehicle sales and service centre, associated signage and Subdivision - consolidation and subdivision to create two (2) Torrens title lots.
Justification	The development is compliant with the maximum allowable FSR. The variation to height and related elements of the building design do not have a direction correlation gross floor area, the building is two (2) stories high, however the element of the building that is subject to the variation is single storey with vaulted ceiling. The variation will have little to no impact on views of the sky or solar access, nor will it unreasonably detract from the amenity of nearby residents or have an adverse impact on the surrounding road system. The proposed exception does not hinder the aims and objectives of WLEP 2009 generally and in particular does not hinder the attainment of the objectives specified in section 4.15(a)(i) and (ii) of the EP&A Act.				
Extent	6%				
	DA-2021/840	Approved 16-11-2021	51 Montague Street, North Wollongong	IN2	Industrial - construction of two (2) additional warehouse units and Subdivision - Strata title - two (2) lots.
Justification	Variation to building height supported as it is minor will have minimal environmental or amenity impacts. Not visible from any public place, no adverse overshadowing visual impacts. 9m max building height. Small portion of the building is over this height with maximum being 9.745m				
Extent	8.27%				

	Development Application	Decision & Determination Date	Address	Zone	Description
	DA-2021/809	Approved 16/11/2021	3 Ralph Black Drive, North Wollongong	IN2	Alterations and additions to building to use as self-storage units
Justification	The Panel considered the written clause 4.6 variation to the floor space ratio development standard and accepted that compliance was unnecessary and unreasonable in the circumstances of this case due to the internal nature of the proposed works which result in the variation. The proposal is consistent with zone objectives and objectives of FSR, all works are internal and no impacts on neighbouring sites.				
Extent	0.96:1 (FSR restriction is 0.5:1), resulting in a variation of 92%.				
	DA-2021/238	Deferred Commencement 20/08/2021	105 Yallah Road, Yallah	C2 IN2	Industrial - 32 units including kiosk/takeaway food premises, earthworks, installation of infrastructure, removal of trees, signage, and Subdivision - Strata title - 33 lots.
Justification	In summary, the justification relies on compliance with the height standard in this instance being unnecessary as there are no unreasonable impacts arising from the non-compliance and the development is consistent with the objectives of the standard despite the non-compliance.				
Extent	8.94% variation to 9m height control. Proposed height 9.805m.				
	DA-2019/1332	Approved 30/04/2021	101 Auburn Street, Coniston	IN1	Alterations and additions and use of premises as a light industry
Justification	New third storey does not exceed permitted height limit. Is of recessive colours not readily discernible from the street and maintains setbacks of lower storeys. Objectives of the zone satisfied.				
Extent	FSR 0.82:1 where maximum FSR 0.5:1 is permitted.				
	DA-2019/1177; DA-2019/1259; DA-2019/1034; DA-2019/1054; DA-2019/1058; DA-2019/951	Approved 18/12/2019	8 Pioneer Drive, Woonona	IN2	Mezzanine Level and Change of use to: - Recreation Facility (Indoor) (DA-2019/1177) - Depot (DA-2019/1259; DA-2019/1034) - Warehouse and Distribution Centre (DA-2019/1054; DA-2019/951) - Light Industry (DA-2019/1058) (Note: The various DAs relate to different industrial units & proposed uses within the sample complex, however, they all share same decision, determination date, variation, and rationale).
Justification	The applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out.				
Extent	12% noncompliance to the 0.5:1 floor space ratio standard.				
	DA-2018/950	Approved 13/11/2018	2/21 Cemetery Road Helensburgh	IN2	Use of Units 2 and 3 as production of videos for entertainment, education and social media and use of constructed raised storage platforms (mezzanines)
Justification	Works are internal and result in no increased bulk and scale, and no anticipated loss of amenity for surrounding development.				
Extent	Floor space ratio of 0.55:1 or 10% variation (0.5:1 max).				
	DA-2017/1396	Approved 18/05/2018	51 Pringle Road Fernhill	IN2	Commercial - new freezer, chiller and dispatch building
Justification	Height of building exceeds maximum 12m height limit prescribed. Clause 4.6 exception request submitted as required. The objectives of the standard and zone objectives are met despite the technical non-compliance with Clause 4.3. The DA was considered by the IHAP at its meeting on 9 May 2018 and the proposed height variation was supported.				
Extent	12m when the maximum prescribed height limit is 11m.				
	DA-2017/1250	Approved 28/02/2018	25 Steel Street, Fairy Meadow	IN2	Industrial - construction of a self-storage unit

	Development Application	Decision & Determination Date	Address	Zone	Description
Justification	Yes. The sufficient planning grounds to justify contravening the 0.5:1 Floor Space Ratio limit are outlined in the applicant's Clause 4.6 statement The applicant has noted environmental planning grounds that justify the departure also include: • The proposed building is 'tucked away' at the eastern end of the site and out of view from Steel Street and is not visually obtrusive. • The building is single storey structure and located 3m from northern and eastern boundary and 7m from southern. There are no overshadowing impacts to neighbouring residential properties. • The building has been positioned with regard to the current easements which traverse the site. • The height of the building is less than the initial 'Block 3' which was approved for the site with a zero setback on the northern boundary. It will be far less visually obtrusive particularly with the retention of the existing Melaleuca on the site. Went to IHAP on 28 February 2018 and the approval was granted for the application.				
Extent	The Floor Space Ratio Map under Clause 4.4(2) of Wollongong Local Environmental Plan 2009 sets a maximum 0.5:1 floor space ratio for the site. The proposed additional storage unit is 84.3sqm increasing the current gross floor area from 1896.9sqm (0.625:1 current) to 1981.2sqm resulting in an FSR is 0.65:1.				
	DA-2017/749	Approved 07/02/2018	101 Montague Street, North Wollongong	IN2	Industrial - demolition of existing structures and construction of automotive service centre with associated carparking and riparian revegetation works
Justification	Building height exceeded to address flooding constraints (elevated floor level) and accommodate necessary clearance for vehicle hoists for the proposed vehicle repair use. No adverse amenity or streetscape impacts arise from the variation.				
Extent	9.55% (9.86m building height proposed where 9m maximum height permitted).				
	DA-2016/358	Approved 23-08-2018	1-3 Canterbury Road, Kembla Grange	B6	Demolition of existing structures, clearing of vegetation, bulk earthworks, construction, and use of a hardware, and building supplies development including plant nursery and landscape supplies, associated roadworks including public infrastructure works (roundabout on Northcliffe Drive) and re-subdivision of five (5) lots into two (2) lots
Justification	The proposal is considered to be consistent with the objectives of the zone as the proposal provides a business along main road providing employment opportunities and thus contributes to the economic and employment growth of the area as discussed above. (Note this is a summary – for a detailed justification, please refer to Council's register for development variations).				
Extent	Maximum Building Height for site is 11m, approved Maximum Building Height is 16.6m.				
	DA-2014/466/F	Approved 15/04/2016	212 Reddalls Road, Kembla Grange	C3; IN2 RU2	Car storage facility and vehicle processing facility to provide shade cover parking for 20,000 cars Modification F - amend condition 20 to enable buildings in excess of 9m high
Justification	The requested exception to clause 4.3 Height of Buildings of the Wollongong Local Environmental Plan 2009 is considered reasonable given the circumstances of the case. The applicant has provided adequate justification for the variation sought and demonstrates that strict compliance with the development standard is unreasonable and unnecessary. It is considered that proposal will not detract from other approved development in the locality that exceed 9m and is considered to meet the objectives of the IN2 zone. The application was referred to IHAP on 6 April 2016. All Panel members concurred with the Council Officer's recommendation. Council received advice from a delegate of the Director General on 21 May 2014 returning delegation of powers to Council (assumed concurrence) negating required concurrence from the Director General as relates to cl. 4.6 of WLEP 2009.				
Extent	Clause 4.3 Height of Buildings of the Wollongong Local Environmental Plan 2009: Maximum permitted height 9m Approved height 12.93m				
	DA-2015/827; DA-2015/666	Approved 18-08-2015 (DA-2015/827) Approved 17/08/2015 (DA-2015/666)	21 Cemetery Road, Helensburgh	IN2 I	Industrial - First use as a depot (mobile food van) and construction of an internal storage mezzanine (DA-2015/827) - Construction of an internal storage mezzanine (DA-2015/666) (Note - both DAs relate to different units at the same complex.
Justification	The 43.9 sqm mezzanine does not impact bulk or scale and is unlikely to result in significant adverse impacts on the character or amenity of the surrounding area. (DA-2015/827).				

	Development Application	Decision & Determination Date	Address	Zone	Description
	The 37.8 sqm mezzanine does not impact bulk or scale and is unlikely to result in significant adverse impacts on the character or amenity of the surrounding area. The application was referred to IHAP on 12 August 2015. All panel members concurred with the Council Officer's recommendation. (DA-2015/666).				
Extent	Permissible FSR: 0.5:1 Approved FSR: 0.515:1 (DA-2015/827). Permissible FSR: 0.5:1 Approved FSR: 0.513:1 (DA-2015/666).				
	DA-2008/769/C	Approved 11/11/2014	61 Reddalls Road, Kembbla Grange	IN2	Designated and Integrated Development - material recovery facility - licence under the Protection of the Environment Operations Act 1997 from the Department of Environment and Climate Change Modification C - to increase height and FSR, delete condition 13 (bushfire matters) and enclose the green waste receival and shredding facility
Justification	The requested exception to clause 4.3 Height of Buildings of the Wollongong Local Environmental Plan 2009 is considered reasonable given the circumstances of the case. The applicant has provided adequate justification for the variation sought and demonstrates that strict compliance with the development standard is unreasonable and unnecessary. It is considered that proposal will not detract from other approved development both on the adjoining property and in the locality that exceed 9m and is considered to meet the objectives of the IN2 zone. The application was referred to IHAP on 4 November 2014. All Panel members concurred with the Council Officer's recommendation. Council received advice from a delegate of the Director General on 21 May 2014 returning delegation of powers to Council (assumed concurrence) negating required concurrence from the Director General as relates to cl. 4.6 of WLEP 2009.				
Extent	Clause 4.3 Height of Buildings of the Wollongong Local Environmental Plan 2009: Maximum permitted height 9m Approved height 16.56m.				
	DA-2013/829	Approved 22-10-2014	6 Keevers Place, Kembbla Grange	IN2	Designated Development - Industrial - construction and operation of a static asphalt plant and associated infrastructure
Justification	The requested exception to clause 4.3 Height of Buildings of the Wollongong Local Environmental Plan (West Dapto) 2010 is considered reasonable given the circumstances of the case. The applicant has provided adequate justification for the variation sought and demonstrates that strict compliance with the development standard is unreasonable and unnecessary. It is considered that proposal will not detract from other approved development both on the adjoining property and in the locality that exceed 9m and is considered to meet the objectives of the IN2 zone. A delegate of The Director-General granted concurrence on 30 August 2013.				
Extent	Clause 4.3 Height of Buildings of the Wollongong Local Environmental Plan (West Dapto) 2010 Maximum permitted height 9m, approved height 25.6m.				
	DA-2002/953/A	Approved 30-08-2013	11 West Street, Wollongong	B6	Alterations And Additions and Use as Office Modification A - modification to internal layout.
Justification	The additional FSR is being added wholly within the building. There is no impact of additional bulk and scale. Traffic impact considered satisfactory.				
Extent	Variation from 0.5:1 to 0.9: FSR.				
	DA-2012/627	Approved 29-08-2012	275 Princes Highway, Unanderra	IN2	Subdivision - torrens title - two industrial lots
Justification	The variation will have limited impact on surrounding development due to the existing physical segregation of the site by the retaining wall (existing). The topography of the site limits the ability for the site to be reasonably used for one use only given the restriction to being able to provide shared access and facilities. The increased floor area on proposed lot 1 results from a mezzanine level, which does not change the overall height or footprint of the building, and the bulk of which is not visually apparent. Given the variation is a 10% increase to the standard, a delegate of the Director General advised on 11/5/12 that Council may assume concurrence.				
Extent	Permissible FSR 0.5:1 Approved FSR 0.55:1 Delegate of the Director General advised Council may assume concurrence on 11/5/12.				

4.5 Proposed changes to land use tables and clauses

Land Use Tables

As discussed in Section 4.1 this Review has considered the consistency of land use permissibility across the newly formed E3, E4 and E5 zones following the implementation of DPE's Employment Zone Reforms. The following changes to the Land Use Tables are proposed and considered minor in nature, relating to removal of duplication or addition of land uses that are complimentary to the zone objectives.

Table 4.11: Proposed changes to the Wollongong LEP 2009 Land Use Tables

Use	LEP Definition	Proposed Change	Rationale
Heavy industrial storage establishment	Heavy industrial storage establishment means a building or place used for the storage of goods, materials, plant or machinery for commercial purposes and that requires separation from other development because of the nature of the processes involved, or the goods, materials, plant or machinery stored, and includes any of the following: (a) a hazardous storage establishment, (b) a liquid fuel depot, (c) an offensive storage establishment.	Remove from E3 Productivity Support zone Add to E5 Heavy Industrial zone	This land use is already permitted in the E5 zone where it is considered most appropriate due to the potential need for separation from other land uses associated with hazardous/offensive storage. As such, these kinds of storage are inappropriate for the E3 zone which is often close to residential and/or Town Centres and does not align with the zone objectives.
Offensive storage establishment	Offensive storage establishment means a building or place that is used for the storage of goods, materials or products and that would, when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the building or place from existing or likely future development on other land in the locality), emit a polluting discharge (including, for example, noise) in a manner that would have a significant adverse impact in the locality or on existing or likely future development on other land in the locality. Note: offensive storage establishments are a type of heavy industrial storage establishment .	Remove from E5 Heavy Industrial zone	Duplication as 'Offensive storage establishments' are a type of 'Heavy industrial storage establishment' which are already permitted in the E5 zone.
Storage premises	Storage premises means a building or place used for the storage of goods, materials, plant or machinery for commercial purposes and where the storage is not ancillary to any industry, business premises or retail premises on the same parcel of land, and includes self-storage units, but does not include a heavy industrial storage establishment, local distribution premises or a warehouse or distribution centre.	Remove 'Self-storage premises' in E4 General Industrial zone and add 'Storage premises.'	'Storage premises are a group level land use definition within the LEP and currently permissible in both E3 and E5. Although in practice there is currently no distinction between 'Storage premises' and 'Self-storage premises' (as self-storage is the only land use belonging to the storage premises group), it is recommended that 'Self-storage premises' be replaced by 'Storage premises' in the E4 General Industrial zone for consistency.

Use	LEP Definition	Proposed Change	Rationale
Timber yards	<p>Timber yard means a building or place the principal purpose of which is the sale of sawn, dressed or treated timber, wood fibre boards or similar timber products. It may include the cutting of such timber, boards or products to order and the sale of hardware, paint, tools and materials used in conjunction with the use and treatment of timber.</p> <p>Note: Timber yards are a type of retail premises.</p>	Add to E4 General Industrial zone	<p>Timber yards are a type of retail premise currently permissible in E3 and E5.</p> <p>This Review recommends their inclusion in the E4 zone for consistency as it is noted that other similar retail uses such as 'Garden centres', 'Hardware and building supplies' and 'Landscaping materials supplies' are already permitted and there is no conflict with the zone objectives.</p>
Truck depot	<p>Truck depot means a building or place used for the servicing and parking of trucks, earthmoving machinery and the like.</p>	<p>Add to E4 General Industrial zone</p> <p>Remove from E3 Productivity Support zone</p>	<p>Truck depots are currently permissible in both the E3 and E5 zones but not E4.</p> <p>This Review recommends their inclusion in the E4 zone and removal from E3 as their current permissibility is inconsistent with the zone objectives.</p> <p>Similar land uses such as 'Freight transport depots' are already permissible in the E4 zone.</p>
Waste or resource management facilities	<p>Waste or resource management facility means any of the following:</p> <ul style="list-style-type: none"> (a) a resource recovery facility, (b) a waste disposal facility, (c) a waste or resource transfer station, (d) a building or place that is a combination of any of the things referred to in paragraphs (a)–(c). 	Add to E5 Heavy Industrial zone	<p>This land use is already permissible in the E4 General Industrial zone.</p> <p>These land uses can involve heavy industrial like operations with emissions, particularly resource recovery facilities. As such, it is considered that the E5 zone is most suitable although permissibility in the E4 should also remain.</p>
Hazardous storage establishment	<p>Hazardous storage establishment means a building or place that is used for the storage of goods, materials or products and that would, when in operation and when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the building or place from existing or likely future development on other land in the locality), pose a significant risk in the locality:</p> <ul style="list-style-type: none"> (a) to human health, life or property, or (b) to the biophysical environment. <p>Note: hazardous storage establishments are a type of heavy industrial storage establishment.</p>	Remove from E5 Heavy Industrial Zone	<p>Duplication as 'Hazardous storage establishments' are a type of 'Heavy industrial storage establishment' which already permitted in the E5 zone.</p>
Goods repair and reuse premises	<p>Goods repair and reuse premises means a building or place the principal purpose of which is to collect, repair or refurbish goods, including furniture and appliances, for the purposes of sale, hire or swap, and includes premises known as op shops.</p> <p>Note: Goods repair and reuse premises are a type of business premises.</p>	Add to the E3 Productivity Support zone	<p>This land use is compatible with the objectives of the E3 zone.</p> <p>It is also currently permissible in the E4 zone.</p>

Use	LEP Definition	Proposed Change	Rationale
Takeaway food and drink premises	<p><i>Take away food and drink premises</i> means premises that are predominantly used for the preparation and retail sale of food or drink (or both) for immediate consumption away from the premises.</p> <p>Note: Take away food and drink premises are a type of <i>food and drink premises</i>.</p>	Remove from E5 Heavy Industrial zone	<p>Council considers the permissibility of <i>kiosks</i> to be sufficient within the zone for providing for the everyday food needs of workers.</p> <p><i>Take away food and drink premises</i> allows for a wider range of premises, including drive through fast food premises, that may compromise the heavy industrial objective of the zone.</p>

Clauses

The following Clause within the Wollongong LEP 2009 is redundant as it has now been superseded by requirements under Part 5 of the SEPP (Exempt and Complying Development) 2008 and is recommended for removal.

‘Schedule 3: Complying Development – Part 1 Types of development – Alterations and additions to industrial and warehouse buildings in industrial zones’.

5. Trends and Feedback

5.1 Stakeholder Views

During August and September 2022, Council engaged in several targeted conversations with industrial real estate agents and town planners as well as undertaking a survey of businesses that operate on industrial land.

Attachment A *Draft Engagement Report* provides detailed information on the consultation method and results.

Targeted Engagement

Prior to the business survey, Council held four one-on-one meetings during August and September 2022 with local commercial real estate agencies involved with the industrial market (and in some instances town planning) in Wollongong.

Further, a list of 15 architects/town planning firms involved with industrial development in Wollongong were identified and contacted with a series of questions seeking their feedback.

Industrial Market Conditions

The following table summarises feedback heard regarding industrial market conditions.

Table 5.1: Summary of stakeholder feedback on industrial market conditions

Theme	Perspectives
Overall demand	<ul style="list-style-type: none"> Demand is very strong across the Wollongong industrial market. Rents are at record highs. Leasing rates are up 30 – 40 %, which stretches many businesses, especially if renegotiating. Land is tightly held with limited stock available for sale. For occupiers, this translates to higher prices and few options. Demand is spilling out from Greater Sydney, where leasing rates even on the Sydney fringe (e.g. Campbelltown area) are now above \$1,000 sqm. Agents report being unable to facilitate all enquiries with some businesses being forced to look elsewhere (e.g. Shoalhaven or Hunter Region). Shoalhaven has more land availability and lower costs while Newcastle offers an alternative option for those requiring access to a port. It was noted that flood affectation in Wollongong as well as lower Council rates in other LGAs can be a factor to look elsewhere. Industrial businesses often have specific operational requirements which preclude some existing available sites or buildings. Unanderra is the most popular location for leasing. Helensburgh market is more based on demand from Sutherland Shire. Pharmaceutical groups (due to research and health facilities in the area), e-commerce and transport companies are showing a strong interest in Wollongong to keep up with consumer demand. Large parcels of B6 land are not available and are more expensive than industrial zoned land. Demand for industrial land within Wollongong LGA will increase with the expansion of the Port of Port Kembla and the proximity and connectivity to Badgerys Creek.
Manufacturing & Heavy Industry	<ul style="list-style-type: none"> The COVID-19 pandemic has brought about a resurgence in thinking around onshore manufacturing and supply chain resilience. Wollongong continues to see demand for manufacturing and engineering businesses. One agency estimated that approximately half of external enquiries related to manufacturing. Wollongong is viewed as a service centre for Greater Sydney with access to the Port of Port Kembla and its surrounding heavy industrial base attractive to manufacturers and other industrial operators.

	<ul style="list-style-type: none"> Operators require hardstand sheds with adequate power supply, heavy duty floors and the ability to handle up to a 40-tonne crane. There is demand for large sites with low site coverage. Transport users and heavy industry require hardstand. There are workforce challenges, with existing skill shortages as well as an aging industrial workforce.
Industrial Units and Self-Storage	<ul style="list-style-type: none"> Demand has increased for smaller industrial units as well as for self-storage space. Over the last few years, there has been a large pipeline of light industrial unit development. This increase in supply has been taken up with tenant waiting lists in place at some sites. Some occupiers are leasing adjacent units. Industrial units provide occupiers with flexibility as they can purchase and rent out later. Popular with tradespersons requiring storage space for equipment. Industrial units are attracting some small businesses, including professional services, that could otherwise establish in town centres. One factor is the relatively low cost to purchase and provision of parking. It was noted that some businesses are attracted from the Wollongong CBD due to lower costs. Buying a large block and dividing into strata industrial units can be profitable from a development standpoint. Demand for self-storage is expected to grow in line with the population/gentrification.
Warehousing and Logistics	<ul style="list-style-type: none"> There is a lack of warehousing space Australia wide with Wollongong being no exception. There is demand for more warehouse developments in Wollongong. Increasing demand for large warehousing and logistics facilities is driven by e-commerce. Looking at the requirements for modern warehousing in Western Sydney, the building typology in demand is high clearances (including ability to fit specialised sprinklers), good roller doors, flat topography, and good access for large trucks B-double trucks. The number one factor for logistics is proximity to major transport corridors to maximise efficiency. The region has a lot of older style sheds but lacks decent warehousing space.
Buildings Requirements	<ul style="list-style-type: none"> The age of buildings can be a challenge, citing a recent enquiry from a medical company that fell through due to this. Older hardstand properties can be more difficult to attract interest as they often require redevelopment. Further, some older style sheds around Port Kembla are becoming unleaseable, even when rents fall reflecting changing user requirements. Some of these will be redeveloped. Businesses increasingly require office space within an industrial setting. Mezzanine space is in very high demand and requires 6.5m clearances. Access to onsite bathrooms is increasingly expected by occupants.

Planning Considerations

The following table summarises feedback heard in regard to planning considerations for industrial lands.

Table 5.2: Summary of stakeholder feedback on planning considerations

Themes	Perspectives
Local Environmental Plan (LEP)	<ul style="list-style-type: none"> Existing controls for height of buildings and Floor Space Ratios (FSR) in light industrial zones can be quite restrictive and it was suggested that a more nuanced, precinct based approach be considered. For example, some areas may warrant multi-story logistics/storage while others do not. This should be a key consideration particularly where the availability of employment land is limited. Further, the current settings limit the ability to also accommodate office space which is required. It was suggested that an FSR of at least 0.65:1 would assist, but acknowledged, that a general lack of sites with sufficient area is also an issue. In regard to land use permissibility, one stakeholder raised that there appears to be an opportunity to consider more concise land uses across the IN1, IN2 and IN3 zones. They provided examples of 'General Industries' being allowed within the IN1 zone but not IN2 and 'Waste and Resource Management Facilities' permitted in the IN2 zone but not elsewhere (although there are provisions within the Infrastructure SEPP). Another stakeholder felt that land uses in IN2 and IN3 were considered appropriate, although they did raise inconsistencies in IN2 giving the example of a 'truck depot' not being permitted

Themes	Perspectives
	<p>while 'freight transport facilities' are. They stated however that the IN1 zone is problematic, and Coniston has been constrained by this to date (although acknowledged this is changing with the Department of Planning and Environment Employment Zones Reform).</p> <ul style="list-style-type: none"> • Another agency raised that that the IN3 land with the Port Kembla SEPP area was not flexible enough in land use permissibility, with businesses wanting to go into this land but currently not permitted (an example was given of a large bulky goods retailer). • There are also a range of emerging and uses that are difficult to define under the standard instrument. Land uses continue to evolve with new technology and can be difficult to categorise. For example, consideration around 'dark supermarkets', are they a 'local distribution premises'?
Development Control Plan (DCP)	<ul style="list-style-type: none"> • It was commented that the Wollongong DCP Chapter B5 has too many controls. • Requirements for bike spaces and showers are costly for some industrial users. An example was provided of a recent industrial unit development at Unanderra that required these facilities despite the majority occupants being tradespersons who that travel by vehicle. • Suggested that the DCP parking chapter needs updating, noting the example of gyms that don't have any specific parking requirements. • Required setbacks to street frontages are quite large for some industrial uses. The 7.5m requirement for local roads is outdated as it doesn't allow for adequate street presentation and entry. Requirements for sites on collector and sub arterial roads are dependent on specific uses. Suggested that any changes should be aligned to the SEPP (Exempt and Complying Development Codes) 2008.
SEPP (Exempt and Complying Development Codes) 2008	<ul style="list-style-type: none"> • One agency that offers a town planning service stated that 9/10 times they advise clients undertaking industrial related development to utilise the Code SEPP pathway where possible. • In their view, it is simpler and quicker with less uncertainty, although it requires more upfront paperwork. • Further, this agency commented that Environmental Sustainable Design (ESD) and landscaping requirements are not as onerous under the Code SEPP. • There is confusion about 'first use of premises' under the Code SEPP. • Regarding mezzanines, the Code SEPP limits the size and percentage of floor space which is good to prevent a 'dummy' second floor. • Regarding complying development within the Port Kembla SEPP area, planning controls need to ensure an appropriate balance between over-regulation and having too little, which can cause coordination issues.
Industrial units	<ul style="list-style-type: none"> • Council needs to consider potential conflict between the short-term demand for industrial units and losing longer term strategic land for larger industrial users. • Over the next 15-20 years, as the connection to Western Sydney grows as well as Port expansion, we need to ensure land is retained to enable opportunities in manufacturing and clean energy. • Industrial unit developments generate a lot of traffic movement, with many occupiers needing to travel to and from the site multiple times per day. • Further, car parking in industrial areas can be problematic with some gyms mentioned as being particularly challenging from a property management perspective.
Flood Affection	<ul style="list-style-type: none"> • Substantial amount of industrial land is flood affected. • Flood affection increases risk for developers due to unknown outcomes. • Some landowners are not willing to pay for flood studies and would like more done from Council around updated studies and consequential requirements. • Bellambi Lane – flooding issues and the need to go through residential development to get to the industrial (particularly problem for trucks, with restrictions on B doubles or sites not having the room to store them).
Buffers with residential	<ul style="list-style-type: none"> • Importance of buffer zones and the transition between industrial and residential. In many ways, people "hear what they see" with sightlines and proper screening being important to reduce land use conflicts. • Consider the 'agent of change principle' in setting clear expectations to future residents that moving near an existing industrial user they should expect noise/emissions and residential developers should be required to deliver housing that appropriately manages this (for example, double glazing requirements). • Example of concerns around urban encroachment at Port Botany. • Agents stated that they are aware of few complaints relating to neighbouring residential properties.

Themes	Perspectives
Transport	<ul style="list-style-type: none"> Importance of B-double access and turning space for trucks is a growing issue. Many sites, even larger ones (2,000 – 4,000 sqm) can't accommodate them and they are not permitted on some roads. Suggestion that Council needs to think about some precincts having a central B-double drop off point that occupiers could access.
DA processing	<ul style="list-style-type: none"> DA processing times, particularly for change of use, can cause potential tenants to lose out as an owner has multiple offers and is not prepared to wait.
Future Industries and Site Requirements	<ul style="list-style-type: none"> Renewable energy – wind turbine manufacturing requires large sites and there are challenges transporting turbines within the existing road networks (for example, the University Avenue bridge over Mt Ousley Road is not tall enough). More thinking needs to be done around future power requirements and the impact on the grid. One stakeholder raised that the need to provide employment locally will become increasingly important as greater consideration is given to the reduction of carbon emissions and the increasing costs of transportation. This should be considered under the banner of Environmentally Sustainable Design (ESD) principles and Council needs to investigate the availability of land for employment expansion. The importance of strategic planning acknowledging the 'big picture' beyond detailed site controls with more of a focus on regional level economic development projects as well as providing an 'open for business' environment that promotes investment and derisks projects through increased certainty. Regarding waste resource recovery investment enquiries, these are land intensive and present challenges for planning. Council needs to think about where those uses might be best located in order to mitigate against complicated planning processes.
Competition between LGAs	<ul style="list-style-type: none"> One stakeholder stated that with respect undertaking planning work in other Council areas, Wollongong's controls can be more prescriptive. In their view, the bigger challenge is accepting that demand for jobs is very competitive and projects will generally gravitate to LGAs where the planning framework is most helpful and receptive.
Retain and Manage	<ul style="list-style-type: none"> One stakeholder raised the GCC Retain and Manage Policy asking for Council consider its draft guiding principles.

Business Survey

The business responses represented a range of operations across several industries and locations within Wollongong LGA. The following table provides an overview of key themes.

Table 5.3: Summary of key themes from Wollongong Industrial Lands Business Survey

Theme	Perspectives
Business expansion within the next 12 months	<ul style="list-style-type: none"> 22 businesses (55%) are planning to expand in the next 12 months, with half indicating they plan to do so at their current location, whereas the other half are considering other locations within the LGA as well as beyond.
Importance of public transport access for staff and customers	<ul style="list-style-type: none"> Almost 3 in 4 businesses felt improved public transport access would be at least somewhat important to their business. The importance is very specific to their business operation and whether they are customer facing which generally increases the need for public transport (for example, a brewery).
Parking and loading requirements	<ul style="list-style-type: none"> Businesses were asked to choose between three responses on their current need for parking, including whether they require less or more spaces for parking and/or loading. Responses were mixed and dependent on the type of business and location. 53% of businesses selected 'adequate – our current level of parking allocation is suitable' whilst 45% selected 'shortage – we require more spaces than currently allocated'. One business (3%) selected 'surplus - we don't require our current level of allocated parking'.
Ease of deliveries	<ul style="list-style-type: none"> The vast majority (95%) said that deliveries can easily be made to their site.
Retailing to the public on site	<ul style="list-style-type: none"> The majority of businesses (55%) selected 'Yes', while the remaining 45% selected 'No'.

Theme	Perspectives
	<ul style="list-style-type: none"> Those that selected 'Yes' represented a wide variety of business types including breweries, gyms, indoor recreation, boat building, hardware & building supplies, food production, manufacturing and a service station.
Office space requirements	<ul style="list-style-type: none"> Almost all businesses (95%) said that they dedicate at least a portion of their current site to office usage, including 30% who indicated they dedicate a large portion.
Precinct comfort and safety	<ul style="list-style-type: none"> Most businesses (80%) stated that their precinct was comfortable and/or safe.
Availability of goods and services in their precinct	<ul style="list-style-type: none"> Businesses were asked to think about the current mix of businesses within their industrial precinct and identify if there are any gaps in access to goods and/or services such as places for their employees to get lunch, proximity to relevant suppliers, storage space or waste disposal etc. Around two thirds of businesses indicated there were no gaps within their current precinct, while the remaining third said there were. Some of the gaps mentioned included insufficient food and beverage offerings; no main sewerage access (Yallah); lack of green space (Port Kembla) and lack of proximity to key suppliers (Montague Street).

Businesses were also provided the opportunity to share any additional feedback. This included:

- Support for increasing the availability of larger sites
- Fragmentation of larger industrial sites
- The need for a dedicated 24/7 industrial precinct separated from neighbouring land uses (noise complaints raised as a concern)
- The value of being located close to public transport for staff/customers and close to main roads for deliveries
- Difficulties with DA processing for alterations (timeframes, changing requirements)
- Local traffic issues and poor quality of road surfaces in some industrial areas
- Support for safer cycling access
- Parking across footpaths
- Support for maintaining a mix of businesses, including non-traditional industrial operators in a precinct.
- Concern about non-traditional operators in precincts noting noise, traffic generation and different operating hours.
- Flooding issues (Jardine Street, Fairy Meadow)
- Permitting a food/coffee van to service workers near MM beach
- Explore opportunities for live music in older industrial buildings

There were an additional 6 'in-scope' responses about industrial land received from stakeholders who themselves are not directly operating on industrial land within Wollongong LGA.

This included two commercial real agencies (who also participated in targeted discussions with Council); a landowner; a self-storage business looking to expand in Wollongong; a conservation group and an anonymous response sharing the idea of an industrial focused museum in the Illawarra.

The self-storage business made commentary on current FSR requirements, noting it was too restrictive, given traffic impact is low and there is no impact on bulk and scale. They suggested that where there are already height and setbacks in place, FSR should not be applicable.

A conservation group that undertakes bird watching on the Tallawarra lands (specifically the southern ash ponds) expressed that the site has become a significant area for bird activity and is worthy of protection. They noted the long-standing contamination issues present on the site and that some old

industrial sites should be reserved for biodiversity. They also shared their vision for a bird sanctuary in the area with an information and education centre.

5.2 Established and Emerging Trends

This section identifies several trends that are either already influencing, or likely to be an influence on, Wollongong's industrial market and lands going forward.

Increasing industrial land values

Industrial land prices have been rising rapidly, particularly since the onset of the COVID-19 pandemic, but also over the long term due to factors. These factors include reduced land availability to support a growing residential population and the rise of e-commerce which requires more space for warehousing and logistics activity.

According to the latest NSW Valuer General report,²⁴ industrial land values in NSW increased by 49.6% over the year to 1 July 2022. The report states that the "largest increases were in the Sydney South West region where values increased by 70.9% followed by Sydney Central West region at 61.1% due to continued limited supply and very strong demand from the logistics and e-commerce sectors."

The Valuer-General provides data on long term unimproved industrial land values using a sample of large and small lot industrial properties across Sydney, Newcastle, and Wollongong, available back to 1996²⁵.

- For large lot industrial properties, the 'benchmark average' has grown at a rate of around 11% per annum since 1996. Since July 2020, values have grown much more strongly, increasing by 23% over the year to July 2021 and a further 75% through to 1 July 2022.
- For small lot industrial properties, the 'benchmark average' has grown at a rate of around 9% per annum since 1996. Since July 2020, values increased by 35% over the year to July 2021 and again by a further 35% through to July 2022.

Detailed unimproved land value data over the last five years is available for each lot in Wollongong LGA.

As show below in Table 5.4, the total value of industrial land in Wollongong LGA has increased by 117% over the four years to July 2022 (\$1.2B to \$2.6B). Across each industrial zone, the largest increase in values occurred since the onset of the pandemic, with total values rising by approximately 72% since July 2020. The largest increases have occurred in the IN1 and IN3 zones. For contrast, over the same period, the total value of business and residential zones increased by 72% and 78%, respectively.

Table 5.4: Unimproved land values, industrial zones, 2018 - 2022, Wollongong LGA

	2018	2019	2020	2021	2022
IN1	\$ 48,364,200	\$ 56,730,200	\$ 55,050,200	\$ 68,365,700	\$ 104,738,800
IN2	\$ 624,892,870	\$ 735,160,040	\$ 765,097,660	\$ 901,223,600	\$ 1,214,209,540
IN3	\$ 526,214,520	\$ 675,973,630	\$ 692,096,070	\$ 771,052,222	\$ 1,284,789,684
TOTAL	\$ 1,199,471,590	\$ 1,467,863,870	\$ 1,512,243,930	\$ 1,740,641,522	\$ 2,603,738,024

Source: NSW Valuer-General, Bulk land value information²⁶; WCC internal calculations

Increased pressure to rezone industrial land for alternate uses

There is widespread recognition that industrial land is under pressure from encroachment by competing land uses. An adequate supply of Industrial Land is needed to maintain the operational effectiveness of cities and towns. When these lands are reduced or removed entirely, this impacts the sustainability of supply chains, leading to increased costs of goods and services, reduced access to urban services for residents and an overall reduction in the employment capacity of the city.

If there is acceptance that industrial land is 'up for grabs' in terms of being able to be rezoned to a residential or mixed-use zone, this can impact investment within industrial areas, and dilute the potential agglomeration effects of well consolidated precincts.

The GCC Review identified that in Sydney, property sector peak body representatives have noted underutilisation of existing industrial land as an issue. They view this as an opportunity to alleviate other land use pressures that Greater Sydney faces (primarily residential and mixed use). It was also noted that re-purposing vacant or underutilised industrial sites would maximise the land value ²⁷.

Where there is high demand for housing, the pressure to retain industrial land for urban services is high. Balancing the growing population's demand for housing, and the urban services they need to operate effectively, is a key land use challenge.

In NSW, the Department of Planning has developed eight draft guiding principles to support Greater Sydney Councils to retain and manage industrial lands ²⁸.

Table 5.5: Draft Guiding Principles, GCC Industrial Lands 'Retain and Manage' Policy Review

Draft Guiding Principle	
1 Security capacity of industrial and urban services land.	Ensure there is sufficient industrial land and allowable floor area, of the right types, to meet the State's needs now and in the future.
2 Supporting sustainability policy and aspirations	Industrial lands policy should align with government environmental objectives and community expectations including minimising commute and delivery times, enabling efficient freight and logistics networks, and minimising environmental and social impacts.
3 Optimising diverse supply chains supported by infrastructure	Ensure that Greater Sydney's freight network (including trade gateways and corridors) and businesses' access to intermediate goods and services are efficient and resilient.
4 Boosting economic activity to support current and emerging industries	Strategically important and well-located industrial lands should support the co-location of businesses. Protecting Greater Sydney's and NSW's adaptive capacity to integrate both current and emerging industries can help secure Australia's current and future economic prosperity.
5 Encouraging innovation	Ensure industrial sites are adaptable to the evolving needs of the users, including the need for greater diversity and intensity of use and changing industry characteristics.
6 Providing business certainty	Ensure consistency and clarity regarding the function of each industrial area, including their economic relationship with activity centres, to send clear market signals that foster business investment and productivity.
7 Servicing population needs	Households and businesses should have access to the goods and services they need and access to local employment opportunities.
8 Consideration of transition to alternative uses	Transition of industrial lands to other uses, but only where the other seven draft Guiding Principles would not be compromised. If an industrial area (or part) is identified for possible transition to an alternative use, prioritisation must first be considered for other employment uses.

Despite a strategic direction to preserve industrial land within the Illawarra Shoalhaven Regional Plan 2041, Wollongong City Council does not have a formal policy in place. As previously noted, over the last decade, Wollongong has seen a limited number of rezonings of industrial land to residential and/or mixed use with the most significant example being the former Corrimal Cokeworks in 2022. There have however also been rezonings to create industrial zoned land at Helensburgh, Kembla Grange and Yallah which has resulted in an overall net increase in zoned industrial land since 2010.

The evolving nature of activities on industrial land

The definition of industrial lands and the activities occurring on them continues to evolve. There is a tension between enabling more flexibility in land use to support a broader range of industries while still retaining land for traditional manufacturing and urban services that are critical to well-functioning cities. There has been some pressure to adopt a more flexible approach of considering potential uses on their merits; locational basis; design, and level of impact, rather than definition of use in all instances. The merits of a flexible approach need to be considered carefully together with the potential impact on the broader land use network (especially centres), and the additional infrastructure, servicing and public domain requirements that may result from a more mixed-use approach ²⁹.

Following is a description of a selection of emerging businesses seeing growth in industrial precincts as identified within the GCC Review:

Freight and logistics: E-commerce and services such as 'click and collect' from individual factory premises has resulted in a significant increase in freight and logistics uses within Industrial precincts. Further, there is increased demand for 'last mile' delivery facilities.

Leisure and Lifestyle uses: Industrial Lands often provide larger format sites and buildings at a more affordable cost than found in Centres. This has attracted indoor recreation uses, such as gyms, performing arts/dance schools and rock climbing centres and other non-traditional uses like childcare, education or training facilities, and places of public worship.

Artisan food and drink: Artisan food premises provide for the production and limited sale of a range of specialist food and drink products. These premises include breweries, coffee roasters, bakers, fine food producers and distilleries.

In Sydney, these premises tend to occur in precincts closer to commercial centres and alongside co-working manufacturing and creative industries emerging in these areas. Due to the component of eat in food and beverage service, these uses require Industrial precincts to cater for user amenity, parking and pedestrian usability and safety in a way which has not been common in the past.

Creative industries: These businesses include both creative production spaces (film making/animation etc) and the manufacturing spaces to make the props, goods and equipment used for cultural and artistic events and theatre, film, and television productions. These industries have historically set up in more affordable areas, due to their inability to meet market rents.

The growth of these industries, and particularly their agglomeration, has resulted in industrial precincts becoming more diverse, incorporating small scale 'maker spaces' and public facing 'industrial door experience' offers. Like artisan food premises, the activities these uses incorporated have an impact on required access, parking, and pedestrian safety considerations.

Knowledge Economy: In Sydney, Councils and property sector representatives have identified an increase in applications for data storage and data centres, and the emergence of cleaner, more

environmentally friendly businesses such as 3D printing services, electronics, and other computer-based services.

The knowledge-intensive economy and other trends such 'localisation', reshoring of manufacturing, sustainable sourcing and product production were identified as key factors in transforming Greater Sydney's industrial lands.

Land use conflicts

The encroachment of residential and other sensitive uses in and around industrial lands has given rise to restrictions on supply chains due to curfews, truck limits, restricted roads, additional costly mitigation, and management measures³⁰.

Land-use conflict between industrial lands and adjacent residential areas is common. Complaints in relation to these conflicts can impact on hours of operation, vehicle movements and capacity.

These pressures are likely to grow in Wollongong particularly as the need to house a growing resident population around major industrial areas such as Port Kembla, Unanderra, and Kembla Grange.

Further, some precincts such as Bellambi/Corrimal, Dapto and Fairy Meadow contain considerable amounts of existing housing on industrial zoned land. This introduces challenges around meeting the objectives of the zoning in the precinct and reduces the feasible footprint for industrial related development.

In addition, the evolving nature of activities occurring in Industrial precincts, such as those with high visitation by the public, have the potential to further exacerbate conflicts within precincts themselves.

Changing nature of industrial building requirements

A need for new industrial typologies is emerging in response to limited land availability, increasing demand and new technologies. In response, the NSW Government amended the Codes SEPP in February 2022, making several changes that provided for new development types and focused on simplifying the requirements for complying development within business and industrial zones.

Specific to industrial zones, the following key changes occurred:

- Increase allowable floor area from 20,000 m² to 50,000 m², subject to existing LEP floor space ratio (FSR) controls or continue to apply an FSR of 1:1 in the code where no FSR control exists.
- Increase allowable building height in zones IN1, IN2 and IN3 from 15m to 18m where the existing LEP height is less than 18m.
- Increase ancillary land uses, such as offices and industrial retail outlets, from 20% to 30% of gross floor area.

Prior to the amendment, the NSW Government released for public consultation an Explanation of Intended Effect (EIE) in May 2021, which had been informed by several publicly released research reports³¹.

The EIE recognised the importance of industrial, warehousing and logistics sector as a growth sector and that the (previous) Code SEPP had not kept pace with changing requirements of industry. The EIE and supporting research^{32 33} highlighted the following industrial trends:

- In high value land markets like metropolitan Sydney, new models of industrial development are emerging that are **denser** than previous decades. This is all about **maximising site efficiency** due to **limited land availability**.
- This is consistent with global trends, already in place in Asia, to develop **innovative multi-storey, mixed used industrial facilities**, that combine different functions including light industrial, modern manufacturing & warehousing with increased ancillary office space, high-quality onsite food and beverage, amenities, and advanced sustainability features.
- **Most industrial building heights are less than 15 metres**, with 13.7 metres considered an industry standard, accounting for approximately 90% of warehouse development. Developers will always strive to keep to this height to minimise construction costs.
- However, **requirements are changing due to new technology** such as K-26 which is a new high-capacity sprinkler system used in warehouses and industrial buildings which requires more cubic space and thus triggering an increase in the height above the standard 13.7 metres.
- Once solar, plant and equipment are calculated, the **common building height** will be in the **15-17 metre range**. For future proofing, the Code SEPP controls on height, have been updated to allow for up to 18 metres on light industrial land
- Industrial operations and by consequence developments are evolving in response to new automation technologies. The use of robotics in warehouse facilities has driven a requirement for **higher bay warehouses up to 45 metres**.
- As part of a developer's overall pipeline these represent a small number, most new warehouses will not exceed a height of 18m. Typically, these buildings are highly customised to end-user specifications.
- The COVID-19 pandemic has brought about a **renewed focus on supply chains** and **"just in case" inventories**. To respond to this need, **co-warehousing** is emerging, which offers flexible options to tenants to meet fluctuations in demand and shortages of space in key markets. This will most likely result in developers building more **'spec' warehouses**.
- Consent to **operate 24-hours** has increasingly become an expectation for potential incoming tenants, and if not available can be a deal breaker.

Based on the above trends, the EIE proposed that the Code SEPP be amended to permit a building height up to 45m (where no LEP height limit exists), subject to a new separation distance of up to 150m to a residential zone boundary (noting there will be no increase where the existing LEP height limit is already 18m to 45m) and a maximum floor area for any part of the building over 18m being up to 40% of the total floor area of the building.

Following consultation, the amended the Code SEPP did not proceed with this change, noting concern about the amenity impact of 45m height limits where no LEP height limit exists and the need for further investigation.

Inadequate infrastructure and servicing

Adequate provision of infrastructure and servicing is necessary to attract investment in Industrial zoned land. Without these it is challenging for industrial land to fulfil its function and purpose.

The GCC Review found barriers to investment and development can include³⁴:

- poor transport access to precincts,
- local congestion,
- inadequate regional routes,
- connections to freight corridors to and from industrial areas and trade gateways,

- a lack of Government-funded infrastructure to support freight,
- timely provision of state infrastructure and
- provision of infrastructure generally not keeping pace with the rate of development.

The extent to which some of these transport barriers apply in Wollongong LGA is currently unknown and may be understood further following the completion of Council's Integrated Transport Strategy (in preparation). There is widespread advocacy in Wollongong for improved freight rail capacity including the proposed SWIRL project linking Western Sydney to Port Kembla.

As noted in Section 3.2, in Wollongong, the lack of servicing of key employment lands has been identified by a number of stakeholder groups (including Council) as a barrier and unlocking remaining unserviced land is identified as a 'game changing' project in Council's Economic Development Strategy 2019.

Lack of amenity within industrial areas

Amenity is a broad term. When considering the built environment, amenity relates to a user's experience of comfort, safety, and convenience. This is impacted by a range of factors including the environmental performance of the buildings and open spaces that are part of a user's activity (ie for work, shopping, recreation etc), and the ease at which a user can access those places.

Industrial areas have traditionally been separated from other areas due to the potential negative amenity impacts of the activities they contain. Industrial activities also tend to require large areas of hardstand and large open warehouse buildings which increase urban heat and are challenging to make comfortable for works and other users of the precinct. Given this, providing amenity for users within these precincts is a challenge.

A lack of amenity and transport access for tenants and their employees has been identified as a barrier for some precincts to attract high-quality businesses. The growth of demand for uses which bring higher volumes of public visitation to industrial precincts, like gyms and breweries, may also be impeded if these precincts cannot offer appropriate levels of amenity.

Contested planning policies and controls

Planning controls set a framework for development on industrial lands. These controls need to be evaluated periodically to ensure they are facilitating appropriate outcomes. Given the importance of retaining industrial zoned land for both strategic and local activities, planning controls can be used to impose certain restrictions which prioritise development types which meet the zone objectives over others.

The GCC Review identified there has been advocacy from stakeholders and policy change within the State Government to update planning controls to facilitate more generous building heights and floor area, a broader range of permitted land uses, extended operating hours, clear environmental impact guidelines, and appropriately scaled controls adjoining residential zones ³⁵.

Sustainability and Decarbonisation

Mitigation and adaptation policies and regulations to address climate change will prompt a change in the way Industrial precincts are planned, constructed and operated. There are significant challenges and opportunities in this area.

Many industrial precincts and the buildings within them have very poor environmental performance and contribute to high carbon emissions. These precincts are also most likely to host the manufacture

of product that will support the transition to green energy. As capacity within the green energy sector grows, industrial precincts must consider how their own operations can transition to make use of clean energy and minimise carbon emissions through their operations.

The introduction of the Sustainable Buildings SEPP (in effect in October 2023) will set minimum standards for non-residential development. Development on land zoned IN3, W4 and within the Port Kembla SEPP area, or development that is permitted under the Codes SEPP, will be exempt from the new provisions. All other non-residential development will be required to quantify the embodied emissions attributable to the development, and the consent authority will need to consider whether the development has been designed to enable a range of measures including waste minimisation, energy efficiency, passive design, renewable energy generation, energy monitoring and water consumption minimisation. There is an opportunity to consider how development control plans can support the objectives of these new controls and improve outcomes for development which is exempt.

At the precinct scale, there are opportunities to continue reducing the urban heat island effect in Industrial precincts through urban greening on public and private lands, and water sustainable urban design. Where environmental constraints such as flooding or ecological conservation on industrial zoned land preclude development, opportunities to offset emissions through blue carbon or bio banking could be explored.



6. Precinct Analysis and Findings

This section provides further detail on each of Wollongong's 42 industrial lands precincts as well as the 6 precincts of primary production land.

The majority of information comes from desktop analysis drawing on known constraints informed by previous studies at various points in time. As such, detailed planning studies for each precinct have not yet been undertaken and the purpose is to provide a suggested direction for each precinct. Most recommend for Council to consider investigating a direction will require detailed study and assessment in relation to relevant policy (e.g. flooding, contamination, urban design, traffic etc).

The following principles have been considered throughout the precinct analysis:

1. Where possible, large industrial lots should be retained to preserve opportunities for a range of businesses, particularly heavy industry that require larger sites.
2. Where appropriate, increased flexibility in planning controls on E4 General Industrial land will be considered to allow for intensification and accommodate changing industry requirements.
3. Whether a precinct supports agglomeration of industrial uses.
4. The presence of any split zoning and whether there are opportunities to rationalise a lot or consider the need to amend lot boundaries due to constraints (e.g. riparian corridors).
5. The presence of a direct residential interface and likelihood of land use conflicts.

As a general principle, precincts that are well located to main roads and buffered from surrounding residential have been identified as having the capacity for more intensive industrial development to support future operational requirements in manufacturing, freight, and logistics. These precincts have been flagged further investigation of planning control changes.

Other precincts are limited in their capacity to either expand or intensify and in some limited instances transitioning industrial land to an alternate usage has been suggested.

Due to the benefits of agglomeration, Council wishes to see industrial precincts clustering a number of operators together and favours this outcome over isolated lots. Further, lots with split zoning where one land use is already dominant have been considered for transition to the dominant zone.

6.1 Ward 1

Characteristics

Ward 1 stretches from Helensburgh and Otford in the north to Fairy Meadow and the boundary with North Wollongong in the south. It is the largest ward in the LGA covering an area of 484 km².

Ward 1 contains some of the oldest industrial land in Wollongong, originally focused on the strong presence of Coal Mining and its associated industries in the area. Over time, some of these lands have transitioned to other uses, mostly residential. The most significant recent rezoning occurred in 2022, being the former Corrimal Cokeworks, resulting in a loss of approximately 8 Ha of the only heavy industrial zoned land in Ward 1. At Coalcliff, land associated with the former Colliery and Cokeworks remains and is zoned RU1 Primary Production, however, it is non-operational.

There are 455 lots in Ward 1 representing a total of 98 Ha of industrial land. The vast majority (86%) is zoned E4 General Industrial with the remaining 14% zoned E3 Productivity Support and is focused along the Princes Highway transport corridor. The key role of these industrial lands is to provide local employment as well as urban services to the surrounding residential population. In the case of Helensburgh, it also services residents in the southern part of Sutherland Shire.

Ward 1 has the lowest amount of industrial land in the LGA (4% of the total), which is over 20 times less than that of Ward 3.

Site coverage throughout Ward 1 ranges from 4% (Precinct 2 – Helensburgh Walker Street Light Industrial) up to 49% (Precinct 14 – Tarrawanna Road Enterprise Corridor). The average level of site coverage is 31%, indicating there is potentially more capacity for intensification of industrial development within the existing zoned land (although this does not indicate feasible development). The recent industrial development at Bellambi (Precinct 10 – Pioneer Drive Light Industrial) was not captured in the footprint data due to timing.

In terms of average lot sizes, these vary from 0.07 Ha (Precinct 4 – Bulli Light Industrial South) to 2.6 Ha (Precinct 5 – Franklin Avenue Light Industrial). By zoning, the range is much smaller when considering only the E3 land (0.09 Ha to 0.75 Ha).

There is occupied housing present throughout industrial lands at Bellambi, Bulli, Corrimal, and Fairy Meadow, which limits development outcomes and lowers the actual amount of zoned industrial land used for industrial uses.

Excluding Helensburgh, the majority of Ward 1's industrial land falls within the narrow coastal plain between Bulli and Fairy Meadow which is intersected by a number of riparian corridors running from the escarpment to the sea. As such, flood constraints are present on at least one lot within the majority (81%) of precincts.

Although Ward 1 has a number of listed heritage items, few fall on industrial lands, with only Precinct 3 (Bulli Light Industrial) and Precinct 6 (Woonona Enterprise Corridor) containing an item each.

There are pockets of new development in the Ward, particularly around the Bellambi Lane area, which recently saw the completion of a large 87 lot industrial unit subdivision.

