
INDUSTRIAL LAND SUPPLY & DEMAND ASSESSMENT

City of Greater Shepparton

January 2022

Final

30/01/2022
Final Version 1.0
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EXECUTIVE SUMMARY

In 2019, Spatial Economics Pty Ltd undertook both a residential and industrial land supply assessment for the Greater Shepparton City Council. This report (industrial land component) provides an update of the assessment undertaken in 2019.

Supply of Industrial Land

As at September 2021¹, there was a total of 642 hectares of zoned industrial land stocks, of which 127 hectares were assessed as available (supply) for industrial purpose development. This quantum of zoned industrial land supply relative to unavailable industrial land stocks equates to a total land area vacancy rate of 20%.

Compared to a previous industrial land supply assessment undertaken in 2016, the comparable land vacancy rate for land zoned Industrial 1 (INZ1) and Industrial 2 (INZ2) has substantially decreased, from 34% to 21%. This simply illustrates the recent consumption levels and known commitments for the zoned industrial land stocks in recent years.

In terms of the geographic spread of zoned industrial land stocks across Greater Shepparton, the large majority of industrial land is located in the industrial precinct of East Shepparton, with a total of 311 hectares - 48% of the total zoned industrial land stocks. Of this industrial land located in East Shepparton, 39 hectares is identified as available supply (down from 98 hectares in the 2016 assessment) , a 13% land area vacancy rate.

The next largest industrial precinct is North Shepparton at 92 hectares, of which 15 hectares is identified as supply. The stock of industrial land for the remaining industrial precincts include:

- Lemnos – 59 hectares;
- Kialla – 54 hectares;
- North West Shepparton – 54 hectares;
- Mooroopna – 42 hectares; and
- Tatura – 30 hectares.

Of the industrial lots identified as supply across Greater Shepparton:

- 65 are located in the East Shepparton precinct;
- 29 in the Kialla precinct;
- 8 in the Mooroopna precinct;
- 6 in the North Shepparton precinct;
- 3 in the Lemnos and Tatura precinct; and
- 1 in the North West Shepparton precinct.

There are five major sites (investigation areas) identified for future potential industrial zoning across Greater Shepparton. Of these sites two are located in Tatura (8 and 14 hectares respectively), one in Mooroopna (20 hectares), one in Lemnos (38 hectares) and one in North Shepparton (162 hectares).

¹ This figure excludes industrial land zoned SUZ that is designated for specific industrial use purposes, specifically SUZ 6, 9 & 11



Recent Subdivision Activity

Since 2019 there have been 36 industrial lots constructed. There has been a significant increase in the subdivision of lots sized from 0.5 to 1 hectare (22% of subdivision activity compared to 11% for the previous period). Again, the majority (53%) of this recent subdivision activity has been in the East Shepparton industrial precinct. However, as a proportion, Kialla has increased its' relative share of subdivision activity from 17% to 31%.

Industrial lot subdivision activity has decreased since 2018, averaging 16 lots per annum. This compares to 24 lots per annum from 2009 to 2018.

Land Consumption

Consumption of industrial land across Greater Shepparton for various time periods include:

- 3.52 hectares per annum from 2009 to 2015;
- 6.06 hectares per annum from 2015 to 2017;
- 15.72 hectares per annum from 2017 to 2019; and
- 3.2 hectares per annum from 2019 to 2021.

As measured from 2015 to 2021 the distribution of industrial land consumption by industrial precinct includes:

- 6.4 hectares per annum in East Shepparton (74% of construction activity);
- 1.3 hectares per annum in North Shepparton (15% of activity); and
- 0.7 hectares per annum in Kialla (8% of activity).

Further analysis has been undertaken to establish the lot size distribution of consumed industrial land from 2009 to 2021. This is a prime indicator of expressed demand for new industrial built premises. In total there was 91 separate industrial lots that had industrial premises constructed. In summary:

- 68% or 62 lots were sized from 0.1 to 0.5 hectares;
- 15% or 14 lots were sized 0.5 to 1 hectare in size;
- 11% or 10 lots were sized 1 to 5 hectares; and

Adequacy

In total, there is between **8 to 15 years** supply of zoned industrial land across Greater Shepparton and an additional **14 to 24 years** supply of land identified for future industrial zoning/development.

The estimation of 8 to 15 years supply of zoned industrial land masks the current deficiency of zoned industrial land across Greater Shepparton.

Spatial Economics consider there are currently insufficient zoned broadhectare land stocks to meet the requirements in the medium to longer term. Greater Shepparton is currently experiencing a sustained high level of industrial activity.

In total, there are only 115 vacant industrial allotments, representing a lot vacancy rate of just 12%. Both the quantum and vacancy rate relative to metropolitan Melbourne and other major regional Victorian centres is considerably low. Typically, the lot vacancy rate is from 25 to 30%.

Outside of the industrial precincts of East Shepparton and Kialla there are minimal vacant zoned industrial lots, specifically by industrial precinct:

- Lemnos – 3 lots;



- Mooroopna – 8 lots;
- North Shepparton – 6 lots;
- North West Shepparton – 1 lot; and
- Tatura – 3 lots.

Furthermore, there are significant deficiencies in the lot size composition. Since 2009, 31% (28 lots) of all industrial land consumption was on lots sized greater than 0.5 hectares. Currently there are only 29 vacant lots sized over 0.5 hectares. In addition, there are only 5 lots sized greater than 5 hectares, and one over 10 hectares. This provides limited choice for potential large industrial land users and limited stock for further subdivision to smaller allotments.

There are currently 233 industrial land users on lots sized less than 1,000 sqm, but only 6 vacant lots in this size.



1.0 Introduction

1.1 Context

In 2019, Spatial Economics Pty Ltd undertook both a residential and industrial land supply assessment for the Greater Shepparton City Council. This report (industrial land component) provides an update of the assessment undertaken in 2019.

The assessment includes:

- the identification of historical and current industrial lot construction activity by location;
- the identification of historical and current industrial land consumption by location;
- identification of all zoned and unzoned industrial land supply stocks including estimates of the net developable land area on a lot by lot basis;
- presentation of potential future land consumption scenarios; and
- estimation of the years of supply of undeveloped industrial land stocks.

The assessment provides a robust and transparent assessment of the supply and demand for industrial land across Greater Shepparton. The assessment will facilitate informed decision making in terms of the existing and future industrial land supply requirements.

In addition, the information will be of assistance to other related planning processes such as infrastructure and service planning.

1.2 Purpose

The monitoring of land supply is a key tool to assist in the management and development of urban growth across Greater Shepparton. The primary purpose of monitoring industrial land supply is to improve the management of urban growth by ensuring that council, public utilities, government and the development industry have access to up-to-date and accurate information on industrial land availability, development trends, new growth fronts, and their implications for planning and infrastructure investment.

The following report provides accurate, consistent and updated intelligence on industrial land supply and demand. This in turn assists decision-makers in:

- maintaining an adequate supply of industrial land for future employment purposes;
- providing information to underpin strategic planning in urban centres;
- linking land use with infrastructure and service planning and provision;
- taking early action to address potential land supply shortfalls and infrastructure constraints; and
- contributing to the containment of public sector costs by the planned, coordinated provision of infrastructure to service the staged release of land for urban development.



2.0 Approach & Methodology

The following provides a brief outline of the major methodologies and approach in the assessment of recent industrial lot construction, industrial land supply areas, industrial land consumption and associated demand projections and determination of assessing adequacy of industrial land stocks. A more detailed methodology is available titled "*Residential & Industrial Land Supply – Background Paper*" which is available at www.G21.vic.gov.au

2.1 Industrial Land Supply

Industrial land is used for a defined set of industrial uses although there are often a significant proportion of non-industrial uses that occupy industrial land. In line with the definition used by the State Government in the Metropolitan and Regional Urban Development Program, the zones that are considered primarily for industrial use across the municipality of Shepparton include: Industrial 1 Zone (IN1Z), Industrial 3 Zone (IN3Z), Commercial 2 Zone (C2 Zone), and select Special Use Zones (SUZ 6, 9 & 11).

Future (unzoned) industrial land is identified through various strategic planning policy documents and consultation with municipal officers. Future industrial land is currently unzoned to support industrial development; however the land is designated for future industrial purpose.

In this project every parcel of land is deemed to be unavailable or available as supply.

- *Supply* – zoned industrial land classified as available for industrial development. This includes land that is vacant, disused or assigned to marginal non-industrial uses with little capital value, such as farm sheds.
- *Unavailable* – zoned industrial land classified as unavailable for industrial development. This includes land already occupied by industrial uses, construction sites, major infrastructure, capital intensive farming operations, established residential premises or where it is known that the owner has strong intentions not to develop the land in the medium to long term or when there is a known development commitment.