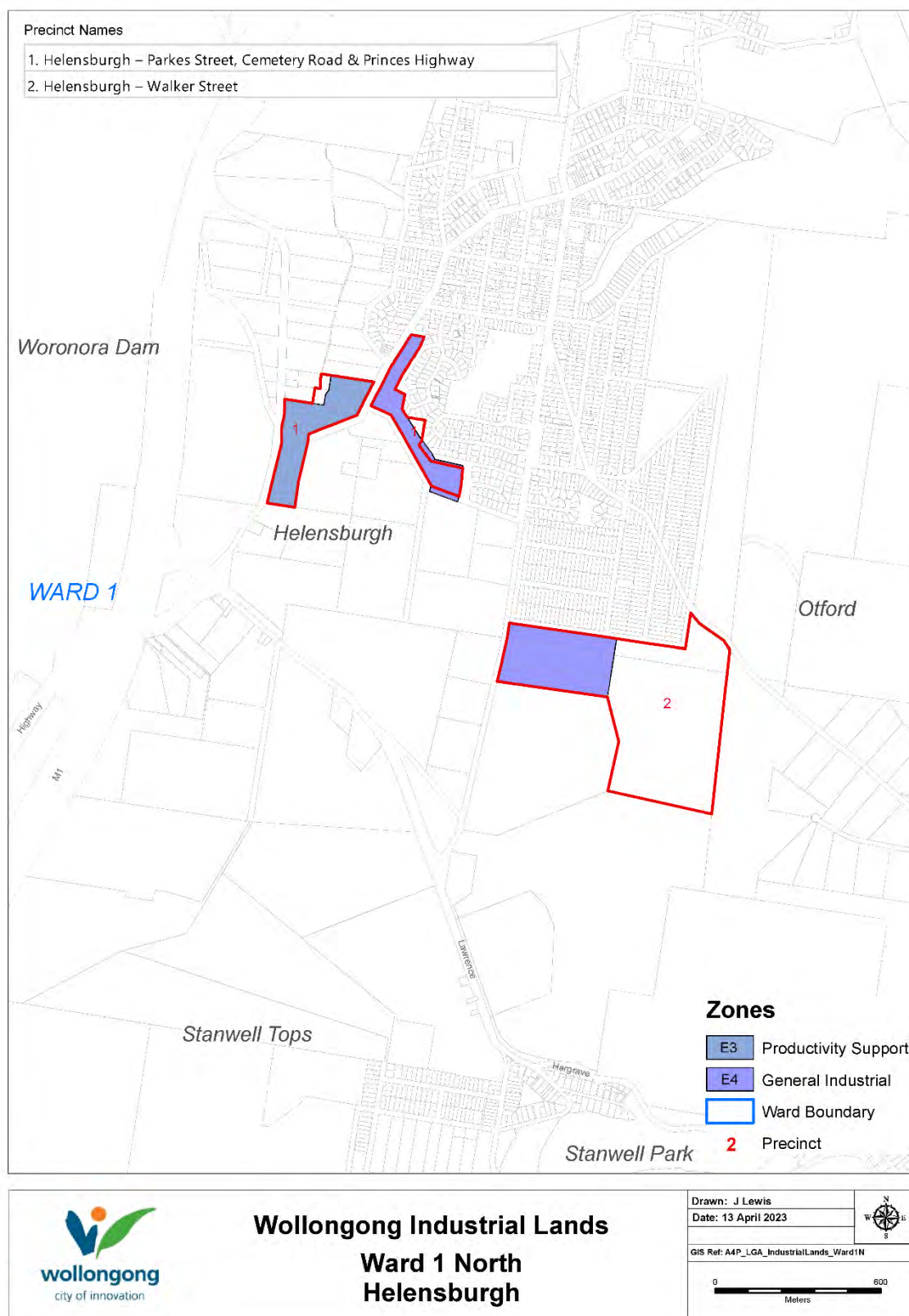


Figure 6.1: Wollongong's industrial lands, Ward 1 North

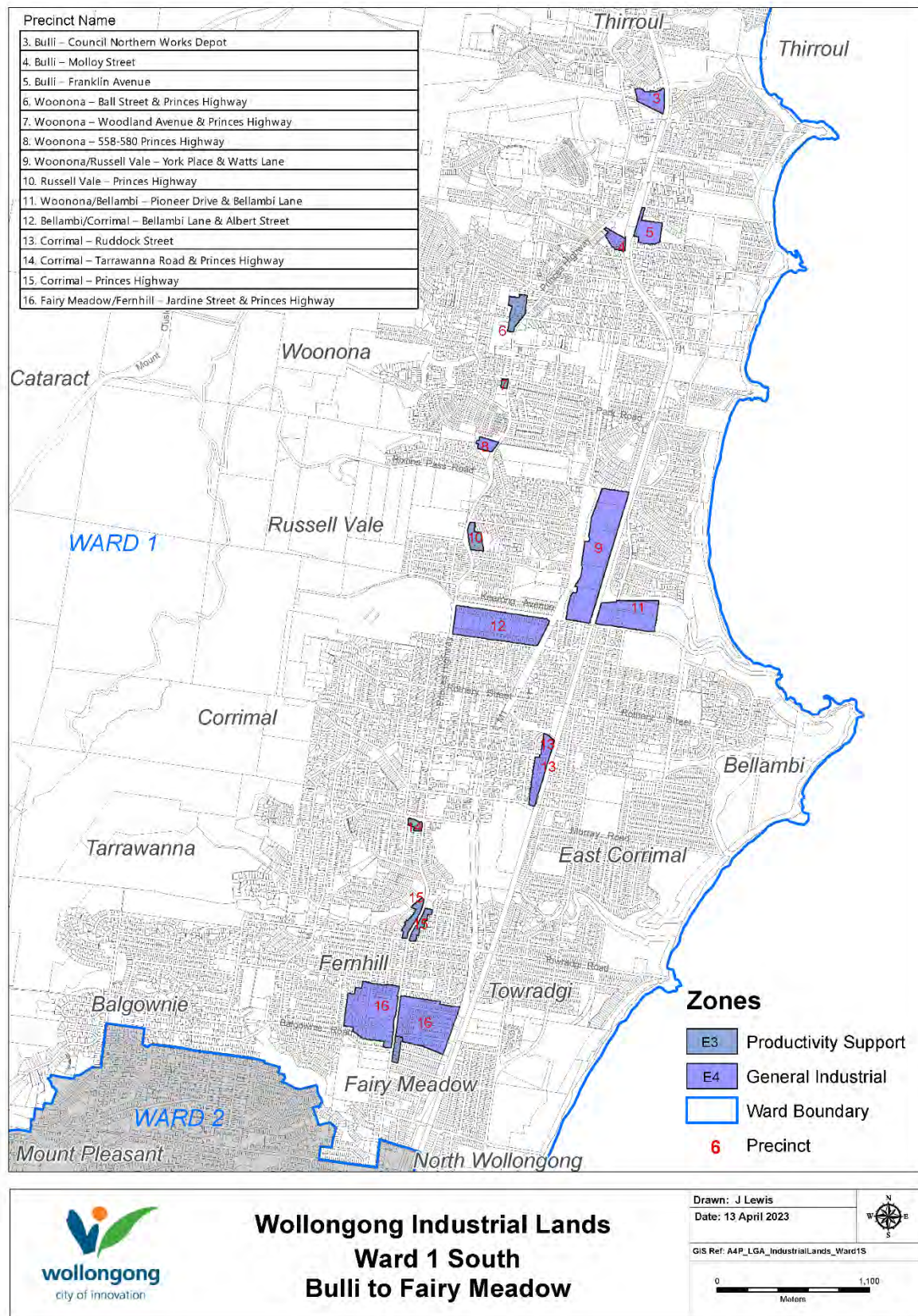


Figure 6.2: Wollongong's industrial lands, Ward 1 South

Planning considerations

There are several planning considerations relevant to improving the functioning of industrial lands in Ward 1.

Precinct 1: Helensburgh – Parkes Street, Cemetery Road & Princes Highway

This precinct consists of two distinct areas located on Parkes Street, Helensburgh.

1a. E3 Productivity Support

- Along the western part of Parkes Street and the Princes Highway, there are 8 lots of E3 Productivity Support land with a total area of 6.01 Ha.
- Lot size ranges from 0.08 Ha to 1.09 Ha with an average of 0.75 Ha.
- The precinct is approximately 1.5 km from the M1 Princes Motorway.
- There are pockets of the precinct that are undeveloped and heavily vegetated. The southern portion of this land at the junction of Parkes Street and the Princes Highway has seen recent light industrial unit development.
- Biodiversity Strategy Conservation constraints exist at high and very high class across the precinct.
- The planning controls were reviewed as part of the Review of land zoned 7(d) Hacking River – Environmental Protection at Helensburgh, Otford, and Stanwell Tops in 2011 and the current planning controls introduced in 2015.
- Existing controls include a uniform 11 metre height limit, 0.5:1 FSR and 0.2 Ha minimum lot size.

No changes to development standards or land uses are proposed.

1b. E4 General Industrial

- Along the eastern part of Parkes Street and Cemetery Road, there are 21 lots of E4 General Industrial land with a total area of 4.01 Ha.
- Lot size ranges from 0.05 Ha to 0.61 Ha with an average of 0.19 Ha.
- This zone has two distinct characters – older style smaller lots along Parkes Street and the recently developed industrial units along Cemetery Road containing a mix of businesses, known as the 'Helensburgh Business Park'.
- There is adjacent residential further along Parkes Street to the north whereas the Helensburgh Business Park is well-defined and buffered by vegetation from the surrounding residential.
- Existing controls include a uniform 11 metre height limit, 0.5:1 FSR and 999 sqm minimum lot size.
- The planning controls were reviewed as part of the Review of land zoned 7(d) Hacking River – Environmental Protection at Helensburgh, Otford, and Stanwell Tops in 2011 and the current planning controls introduced in 2015.

No changes to development standards or land uses are proposed.

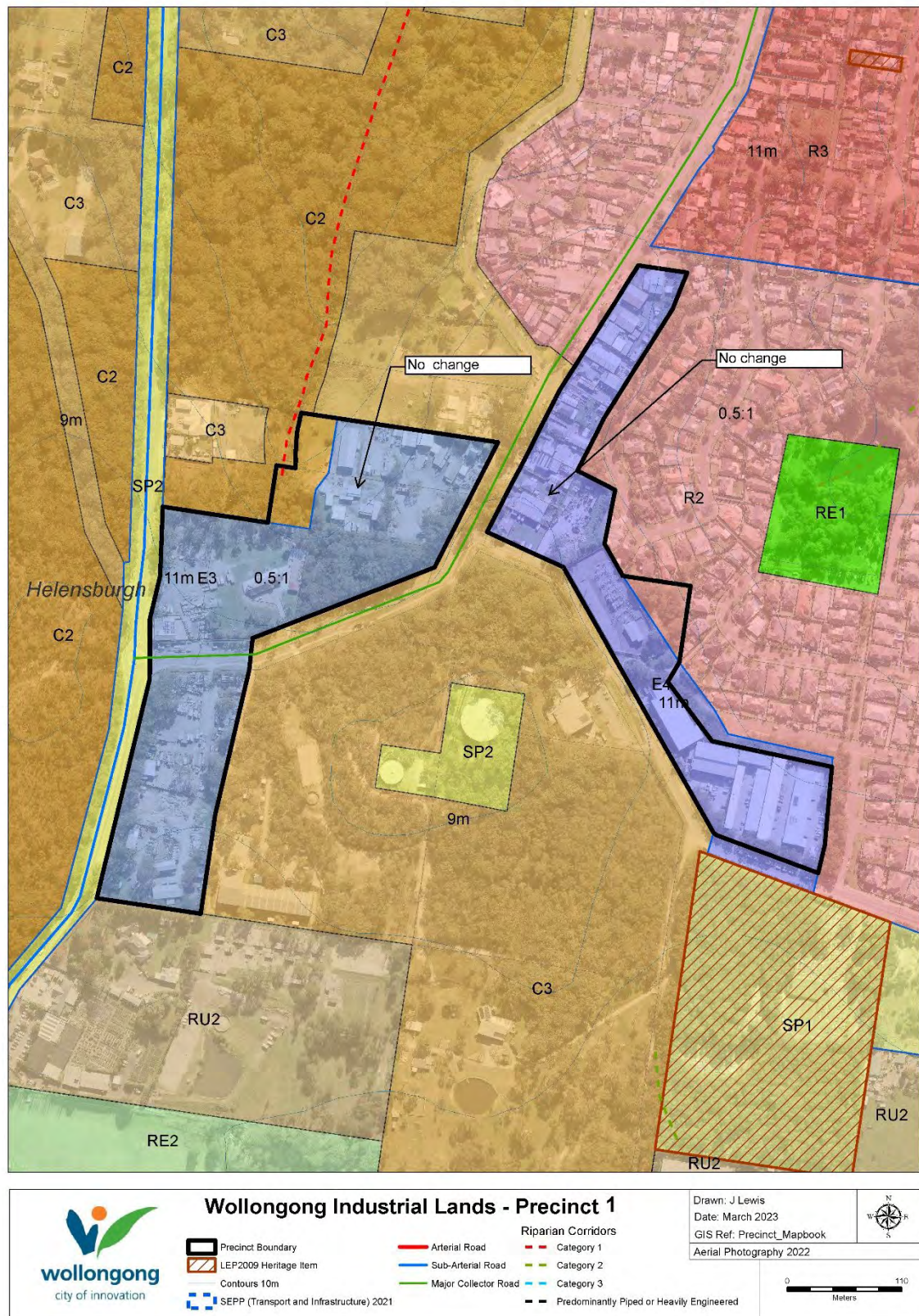


Figure 6.3: Map of Precinct 1: Helensburgh – Parkes Street, Cemetery Road & Princes Highway

Precinct 2: Helensburgh – Walker Street

- This precinct is the result of a rezoning in 2015 arising from the Review of 7(d) Hacking River Environmental Protection zone that created four lots of E4 General Industrial land with an area of 8.45 Ha.
- Lot size ranges from 0.08 Ha to 3.33 Ha with an average of 2.11 Ha.
- A large portion of the lots are steeply sloped and vegetated.
- Part of the precinct is used for a resource recovery and landscaping material supply facility. The flatter cleared land appears underutilised and occupied with mostly temporary structures such as shipping containers and trailer parking.
- The precinct has access from Walker Street approximately 1.5 km from the town centre and is isolated from surrounding residential.
- The precinct lacks servicing with no sewerage connection present. This constrains the development for certain land uses that are water intensive and/or require amenities for employees.
- The precinct has no mapped Floor Space Ratio which is inconsistent with E4 General Industrial land across the LGA.
- The precinct has a 9 metre height limit which is lower than the common limit of 11 metres for E4 zoned land.
- The precinct has a minimum subdivision lot size of 39.99 Ha which precludes subdivision and retains land for larger industrial uses.

No changes to development standards are proposed.

More intensive uses are not considered appropriate while supporting infrastructure is not available.

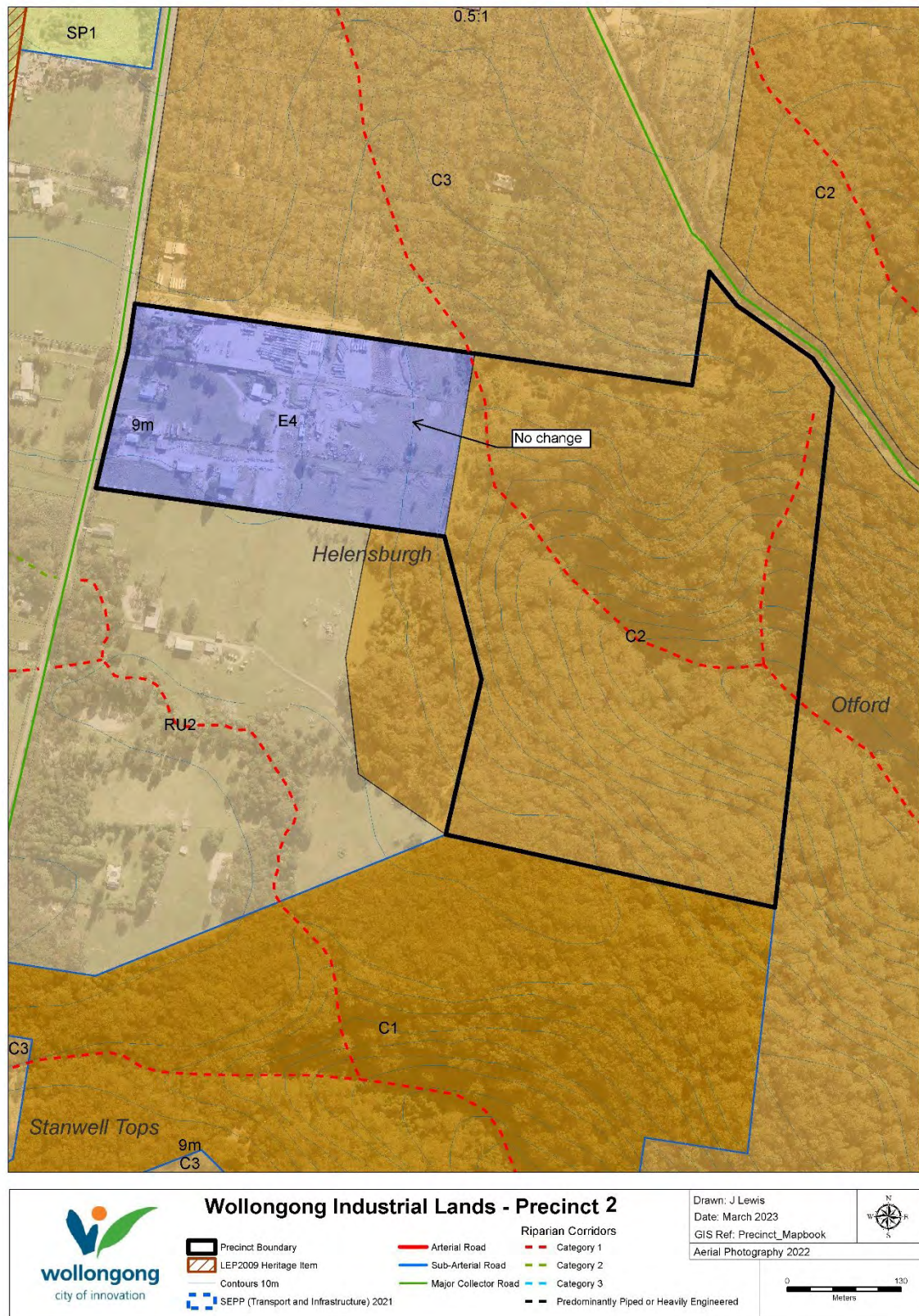


Figure 6.4: Map of Precinct 2: Helensburgh – Walker Street

Precinct 3: Bulli – Council Northern Works Depot

- This precinct consists of five lots with a total area of 2.49 Ha.
- The majority of the lots are zoned E4, with the exception of Lot 1 DP 711752 and Lot 53 DP 1201697, which include a portion of RU1 land, over the driveway into the precinct.
- Lot sizes range from 0.1 Ha to 1.34 Ha with an average of 0.5 Ha.
- Council's Northern Works Depot takes up a significant portion of the precinct. The remaining area includes a training facility and strata industrial units (including a gym, hire business and others).
- The precinct is located 85m off the Princes Highway. Movement off and onto the Princes Highway is challenging due to the alignment of the entry driveway and the intersection just to the north.
- The precinct's northern portion is intersected by a riparian corridor and flooding is a noted constraint (Hewitts Creek Flood Precinct).
- The heritage listed Bulli Colliery Rail Bridge and Alignment now used as a pedestrian pathway runs along the southern boundary of the precinct.
- The precinct is surrounded by R2 low density residential zoned land.
- Existing controls include a uniform nine metre height limit, 0.5:1 FSR and minimum lot size of 999 sqm.

Due to its relative isolation and scale as well as the surrounding residential character, opportunities for industrial intensification within the precinct are considered limited and there are no changes to development standards proposed.

However, Council could investigate:

- Rezoning the small portion of RU1 Primary Production on Lot 1 DP 711752 and Lot 53 DP 1201697 to E4 General Industrial (currently functioning as an access handle into the precinct).
- Rezoning the adjacent road reserve from RU1 Primary Production to R2 Low Density Residential (currently functioning as a pedestrian pathway).

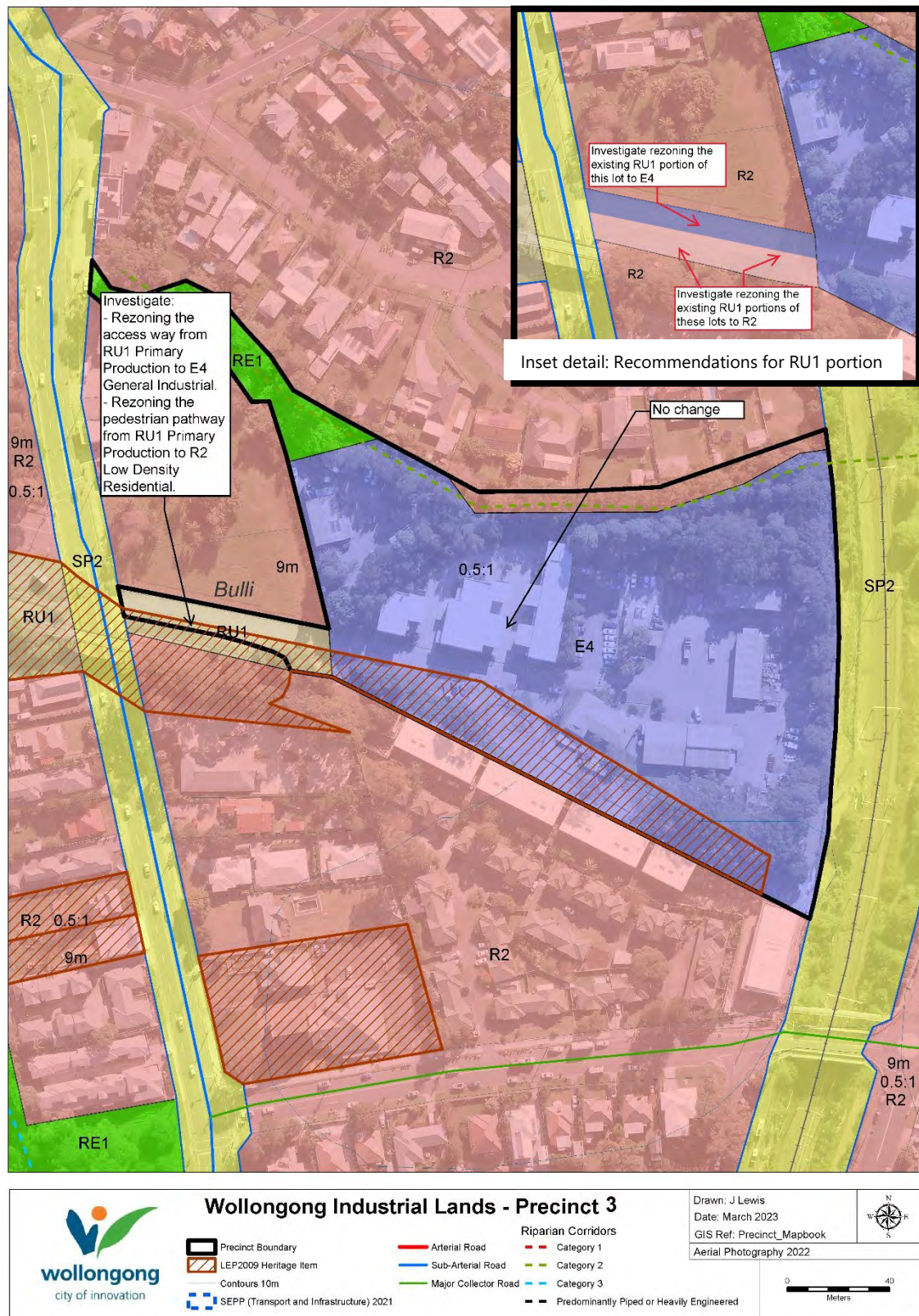


Figure 6.5: Map of Precinct 3: Bulli – Council Northern Works Depot

Precinct 4: Bulli – Molloy Street

- This precinct consists of 13 lots of E4 General Industrial land with a total area of 0.95 Ha.
- Lot sizes range from 0.03 Ha to 0.16 Ha with an average of 0.07 Ha.
- This precinct is the remnant of a larger industrial area that was in part rezoned to E1 Local Centre and redeveloped as a large supermarket and service station in 2016.
- The precinct is 50m from the Princes Highway and 60m from the intersection of the Princes Highway and Memorial Drive.
- 7 of the 13 lots are occupied by industrial related businesses, the remaining lots are occupied by housing. There are four (4) R2 Low Density Residential zoned lots at the southern boundary of the precinct.
- The former timber yard which anchors the northern corner of the precinct is now used as a co-working space with an indoor recreation facility and kiosk.
- There has been the recent demolition of a dwelling and development of an industrial unit under complying development on Rixon Avenue.
- Flooding is a noted constraint within most of the precinct (Collins Creek Flood Precinct).
- Existing controls include a uniform 11 metre height limit, 0.5:1 FSR and minimum lot size of 999 sqm.

Due to its relative isolation and scale as well as the surrounding residential character, opportunities for industrial intensification within the precinct are considered limited and there are no changes to development standards or land uses proposed.

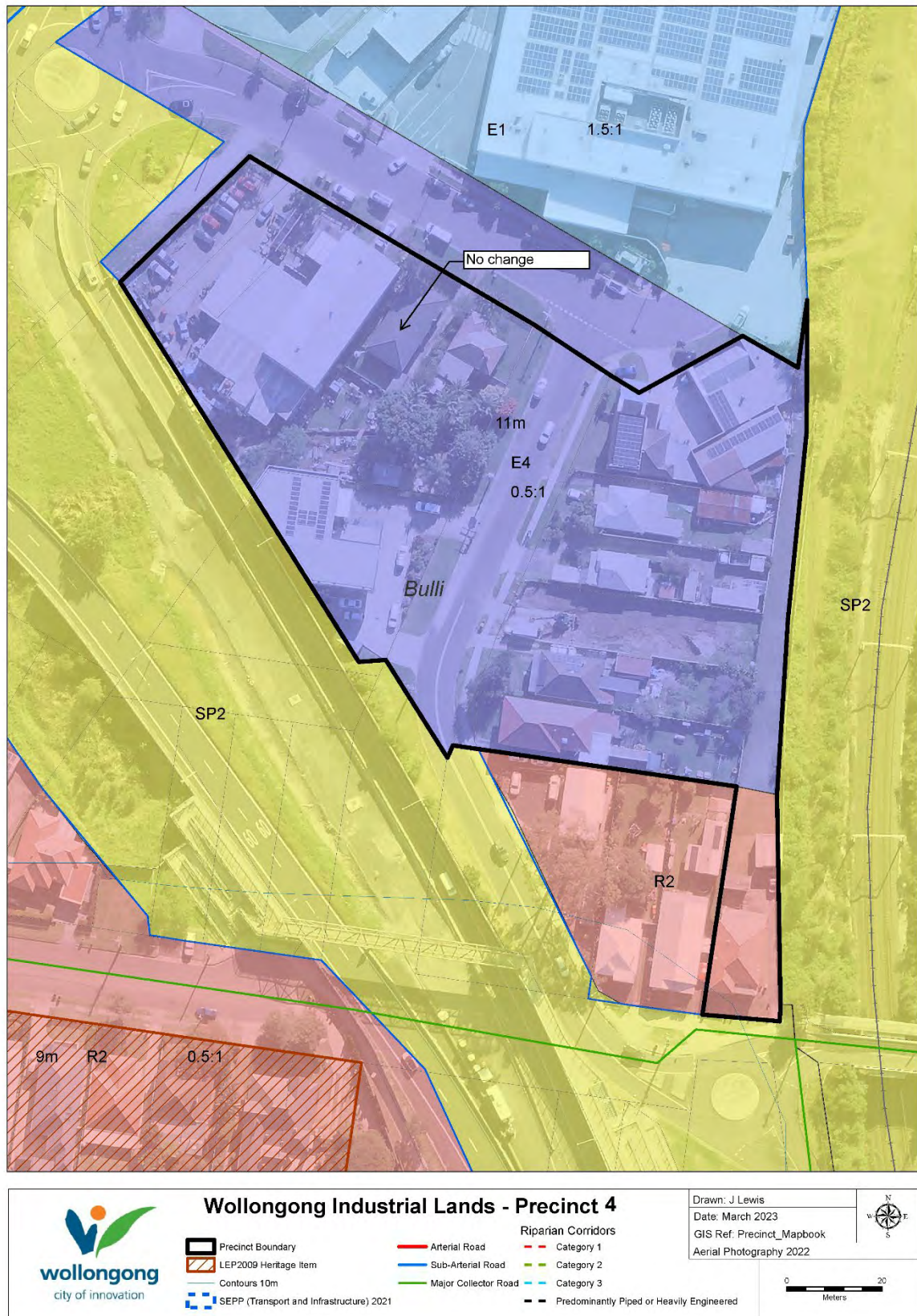


Figure 6.6: Map of Precinct 4: Bulli – Molloy Street

Precinct 5: Bulli – Franklin Avenue

- This single large lot is the site of a manufacturing business.
- The lot is zoned E4 General Industrial with a total area of 2.6 Ha.
- The site is surrounded by residential zoned land, although it is well-defined and buffered by vegetation and the South Coast Rail Line to the west.
- The precinct is 220m from Bulli Railway Station, and 1km from the entry to Memorial Drive.
- A riparian corridor intersects the north-eastern portion of the precinct and flooding is a noted constraint, limiting development outcomes on this portion of the site (Collins Creek Flood Precinct).
- Existing controls include a uniform 11 metre height limit, 0.5:1 FSR and minimum lot size of 999 sqm.

Due to its relative isolation and scale as well as the surrounding residential character, opportunities for industrial intensification within the precinct are considered limited and there are no changes to development standards identified.

However, Council could investigate the rezoning of the north-eastern portion of the site (in line with the riparian corridor) to C3 Environmental Management to protect and manage the values of the riparian corridor.

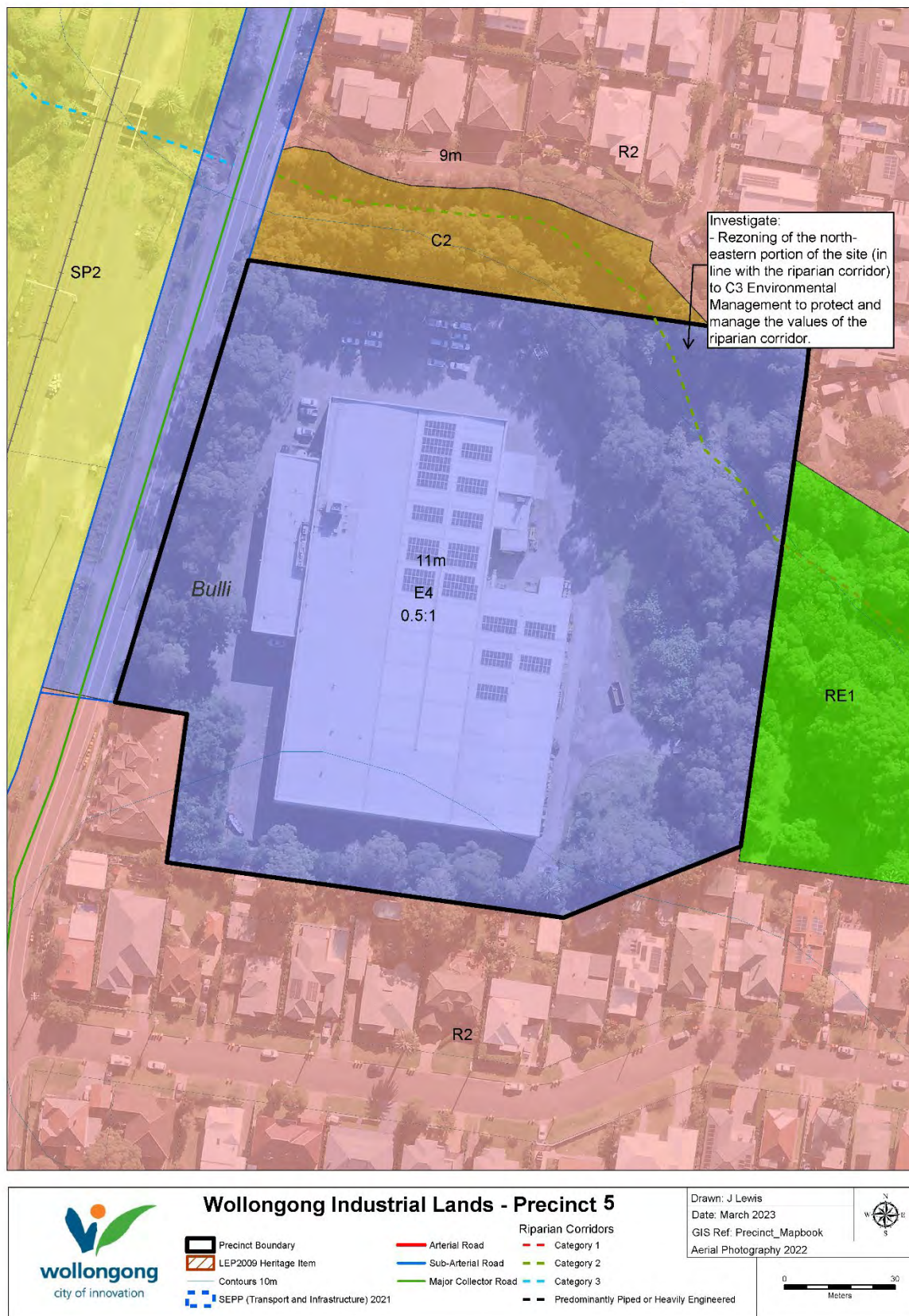


Figure 6.7: Map of Precinct 5: Bulli – Franklin Avenue

Precinct 6: Woonona – Ball Street & Princes Highway

- This precinct consists of 13 lots of E3 Productivity Support with a total area of 2.06 Ha.
- Lot sizes range from 0.05 Ha to 0.42 Ha with an average of 0.16 Ha.
- The precinct is adjacent to the Woonona Town Centre which is zoned E1 Local Centre.
- Access is via the Princes Highway and Ball St.
- The precinct is largely occupied by strata villas and townhouses and has a direct interface with residential zoning to the west.
- A Council owned car park occupies a large lot in the northern portion of the precinct.
- The precinct contains two listed heritage items. The large Woonona Industrial Co-operative Building – which dominates the Ball Street streetscape and the Woonona Post Office which is occupied by a business.
- Pope's Road splits the precinct isolating three lots (including two split lots with portions of residential) on the southern side, surrounded by residential zoning.
- A riparian corridor intersects the northern edge of the precinct and flooding is a noted constraint across the whole precinct (Collins Creek Flood Precinct).
- Existing controls include a uniform 11 metre height limit, 0.5:1 FSR and minimum subdivision lot size of 999 sqm.

At present, there has been limited industrial development outcomes within the precinct and its future capacity to deliver on the objectives of the E3 zoning are limited due to the encroachment of strata residential development and flooding constraints.

Council could investigate:

- Rezoning part of the precinct to a residential zone to reflect existing residential development.
- Conducting flood impact assessments to establish the appropriate zoning for sites with a significant flood affectation.

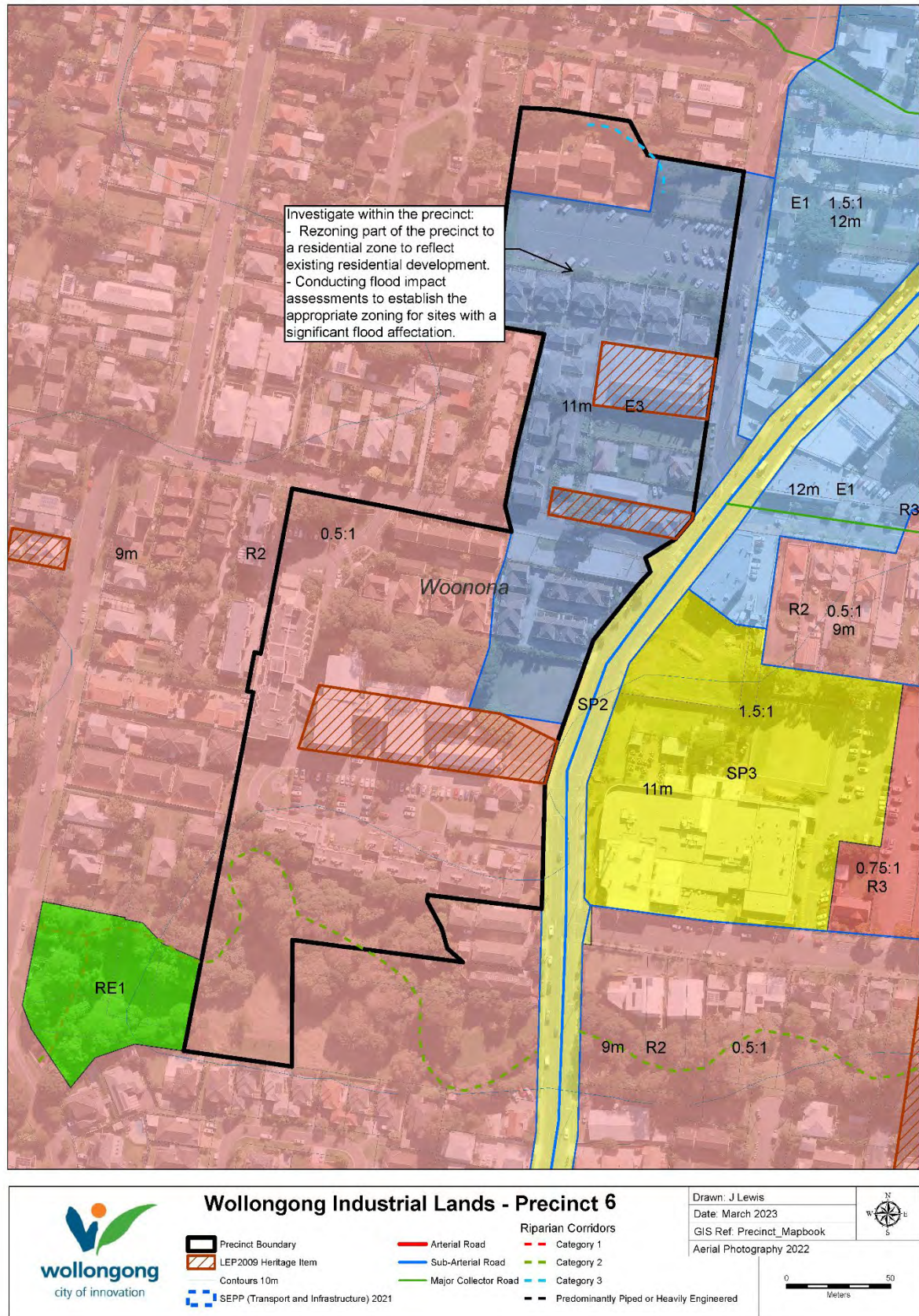


Figure 6.8: Map of Precinct 6: Woonona – Ball Street & Princes Highway

Precinct 7: Woonona – Woodland Avenue & Princes Highway

- This precinct consists of two lots which have an area of 0.14 Ha and 0.16 Ha.
- Existing usage includes a small number of businesses in an older style strata complex and mechanical services on the corner frontage.
- Flooding is a noted constraint on a very small portion of the southern lot within the precinct (Collins Creek Flood Precinct).
- Existing controls include a uniform nine metre height limit, 0.5:1 FSR and MLS of 999 sqm. While the height limit is lower than the typical 11 metres for this zone, it aligns with the surrounding residential zone.
- The size of the land and the surrounding residential land limits opportunities for further industrial expansion and/or intensification in this precinct.

No changes to development standards or land uses have been proposed.

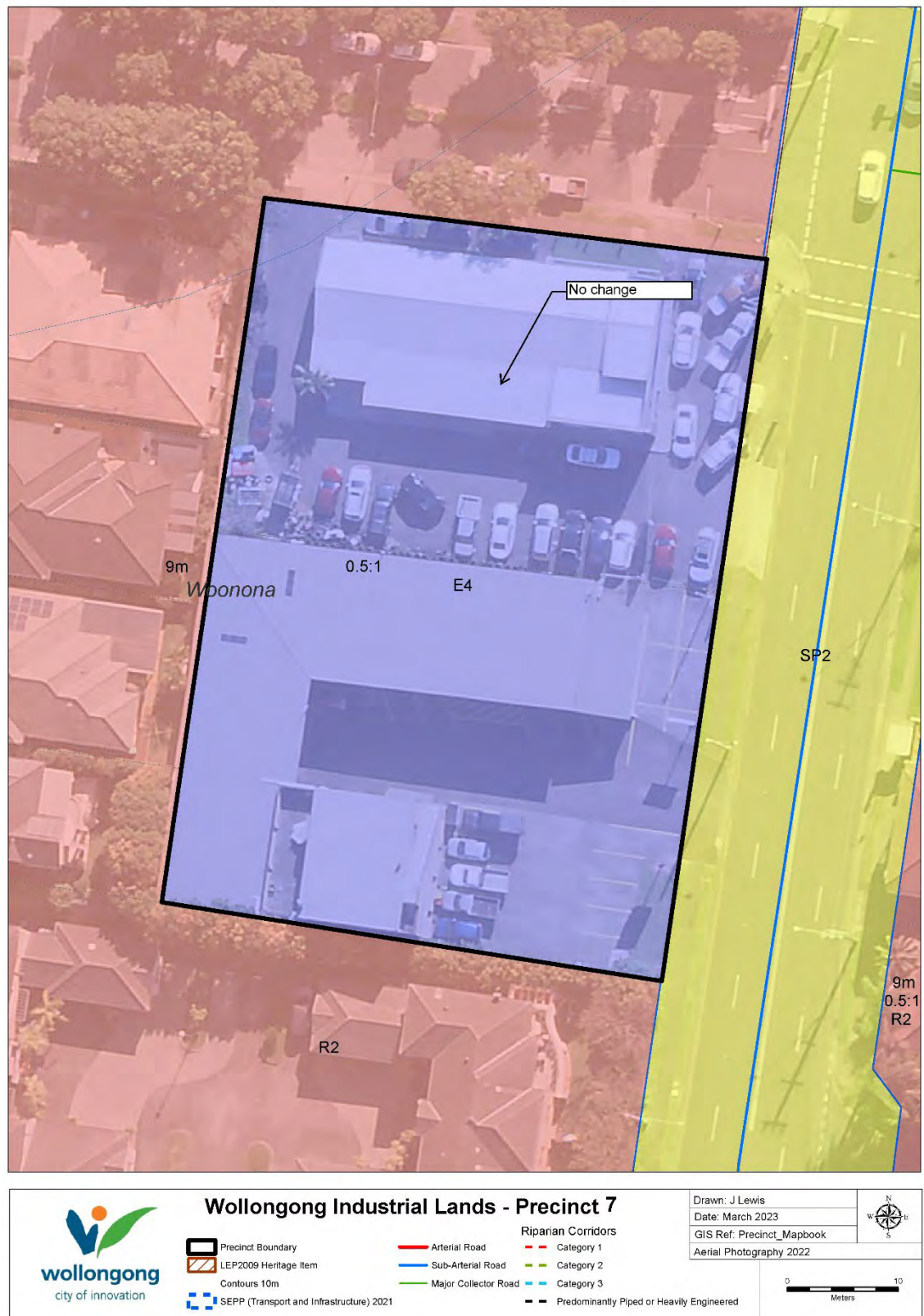


Figure 6.9: Map of Precinct 7: Woonona – Woodland Avenue & Princes Highway

Precinct 8: Woonona – 558-580 Princes Highway

- This precinct consists of two lots of E4 General Industrial land with an area of 0.18 Ha and 0.88 Ha, consolidated under one ownership.
- The northern half of the site is a campus style industrial training facility servicing the mining industry while the southern portion of the site is zoned residential and vacant.
- A riparian corridor traverses the southern edge of the precinct and flooding is a noted constraint across most of the precinct (Collins Creek Flood Precinct).
- Existing controls include a uniform nine metre height limit, 0.5:1 FSR and minimum lot size of 999 sqm. While the height limit is lower than the typical 11 metres for this zone, it aligns with the height limit of the surrounding residential zone.

Council could investigate:

- Rezoning the portion of R2 Low Density Residential zoning on Lot 501 DP 852593 to C3 Environmental Management to protect and manage the values of the riparian corridor and acknowledge the development constraints imposed by the flood affectation.
- Including the vacant adjacent R2 Low Density Residential lot (Lot 12 DP 861739) which is outside the scope of this Review, in a future Housekeeping LEP Review for consideration to be rezoned to C3 Environmental Management.

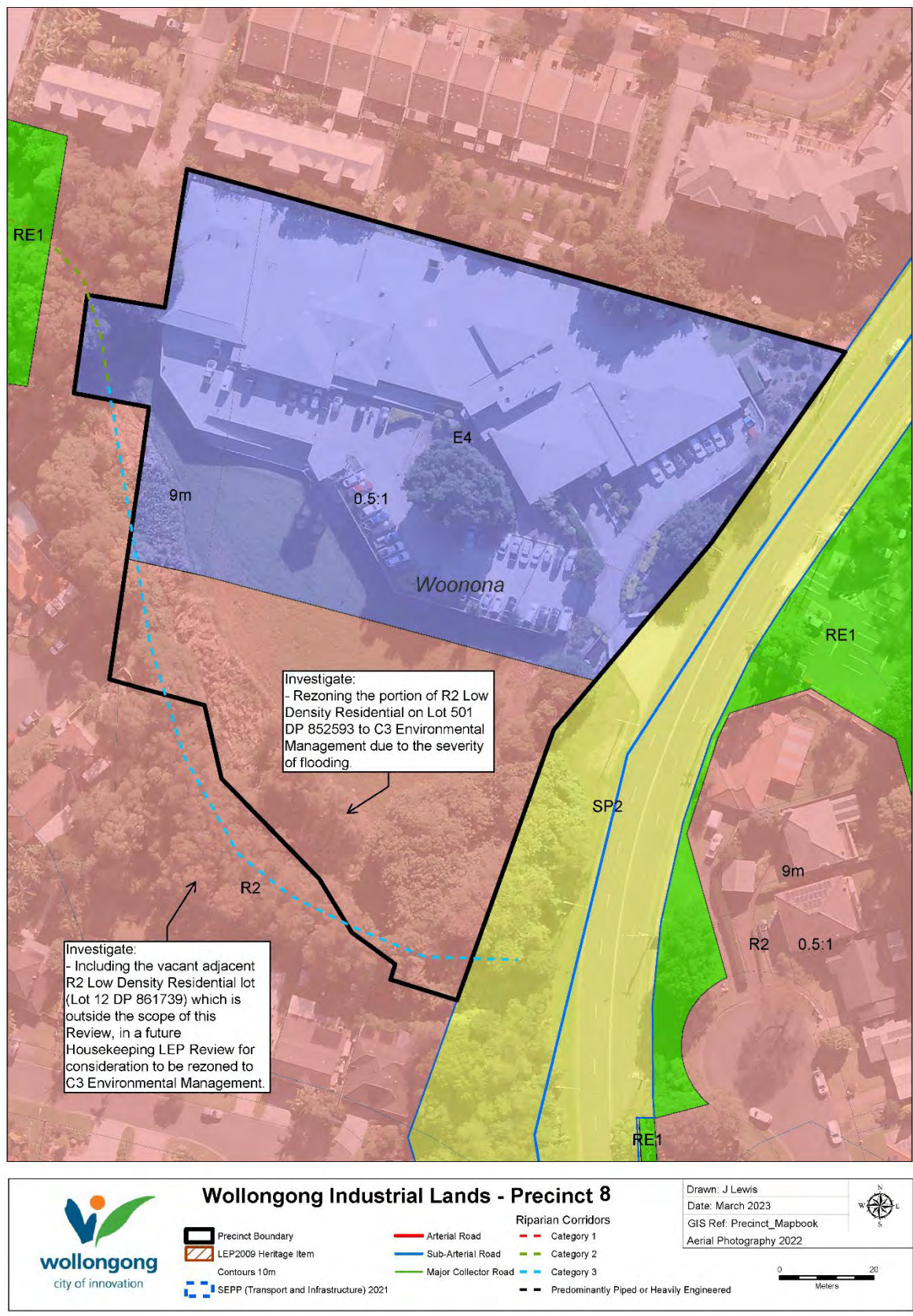


Figure 6.10: Map of Precinct 8: Woonona – 558-580 Princes Highway

Precinct 9: Woonona/Russell Vale – York Place & Watts Lane

- This precinct consists of nine lots of E4 General Industrial land with a total area of 17.94 Ha.
- Lot sizes range from 0.21 Ha to 3.71 Ha with an average of 1.99 Ha.
- This is a well-defined precinct, appropriately buffered from surrounding residential by Memorial Drive and adjacent railway.
- The precinct is accessed directly off Memorial Drive and adjoins Bellambi Train Station at its southern end.
- The precinct has a diverse mix of existing businesses with examples such as concrete batching, steelwork manufacturing, metal recycling, industrial training facility, industrial retail outlet, a swim school, Council laboratory and Bunning's Warehouse.
- There are several riparian corridors that traverse the precinct at various points and flooding is a noted constraint across large areas of the precinct (Collins Creek Flood Precinct).
- Existing controls include a uniform 11 metre height limit, 0.5:1 FSR and MLS of 999 sqm.

Council could investigate:

- Increasing the height limit and FSR controls within the precinct to allow for intensification of industrial activities, as appropriate within flooding constraints.
- Investigate increasing MLS to preserve existing large lots and support industrial expansion.

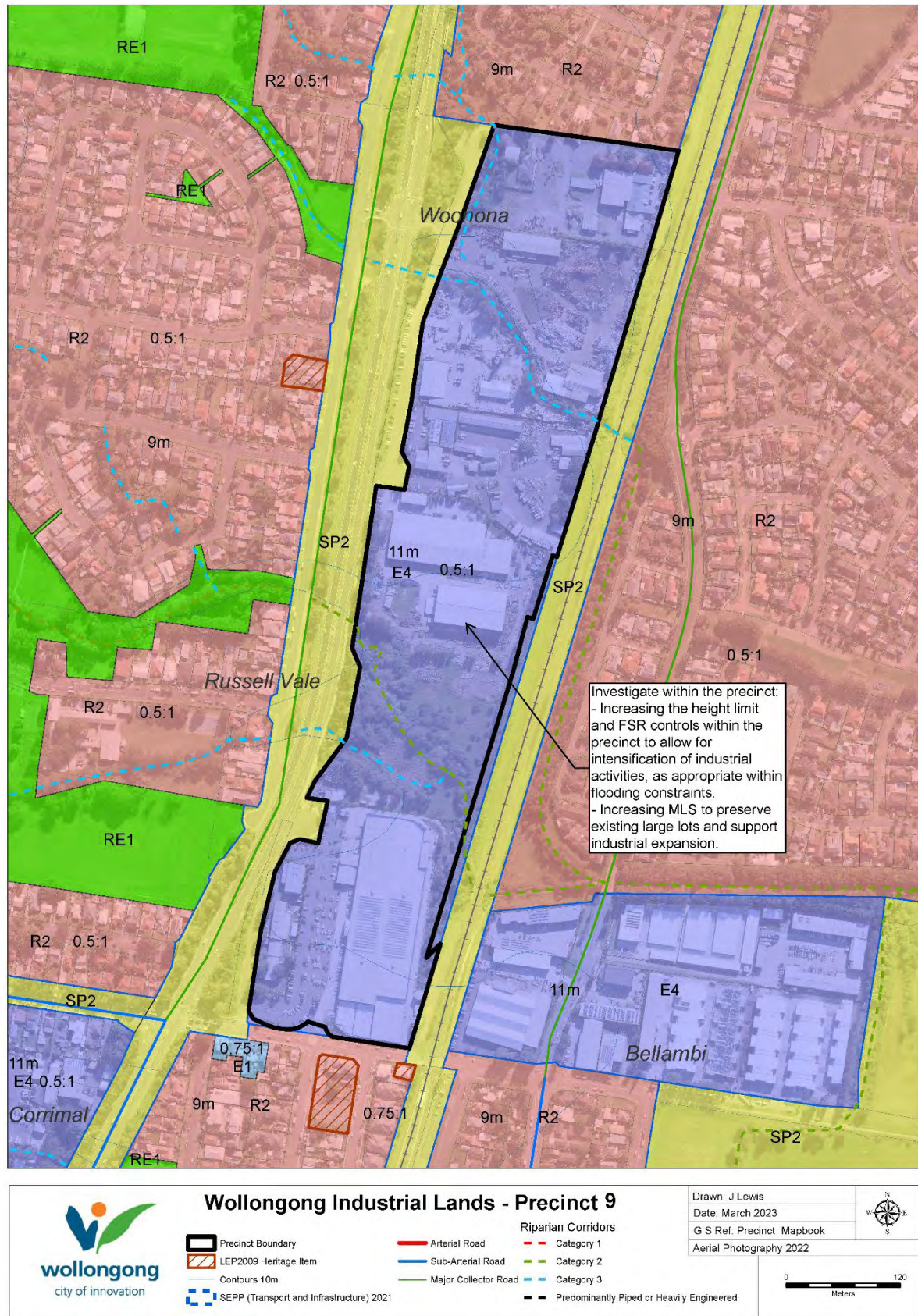


Figure 6.11: Map of Precinct 9: Woonona/Russell Vale – York Place & Watts Lane

Precinct 10: Russell Vale – Princes Highway

- This precinct consists of eight lots of E3 Productivity Support land with a total area of 1.57 Ha.
- Lot size ranges from 0.06 Ha to 0.33 Ha with an average of 0.20 Ha.
- The precinct is located on the Princes Highway.
- The precinct is well defined although it has a direct interface with adjacent residential to the east.
- The precinct is also intersected by a riparian corridor through its southern portion and flooding is a constraint (Collins Creek Flood Precinct).
- Lot 100 DP 873314 has split zoning with a small portion of R2 Low Density Residential zoning that is currently being used by a business.
- Existing controls include a uniform nine metre height limit, 0.5:1 FSR and minimum subdivision lot size of 999 sqm. While the height limit is lower than the typical 11 metres for this zone, it aligns with the height limit of the surrounding residential zone.

Council could investigate:

- Rezoning the portion of R2 Low Density Residential on Lot 100 DP 873314 to E3 Productivity Support reflecting existing business use.

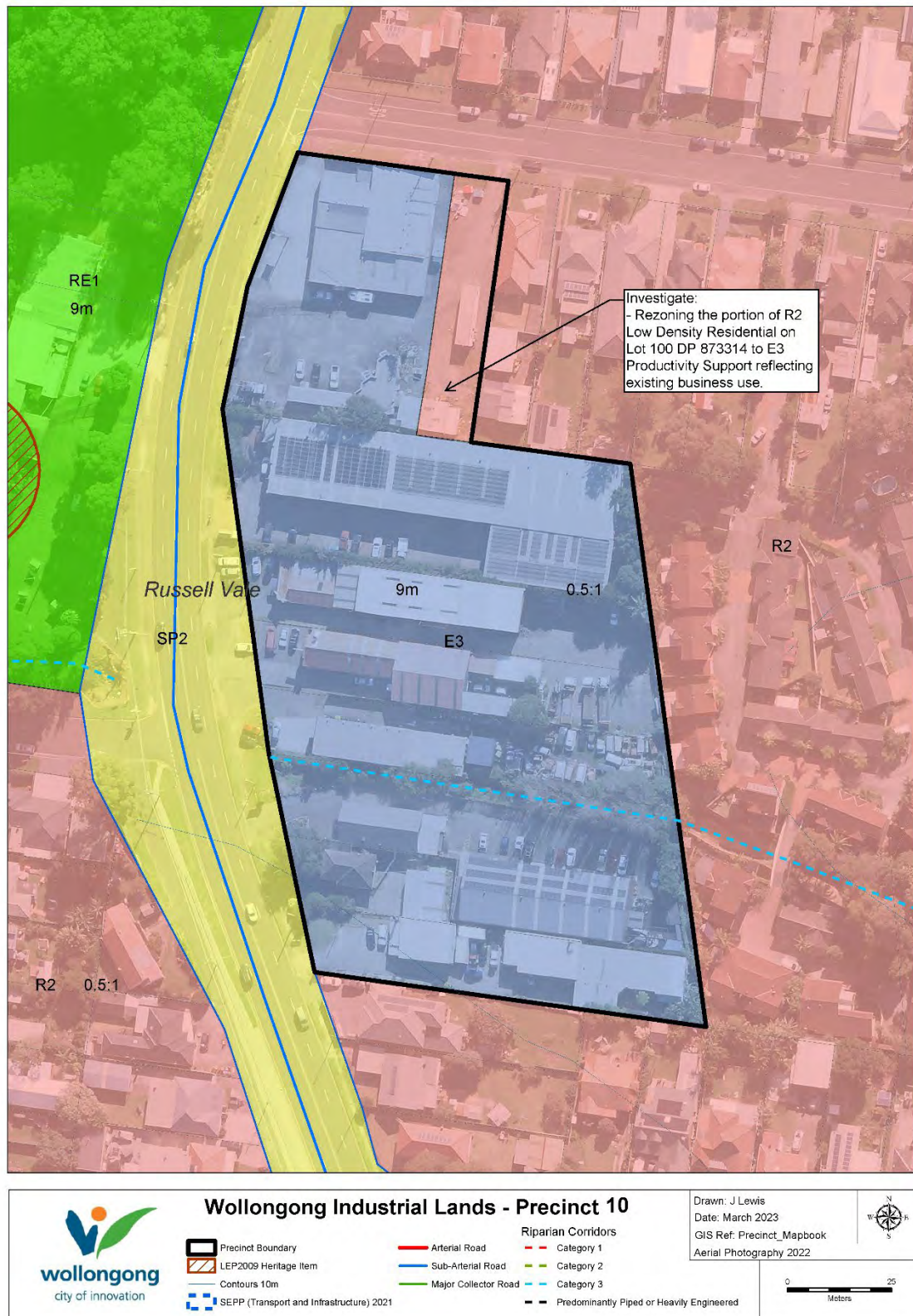


Figure 6.12: Map of Precinct 10: Russell Vale – Princes Highway

Precinct 11: Woonona/Bellambi – Pioneer Drive & Bellambi Lane

- This precinct consists of 16 lots of E4 General Industrial zoned land with a total area of 8.4 Ha.
- Lot sizes range from 0.01 Ha to 2.64 Ha with an average of 0.53 Ha. As shown in Figure 6.13, the precinct includes seven large lots (0.4 Ha or more).
- This precinct is 270m from an intersection with Memorial Drive and directly adjacent to Bellambi train station.
- As shown below in Figure 6.14, the precinct has a number of strata complexes with the largest being a recently completed complex of 87 industrial units at 6 Bellambi Lane.
- There is a diverse mix of businesses within the precinct with examples including metal fabrication, equipment supply, animal training, motor vehicle repairs, self-storage, pool supplies, brewery, and a distillery.
- The precinct is well defined and buffered from the surrounding residential.
- A riparian corridor runs along the northern boundary of the precinct, and flooding is a noted constraint within the precinct (Collins Creek Flood Precinct).
- Existing controls include a uniform 11 metre height limit, 0.5:1 FSR and minimum subdivision lot size of 999 sqm.

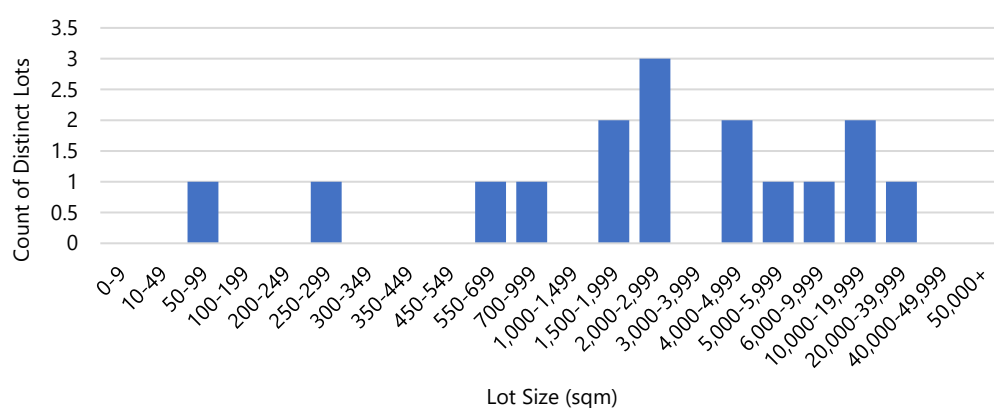


Figure 6.13: Lot size distribution, Precinct 11



Figure 6.14: Strata complexes within Precinct 11, WCC Rates Map (March 2023)

Council could investigate:

- Increasing height and FSR controls within the precinct to allow for intensification of industrial activities and flexible floor plates within existing buildings (subject to parking requirements), as appropriate within flooding constraints.
- Increasing the MLS to preserve existing large lots.

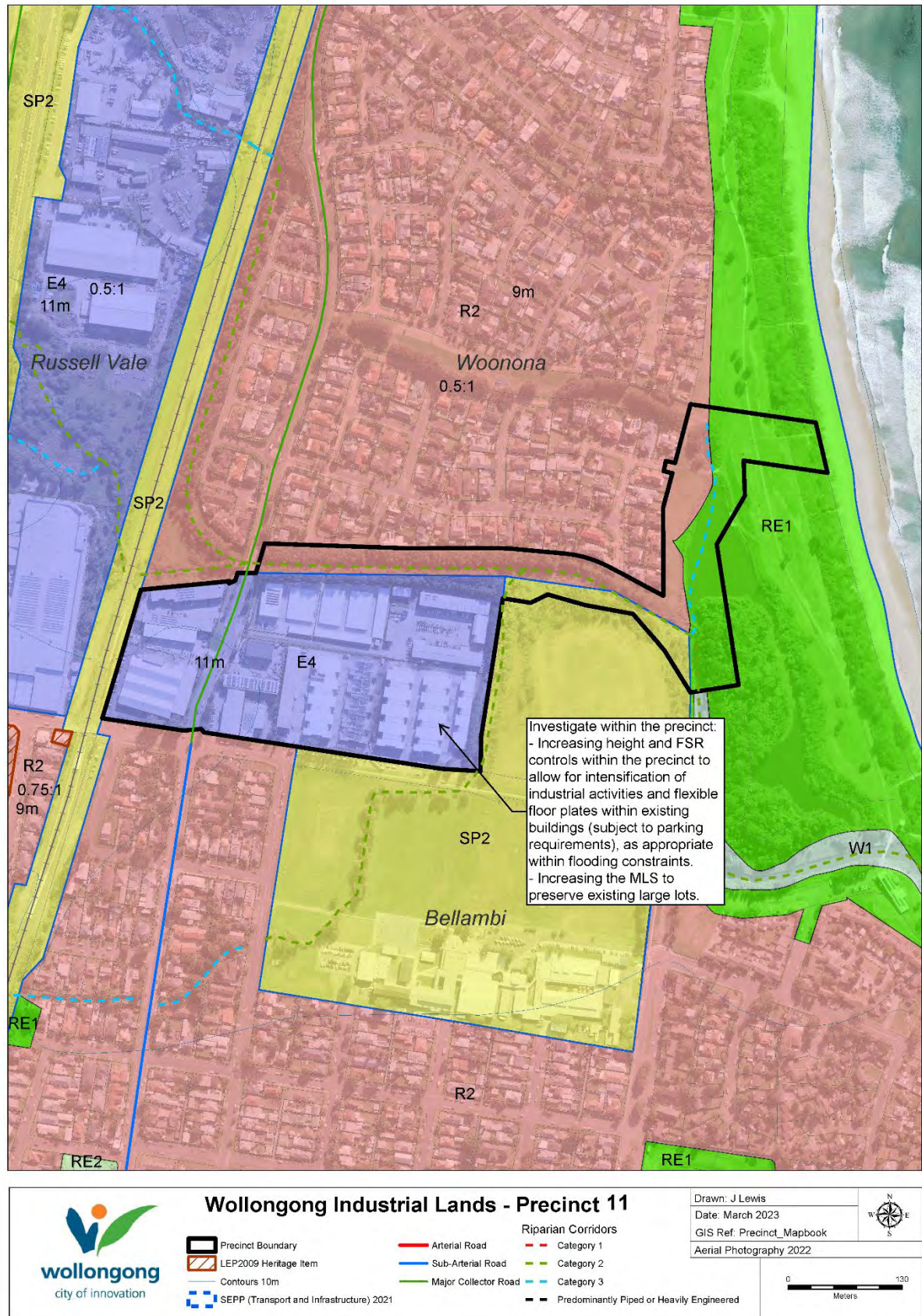


Figure 6.15: Map of Precinct 11: Woonona/Bellambi – Pioneer Drive & Bellambi Lane

Precinct 12: Bellambi/Corrimal – Bellambi Lane & Albert Street

- This precinct consists of 81 lots of E4 General Industrial land with an area of 12.73 Ha.
- Lot sizes range from 0.005 Ha to 1 Ha with an average of 0.16 Ha.
- The lots in the centre of the precinct range from 4,000-9,000 sqm and have fronts to either Bellambi Lane or Albert Street. The lots along Bellambi Lane and Albert Street are typically 580-3,000 sqm.
- This precinct is well-defined and an important node in the provision of local employment and urban services land for northern suburbs residents.
- Access to the precinct is primarily from Bellambi Lane which intersects with Memorial Drive.
- The precinct contains a number of occupied dwelling houses along both Bellambi Lane and Albert Street frontages. Further, the close proximity to the surrounding residential zone on the southern side of Albert Street can have land use conflict.
- A riparian corridor intersects the precinct east-west and flooding is a constraint (Collins Creek Flood Precinct).
- Existing controls include a uniform 11 metre height limit, 0.5:1 FSR and minimum subdivision lot size of 0.4 Ha, which is inconsistent with the typical 999 sqm for this zone.

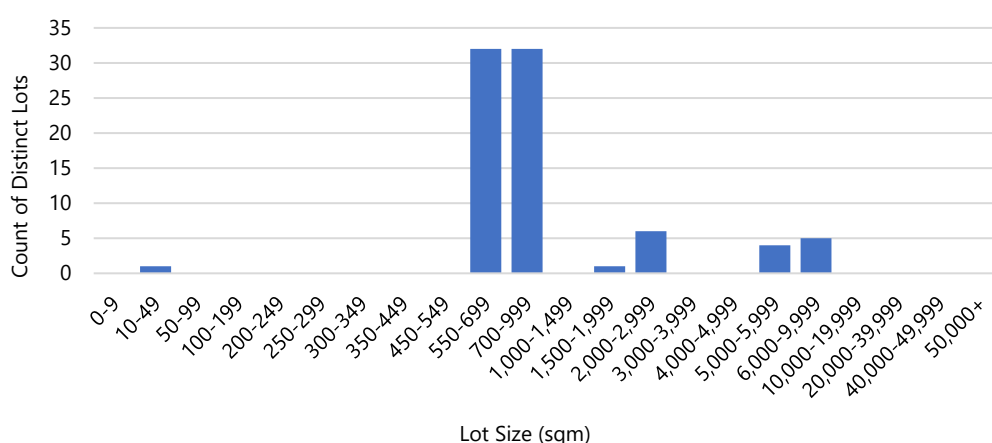


Figure 6.16: Lot size distribution, Precinct 12



Figure 6.17: Residential dwellings in Precinct 12, WCC Internal (June 2023)

Council could investigate:

- Increasing the height and FSR controls to allow for intensification of industrial activities, as appropriate within flooding constraints. Specifically:
 - Albert Street lots (retain existing height and FSR).
 - Bellambi Lane (increase height and FSR controls, with appropriate setbacks from the riparian corridor).

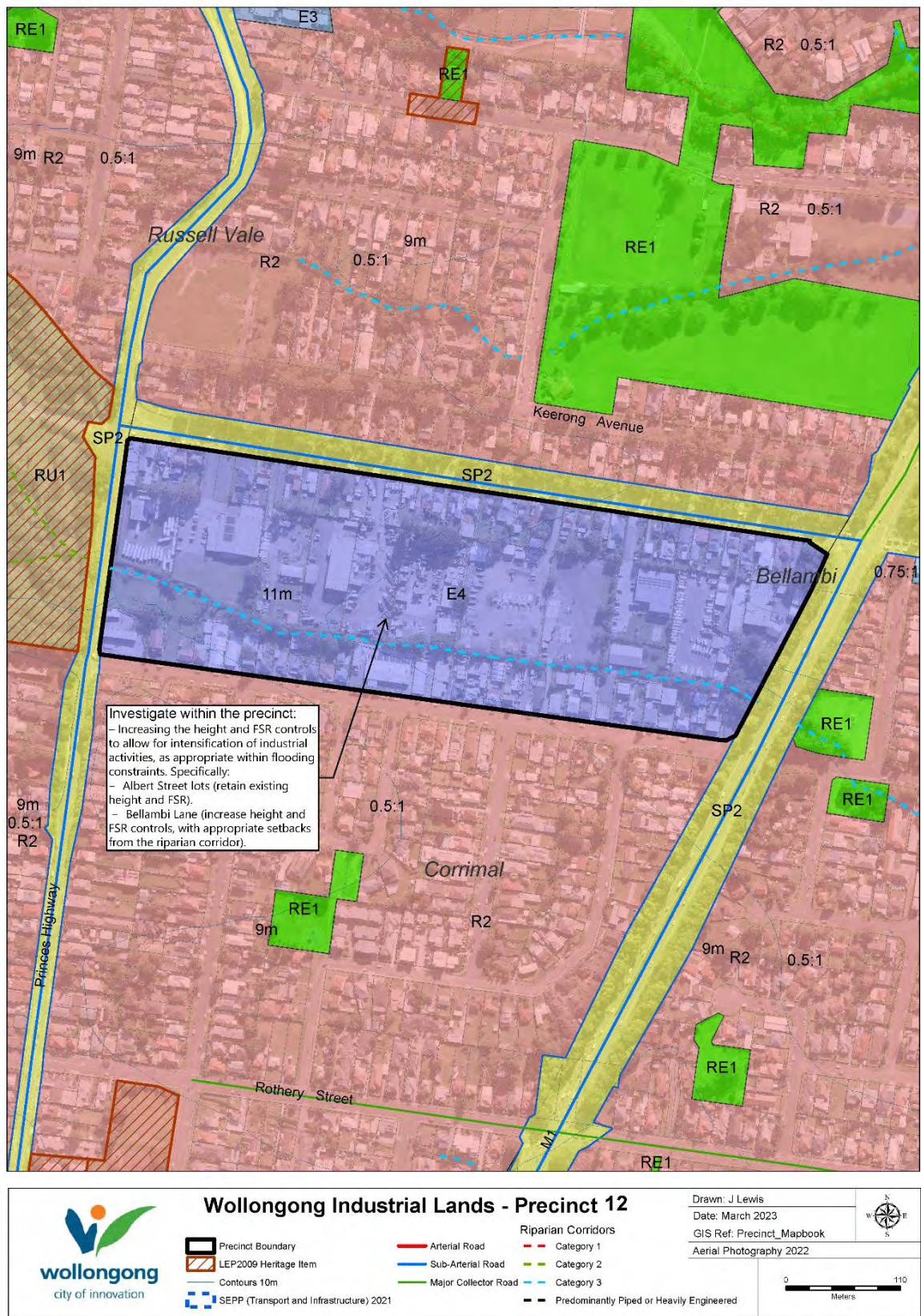


Figure 6.18: Map of Precinct 12: Bellambi/Corrimal – Bellambi Lane & Albert Street

Precinct 13: Corrimal – Ruddock Street

- The precinct consists of 28 lots of E4 General Industrial with a total area of 3.09 Ha.
- Lot sizes range from 0.04 Ha to 0.71 Ha with an average of 0.11 Ha.
- The precinct is located to the north of Railway Street and backs on to the South Coast Rail Line. Ruddock Street has access via Railway Street to Memorial Drive and is close to Corrimal Railway Station, however, the street is narrow with limited on street parking.
- There is a mix of lot sizes within the precinct. Larger lots tend to support businesses and smaller lots tend to be occupied by housing (along the southern end of Ruddock Street). Example land uses within the precinct include urban services (mechanical), a substation associated with the railway, a wholesale bakery, removalists, and cabinet making.
- Along the north-eastern edge of the precinct, a small portion of one lot (Lot 501 DP 1031959) is zoned R2 Low Density Residential. This lot also has split FSR controls, which do not align with the zoning boundaries. The entire lot, along with a portion of the adjacent lot, has a high flood risk classification.
- The existing height limit is a uniform 11 metres (lower than the 13 metre limit of the surrounding R3 Residential zoning) and MLS of 999 sqm.
- A riparian corridor intersects the precinct along this northern edge and flooding is a constraint in the northern and southern portions of the precinct (Collins Creek Flood Precinct).
- There is adjacent residential zoned land to the north and west with a direct interface. It is noted that many of these lots are built to boundary including the rear boundary interface with the residential zone. DCP Chapter B5 includes requirements for industrial properties abutting a residential zone, including requirements for increased landscaped setbacks.

Due to the existing constraints, opportunities for increased intensification are considered limited and there are no identified changes to development standards.

However, Council could investigate rezoning the portion of vacant R2 Low Density Residential zoning on Lot 501 DP 1031959 to E4 General Industrial to rationalise the zoning across the lot.

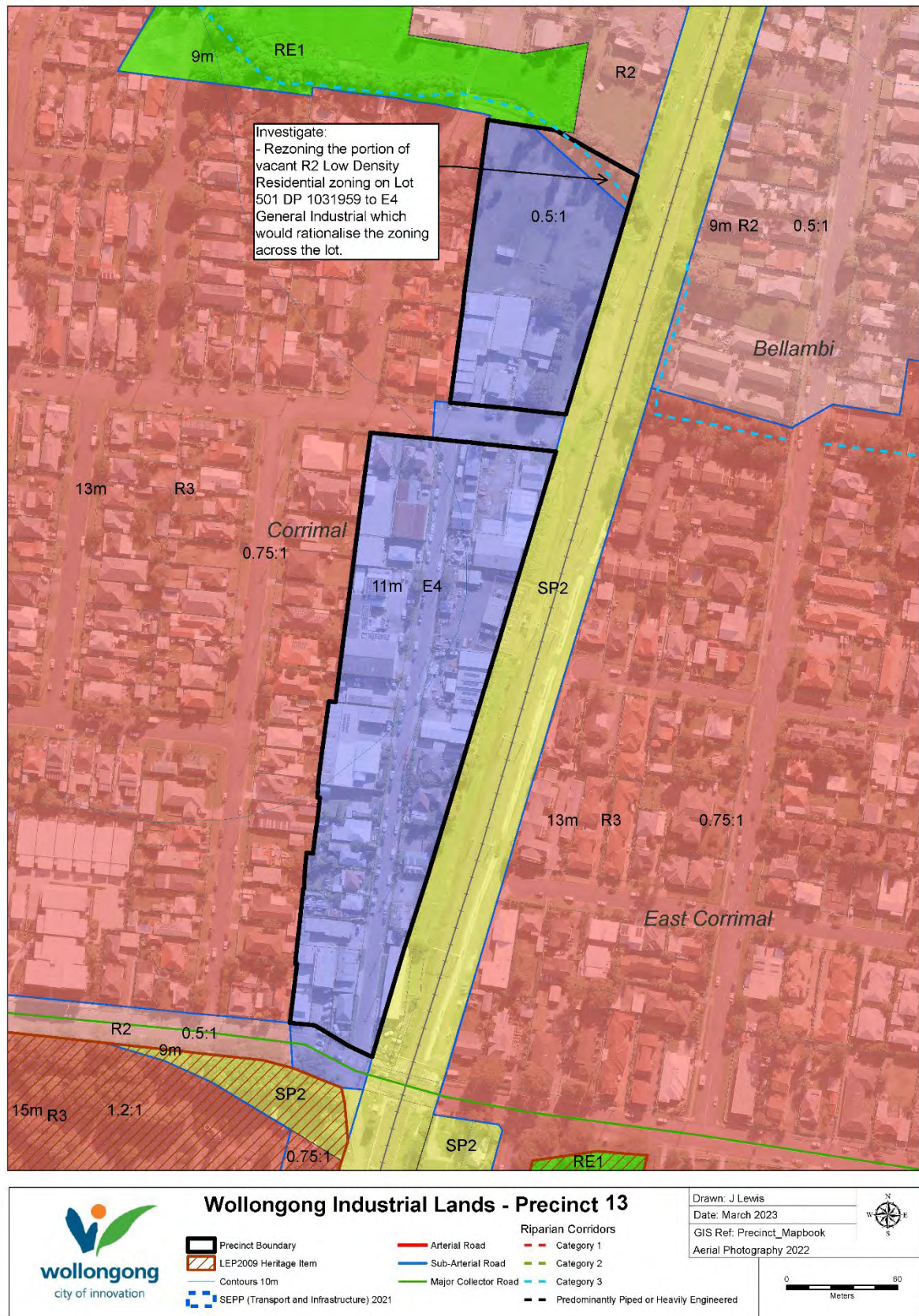


Figure 6.19: Map of Precinct 13: Corrmal – Ruddock Street

Precinct 14: Corrimal – Tarrawanna Road & Princes Highway

- This small precinct of five lots of E3 Productivity Support with a total area of 0.63 Ha.
- Lot sizes range from 0.002 Ha to 0.19 Ha with an average of 0.13 Ha.
- The precinct has dual frontages to Tallawarra Road and the Princes Highway.
- The precinct is surrounded by residential zoned land which may place a constraint on further intensification.
- Flooding is a noted constraint across all lots within the precinct (Towradgi Creek Flood Precinct).
- Existing controls include a uniform 11 metre height limit, 0.5:1 FSR and minimum lot size of 999 sqm.

No changes to development standards or land uses have been proposed.

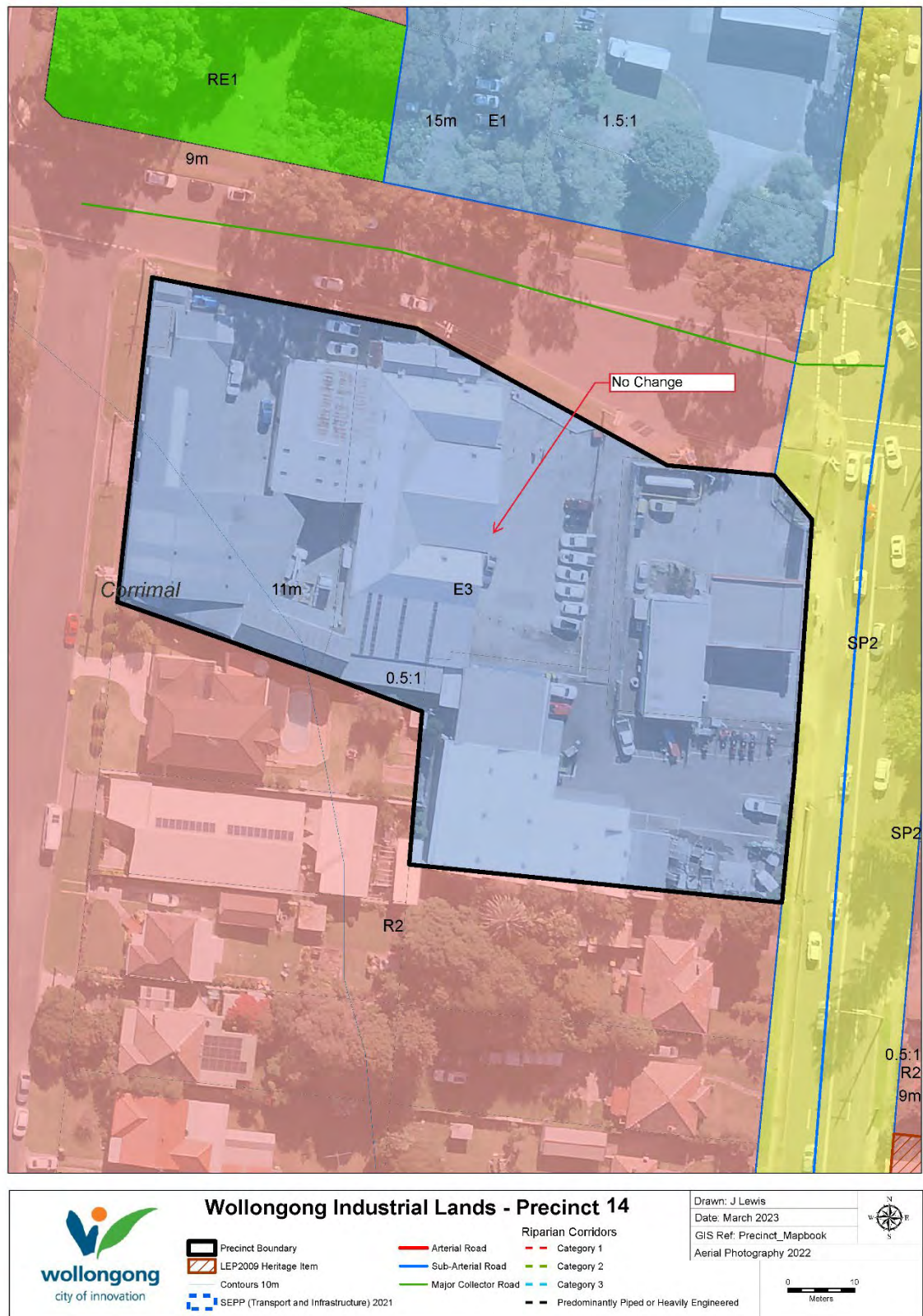


Figure 6.20: Map of Precinct 14: Corimal – Tarrawanna Road & Princes Highway

Precinct 15: Corrimal – Princes Highway

- This precinct consists of 29 lots of E3 Productivity Support with a total area of 2.62 Ha.
- Lot sizes range from 0.06 Ha to 0.24 Ha with an average of 0.09 Ha.
- The precinct is located on the Princes Highway and is well-defined, providing a diverse mix of businesses to surrounding residents in the southern part of Corrimal and Fernhill.
- Unlike most E3 Productivity Support zoned land, this precinct is not an extension of a town centre.
- Flooding is a noted constraint within the northern half of the precinct and it is surrounded by residential zoning with direct interfaces.
- One lot (Lot 11 DP 629423) contains split zoning with a small portion of R2 Low Density Residential at its eastern boundary.
- Existing controls include a uniform 11 metre height limit, 0.5:1 FSR and minimum subdivision lot size of 999 sqm.

Council could investigate rezoning the portion of R2 Low Density Residential on Lot 11 DP 629423 to E3 Productivity Support reflecting existing business use.

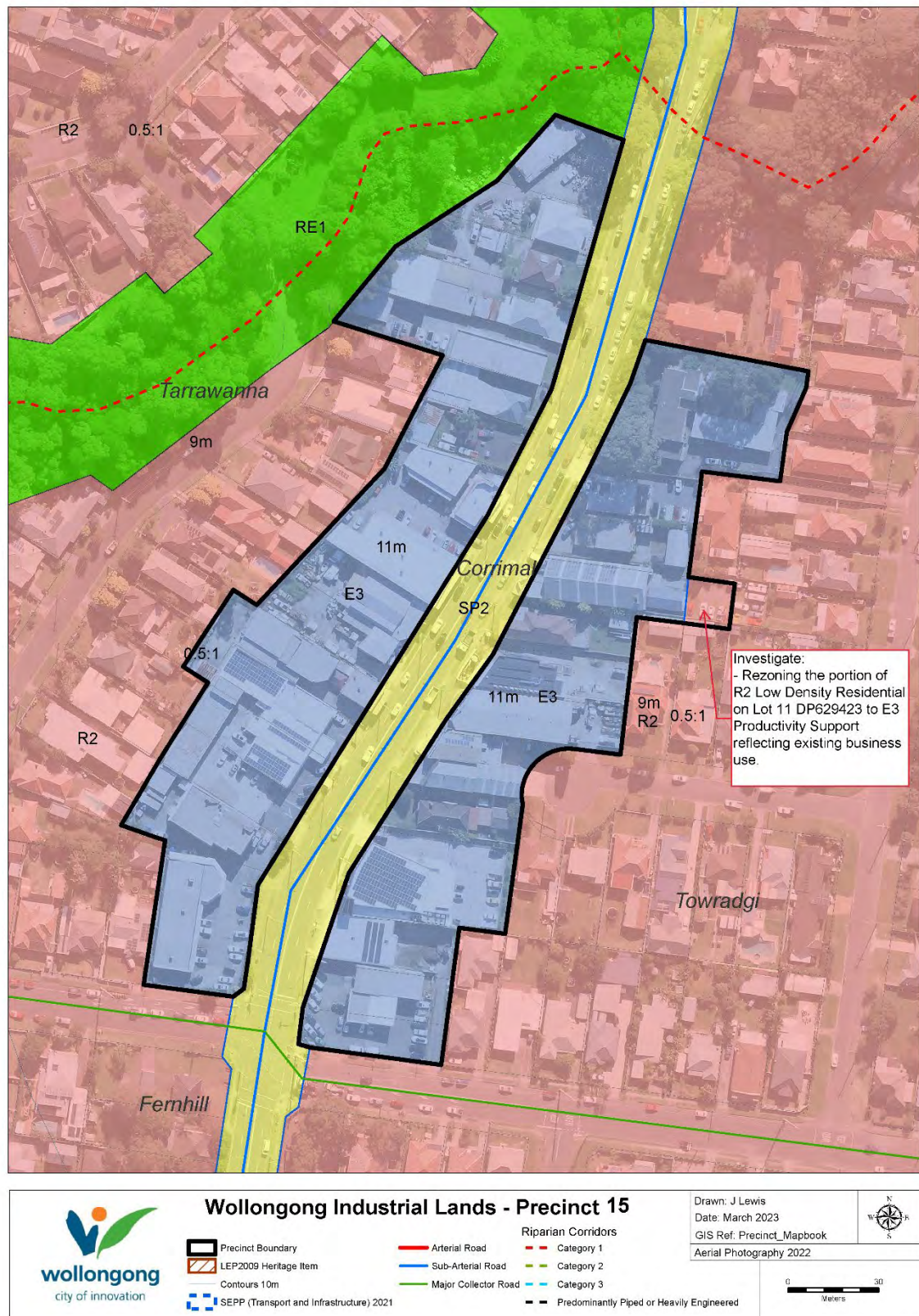


Figure 6.21: Map of Precinct 15: Corrimal – Princes Highway

Precinct 16: Fairy Meadow/Fernhill – Jardine Street & Princes Highway

This is one of the most significant precincts of industrial land in Ward 1 and consists of the following two zones.

16a. E3 Productivity Support

- Along the Princes Highway between Kingsford Street and Norman Street is a collection of 11 lots of E3 Productivity Support with a total area of 0.79 Ha.
- Lot sizes range from 0.05 Ha to 0.14 Ha with an average of 0.07 Ha.
- This land contains a mix of businesses and provides a transition between the Fairy Meadow Town Centre (E1 Local Centre) and the General Industrial (E4) land to the north.
- Existing controls include a uniform height limit of 11 metres, 0.5:1 FSR and no MLS. The latter is inconsistent with typical 999 sqm MLS for this zone.

Council could investigate introducing a MLS of 999 sqm to control the subdivision of land.

16b. E4 General Industrial

- This significant precinct of industrial land orientated east-west along Jardine Street consists of 199 lots of E4 General Industrial land with a total area of 22.61 Ha.
- Lot sizes range from 0.01 Ha to 1.62 Ha with an average of 0.11 Ha. The majority of lots fall narrowly within the range of 500-699 sqm, with a few larger lots bringing up the average.
- The Princes Highway divides the precinct north-south into two portions. It is noted that access to the M1 Motorway requires use of Towradgi Road or passing through the Fairy Meadow Town Centre. This may constrain future industrial intensification.
- The two portions have different characters:

Western portion:

- The western portion includes Jardine Street as well Pringle Road and Charles Road with the latter two roads being part of the suburb of Fernhill. All these roads terminate with the precinct.
- This portion of the precinct once contained a drive-in theatre and includes a mix of generally larger lots including some large, amalgamated sites and caters for a diverse range of activities including manufacturing, fabrication, urban services, industrial retail outlets, transportation, and indoor recreation (dance studios, fitness, and martial arts).
- There are a few strata industrial unit complexes, mostly on Jardine Street.
- Lots in Fernhill along the northern portion of Pringle Road and Charles Road are smaller and more similar to those in the eastern portion of the precinct.
- Residential zoned land surrounds this portion of the precinct with a direct interface on three sides. Along the northern boundary, industrial properties are built to the boundary of residential properties. It is noted that DCP Chapter B5 includes setback requirements for industrial development abutting residential zones, including increased landscaping requirements.
- Flooding is a noted constraint (Fairy Cabbage Flood Precinct).

Eastern portion:

- Although there are a few exceptions, the eastern portion generally contains smaller 'residential sized' lots with a significant presence of occupied dwelling houses.
- Figure 6.23 is taken from Council's rates map (as of March 2023) and shows there is a significant number of residential rated dwellings present within the eastern half of this

precinct. This compromises the business identity of the precinct, and the ongoing presence of housing may indicate that existing planning controls have not facilitated the necessary conditions to enable redevelopment of these houses into industrial uses.

- Existing businesses range considerably with examples such as a large mechanical engineering workshop, small businesses (take away food, personal services), a service station, signwriting, urban services (mostly automotive) and self-storage.
- Strata industrial unit complexes are not currently present.
- Residential zoned land surrounds this portion of the precinct with direct interface on two sides. Along the northern boundary, industrial properties are built to the boundary of residential properties. It is noted that DCP Chapter B5 includes setback requirements for industrial development abutting residential zones, including increased landscaping requirements.
- A riparian corridor (predominantly piped/heavily engineered) follows part of the southern boundary of the E4 zone and flooding is a noted constraint (Fairy Cabbage Flood Precinct).
- Across both portions, existing controls include a uniform height limit of 11 metres, 0.5:1 FSR and MLS of 999 sqm.

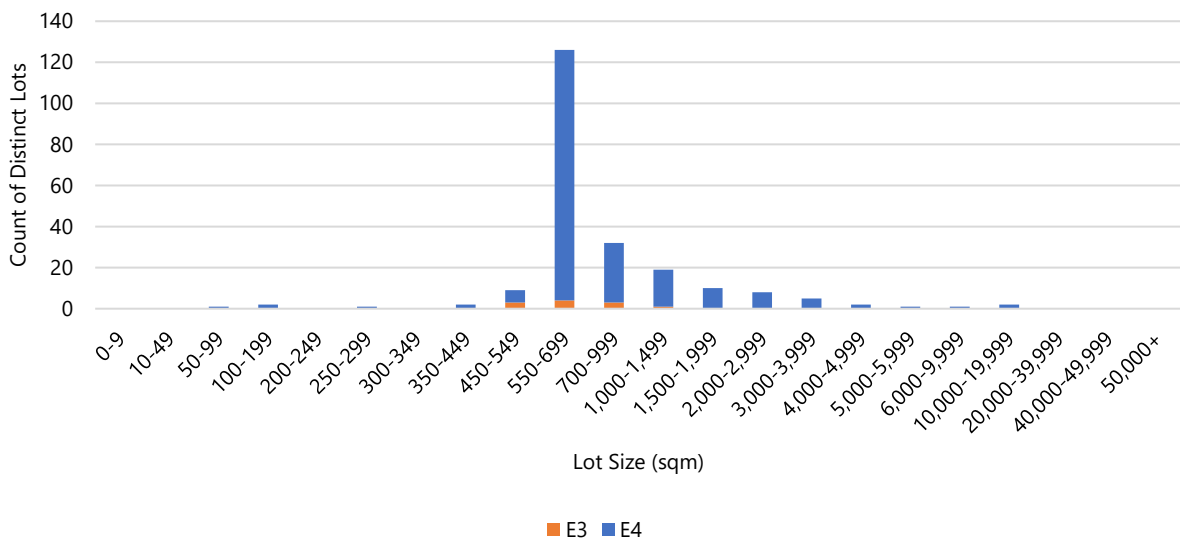


Figure 6.22: Lot size distribution, Precinct 16



Figure 6.23: Residential dwellings on industrial land, Precinct 16, WCC (June 2023)

There is an opportunity for Council to investigate:

- Increasing the height limit and FSR in parts of the precinct in order to incentivise redevelopment as industrial uses and to support the intensification of industrial activity
- Reviewing the DCP controls relating to industrial interfaces with residential, particularly in relation to transition of form.
- Increasing the MLS in some areas to preserve existing large lots and support industrial expansion.

6.2 Ward 2

Characteristics

Ward 2 is Wollongong's central and smallest ward covering an area of 51 km².

The Ward stretches from Fairy Meadow and North Wollongong in the north to Coniston in the south. The precinct includes the Unanderra Town Centre but not the adjacent Unanderra Industrial Park.

Ward 2 contains 848 lots representing around 130 Ha of industrial land across several zones. The majority (63%) is zoned E3 Productivity Support with a further 35% E4 General Productivity. A very small proportion (2%) is zoned W4 Working Waterfront which surrounds Wollongong Harbour and plays a separate, unique role within the LGA.

The E3 Productivity Support lands in Ward 2 support business activity that is peripheral to the Wollongong CBD. Key precincts include the southern part of Fairy Meadow, North Wollongong and south of the Wollongong CBD through to Coniston.

The most significant precinct of E4 General Industrial land is orientated around Montague Street, North Wollongong. This area offers a well-defined and separated industrial park that supports local manufacturing, warehousing, urban services, and other business uses. It also has a synergy with the adjacent University of Wollongong Innovation Campus and offers significant potential for collaboration between research and manufacturing.

The other significant area of E4 General Industrial zoning is in Coniston. This area supports a mix of light industrial operations. A small area of E3 Productivity Support zoned land exists at the southern end of the precinct. This was previously zoned B7 Business Park and supports a limited number of office developments focused on government services.

There are other less significant pockets of industrial land and productivity support across the ward, providing a mix of urban services and business operations.

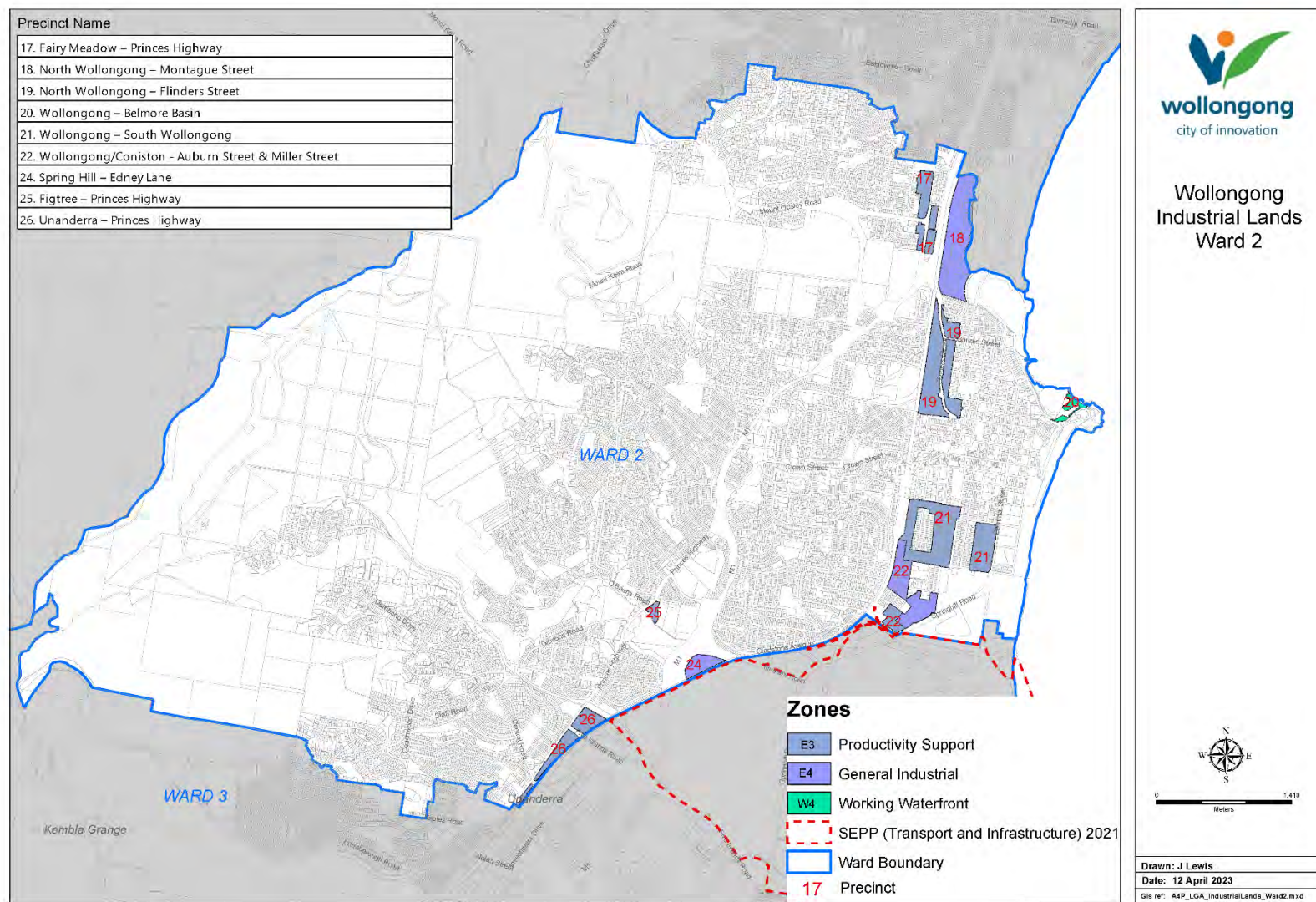


Figure 6.25: Wollongong's industrial lands, Ward 2

Planning considerations

Precinct 17: Fairy Meadow – Princes Highway

- This precinct consists of 81 lots of E3 Productivity Support with a total area of 13.26 Ha.¹¹
- Lot sizes range from 0.001 Ha to 1.44 Ha with average lot size of 0.16 Ha.
- This is a large area of business activity. The precinct is separated into two portions by a small area of R2 Low Density Residential zoned land off Cabbage Tree Lane.
 - The northern portion, between Anama Street and Cabbage Tree Lane consists of four lots that adjoin the Fairy Meadow Town Centre.
 - The larger southern portion begins south of Cabbage Tree Lane and continues past the intersection with Mount Ousley Road. The majority of lots have direct frontage to the Princes Highway south of the Town Centre. Where the precinct transitions from being only west of the highway to both sides, the Princes Highway expands from 4 lanes to 6.
 - Lots range considerably in size with generally larger lots on the western side of the Princes Highway and small fragmented lots, particularly in the south-eastern portion of the precinct south of Woodhill Street.
- Flooding is a noted constraint and there are several intersections with riparian corridors in the southern portion of the precinct (Fairy Cabbage Flood Precinct). Cabbage Tree Creek is the main watercourse traversing the precinct south of Anama Street.
- The precinct is surrounded by residential zoning with the majority of lots having a direct interface.
- Some lots contain split zoning within the southwestern portion of the precinct. This includes lots that are mostly zoned residential with a small portion of E3, as well as lots that are predominately E3 with a small portion of residential zoning.
- The FSR is 0.5:1, except for one lot on Anama Street where 0.75:1 applies, carrying over the FSR from the adjacent R3 Medium Density Residential zoning. It is noted that the E2 Commercial Centre zoning which applies directly north of the precinct allows for up to 1:5:1.
- Across the entire precinct the height limit is a uniform 11 metres which is higher than the adjacent R2 Low Density Residential zone (nine metres), but lower than the R3 Medium Density Residential (15 metres) and E1 Local Centre Zoning (16 metres).
- The block in the south-eastern portion of the precinct (bound by the Princes Highway and Woodhill Street) has a MLS of 449 sqm compared with 999 sqm elsewhere in the precinct. This reflects its previous zoning as medium density residential under the Wollongong LEP 1990.
- Council's Retail and Business Centres Strategy found an overall surplus of retail floorspace supply for the (then) B6 Enterprise Corridor zone in Fairy Meadow through to 2041.

¹¹ A small number of lots between Cabbage Tree Lane and Anama Street are technically in Ward 1, however, they have been allocated to Ward 2 to maintain the grouping of lots as a precinct.

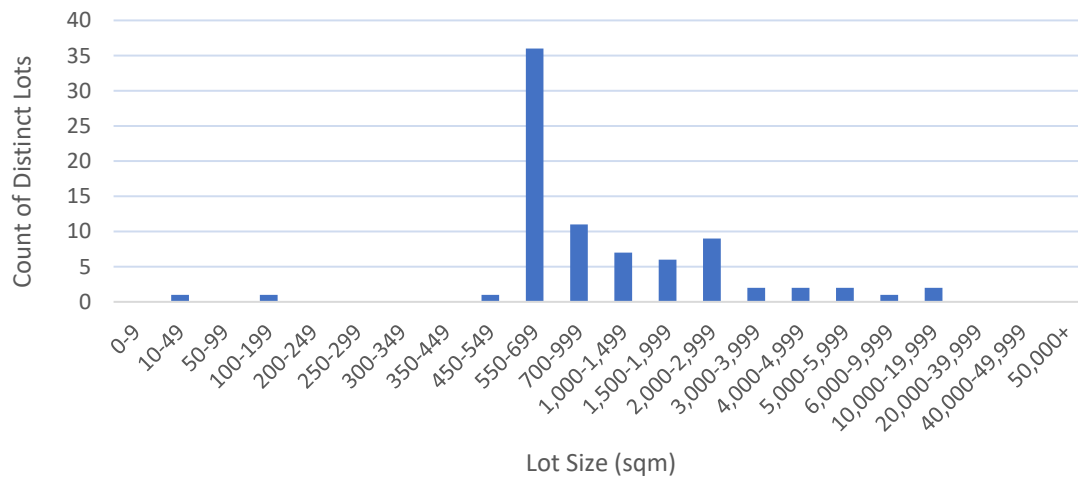


Figure 6.26: Lot size distribution, Precinct 17

Council could investigate amending the zoning on the following split lots:

- Lot 1 DP 1186837 – rezone the portion of R2 Low Density Residential (currently used as a carpark) to E3 Productivity Support.
- Lot 80 DP 1115180 – rezone the portion of R2 Low Density Residential to E3 Productivity Support reflecting existing use as a business premises.
- Lot 301 DP 710268 – rezone the portion of E3 Productivity Support to R2 Low Density Residential reflecting existing housing.
- Lot 302 DP 710268 – rezone the portion of E3 Productivity Support to R2 Low Density Residential reflecting existing housing.
- Lot 1 DP 1237970 – rezone the portion of E3 Productivity Support to R2 Low Density Residential reflecting existing housing.

Precinct 18: North Wollongong – Montague Street

- Anchored around Montague Street, North Wollongong, this well-defined precinct is the largest contiguous area of industrial land north of the Wollongong CBD. The precinct is buffered from surrounding residential zoned land by the South Coast rail line and Memorial Drive infrastructure corridor and the Fairy Creek Riparian Corridor.
- The precinct consists of 87 lots of E4 General Industrial land with a total area of 27.89 Ha.
- Lot sizes range from 0.002 Ha to 5.71 Ha with average lot size of 0.32 Ha Figure 6.28 shows a range of lot sizes within the precinct, with the majority falling between 1,500-3,000 sqm and a smaller number of very small and large lots.
- There is a number of strata industrial unit complexes across the precinct, particularly on the western side of Montague Street, north of Puckey Avenue.
- A significant site within the precinct is Council's Central Works Depot.
- The precinct is in close proximity to the M1 Princes Motorway via Flinders Street, North Wollongong, however, traffic volumes are high and there are limited access points.
- There are a variety of uses occurring within the precinct including manufacturing, urban services (e.g. concrete batching, mechanical), industrial training services, warehousing, self-storage as well small business operating in strata complexes such as gyms and martial arts.
- Across the precinct, a nine metre height limit is in place which is lower than the common limit of 11 metres for E4 General Industrial land, particularly where there is no direct residential interface.
- The UOW Innovation Campus runs adjacent to precinct separated by Fairy Creek (with a bridge via Puckey Avenue) and the precinct offers supporting land to complement research and development activity at the Innovation Campus.
- It is noted that the precinct is in the vicinity of culturally sensitive locations and future development will need to consider the potential for Aboriginal Heritage.
- Flooding is a noted constraint within the precinct (Fairy Cabbage Flood Precinct).
- Existing controls include a uniform height limit of 11 metres, 0.5:1 FSR and MLS of 999 sqm.

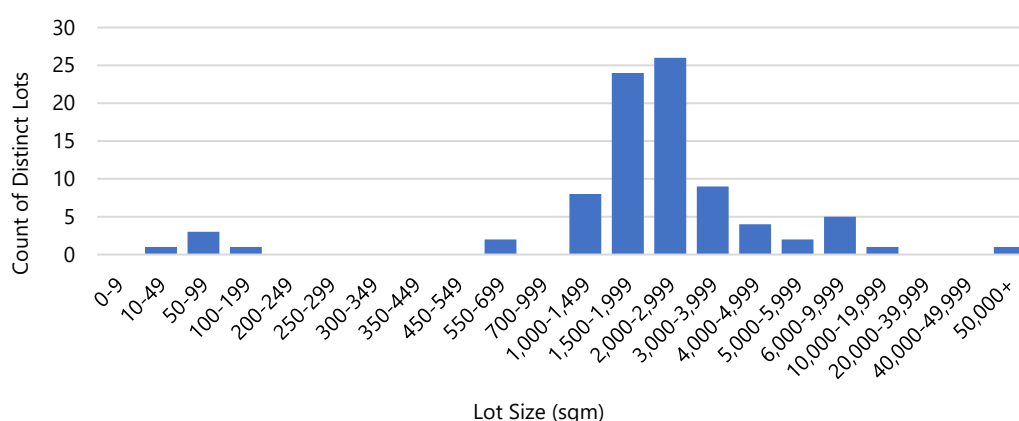


Figure 6.28: Lot size distribution, Precinct 18

Council could investigate:

- Increasing the height limit and FSR controls to allow for intensification of industrial development within the precinct, within appropriate flooding constraints.
- Increasing the MLS to preserve existing large lots and support industrial expansion.

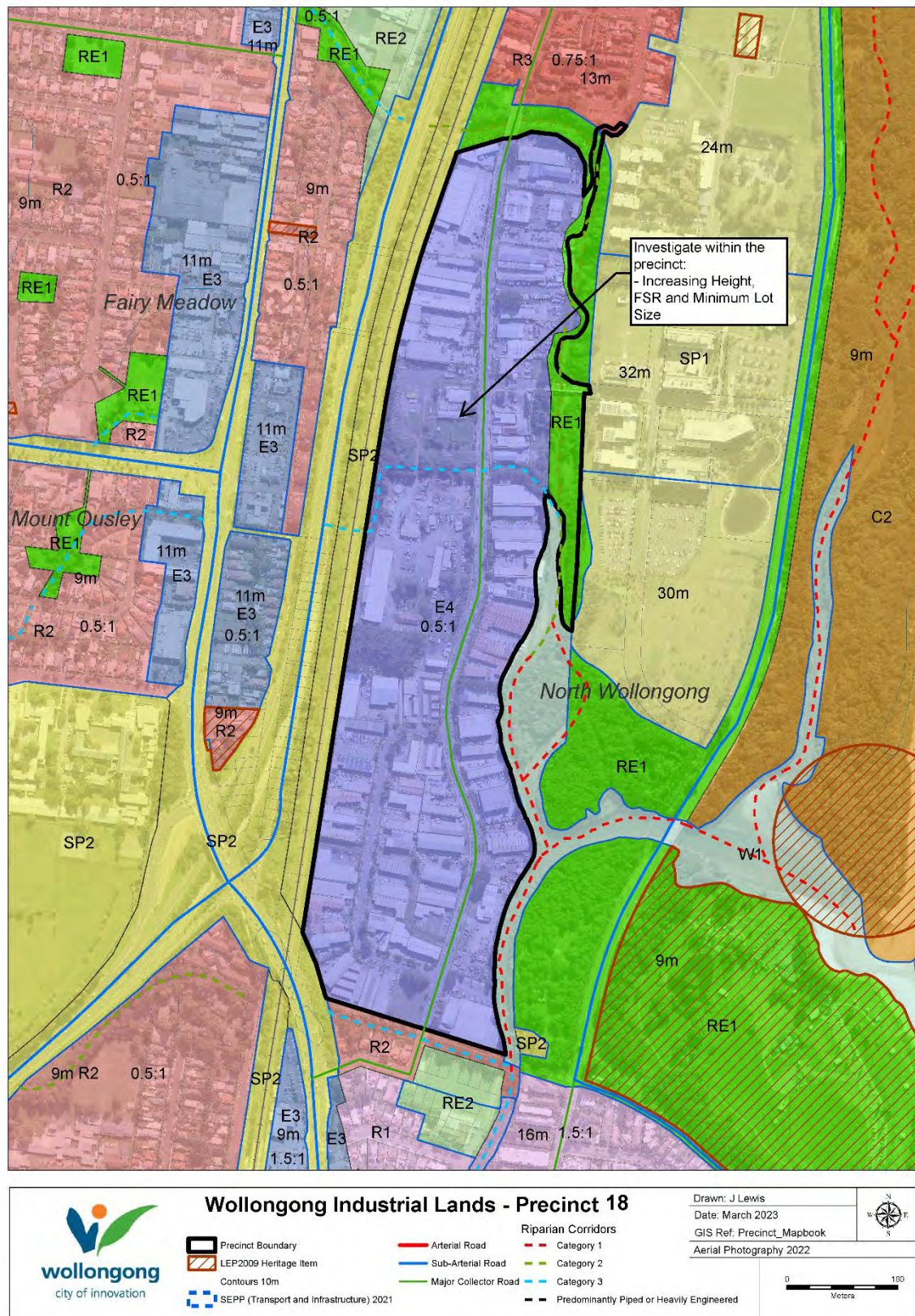


Figure 6.29: Map of Precinct 18: North Wollongong – Montague Street

Precinct 19: North Wollongong – Flinders Street

- This precinct consists of 147 lots of E3 Productivity Support land with a total area of 28.85 Ha.
- Lot sizes range from 0.001 Ha to 2.73 Ha with an average of 0.20 Ha.
- As the northern gateway to the Wollongong CBD, this key business precinct has increasingly come under pressure from higher density 'shop top' housing development, which has changed the character of the street from a focus on urban services and larger format retailing, to a mix of business and residential activity.
- The precinct has complex planning considerations in regard to surrounding residential interfaces, traffic volumes and public transport access, heritage items and flood constraints.
- Existing controls include a height limit ranging from nine to 32 metres as well as a uniform MLS of 999 sqm. FSR ranges from 1.5:1 to 3:1, dependant on the street frontage dimension and the land use of the development (Wollongong LEP 2009 4.4A)
- As noted in Section 5.1, Council has received a business survey response regarding sites at 73-75 & 81 Gipps Street, and 60-72 & 74 Flinders Street. The response recommended Council to consider the potential to cater for increased development at the subject site and provide for a diverse array of services for the community. It requests that Council support diversification of uses across the subject site and area and ensure that the zoning allows for the maximum flexibility to allow for redevelopment (including consideration of supermarkets noting an undersupply of quality services in the local area, including supermarkets and associated shop offerings).
- The response further requests that height limits and FSR reflect the future potential to provide for a mix of residential development and retail uses, asking that Council retain the business zoning on the site, acknowledging it is unlikely any redevelopment would occur for industrial purposes.
- Council's Retail and Business Centres Strategy includes the following action item in relation to this precinct:
 - Review the Flinders Street B6 – Enterprise Corridor zoned land (between Smith St and Ajax Ave Wollongong). Consider which areas need to be preserved as Enterprise Corridor/Productivity Support, and which areas should transition to other zoning, including Mixed Use and/or Residential.
- Council's Housing Strategy includes the following action item in relation to this precinct:
 - Rezone parts of B6 Enterprise Corridor Zone along Bourke Street, Edward Street and Gipps Street back to a residential zone (as existed prior to 2007).

This Review supports further investigation by Council to:

- Determine the appropriate amount of E3 Productivity Support required within the precinct.

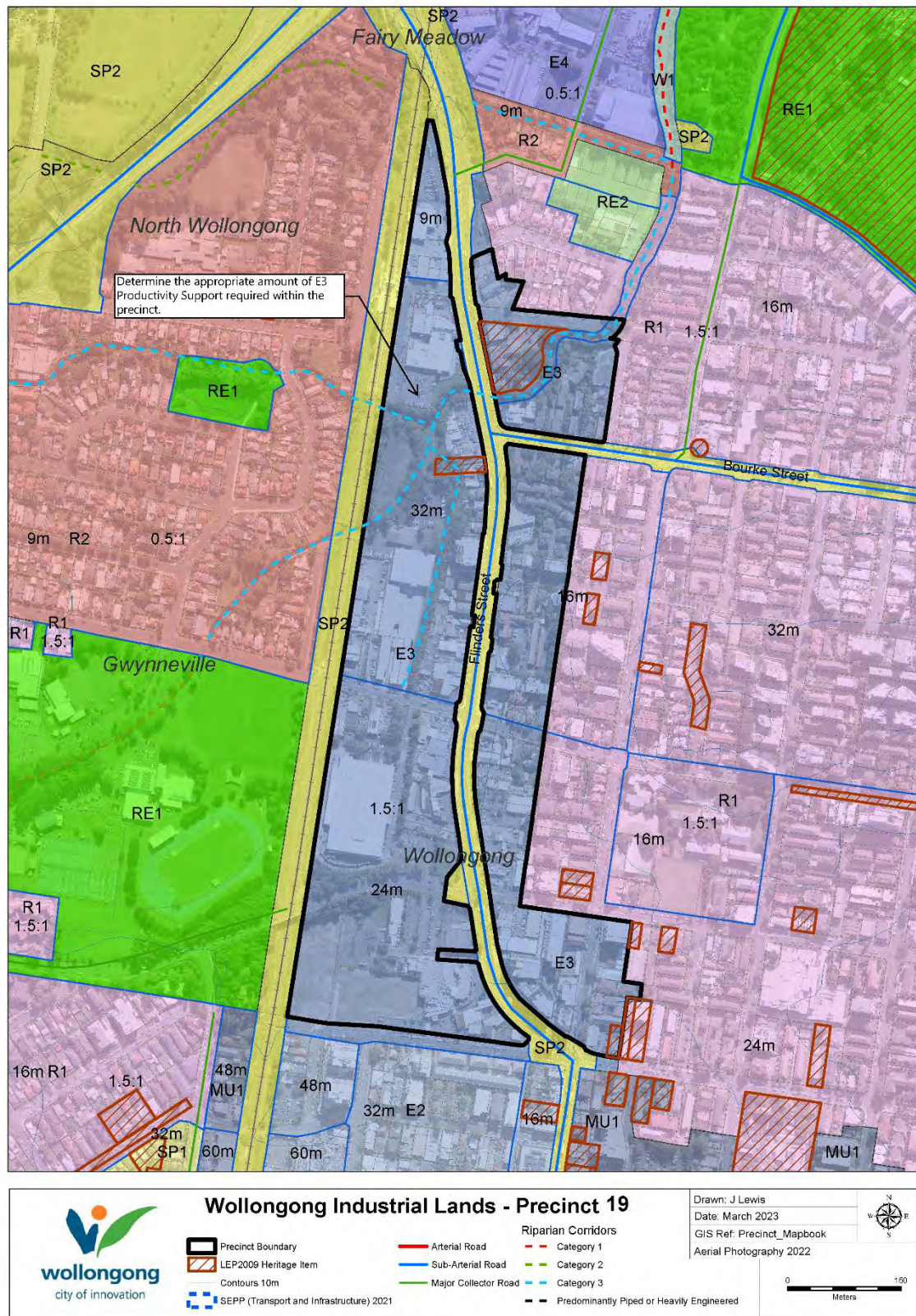


Figure 6.30: Map of Precinct 19: North Wollongong – Flinders Street

Precinct 20: Wollongong – Belmore Basin

- This precinct consists of one lot zoned W4 Working Waterfront with an area of 2.57 Ha.
- This zone has limited permitted uses and its objectives focus on promoting industrial and maritime activities at the foreshore.
- The precinct is located at Wollongong Harbour. The harbour is managed by the NSW Department of Primary Industry (DPI) and has a rich history.
- The precinct is within the North Beach Precinct and Belmore Basin State Heritage Conservation Area and the W4 zoned area includes five State Listed Heritage items (Breakwater Light House 5906, Harbour Steps 6418, Site of Cokeworks including remains of coke oven 6406, Stone Steps 6419, and Stone Steps 6364).
- There are no existing height of building, FSR or MLS controls applying to the precinct.
- DPE released a masterplan in 2020 to guide the future care and improvement of the harbour.
- Future employment outcomes and activities associated with the W4 zoned land need to be sensitively balanced against the high importance placed on heritage values, existing waterfront operations and the amenity of the public domain at the foreshore.