For all industrial land, each individual parcel is recorded with its size and the applicable zone. This enables an assessment of the overall or gross stock of land either as unavailable or available as supply.

In several instances, discrete parcels of land (within one title) have been created to demonstrate a high degree of availability for development on a particular site. For example, where there is a significant area of land with a specific use operating from a small portion of the land and it is understood the balance of the land is regarded as a potential development site, the title area has been split to show the occupied and vacant components of the land.

The supply of industrial land must take into account the likelihood of a reasonable level of infrastructure servicing. However, the level of servicing required for industrial land in small towns is not necessarily high and industrial land may be considered as supply with only limited services available.

All industrial land that is identified as available as supply, is assessed to determine the "net developable land" which is the land available to develop for industrial uses. This is after allowing for local roads and open space as well as allowing for any constraints that are on the land. These constraints including native vegetation, flooding, or terrain can be very significant and have large effects on the availability of land. The determination of net developable land is done on a site by site basis with reference to any constraints.



2.2 Industrial Lot Construction

Analysis of the cadastral database on land zoned for industrial purposes from July 2008 to September 2021 was undertaken to determine the location, volume and resultant lot size of industrial lot subdivisions.

2.3 Industrial Land Consumption

To determine industrial land consumption, examination of aerial imagery between specific periods was undertaken and updated to November 2021 via a land use survey of each previously identified vacant industrial allotment.

In comparing the extent to which consumption has occurred, land has been 'back cast' against previous periods to ensure like for like areas have been compared. This has been done to ensure that the effect of the rezoning of new industrial land or the rezoning of industrial land to non-industrial uses does not distort the actual consumption that has occurred between periods.

2.4 Future Demand

Projected industrial land demand has been based on the recent industrial land consumption method that calculates the use of industrial land by location, by zone and importantly area. This method is utilised by State Governments' Metropolitan and Regional Urban Development Program.

This method is particularly appropriate for large metropolises, regional centres and townships where there is sufficient demand for industrial land as well as unconstrained supply.

Historical industrial land consumption under the above conditions is a sound base to assess future consumption of industrial land consumption. However, economic/employment activity can and will invariably change. Specifically, as local resident population increases so will the requirement for additional employment land to 'service' the resident population needs. In addition, there is always the likelihood of 'export' related industry development that would require additional industrial land.

Due to this uncertainty relating to forecasting industrial land requirements, three demand scenarios are presented, namely:

Scenario One: Long Term Trend – is assumed at an average annual rate of industrial land consumption of 6.3 hectares. This represents actual industrial land consumption from 2009 to 2021.

Scenario Two: Recent Trend - is assumed at an average annual rate of industrial land consumption of 8.7 hectares. This represents actual industrial land consumption from 2015 to 2021.

Scenario Three: Sustained Accelerated Growth – is assumed at an average annual rate of industrial land consumption of 10.9 hectares. This represents a 25% increase in land consumption from the recent consumption trend.

Due to the demand for industrial land being relatively 'lumpy' (compared to residential land) the above approach provides sensitivity testing to allow for plausible significant increases in demand for industrial land.

2.5 Adequacy of Industrial Land Stocks

Industrial land 'adequacy' is illustrated by using the number of years of supply through the interaction of both demand and supply. The number of 'years of supply' is measured by dividing estimates of both zoned and unzoned areas (net developable) by the average annual rate of industrial land consumption.



Demand scenarios have been developed for potential higher levels of future demand, to take into account either higher population growth or specific changes to the employment/industrial land market i.e. increased economic development activity.

Industrial land is usually clustered together in definitive nodes or clusters due to the negative external effects of industrial uses on other land uses. Hence, industrial land is analysed through identified industrial precincts.

For the City of Greater Shepparton, the following industrial precincts have been identified, and subsequently land supply information reported and assessed at an industrial precinct and municipal level.

- East Shepparton
- Kialla
- Lemnos
- Mooroopna
- North Shepparton
- North West Shepparton
- Tatura.

The adequacy of industrial land stocks is reported at a municipal level.



3.0 Recent Industrial Development Activity

Key Findings

From July 2011 to October 2021 there was an average annual value of \$15.4 million for select industrial building approval activity. In recent years the value of industrial building approval activity has significantly increased. Increasing from \$13.7 million in 2016/17, to \$16 million in 2017/18 and to a record high of \$23 million in 2018/19. In 2020/21, the value of building approval activity was recoded at nearly \$20 million and for the first four months of the 2021 financial year just over \$7 million of activity was recorded.

From 2019 to 2021 there have been 36 industrial lots constructed. There has been a significant increase in the subdivision of lots sized from 0.5 to 1 hectare (22% of subdivision activity compared to 11% for the previous period). Again, the majority (53%) of this recent subdivision activity has been in the East Shepparton industrial precinct. However, as a proportion, Kialla has increased its' relative share of subdivision activity from 17% to 31%.

Consumption of industrial land across Greater Shepparton for various time periods include:

- 3.52 hectares per annum from 2009 to 2015;
- 6.06 hectares per annum from 2015 to 2017; 15.72 hectares per annum from 2017 to 2019; and
- 3.2 hectares per annum from 2019 to 2021.

As measured from 2015 to 2021 the distribution of industrial land consumption by industrial precinct includes:

- 6.4 hectares per annum in East Shepparton (74% of construction activity);
- 1.3 hectares per annum in North Shepparton (15% of activity); and
- 0.7 hectares per annum in Kialla (8% of activity).

The following provides an overview of the quantum, location and composition of industrial (and related) development activity in terms of:

- Industrial subdivision activity;
- Consumption of industrial land (construction); and
- Value of building approvals.

3.1 Industrial Subdivision Activity

Detailed analysis of the cadastral database of industrial zoned land across Greater Shepparton was undertaken to establish the location, volume and resultant lot size of industrial subdivision activity. Table 1 summarises the results of this analysis.

From July 2009 to July 2015 there were a total of 167 zoned industrial land subdivisions, with the majority (111 or 66%) located in the East Shepparton industrial precinct and a further 29 lots (17% of activity) located in Kialla. There was minimal industrial subdivision activity in Lemnos and Mooroopna.

The majority (66%) of subdivisions resulted in industrial allotments sized from 0.1 to 0.5 hectares, 12% sized less than 0.1 hectares, 11% sized from 0.5 to 1 hectare and 10% sized from 1 to 5 hectares.

From July 2009 to July 2015, on average there was 24 industrial subdivisions.



Table 1: Number of Industrial Subdivisions by Lot Size, 2009 to 2018

Precinct/LGA	Less than	0.1 to	0.5 to 1	1 to 5	5+	Total
	0.1	0.5				
	hectares	hectares	hectares	hectares	hectares	
East Shepparton	10	80	11	8	2	111
Kialla	5	22	2			29
Lemnos		2	2			4
Mooroopna	5					5
North Shepparton		5	1	3	1	10
Tatura		1	2	5		8
Greater Shepparton	20	110	18	16	3	167

Source: Spatial Economics Pty Ltd

Since 2019 there have been 36 industrial lots constructed (Table 2). There has been a significant increase in the subdivision of lots sized from 0.5 to 1 hectare (22% of subdivision activity compared to 11% for the previous period). Again, the majority (53%) of this recent subdivision activity has been in the East Shepparton industrial precinct. However, as a proportion, Kialla has increased its' relative share of subdivision activity from 17% to 31%.

Industrial lot subdivision activity has decreased since 2018, averaging 16 lots per annum. This compares to 24 lots per annum from 2009 to 2018.

Table 2: Number of Industrial Subdivisions by Lot Size, 2019 to 2021¹

Precinct/LGA	Less than	0.1 to	0.5 to 1	1 to 5	5+	Total
	0.1	0.5				
	hectares	hectares	hectares	hectares	hectares	
East Shepparton		11	6	1	1	19
Kialla		9	1	1		11
Lemnos				1	1	2
North Shepparton	1			2		3
North West Shepparton			1			1
Greater Shepparton	1	20	8	5	2	36

Source: Spatial Economics Pty Ltd

1: As at September 2021

Since 2019, the majority (67% or 24 lots) of industrial subdivision activity has been on land zoned Industrial 1 (IN1Z), 28% or 10 lots zoned Industrial 3 (INZ3) and the remainder (2 lots) zoned Commercial 2 (C2Z)

Since 2019, the resultant lot size from industrial land subdivision across Greater Shepparton is typically 4,000 sqm (increasing from historical outcomes of around 2,900 sqm). However, there is significant variance across the differing industrial precincts, ranging from:

- 4,000 sqm in East Shepparton; and
- 2,000 sqm in Kialla.



3.2 Consumption of Industrial Land

Detailed analysis of existing and historic aerial imagery combined with zoning/cadastral information and current comprehensive land use surveys from 2009 to 2021 has been used to establish the consumption of industrial land.