No investigations to inform changes to development standards or land uses have been proposed.



Figure 6.31: Map of Precinct 20: Wollongong – Belmore Basin

Precinct 21: Wollongong – South Wollongong

- This precinct consists of consists of 338 lots of E3 Productivity Support land with a total area of 25.8 Ha.
- Lot sizes range from 2 sqm to 1.46 Ha with an average of 0.08 Ha.
- The precinct forms a rectangular area bound by Ellen Street (North), Auburn Street (West), Corrimal Street (East) and Swan Street (South).
- The E3 zoning is not contiguous as there are two areas of R2 Low Density Residential zoning within the precinct. There are direct residential interfaces within the western portion of the precinct.
- The E3 zoned land consists of a diverse range of businesses including urban services, indoor recreation, hospitality, professional services, and retail/wholesale trade. There is a small business park on the south-eastern edge known as the 'Swan Street Industrial Centre.'
- Across all lots, height limits are uniform nine metres and FSR is 0.5:1, with the exception of five lots in the southwestern portion along Auburn Street that have an FSR of 0.75:1. MLS is a uniform 999 sqm.
- Flooding is a noted constraint within the precinct with a riparian corridor traversing the boundaries of the Swan Street Industrial Centre (Wollongong City Flood Precinct).
- There are two amalgamated lots at 65 Auburn Street (Lot 1 DP 352010 and Lot 1 DP 1159759) that have a split zone including a portion of R2 Low Density Residential.
- In 2017, Council adopted its South Wollongong Future Strategy Vision which included this precinct (as well as Precinct 22) within the study area.
 - The Strategy recognised that significant employment generating industries need to be protected from incompatible land uses, whilst maintaining the retail and commercial focus of the city centre. This included a principle to 'maintain the diverse land use mix, encouraging employment opportunities that are difficult to locate in the centre'.
 - The Strategy also noted the significant constraints the known flood risks imposed on the area and proposed not to encourage intensification of development within the flood affected areas near Swan Street and Beach Street. The South Wollongong Future Strategy Vision is proposed to be reviewed following the completion of the revised Wollongong City Flood Plain Risk Management Study and Plan (in preparation).
- The finalisation and implementation of the South Wollongong review of planning controls is scheduled to be undertaken over the 2024/25 and 2025/26 financial years. This project should consider the proposed planning principles of this Review when considering planning controls for the E3 Productivity Support zone.
- Council's Housing Strategy proposes modification of planning controls for housing in locations where there is more capacity for development, including the residential precinct within South Wollongong. The Strategy requires this review to occur after the completion of the Wollongong City Flood Plain Risk Management Study and notes the importance of light industrial and employment uses in this precinct.

Following the completion of the Wollongong City Flood Plain Risk Management Study and Plan, and as part of the scheduled review of controls for South Wollongong Council could investigate opportunities to:

- Rezone the portion of R2 Low Density Residential zoning to E3 Productivity Support zoning on the two amalgamated lots (Lot 1 DP 352010 and Lot 1 DP 1159759) reflecting existing business use.

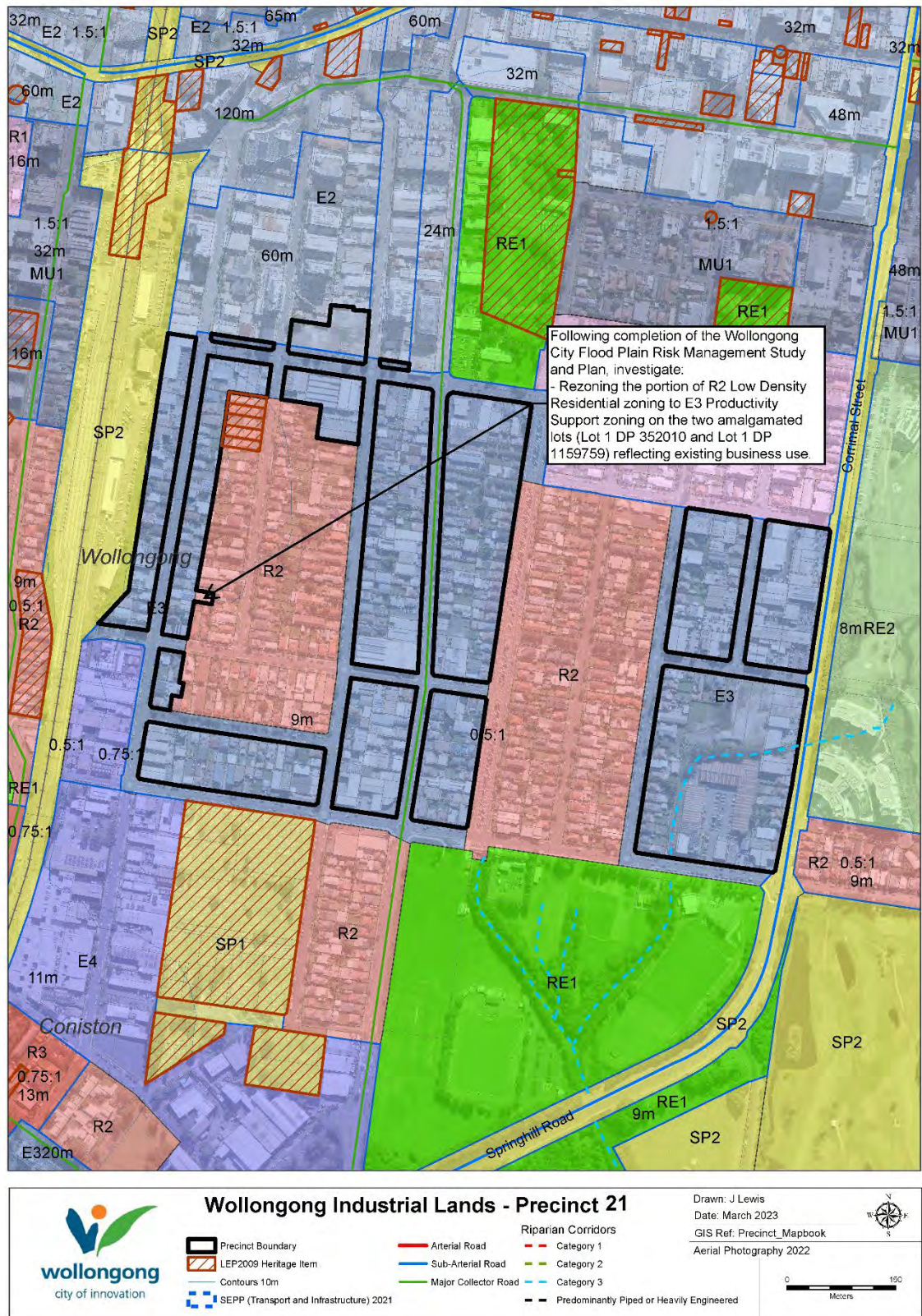


Figure 6.32: Map of Precinct 21: Wollongong – South Wollongong

Precinct 22: Wollongong/Coniston – Auburn Street & Miller Street

- This precinct begins adjacent to Precinct 21 along Auburn Street and moves south encompassing the suburb of Coniston east of the railway line as well as some lots on the southern fringe of Wollongong suburb around the Wollongong Cemetery.
- Council's adopted South Wollongong Future Strategy Vision includes this precinct within the study area. The Strategy identified the area within Precinct 22 as having the potential to accommodate manufacturing and freight/service roles, particularly with its proximity to the Port of Port Kembla.
- Flooding is a noted constraint across the precinct (Wollongong City Flood Precinct).
- The Strategy proposes that Council review planning controls for the South Wollongong precinct following the completion of the revised Wollongong City Flood Plain Risk Management Study and Plan.

There are two zones as follows.

22a E3 Productivity Support

- There are 11 lots of E3 Productivity Support with a total area of 3.15 Ha.
- Lot sizes range from 0.04 Ha to 1.31 Ha with an average of 0.29 Ha.
- This area has a distinctly different character to other E3 Productivity Support lands across the LGA reflecting its previous zoning as B7 Business Park and existing office buildings.
- Existing controls include a uniform height limit of 20 metres (which is higher than the typical 11 metres for this zone) and FSR of 0.5:1. The height limit is deemed appropriate given the existing office buildings and separation from other land uses.

No changes to development standards or land uses have been proposed.
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22b E4 General Industrial

- There are 64 lots of E4 General Industrial with a total area of 12.45 Ha.
- Lot sizes range from 0.001 Ha to 1 Ha with an average of 0.19 Ha.
- Among the industrial zoning there are two areas of R2 Low Density Residential zoning with some having a direct interface (mostly along Miller Street and Bridge Street). Coniston Primary School as well as the Wollongong Cemetery are also within the precinct.
- Land use in the precinct is varied and includes manufacturing and urban services.
- This zone contains inconsistent height controls with a portion along Auburn Street (previously zoned IN2 light industrial) having no height limit whilst other areas are limited to 11 metres. A number of these lots also have an inconsistent higher FSR (0.75:1) compared with 0.5:1 for the remainder of the zone. MLS is a uniform 999 sqm.
- There are also two lots along Keira Street consolidated under one ownership (Lot 110 DP 1146886 & Lot 1 DP 1191667) where split zoning on Lot 1 DP 1191667 introduces majority R2 Low Density Residential zoning and small portion of E4, with the lot currently being used as a parking area for the occupying business mechanical business. The lot is adjacent to a laneway linking Keira Street to Fox Avenue.
- During the exhibition of Council's recently adopted Retail and Business Centres Strategy, a submission was received asking Council to consider rezoning 95 Gladstone Avenue (Lot 1 DP 120409) to a commercial zone.
- Given the isolated location of the lot within a residential precinct, and the lot is part of a pair of lots (Lot 1 DP120409 & Lot 1 DP1148812) which form a triangular shape facing Gladstone Avenue, opposite Neville McKinnon Park. Both lots are zoned R2 Low Density

Residential and within an area of the same zoning. This zoning is consistent with that of the previous LEP (1990). The lots are adjacent to a pedestrian pathway connecting Gladstone Street to Swan Street, via a railway underpass. The lot is isolated from other industrial uses, being west of the railway line with no vehicle connections that would link it with Precinct 22. As such, it is not considered appropriate for rezoning.

Following the completion of the Wollongong City Flood Plain Risk Management Study and Plan, and as part of the scheduled review of controls for South Wollongong Council could investigate opportunities to investigate:

- Introducing a height limit on the E4 General Industrial lots between Swan Street and West Street and review the inconsistent FSR.
- Increasing the MLS to preserve existing large lots and support industrial expansion.
- Rezone the portion of R2 Low Density Residential on Lot 1 DP 1191667 to E4 General Industrial reflecting existing business use.

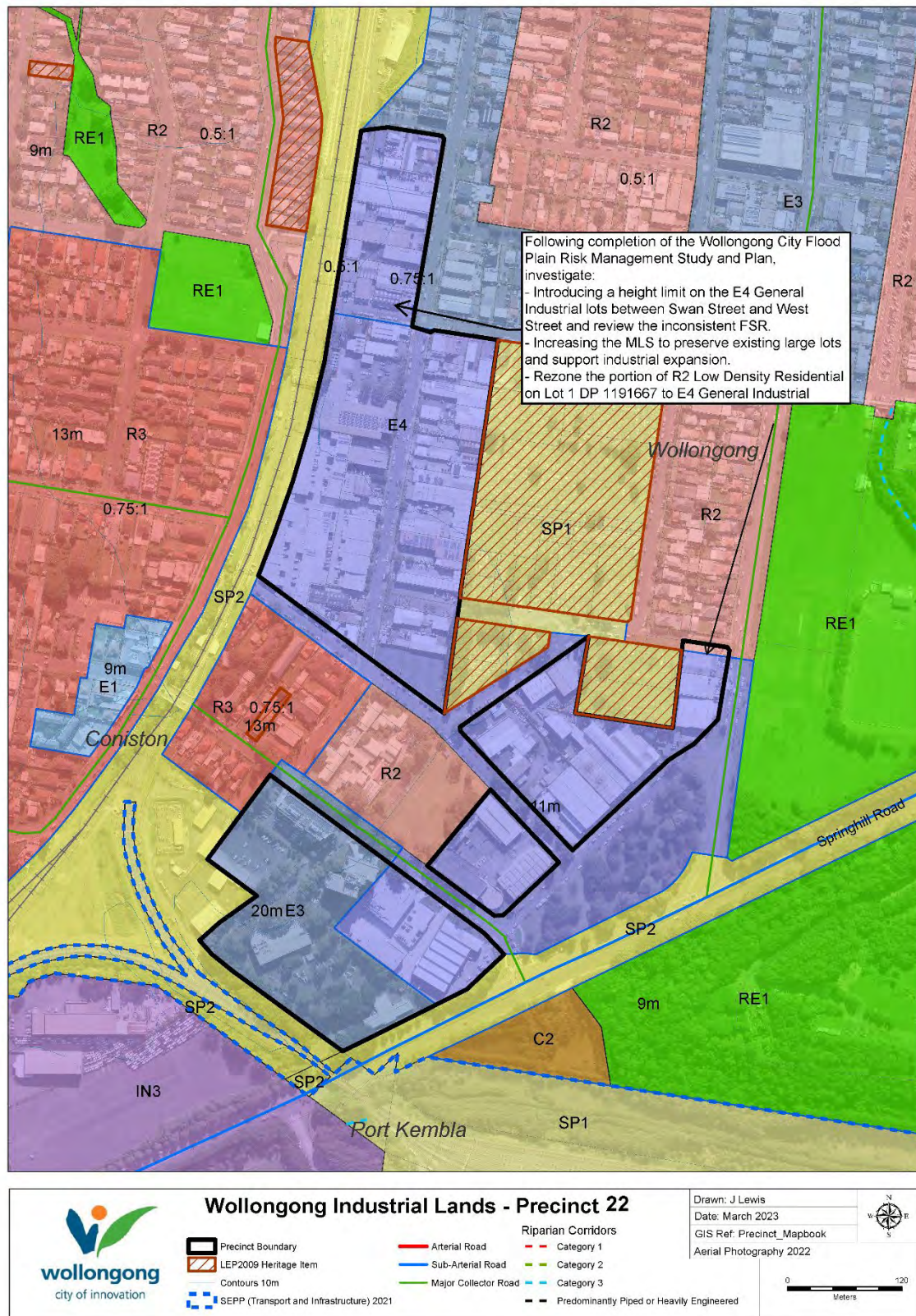


Figure 6.33: Map of Precinct 22: Wollongong/Coniston – Auburn Street & Miller Street

Precinct 24: Spring Hill – Edney Lane

- This precinct comprises seven lots of E4 General Industrial land with a total area of 4.91 Ha.
- Lot sizes range from 0.28 Ha to 2.50 Ha with an average of 0.70 Ha.
- Flooding is noted as a constraint within the precinct (Allans Creek Flood Precinct).
- This precinct is isolated, well-defined, and buffered from other land uses by the surrounding road and railway network as well as heavy vegetation.
- Access to the precinct is from Gladstone Avenue (under Masters Road).
- At present, the main activity within the precinct is a campus style office building associated with a high technology industry.
- The remaining land uses are underutilised including container storage and a portion of vacant land on the north-eastern frontage.
- Existing controls include a uniform height limit of 11 metres, FSR of 0.5:1 and MLS of 999 sqm.

Council could investigate:

- Increasing the height limit and FSR controls to allow for industrial intensification.
- Increasing the MLS to preserve existing large lots and support industrial expansion.

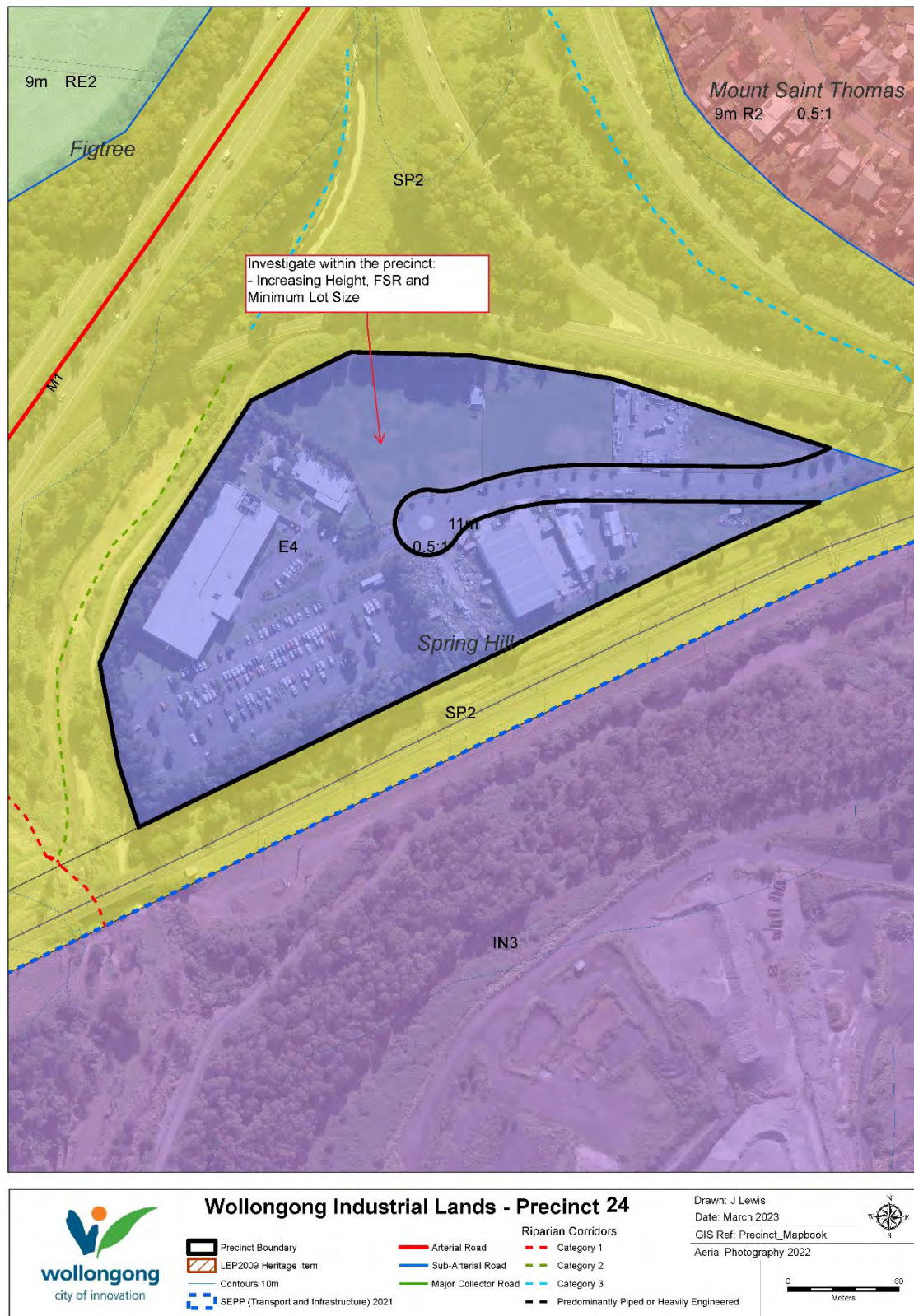


Figure 6.34: Map of Precinct 24: Spring Hill – Edney Lane

Precinct 25: Figtree – Princes Highway

- This precinct comprises two separate zonings centred around O'Brien's Road and the Princes Highway, Figtree.
- For both zones access is excellent being on the Princes Highway and flooding is a noted constraint (Allans Creek Flood Precinct).
- The precinct is in close proximity to residential zoning to the north however it has no direct interface.
- There are two zones as follows:

25a. E3 Productivity Support

- There are three lots of E3 Productivity Support zoned land with a total area of 1.63 Ha.
- Lot sizes range from 0.13 Ha to 0.93 Ha with an average of 0.54 Ha.
- This zone includes the Figtree Hotel and there also exists a restaurant and veterinary hospital.
- Adjacent to the east is Sid Parrish Park sports fields (Council land).
- A riparian corridor traverses the eastern boundary of this zoning constraining development outcomes with the south-eastern portion heavily vegetated.
- Existing controls include a uniform height limit of nine metres, FSR of 0.5:1 and MLS of 999 sqm. This height limit is lower than the typical 11 metres for the zone.

No changes to development standards or land use changes have been proposed.

25b. E4 General Industrial

- There are five lots of E4 General Industrial zoned land with a total area of 0.54 Ha.
- Lot sizes range from 0.02 Ha to 0.27 Ha with an average of 0.11 Ha.
- There a number of small businesses operating within this zone including urban services (auto related) as well as office premises offering real estate or financial services, which is inconsistent with the land use table.
- The E4 land is adjacent to Figtree High School.
- Two lots (Lot 21 DP 773165 and Lot 1 DP 70899) include SP2 Infrastructure zoning associated with the road corridor on the Princes Highway frontage.
- The opportunity for industrial intensification and/or expansion on this land limited.
- Existing controls include a uniform height limit of 11 metres, FSR of 0.5:1 and MLS of 999 sqm.

Council could investigate:

Rezoning the E4 General Industrial land to E3 Productivity Support to rationalise the zoning across the precinct as well as permit the operation of office premises along a main road which would be consistent the zone objectives (provided that shop top housing is no longer permissible).

Review the SP2 Infrastructure zoning along the Princes Highway frontage (Lot 21 DP 773165 and Lot 1 DP 70899).

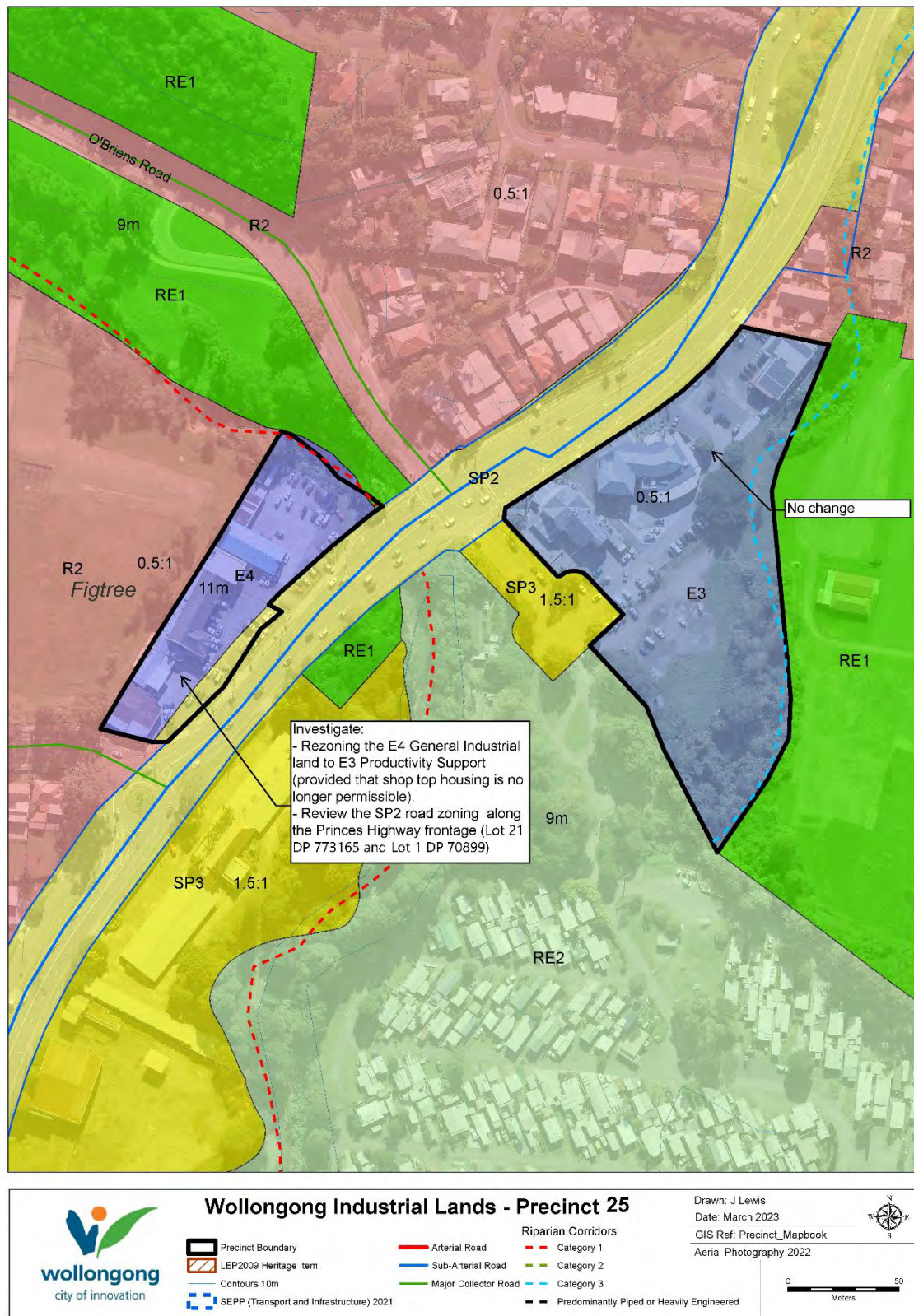


Figure 6.35: Map of Precinct 25: Figtree – Princes Highway

Precinct 26: Unanderra – Princes Highway

- This precinct comprises 105 lots of E3 Productivity Support land with a total area of 8.81 Ha.
- Lot sizes range from 0.001 Ha to 0.64 Ha with an average of 0.08 Ha.
- This large, narrow precinct runs along the Princes Highway and extends beyond the north and south of the Unanderra Town Centre. The precinct provides a buffer to the heavy and general industrial lands east of the railway.
- The precinct includes a variety of land uses. Generally, businesses are more orientated towards urban services in the north of the precinct. Land uses within the Unanderra Town Centre are predominately small business premises including take away food and drink. There is a small portion of the E1 Local Centre zoning within the E3.
- Unanderra Train Station sits adjacent to the precinct and associated car parking occupies a portion of the E3 zoned land. Nearby is a listed heritage item – the Unanderra Station Master’s Residence.
- There is residential zoning at the southern fringe and along the Princes Highway.
- Flooding is a noted constraint within the precinct (Allans Creek Flood Precinct).
- Council’s Retail and Business Centres Strategy recommended reviewing the recommendation of the adopted Unanderra Masterplan 2013 to transition the B6 Enterprise Corridor zoned land south-east of Unanderra Town Centre to a B2 – Local Centre zoning to improve street activation along the Princes Hwy corridor. These are predominately small lots.

Council could consider:

- Supporting the recommendation of Council's Retail and Business Centres Strategy to rezone the identified E3 Productivity Support land to the east of the Town Centre up to and including the creek allotment (Lot 1 DP 1064623) to E1 Local Centre which would more appropriately meet the desired zone objectives and support the development of the Unanderra Town Centre.

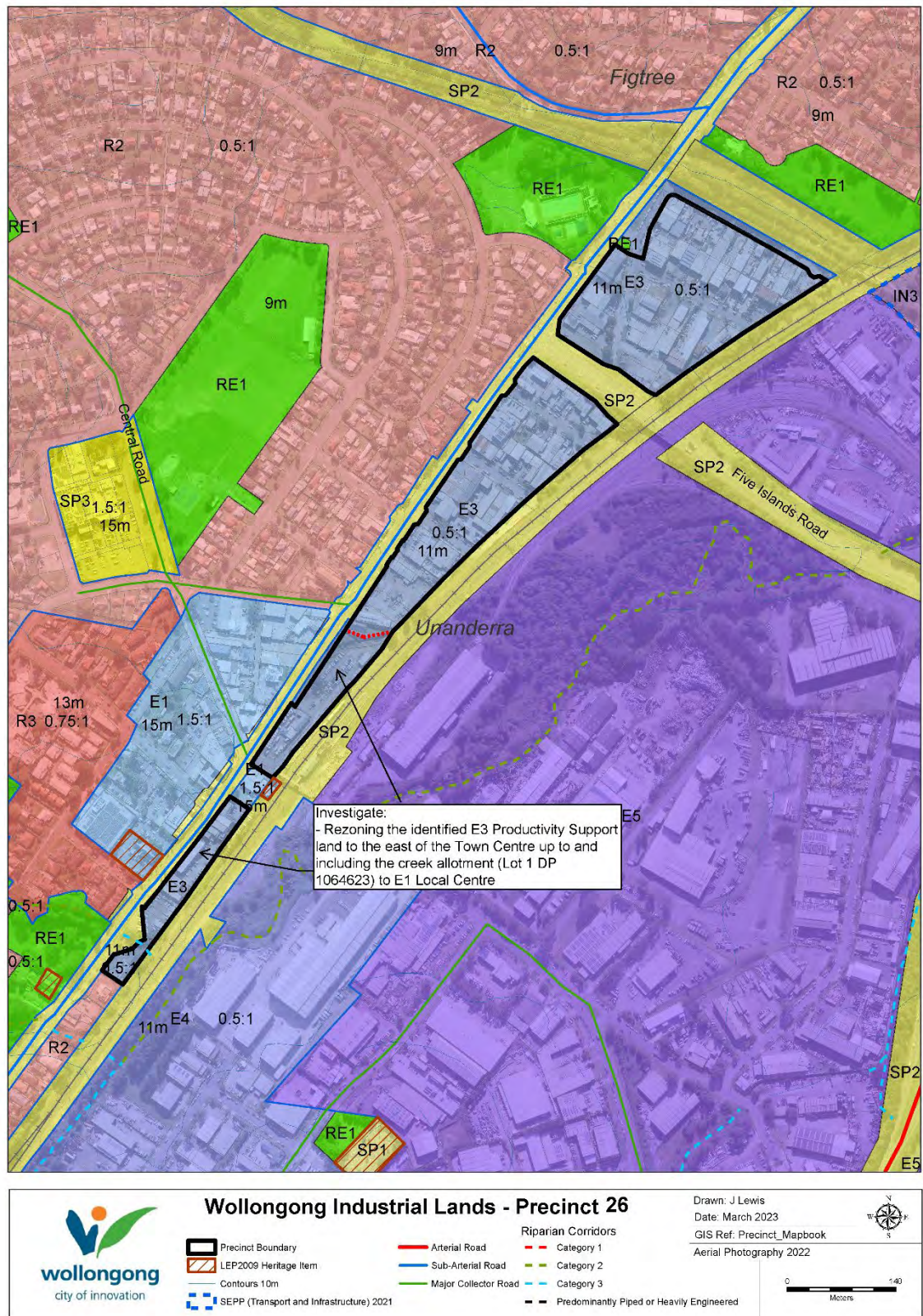


Figure 6.36: Map of Precinct 26: Unanderra – Princes Highway

6.3 Ward 3

Characteristics

Ward 3 is the southern ward of the LGA and covers an area of 176 km² stretching east-west across the coastal plane. Ward 3 contains Wollongong's fastest growing population - the West Dapto Urban Release Area.

Ward 3 contains 91% of the total industrial land in the LGA and includes all three regionally significant employment lands as identified by the NSW Government (the Port of Port Kembla, West Dapto Employment Lands at Kembla Grange and the Tallawarra Employment Lands at Yallah) as well as the Unanderra Industrial Park.

Ward 3 has 1,131 lots representing about 2,217 Ha of industrial land. The majority zoning (41%) is IN3 Heavy Industrial, within the Port Kembla SEPP boundary, followed by E4 General Industrial (23%), E5 Heavy Industrial (13%) outside of the Port Kembla SEPP boundary and SP1 Special Activity (21%) at the Port of Port Kembla with only a small amount of E3 Productivity Support (3%).

In total, Ward 3 contains approximately 1,200ha of heavy industrial land (E5 and IN3). The Wollongong LGA is one of few LGAs containing this zoning in Greater Sydney.

The Port of Port Kembla is a nationally significant economic asset and anchor point for Ward 3's industrial land. The BlueScope Steelworks surrounds the Port, as do a number of large heavy industrial businesses focused on servicing regional, state-wide and national customers. The Port is planned to become NSW's second container terminal by the 2040's and the broader precinct is central to supporting a number of projects that will transition the Illawarra towards large scale development of a clean energy industry.

The nearby Unanderra Industrial Park plays a supporting role for the Port as well as providing land for a number of manufacturing, engineering, and logistics businesses. The West Dapto Employment Lands at Kembla Grange, while largely undeveloped, are important to supporting the longer-term activity at the Port as well as providing additional larger lot industrial land to for new business expansion.

The Tallawarra Employment Lands remain undeveloped and represent a further opportunity to bring to additional industrial land although lack of servicing and contamination are barriers to doing so.

Across Ward 3 there are also a number of general industrial precincts with more of a local urban services role. Key precincts include parts of Port Kembla, Cringila, Dapto and Yallah.

Further, there are a small number of E3 Productivity Support lands, including the bulky goods precinct at King Street Warrawong, the largest in the region.

Site coverage throughout Ward 3 ranges from Nil (Precinct 40 – Tallawarra Employment Lands) up to 56% (Precinct 34 – Warrawong Enterprise Corridor and Industrial Park, E3 zone). The average level of site coverage is 22%, indicating there is potentially more capacity for intensification of industrial development within the existing zoned land (although this does not indicate feasible development).

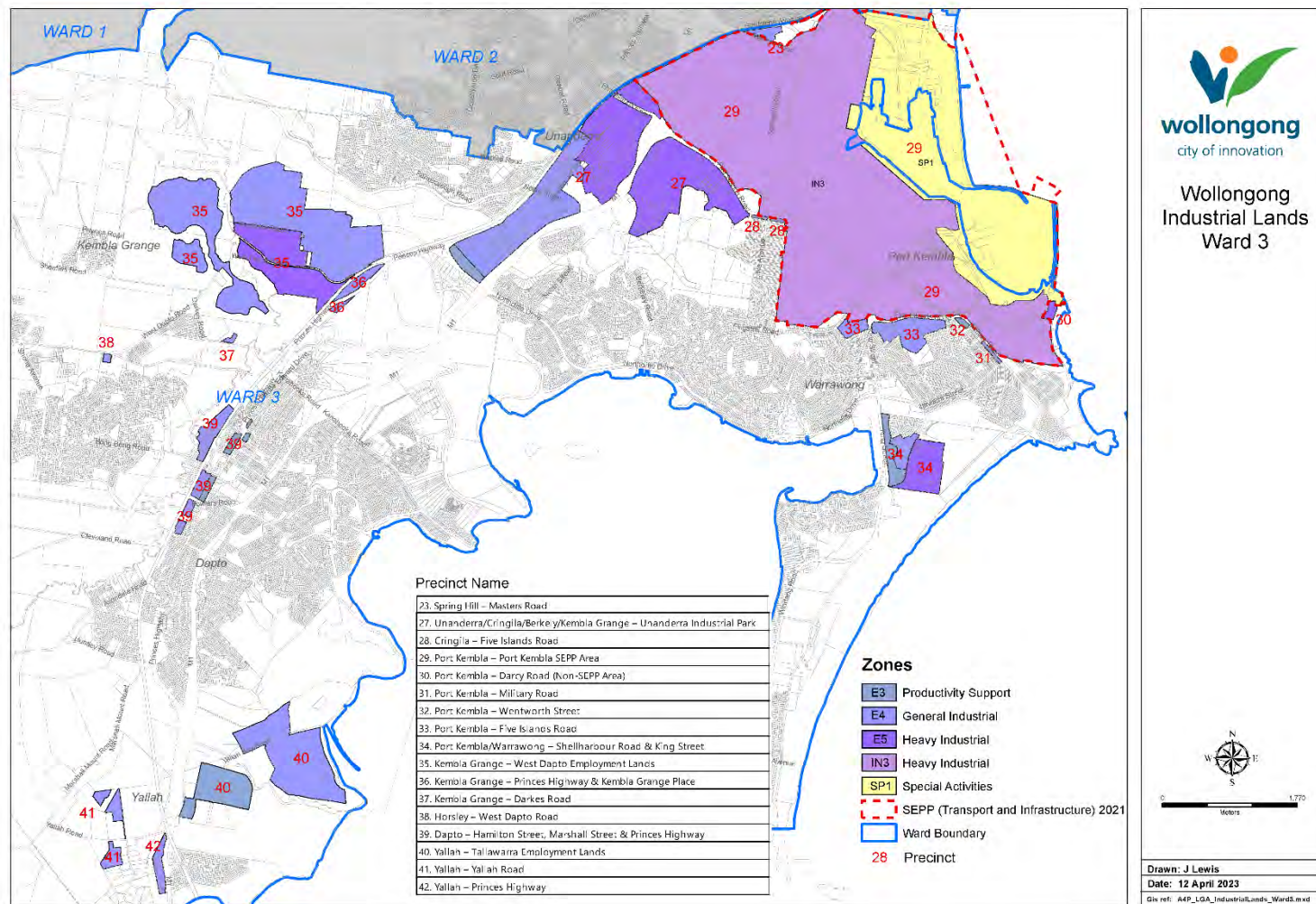


Figure 6.37: Wollongong's industrial lands, Ward 3

Planning considerations

There are several planning considerations relevant to improving the functioning of industrial lands in Ward 3.

*Precinct 23: Spring Hill – Masters Road*¹²

- This precinct comprises two lots of E4 General Industrial land with an area of 4.59 Ha.
- Lot sizes range from 1.29 Ha to 3.30 Ha with an average of 2.29 Ha.
- This precinct is well located on Masters Road with access to the M1 Princes Motorway.
- The site is separated from residential housing to the north by the railway line and there is vegetation to the east of the precinct.
- The precinct was previously zoned IN1 General Industrial although its height and FSR controls generally reflect that of a (then) IN2 Light Industrial zone (11 metres, 0.5:1). There is however no MLS.
- Flooding is a noted constraint (Wollongong City Flood Precinct).
- Known as 'Springhill Centre', the precinct contains a variety of mixed businesses including indoor recreation, light industry (distillery), furniture retailing and take away food and drink premises.
- The precinct is in close proximity to residential housing along Gladstone Avenue and currently provides an appropriate transition to the Port Kembla SEPP Area.

Council could investigate:

- Introducing a MLS control to preserve existing large lots and make the precinct consistent with other E4 zoned land.

¹² Note – Precinct 23 is out of numerical order due to the Ward boundary.

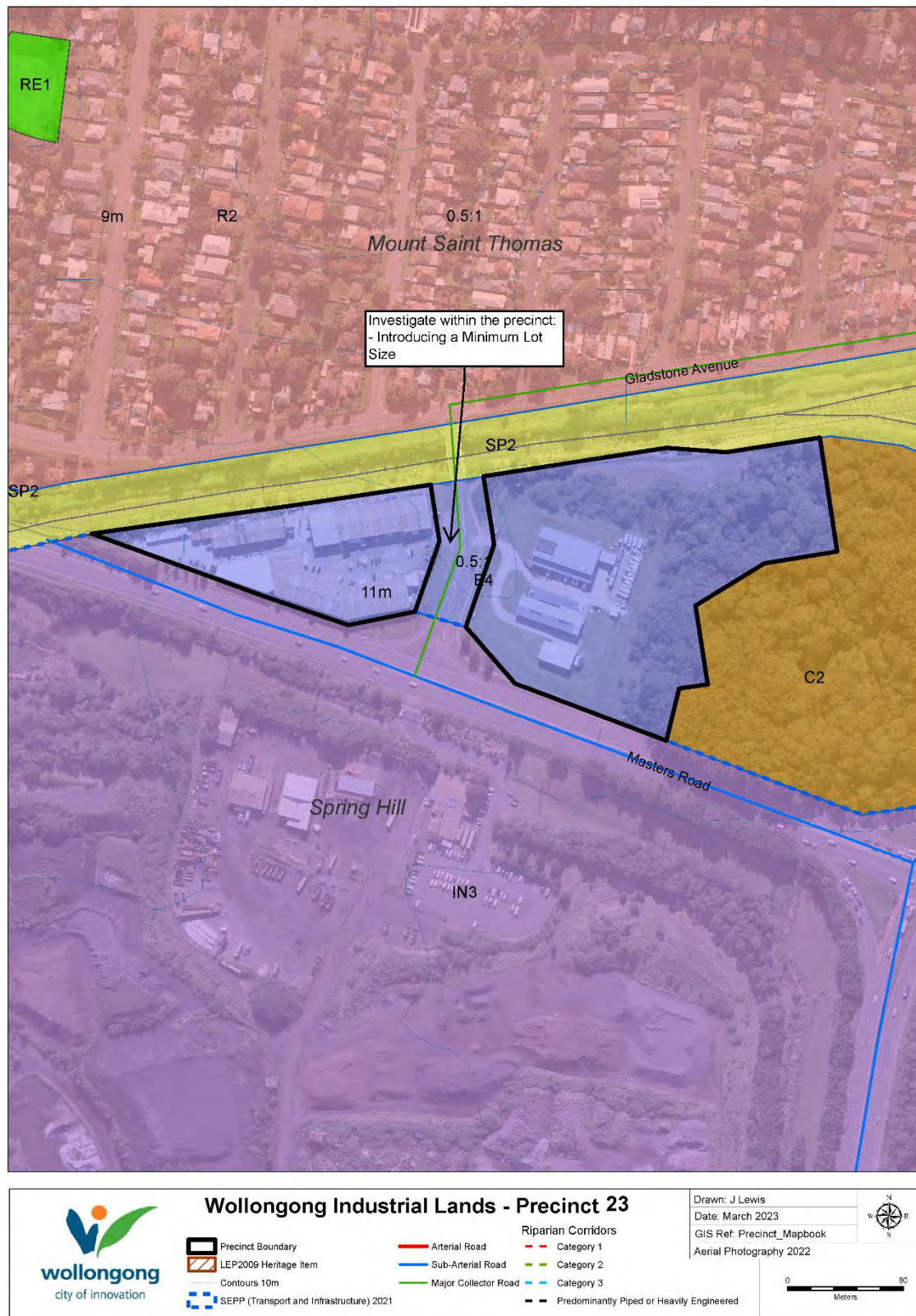


Figure 6.38: Map of Precinct 23: Spring Hill – Masters Road

Precinct 27: Unanderra/Cringila/Berkeley/Kembla Grange – Unanderra Industrial Park

- Although not classed as regionally significant employment land under the Regional Plan, this precinct is recognised as having a strategic role servicing demand from a wide catchment and supporting the operations of the Port of Port Kembla through manufacturing, warehousing and freight services.
- The northern and eastern parts of the precinct contain heavy industrial lands while the central part of the precinct is general industrial followed by a small portion of productivity support land along the southern boundary within the suburb of Kembla Grange.
- Overall, the industrial park is well defined and close to major transport nodes with access along the Princes Highway and Five Islands Road to the M1 Princes Motorway. There are however some challenges with access points to the eastern portion of the precinct.
- Overall, the precinct is buffered from the surrounding residential at Unanderra, particularly the heavy industrial zoning. However, there are a small number of existing houses along the Princes Highway south of the Unanderra Town Centre which may experience negative amenity impacts due to the proximity to industrial activities.
- As shown in Figure 6.39, there are a range of lot sizes within the precinct, the most common being 2,000-2,999 sqm.

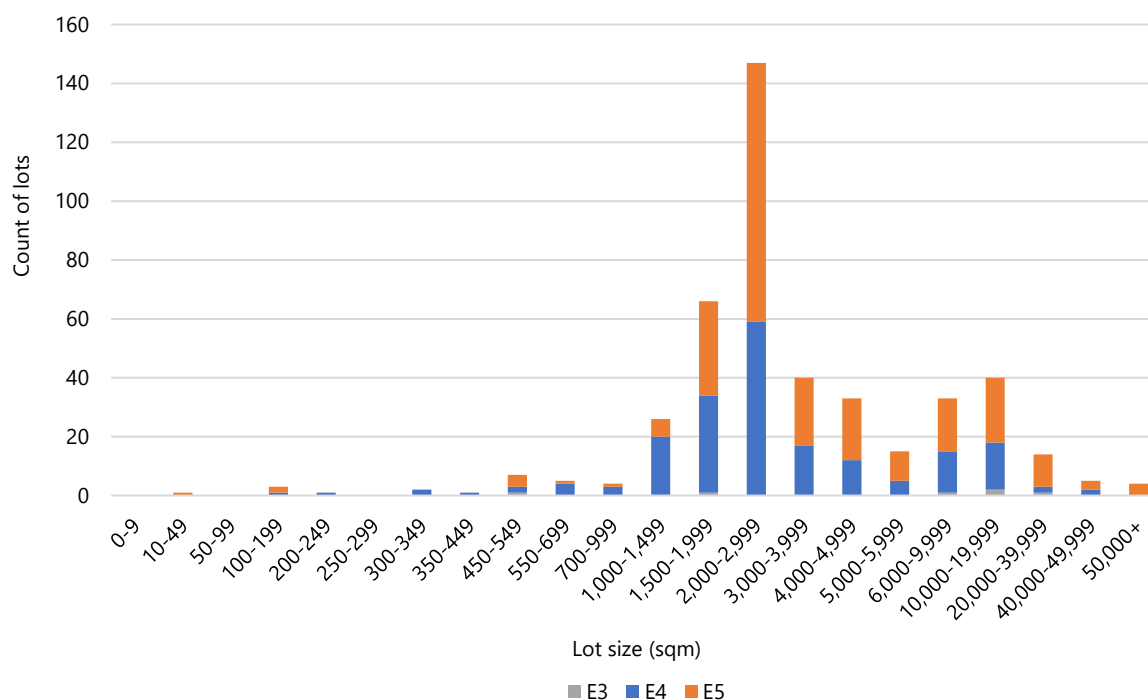


Figure 6.39: Distribution of lot sizes, Precinct 27

The precinct consists of three zones:

27a E3 Productivity Support

- This zone consists of 6 lots with a total area of 7.41 Ha.
- Lot sizes range from 0.05 Ha to 3.47 Ha with an average of 1.24 Ha.
- This zone runs along the precinct's southern boundary in the suburb of Kembla Grange with the lots having a frontage to Northcliff Drive.
- The majority of the lots are occupied by a newly developed Bunnings Warehouse complex.
- Existing controls include a uniform height limit of 11 metres, 0.5:1 FSR and MLS of 0.4 Ha.
- It is noted that the Bunnings Warehouse sought a clause 4.6 variation for additional height (16.6 m) which was approved as part of the development consent.

Noting the recent development on the site, no changes to development standards or land uses have been proposed.

27b E4 General Industrial

- This zone consists of 196 lots with a total area of 85.28 Ha.
- Lot sizes range from 0.002 Ha to 4.97 Ha with an average of 0.44 Ha.
- There is considerable variation in lot size throughout this zone supporting varied land uses and industrial typologies.
- There are a small number of lots located along the Princes Highway and intersected by the junction with Nolan Street and the South Coast Rail Line. Some of these lots are irregular in shape – being narrow and angular, limiting flexibility for industrial development outcomes. These lots are also near residential land to the west.
- The rectangular block bound by Nolan Street, Investigator Drive, Sirius Road and Waverley Drive contains mostly smaller lots including a number of strata industrial complexes.
- Directly north is a large lot at 238-246 Berkeley Road which has a riparian corridor (Allan's Creek) traversing its western boundary, limiting development outcomes on that portion of the site. The remaining portion of the lot is developed with a number of sheds containing a mix of businesses including the Bunnings Trade Centre.
- There is a developed lot (Lot 376 DP 1046385) along Investigator Drive with zoning split between the E4 and E5 zones.
- South of Nolan Street, along Doyle Avenue to the junction with Luso Drive, lot sizes are generally larger, with development similar in character to that expected within a heavy industrial zone. Council owns a parcel of vacant land (Lot 13 DP 264114) that is heavily vegetated occupying the centre of this block.
- South of Luso Drive to the boundary with Canterbury Road, lot sizes become more varied with several large parcels as well as smaller parcels that have been subdivided along Orangegroove Avenue and Sylvester Avenue.
- Flooding is a noted constraint within this zone (Allans Creek Flood Precinct).
- Existing controls include a height limit ranging from no limit to 11 metres, FSR of 0.5:1 and MLS of 0.1 Ha. It is noted that no height limit applies only to a small number of lots located along the Princes Highway, however, this is land that is closest to residential zoning.

Council could investigate:

- Increasing height limits and removing FSR controls to enable industrial intensification, with the exception of the lots located between the Princes Highway and South Coast railway line from the Farmborough road intersection in the north and the railway level crossing on the Princes Highway in the south, where an appropriate height limit should be introduced.
- Increasing MLS to preserve existing large lots from subdivision and support their retention for industrial expansion.
- Rezoning the portion of E4 General Industrial on Lot 376 DP 1046385 to E5 Heavy Industrial to rationalise the zoning across the lot.

27c E5 Heavy Industrial

- This zone consists of 247 lots with a total area of 179.36 Ha.
- Lot sizes range from 0.004 Ha to 15.58 Ha with an average of 0.73 Ha.
- This zone broadly occupies the northern portion of the industrial park and is divided into two halves by the M1 Princes Motorway.
- The western half is bound by the South Coast Rail Line, Marley Place (where it is adjacent to IN3 land under the SEPP in Precinct 29) and transitions to the E4 zone along Berkeley Road and Investigator Drive.
- The Eastern portion is bound by Five Islands Road (lots here are part of the suburb of Cringila), Glastonbury Avenue and Brady Street (lots are part of the suburb of Berkeley). Adjacent to the south is C3 Environmental Management zoning reflecting increased slope into the areas known as the 'Berkeley and Cringila Hills'.
- There is a listed heritage item within the precinct – the site of the former "Berkeley House" along Glastonbury Avenue.
- Flooding is also noted constraint within this zone (Allans Creek Flood Precinct).
- Existing controls include no height limit or FSR control, however, there is a 0.4 MLS which is intended to limit subdivision of larger land parcels required for industrial businesses and to distinguish this zone from the previously light industrial zone (IN2) which had a 0.1 Ha MLS.
- In 2022, Council received an enquiry regarding part of Lot 12 DP 1188144 No 26 Warehouse Place, Berkeley.
 - The enquiry sought feedback on the potential rezoning of approximately 9,500 sqm from C3 Environmental Management to E5 Heavy Industrial. The proposal also raised the potential for a portion of Lot 11 (No 24) adjacent to the site being included in a future Planning Proposal (PP).
 - The enquiry noted that an earlier draft Planning Proposal (PP-2014/9) for a portion of the subject site along with 13 Brady Street (Part of Lot 7 DP 1090509) and 15 Brady Street (Part of Lot 22 DP 1188144) Berkeley was considered by Council at its meeting of 31 July 2017 and Council resolved at that time for it not to proceed.
 - Subsequently, Council advised the proponent that any planning proposals regarding industrial land will not be considered until the finalisation of this Review.

Council could investigate:

- Increasing the MLS to further protect existing large lots from subdivision and support their retention for industrial expansion
- Reviewing the boundary of the precinct, to clarify the boundary between environmental conservation / constrained areas and land the may be suitable for industrial development

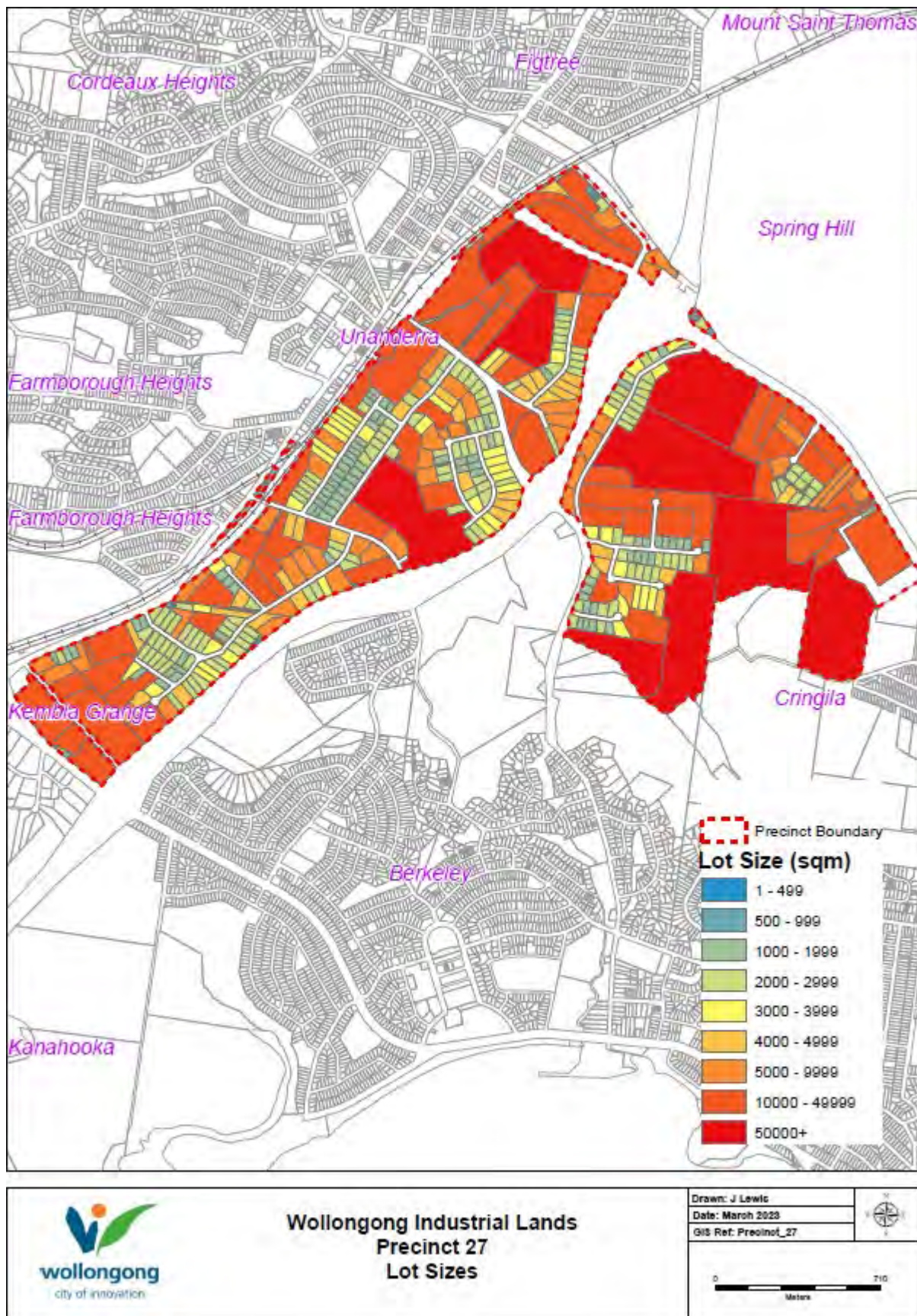


Figure 6.40: Lot size map, Precinct 27

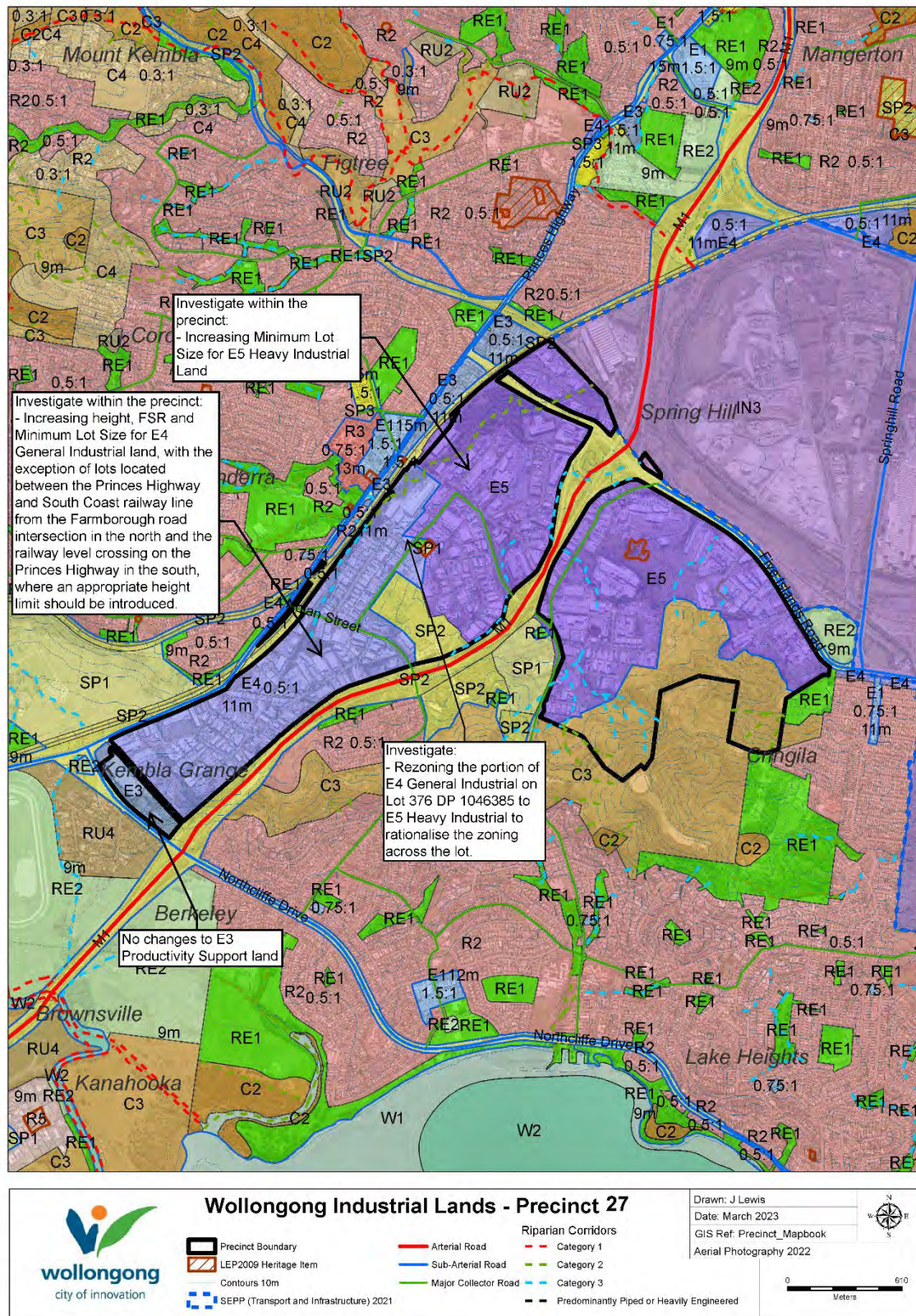


Figure 6.41: Map of Precinct 27: Unanderra/Cringila/Berkeley/Kembla Grange – Unanderra Industrial Park

Precinct 28: Cringila – Five Islands Road

- This precinct comprises 42 lots of E4 General Industrial land with an area of 1.56 Ha.
- Lot sizes range from 0.03 Ha to 0.22 Ha with an average of 0.04 Ha.
- The precinct is located along on Five Islands Road with proximity to the M1 Princes Motorway.
- It is noted that while lots east of Lake Avenue have access via a slip lane, those west of Lake Avenue do not. The latter lots are under one ownership; however, industrial redevelopment potential is constrained whilst access is restricted to the existing vehicle driveways.
- The lots are mostly very small (less than 400sqm) and support a variety of land uses including urban services, fabrication, industrial retail outlets and a service station.
- Cringila village is adjacent. The E1 Local Centre bisects the E4 General Industrial zoned land with the site of the Five Islands Hotel.
- Existing controls include a height limit of nine metres, 0.5:1 FSR and MLS of 999 sqm. The height limit is lower than the typical 11 metres for the zone, however, it is considered appropriate due to the precinct's direct residential interface.

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| <ul style="list-style-type: none">• No changes to development standards or land use have been proposed. |
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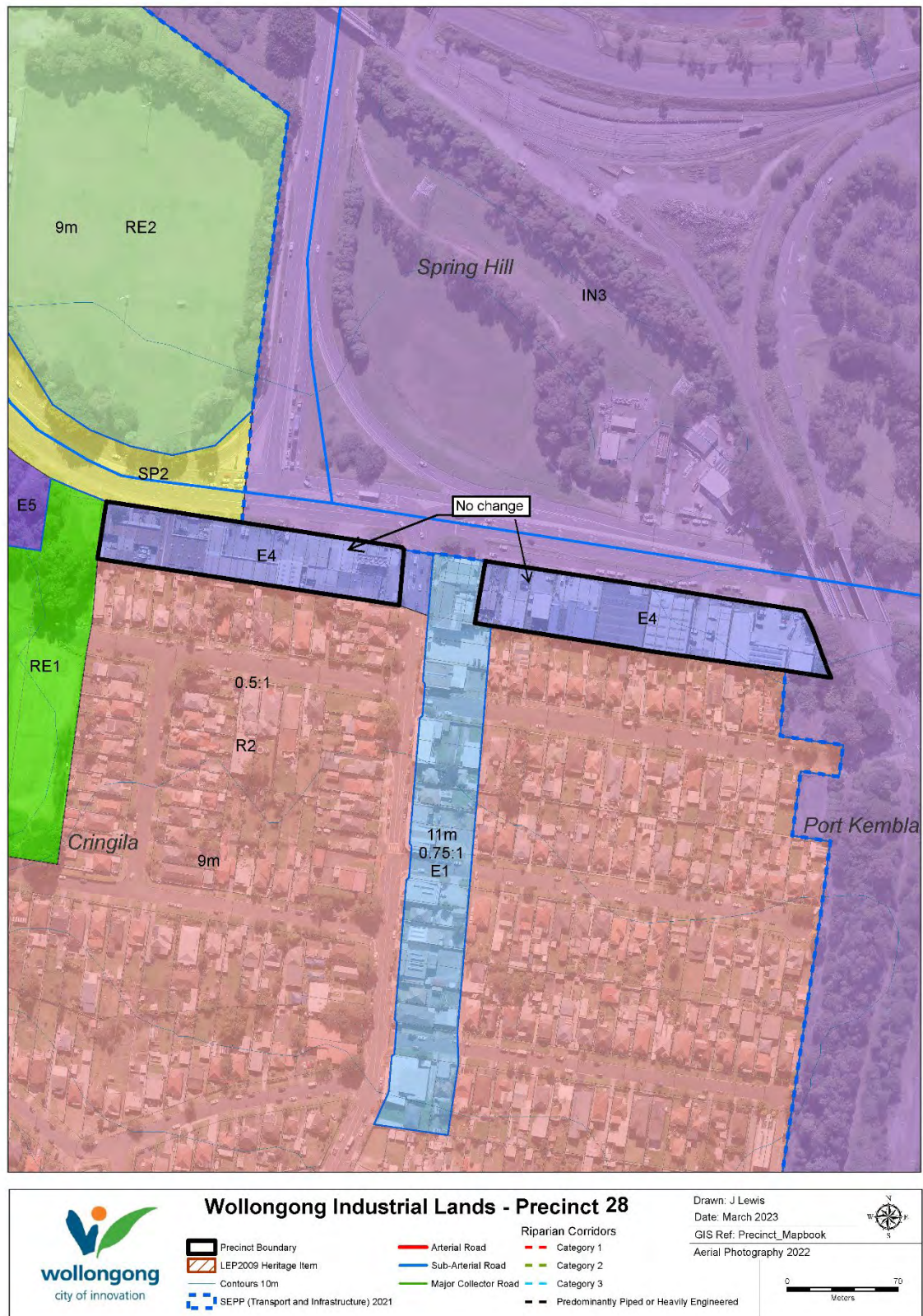


Figure 6.42: Map of Precinct 28: Cringila – Five Islands Road

Precinct 29: Port Kembla – Port Kembla SEPP Area

- Port Kembla is the largest industrial area in Wollongong LGA.
- The industrial land at Port Kembla is an integral part of Wollongong's history reflecting more than ninety years of steelmaking in the region.
- The Port of Port Kembla is an economic asset of national significance and NSW's largest terminal for vehicle imports and grain exports, and the second largest terminal for coal exports. It also handles several dry bulk, break bulk and bulk liquids and has a Liquefied Natural Gas import facility under construction.
- Most of the industrial land at Port Kembla falls under the application of SEPP (Transport and Infrastructure) 2021 as the principal environmental planning instrument.
- The Port area (Inner and Outer Harbour) is leased by the NSW Government to NSW Ports on a long-term lease. Most of these lands are then tenanted through sub-leasing arrangements to port operators. Most of the industrial lands surrounding the Port lease area are owned by BlueScope Steel, with other landowners, such as Port Kembla Copper and other metal manufacturers, owning smaller parcels.
- The precinct leverages off a strong transport network comprising the port, rail and road. These provide access to domestic and international markets. The area also has an established service infrastructure network, including high voltage power and recycled water.
- The precinct's major road connections are Springhill Road (to the Wollongong CBD) and Five Islands and Masters Roads (to the M1 Princes Motorway). The precinct includes public passenger and freight railway (with the South Coast Line running through the precinct to Port Kembla station) as well as private lines servicing port operations. Freight connections out of the precinct include both the South Coast Line and the Moss Vale – Unanderra Line.
- Port Kembla is at the centre of the NSW Government's vision for development of the Illawarra as a 'hydrogen hub' and supporting a number of projects within the recently announced Illawarra Renewable Energy Zone (REZ). Some of the projects proposed or already underway include:
 - NSW Port's approved Outer Harbour Expansion which is intended to provide land for an eventual container terminal in the 2040s once Port Botany reaches capacity. NSW Ports have also announced they are looking to support the assembly of offshore wind infrastructure in this area, given the active interest in offshore wind investment and development by the 2030s.
 - Squadron Energy are currently constructing the 'Port Kembla Gas Terminal' at Berth 101 which will see the import of Liquefied Natural Gas (LNG) to the region. Further, Squadron Energy have proposed a \$1.3B hydrogen-gas turbine power station at Berth 101 which has been declared as Critical State Significant Infrastructure and is currently at the stage of preparing an Environmental Impact Statement.
 - BlueScope have also made a number of announcements:
 - a \$1B relining of the No.6 Blast furnace which received NSW Government approval as Critical State Significant Infrastructure in September 2022.
 - a Masterplan to unlock approximately 200 Ha of surplus/under-utilised land and repurpose existing buildings.
 - investigating green steel production, the establishment of an Advanced Steelmaking Precinct and other clean/innovative technologies.
- In 2021, the NSW Government released the *Port Kembla Precinct Profile* which provides extensive information of the role of the Port Precinct, including existing operations and future aspirations including clean energy projects³⁶. Key directions identified in the Profile include:

- A future container terminal at Port Kembla will be a catalyst for growth including opportunities around gas infrastructure, expansion of the bulk liquids terminal and increasing the throughput of construction materials.
- Advanced and clean manufacturing, such as wind tower fabrication and battery materials manufacturing, as potential emerging opportunities.
- That key pieces of infrastructure such as the potential Maldon–Dombarton rail line and corridor (status and timing yet to be confirmed) are likely to be pivotal in helping both attract and support emerging growth opportunities at the precinct.
- That the exact details of land and infrastructure requirements (particularly land size requirements) for most of these emerging and conceptual uses are unknown at this early stage and typically will depend on the size and capacity of development/facility proposed. Careful consideration will be required to assess the feasibility of whether all these uses can practically and safely fit within the port.
- That of underutilised and non-operational sites and key emerging strategic processes such as the BlueScope Masterplan/Lands Strategy or the new NSW Ports Master Plan may also provide some answers about additional future/surplus land availability for emerging port uses and the potential for co-location opportunities. At the time of finalising this Review preliminary details regarding the Bluescope Masterplan of surplus lands at Port Kembla have been released. Any future decision making in relation to changes to planning controls for the Port SEPP area will be a NSW State Government run process.
- That private ownership of land at the Port requires there also to be a desire for the landowners to develop the land for these purposes.
- That effective coordination and early collaboration between key government agencies, landowners and operators will be required to ensure that the land and infrastructure requirements of future uses in the port can be met where possible (as projects become more certain) and that they can coexist in harmony.
- Since the publication of the Profile, Port Kembla has also been raised as a possible East Coast location to base the Australian Government’s future nuclear-powered submarine fleet under the AUKUS defence agreement. As of April 2023, the Australian Government has announced it is still considering all feasible options and no decision has been made.³⁷
- On 24 May 2023, a ‘Commodity Logistics and Import Project’ (State Significant Infrastructure) was approved which will see the upgrade of three berths at the Port Kembla Steelworks, including the installation and operation of a new continuous ship unloader and conveyor, and the relocation of three existing ship unloaders. The upgrade to the berth infrastructure would increase the ship unloading rate and the volume of materials that can be handled each day, providing the additional capacity needed for imported coal and ensure ongoing production of local steel as local supply of coking coal scales back from 2028.
- The precinct consists of two distinct zones:

29a IN3 Heavy Industrial

- This zone consists of 165 lots with a total area of 909.44 Ha.
- Lot sizes range from 0.001 Ha to 370.77 Ha with an average of 5.51 Ha.
- The BlueScope Steelworks are the most significant site which in itself has a number of sub precincts associated with BlueScope’s operation.
- In this zone, there are no existing controls on height, FSR or MLS. This differs from E5 heavy industrial land under WLEP 2009 where there is generally a 0.4 MLS. There are

also some land use permissibility differences that have been previously discussed (Section 4.1).

- There are several listed heritage items that interact with this zone:
 - Mobile Block Settling Steam Crane
 - Hill 60, Illowra Battery
 - Brick Chimney, Port Kembla Copper
 - Office and House, Port Kembla Copper
 - Commonwealth Rolling Mill Plant and Gardens
- It is noted that as part of Stage 2 of Council's Heritage Schedule Review, consideration is being given to the potential of two additional heritage listings at No 1 Steelworks, Five Islands Road, which would require an amendment to the SEPP:
 - Group of BHP Houses - 'Mortlock' 'Mandalay' and 'Flagstaff'
 - "Lindenfels" House and Garden
- Flooding is a noted constraint within the zone with Allan's Creek a major riparian corridor that flows into Port Kembla Harbour (Allans Creek Flood Precinct).

29b SP1 Special Activities

- This zone consists of 69 lots with a total area of 465.03 Ha. This includes two large lots that comprise the inner harbour and hence the total amount of 'dry-land' is approximately 245.70 Ha, although it is noted that land has been progressively reclaimed overtime.
- Lot sizes range from 0.002 Ha to 132.6 Ha with an average of 6.74 Ha.
- The objective of this zone is to promote efficient operations of the Port of Port Kembla.
- Flooding is also a noted constraint within this zone (Allans Creek Flood Precinct).
- There are no existing height, FSR or MLS controls.

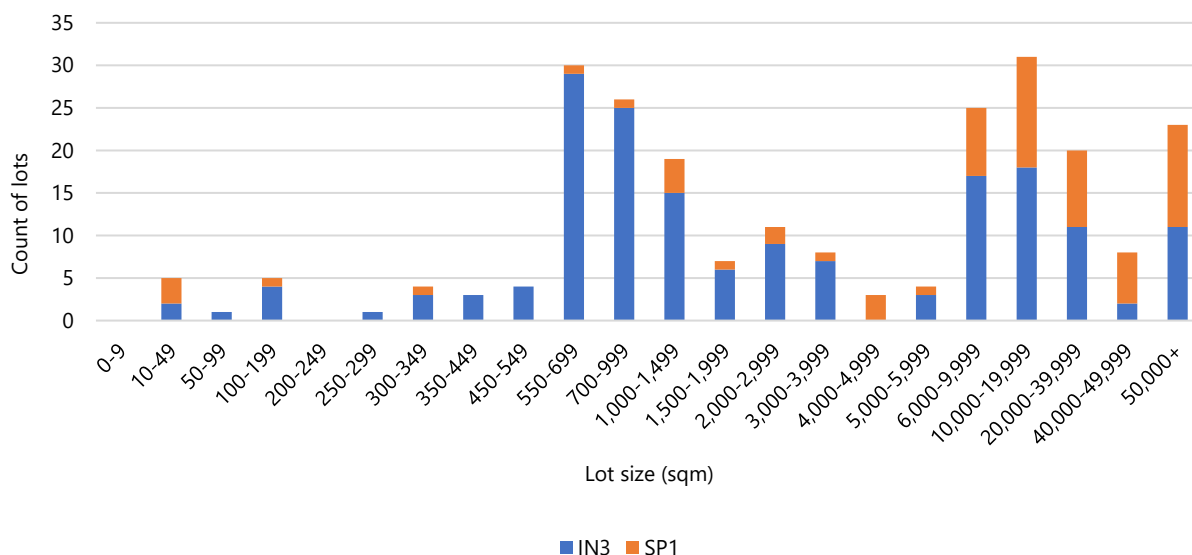


Figure 6.43: Lot size distribution, Precinct 29

Planning Considerations

While Council does not have direct planning authority over this precinct, this Review highlights the following planning considerations:

- Council's vision for the Port and surrounds is that it remains an area of critical economic importance focused on employment generation in heavy industry, port operations as well as supporting clean energy investment.
- The heavy industrial zoning should be retained and not compromised by encroachment of other uses within the SEPP boundary, especially residential. Alternative employment uses that provide opportunity for growth and evolution of employment generating sectors will be supported through rigorous precinct scale master planning and strategic evaluation processes.
- There is an opportunity to strengthen controls concerning residential interfaces including protecting existing residents of Cringila and Port Kembla from unacceptable levels of noise and/or emissions.
- Council will continue to work proactively with stakeholders through the Port Kembla Roundtable that it chairs to enable coordination of development within the precinct.
- Council will continue to advocate for improved connectivity to the Port, particularly freight rail, in line existing adopted strategies such as the Economic Development Strategy 2019-29 and the Local Strategic Planning Statement (2020).

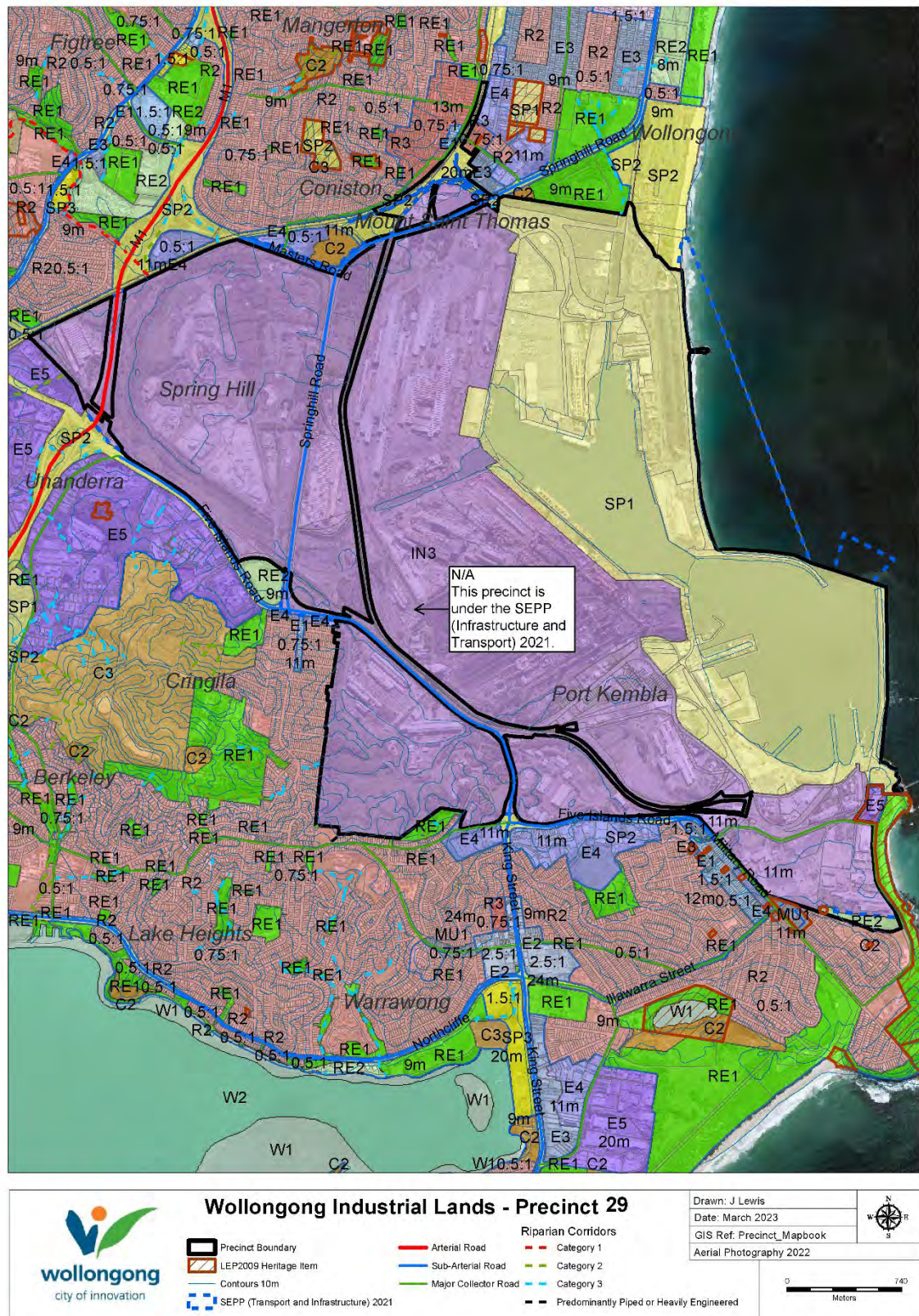


Figure 6.44: Map of Precinct 29: Port Kembla – Port Kembla SEPP Area

Precinct 30: Port Kembla – Darcy Road (Non-SEPP Area)

- This precinct comprises of two lots of IN3 Heavy Industrial Land on Darcy Road and Gloucester Boulevard with a total area of 2.49 Ha. The lots are under one ownership.
- Lot sizes range from 0.55 Ha to 1.94 Ha with an average of 1.24 Ha.
- The applicable environmental planning instrument is the Wollongong LEP 2009; however, the precinct is surrounded by land within Precinct 29 where SEPP (Transport and Infrastructure) 2021 is applicable.
- The precinct has seen a recently approved Development Application (DA-2022/788) relating to the first stage of a hydrogen electrolyser, research, development and manufacture facility.
- The precinct has a heritage listing, namely, MM Beach which is directly opposite and listed with state significance.
- There are no height or FSR controls however there is a 9.99 Ha MLS control which is inconsistent with other E5 zoned land (0.4 Ha MLS is typical).

Council could investigate rectifying the inconsistency of applicable planning instruments through consultation with DPE to consider the incorporation of this precinct into SEPP (Transport and Infrastructure) 2021.

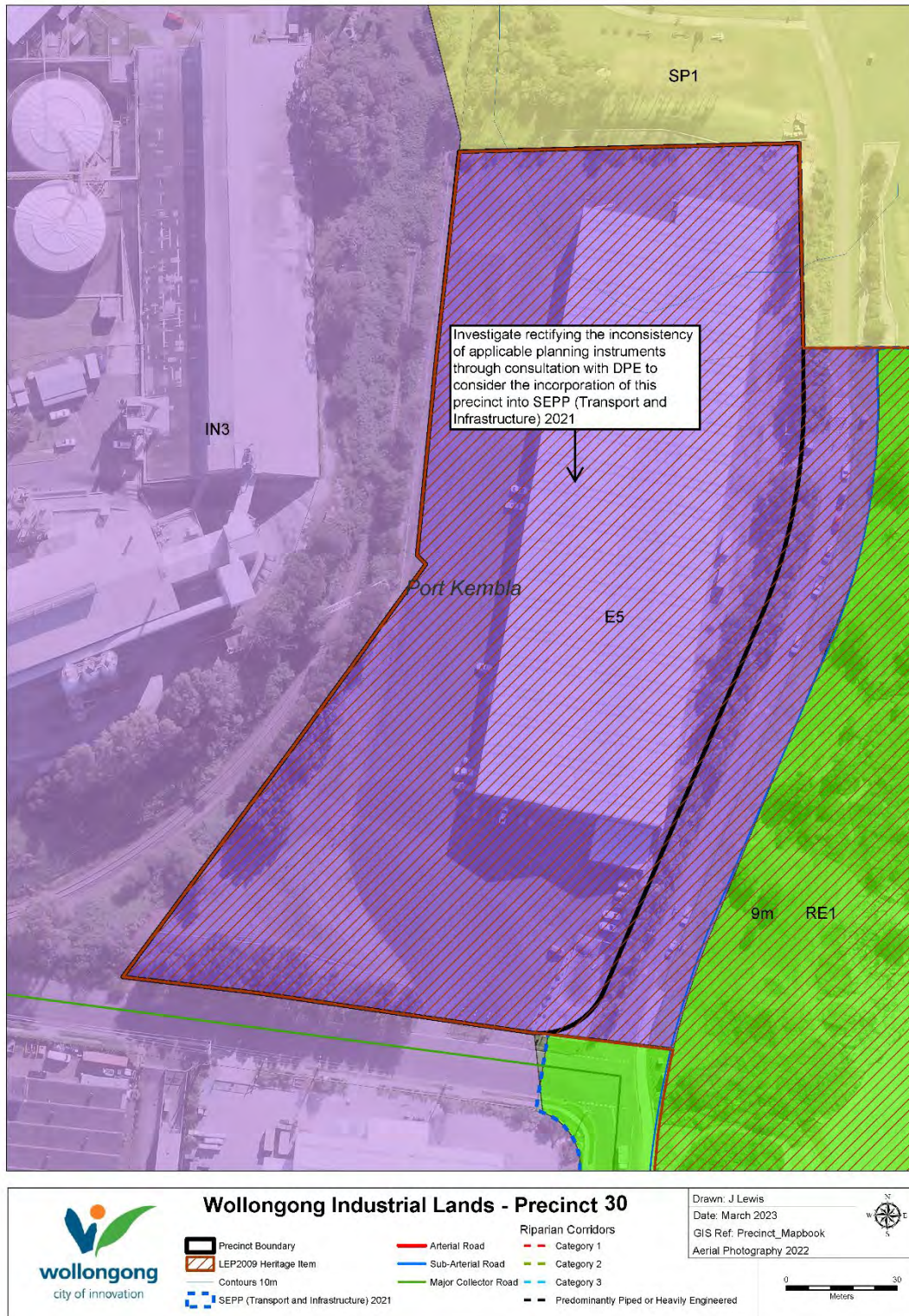


Figure 6.45: Map of Precinct 30: Port Kembla – Darcy Road (Non-SEPP Area)

Precinct 31: Port Kembla – Military Road

- This precinct comprises 25 lots of E4 General Industrial with a total area of 1.46 Ha.
- Lot sizes range from 0.05 Ha to 0.12 Ha with an average of 0.06 Ha.
- The precinct runs along the majority of two blocks of Military Road between Church Street and Allan Street. The northern most lots of these blocks are zoned E1 Local Centre. The Port Kembla Town Centre runs adjacent to the precinct, along Wentworth Street.
- There are two listed heritage items within the precinct – the Former Fire Station (Lot 1, DP 1224353) and a Bomb shelter (Lot 1, DP 1037234).
- The Retail and Business Centres Study recommended that within this Review the E1 Local Centre zoning along Military Road between Allan and Darcy Streets be considered for transition to E4 General Industrial zoning in line with the adopted Port Kembla 2505 Revitalisation Plan 2018 – 2045 vision for Military Road, that it has a light industrial character.
- There is an identified oversupply of Local Centre zoned land within the Port Kembla Town Centre. Military Road is best suited to light industrial uses which provide a transition between the Town Centre and the adjacent heavy industrial land within the SEPP Area. Allan Street forms an entry to the town centre from Military Rd, with the town centre carpark and Club Building facing onto this street.
- Existing controls include a uniform height limit of 11 metres, 0.5:1 FSR and MLS of 0.1 Ha.

Council could investigate:

- Rezoning the E1 Local Centre land along Military Road between Allan and Darcy Streets to E4 General Industrial, except for the lots facing Allan Street (Lots 7-11 Sec 1 DP 5868), acknowledging their role as part of the Town Centre.
- Rezoning Lot 5 Sec 2 DP 5868 from E4 General Industrial to E1 Local Centre to ensure consistent zoning across Council's Car Park.

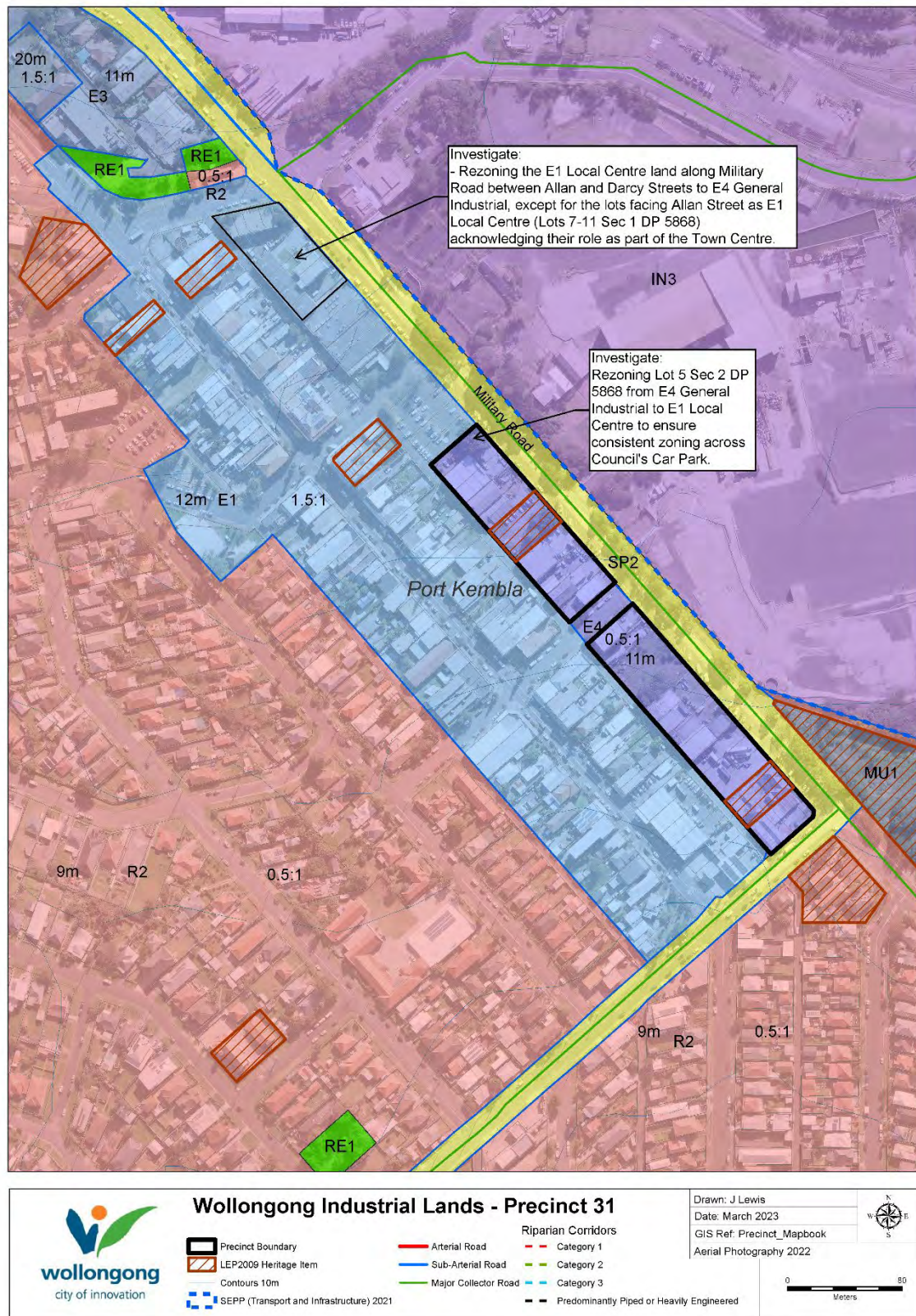


Figure 6.46: Map of Precinct 31: Port Kembla – Military Road

Precinct 32: Port Kembla – Wentworth Street

- Prior to the DPE Employment Zones Reform, this precinct consisted of two distinct zones:
 - 12 lots of B6 Enterprise Corridor (0.72 Ha, average lot size 0.06 Ha)
 - 2 lots of B7 Business Park (0.24 Ha, average lot size 0.12 Ha).
- The precinct now consists entirely of 14 lots of E3 Productivity Support land with a total area of 0.96 Ha. Lot sizes range from 0.01 Ha to 0.20 Ha with an average of 0.07 Ha.
- Similar to Precinct 22 (Coniston), there is now a misalignment of planning controls among the lots.
- The lots which were previously B6 have no minimum lot size, a 0.5:1 FSR and height limit of 11 metres. In contrast, the lots which were previously B7 have a minimum lot size of 0.07 Ha, a FSR of 1.5:1 and height limit of 20 metres.
- The previous B7 land resulted from a spot rezoning in 2010 from the surrounding B6 to enable a proposed office development that subsequently did not eventuate. Part of this land is currently occupied by a not for profit organisation in an older style campus building.
- The E3 zoned land to the north is underutilised (road reserve) and requires further investigation to determine its purpose and future role.

Council could investigate:

- Aligning development standards across the precinct.
- The current and future role of adjacent vacant road reserve.

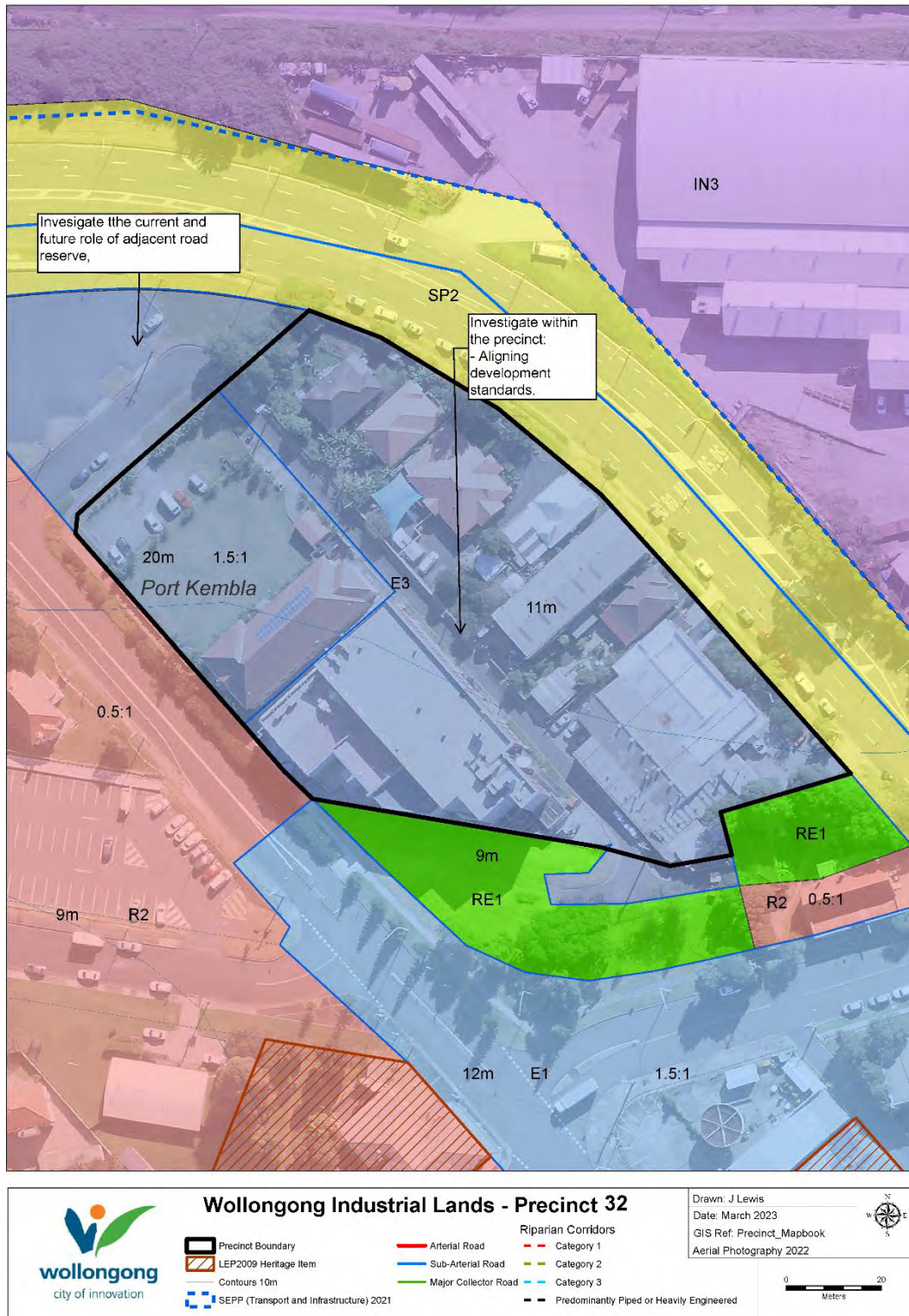


Figure 6.47: Map of Precinct 32: Port Kembla – Wentworth Street

Precinct 33: Port Kembla – Five Islands Road

- This precinct consists of 44 lots of E4 General Industrial land with a total area of 29.52 Ha.
- Lot sizes range from 0.04 Ha to 6.55 Ha with an average of 0.67 Ha.
- This is an important node of light industrial land that runs adjacent to the southern boundary of the Port Kembla SEPP Area, providing good sized lots with mixed opportunities for local manufacturing, urban services, and warehousing.
- Recent development includes a strata complex of 33 industrial units at 35 Five Islands Road. This complements an existing strata complex at 41 Five Islands Road.
- King Street divides the precinct, with the western portion dominated by two large lots along Wattle Road and the majority of properties in the eastern portion which is Five Islands Road.
- The precinct is not flat with several sections involving sloped land.
- There is surrounding residential along the southern boundary with direct interfaces in both the western and eastern portion of the precinct. The precinct forms a transition buffer between the IN3 SEPP lands and the residential area.
- Existing controls across the precinct are a uniform height limit of 11 metres, 0.5:1 FSR and MLS of 0.1 Ha.

Council could investigate:

- Increasing the height limit and FSR controls to support industrial intensification.
- Increasing the MLS to preserve existing large lots and support industrial expansion.

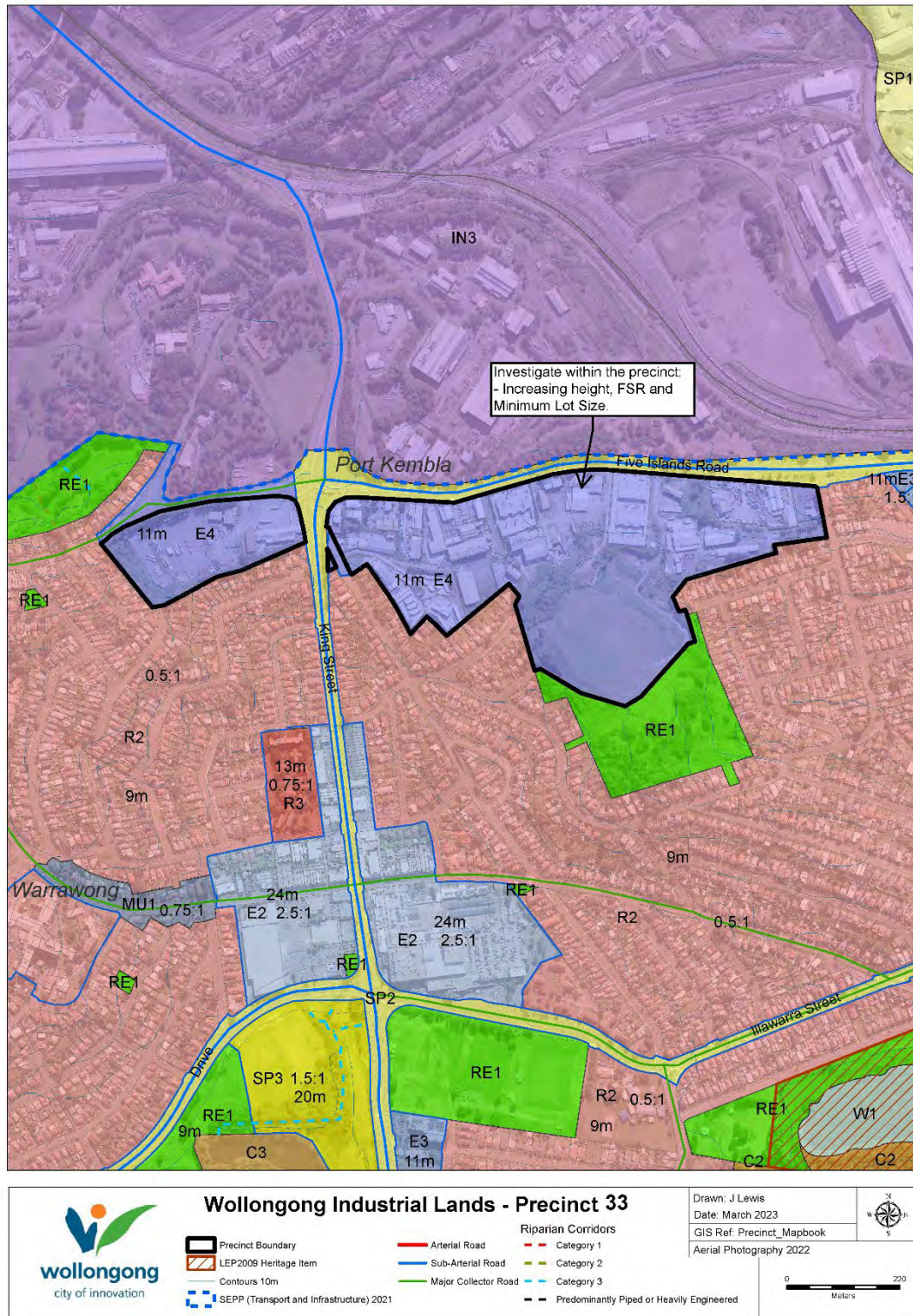


Figure 6.48: Map of Precinct 33: Port Kembla – Five Islands Road

Precinct 34: Port Kembla/Warrawong – Shellharbour Road & King Street

- This large precinct has two main frontages – King Street, Warrawong (E3) and Shellharbour Road, Port Kembla (E4 and E5).
- This precinct offers a significant clustering of bulky goods retailing as well as a mix of industrial and warehousing/storage businesses.
- This precinct consists of three zones:

34a. E3 Productivity Support

- This zone consists of 33 lots with a total area of 11.17 Ha.
- Lot sizes range from 0.02 Ha to 1.57 Ha with an average of 0.34 Ha.
- This zone is orientated along King Street and services as a key bulky goods retailing precinct servicing not just local residents but also residents of the broader region. There are however other land uses with examples including take away food and drink, indoor recreation (gym), a radio station and the Warrawong District Library.
- Existing controls include a uniform 11 metre height limit, 0.5:1 FSR and MLS of 0.2 Ha.
- There is adjacent residential on the east side of Carlotta Crescent.

No changes to development standards or land use for this zone have been proposed.

34b. E4 General Industrial

- This zone consists of 23 lots with a total area of 9.22 Ha.
- Lot sizes range from 0.02 Ha to 1.47 Ha with an average of 0.4 Ha.
- This zone runs adjacent to the E3 zone with frontages along Shellharbour Road and Kemblawarra Road, the latter having a direct residential interface.
- There is a mix of lot sizes with most being relatively large although some are quite narrow.
- There is a wide variety of land uses present with a range of building typologies. Larger sheds industrial activities such as fabrication and logistics services.
- Other example land uses include urban services (automotive), crane storage, self-storage, and civil construction. The Kemblawarra Portuguese Sports and Social Club is also present.
- There are a number of through-site links to the bulky good retail on King Street.
- One lot has split zoning with the E3 and encompasses the showroom of a bulky goods retail store that runs across the entire lot and between the two zones.
- Existing controls include a uniform height limit of 11 metres, 0.5:1 FSR and MLS of 0.2. (which is higher than the typical 0.1 Ha for this zone).

Council could investigate:

- Increasing the height limit and FSR across the E4 General Industrial zone to support industrial intensification.
- Increasing the MLS across the E4 General Industrial zone to preserve existing large lots and support industrial expansion.

34c. E5 Heavy Industrial

- This zone consists of 22 lots with a total area of 29.35 Ha.
- Lot sizes range from 0.01 Ha to 7.24 Ha with an average of 1.33 Ha.

- This large area of heavy industrial zoned land extends along the eastern side of Shellharbour Road and supports a wide variety of land uses.
- There is again a mix of lot sizes, including a few very large lots.
- The northern portion of the zone includes mostly industrial operators operating from large sheds with example businesses involved in industrial galvanizing, sandblasting, engineering, recycling, steel supplies and urban services (automotive).
- Further south is a large complex known as the 'Warrawong Business Park' with the main land use being warehousing/distribution and self-storage. Some warehouses operate as storage for the nearby bulky goods retailers on King Street. There are however other land uses present, including employment services and indoor recreation, noting the latter is no longer permissible within the new E5 zone per the DPE Employment Zone Reforms.
- Existing controls include a 20 metre limit (which is not in place on any other E5 zoned land), no FSR and a 0.4 Ha MLS.

Council could investigate:

- Increasing the MLS across the E5 Heavy Industrial zone to preserve existing large lots and support industrial expansion.

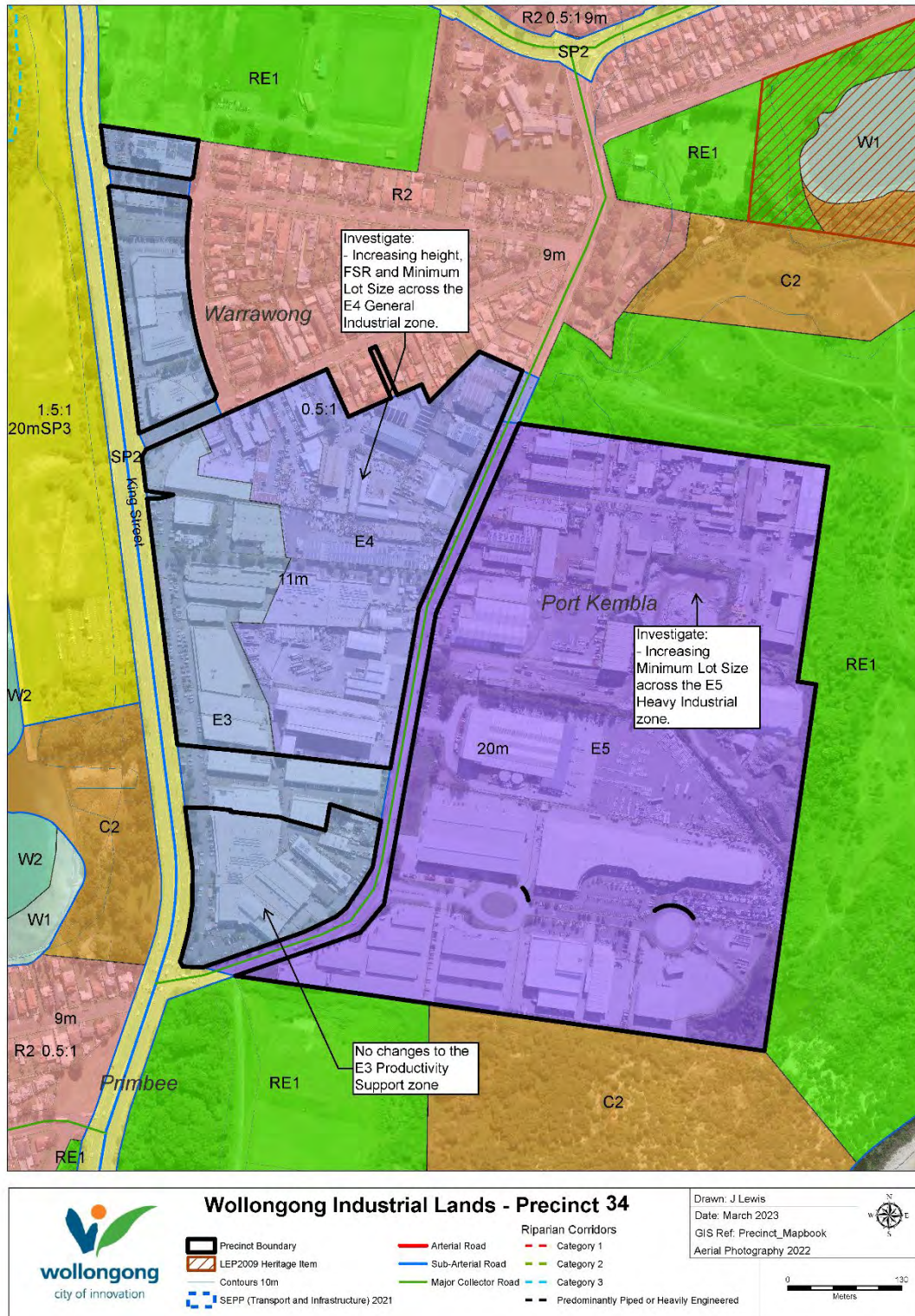


Figure 6.49: Map of Precinct 34: Port Kembla/Warrawong – Shellharbour Road & King Street

Precinct 35: Kembla Grange – West Dapto Employment Lands

History

- This precinct known as the 'West Dapto Employment Lands' is considered by the NSW Government to be regionally significant employment land.
- Like Unanderra, the NSW Government has identified the precinct as having a support role to the Port of Port Kembla, particularly in waste and resource recovery as well as automotive logistics. Broad functions of the precinct include Manufacturing, Freight Storage and Circular Economy³⁸.
- There is a long history of industrial land uses within the precinct with historical imagery from 1977 showing two large, developed lots along West Dapto Road associated with manufacturing storage for Port Kembla. By 1986/87, imagery shows that Reddalls Road had been constructed and Council's Whytes Gully Landfill was operational.
- In 2010 the West Dapto LEP 2010 was made which included the expansion of industrial zoning within the precinct with the purpose of providing more employment land in the release area for the future population.
- In 2014 and 2016, Council approved development applications for the storage of imported automotive vehicles from the Port of Port Kembla on a number of lots. The land use does not hinder future higher and better employment uses of the land.
- The precinct includes a number of large parcels of land held under one ownership:
 - Council is a substantial landowner within the precinct with approximately 66 Ha of land including the Whytes Gully Landfill and a listed heritage item – the Glengarry Cottage. At 55 Reddalls Road, Council owns a vacant block of E4 General Industrial land (0.72 Ha).
 - BlueScope own a number of lots (Lot 1 DP 588139; Lot 2 DP 230137; Lot 1 DP 588140; Lot 1002 DP 1192327) known collectively as the 'BlueScope holdings'. This includes two large undeveloped lots on the southern side of West Dapto Road currently being used for grazing of livestock.
 - A private company involved in large scale storage of automotive vehicles imported through the Port of Port Kembla. This is currently the dominant land use across both the E4 and E5 zones.
- Other example land uses within the precinct are asphalt batching, engineering services, organics recycling and urban services (automotive).
- In 2018, industrial lands within the precinct were identified by the NSW Government as a potential location for a prison. However, the proposal did not proceed.

Draft Planning Proposal

- There is an active draft planning proposal (PP-2021-7425) known as the 'BlueScope Holdings – West Dapto Road, Kembla Grange' under consideration by Council. The draft proposal:
 - applies to a combined area is 215.69 Ha including approximately 115.58 Ha on the western side of West Dapto Road and 100.57 Ha on the eastern side and bound by the South Coast Rail Line.
 - seeks to rezone 7.9 ha of C3 Environmental Management and 0.8 ha of C2 Environmental Conservation to 8.7 ha IN2 Light Industrial zoned land as well as 3.5 ha of SP2 Railway to IN3 Heavy Industrial zoned land. This includes a disused rail line.
 - does not propose to change existing LEP controls on the existing industrial zoned land nor introduce controls on the additional industrial land that differ.
 - includes a draft Neighbourhood Plan for the site outlining a proposed development concept for the residential and industrial zoned lands.

Precinct

- The precinct is well buffered from surrounding residential land to the north and west.
- This precinct is located within the West Dapto Urban Release Area (WDRUA) Stage 1/2 Kembla Grange and forms the majority of employment land within the WDRUA.
- The precinct consists of two industrial zones:

E4 General Industrial

- There are 31 lots of E4 General Industrial land with a total area of 232.24 Ha.
- Lot sizes range from 0.003 Ha to 35.60 Ha with an average of 7.49 Ha.
- 18 lots (58%) are larger than one hectare, including a number of very large lots ranging up to 35 Ha.
- Existing controls include a uniform nine metre height limit (lower than the typical 11 metre height limit for this zone), 0.5:1 FSR and MLS of 0.1 Ha.
- Flooding is a noted constraint within this zone and there a number of riparian corridors (Mullet Creek Flood Precinct).
- There are also two listed heritage items in this zone – the “Glengarry Homestead” and a Moreton Bay Fig (West Dapto Road).
- Wollongong DCP Chapter 16 West Dapto Urban Release Area includes the ‘Reddalls Road Industrial Neighbourhood Plan’ which introduces additional controls applicable to industrial land west of Reddalls Road including the requirement for future development to upgrade Reddalls Road to a standard that is suitable for the normal range of Heavy vehicles at no cost to Council.
- It is noted that Council has received a development enquiry from a landowner regarding the possibility of industrial strata unit development on Lot 1001 DP 1192327, which is on the southern side of West Dapto Road adjacent to heavy industrial land (part of the BlueScope holdings).

Council could:

- Review the boundaries of the E4 General Industrial zoning along the western side of Reddalls Road where it meets the C3 Environmental Zoning to ensure it appropriately reflects the required conservation zone. This includes the small portion of E4 zoning on Lot 3 240557 as well as E4 zoning on Council owned land (Lot 2 DP 1232422).
- Investigate increasing height and FSR controls to allow for intensification of industrial development.
- Investigate increasing the MLS to preserve existing large lots and support industrial expansion.

E5 Heavy Industrial

- There are seven lots of E5 Heavy Industrial land with a total area of 67.63 Ha.
- Lot sizes range from 0.16 Ha to 34.78 Ha with an average of 9.66 Ha.
- Five out of seven lots (71%) are large ranging from one to 35 Ha.
- Flooding is a noted constraint within the precinct with a number of riparian corridors (Mullet Creek Flood Precinct).
- On the north side of West Dapto Road, BlueScope own a smaller vacant parcel that is traversed by a riparian corridor and disused railway line. The remaining parcels in this

block bound by Reddalls Road include storage of automotive vehicles (mostly outdoors) as well as storage of steel products.

- South of West Dapto Road is a large undeveloped parcel of land (part of the BlueScope holdings) with disused railway running across its north-eastern boundary. The land is well buffered with adjacent C3 Environmental Management around a riparian corridor to the west and public recreation land at the southern boundary. It is known that flooding severely constrains the current development potential of this parcel.
- Existing controls include no height limit or FSR and a MLS of 2,999 sqm, which is smaller than the 3,999 sqm applicable in Precinct 27 (Unanderra Industrial Park).

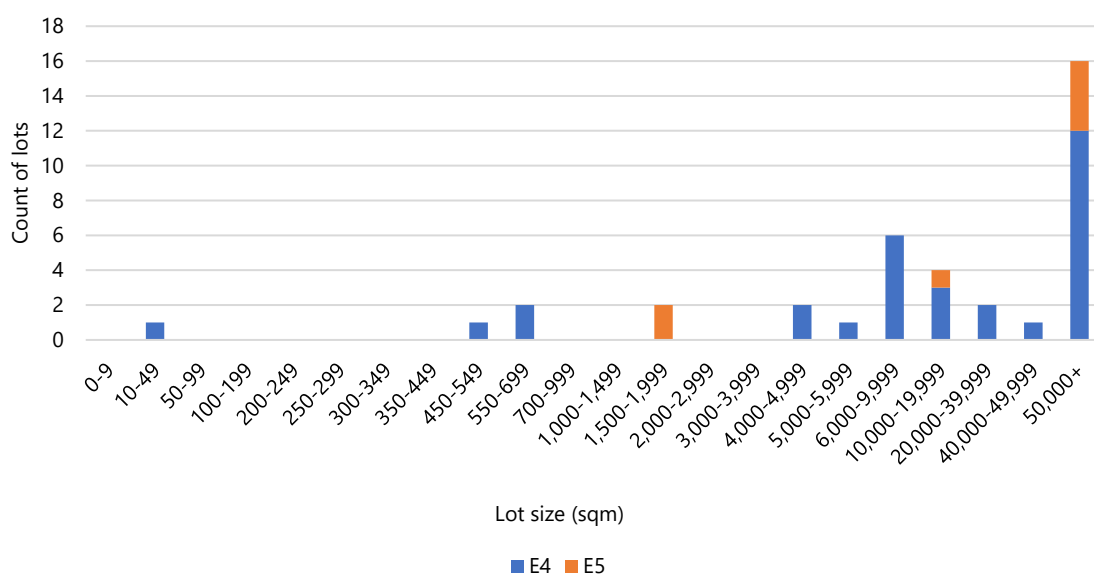


Figure 6.50: Lot size distribution, Precinct 35

Council could consider increasing the MLS to preserve existing large lots and support industrial expansion.