Consumption of industrial land refers to the construction on previously unoccupied industrial land over-time.

From this assessment the consumption of industrial land can be established by location, lot size and zoning. Consumption of industrial land is used as the primary indicator of future demand for industrial land and therefore the adequacy (years of supply) can be established.

There has been a steady and substantial increase over-time of the consumption of industrial land across the Greater Shepparton municipal area. However ever, over the last two years, consumption has declined to lower longer term historical rates at around three hectares per annum.

Consumption of industrial land across Greater Shepparton for various time periods include:

- 3.52 hectares per annum from 2009 to 2015;
- 6.06 hectares per annum from 2015 to 2017;
- 15.72 hectares per annum from 2017 to 2019; and
- 3.2 hectares per annum from 2019 to 2021.

As measured from 2015 to 2021 the distribution of industrial land consumption by industrial precinct includes:

- 6.4 hectares per annum in East Shepparton (74% of construction activity);
- 1.3 hectares per annum in North Shepparton (15% of activity); and
- 0.7 hectares per annum in Kialla (8% of activity).

Comparatively there was minimal to no industrial land consumption in the industrial precincts of Lemnos, Mooroopna, North West Shepparton and Tatura.

As measured from 2009 to 2021, 76 hectares of industrial land was consumed across Greater Shepparton, the majority (73% or 56 hectares) of this consumption has been on land zoned Industrial 1 (INZ1). This is followed by land zoned Commercial 1 (C1Z) at 17 hectares and 3.6 hectares of land zoned Industrial 3 (INZ3).

Further analysis has been undertaken to establish the lot size distribution of consumed industrial land from 2009 to 2021. This is a prime indicator of expressed demand for new industrial built premises. In total there was 91 separate industrial lots that had industrial premises constructed. In summary:

- 68% or 62 lots were sized from 0.1 to 0.5 hectares;
- 15% or 14 lots were sized 0.5 to 1 hectare in size;
- 11% or 10 lots were sized 1 to 5 hectares; and
- 4 lots were sized greater than 5 hectares.

Over this period, there was 59 lots consumed in the East Shepparton industrial precinct, 16 in Kialla and 12 in North Shepparton.



3.3 Industrial Building Approval Activity

The following provides an overview of the value of selected industrial building approvals by type for Greater Shepparton, Table 3 summarises the outcomes.

Table 3: Value (\$ million) of Industrial Building Approvals by Type

	2011/ 12	2012/ 13	2013/ 14	2015/ 16	2016/ 17	2017/ 18	2018/ 19	2019/ 20	2020/ 21	2021/ 22 *
Factories	0.6	10.28	2.09	3.54	4.9	2.62	10.11	2.26	0.3	2.3
Warehouses	7.53	5.93	2.49	5.26	4.68	4.19	10.33	3.89	6.2	3.9
Agricultural Buildings	3.15	0.79	1.48	4.93	3.84	8.01	0.99	7.81	13.17	0.6
Other industrial buildings	0.11	0.43	0.2	0.85	0.26	1.19	1.45	0.05	0.26	0.2
Greater Shepparton	11.39	17.43	6.27	14.58	13.68	16.00	22.88	14.01	19.93	7.12

Source: Australian Bureau of Statistics: Building Activity. Cat# 8752.0

*As at October 2021 (4 months of the financial year)

From July 2011 to October 2021 there was an average annual value of \$15.4 million for select industrial building approval activity. In recent years, the value of industrial building approval activity has significantly increased. Increasing from \$13.7 million in 2016/17, to \$16 million in 2017/18 and to a record high of nearly \$23 million in 2018/19. In 2020/21, the value of building approval activity was recorded at nearly \$20 million and for the first four months of the 2021 financial year just over \$7 million of activity was recorded.

The value of industrial building approval activity remains buoyant across the municipal area of Shepparton

In recent years the value of industrial building approval activity for both Warehouses and factories has declined slightly. However, the value of agricultural buildings has substantially increased, recording nearly \$22 million of activity over the past 2.3 years

In recent years, the value of industrial building approval activity has significantly increased compared to the medium-term average – increasing from \$14.6 million to nearly \$18 million per annum. This will directly correlate into increased levels of industrial land consumption.

Key Issues

Of strategic importance is the clear observed significant increase in industrial development activity. It is unknown and difficult to accurately predict whether this level of development activity will sustain over the longer term. What is critical, is to plan for this level of development activity and hence plan for plausible demand scenarios.



4.0 Industrial Land Stocks

Key Findings

As at September 2021, there was a total of 6425 hectares of zoned industrial land stocks, of which 127 hectares were assessed as available (supply) for industrial purpose development. This quantum of zoned industrial land supply relative to unavailable industrial land stocks equates to a total land area vacancy rate of 20%.

In terms of the geographic spread of zoned industrial land stocks across Greater Shepparton, the large majority of industrial land is located in the industrial precinct of East Shepparton, with a total of 311 hectares - 48% of the total zoned industrial land stocks.

The next largest industrial precinct is North Shepparton at 92 hectares. The stock of industrial land for the remaining industrial precincts include:

- Lemnos – 59 hectares;*
- Kialla – 54 hectares;*
- North West Shepparton – 54 hectares;*
- Mooroopna – 42 hectares; and*
- Tatura – 30 hectares.*

Across Greater Shepparton there is a variety of industrial zone types, specifically there are:

- 39 hectares of land zoned Industrial 3 (INZ3);*
- 97 hectares of land zoned Commercial 2 (C2Z);*
- 253 hectares of land zoned Special Use (SUZ - 6, 9 & 11); and*
- 507 hectares of land zoned Industrial 1 (INZ1).*

There are five major sites identified for future potential industrial zoning across Greater Shepparton. Of these sites two are located in Tatura (8 and 14 hectares respectively), one in Mooroopna (20 hectares), one in Lemnos (38 hectares) and one in North Shepparton (162 hectares).

As at September 2021, there was a total of 985 zoned industrial allotments, of which 115 lots were identified as available supply.

Of the 985 industrial allotments 76% are sized below 0.5 hectares, specifically 239 lots are sized less than 1,000 sqm and 513 lots sized from 1,000 to 5,000 sqm. There are 233 lots sized greater than 5,000 sqm across the municipal area, of which only 29 are identified as supply.

The following section of the report provides an overview of:

- existing zoned industrial land stocks;
- identified future (unzoned) industrial land stocks;
- stock of available (supply) and unavailable industrial land stocks;
- lot size distribution; and
- estimated net developable area.

The industrial land market across Greater Shepparton is primarily located in the urban centres of Shepparton/Mooroopna and to a lesser degree Tatura. For this report, seven industrial precincts have been established on distinct geographical industrial sub-markets. These include: East Shepparton, Lemnos, North Shepparton, North West Shepparton, Mooroopna, Kialla and Tatura.

The majority of historical activity in terms of subdivision, construction and existing industrial uses are located within the East Shepparton industrial precinct.



4.1 Industrial Land Stocks - Area

As at September 2021², there was a total of 642 hectares of zoned industrial land stocks, of which 127 hectares were assessed as available (supply) for industrial purpose development. This quantum of zoned industrial land supply relative to unavailable industrial land stocks equates to a total land area vacancy rate of 20%.

Compared to a previous industrial land supply assessment undertaken in 2016, the comparable land vacancy rate for land zoned Industrial 1 (INZ1) and Industrial 2 (INZ2) has substantially decreased, from 34% to 21%. This simply illustrates the recent consumption levels and known commitments for the zoned industrial land stocks in recent years.

In terms of the geographic spread of zoned industrial land stocks across Greater Shepparton, the large majority of industrial land is located in the industrial precinct of East Shepparton, with a total of 311 hectares - 48% of the total zoned industrial land stocks. Of this industrial land located in East Shepparton, 39 hectares is identified as available supply (down from 98 hectares in the 2016 assessment) , a 13% land area vacancy rate.

The next largest industrial precinct is North Shepparton at 92 hectares, of which 15 hectares is identified as supply. The stock of industrial land for the remaining industrial precincts include:

- Lemnos – 59 hectares;
- Kialla – 54 hectares;
- North West Shepparton – 54 hectares;
- Mooroopna – 42 hectares; and
- Tatura – 30 hectares.

Table 4 summarises the gross area of industrial land stocks by land status and zone type across Greater Shepparton by industrial precinct.