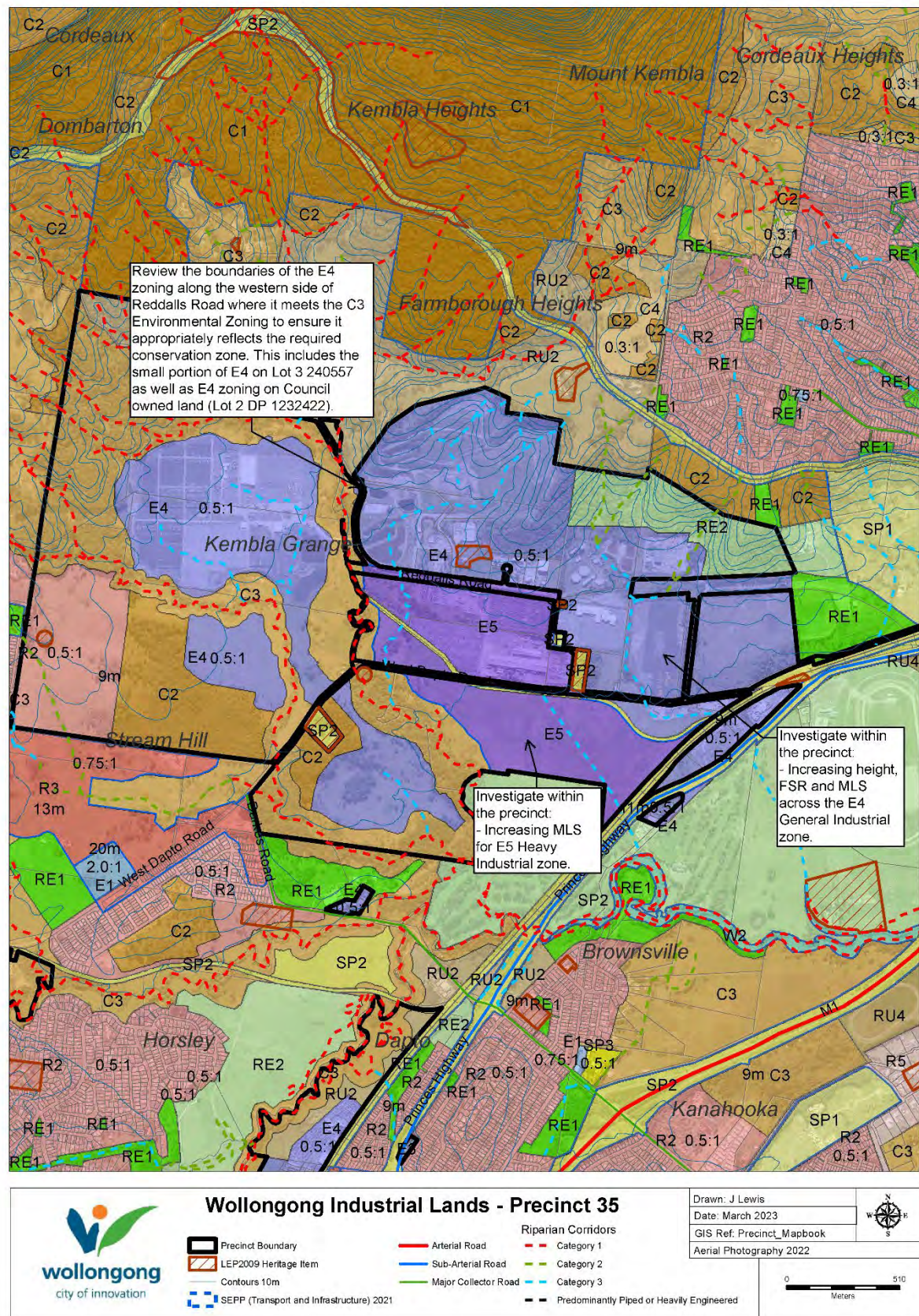


Figure 6.51: Map of Precinct 35: Kembla Grange – West Dapto Employment Lands

Precinct 36: Kembla Grange – Princes Highway & Kembla Grange Place

- This precinct consists of 11 lots of E4 General Industrial land with a total area of 8.46 Ha.
- Lot sizes range from 0.01 Ha to 2.84 Ha with an average of 0.77 Ha.
- This precinct consists of some of the oldest industrial land within the Kembla Grange area with historical imagery showing industrial development from as early as 1961 which has progressively filled in. It is adjacent to Precinct 35 which was zoned later directly to the west.
- Businesses operating in this precinct are predominately of an urban services character although there are other uses such as outdoor recreation (go kart track) present.
- Flooding is noted as a constraint within the precinct (Mullet Creek Flood Precinct).
- Existing controls are not consistent across the precinct.
 - Along the Princes Highway, lots have a nine metre height limit, 0.5:1 FSR and no MLS.
 - In contrast, lots along Kembla Grange Place have an 11 metre height limit, 0.5:1 FSR and a MLS of 999 sqm.
- Council has received an enquiry on behalf of the owner of a site within the precinct requesting consideration of increasing height limits from nine to 11 metres, noting this was previously considered by Council in 2013 with an LGA wide Housekeeping Review that did not progress.

Council could investigate:

- Aligning controls across the precinct including increasing height and FSR controls as well as introducing a consistent MLS.

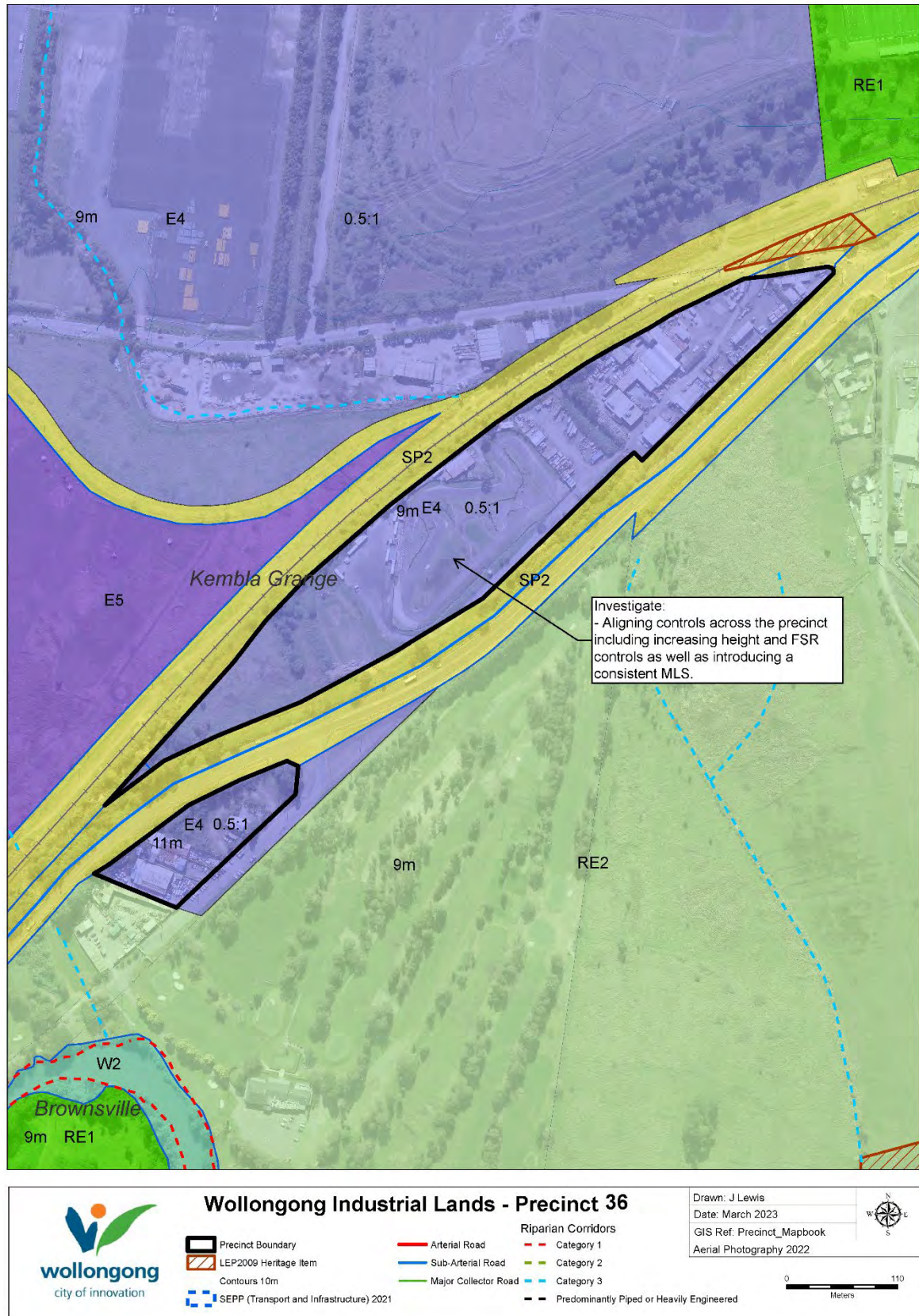


Figure 6.52: Map of Precinct 36: Kembla Grange – Princes Highway & Kembla Grange Place

Precinct 37: Kembla Grange – Darkes Road

- This precinct consists of 3 lots of E4 General Industrial land with a total area of 1.10 Ha.
- Lot sizes range from 0.36 Ha to 0.38 Ha with an average of 0.37 Ha.
- This precinct is located within the WDURA Stage 1/2 Kembla Grange.
- The precinct is relatively isolated with access is via Darkes Road which is single-carriage way, although there is connectivity to the M1 Princes Motorway via the Princes Highway.
- The western edge of the precinct is in close proximity to R2 Low Density Residential on the southern side of Darkes Road although there is presently limited housing development and no direct interface.
- Otherwise, the precinct is well buffered, surrounded by private recreation land (including the Australian Motorlife Museum) as well as environmental management to the south and east associated with a riparian corridor.
- Land uses currently include urban services (automotive), landscaping design/construction and an occupied dwelling house.
- Flooding is a noted constraint within the precinct (Mullet Creek Flood Precinct).
- Existing controls include a uniform height limit of nine metres, 0.5:1 FSR and MLS of 0.1 Ha.

Due to size of the precinct and relative isolation, opportunities for industrial intensification are limited. No changes to development standards or land uses have been proposed.

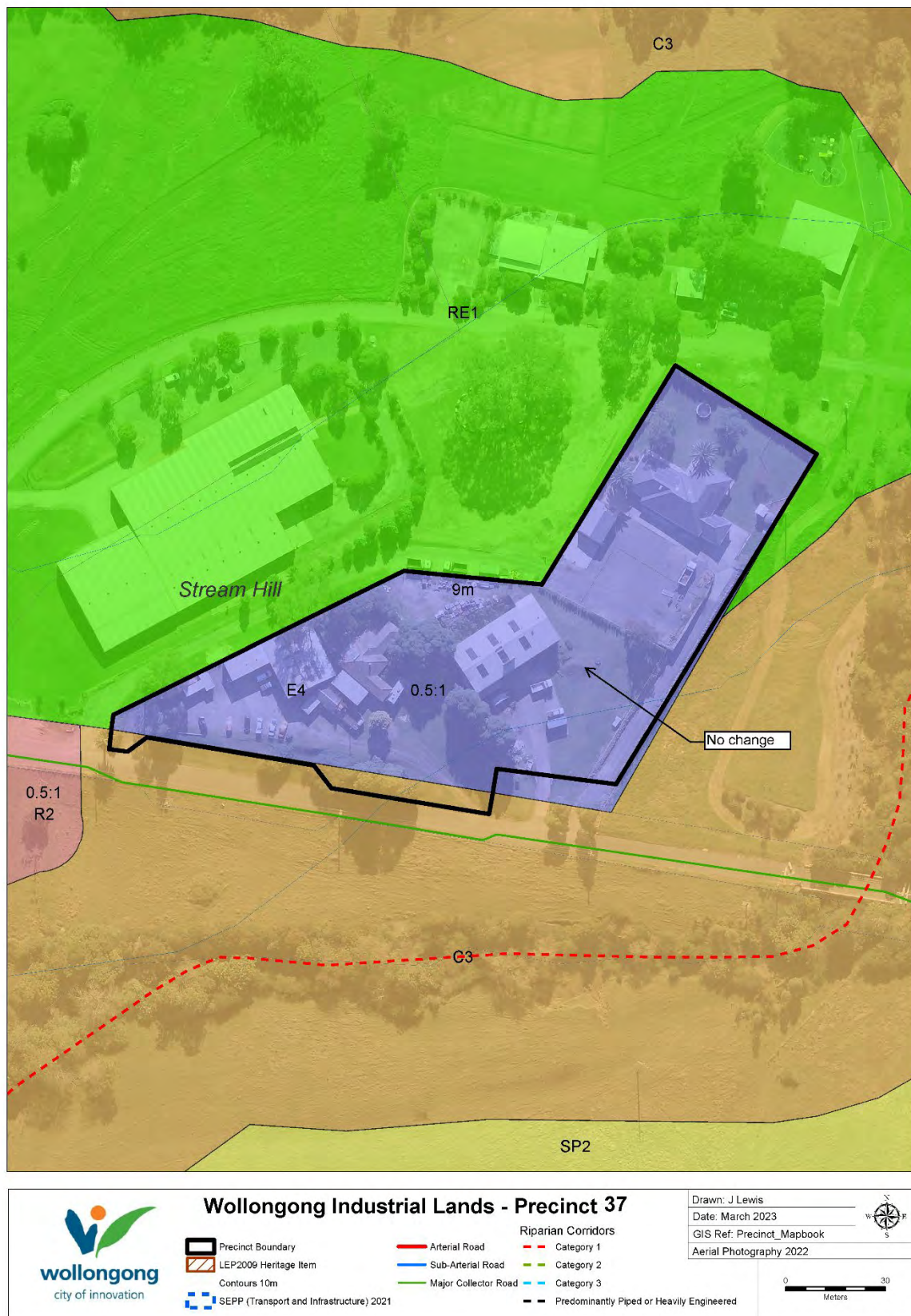


Figure 6.53: Map of Precinct 37: Kembla Grange – Darkes Road

Precinct 38: Horsley – West Dapto Road

- This precinct consists of a single isolated lot of E4 General Industrial land with a total area of 1.08 Ha.
- The precinct is located within the WDURA Stage 1/2 Sheaffes/Wongawilli.
- Access is via West Dapto Road to the M1 Princes Motorway although it is not in close proximity. There is also an existing railway line connecting the Wongawilli Colliery with the main South Coast Rail Line directly in front of this site and running parallel to West Dapto Road.
- The site is isolated and well buffered from surrounding residential zones via C3 Environmental Management land associated with riparian corridors and is heavily vegetated to the south and east.
- There has been recent development on the site with construction of a self-storage facility (65 units) that includes improved road access.
- Flooding is a noted constraint within the precinct (Mullet Creek Flood Precinct).
- Existing controls include a uniform nine metre limit (which is lower than the typical 11 metres for this zone across the LGA), 0.5:1 FSR and MLS of 0.1 Ha.

Due to the site's isolation as well as recent development, no changes to development standards or land use have been proposed.

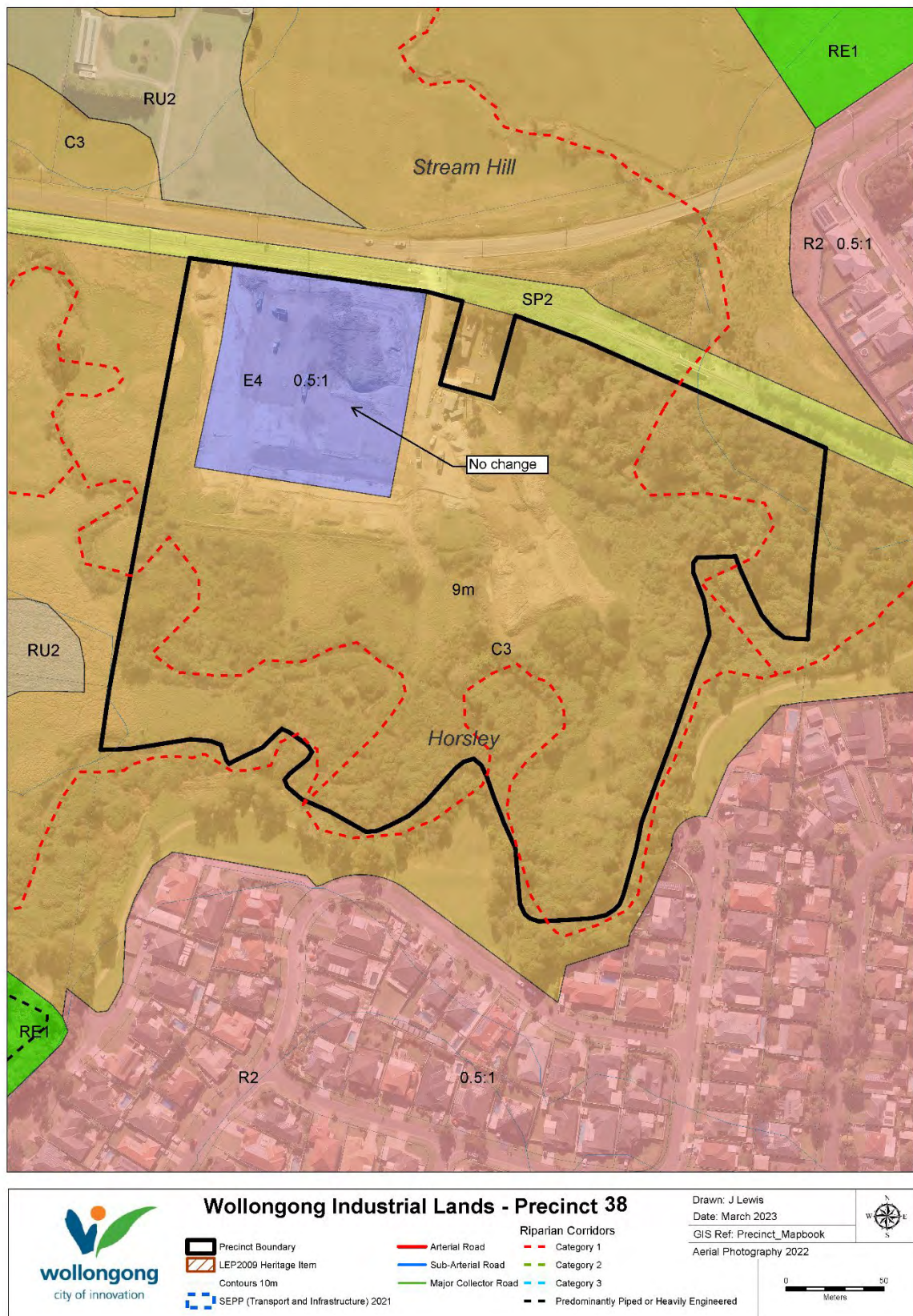


Figure 6.54: Map of Precinct 38: Horsley – West Dapto Road

Precinct 39: Dapto – Hamilton Street, Marshall Street & Princes Highway

- This precinct includes a number of lands that are disjointed and orientated around the Dapto Town Centre. There are two relevant zones:

E3 Productivity Support

- This zone consists of 67 lots with a total area of 5.99 Ha.
- Lot sizes range from 0.02 Ha to 0.20 Ha with an average of 0.09 Ha.
- This zone is orientated along the Princes Highway and provides a transition to the Dapto Town Centre from the north and south. Lots on the northern side have a direct interface with surrounding residential zoning.
- Existing controls include a variation in height limits (nine to 11 metres) as well as FSR (0.5:1 up to 1.2:1). The higher end of the range includes an FSR more in line with zoning for the town centre.
- Additionally, there is no minimum lot size for this zone.
- Flooding is a noted constraint within this zone (Mullet Creek Flood Precinct).
- Although there is variation in controls, the existing controls are considered appropriate as they provide a transition to the Town Centre.

No changes to development standards or land use have been proposed.

E4 General Industrial

- This zone consists of 77 lots with a total area of 18.96 Ha.
- Lot sizes range from 0.01 Ha to 4.84 Ha with an average of 0.25 Ha.
- The E4 zone has a uniform nine metre limit (which is lower than the typical 11 metre height limit for this zone), 0.5:1 FSR and MLS of 0.1 Ha.
- The zone has two distinct areas – lots along Hamilton Street and along Marshall Street to junction with Cleveland Road.

Hamilton Street

- The zoning along Hamilton Street has a significant riparian corridor along its western boundary with associated C3 Environmental Management zoning that splits another of otherwise industrial lots.
- At the end of Hamilton Street is a very large lot associated with a used car wreckers and parts store (Lot 11 DP 229044). Elsewhere, there are limited industrial businesses operating along Hamilton Street, with the majority of lots still occupied by housing that existed prior to the current zoning.
- Despite this, there is no direct residential interface with the industrial zoning buffered by environmental management land and the rail corridor to the east.
- Further, it is noted there is a large strip of vacant zoned industrial lands with no access that runs adjacent to the rail corridor. This land is part of Lot 2 DP 1278090 which includes rail corridor that is zoned SP2 Infrastructure.

Marshall Street

- In contrast to Hamilton Street, Marshall Street contains a wider variety of industrial businesses, however, occupied housing is still present.
- Despite this, only the southern portion of Marshall Street (between Fowlers Road and Cleveland Road) has a direct residential interface (R3 Medium

Density Residential) on the eastern side of the road. It is noted that this adjacent residential has a higher height limit (11 metres).

- The rail line separates this land from R2 Low Density Residential to the west.
 - Example land uses include urban services (automotive, concrete batching, building supplies) as well as recently developed strata units and self-storage.
 - The former Dapto Bowling Club, which includes split zoning between the E4 and RE2 Private Recreation, has seen recent re-development of part of the site to a childcare centre.
 - Council also owns approximately 1.71 Ha of vacant industrial land (Lot 100 DP 1116914) along Marshall Street.
 - Marshall Street contains a listed heritage item – the former Crystal clothing factory.
- As noted previously in Ward 1, the presence of significant occupied housing compromises the total industrial potential of the zone and can introduce potential land use conflicts.
 - Flooding is a noted constraint within this zone (Mullet Creek Flood Precinct).

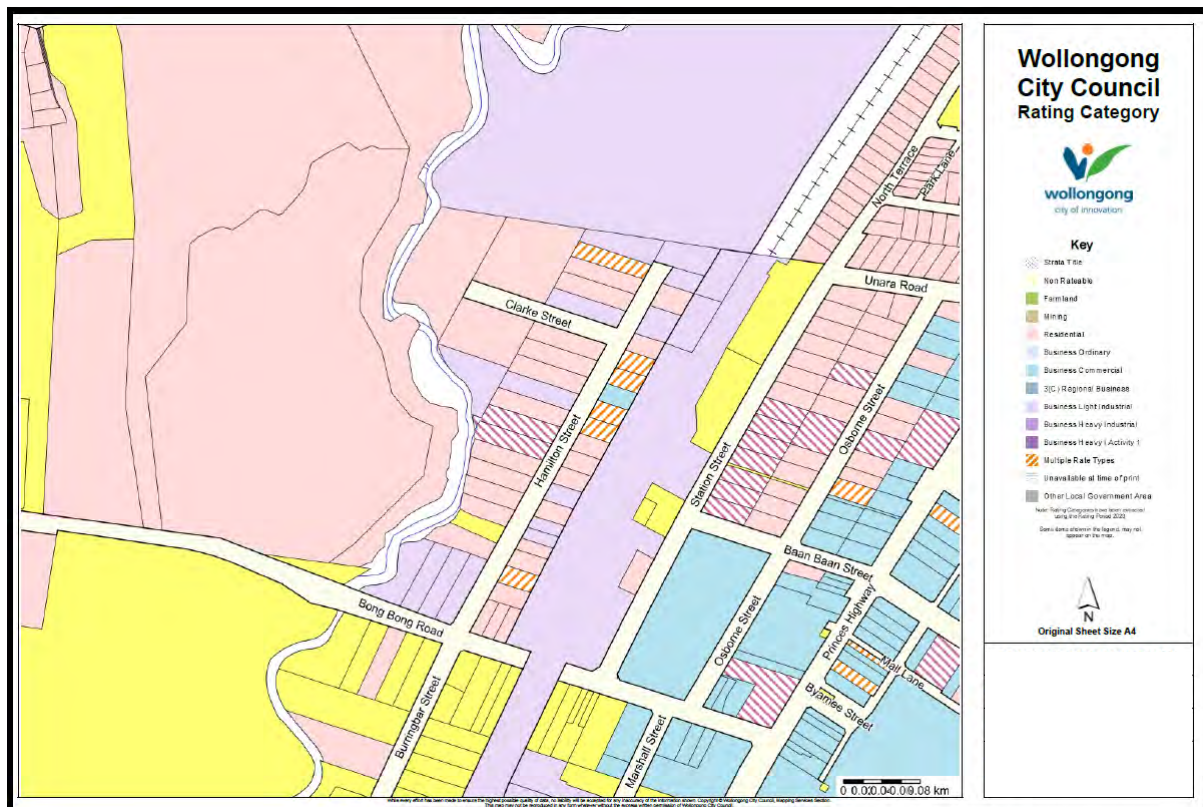


Figure 6.55: Residential dwellings along Hamilton Street, Precinct 39, WCC Rates Map (2023)

Council could investigate:

- Increasing the height limit and FSR controls across the E4 General Industrial zone to support industrial intensification.
- Increasing the MLS to preserve existing large lots and support industrial expansion.

Precinct 40: Yallah – Tallawarra Employment Lands

History

- Tallawarra is recognised by the NSW Government as containing regionally significant employment land.
- The land at Tallawarra comprises a mixture of steep ridges, undulating to flat land and low-lying flood affected wetland areas. The precinct includes Duck Creek and critical habitat for threatened species and endangered ecological communities.
- To the west is the M1 Princes Motorway and southern rail corridor. North of the precinct is residential land at Dapto and Koonawarra and south is Haywards Bay. The eastern boundary of the precinct is Lake Illawarra upon which the existing power station is located (zoned SP2 Infrastructure).
- The history of industrial activity within the precinct dates back to the operation of a coal fired power plant from the 1950s until it was decommissioned in 1989.
- In 2009, the existing Tallawarra Gas Turbine Power Station began operation, and surplus lands associated with the previous coal fired plant were rezoned, as part of WLEP 2009.
- Tallawarra Power Station is expanding with a project called 'Tallawarra B'. The project is currently under construction and proposes Australia's first peaking power station powered by a blend of gas and green hydrogen with emissions offset. Further, the Tallawarra A Power Station is set to be upgraded in 2024 to also received dual-fuel capability³⁹.
- The rezoning created approximately one third employment land, one third residential and one third environmental land. As previously mentioned, WLEP 2009 included a local provision which set a buffer zone around the power station that does not permit development unless it can be demonstrated that any adverse impacts from noise and odour can be minimised.
- In 2013, the then Planning Assessment Commission approved a Concept Plan (MP 09_0131) for mixed-used development, including:
 - Industrial
 - residential
 - commercial
 - retail development
 - public open space areas
 - new recreational facilities
 - environmental management
 - conservation areas
 - riparian corridors
- The Concept Plan was conditioned to lapse within five years unless a Development Application was submitted to Council for approval to carry out all or part of the project. Additionally, the first future application must be for a superlot subdivision of the entire site that is generally in accordance with the land use boundaries provided in the Concept Plan. In addition to other requirements of the Terms of Approval, the application must identify the sequential staging of the Concept Plan.
- The Concept Plan was subsequently modified to increase residential outcomes on the site, including allowing for residential development to commence in the northern and central areas of the site independent of the southern area. The later are not considered to be developed in the foreseeable future until contamination issues associated with the previous coal fired power plant are resolved.
- As a result, a total of 535.9 Ha of land was mapped in WLEP 2009 as the 'Tallawarra Lands Urban Release Area', which consists of:

- The Northern Precinct - located to the south of the established suburbs of Kanahooka and Koonawarra, and north of the Tallawarra Power Station. The precinct is 110ha in size and positioned on the eastern slopes of Mount Brown fronting Lake Illawarra.
- Central Precinct - located adjacent to existing residential area, is 210ha in size and is positioned on the southern slopes of Mount Brown. The precinct extends from the Princes Highway in the west through to Lake Illawarra in the east. The precinct also includes a zoned neighbourhood centre within the residential land.
- Southern Precinct - bounded by the Princes Highway, residential development in Haywards Bay, Duck Creek, and existing wetlands adjacent to Lake Illawarra.
- Mount Brown reserve - located in the eastern portion of the Central Precinct and offers substantive views over the site and Lake Illawarra.
- The Concept Staging Plan proposes that development first commence in the Northern Precinct in two stages before progressing to the Central Precinct, where employment lands are flagged to be the initial focus, with the purpose of activating surrounding residential areas.
- Staged development is proposed in accordance with the adopted Sydney Water Servicing Strategy as well as required infrastructure works and potential dedication of land for public space.
- Subsequently, in relation to the Northern and Central precincts, a development application (DA-2020/1332) has been lodged for a super-lot subdivision which would allow for the proponent to sell the proposed super-lots 1 & 3 for development. As part of the Concept Approval, the super-lot DA is required to include:
 - Design guidelines
 - Stormwater management masterplan, and
 - Flood risk assessment and management plan.
- DA-2020/1332 is currently under assessment by Council.
- The proponent has also lodged the draft Wollongong DCP Chapter 21 - Tallawarra Lands Site to Council which includes a concept staging plan as well as guidance to shape future development outcomes within the urban release area.
- On 8 May 2023, Council resolved that the draft DCP Chapter be amended by the proponent and then placed on public exhibition, following the amendments being satisfactory to Council.
- The draft DCP Chapter includes the following principles in relation to the employment land:
 - **Principle 1: Flexibility in scale and use**
 - Uses of employment lands will include low-cost, small-scale units and spaces to provide low risk entrepreneurial start up opportunities.
 - Lot sizes and tenure will be flexible to allow for shared facilities (such as loading, unloading and storage) and changes to scale as business grow and adjust.
 - **Principle 2: Connectivity**
 - Employment lands will be connected to the commercial and mixed-use lands and public open space by shared pathways to encourage walking and movement.
 - **Principle 3: Sustainable, energy efficient, low maintenance and low embodied energy materials.**
 - Facilitate smart design solutions for passive heating/cooling and external materials and finishes that are low maintenance, have high performing insulating properties and low embodied energy.
 - Front and rear setbacks to allow deep soil planting areas and street tree growth to contribute to the long-term urban tree canopy and create a visual buffer between the

northern edge of the employment lands and the residential lands in the Central Precinct.

- Encourage building forms that are multi-purpose with minimal construction and installation time and cost to reduce construction and site impacts and reduce overall development costs.
- Further, there are a number of proposed employment lands objectives, including:
 - The employment precinct will be developed with an emphasis on 'Passivhaus' design principles, in terms of building forms, construction materials and future business operators.
 - Priority will be given to suitable forms of development to accommodate low-cost start-ups to encourage innovation, and creative industries, especially those in the sustainable building and construction industry, data centres and battery storage and small-scale personal storage facilities.
 - Suitable uses will be 'low trip generating' in keeping with the locational factors of the Tallawarra employment lands.
 - Building design and land tenure outcomes shall be oriented to an adaptable, 'long-life loose fit' approach to allow for expansion of small businesses, and adaptive re-use of building infrastructure.
 - Building forms and architectural design will have regard to the site constraints, including height restrictions and setbacks to EA infrastructure.
 - Opportunities for shared use of facilities, including loading docks, storage, parking and communal staff and office facilities shall be accommodated where possible.
- It is proposed that controls aligned with the above objectives be developed prior to the planning advancement of the 'employment lands' precinct in Phase 2.

Precinct

- This Review is considering only the two zones of employment land that are only a component of the 'Southern Precinct' within the urban release area discussed in the Concept Plan above.
- Both zones are separated by a significant riparian corridor that flows into Lake Illawarra and flooding is a noted constraint (Duck Creek, Lake Illawarra and Macquarie Rivulet Flood Precinct).
- Yallah Bay Road provides the only access to the precinct linking it to the Princes Highway.
- All lots remain unserviced with no access at present to sewer and/or potable water.
- It is understood that the employment lands have contamination issues affecting particularly the areas associated with coal ash ponds. Council's Industrial Lands Business Survey received feedback from a local conservation group about the value of these lands for birdwatching and plans to expand outdoor recreation activity within the area.
- The two employment zones (all land under one ownership) are:

E3 Productivity Support

- There are 8 lots of E3 Productivity Support land with a total area of 37.15 Ha.
- Lot sizes range from 0.23 Ha to 11.4 Ha with an average of 4.64 Ha.
- This land has a direct interface with adjacent R2 Low Density Residential zoning discussed above as the 'southern area' of the Concept Plan.
- Existing controls include a uniform height limit of 16 metres, FSR ranging from 0.5:1 to not in place (small portion on the western fringe of the previous B6 Enterprise Corridor zone) and a uniform MLS of 0.2 Ha.
- Unresolved contamination issues limit development within the foreseeable future.

Council could investigate:

- Increasing FSR to support more intensive development (including amending the FSR mapping to cover where it was not previously in place), subject to 'shop top housing' being removed as an additional permitted land use on the prior B6 Enterprise Corridor land.

E4 General Industrial

- There are 7 lots of E4 General Industrial land with a total area of 87.27 Ha.
- Lot sizes range from 0.15 Ha to 52.44 Ha with an average of 12.47 Ha.
- This zone consists of previously IN2 Light Industrial land on the north side of Yallah Bay Road and formerly IN1 General Industrial Land on the south side of Yallah Bay Road.
- The former IN2 land is adjacent to the Tallawarra Power Station and also has a direct interface to future residential. The proposed Tallawarra neighbourhood centre will be just to the west.
- Similar to the E3 zone, with the exception of a uniform 0.5:1 FSR, existing controls are not aligned. The previous IN1 land has a height limit of 20 metres and 0.4 Ha MLS while the IN2 has a 16 metre height limit and 0.1 Ha MLS. The later height limit is considered appropriate to provide transition to the adjacent R2 Low Density Residential.
- Unresolved contamination issues limit development within the foreseeable future.

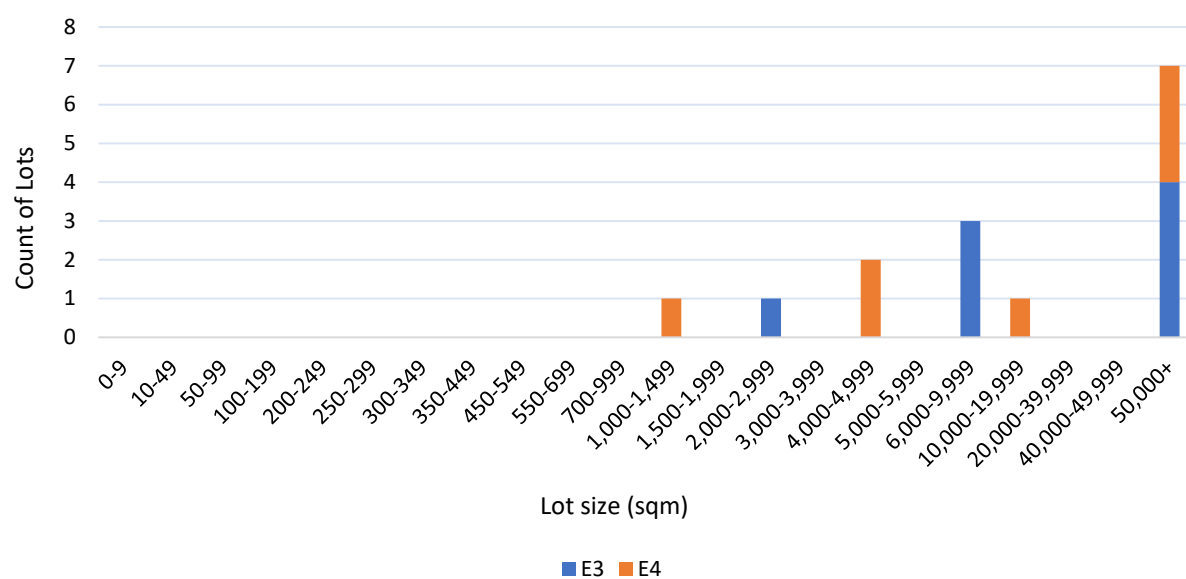


Figure 6.57: Lot size distribution, Precinct 40

Council could investigate:

- Increasing FSR to support industrial intensification across the E4 General Industrial zone.

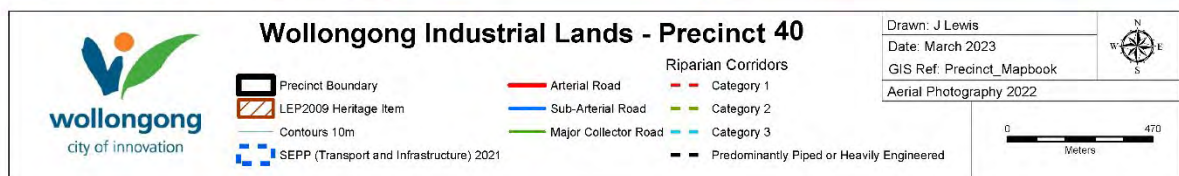
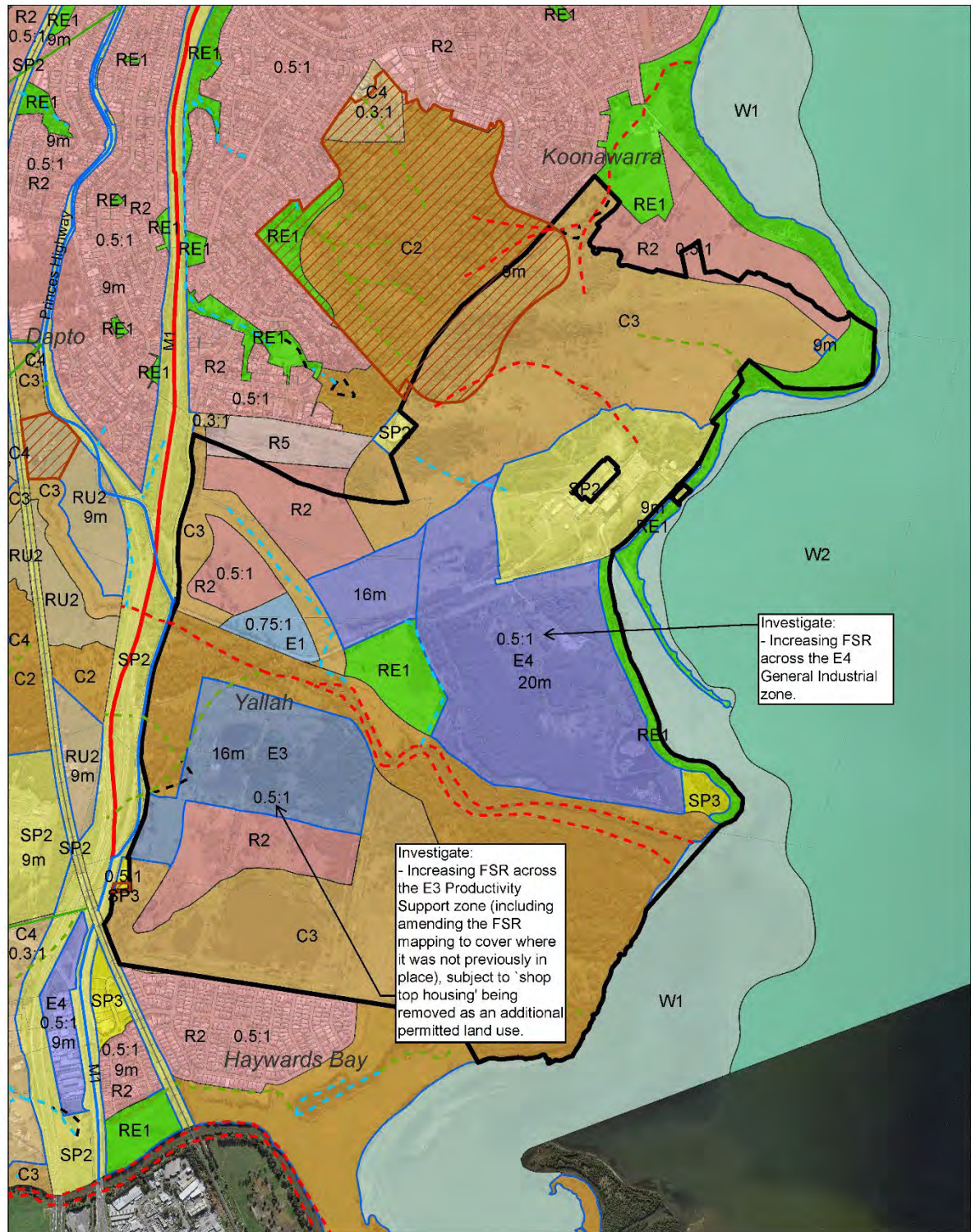


Figure 6.58: Map of Precinct 40: Yallah – Tallawarra Employment Lands

Precinct 41: Yallah – Yallah Road

- This precinct consists of 23 lots of E4 General Industrial land with an area of 12.77 Ha.
- Lot sizes range from 0.1 Ha to 6.33 Ha with an average of 0.56 Ha.
- There are two distinct areas in the precinct – two lots to the north with access via Yallah Road and a new industrial subdivision to the south of Yallah Road with an internal road called Indigo Loop.
- This precinct is located within the WDURA Stage 5 – Yallah/Marshall Mount.
- There is adjacent residential zoning to the south and east.

North of Yallah Road

- Only one lot is currently developed (Lot 2 DP 517460). This lot is setback from Yallah Road with access via a narrow local road. Existing controls include a nine metre height limit, no FSR and 0.1 Ha MLS. This lot is adjacent to an electrical substation.
- Lot 1 DP 234771 is a large lot that fronts Yallah Road with R3 Medium Density zoned land. The lot is occupied by a farm and only the north-eastern portion contains E4 General Industrial zoning that is dissected by a riparian corridor.
- Existing controls include a nine metre height limit, 0.5:1 FSR and no MLS.

There is an opportunity for Council to investigate

- Aligning controls across the precinct including introducing an FSR control (where absent) and MLS that is consistent across the precinct.

South of Yallah Road (Indigo Loop)

- This portion of the precinct includes a newly developed light industrial subdivision of 21 lots.
- Existing controls include a nine metre limit, 0.5:1 FSR and 0.1 Ha MLS.
- There is a direct interface with residential on both the eastern and southern boundaries.

Given the recent development and residential interface, no immediate changes to development standards or land uses have been proposed for this portion of the precinct.

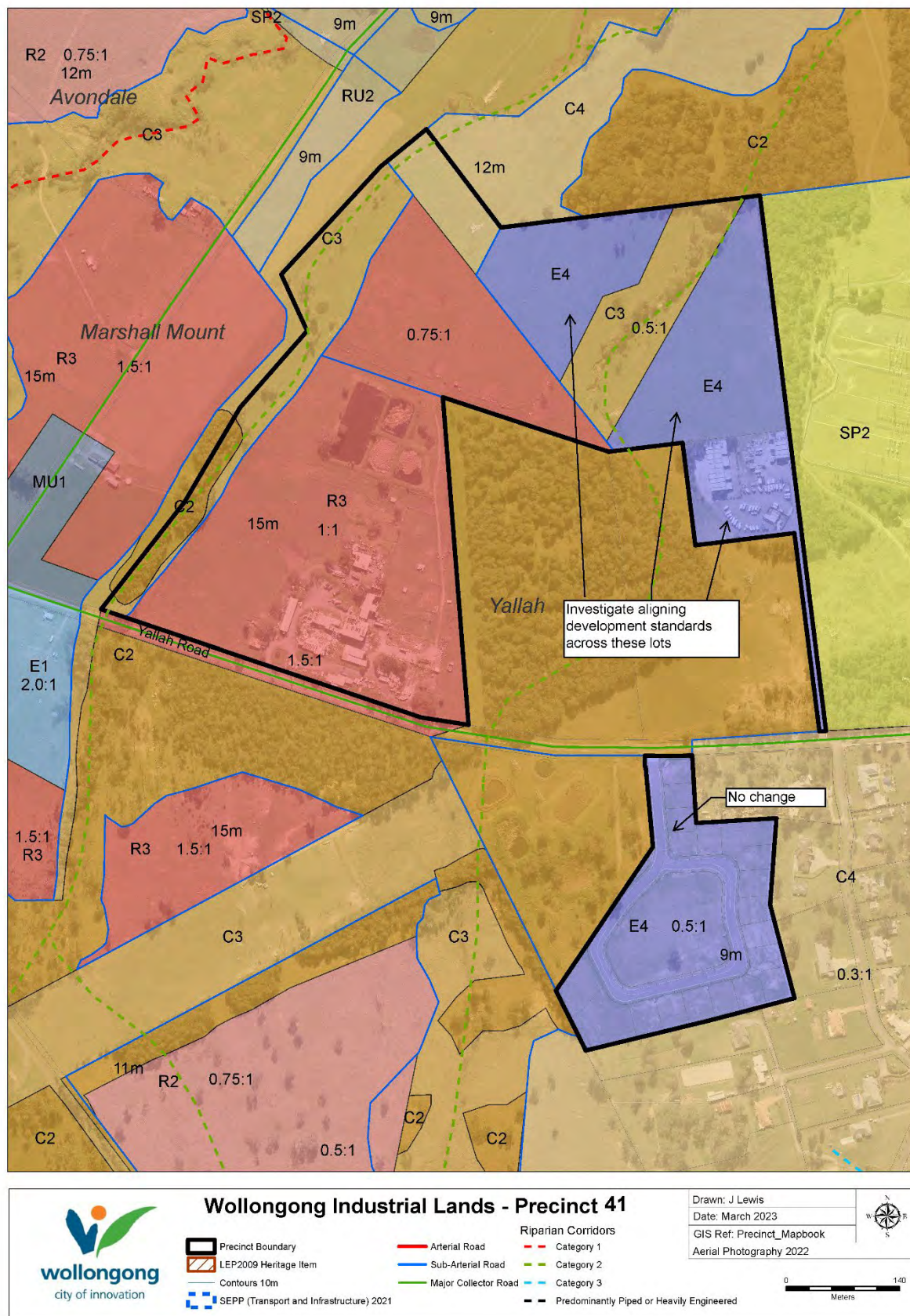


Figure 6.59: Map of Precinct 41: Yallah – Yallah Road

Precinct 42: Yallah – Princes Highway

- This precinct consists of 19 lots of E4 General Industrial land with an area of 7.74 Ha.
- Lot sizes range from 0.01 Ha to 1.23 Ha with an average of 0.41 Ha.
- This precinct is located within the WDURA Stage 5 – Yallah/Marshall Mount.
- The precinct has excellent access being located along the Princes Highway and close to the M1 Princes Motorway.
- Example land uses include motor vehicle dealerships, smash repairs, fabrication, building supplies and a veterinary hospital.
- It is noted that the precinct falls within the flight path of Shellharbour Airport and any increases to height limit will require consultation with the Civil Aviation Safety Authority (CASA).
- Existing controls include a uniform height limit of nine metres (lower than the typical 11 metres for this zone), 0.5:1 FSR and MLS of 0.1 Ha.
- There is no residential interface.
- The boundary of the Albion Park Rail bypass / M1 SP2 Infrastructure Road zone is being separately reviewed as part of a separate draft Planning Proposal. It is proposed to align the transport corridor with the land managed by Transport for NSW and remove the restriction from the privately owned land.

There is an opportunity for Council to investigate:

- Increasing both the height limit and FSR to facilitate intensification of industrial development. Note this will require consultation with CASA.
- Increasing the MLS to preserve existing large lots and support industrial expansion.

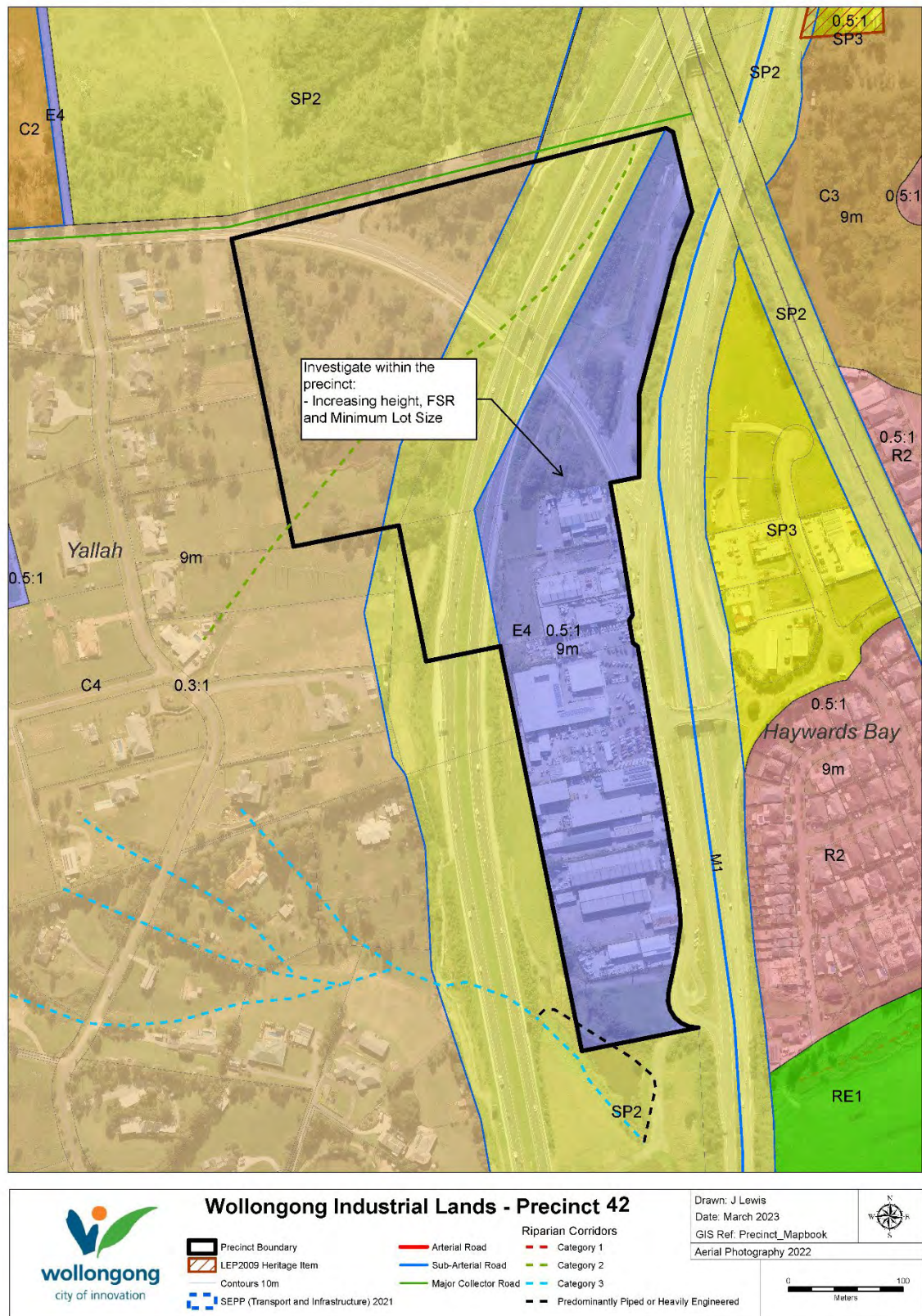


Figure 6.60: Map of Precinct 42: Yallah – Princes Highway



6.4 Primary Production Lands

Characteristics

The Wollongong LGA contains six RU1 Primary Production zones associated with existing or former mining related activities. Further detail on these precincts is included in Appendix 4.

Wollongong has an extensive history of over 100 years of coal mining within the NSW Southern Coalfield, which is known for producing world-class metallurgical coal that is utilised in local steelmaking at Port Kembla as well as elsewhere in Australia and overseas. The Southern Coalfield is the only source of metallurgical coal within NSW⁴⁰.

While mining operations are likely to continue in Wollongong for at least several decades, over the longer term, Council will need to consider landowner proposals for the eventual transition of each RU1 precinct upon permanent closure of mining operations.

Mining lands exists uniquely in locations associated with mineral resources that often have high environmental value, including along the Illawarra Escarpment, where Council's Illawarra Escarpment Strategic Management Plan (IESMP) (2015) is applicable. The IESMP recognises the long and ongoing history of coal mining on the escarpment including its important economic contribution (as well its role in the active management of escarpment land), however, it also requires that the economic benefits of mining be complementary to positive environmental and cultural outcomes.

More broadly, the IESMP identifies that part of the Illawarra Escarpment's economic value can include "areas capable of supporting local employment including tourism" and that productive use of land can drive investment in active management of the escarpment. However, the IESMP also states that in land use planning decisions, environmental and cultural values must take precedence over its economic exploitation.

In July 2021, the NSW Government strengthen rehabilitation requirements for mining lease holders took effect, via an amendment to the Mining Regulation 2016. Key changes included requirements for progressive rehabilitation and environmental protection obligations. Mining operators are required to prepare Rehabilitation Management Plans (which include Mine Closure Plans) and periodically submit these to the NSW Resources Regulator. It is noted that any nominated land use transition within these plans is aspirational and will require ongoing community consultation, including with Council, particularly as the end of life for mines approaches.

The Review acknowledges that in many locations, the presence of physical constraints as well high environmental and cultural value, make the most likely land use transition from RU1 an environmental zoning. It is however recognised that within some precincts, existing mining infrastructure has an industrial character, and there may be opportunities to explore land use transition to an alternate employment generating land use.

Planning considerations

Precinct M1: Helensburgh – Metropolitan Colliery

- This is a large precinct consisting of eight lots of RU1 Primary Production land with a total area of 33.5 Ha directly north of the Helensburgh Town Centre.
- At present, the precinct includes an operational underground coal mine that uses longwall mining methods.
- Metropolitan Colliery is considered the oldest coal mine in Australia, first opening in 1887 by the Cumberland Coal & Iron Mining Company before being sold to Australian Iron and Steel in 1965. Several other companies owned and operated the mine up to 25 October 2006 prior to acquisition by Peabody Energy, its current owner and operator.
- Existing development consent was issued in 2009 and authorises mining operations for up to 23 years (2032). There are conditions on the total amount of coal that can be extracted per calendar year as well as transported from the site. Linkage to the Port Kembla Coal Terminal (PKCT) is via a rail spur to the main South Coast railway line. The existing consent has also been subject to three modifications since it was issued in 2009.
- The precinct is located in the Hacking River catchment, which drains through the Royal National Park.
- Existing planning controls in the precinct include no height limit or FSR and a uniform minimum lot size of 39.99 Ha.

There is an opportunity for Council to collaborate with the landowner to begin considering the long-term strategic vision for the area, should the mine cease operation earlier and/or not extend its consent.