Across Greater Shepparton there is a variety of industrial zone types, specifically there are:

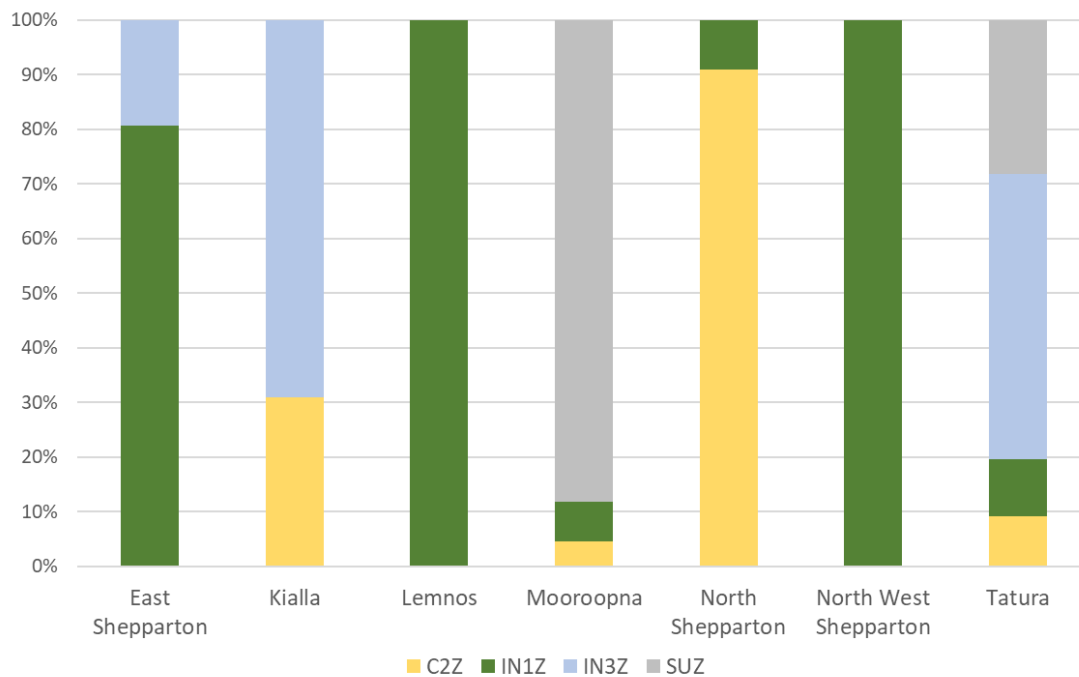
- 39 hectares of land zoned Industrial 3 (INZ3);
- 97 hectares of land zoned Commercial 2 (C2Z);
- 253 hectares of land zoned Special Use (SUZ - 6, 9 & 11); and
- 507 hectares of land zoned Industrial 1 (INZ1).

Graph 2 below illustrates the zoning composition by industrial precinct (measured in area).

² This figure excludes industrial land zoned SUZ that is designated for specific industrial use purposes, specifically SUZ 6, 9 & 11



Graph 1: Zoning Composition by Industrial Precinct (area), 2021



Source: Spatial Economics Pty Ltd

There are three separate areas zoned Special Use. The area zoned SUZ6 is reserved for and for uses associated with the GV Link Freight Logistics Centre. This land is currently undeveloped. This site will not be available for general industrial use. However, the specific location of a freight and logistics centre will mean that there is limited demand for industrial land for these purposes elsewhere across the City of Greater Shepparton.

The areas zones SUZ9 and SUZ11 are designated for Tatura Milk Industries and Unilever respectively and these two industries control all of the land, hence the land is deemed unavailable.

There are five major sites identified for future potential industrial zoning across Greater Shepparton. Of these sites two are located in Tatura (8 and 14 hectares respectively), one in Mooroopna (20 hectares), one in Lemnos (38 hectares) and one in North Shepparton (162 hectares).

Investigation Area 10 (Investigation Area 4 in Clause 21.04-1 Urban Consolidation and Growth) – East of Doyles Road, Grahamvale -has not been included in this assessment as potential (unzoned) industrial land. This is primarily due to the uncertainty of this area regarding its suitability for industrial development. There are a variety of strategic planning issues to be addressed including: access; drainage, flooding and proximity to sensitive land uses. At this stage it is unclear what the future land use or land uses will be.

4.2 Industrial Land Stocks – Lot Size Distribution

Table 6³ below details the number of zoned industrial lots by selected lot size cohorts. As at September 2021, there was a total of 985 zoned industrial allotments, of which 115 lots were identified as available supply.

Of the 985 industrial allotments 76% are sized below 0.5 hectares, specifically 239 lots are sized less than 1,000 sqm and 513 lots sized from 1,000 to 5,000 sqm. There are 233 lots

³ Excludes industrial land zoned SUZ that is designated for specific industrial use purposes, specifically SUZ 6, 9 & 11



sized greater than 5,000 sqm across the municipal area, of which only 29 are identified as supply.

Spatial Economics make the observation that the lot size distribution in Greater Shepparton has a higher proportion of larger lots compared to other major regional Victorian urban centres.

Of the industrial allotments located in the East Shepparton industrial precinct, there are 530 lots sized below 0.5 hectares, of which 53 are identified as supply. There is an additional 116 lots sized greater than 5,000 sqm, of which only 123 are identified as supply. East Shepparton has a lot vacancy rate of 10%, which is considered low.

Of the 117 industrial allotments in the Kialla industrial precinct, 29 have been identified as supply (25% lot vacancy rate).

For the remaining industrial precincts as at September 2021, there were:

- North Shepparton – total of 86 industrial lots (7% vacancy rate);
- Tatura – total of 51 industrial lots (6% vacancy rate);
- Mooroopna – total of 49 industrial lots (16% vacancy rate);
- Lemnos – total of 22 industrial lots (14% vacancy rate); and
- North West Shepparton – total of 14 industrial lots (6% vacancy rate).



Map 1: Industrial Precincts – Greater Shepparton

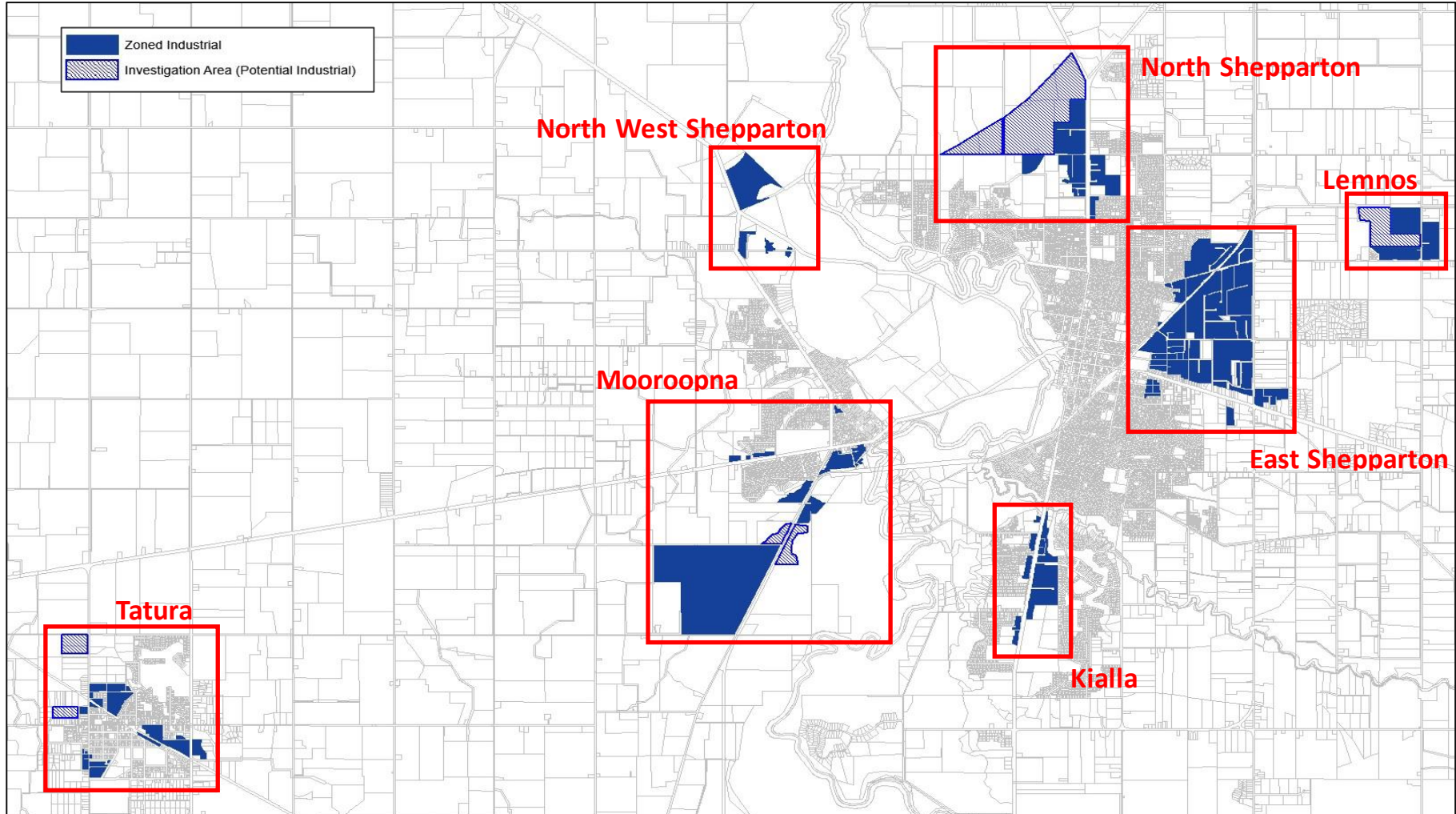


Table 4: Gross Area (hectares) of Industrial Land Stocks, 2021

Industrial Precinct/LGA	C2Z			IN1Z			IN3Z			Total Zoned Stocks			SUZ		
	Unavailable	Supply	Land Area Vacancy Rate %	Unavailable	Supply	Land Area Vacancy Rate %	Unavailable	Supply	Land Area Vacancy Rate %	Unavailable	Supply	Land Area Vacancy Rate %	Unavailable	Supply	Land Area Vacancy Rate %
East Shepparton				266	39	13%	6	0	2%	272	39	13%	0	0	
Kialla	24	5	17%				16	10	39%	39	15	28%	0	0	
Lemnos				54	5	8%				54	5	8%	0	0	
Mooroopna	4	1	18%	30	7	19%				34	8	19%	0	226	100%
North Shepparton	53	7	11%	23	9	27%				77	15	17%	0	0	
North West Shepparton				10	44	82%				10	44	82%	0	0	
Tatura	3	0	2%	19	1	4%	7		0%	30	1	3%	26	0	0%
Greater Shepparton	84	13	13%	402	104	21%	29	10	26%	515	127	20%	26	226	90%

Source: Spatial Economics Pty Ltd

Table 5: Industrial Land Stocks - Lots, 2021

Industrial Precinct/LGA	C2Z			IN1Z			IN3Z			Total Zoned Stocks			SUZ		
	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %
East Shepparton				518	64	11%	63	1	2%	581	65	10%	0	0	
Kialla	71	9	11%				17	20	54%	88	29	25%	0	0	
Lemnos				19	3	14%				19	3	14%	0	0	
Mooroopna	6	2	25%	35	6	15%				41	8	16%	0	2	100%
North Shepparton	66	4	6%	14	2	13%				80	6	7%	0	0	
North West Shepparton				13	1	7%				13	1	7%	0	0	
Tatura	17	1	6%	22	2	8%	9		0%	48	3	6%	5	0	0%
Greater Shepparton	160	16	9%	621	78	11%	89	21	19%	870	115	12%	5	2	29%

Source: Spatial Economics Pty Ltd

Table 6: Number of Zoned Industrial Allotments by Lot Size Cohort, 2021⁴

Industrial Precinct/LGA	Less than 0.1 hectares			0.1 to 0.5 hectares			0.5 to 1 hectare			1 to 5 hectares			5 to 10 hectares			10+ hectares			Total Lots		
	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %
East Shepparton	191	4	2%	286	49	15%	55	5	8%	39	5	11%	9	2	18%	1		0%	581	65	10%
Kialla	9		0%	62	23	27%	11	3	21%	5	2	29%	1	1	50%				88	29	25%
Lemnos				5	1	17%	5	1	17%	6	1	14%	2		0%	1		0%	19	3	14%
Mooroopna	16		0%	14	4	22%	2	1	33%	6	3	33%	3		0%				41	8	16%
North Shepparton	8	1	11%	38	1	3%	15		0%	16	3	16%	3	1	25%				80	6	7%
North West Shepparton				7		0%	4		0%	2		0%					1	100%	13	1	7%
Tatura	9	1	10%	21	2	9%	13		0%	4		0%	1		0%				48	3	6%
Greater Shepparton	233	6	3%	433	80	16%	105	10	9%	78	14	15%	19	4	17%	2	1	33%	870	115	12%

Source: Spatial Economics Pty Ltd

⁴ This table excludes industrial land zoned SUZ that is designated for specific industrial use purposes, specifically SUZ 6, 9 & 11

4.3 Supply of Industrial Land

As previously outlined, there was, at September 2021, 127 gross hectares of zoned available industrial land supply (excluding land zoned Special Use).

Of this identified supply, there will be a proportion of land not available for development. Such land development take-outs including, but not limited to local and regional roads, supporting infrastructure, open space requirements, native vegetation, excessive slope and other environmental constraints (waterways). Land development take-outs vary by site and particularly the size of the allotment.

Specific land development take-outs have been assessed on a parcel by parcel basis and results in an estimate of the net developable area i.e. the area available for actual industrial site development.

In total for zoned industrial land stocks¹ across the municipal area there is approximately 92 net developable hectares and 125 hectares for the GV Link sites (SUZ6). In terms of future identified industrial land stocks (unzoned) there is an estimated 154 net developable hectares.

The graphs below illustrate the supply of industrial allotments by selected lot size cohort. The majority of industrial lot supply (70% or 80 lots) are sized between 0.1 and 0.5 hectares, with a further 6 allotments below 0.1 hectares. This reflects the distribution of recent consumption, subdivision and occupied industrial lot status across the municipality. In essence, reflecting the lot size configuration of historical and existing demand.

There are only 5 industrial lots identified as supply that are sized greater than five hectares, of which two are located in the East Shepparton industrial precinct and one respectively in Kialla, North Shepparton and North West Shepparton. The size of these allotments represents an opportunity for further/future subdivision.

Of the industrial lots identified as supply across Greater Shepparton:

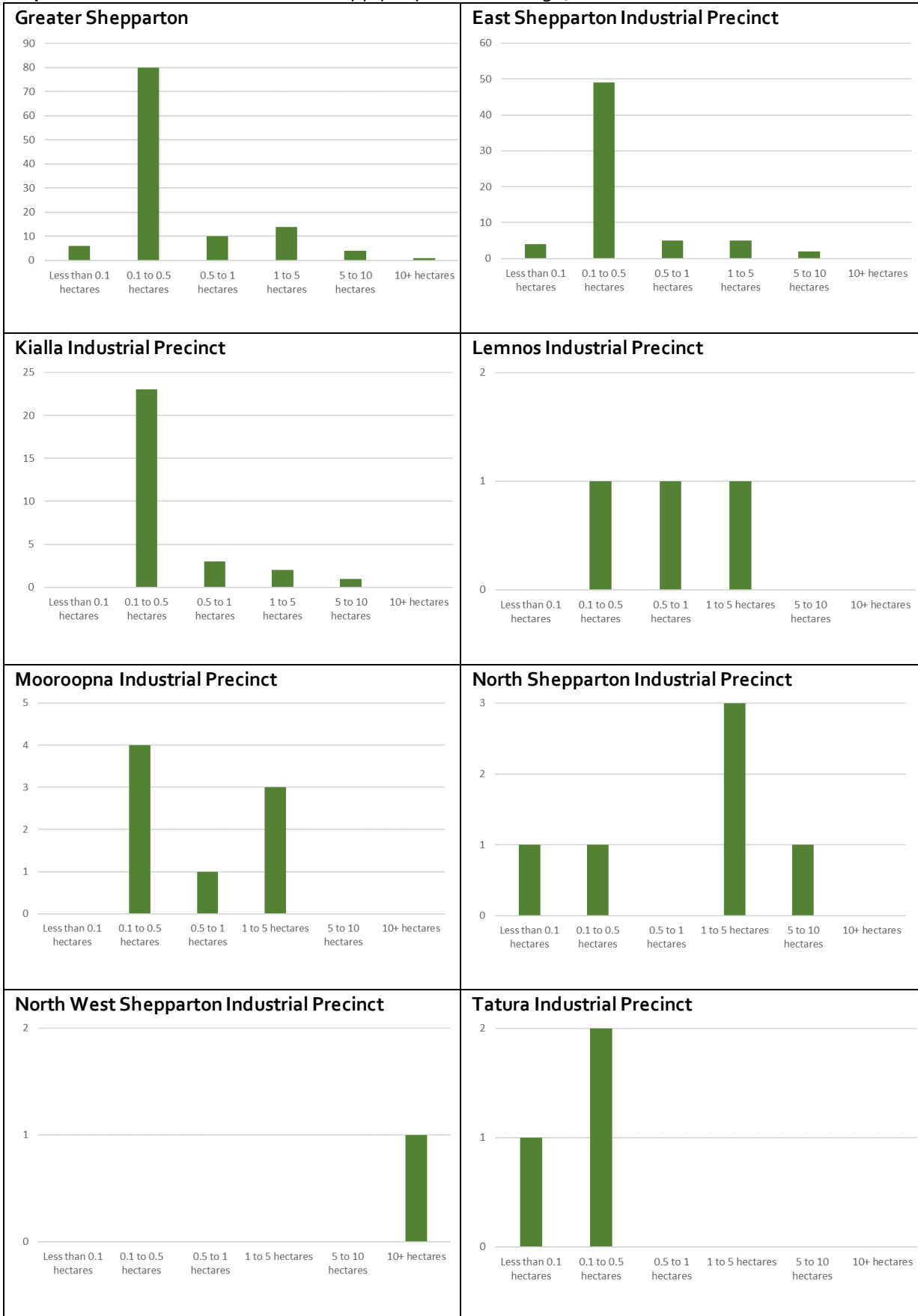
- 65 are located in the East Shepparton precinct;
- 29 in the Kialla precinct;
- 8 in the Mooroopna precinct;
- 6 in the North Shepparton precinct;
- 3 in the Lemnos and Tatura precinct; and
- 1 in the North West Shepparton precinct.