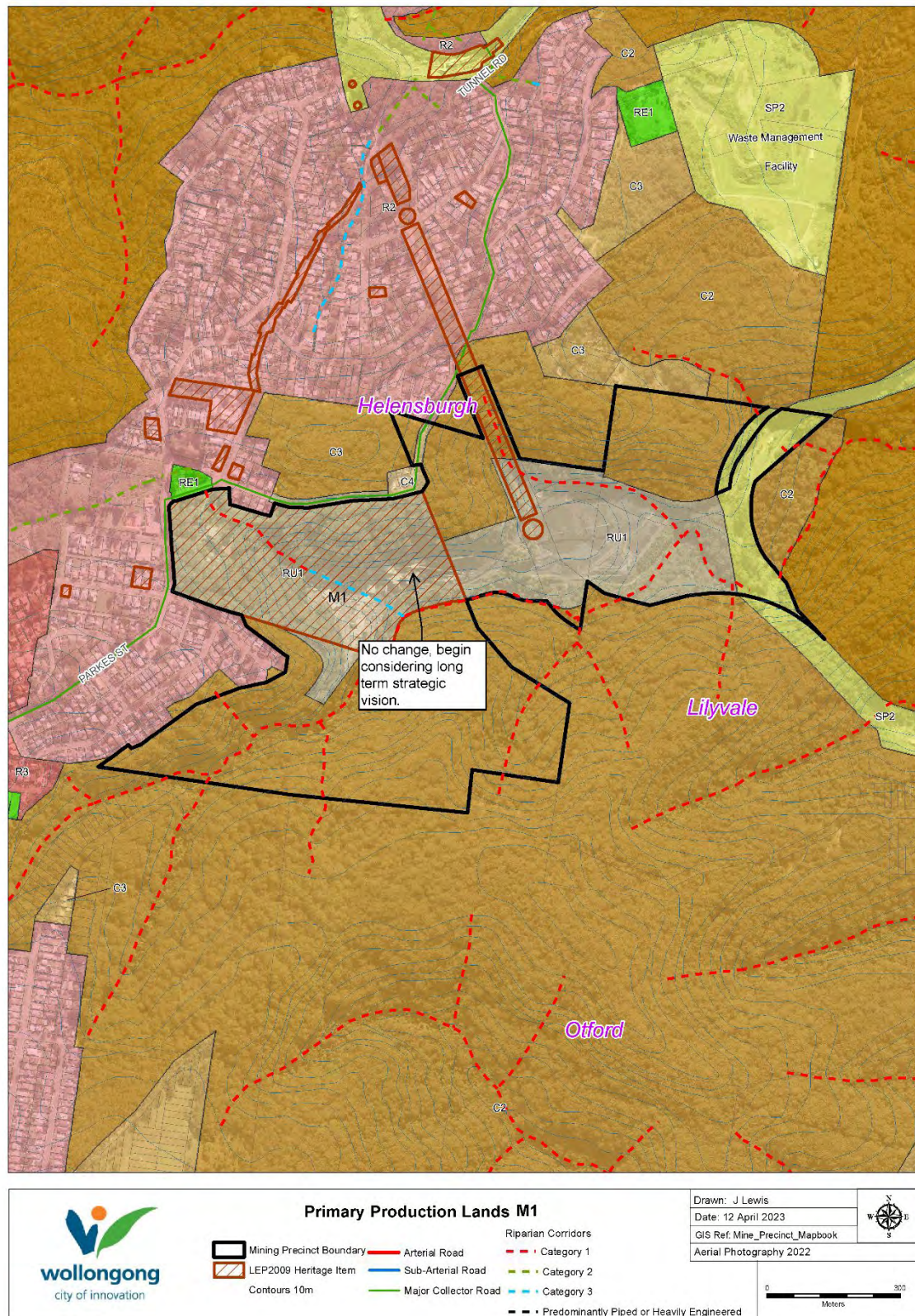


Figure 6.61: Map of Precinct M1: Helensburgh – Metropolitan Colliery

Precinct M2: Coalcliff – Former Colliery and Cokeworks

- This precinct consists of three lots of RU1 Primary Production land with a total area of 33.57 Ha and average lot size of 11.19 Ha.
- This large precinct is complex with geotechnical and contamination challenges as well as limited access via Lawrence Hargrave Drive.
- The precinct is the site of the former Coalcliff Colliery and Cokeworks with the latter closing in 2013.
- The site also extends outside of the RU1 zoning into steep land zoned C2 Environmental Conservation as well including SP2 Infrastructure zoning (South Coast Line rail corridor).
- The majority of the site falls within the Illawarra Escarpment conservation area and the requirements of the Illawarra Escarpment Strategic Management Plan 2015 apply.
- In 2019 a Biodiversity Stewardship agreement was approved for over approximately 75Ha of the site. Approximately 50 Ha of this is on C2 zoned land north of the RU1 zoned land, and 25Ha south of the RU1 zoned land. This ensures that the biodiversity of this land is protected and managed in perpetuity.
- The Coalcliff Colliery Shaft Mine and Coke Works are local Heritage items. The nearby Jetty Mine and Coalcliff Tunnel 8 (which extends from within the site down to the south, are also locally listed. All of the C1 National Parks and Nature Reserves and C2 Environmental Conservation zoned land on the site is also included in a Landscape Heritage Conservation Area - the Illawarra Escarpment Landscape Area. The RU1 zoned land is not mapped within the conservation area.
- The entire site is mapped as Contaminated land.
- In 2017, the owner commenced initial consultation with the local community on the possible rezoning of part of the site. A draft Planning Proposal request has not been received by Council.
- Existing planning controls in the precinct include no height limit or FSR and a uniform minimum lot size of 39.99 Ha.

There is an opportunity for Council to collaborate with the landowner to begin considering the long-term strategic vision for the area

Considerations could include investigating rezoning:

- The steep (>18 degree) portions of the land to C2 Environmental Conservation.
- The remaining disturbed portions of the land and the riparian corridor to C3 Environmental Management.
- Consider appropriate zoning for the flat southern portion of the precinct.

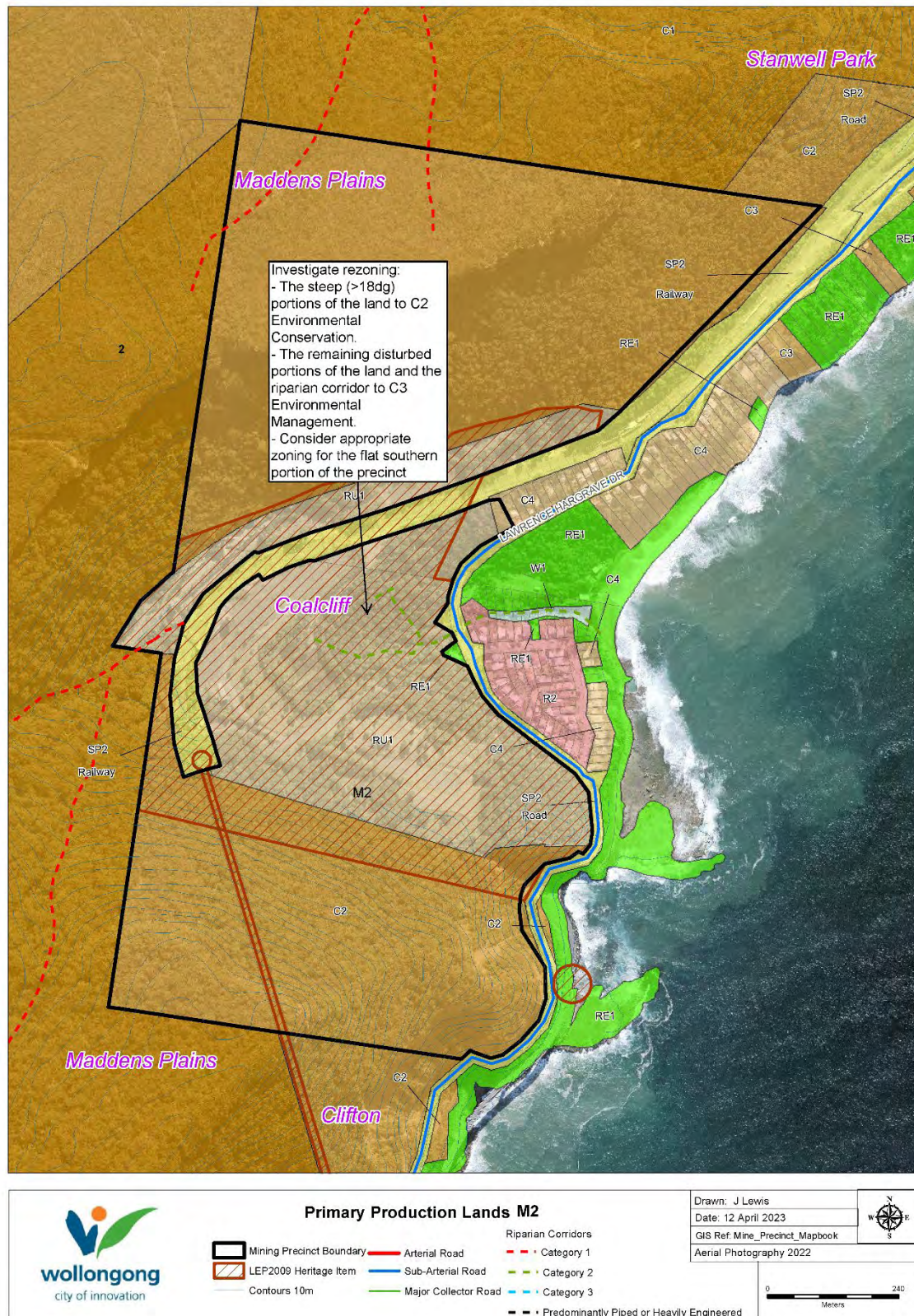


Figure 6.62: Map of Precinct M2: Coalcliff – Former Colliery & Cokeworks

Precinct M3: Bulli – Remnant Mining Lands

- This precinct consists of 5 lots of RU1 Primary Production land with a total area of 9.84 Ha running adjacent to Hobart Street, Bulli meeting the Princes Highway at the boundary of Precinct 3.
- This precinct was part of the former Bulli Colliery.
- The RU1 zoning is divided by an SP2 Infrastructure – Road zoning, which reflects a proposed future Bulli Pass alignment.
- The land is owned by the NSW Government who purchased the land to protect the corridor.
- Existing planning controls in the precinct include no height limit or FSR and a uniform minimum lot size of 39.99 Ha.
- There are also two listed heritage items within the precinct:
 - Bulli Collieries (includes shaft No 1, shaft No 2 original shaft sinking head frame, old pit top, old furnace shaft and pit town remains)
 - The Bulli Colliery Rail Bridge and Alignment (Former).
- Flooding is a noted constraint within the precinct.
- Part of the precinct falls within the Illawarra Escarpment conservation area with the requirements of the IESMP 2015 applicable.
- Environmental constraints limit future development outcomes within this precinct.

There is an opportunity for Council to collaborate with the landowner to begin considering the long-term strategic vision for the area

Considerations could include:

- Rezoning the RU1 Primary Production land west of the Princes Highway to C3 Environmental Management zoning.
- Rezoning the small portion of RU1 Primary Production on Lot 1 DP 711752 and Lot 53 DP 1201697 (eastern side of Princes Highway) to E4 General Industrial (currently functioning as an access handle into the precinct).
- Rezoning the adjacent road reserve on the eastern side of the Princes Highway from RU1 Primary Production to R2 Low Density Residential (currently functioning as a pedestrian pathway).

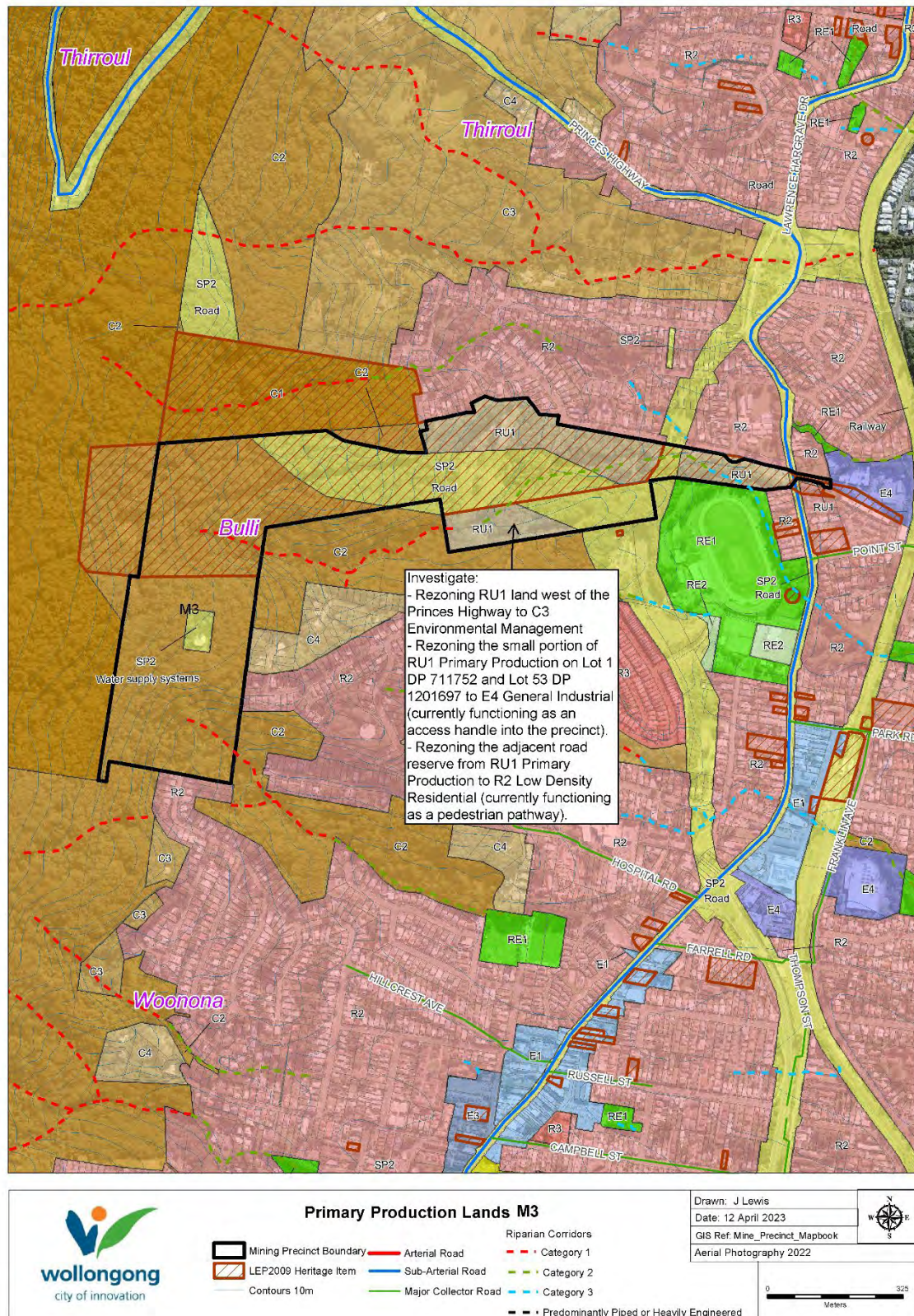


Figure 6.63: Map of Precinct M3: Bulli – Remnant Mining Lands

Precinct M4: Corrimal – Russell Vale Colliery

- This precinct contains an active colliery and consists of 10 lots of RU1 Primary Production land with a total area of 66.84 Ha.
- This underground coal mine has been operating for more than 130 years and is currently owned and operated by Wollongong Resources.
- The mine previously operated under development consent issued in 2011 until it was put into 'care and maintenance' from 31 December 2015 until mid-2021 when it recommenced operations following approval in December 2020 by the Independent Planning Commission for an expansion of longwall mining operations. This development consent is in place until December 2025.
- The eastern portion of the precinct has access via Bellambi Lane to the M1 Princes Motorway. As part of the development consent, an annual contribution is paid to Council for road maintenance on Bellambi Lane.
- The western portion of the site fall within the Illawarra Escarpment conservation zone and the requirements of the IESMP 2015 apply.
- Existing planning controls in the precinct include no height limit or FSR and a uniform minimum lot size of 39.99 Ha.
- It is noted that once mining operations cease, the eastern portion of the precinct may be suitable to provide additional light industrial land, subject to further studies. This would build upon the existing character of the area and allow for agglomeration with the adjacent precinct at Bellambi Lane.

There is an opportunity for Council to collaborate with the land owner to begin considering the long-term strategic vision for the area, should the mine cease operation earlier and/or not extend its consent.

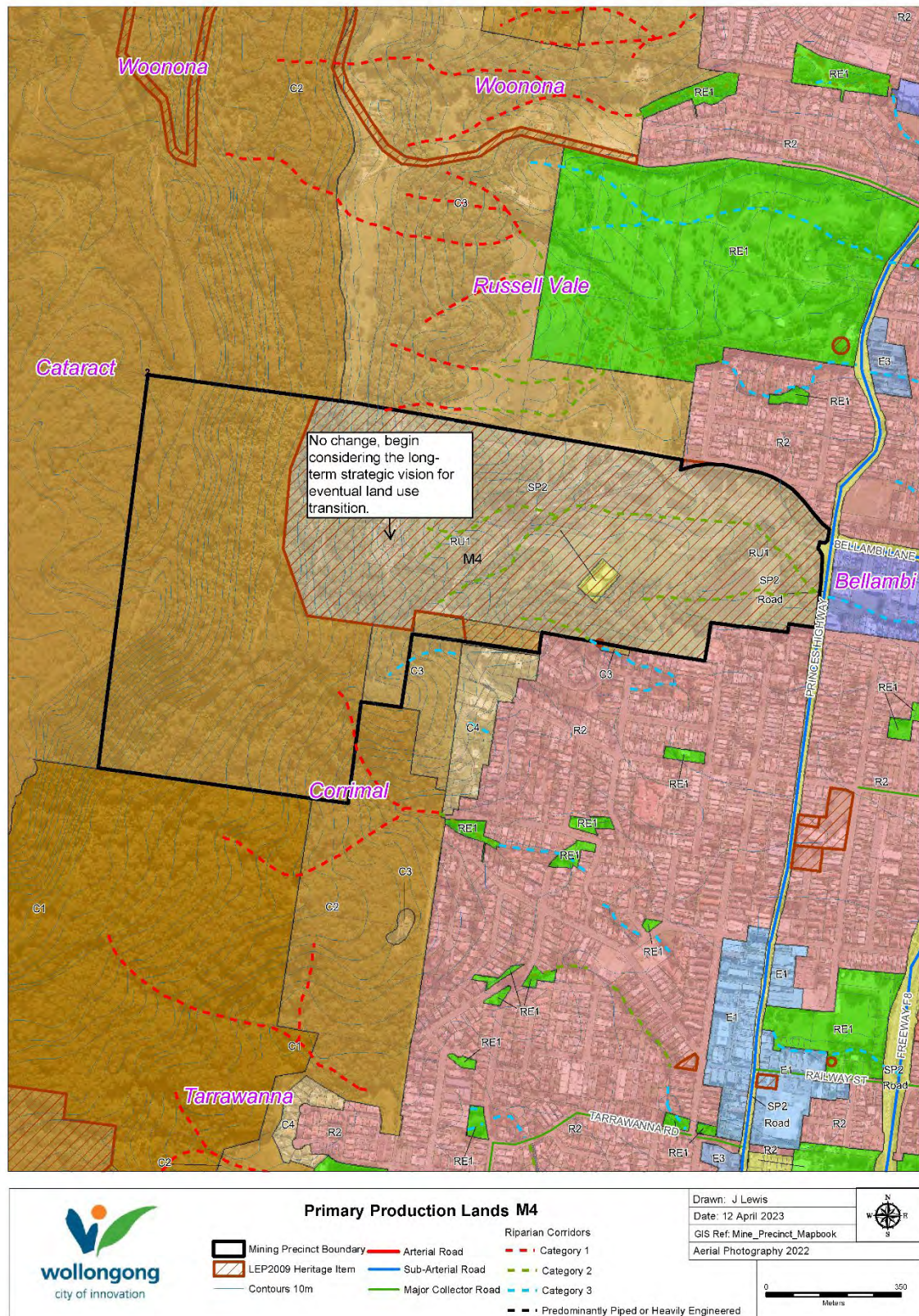


Figure 6.64: Map of Precinct M4: Corimal – Russell Vale Colliery

Precinct M5: Kembla Heights/Mt Kembla – Dendrobium Mine

- This is a large, complex precinct consisting of eight lots of RU1 Primary Production land with a total area of 33.28 Ha. The lots are disjointed with the majority contiguous and centred around Stones Road.
- The precinct falls within the Illawarra Escarpment conservation area and the requirements of the IESMP apply.
- At present, Illawarra Coal Holdings Pty Ltd, a subsidiary of South32 Limited (South32) owns and operates the Dendrobium Mine, an underground coal mine within the precinct.
- The mine supports an existing workforce of 650 personnel and produces metallurgical coal for steelmaking in Australia and overseas.
- While the coal lease for the mine extends between Wollongong, Wollondilly and Wingecarribee LGAs, the pit top for the mine and Kemira Valley rail coal loading facility is within this precinct.
- A private rail connection delivers coal directly to the Dendrobium Coal Preparation Plant at the Port Kembla Steelworks. Private road through the steelworks also allows transport onwards to the Port Kembla Coal Terminal (PKCT) for export.
- Existing development consent for the mine was granted in 2001, allowing for the extraction of up to 5.2 million tonnes per annum of coal up to 31 December 2030, using longwall mining methods.
 - The existing consent permits mining from five approved underground mining areas. Coal extraction is complete in Areas 1 and 2, largely complete in Area 3A and well advanced in Area 3B. Extraction from Area 3C has not yet commenced as the coal seam in that area contains high levels of gas that must first be drained over a period of years before mining can safely occur.
- In 2019, South32 sought development consent for the Dendrobium Mine Extension Project to allow it to extract an additional coal from two new mining areas and to extend the life of the mine until December 2048.
 - Council in its submission to DPIE on the project recognised the importance of local coal mining to the local, regional, and domestic economy. However, Council indicated that it remained concerned over the extent of subsidence related impacts upon watercourses and coastal upland swamps due to the current proposed mine layout, particularly the proposed 305 metre longwalls.
 - In February 2021, the Independent Planning Commission (IPC) formally refused the mine extension for a variety of reasons. The refusal was initially appealed by South32 before being withdrawn and a revised proposal being re-lodged in early 2022, following its declaration in December 2021 as State Significant Infrastructure.
 - The revised proposal sought to reduce the overall footprint of the project area and adopt a number of impact mitigation strategies.
 - In August 2022, South32 advised the Australian Stock Exchange that it no longer wished to pursue the project due to significant upfront costs and uncertain economic returns. Therefore, the project has now been withdrawn.
 - South32 stated they have identified opportunities to extend mining activities until at least 2028 and are evaluating potential options to extend the mine life beyond this date⁴¹.
- Existing planning controls in the precinct include no height limit or FSR and a uniform minimum lot size of 39.99 Ha.
- South32 has recently partnered with Council to conduct a community engagement process to determine visions and values for the short, medium and long term future of their land holdings.

There is an opportunity for Council to collaborate with the landowner to begin considering the long-term strategic vision for the area.

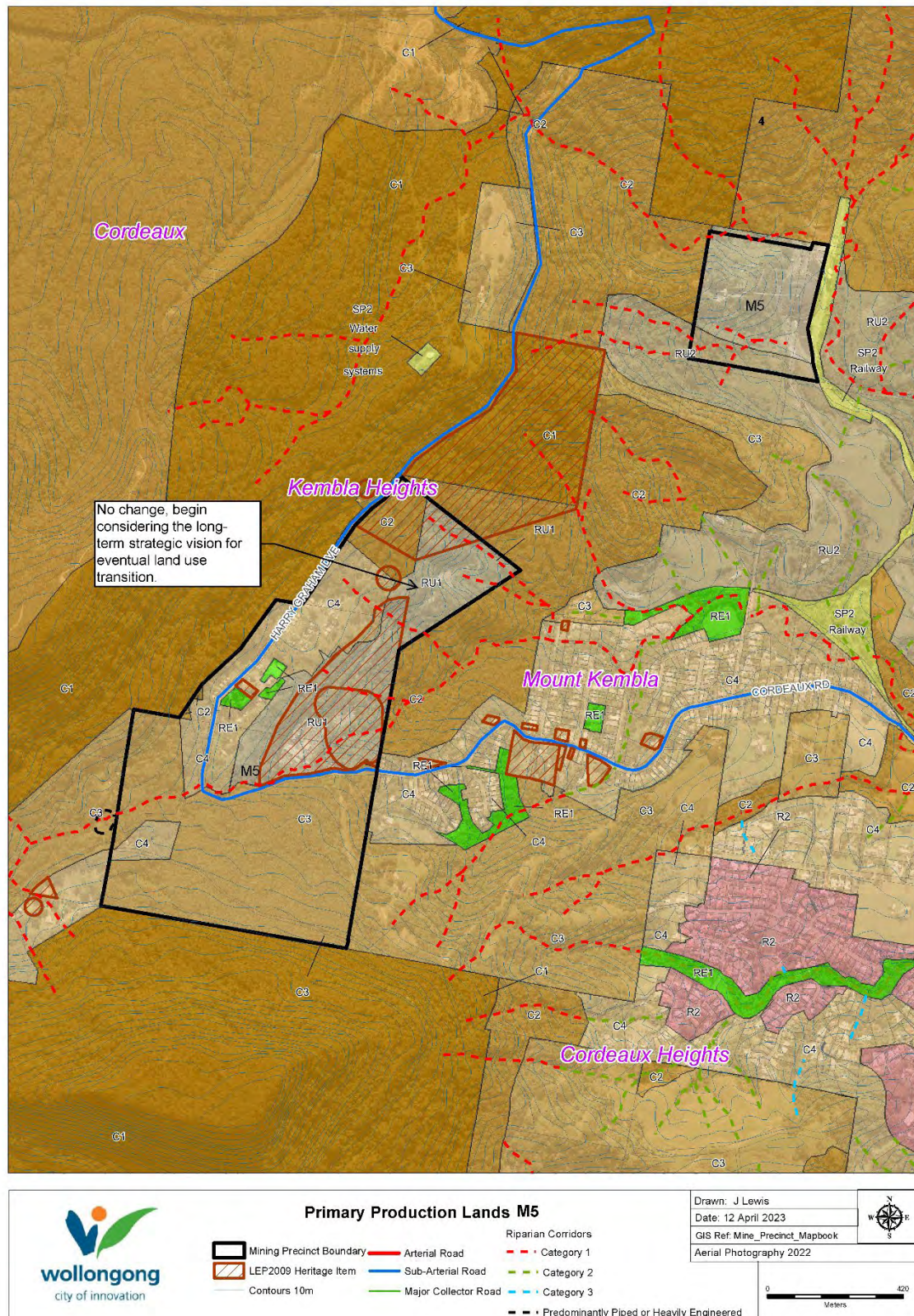


Figure 6.65: Map of Precinct M5: Kembla Heights/Mt Kembla – Dendrobium Mine

Precinct M6: Wongawilli – Wongawilli Mine

- This is a large precinct consisting of eight lots of RU1 Primary Production land with a total area of 33.5 Ha.
- The precinct includes an underground coal owned and operated by Wollongong Resources that is currently under 'care and maintenance'.⁴²
- The Wongawilli Colliery pit top is situated on the eastern edge of the Illawarra Escarpment conservation area and is within the catchment of Robin's Creek. The requirements of the IESMP 2015 apply.
- The Colliery operates under development consent issued in November 2011 and subsequently modified in December 2015. Coal is transported to Port Kembla via a rail spur line.
- In 2020, the Colliery sought approval for a modification proposed to extend the life of the Colliery by five years to enable development of the approved North West Mains Development (NWMD). Furthermore, the modification largely sought approval to extend the length of the approved NWMD alignment to access the existing Wongawilli Ventilation Shaft 1 and minor surface activities.
- Council's submission supported the proposed modification; however, Council reserved its rights to consider its position on any future application for the actual North-West sector mine layout, based on merit assessment of the accompanying Environmental Impact Statement (EIS).
- Council's submission also indicated that noise emissions from the pit top should be minimised with respect to the surrounding residential community in Wongawilli, noting that the colliery had previously implemented noise mitigation measures at the site.
- On 13 April 2022, a delegate of the (then) Department of Planning, Industry and Environment (DPIE) formally granted consent to the modification project. The consent is limited up to 30 June 2027. Following this, Wollongong Resources has completed a number of management plans (including water and noise management plans) as per the consent requirements.
- It is also located within the WDURA (Stage 1/2 Sheaffes/Wongawilli) and Wollongong DCP Chapter D16: West Dapto Release Area applies, which includes a direction that future urban development should be designed to recognise the continued use of the rail spur line and include measure to mitigate noise and other potential impacts.
- Existing planning controls in the precinct include no height limit or FSR and a uniform minimum lot size of 39.99 Ha.

This is a complex precinct and there is an opportunity for Council to begin considering the long-term strategic vision for the area, should the mine cease operation earlier and/or not extend its consent.

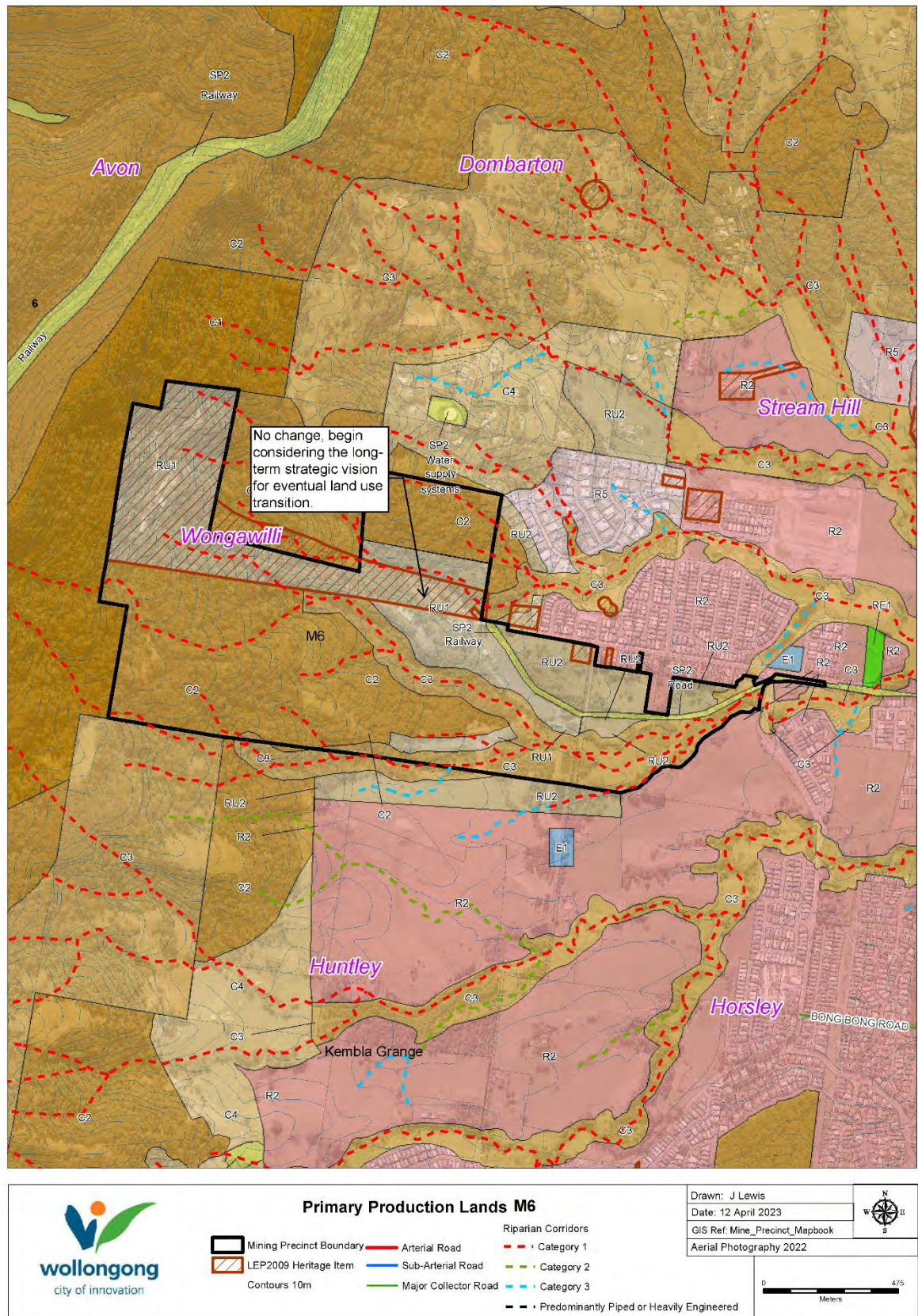


Figure 6.66: Map of Precinct M6: Wongawilli – Wongawilli Mine



7. Recommendations

The draft Review makes a range of recommendations for consideration. The recommendations range from minor housekeeping amendments to more significant investigations which would require specialist studies if they were to progress.

7.1 Planning Principles

The Review proposes to adopt the following planning directions to guide future strategic planning for industrial lands as well as primary production zones across Wollongong LGA.

1. Recognise the importance of industrial land to supporting jobs, economic development, and urban services by retaining lands in locations that support these outcomes.
2. Recognise, retain, and promote the Port of Port Kembla and surrounds as an area of critical economic importance focused on employment generation in heavy industry, port operations as well as supporting clean energy investment. Alternative employment uses that provide opportunity for growth and evolution of employment generating sectors will be supported through rigorous precinct scale master planning and strategic evaluation processes.
3. Retain a mix of lot sizes, including larger lots that accommodate diverse business requirements and support expansion for existing and future industries.
4. Where appropriate, allow for increased density on industrial land to accommodate changing building requirements for evolving industrial uses.
5. Promote agglomeration of industrial activity within well-defined precincts with efficient transport connectivity and appropriate buffers from surrounding residential.
6. Continue to advocate for provision of servicing to industrial lands and critical enabling infrastructure.
7. Collaborate with landowners to plan for the eventual transition of mining lands.

7.2 Proposed Wollongong LEP 2009 amendments

To implement the findings of this Review, modification of the following planning controls is required through the preparation and exhibition of draft Planning Proposals to amend the WLEP 2009. It is likely that a number of draft Planning Proposals will be prepared to address high priority issues or implement place-based outcomes. All draft PPs will have detailed information justifying the strategic merit of the proposed changes and be accompanied by maps identifying the location of proposed changes. All draft PPs will be reported to Council for endorsement, review by the NSW Government and then exhibited for community and stakeholder feedback.

Land Use tables

The following Land Use Table and Clauses actions are per the recommendations discussed in Section 4.5.

Table 7.1: Recommended changes to Land Use tables, WLEP 2009

No	Zone	Action
1	E3 Productivity Support	<ol style="list-style-type: none">1. Remove 'Heavy industrial storage establishment'2. Add 'Goods repair and reuses premises'
2	E4 General Industrial	<ol style="list-style-type: none">1. Add 'Timber yard'2. Replace 'Self storage premises' with 'Storage premises'

	E5 Heavy Industrial	<ol style="list-style-type: none"> 1. Add 'Waste or resource management facility' 2. Remove 'Offensive storage establishment' (redundant due to permissibility of 'Heavy industrial storage establishments') 3. Remove 'Hazardous storage establishment' (redundant due to permissibility of 'Heavy industrial storage establishments') 4. Remove 'take away food and drink premises'
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Clauses

The following change to Clauses has been identified in Section 4.5.

Table 7.2: Recommended changes to Clauses, WLEP 2009

No	Action
1	Remove 'Schedule 3: Complying Development – Part 1 Types of development – Alterations and additions to industrial and warehouse buildings in industrial zones' as it is now superseded by SEPP (Exempt and Complying Development) 2008.
2	Investigate increasing the size of 'kiosk' permitted uses via Clause 5.4(6) of WLEP 2009

Precincts

The following table provides a summary of the recommended actions from the precinct analysis in Section 6.

In total, there are 14 out of 42 precincts identified for investigation for intensification (height and/or FSR controls). Note each precinct will require detailed studies, including flood and traffic impact assessments. It is noted that 11 out of the 14 precincts have flooding as a noted constraint with varying degrees of severity.

Table 7.3: Recommended changes based on precinct analysis

Precinct	Land Use	Height Limit	Floor Space Ratio (FSR)	Minimum Lot Size (MLS)
1. Helensburgh – Parkes Street, Cemetery Road & Princes Highway	No change	No change	No change	No change
2. Helensburgh – Walker Street	No change	No change	No change	No change
3. Bulli – Council Northern Works Depot	Investigate: <ul style="list-style-type: none"> - Rezoning the small portion of RU1 Primary Production on Lot 1 DP 711752 and Lot 53 DP 1201697 to E4 General Industrial (currently functioning as an access handle into the precinct). - Rezoning the adjacent road reserve from RU1 Primary Production to R2 Low Density Residential (currently functioning as a pedestrian pathway). 	No change	No change	No Change
4. Bulli – Molloy Street	No change	No change	No change	No change
5. Bulli – Franklin Avenue	Investigate rezoning the north-eastern portion of the site (in line with the riparian corridor) to C3 Environmental Management to protect and manage the values of the riparian corridor.	No change	No change	No change
6. Woonona – Ball Street & Princes Highway	Investigate: <ul style="list-style-type: none"> - Rezoning part of the precinct to a residential zone to reflect existing residential development. - Conducting flood impact assessments to establish the appropriate zoning for sites with a significant flood affectation. 	No change	No change	No change
7. Woonona – Woodland Avenue & Princes Highway	No change	No change	No change	No change
8. Woonona – 558-580 Princes Highway	Investigate: <ul style="list-style-type: none"> - Rezoning the portion of R2 Low Density Residential zoning on Lot 501 DP 852593 to C3 Environmental Management to 	No change	No change	No change

Precinct	Land Use	Height Limit	Floor Space Ratio (FSR)	Minimum Lot Size (MLS)
	<p>protect and manage the values of the riparian corridor and acknowledge the development constraints imposed by the flood affectation.</p> <p>- Including the vacant adjacent R2 Low Density Residential lot (Lot 12 DP 861739) which is outside the scope of this Review, in a future Housekeeping LEP Review for consideration to be rezoned to C3 Environmental Management.</p>			
9. Woonona/Russell Vale – York Place & Watts Lane	No change	Investigate increasing height limit, as appropriate within flooding constraints.	Investigate increasing FSR, as appropriate within flooding constraints.	Investigate increasing MLS
10. Russell Vale – Princes Highway	<p>Investigate:</p> <ul style="list-style-type: none"> Rezoning the portion of R2 Low Density Residential on Lot 100 DP 873314 to E3 Productivity Support reflecting existing business use. 	No change	No change	No change
11. Woonona/Bellambi – Pioneer Drive & Bellambi Lane	No change	Investigate increasing height limit, as appropriate within flooding constraints.	Investigate increasing FSR, as appropriate within flooding constraints.	Investigate increasing MLS
12. Bellambi/Corrimal – Bellambi Lane & Albert Street	No change	<p>1. Albert Street – no change</p> <p>2. Bellambi Lane – investigate increasing height limit</p>	<p>1. Albert Street – no change</p> <p>2. Bellambi Lane – investigate increasing FSR</p>	<p>1. Albert Street – no change</p> <p>2. Bellambi Lane – no change</p>
13. Corrimal – Ruddock Street	Investigate rezoning the portion of vacant R2 Low Density Residential zoning on Lot 501 DP 1031959 to E4 General Industrial to rationalise the zoning across the lot.	No change	No change	No change
14. Corrimal – Tarrawanna Road & Princes Highway	No change	No change	No change	No change
15. Corrimal – Princes Highway	Investigate rezoning the portion of R2 Low Density Residential on Lot 11 DP	No change	No change	No change

Precinct	Land Use	Height Limit	Floor Space Ratio (FSR)	Minimum Lot Size (MLS)
	629423 to be E3 Productivity Support reflecting existing business use.			
16. Fairy Meadow/Fernhill – Jardine Street & Princes Highway	No change	E4 zone: Investigate increasing height limit	E4 zone: Investigate increasing FSR	E3 zone: Investigate introducing a MLS E4: Investigate increasing MLS
17. Fairy Meadow – Princes Highway	Investigate amending the zoning on the following split lots: <ul style="list-style-type: none"> - Lot 1 DP 1186837 – rezone the portion of R2 Low Density Residential (currently used as a carpark) to E3 Productivity Support. - Lot 80 DP 1115180 – rezone the portion of R2 Low Density Residential to E3 Productivity Support reflecting existing use as a business premises. - Lot 301 DP 710268 – rezone the portion of E3 Productivity Support to R2 Low Density Residential reflecting existing housing. - Lot 302 DP 710268 – rezone the portion of E3 Productivity Support to R2 Low Density Residential reflecting existing housing. - Lot 1 DP 1237970 – rezone the portion of E3 Productivity Support to R2 Low Density Residential reflecting existing housing. 	No change	No change	No change
18. North Wollongong – Montague Street	No change	Investigate increasing height limit	Investigate increasing FSR	Investigate increasing MLS
19. North Wollongong – Flinders Street	Determine the appropriate amount of E3 Productivity Support required within the precinct.	No change	No change	No change
20. Wollongong – Belmore Basin	No change	No change	No change	No change

Precinct	Land Use	Height Limit	Floor Space Ratio (FSR)	Minimum Lot Size (MLS)
21. Wollongong – South Wollongong	1. Investigate the rezoning of a portion of R2 Low Density Residential zoning to E3 Productivity Support zoning on the two amalgamated lots (Lot 1 DP 352010 and Lot 1 DP 1159759) reflecting existing business use.	No change	No change	No change
22. Coniston/Wollongong- Miller Street & Auburn Street	Investigate rezoning the portion of R2 Low Density Residential on Lot 1 DP 1191667 to E4 General Industrial reflecting existing business use.	Investigate introducing an 11 metre height limit on the E4 General Industrial lots between Swan Street and West Street	Review the inconsistent FSR between Swan Street and West Street	Investigate increasing the MLS
23. Spring Hill – Masters Road	No change	No change	No change	Investigate introducing a MLS
24. Spring Hill – Edney Lane	No change	Investigate increasing height limit	Investigate increasing FSR	Investigate increasing the MLS
25. Figtree – Princes Highway	Investigate: <ul style="list-style-type: none"> - Rezoning the E4 General Industrial land to E3 Productivity Support to rationalise the zoning across the precinct as well as permit the operation of office premises along a main road which would be consistent the zone objectives (provided that shop top housing is no longer permissible). - Review the SP2 Infrastructure zoning along the Princes Highway frontage (Lot 21 DP 773165 and Lot 1 DP 70899). 	No change	No change	No change
26. Unanderra – Princes Highway	Supporting the recommendation of Council's Retail and Business Centres Strategy to transition the identified E3 Productivity Support land to the east of the Town Centre up to and including the creek allotment (Lot 1 DP 1064623) to E1 Local Centre which would more appropriately meet the	No change	No change	No change

Precinct	Land Use	Height Limit	Floor Space Ratio (FSR)	Minimum Lot Size (MLS)
	desired zone objectives and support the development of the Unanderra Town Centre.			
27. Unanderra / Cringila / Berkely / Kembla Grange – Unanderra Industrial Park	Investigate rezoning the portion of E4 General Industrial on Lot 376 DP 1046385 to E5 Heavy Industrial to rationalise the zoning across the lot. Review the boundary between environmental and industrial lands.	E4: Investigate increase in height limit, including introduction of an appropriate height limit for lots between the Princes Highway and the South Coast Railway Line. from the Farmborough road intersection in the north and the railway level crossing on the Princes Highway in the south, where an appropriate height limit should be introduced	E4: Investigate removing the FSR for this zone, except for lots between the Princes Highway and the South Coast Railway Line from the Farmborough road intersection in the north and the railway level crossing on the Princes Highway in the south, where an appropriate height limit should be introduced.	E4 & E5: Investigate increasing MLS.
28. Cringila – Five Islands Road	No change	No change	No change	No change
29. Port Kembla – Port Kembla SEPP Area	N/A	N/A	N/A	N/A
30. Port Kembla – Darcy Road (Non-SEPP Area)	Council to consult with DPE regarding potential inclusion of this precinct into SEPP (Transport and Infrastructure) 2021	No change	No change	No change
31. Port Kembla – Military Road	Investigate: <ul style="list-style-type: none"> - Rezoning the E1 Local Centre land along Military Road between Allan and Darcy Streets to E4 General Industrial, except for the lots facing Allan Street (Lots 7-11 Sec 1 DP 5868), acknowledging their role as part of the Town Centre. - Rezoning Lot 5 Sec 2 DP 5868 from E4 General Industrial to E1 Local Centre to ensure consistent zoning across Council's Car Park. 	No change	No change	No change
32. Port Kembla – Wentworth Street	Investigate the current and future role of adjacent vacant road reserve	Investigate aligning height limit across the precinct	Investigate aligning FSR across the precinct	Investigate aligning MLS across the precinct

Precinct	Land Use	Height Limit	Floor Space Ratio (FSR)	Minimum Lot Size (MLS)
33. Port Kembla – Five Islands Road	No change	Investigating increasing height limit	Investigating increasing FSR	Investigating increasing MLS
34. Port Kembla/Warrawong – Shellharbour Road & King Street	No change	E4: Investigate increasing height limit	E4: Investigate increasing FSR	E4 & E5: Investigate increasing MLS
35. Kembla Grange – West Dapto Employment Lands	Review the boundaries of the E4 zoning along the western side of Reddalls Road where it meets the C3 Environmental Zoning to ensure it appropriately reflects the required conservation zone. This includes the small portion of E4 on Lot 3 240557 as well as E4 zoning on Council owned land (Lot 2 DP 1232422).	E4: Investigate increasing height limit	E4: Investigate increasing FSR	E4: Investigate increasing MLS E5: Investigate increasing MLS
36. Kembla Grange – Princes Highway & Kembla Grange Place	No change	Aligning controls including investigating increasing height limit and ensure alignment across the precinct	Aligning controls including investigating increasing FSR and ensure alignment across the precinct	Introduce a MLS that is consistent across the precinct
37. Kembla Grange – Darkes Road	No change	No change	No change	No change
38. Horsley – West Dapto Road	No change	No change	No change	No change
39. Dapto – Hamilton Street, Marshall Street & Princes Highway	No change	E4 zone: Investigate increasing height limit	E4 zone: Investigate increasing FSR	E4 zone: Investigate increasing MLS
40. Yallah – Tallawarra Employment Lands	No change	No change	E3: Investigate aligning FSR across the zone (subject to removal of shop top housing as APU). E4 zone: Investigate aligning FSR across the zone	E4: Investigate aligning the MLS across the zone
41. Yallah – Yallah Road	No change	No change	Investigate introduction of an FSR (where absent).	Investigate aligning MLS across the zone.
42. Yallah – Princes Highway	No change A separate review of the SP2 Infrastructure zone is occurring	Investigate increasing the height limit	Investigate increasing FSR	Investigate increasing MLS
M1. Helensburgh – Metropolitan Colliery	There is an opportunity for Council to collaborate with the landowner to begin considering the long-term strategic vision for the area, should the mine cease operation	No change	No change	No change

Precinct	Land Use	Height Limit	Floor Space Ratio (FSR)	Minimum Lot Size (MLS)
	earlier and/or not extend its consent.			
M2: Coalcliff – Former Colliery & Cokeworks	<p>There is an opportunity for Council to collaborate with the landowner to begin considering the long-term strategic vision for the area. Considerations could include investigating rezoning:</p> <ul style="list-style-type: none"> ○ The steep portions of the land to C2 Environmental Conservation. ○ The disturbed portions of the land and the riparian corridor to C3 Environmental Management. ○ Consider appropriate zoning for the flat southern portion of the precinct. 	No change	No change	No change
M3: Bulli – Remnant Mining Lands	<p>There is an opportunity for Council to collaborate with the landowner to begin considering the long-term strategic vision for the area. Considerations could include:</p> <ul style="list-style-type: none"> ○ Rezoning the RU1 Primary Production land west of the Princes Highway to C3 Environmental Management zoning. ○ Rezoning the small portion of RU1 Primary Production on Lot 1 DP 711752 and Lot 53 DP 1201697 (eastern side of Princes Highway) to E4 General Industrial (currently functioning as an access handle into the precinct). ○ Rezoning the adjacent road reserve on the eastern side of the Princes Highway from RU1 Primary Production to R2 	No change	No change	No change

Precinct	Land Use	Height Limit	Floor Space Ratio (FSR)	Minimum Lot Size (MLS)
	Low Density Residential (currently functioning as a pedestrian pathway).			
M4: Corrimal – Russell Vale Colliery	There is an opportunity for Council to collaborate with the landowner to begin considering the long-term strategic vision for the area, should the mine cease operation earlier and/or not extend its consent.	No change	No change	No change
M5: Kembla Heights/Mt Kembla – Dendrobium Mine	There is an opportunity for Council to collaborate with the landowner to begin considering the long-term strategic vision for the area.	No change	No change	No change
M6: Wongawilli – Wongawilli Mine	There is an opportunity for Council to collaborate with the landowner to begin considering the long-term strategic vision for the area, should the mine cease operation earlier and/or not extend its consent.	No change	No change	No change

7.3 Proposed Wollongong DCP 2009 amendments

To implement the findings of this Review the modification of the following chapters of the Wollongong Development Control Plan 2009 (DCP) are required:

Table 7.4: Recommended changes to DCP controls

No	Action
1	Review DCP Chapter B5 with a view to rationalising it through reducing its length and where appropriate, investigate simplification of controls that are duplicative or already covered in other chapters of the DCP.
2	Review DCP Chapter B5 – Investigate options to provide for improved amenity within industrial precincts and development on industrial zoned lots.
3	Review DCP Chapter B5 – Review setback controls following completion of Council's Integrated Transport Strategy and further understanding of the functioning of industrial road networks.
4	Review DCP Chapter B5 – Review controls in relation to 'kiosks' to encourage uptake and appropriately regulate their operation
5	Investigate the necessity of highly specific controls compared with adopting more generalist principles as well as the inclusion of subsections that are very specific to certain industries (e.g. motor vehicle repair workshops, abrasive blasting industries); relate to matters that are already addressed elsewhere in the DCP (e.g., riparian corridors, utility infrastructure services, road design and construction) or detailed landscaping requirements.
6	Investigate including separate parking requirements for indoor recreation land uses in a future update of Wollongong DCP Chapter E3.
7	Review requirements around residential interfaces in industrial lands. Include requirements for residential development adjoining Industrial land to mitigate impacts such as noise.
8	Consider how the DCP can support the objectives of the incoming Sustainable Buildings SEPP (October 2023) and improve outcomes for development which is exempt.



Appendices

Appendix 1 Review of Strategic Policy

Table A.1: Summary of relevant strategic plans and/or policies

Strategic Plan or Policy	Implications for Wollongong's Industrial Lands
NSW State Government	<p>In September 2022, the Greater Cities Commission (GCC) released a discussion paper, 'the Six Cities Region' outlining a vision for the six cities of the sandstone region.</p> <p>A draft region plan will be released in the first half of 2023. The Illawarra-Shoalhaven City Plan will be released at some point during FY2023-24.</p> <p>Key ideas relevant to industrial lands include:</p> <ul style="list-style-type: none"> Industrial lands have an important role to play as a vital piece of economic infrastructure, because they help to generate the investment needed for the effective functioning of the Six Cities Region, including supporting an efficient supply chain. Industrial lands must be strategically planned so that we can coordinate the functions and types of land use and infrastructure. If links are missing in the supply chain, this impacts the productivity, functioning and economic resilience of cities. If the supply chain is too complex, this can reduce sustainability and competitiveness, especially for export industries and urban services. The Region Plan will include an industrial lands policy across the Six Cities Region to provide certainty to communities, businesses, and investors to support local, regional and state economic growth. This will ensure that industrial areas are sustainably linked to current and global gateways like ports and airports. Industrial lands policy will ensure industrial areas are located close to the businesses and communities they serve, including locations near major gateways, economic corridors, and innovation districts, so that new industries in the Six Cities Region can sustain a global comparative advantage. The importance of linking freight, ports, and airports for economic growth, including new and connected infrastructure at Port Kembla which is set to be NSW's second container terminal. That a new rail connection to Western Sydney is crucial for additional rail freight capacity in and out of Port Kembla and the Illawarra-Shoalhaven City. <p>It's also noted that the Region Plan will set job targets for each of the six cities and across four categories of jobs (knowledge-intensive, health and education, population-serving and industrial). In setting jobs targets, the Region Plan will recommend the incentives, planning changes and encourage investment and skills creation needed to achieve targets</p>
Six Cities Region Discussion Paper (GCC 2022)	
Industrial Lands 'Retain and Manage' Policy Review	<p>In June 2022, the GCC released the findings of a 12-month review of the 'Retain and Manage' policy and concluded there is an ongoing need for the policy to remain in place at least until the development of the Six Cities Regional Plan, which will include following eight draft Guiding Principles to provide greater clarity and assistance to councils regarding industrial land classified as 'Retain and Manage' industrial lands.</p> <p>The Review adopted the following policy vision for industrial lands across Greater Sydney:</p> <p><i>"Industrial lands in Greater Sydney should provide employment and economic opportunities of local, city and state significance. To enable this, the industrial land management policy should maximise the productivity of industrial lands and optimise productivity over competing land uses across Greater Sydney. Industrial lands should be strategically located offering diverse locations, building and lot sizes, operational conditions, and affordability in a manner that fosters opportunities for business development and innovation. The local character of industrial lands should be enhanced to improve the amenity for workers and visitors".</i></p> <p>The Review acknowledged that:</p> <ul style="list-style-type: none"> The value of, and need to secure, industrial capacity to ensure there is sufficient land and allowable floor area, of the right types, to meet the state's industrial needs now and in the

Strategic Plan or Policy	Implications for Wollongong's Industrial Lands
	<p>future. The importance of supporting economic resilience and future business investment, especially at a time when there is increased demand for industrial lands.</p> <ul style="list-style-type: none"> • There are circumstances where some industrial land could transition to alternative uses, including other types of employment, office and medical/health services, mixed uses and in some cases, could allow for some types of residential use. • Encroachment from competing uses can be detrimental to industrial lands and that some safeguarding is necessary to ensure that the productivity and economic functionality of Greater Sydney is not compromised. <p>As such, the Review determined it was necessary to develop the following eight draft guiding principles for industrial lands to provide greater clarity and assistance to councils on the management of 'Retain and Manage' industrial areas. These are outlined following:</p> <ol style="list-style-type: none"> 1. <i>Security capacity of industrial and urban services land.</i> Ensure there is sufficient industrial land and allowable floor area, of the right types, to meet the State's needs now and in the future. 2. <i>Supporting sustainability policy and aspirations</i> Industrial lands policy should align with government environmental objectives and community expectations including minimising commute and delivery times, enabling efficient freight and logistics networks, and minimising environmental and social impacts. 3. <i>Optimising diverse supply chains supported by infrastructure</i> Ensure that Greater Sydney's freight network (including trade gateways and corridors) and businesses' access to intermediate goods and services are efficient and resilient. 4. <i>Boosting economic activity to support current and emerging industries</i> Strategically important and well-located industrial lands should support the co-location of businesses. Protecting Greater Sydney's and NSW's adaptive capacity to integrate both current and emerging industries can help secure Australia's current and future economic prosperity. 5. <i>Encouraging innovation</i> Ensure industrial sites are adaptable to the evolving needs of the users, including the need for greater diversity and intensity of use and changing industry characteristics. 6. <i>Providing business certainty</i> Ensure consistency and clarity regarding the function of each industrial area, including their economic relationship with activity centres, to send clear market signals that foster business investment and productivity. 7. <i>Servicing population needs</i> Households and businesses should have access to the goods and services they need and access to local employment opportunities. 8. <i>Consideration of transition to alternative uses</i> Transition of industrial lands to other uses, but only where the other seven draft Guiding Principles would not be compromised. If an industrial area (or part) is identified for possible transition to an alternative use, prioritisation must first be considered for other employment uses.
	<p>The Regional Plan highlights the importance of Wollongong's industrial lands to the region, especially the economic importance of the Port of Port Kembla.</p> <p>The Plan identifies employment lands at Port Kembla, West Dapto and Tallawarra as 'regionally significant' and discusses the importance of activating these precincts to support new and innovative economic activity such as hydrogen production.</p>
Illawarra Shoalhaven Regional Plan 2041 (DPE 2021)	<p>The Plan acknowledges the important history of mining and steel making in the region and confirms an ongoing role for local mining as well as supporting advanced manufacturing and defence sectors. The role of the University of Wollongong in supporting innovation in manufacturing is also highlighted.</p>
	<p>The Plan encourages the NSW Government and/or Council to consider the following:</p> <ul style="list-style-type: none"> • Protect Port Kembla as an international gateway for freight and logistics <ul style="list-style-type: none"> ◦ Reducing land use conflicts and, where appropriate, including buffer measures to minimise the impact of development on the efficient functioning of the Port and freight industry.

- The impact of high traffic-generating development on roads that service the Port to reduce conflicts with dangerous goods vehicles.
- **Activate regionally significant employment lands**
 - Retaining and managing regionally significant employment lands and safeguard them from competing pressures.
 - Creating flexible planning and development controls that respond to new opportunities and technologies, including catalytic investments.
 - That the availability of employment lands depends on servicing, location and size, and constraints such as flooding, bushfire, and the location of biodiversity.
 - Aligning infrastructure to support the rollout of employment land in the region.
 - The impact of e-commerce and technological change on warehousing and distribution.
 - Supporting defence and advanced manufacturing industries.
 - Monitoring the take up and availability of employment land through the Employment Lands Development Monitor.
- **Mining**
 - Protecting areas of mineral and energy resources potential.
 - Protecting infrastructure that facilitates mining industries, such as road and rail freight routes, from development that could affect current or future extraction
 - Addressing water resource constraints and impacts.
- **Clean Energy**
 - Positioning the region as a clean energy hub with regional economic development and strategic plans considering the development of the Port as a green hydrogen hub to create economic and jobs growth in the region.
 - Opportunities to encourage energy efficient building design for residential, commercial and industrial areas.
- **Circular Economy**
 - That high levels of industrial activity in the region presents an opportunity to develop a circular economy.
 - Further work is required to better understand the feasibility of industrial symbiosis to maximise efficiencies, share resources and materials, re-use and recycle water, reduce operating costs and improve environmental outcomes.

Transport for NSW developed the *Illawarra-Shoalhaven Regional Transport Plan (IS RTP)* in conjunction with the Department of Planning and Environment's *Illawarra- Shoalhaven Regional Plan 2041*.

The IS RTP outlines the local actions required to achieve the region's transport vision and includes the following focus areas:

- improving connectivity between the Illawarra-Shoalhaven and Greater Sydney
- increasing population within a 30-minute public transport trip of a regionally significant centre*
- increasing the number of trips made by walking, cycling and public transport
- reducing crash rates in-line with the NSW-wide "Towards Zero" goal of zero fatalities and serious injuries on our roads
- improving transport connections to Greater Sydney, with a strong focus on connectivity to Western Sydney
- increasing access for High Productivity Vehicles (HPV) across the region.

**Illawarra
Regional
Transport Plan
(TfNSW 2021)**

Relevant to industrial lands, the IS RTP states that the regional freight task will continue to grow over the next 20 years, particularly with the Port of Port Kembla identified as a future container terminal and potential hub for hydrogen production and export, and to support this expansion, surrounding road and rail networks will need to embrace technology-driven solutions, and address first mile/last mile limitations.

**Metro Wollongong, Shellharbour City Centre, Kiama, Nowra City Centre and Milton-Ulladulla.*

In September 2022, the NSW Government released the Port Kembla Precinct Profile, providing a summary of the planning and economic context at Port Kembla, as well as its current role/s and functions.

The Profile outlines future opportunities and options for the precinct to realise its potential for employment and growth. It recognises that these opportunities and the resolution of constraints can only be realised with coordination and collaboration between all levels of government, inter-governmental agencies, industry, and industry organisations.

The 'precinct', for the purpose of this profile refers to the Port of Port Kembla (the Transport and Infrastructure SEPP – Chapter 5 Three Ports area). However, it is acknowledged that the Port is also supported by other industrial areas such as Unanderra and Kembla Grange and key data is provided on these lands.

The Profile identifies the current role and function of the Port Kembla precinct as well as including detailed land use characteristics, including the amount of operational and non-operational land.

The Profile notes that employment growth across Port Kembla, Unanderra and Kembla Grange will be driven by ongoing development of the region's port-related and manufacturing uses and this will see the largest quantum of additional jobs attributed to Manufacturing, Construction and Transport, Postal and Warehousing. The Profile also note the future investment pipeline in the precinct includes 34 projects with an estimated value of \$7.12 billion all at various stages of development.

The Profile includes findings from stakeholder engagement on the future role and opportunities across the Port Kembla precinct, noting they are not all endorsed by the NSW Government and/or part of a committed action plan. These include:

**Port Kembla
Precinct Profile
(DPE 2022)**

- **Decarbonisation, port expansion and new technologies will likely drive growth**
 - The Profile identifies three groups of opportunities - those created by global climate change policy responses including net zero carbon emissions targets, those that relate to the Port (including expansion to receive container freight) and those relating to new technologies.
 - The Profile then outlines opportunities by category including Energy, Port Related, BlueScope, Advanced/Clean Manufacturing and Circularity.
- **Potential for the establishment of a 'renewable zone' or 'green precinct' in Port Kembla leveraging off the emerging Hydrogen Hub focus within the precinct.**
 - The Profile identifies a number of challenges and considerations including access to investment, appropriate infrastructure (water, power and distribution), access to customers, access to skills and potential environmental impacts.
 - The Profile identifies a number of options to realise opportunities including tapping into the work of the Port Kembla Hydrogen Hub and funding from the NSW Government, exploring the role of a concierge to assist investors landowners navigate government processes/requirements as well as various collaborations.
- **Masterplan collaboration with BlueScope and NSW Ports will be a key success factor when it comes to growth**
 - The Profile notes that BlueScope is investigating repurposing its existing buildings, unlocking approximately 200 Ha of surplus/under-utilised land through its Masterplan and exploring its future role with hydrogen and other clean energy initiatives.
 - BlueScope is also planning to continue traditional steelmaking through its proposed Blast Furnace 6 realignment project as well as expansion of galvanised steel production. It is also noted that there may be potential opportunities for the manufacturing of offshore windfarm components.
 - The profile also notes the outer harbour of Port Kembla is likely to house NSW's second container terminal via the approved Outer Harbour Expansion project and that a future container terminal would be a catalyst for growth throughout the precinct. Opportunities around gas infrastructure, expansion of the bulk liquids terminal and increasing the throughput of construction materials are also identified.
 - The profile identifies challenges and opportunities for both BlueScope and NSW Ports (for example, access to investment as a barrier and collaboration opportunities).

Strategic Plan or Policy	Implications for Wollongong's Industrial Lands
	<ul style="list-style-type: none"> • There is significant interest in understanding what the circular economy opportunities in and around the Port could be <ul style="list-style-type: none"> ○ An opportunity for a designated circular economy hub or precinct could be investigated. ○ The Profile explores the challenges and opportunities associated with establishing a circular economy in and around the Port. <p>The Profile notes there are likely to be challenges arising in terms of future land availability and supporting infrastructure to accommodate some of these potential uses and that the exact details of land and infrastructure requirements (particularly land size requirements) for most of these emerging and conceptual uses are unknown at this early stage and typically will depend on the size and capacity of development/facility proposed.</p> <p>The Profile notes that key pieces of infrastructure such as the potential Maldon-Dombarton rail line and corridor are likely to be pivotal in attracting and supporting growth opportunities within the precinct and that use of underutilised and non-operational sites and key emerging strategic processes such as the <i>BlueScope Masterplan/Lands Strategy</i> or the new <i>NSW Ports Masterplan</i> may provide additional insight.</p> <p>It is noted that careful consideration is required around the feasibility of whether all the identified uses can practically and safely fit within the port.</p> <p>The Profile finds there is capacity to meet the increased demands on transport, water and electricity however further advocacy on transport and collaboration between investors, agencies and service providers will be key. Regarding transport needs, the Profile states the following should be considered in detail:</p> <ul style="list-style-type: none"> ○ Delivering additional rail freight between the Port and Western Sydney ○ Investigating the future and timing of the Maldon to Dombarton rail for freight movements ○ Road upgrades (e.g. Mount Ousley Interchange and Picton Road) to improve HPV access to the Port from the Hume Motorway. <p>The Profile also states that Sydney Water are currently developing the Illawarra Regional Masterplan which will map opportunities and identify high level servicing concepts and there are collaboration opportunities for NSW Government agencies and landowners/operators to work with Sydney Water.</p>
NSW Hydrogen Strategy (2021)	<p>The NSW Hydrogen Strategy brings together the NSW Government's existing and new policies into a framework to support the development of a commercial hydrogen industry in NSW.</p> <p>The Strategy sets the aim of NSW producing 110,000 tonnes of green hydrogen per annum from 700 MW of electrolyser capacity for under \$AU2.80 per kg by 2030.</p> <p>To achieve this, the Strategy provides up to \$3 billion in incentives to commercialise hydrogen supply chains including \$70 million to establish hydrogen hubs in the Illawarra and Hunter, identifying that both the Port of Newcastle and Port Kembla have existing export terminals and trade relationships and proximity to existing electricity transmission infrastructure including the planned Illawarra and Hunter-Central Coast Renewable Energy Zone (REZs).</p>
NSW Freight and Transport Strategy 2018	<p>This plan sets out the NSW Government's priorities for freight and ports over the next five years and is central to the NSW Government's long term transport planning.</p> <p>Relevant to Wollongong, the plan notes the importance of managing traffic congestion around Wollongong and delivering new infrastructure to increase freight rail capacity on the shared Illawarra line.</p>
Illawarra Industrial Lands Study (DPE 2014)	<p>In 2014, the NSW Government released a study prepared by Cardno that aimed to quantify the amount and type of developable industrial land in the Illawarra Shoalhaven region and identify any major physical and serving constraints.</p> <p>The Study found there was a critical shortage of vacant land throughout the Illawarra that is free from physical constraints (bushfire, flooding, biodiversity) or servicing such as access to sewerage, water, and electricity.</p> <p>Key findings for Wollongong LGA included:</p>

Strategic Plan or Policy	Implications for Wollongong's Industrial Lands
	<ul style="list-style-type: none"> Only 30% of vacant industrial land in Wollongong LGA was unaffected by a physical constraint. 38% of vacant industrial land was considered flood prone. In particular, the regionally significant sites at both Kembla Grange and Tallawarra. The majority of occupied industrial land at Port Kembla is considered flood prone, with the occupied industrial land in the Wollongong LGA as a whole being 47 percent. This highlights how engineering methods have been used to mitigate against flood impacts Bushfire prone land as well as and biodiversity were not significant physical constraints affecting industrial land. Topography was not a major constraint with 88% of total vacant land either flat or comprising of a gradient of less than 5%. <p>The Study emphasised the need to bring to market vacant industrial land through a series of recommendations which included:</p> <ul style="list-style-type: none"> Collaborating with major landowners with significant holdings (e.g. BlueScope's surplus sites). Coordinating the servicing of industrial lands and continually monitoring how the delivery of these lands occur over time. Identifying critical infrastructure required for significant industrial lands across the region.
Wollongong City Council	
Wollongong Community Strategic Plan – Our Wollongong 2032	<p>Council's Community Strategic Plan (CSP) is the highest-level strategic planning document that outlines the community's vision and aspirations over the next decade and guides all of Council's decision making.</p> <p>Relevant to this Review is Goal 2 within the CSP which states, 'We have an innovative and sustainable economy', and includes several objectives to grow and diversify the economy, including attracting new business investment and encouraging innovation.</p> <p>The supporting 2022 – 2026 Delivery Program and Operational Plan 2022 – 2023 identify the following project: 'Prepare a Local Government Area Industrial Lands Study.'</p>
Wollongong Retail and Business Centres Strategy (2023)	<p>Council's Retail and Business Centres Strategy sets a strategic direction to ensure the success of commercial centres across Wollongong LGA.</p> <p>Relevant to Industrial Lands, The Strategy includes the following recommendations, building on those identified in previous Town Centre plans:</p> <p>5.2 Recommendation 3: Tighten centre boundaries to create resilient and active centres</p> <p>As part of the Industrial Lands Review:</p> <ul style="list-style-type: none"> Review the B2 zoned land on Military Road Port Kembla between Darcy Rd and Allan St. Consider transition to IN2 Light Industrial, in line with the adopted Port Kembla 2505 Revitalisation Plan 2018 - 2045. Review the recommendation of the adopted Unanderra Masterplan 2013 to transition the B6 Enterprise Corridor zoned land south-east of Unanderra Town Centre to a B2 – Local Centre zoning to improve street activation along the Princes Hwy corridor. Review the residential zoning at 95 Gladstone Street Wollongong and consider if appropriate to rezone to an Industrial use. <p>5.4 Recommendation 11: Facilitate an appropriate range of land use options to increase activity within, and patronage of, centres</p> <ul style="list-style-type: none"> Continue to discourage out-of-centre retail development by limiting the scale and/or permissibility of retail uses in other zones. <ul style="list-style-type: none"> Implement the proposed changes of the Employment Zone Reform to remove indoor recreation and Take-away food and drink premises from the Land Use Table in Heavy Industrial Zones. As part of the Industrial Lands Review, consider whether further limitations on retail premises are required in Industrial zoned land.
Wollongong Housing Strategy (2023)	<p>Council's Housing Strategy has been prepared to guide the future housing directions within Wollongong LGA over the next 10-20 years.</p> <p>Relevant to industrial lands, the Strategy contains the following strategy:</p>

Strategic Plan or Policy	Implications for Wollongong's Industrial Lands
<i>Wollongong Local Strategic Planning Statement (2020)</i>	<p>CW6: Retain Industrial zoned land for employment opportunities, and not for residential outcomes.</p> <p>The Statement contains the following relevant aspirations for the next 20 years:</p> <ol style="list-style-type: none"> 1 Trade though Port Kembla will continue to grow, providing employment opportunities. Buffer areas around the Port and freight corridors will need to be considered. 2 The Maldon – Dombarton Freight Rail Line, or the South West Illawarra Rail Link (SWIRL – freight and passengers) will be constructed. 3 Employment lands at Port Kembla, Unanderra, West Dapto, south Wollongong, Fairy Meadow, West Dapto, Tallawarra; Helensburgh, Bellambi and other locations will be protected to provide local employment opportunities for the growing population. 4 Investigate opportunities for jobs growth in the renewables and green technology industries.
	<p>The undertaking of an Industrial Lands Planning Controls Review is a commitment of the Statement.</p> <p>The following adopted Town and Village Plans contain relevant actions for industrial lands:</p>
	<p><u>Unanderra Town Centre Plan</u></p> <p>6.2 Planning: Review the B6 Enterprise land use zone along the southern edge of the town centre to B2 local centre, encouraging a more appropriate mix of town centre use (pg. 67)</p> <p><u>Port Kembla 2050 Revitalisation Plan</u></p> <p>2.4 LGA Wide Employment Lands Study: Ensure that the strategic direction for the growth of the town centre and suburb is included in the work of the LGA wide Employment Lands Study, and is informed by the growth and needs of the Port</p>
<i>Town and Village Plans; Wollongong Retail and Business Centres Strategy</i>	<p>3.7 Planning Control Amendments: Council to facilitate high-quality development, business activation and improve design outcomes by investigating amendments to planning controls to assist in sustainable land-uses, filling of vacancies and developments in the Town Centre. Any future amendments will be informed by actions 2.3 (Housing Strategy) and 2.4 (Employment Lands Strategy) (pg. 41)</p>
	<p>The Plan included a vision for the Military Road Spine in (page 24)</p> <p>"02 - Darcy Road to Church Street intersections has a light industrial access focus, with the opportunity for additional street trees and amenities for pedestrians and cyclists"</p>
	<p>The following future strategy for South Wollongong has also been adopted although the final plan for the precinct will be developed following completion of other work such as the updated Wollongong City Flood Plain Risk Management Study.</p> <p><u>South Wollongong Future Strategy (2017)</u></p> <ul style="list-style-type: none"> o The Strategy identifies that the southern part of the South Wollongong precinct (around Coniston) has the potential to further accommodate employment and freight uses in support of the Port of Port Kembla operations which are forecast to expand. Further investigation of the precinct's role in this regard is required.
<i>Wollongong Economic Development Strategy (2019-2029)</i>	<p>The Strategy set an aspirational jobs target of 10,500 new jobs in Wollongong LGA by 2028.</p>
	<p>This target includes the creation of 4,700 jobs above those forecast to occur under a 'business as usual' growth scenario. This will be achieved through targeting knowledge-intensive, high value, high skilled sectors, that are not linked to population growth. Among these, are Advanced Manufacturing and Defence, which require suitable industrial lands.</p> <p>The Strategy nominates a list of 10 'game-changing' projects that would be transformative for Wollongong should they occur with the following projects having a direct relationship to industrial lands:</p> <ul style="list-style-type: none"> • Critical transport projects to reduce the travel time between Wollongong and Sydney (particularly the South West Illawarra Rail Link (SWIRL) proposal which would drastically alter the freight rail capacity to the region).

Strategic Plan or Policy	Implications for Wollongong's Industrial Lands
	<ul style="list-style-type: none"> • Development of unused and underutilised employment lands. • Completion of the Australian Industrial Gas Energy Terminal project. • Delivery of the Port Kembla container terminal project. <p>The Strategy notes the following in relation to unused/underutilised employment lands:</p> <ul style="list-style-type: none"> • Council acknowledges the importance of preserving these industrial lands to ensure industry has access to appropriately zoned land into the future. • Those looking for larger parcels, in particular, are unable to be assisted based on the current supply of serviceable industrial land. This inability to provide suitable land for new businesses represents a lost employment and investment opportunity in Wollongong. • There are currently 282 hectares of undeveloped employment land zoned in the Wollongong LGA of which 85% or just over 239 hectares is zoned industrial, with the remaining reserved as enterprise corridor/business park. The majority of this land is around the Port of Port Kembla, Unanderra, and West Dapto. • Development of employment lands, which are largely privately owned, represent a significant opportunity for the region's manufacturing industry. The region has seen an increase in interest from industrial and manufacturing business located in Southern and Western Sydney who are being squeezed out by demand for rezoning of industrial land to residential land. <p>The Strategy also includes the following action for Council:</p> <p><i>Advocate for the retention and development of currently unused or underused industrial and urban services employment lands to support appropriate employment.</i></p>
Integrated Transport Strategy (underway)	<p>The Strategy will be Council's guiding supporting document for transport in Wollongong. It will bring together other strategies across all transport modes and use the Movement and Place Framework to develop a clear understanding of the role and function of our movement networks.</p> <p>Relevant to Industrial Lands, the Strategy will:</p> <ul style="list-style-type: none"> • Reflect recommendations for freight networks from the NSW Freight and Ports Plan 2018-2023 including identifying corridors (road and rail) needed to be protected to support the efficiency of the Port of Port Kembla. • Set guidance on the service provision needed for future developments and change of use, including the provision for appropriate off-street loading facilities • Set principles for the change in demand for kerb side deliveries • Consider the SWIRL proposal and how it may assist in future freight movement and connection to Sydney freight distribution hubs. This includes identifying options for handling of freight across Wollongong and the Port of Port Kembla if the SWIRL project does not emerge a preferred option by industry or other tiers of Government.
Climate Friendly Planning Framework Discussion Paper (2022)	<p>The Discussion Paper promotes enhancements to our planning framework to improve the environmental outcomes of development. The paper has 5 focus areas: Landscaping and Urban Greening; Solar and Energy Efficiency; Materials, Building Form and Waste; Transport and Car Parking; Policies and Incentives.</p> <p>Relevant to Industrial Lands is the encouragement to:</p> <ul style="list-style-type: none"> • Increase quantity and quality of canopy cover in the public domain – many industrial areas have limited street tree canopy cover and landscaping requirements for Industrial DAs can often be compromised in order to meet parking or other requirements • Facilitating the achievement of community net zero carbon emissions targets by 2050 in relation to energy efficient design construction and ongoing operations • Supporting access to public transport, improved active transport connections and bicycle facilities, and EV charging facilities. • Offer incentives to developers who exceed environmental sustainability standards.
Sustainable Wollongong 2030: A Climate Healthy Strategy	<p>On 16 November 2020, Council adopted both the Sustainable Wollongong 2030: A Climate Healthy City Strategy and the Climate Change Mitigation Plan 2020-2022.</p>

Strategic Plan or Policy	Implications for Wollongong's Industrial Lands
Climate Change Adaptation Plan 2022 Net Zero Wollongong - Climate Change Mitigation Plan 2023-2030	<p>The Sustainable Wollongong 2030 Strategy is an overarching, high-level document that brings together all of Council's environmental and sustainability priorities, goals, and targets from a range of other strategies, plans and programs. The Strategy includes six priority areas and subsequent goals:</p> <ol style="list-style-type: none"> 1) A city whose Council shows leadership Environmental and climate leadership underpins Council decision-making and service delivery which inspires the same in others 2) A city that works together Together we protect our environment, reduce emissions and increase our resilience to climate change 3) A low emissions city We will achieve net zero emissions by 2030 for Council operations, and together we will achieve net zero emissions by 2050 for the city 4) A city in harmony with our environment Our ecosystems and waterways are enhanced, our urban areas are cooler and greener and our community is connected to our natural environment 5) A low waste city Our community only take what they need, reuse and recycle what they can and are aware of the resources that they consume 6) A climate and water resilient city Our infrastructure and community can adapt to a changing climate and water is valued as a vital natural resource <p>The Climate Change Mitigation Plan 2020-2022 includes 98 actions for Council to reduce our own emissions and to support the community and businesses to reduce theirs over the next two years. Actions focus on partnerships with government, business, industry and community groups, undertaking required research and pilot projects within our community, and rolling out some key projects to reduce Council's emissions.</p> <p>In March 2022, Council also adopted its Climate Change Adaptation Plan, fulfilling a commitment as a member of the Global Covenant of Mayors for Climate and Energy and accompanying Council's Climate Change Mitigation Plan 2020-2022.</p> <p>The Net Zero Wollongong - Climate Change Mitigation Plan 2023-2030 was adopted on 27 November 2023. The plan aims to achieve the related goals set out in the Community Strategic Plan and Wollongong's emission reduction targets. Emissions sources and abatement pathways are identified for both the community and Council's operational emissions. These are underpinned by detailed action plans that target the main emissions sources in each sector. The Industrial sector is noted as a key generator of community emissions across electricity, gas and IPPU. To this end Council is committed to being involved in the process of decarbonising our industrial sector while strengthening our local economy through State, Federal and privately run programs. The plan notes that the community emissions reduction pathway and 2030 interim target excludes emissions from industrial processes and product use. The majority of the community's and Council's influence is across transport, stationary energy, waste and agriculture and the focus of the actions within the plan in these sectors. Council acknowledges its role to work with our industrial partners to reduce their emissions through support and programs such as the Safeguard Mechanism, the Regional Growth Fund, the Powering the Regions fund and the National Reconstruction Fund.</p>
West Dapto Vision (2018)	<p>In December 2018, Council adopted a revised West Dapto Vision that contains seven key employment principles to inform strategic decisions within the West Dapto Urban Release Area.</p> <p>The majority of these principles have application to the industrial lands at West Dapto.</p> <p>The principles are:</p> <ol style="list-style-type: none"> 1. Support local sustainable employment 2. Attract, facilitate, and support industries, enterprises, and businesses to locate in West Dapto 3. Ensure Town & Village centre employment outcomes are prioritised 4. Protect existing employment land

Strategic Plan or Policy	Implications for Wollongong's Industrial Lands
	<ol style="list-style-type: none"> 5. Take advantage of and encourage employment innovations 6. Improve employment opportunities whilst ensuring development is of a high standard 7. Ensure a high level of accessibility to employment hubs.
Urban Greening Strategy (2017)	<p>The strategy seeks to increase the quality and quantity of all vegetation and open green space on all land types in an urban setting. Wollongong's average urban tree canopy cover is well below the national average of 39% (ISF Benchmarking report). Optimal urban canopy cover for amenity and wellbeing is estimated at 35- 40%. Some suburbs in Wollongong have canopy cover as low as 3%. New urban release areas will need to be planned to establish a tree canopy from scratch.</p> <p>Canopy cover is not evenly distributed across the LGA, and priority must be given in public tree programs to protecting the most vulnerable by increasing canopy cover where it is needed most.</p> <p>Council's investment will focus on providing high quality shade where people are most active by targeting town centres, streets and active transport routes, and parks.</p>
Illawarra Escarpment Strategic Management Plan (2015)	<p>The Illawarra Escarpment Strategic Management Plan (IESMP) 2015 seeks to identify the environmental, cultural, and economic values of the escarpment and foothills requiring conservation, define principles and strategic action for protecting and enhancing escarpment values and outlines an action plan for Council to improve escarpment management.</p> <p>The IESMP contains the following vision:</p> <p style="padding-left: 40px;"><i>The Illawarra Escarpment is an outstanding feature of the Illawarra region providing a natural backdrop to the city as well as encompassing areas of high conservation value and rich cultural heritage. The long term vision for this area is for these values to be preserved and enhanced through public reserve or private stewardship.</i></p> <p>The IESMP applies to land mapped as 'Illawarra Escarpment' under the Wollongong LEP 2009 with land use planning focused on achieving the ongoing conservation and enhancement of the Illawarra Escarpment. Specifically, the escarpment is not viewed an appropriate area for meeting demands for urban growth and planning proposals need to demonstrate how any change would provide an overall improvement to the environmental and cultural values outlined within the IESMP.</p> <p>There is no industrial land within the Illawarra Escarpment LEP boundary, however, there are RU1 Primary Production lands, including the three active mining operations at Russell Vale, Dendrobium and Wongawilli.</p> <p>Specific to mining, the IESMP recognises the long and ongoing history of coal mining in the escarpment including its economic value and contribution to active management of the escarpment through weed, bush fire and pest management. However, the IESMP also states that the economic benefits of of mining must be complementary to positive environmental and cultural outcomes.</p> <p>The IESMP recognises "areas capable of supporting local employment including tourism" are economic values to be preserved or enhanced. However, the IESMP further states that "although productive use of land is essential to drive investment in the active management of the Illawarra Escarpment, the environmental and cultural values must take precedence over its economic exploitation due to its significance. It is important that land use planning decisions protect the escarpment by not degrading its cultural and environmental values for economic gain."</p>
Wollongong Employment Lands Strategy (2006)	<p>This study informed the preparation of the draft Wollongong LEP 2009.</p> <p>The study was prepared at the time of some major projects including the announcement by the NSW Government of a \$140m expansion of the Port of Port Kembla to facilitate car importing, the building of the Tallawarra Power Station as well anticipated future expansion of the University of Wollongong's Innovation Campus, which had not yet been fully developed.</p> <p>The Study concluded that:</p> <ul style="list-style-type: none"> • There was existing supply of approximately 631.8ha of industrial zoned land and proposed supply of approximately 619.9ha of employment generating land (considering rezoning recommendations). This translated to a total loss of 11.9 ha of employment land.

Strategic Plan or Policy	Implications for Wollongong's Industrial Lands
	<ul style="list-style-type: none"> Some of the identified existing supply does not presently accommodate any employment generating uses i.e: the Woonona Industrial precinct and part of the Berkeley Road precinct. Consequently, the loss of presently operating employment generating land in light of the rezoning recommendation is to be less. Any loss in employment land will be more than made up for with the release of new industrial zoned lands in the West Dapto Urban Release Area and with the release of 600 ha of employment lands surrounding the Tallawarra Power Station. At the LGA level, the total current and proposed industrial zoned areas and commercial services zones across the Wollongong LGA (taking into consideration the rezoning recommendations) total 2,206 ha and 2,228 ha, respectively. This is a net gain of 22 ha of employment lands across the LGA. Council could consider protection of key employment precincts whilst acknowledging that small, isolated sites had little long term strategic employment value. There were a number of light industrial precincts with small sized lots that do not have a good capacity to accommodate a broad range of employment generating uses, limited to only providing small scale service industry. These were: <ul style="list-style-type: none"> Helensburgh Industrial Area Thirroul Industrial Area Tarrawanna, Bellambi Street Industrial Area Fairy Meadow, Princes Highway Industrial Area Unanderra, Five Islands Road Industrial Area The two heavy industrial zoned lands examined appear to comprise good sized lots. Most precincts have reasonable access to the higher order road network. Many industrial precincts had a reasonable buffer from residential areas, noting however, there were a number with a poor interface, creating land use conflicts. Council consider undertaking a more detailed analysis of the range of lot sizes for each of the industrial precincts in the LGA, in order to gain a more detailed understanding of the extent that small lot size constrains the supply of employment lands in the LGA. Our assessment was based on average lot sizes only.
Non-Government	
Port Development Plan 2019–2023 (NSW Ports)	<p>In 2015, NSW Ports released a masterplan for Port Kembla which indicated that it would continue to be NSW's largest motor vehicle import hub and bulk grain export port while catering for a growing range of dry bulk, bulk liquid and general cargo. The report indicates that a container terminal will be established when capacity at Port Botany is reached.</p> <p>In 2019, NSW Ports released their <i>Port Development Plan 2019-2023</i> which includes development objectives and proposals for their assets, including Port Kembla.</p> <p>Port Kembla is NSW's "port of growth" and a key infrastructure asset and economic driver of the Illawarra region. The Port is:</p> <ul style="list-style-type: none"> Australia's largest motor vehicle port. A major import port for cement. A major export port for coal and grain. <p>Over the next 30 years, Port Kembla's role in supporting the state's mining, agriculture, manufacturing, and construction industries as well as its population centres will grow and strengthen. Port Kembla will continue to connect NSW with overseas markets through exports and be a gateway for the imports required for the motor vehicle, manufacturing and construction industries.</p> <p>As well as remaining the state's largest motor vehicle import hub and bulk grain export port, the next three decades will see Port Kembla handle an increasingly diverse range of dry and liquid bulk products.</p> <p>This will in turn strengthen Port Kembla's role as the second container port after Port Botany, servicing the needs of metropolitan Sydney, in particular southern and western Sydney, and NSW more broadly.</p>
Industrial Lands in the Illawarra Report (Property Council of Australia, 2019)	<p>In 2019, the Property Council of Australia Illawarra Chapter through its Industrial Lands Working Group engaged Urbis to develop an advocacy position in relation to industrial land within the Illawarra Region (Wollongong, Shellharbour, and Kiama LGAs).</p> <p>Key findings of the report were:</p>

Strategic Plan or Policy	Implications for Wollongong's Industrial Lands
	<ul style="list-style-type: none"> • Of the 289 ha of undeveloped industrial land across the Illawarra, only 63.9 ha or 36% is development-ready due to physical constraints. This includes sites which are serviced (34.4ha) and unserviced (29.2 ha). • Undeveloped industrial land parcels throughout the Illawarra and estimated that development-ready land could support up to 3,179 additional jobs. • There is currently a shortage of serviced, unconstrained industrial lots, close to population centres, across the Illawarra. This is limiting the ability of SMEs across the region to expand, pushing them further south (likely to the Shoalhaven) where there is more lot availability and lower rents. • Some stakeholders thought there to be a clear advantage of developing large unutilised industrial land holdings at Port Kembla and Kembla Grange, helping deliver new supply. • Consultation with major landholders and the (then) Department of Planning, Industry and Environment found there are challenges with redevelopment of those sites: <ul style="list-style-type: none"> ○ The process of remediation of these sites is extremely costly. ○ Landholders would require large investment to make development viable, either from a major institutional investor or additional government assistance beyond the significant contribution already being made.

Appendix 2 Heritage Items

The following are heritage listings under Schedule 5 Part 1 of the Wollongong LEP 2009 and SEPP (Transport and Infrastructure) 2021 that apply to lots within scope of this Review.

Table A.2: List of relevant heritage items, Wollongong LGA

Suburb	Precinct(s)	Item Name	Address	Significance	Item Number
Bulli	M3 – Bulli Remnant Mining Lands	Bulli Collieries —includes shaft No 1, shaft No 2 original shaft sinking head frame, old pit top, old furnace shaft and pit town remains*	Hobart Street	Local	5924
	M3 – Bulli Remnant Mining Lands; 3 – Bulli Light Industrial (North)	Bulli Colliery Rail Bridge and Alignment (Former)*	Bulli Colliery to rail bridge embankments	Local	6257
Coalcliff	M2 - Former Coalcliff Cokeworks Site	Coalcliff Colliery Shaft Mine and Coke Works*	280 Lawrence Hargrave Drive	Local	6348
Corrimal	M4 - Russell Vale Colliery	South Bulli Colliery*	Lot 1 and 7 Princes Highway	Local	5928
		Ficus obliqua	Bloomfield Park, 10 Lydon Street	Local	6465
Dapto	39 - Dapto Enterprise Corridor & Light Industrial	Crystal clothing factory (former)	14–16 Marshall Street	Local	61023
Helensburgh	M1 – Metropolitan Mine Helensburgh	Metropolitan Colliery*	Lot 7304 Parkes Street	Local	5921
		Railway tunnels*	Lilyvale siding		6482
Kembla Grange	35 – West Dapto Employment Lands	"Glengarry" homestead	107 Reddalls Road	Local	6432

Suburb	Precinct(s)	Item Name	Address	Significance	Item Number
		Moreton Bay Fig	West Dapto Road (on bend in West Dapto Road, northern end of property)	Local	6329
Kembla Heights	M5 - Mount Kembla Dendrobium Colliery	Former Post Office	Lot 3 Harry Graham Drive	Local	5946
		Mt Kembla Colliery—including site of mine workings, portal, mine air shaft and pit pony stables*	Lot 1 Harry Graham Drive	Local	7105
		Nebo Colliery*	Lots 1 and 3 Harry Graham Drive	Local	7104
		Mine Manager's Residence	East of Lot 1 Harry Graham Drive	Local	5947
		Site of Pioneer Kerosene Works*	Between American Creek and Cordeaux Road	Local	6411
North Wollongong	Precinct 19 – Flinders Street Enterprise Corridor	North Wollongong Hotel (formerly Bode's Hotel) and Group of Trees	3 Flinders Street	Local	6273
Port Kembla	30 – Port Kembla Darcy Road (Non-SEPP)	Hill 60, Fisherman's Beach, Boilers Point, Red Point and MM Beach*	Hill 60, Fisherman's Beach, Boilers Point and MM Beach	State	61043
	31 – Military Road Light Industrial	Bomb shelter*	59 Military Road	Local	6478
		Former Fire Station	99 Military Road	Local	6307
	29 – Port Kembla SEPP Area	Mobile Block Setting Steam Crane	Eastern Breakwater Harbour		4
		Hill 60, Illowra Battery (State Heritage Register listing 01492)	Gloucester Boulevard		5
		Brick Chimney, Port Kembla Copper	Military Road		3
		Office and House, Port Kembla Copper	Military Road		2
		Commonwealth Rolling Mill Plant and Gardens	Old Port Road		1
Unanderra	27 – Unanderra Industrial Park	Site of former "Berkeley House" *	23 Glastonbury Avenue and 191–195 Five Islands Road	Local	6519
	26 – Unanderra Enterprise Corridor & 27 – Unanderra Industrial Park	Unanderra Station Master's Residence	Lot 1000 Princes Highway	Local	6428

Suburb	Precinct(s)	Item Name	Address	Significance	Item Number
Wollongong	19 – Flinders Street Enterprise Corridor	Former Coach House	10A–10B Flinders Street	Local	6274
		“Ken Elm”	90 Smith Street	Local	6397
	20 – Belmore Basin	Breakwater Light House	Endeavour Drive— End of Breakwater, Wollongong Harbour	State	5906
		Harbour steps	Endeavour Drive— Belmore Basin— north-eastern side	State	6418
		Stone steps	Endeavour Drive— Belmore Basin— connecting Endeavour Drive to Wharf Area	State	6364
		Site of Coke Works, including remains of coke oven*	Endeavour Drive— Belmore Basin	State	6406
Wongawilli	M6 – Wongawilli Colliery	Wongawilli Mine Manager’s Cottage (former) and Tennis Court	63 Wongawilli Road	Local	61067
		Wongawilli Colliery*	Lot 422–425 Wongawilli Road	Local	7100

“*” Indicates an archaeological site or a heritage site with an archaeological component.

Appendix 3 Comparative Planning Analysis Data

Note: when the term 'Nil' is used it refers to there being no control applied to the land, rather than a control being equal to zero.

Table A.3: Comparison of key LEP controls for industrial zones for selected LGAs

LGA	Zone	Area (ha)	Max Height of Buildings (range, m)	Max FSR (range)	Min Lot Size (range, Ha)	General Comment
Bayside	IN1	266.9	14.5 – Nil	1.2:1 – Nil	Nil – 0.15	Most of the land included within the SEPP boundary around Port Botany has no height or FSR controls (including on IN1/IN2 land). South of the Airport, height and FSR controls are more restrictive on both IN1 and IN2 land (maximum 14.5m H.O.B. and 1:1 FSR). 0.15 Ha. is the largest M.L.S. in both IN1 and IN2.
	IN2	57.7	10 – 25	1:1 – 1.5:1	0.084 – 0.15	
	SP1	N/A	15 – Nil	Nil	Nil	
Blacktown	IN1	1,702.6	18 – Nil	Nil	Nil – 7	Heights vary from 18m to no limit for both IN1 and IN2. No FSR. 7 Ha is the largest M.L.S. for IN1 and 0.25 Ha for IN2.
	IN2	474.8	18 – Nil	Nil	Nil – 0.25	
Camden	IN1	267.1	9.5 – Nil	1:1 – Nil	Nil – 0.4	Varied heights and FSR for both IN1 and IN2. 0.4 Ha is the largest M.L.S. for IN1 and 0.2 Ha for IN2.
	IN2	105.8	9.5 – Nil	1:1 – Nil	Nil – 0.2	
Campbelltown	IN1	642.8	19	Nil	0.4	Uniform height limit of 19m across both IN1 and IN2 with no FSR. 0.4 Ha is the largest M.L.S. in both IN1 and IN2.
	IN2	120.5	19	Nil	0.2 – 0.4	
Canterbury Bankstown	IN1	629.7	Nil	1:1 – Nil	Nil – 1	No height limits across all precincts. FSR of 1:1 in place for some IN1 and IN2 land. 1 Ha is largest MLS for IN1 and 0.1 Ha for IN2.
	IN2	319.8	Nil	1:1 – Nil	Nil – 0.1	
Cumberland	IN1	880.1	12 – Nil	1:1 – Nil	Nil – 0.15	Varied heights from 12m through to Nil in a number of precincts. FSR varies from 1:1 through to Nil for a number of precincts. 0.15 Ha is the largest M.L.S. in both IN1 and IN2.
	IN2	203.4	12 – Nil	1:1 – Nil	Nil – 0.15	
Fairfield	IN1	838	Nil	Nil	Nil – 0.093	No height restrictions. No FSR on IN1 and the vast majority of IN2 with one precinct an outlier (0.33:1).
	IN2	76.2	Nil	0.33:1 – Nil	Nil – 0.15	

LGA	Zone	Area (ha)	Max Height of Buildings (range, m)	Max FSR (range)	Min Lot Size (range, Ha)	General Comment
						0.093 Ha is the largest M.L.S. for IN1 and 0.15 Ha for IN2.
Liverpool	IN1	640.2	15 – 30	1:1 – Nil	Nil – 0.2	Varied heights, ranging from 15-30m for IN1, 13m to Nil for IN2 and uniform 30m for IN3. FSR ranges from 1:1 to Nil for IN1 and IN2 and no FSR on IN3. 0.2 Ha is the largest M.L.S. for all zones.
	IN2	180.6	13 – Nil	1:1 – Nil	Nil – 0.2	
	IN3	282.4	30	Nil	0.2	
Newcastle	IN1	92.6	Nil	Nil	0.1	No height or FSR across all precincts. Uniform M.L.S. across each industrial zone (excluding SP1 which has none).
	IN2	716.4	Nil	Nil	0.1	
	IN3	217.3	Nil	Nil	0.4	
	SP1	1,503.9	Nil	Nil	Nil	
Parramatta	IN1	449.4	9.2 – Nil	1:1 – Nil	Nil – 0.8	Varied heights, ranging from 9.2m to Nil for IN1, uniform 15m for IN2 and uniform 12m for IN3. FSR ranges from 1:1 to Nil for IN1 and is uniform 1:1 for IN2 and IN3. Generally, there is no M.L.S., except for IN1, where some lots have up to 0.8 Ha.
	IN2	11.5	15	1:1	Nil	
	IN3	227.1	12	1:1	Nil	
Penrith	IN1	2,186.6	12 – Nil	Nil	Nil – 1.25	Varied heights ranging from 12 m to Nil in IN1 (12 m is most common). Uniform height of 12 m in IN2. No FSR across all precincts. 1.25 Ha is the largest M.L.S. for IN1 and 0.2 Ha for IN2.
	IN2	57.8	12	Nil	0.2	
Port Stephens	IN1	1,270.2	Nil	Nil	Nil	No height or FSR across all precincts.
	IN2	27.9	Nil	Nil	Nil	
	IN4	26	Nil	Nil	Nil	
Shellharbour	IN1	14.1	11	1:1	2.7	Uniform 11m H.O.B., 1:1 FSR and 2.7 Ha M.L.S. across all precincts.
	IN2	90.7	11	1:1	2.7	
Shoalhaven	IN1	539.5	8.5 – Nil	Nil	Nil	No controls across all industrial zones with exception of an 8.5 m H.O.B. limit in Berry and 0.05 Ha M.L.S. applying to part of the IN2 at Greenwell Point. It is however noted that the Shoalhaven DCP provides a height limit of 11m in the absence of mapped LEP controls.
	IN2	74.0	Nil	Nil	Nil – 0.05	
	IN4	1.6	Nil	Nil	Nil	
Sutherland Shire	IN1	264	16	1:1 – 1.5:1	0.1 – 1	Uniform 16m H.O.B. for industrial land except on part of the IN3 land at Kurnell where it is unrestricted. FSR generally 1:1 however increases to 1.5:1 at Taren Point.
	IN2	25.7	16	1:1 – 1.5:1	0.1	
	IN3	238.4	16 – Nil	1:1	5	
	IN4	4.1	16	1.5:1	1	

LGA	Zone	Area (ha)	Max Height of Buildings (range, m)	Max FSR (range)	Min Lot Size (range, Ha)	General Comment
						Minimum lot sizes are uniform in each zone except IN1.
Wollongong	IN1	91.6	11 – 20	0.5:1	Nil – 0.4	There is variation in controls among IN1 and IN2. For IN1, heights range from 11-20 m, with uniform 0.5:1 FSR. M.L.S. varies from Nil to 0.4h.a.
	IN2	540	9 – Nil	0.5:1 – Nil	Nil – 39.99	
	IN3	1,198	20 – Nil	Nil	Nil – 9.99	
	IN4	2.6	Nil	Nil	Nil	
	SP1	248.1	Nil	Nil	Nil	For IN2, the most common height control is 11m, followed by 9m (mostly in in the Ward 3). There is one IN2 zone along Auburn Street, Wollongong, with no height limit and there is IN2 land at Tallawarra with 16m. Similarly, the vast majority of lots have an FSR of 0.5:1, although there a very small number with no FSR. M.L.S. for IN2 varies from Nil to 39.99 h.a. on a small number of lots at Helensburgh (which is an outlier). The most common MLS is 0.1 Ha. IN3 lands generally have no height or FSR controls, except a 20m height limit along Shellharbour Rd, Port Kembla. M.L.S. is generally 0.4 Ha, with the exception of lots at Kembla Grange (0.3 Ha). The SP1 lands within the SEPP at the Port of Port Kembla have no controls.

Appendix 4 Precinct Tables

The following tables provide data from the desktop land audit including precinct name and number, lot size information, key planning controls, heritage, and flood affectation, as well as estimated site coverage using building footprint data provided to Council in December 2022¹³.

Table A.4: Detailed precinct table, Industrial land, Wollongong LGA

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct	Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)	
WARD 1														
1	Helensburgh – Parkes Street, Cemetery Road & Princes Highway													
E3	B6	8	6.01	0.75	Princes Highway & Parkes Street	0.2	0.2	0.5:1	0.5:1	11	11	No	No	10%
E4	IN2	21	4.01	0.19	Parkes Street & Cemetery Road	0.1	0.1	0.5:1	0.5:1	11	11	No	No	32%
2	Helensburgh – Walker Street													
E4	IN2	4	8.45	2.11	Walker Street	39.99	39.99	Nil	Nil	9	9	No	No	4%
3	Bulli – Council Northern Works Depot													
E4	IN2	5	2.49	0.5	Princes Highway	0.1	0.1	0.5:1	0.5:1	9	9	Yes	Yes	13%
4	Bulli – Molloy Street													

¹³ Notes:

- Site coverage is estimated using building footprint data from Geoscape that has been provided to Council in December 2022. However, the footprint capture dates vary considerably across the LGA, including data that is in some precincts more than five years old. In precincts where there have been new industrial subdivisions or large-scale development, the site coverage will not be accurate, and this has been noted separately where it is thought to be significant.
- Key planning control ranges/affectations are influenced by outliers i.e., if any lot in a precinct has different controls to the majority, this affects the range shown.

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct		Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)
E4	IN2	13	0.95	0.07	Molloy Street & Rixon Avenue	0.1	0.1	0.5:1	0.5:1	11	11	No	Yes	37%
5	Bulli – Franklin Avenue													
E4	IN2	1	2.6	2.6	Franklin Avenue	0.1	0.1	0.5:1	0.5:1	11	11	No	Yes	30%
6	Woonona – Ball Street & Princes Highway													
E4	B6	13	2.06	0.16	Ball Street, Popes Road & Princes Highway,	0.1	0.1	0.5:1	0.5:1	11	11	Yes	Yes	32%
7	Woonona – Woodland Avenue & Princes Highway													
E4	IN2	2	0.30	0.15	Woodland Avenue & Princes Highway	0.1	0.1	0.5:1	0.5:1	9	9	No	No	44%
8	Woonona – 558-580 Princes Highway													
E4	IN2	2	1.06	0.53	Princes Highway	0.1	0.1	0.5:1	0.5:1	9	9	No	Yes	39%
9	Woonona/Russell Vale – York Place & Watts Lane													
E4	IN2	9	17.94	1.99	York Place & Watts Lane	0.1	0.1	0.5:1	0.5:1	11	11	No	Yes	22%
10	Russell Vale – Princes Highway													
E3	B6	8	1.57	0.20	Princes Highway	0.1	0.1	0.5:1	0.5:1	9	9	No	Yes	41%
11	Woonona/Bellambi – Pioneer Drive & Bellambi Lane													

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct		Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)
E4	IN2	16	8.40	0.53	Pioneer Drive & Bellambi Lane	0.1	0.1	0.5:1	0.5:1	11	11	No	Yes	24%
12	Bellambi/Corrimal – Bellambi Lane & Albert Street													
E4	IN2	81	12.73	0.16	Bellambi Lane & Albert Street	0.4	0.4	0.5:1	0.5:1	11	11	No	Yes	23%
13	Corrimal – Ruddock Street													
E4	IN2	28	3.09	0.11	Ruddock Street & Collins Street	0.1	0.1	0.5:1	0.75:1	11	11	No	Yes	38%
14	Corrimal – Tarrawanna Road & Princes Highway													
E3	B6	5	0.63	0.13	Tarrawanna Road & Princes Highway	0.1	0.1	0.5:1	0.5:1	11	11	No	Yes	49%
15	Corrimal – Princes Highway													
E3	B6	29	2.62	0.09	Princes Highway	0.1	0.1	0.5:1	0.5:1	11	11	No	Yes	44%
16	Fairy Meadow/Fernhill – Jardine Street & Princes Highway													

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct		Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)
E3	B6	11	0.79	0.07	Princes Highway, Kingsford Street, Smith Street & Norman Street	Nil	Nil	0.5:1	0.5:1	11	11	No	Yes	41%
E4	IN2	199	22.61	0.11	Jardine Street, Kingsford Street, Chapman Street & Princes Highway	0.1	0.1	0.5:1	0.5:1	11	11	No	Yes	45%
WARD 2														
17	Fairy Meadow – Princes Highway													
E3	B6	81 ¹⁴	13.26	0.16	Princes Highway, Anama Street, Cabbage Tree Lane, McGrath Street, Woodhill Street and Mount Ousley Road	0.04	0.1	0.5:1	0.75:1	11	11	No	Yes	34%
18	North Wollongong – Montague Street													

¹⁴ Five lots of this precinct are technically in Ward 1 but have been allocated to Ward 2 (where the majority are) to keep the precinct grouped.

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct		Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)
E4	IN2	87	27.89	0.32	Montague Street & Ralph Black Drive	0.1	0.1	0.5:1	0.5:1	9	9	No	Yes	34%
19	North Wollongong – Flinders Street													
E3	B6	147	28.85	0.20	Flinders Street, Stafford Street, Station Street, Achilles Avenue, Bourke Street, Wiseman Avenue, Gipps Street, Charlotte Street, Campbell Street, Keira Street, Smith Street	0.1	0.1	1.5:1	1.5:1	9	32	Yes	Yes	30%
20	Wollongong – Belmore Basin													
W4	IN4	1	2.57	2.57	Endeavour Drive	Nil	Nil	Nil	Nil	Nil	Nil	Yes	No	4%
21	Wollongong – South Wollongong													

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct		Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)
E3	B6	338	25.80	0.08	Auburn Street, Corrimal Street, Glebe Street, Kembla Street, West Street, Beach Street & Swan Street	0.1	0.1	0.5:1	0.75:1	9	9	No	Yes	46%
22	Wollongong/Coniston – Auburn Street & Miller Street													
E3	B7	11	3.15	0.29	Bridge Street & Old Springhill Road	0.1	0.1	0.5:1	0.5:1	20	20	No	Yes	19%
E4	IN1	50	10.88	0.22	Auburn Street, Miller Street, Fox Avenue, Tate Street & Bridge Street	0.1	0.1	0.5:1	0.5:1	11	11	No	Yes	47%
	IN2	14	1.57	0.11	Auburn Street, West Street, Swan Street	0.1	0.1	0.5:1	0.75:1	Nil	Nil	No	Yes	57%
24	Spring Hill – Edney Lane													

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct		Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)
E4	IN2	7	4.91	0.70	Edney Lane	0.1	0.1	0.5:1	0.5:1	11	11	No	Yes	10%
25	Figtree – Princes Highway													
E3	B6	3	1.63	0.54	Princes Highway	0.1	0.1	0.5:1	0.5:1	9	9	No	Yes	14%
E4	IN2	5	0.54	0.11		0.1	0.1	0.5:1	0.5:1	11	11	No	Yes	38%
26	Unanderra – Princes Highway													
E3	B6	105	8.81	0.08	Princes Highway	0.1	0.1	0.5:1	0.5:1	11	11	Yes	Yes	38%
WARD 3														
23	Spring Hill – Masters Road													
E4	IN1	2	4.59	2.29	Masters Road & Drummond Street	Nil	Nil	0.5:1	0.5:1	11	11	No	Yes	19%
27	Unanderra/Cringila/Berkely/Kembla Grange – Unanderra Industrial Park													
E3	B6	6	7.41	1.24	Princes Highway, Canterbury Road & Northcliffe Drive	0.4	0.4	0.5:1	0.5:1	11	11	No	No	29%

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct		Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)
E4	IN2	196	85.28	0.44	Waverley Drive, Sirius Road, Investigator Drive, Nolan Street, Doyle Avenue, Luso Drive, Orangegroove Avenue, Sylvester Avenue & Canterbury Road	0.1	0.1	0.5:1	0.5:1	11	Nil	No	Yes	26%

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct		Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)
E5	IN3	247	179.36	0.73	Berkeley Road, Investigator Drive, Resolution Drive, Five Islands Road, Glastonbury Avenue, Wayne Place, Marley Place, Industrial Road, Warehouse Place, Lathe Place & Brady Street	0.4	0.4	Nil	Nil	Ni	Nil	Yes	Yes	19%
28	Cringila – Five Islands Road													
E4	IN2	42	1.56	0.04	Five Islands Road	0.1	0.1	0.5:1	0.5:1	9	9	No	No	54%
29	Port Kembla – Port Kembla SEPP Area													

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct		Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)
IN3	IN3	165	909.44	5.51	Springhill Road, Masters Road, Five Islands Road, Flinders Street, Old Port Road, Darcy Road, Marley Place, John Cleary Place, Military Road, Flagstaff Road & Gloucester Boulevarde	Nil	Nil	Nil	Nil	Nil	Nil	Yes	Yes	13%
SP1	SP1	69	465.03 ₁₅	6.74	Old Port Road, Foreshore Road, Christy Drive, Springhill Road, Port Kembla Road, and Gloucester Boulevarde	Nil	Nil	Nil	Nil	Nil	Nil	Yes	Yes	6%
30	Port Kembla – Darcy Road (Non-SEPP)													

15 Note this is inclusive of the Inner Harbour. Approximate dry land is 245.70 Ha.

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct		Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)
E5	IN3	2	2.49	1.24	Darcy Road & Gloucester Boulevard	9.99	9.99	Nil	Nil	Nil	Nil	Yes	No	35%
31	Port Kembla – Military Road													
E4	IN2	25	1.46	0.06	Military Road	0.1	0.1	0.5:1	0.5:1	11	11	Yes	No	34%
32	Port Kembla – Wentworth Street													
E3	B6	12	0.72	0.06	Military Road & Wentworth Street	Nil	Nil	0.5:1	0.5:1	11	11	No	No	57%
	B7	2	0.24	0.12		0.07	0.07	1.5:1	1.5:1	20	20	No	No	22%
33	Port Kembla – Five Islands Road													
E4	IN2	44	29.52	0.67	Five Islands Road, Harris Street, Wattle Street, Flagstaff Road, King Street & Shellharbour Road	0.1	0.1	0.5:1	0.5:1	11	11	No	No	19%
34	Port Kembla/Warrawong – Shellharbour Road & King Street													
E3	B6	33	11.17	0.34	King Street, Carlotta Crescent & Shellharbour Road	0.2	0.2	0.5:1	0.5:1	11	11	No	No	56%

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct		Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)
E4	IN2	23	9.22	0.4	Shellharbour Road & Kemblawarra Road	0.2	0.2	0.5:1	0.5:1	11	11	No	No	42%
E5	IN3	22	29.35	1.33	Shellharbour Road & King Street	0.4	0.4	Nil	Nil	20	20	No	No	28%
35	Kembla Grange – West Dapto Employment Lands													
E4	IN2	31	232.24	7.49	West Dapto Road, Reddalls Road, Sheaffes Road, Darkes Road, Wyllie Road & Kembla Grange Place	0.1	0.1	0.5:1	0.5:1	9	9	Yes	Yes	2%
E5	IN3	7	67.63	9.66	West Dapto Road, Reddalls Road, Sheaffes Road, Darkes Road, Wyllie Road & Kembla Grange Place	0.3	0.3	Nil	Nil	Nil	Nil	No	Yes	3%

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct	Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)	
36	Kembla Grange – Princes Highway & Kembla Grange Place													
E4	IN2	11	8.46	0.77	Princes Highway, Kembla Grange Place & West Dapto Road	0.1	Nil	0.5:1	0.5:1	9	11	No	Yes	11%
37	Kembla Grange – Darkes Road													
E4	IN2	3	1.10	0.37	Darkes Road	0.1	0.1	0.5:1	0.5:1	9	9	No	Yes	17%
38	Horsley – West Dapto Road													
E4	IN2	1	1.08	1.08	West Dapto Road	0.1	0.1	0.5:1	0.5:1	9	9	No	Yes	0%
39	Dapto – Hamilton Street, Marshall Street & Princes Highway													
E3	B6	67	5.99	0.09	Princes Highway, Osborne Street, Yalunga Street, Unara Road, Marshall Street, Maccabe Street & Prince Edward Drive	Nil	Nil	0.5:1	1.2:1	9	11	No	Yes	39%

						Min Lot Size (Ha)		FSR		Height of Buildings (m)				
Precinct		Number of Lots	Area (Ha)	Average Lot Size (Ha)	Key Streets	Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk	Site Coverage (%)
E4	IN2	77	18.96	0.25	Princes Highway, Clarke Street, Hamilton Street, Marshall Street & Maccabe Street	0.1	0.1	0.5:1	0.5:1	9	9	Yes	Yes	19%
40	Yallah – Tallawarra Employment Lands													
E3	B6	4	16.57	4.14	Yallah Bay Road	0.2	0.2	0.5:1	Nil	16	16	No	Yes	0%
	B7	6	20.58	3.43		0.2	0.2	0.5:1	0.5:1	16	16	No	Yes	0%
E4	IN1	3	76.16	25.39		0.4	0.4	0.5:1	0.5:1	20	20	No	Yes	0%
	IN2	5	11.11	2.22		0.1	0.1	0.5:1	0.5:1	16	16	No	Yes	0%
41	Yallah – Yallah Road													
E4	IN2	23	12.77	0.56	Yallah Road & Indigo Loop	Nil	0.1	0.5:1	Nil	9	9	No	No	2%
42	Yallah – Princes Highway													
E4	IN2	19	7.74	0.41	Princes Highway	0.1	0.1	0.5:1	0.5:1	9	9	No	No	20%

Table A.5: Detailed precinct information, Primary Production Lands, Wollongong LGA

						Min Lot Size (Ha)		FSR		Height of Buildings (m)			
Precinct	Number of Lots	Area (ha)	Average Lot Size (ha)	Key Streets		Lower Range	Upper Range	Lower Range	Upper Range	Lower Range	Upper Range	Heritage	Flood Risk

M1	Helensburgh – Metropolitan Colliery												
	RU1	8	33.51	4.19	Parkes Street	39.99	39.99	Nil	Nil	Nil	Nil	Yes	No
M2	Coalcliff – Former Colliery & Cokeworks												
	RU1	3	33.57	11.19	Lawrence Hargrave Drive	39.99	39.99	Nil	Nil	Nil	Nil	Yes	No
M3	Bulli – Remnant Mining Lands												
	RU1	5	9.84	1.97	Hobart Street & Princes Highway	39.99	39.99	Nil	Nil	Nil	Nil	Yes	Yes
M4	Corrimal – Russell Vale Colliery												
	RU1	10	66.84	6.68	Princes Highway	39.99	39.99	Nil	Nil	Nil	Nil	Yes	Yes
M5	Kembla Heights/Mt Kembla – Dendrobium Colliery												
	RU1	8	35.28	4.41	Stones Road & Harry Graham Drive	39.99	39.99	Nil	Nil	Nil	Nil	Yes	No
M6	Wongawilli – Wongawilli Colliery												
	RU1	5	49.44	9.89	Wongawilli Road	39.99	39.99	Nil	Nil	Nil	Nil	Yes	Yes

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From the mountains to the sea, we value and protect our natural environment and will be leaders in building an educated, creative, sustainable and connected community.

We value and protect our environment

We have an innovative and sustainable economy

Wollongong is a creative, vibrant city

We are a connected and engaged community

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