It is clear that there are limited industrial lot stocks across Greater Shepparton, both in terms of smaller and larger allotments. The lack of larger allotments is an issue for potential large industrial land users to locate/expand in Shepparton and as a land supply source for potential subdivision.

¹ Industrial zones of C2Z, IN1Z and IN2Z



Graph 2: Number of Industrial Lots (Supply) by Lot Size Range, 2021



Source: Spatial Economics Pty Ltd
Note: Excludes lots zoned SUZ



Key Issues

Spatial Economics have identified that there are insufficient stocks of zoned industrial land across Greater Shepparton to meet the underlying requirements in the medium term. As at March 2019, there was 138 gross hectares of zoned available industrial land supply (excluding land zoned Special Use). This is likely to equate to approximately 100 net developable hectares.

Of the industrial lots identified as supply across Greater Shepparton, there are only:

- 70 located in the East Shepparton precinct;
- 21 in the Kialla precinct;
- 8 in the Mooroopna precinct;
- 4 in the North Shepparton precinct;
- 2 respectively in the Lemnos and Tatura precinct; and
- 1 in the North West Shepparton precinct.

The majority of industrial lot supply (68% or 73 lots) are sized between 0.1 and 0.5 hectares, with a further 5 allotments below 0.1 hectares. There are only 15 industrial lots identified as supply that are sized from 1 to 5 hectares, of which six are located in the East Shepparton industrial precinct and three respectively within the industrial precincts of Kialla and Mooroopna. There are no lots identified as supplied sized above ten hectares.

It is clear that there are limited industrial lot stocks across Great Shepparton, both in terms of smaller and larger allotments. The lack of larger allotments is an issue for potential large industrial land users to locate/expand in Shepparton and as a land supply source for potential subdivision.



5.0 Adequacy of Industrial Land Stocks

Key Findings

In total, there is between **8 to 15 years** supply of zoned industrial land across Greater Shepparton and an additional **14 to 24 years** supply of land identified for future industrial zoning/development.

Spatial Economics consider there are currently insufficient zoned broadhectare land stocks to meet the requirements in the medium to longer term. Greater Shepparton is currently experiencing a sustained increase in the consumption of industrial land.

The adequacy of supply is measured by dividing estimates of the net developable area by the average annual rate of industrial land consumption. The result is a measure of adequacy expressed in years.

Firstly, identifying the future location and amount of consumption of industrial land is an uncertain task. Current levels of consumption are used as an indication of the adequacy of industrial land supply. However, the level and location of future consumption may change due to:

- the investment and business activity behaviour of the private sector;
- trends in the global economy;
- propensity for certain activities to agglomerate;
- directions in technology;
- population/employment trends;
- environmental impacts and adaptation; and
- social attitudes.

Historical industrial land consumption is a sound base to assess future consumption of industrial land. However, economic/employment activity can and will invariably change. Specifically, as local resident population increases so will the requirement for additional employment land to 'service' resident population needs. In addition, there is always the likelihood of 'export' related industry development that would require additional industrial land – this is particularly apt for Greater Shepparton.

Due to this uncertainty relating to forecasting industrial land requirements three demand scenarios and related adequacies are presented below.

Scenario One: Long Term Trend – is assumed at an average annual rate of industrial land consumption of 6.3 hectares. This represents actual industrial land consumption from 2009 to 2021.

Scenario Two: Recent Trend - is assumed at an average annual rate of industrial land consumption of 8.7 hectares. This represents actual industrial land consumption from 2015 to 2021.

Scenario Three: Sustained Accelerated Growth – is assumed at an average annual rate of industrial land consumption of 10.9 hectares. This represents a 25% increase in land consumption from the recent consumption trend.

These three demand scenarios are chosen as they are a simple, transparent and a relevant way to account for an unexpected increase in demand in the future. This approach to include sensitivity testing of projected industrial land consumption is an approach the State Governments' Regional Urban Development Program includes in their industrial land supply assessment.

In total, there is between **8 to 15 years** supply of zoned industrial land across Greater Shepparton and an additional **14 to 24 years** supply of land identified for future industrial zoning/development.



The 'years of supply' is primarily dependent on 1) the realised demand scenario; and 2) the major assumption that all identified supply is made available for development/market. In regard to the latter, there are many factors that may influence the identified land stocks not being available to the market such as ownership intentions, costs of development, land products not meeting industrial land user requirements (lot size, configuration, incompatible neighbouring uses etc).

It is imperative that there are sufficient zoned industrial land stocks, with diverse lot sizes to meet industrial land users' requirements. If suitable land stocks are not available, firms will readily locate to competing areas, most likely outside of Greater Shepparton.

Spatial Economics consider there are currently insufficient zoned industrial broadhectare land stocks to meet the requirements in the medium to longer term. Greater Shepparton is currently experiencing a sustained increase in the actual consumption of industrial land at unprecedented levels.

The estimation of 8 to 15 years supply of zoned industrial land masks the current deficiency of zoned industrial land across Greater Shepparton.

In total, there are only 115 vacant industrial allotments, representing a lot vacancy rate of just 12%. Both the quantum and vacancy rate relative to metropolitan Melbourne and other major regional Victorian centres is considerably low. Typically, the lot vacancy rate is from 25 to 30%.

Outside of the industrial precincts of East Shepparton and Kialla there are minimal vacant zoned industrial lots, specifically by industrial precinct:

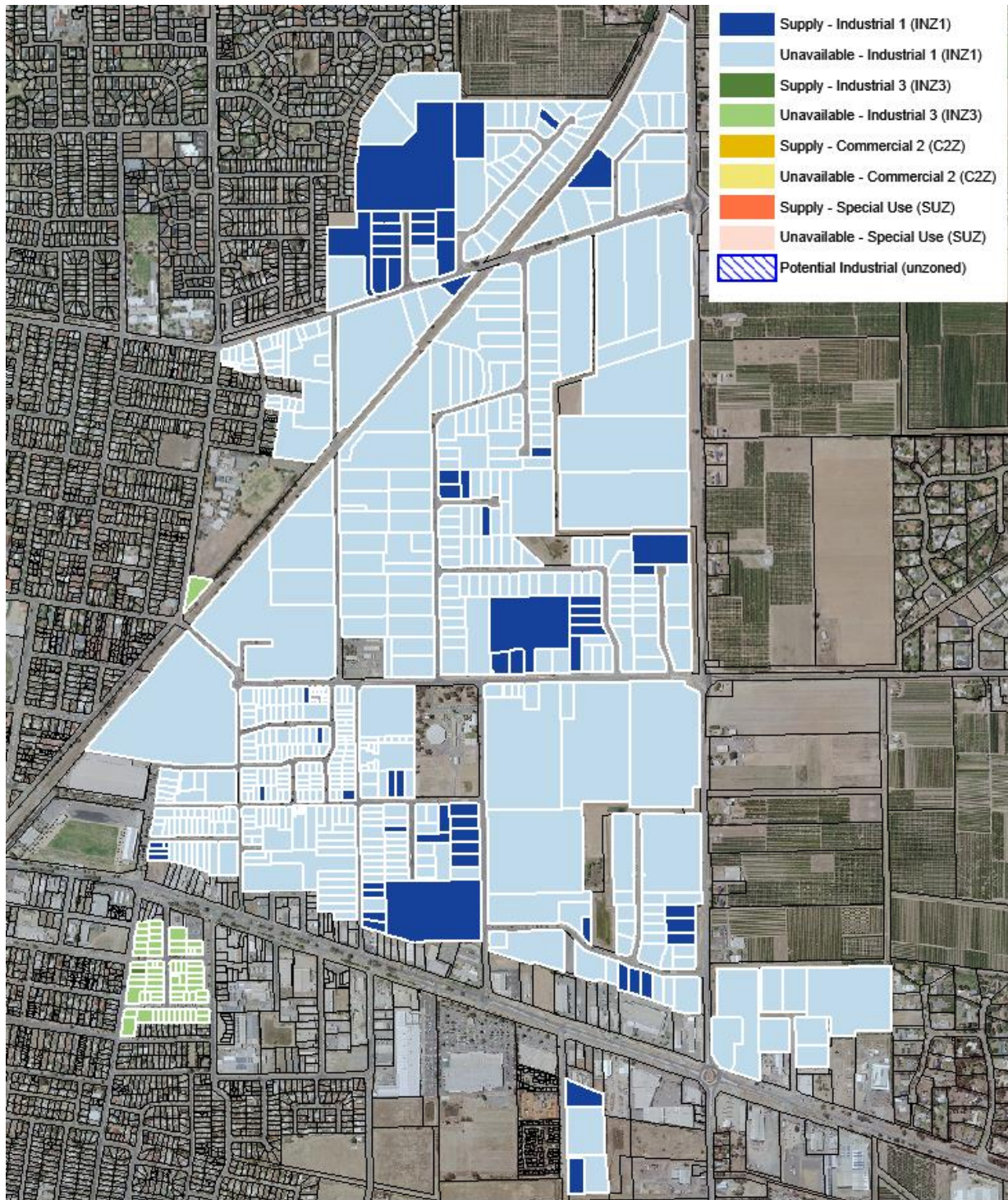
- Lemnos – 3 lots;
- Mooroopna – 8 lots;
- North Shepparton – 6 lots;
- North West Shepparton – 1 lot; and
- Tatura – 3 lots.

Furthermore, there are significant deficiencies in the lot size composition. Since 2009, 31% (28 lots) of all industrial land consumption was on lots sized greater than 0.5 hectares. Currently there are only 29 vacant lots sized over 0.5 hectares. In addition, there are only 5 lots sized greater than 5 hectares, and one over 10 hectares. This provides limited choice for potential large industrial land users and limited stock for further subdivision to smaller allotments.

There are currently 233 industrial land users on lots sized less than 1,000 sqm, but only 6 vacant lots in this size.



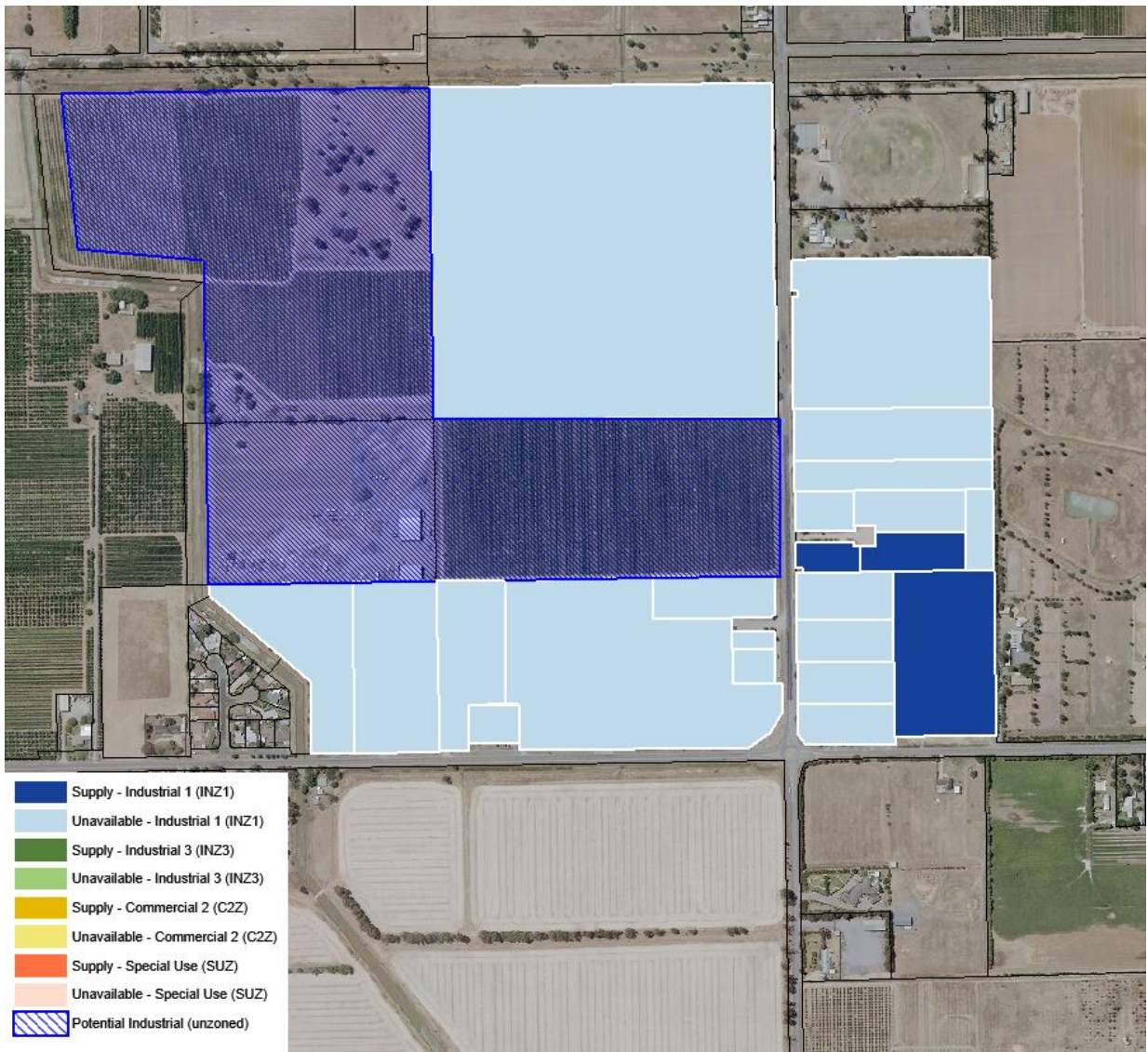
Map 2: East Shepparton Industrial Precinct



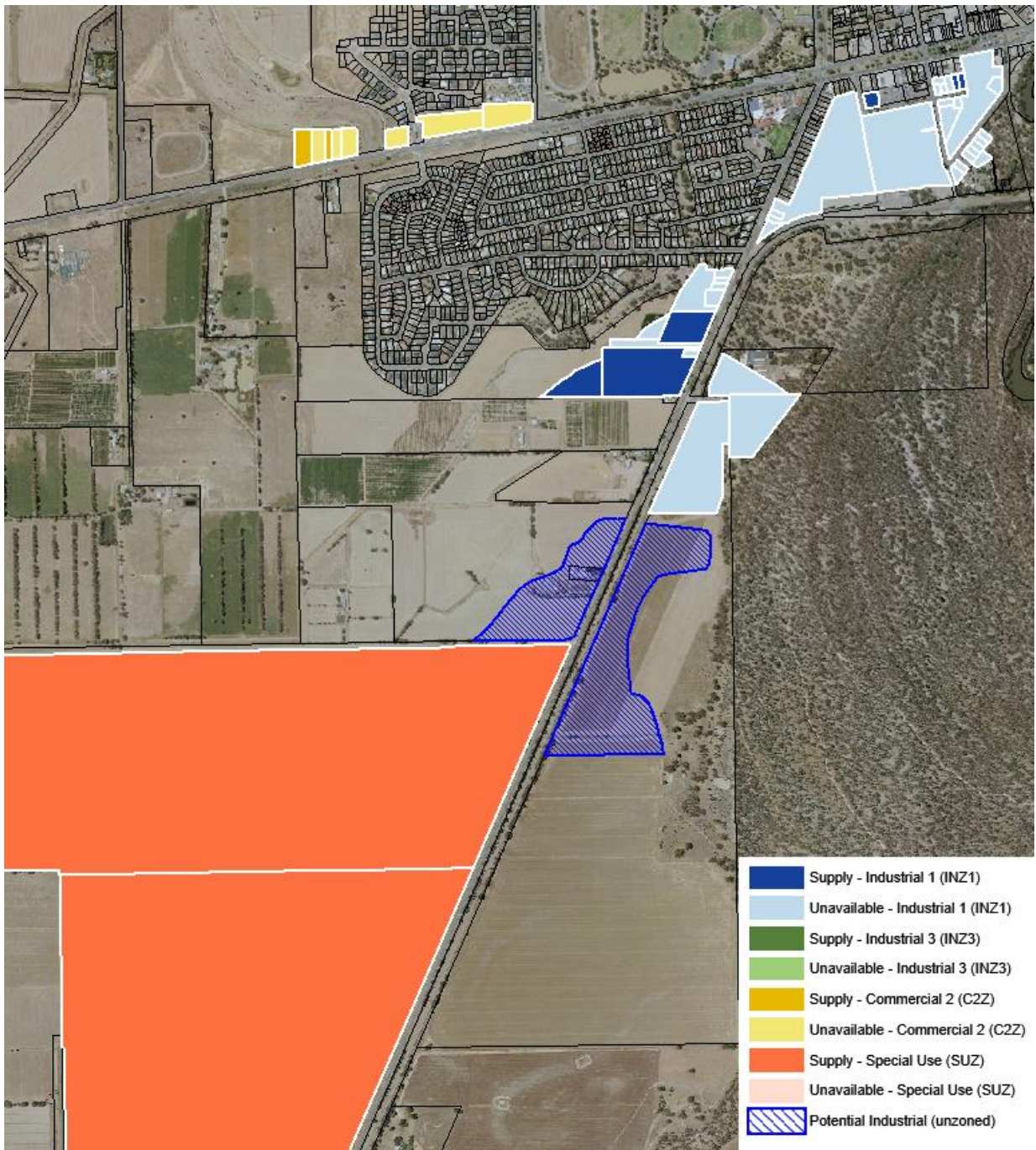
Map 3: Kialla Industrial Precinct



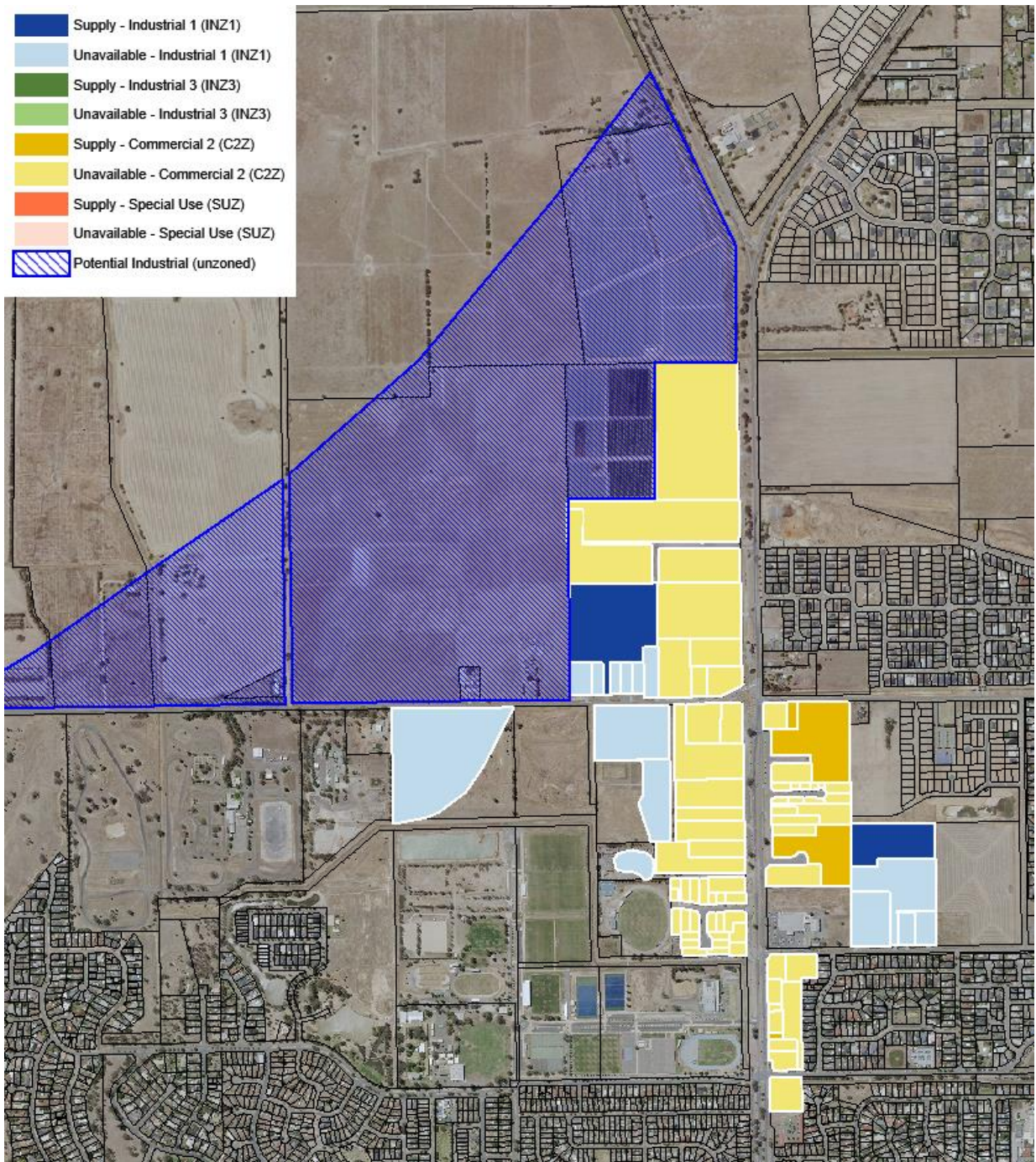
Map 4: Lemnos Industrial Precinct



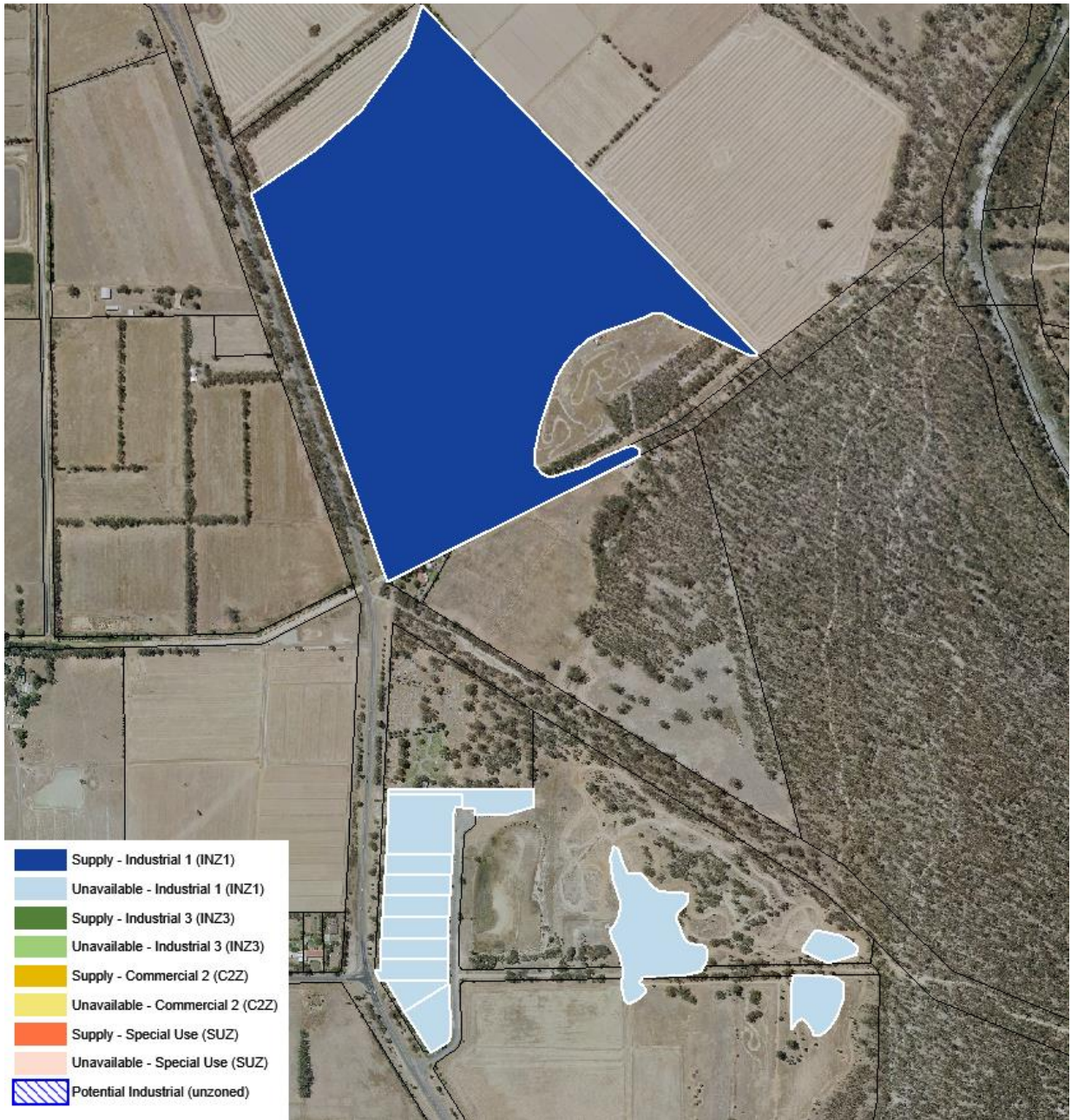
Map 5: Mooroopna Industrial Precinct



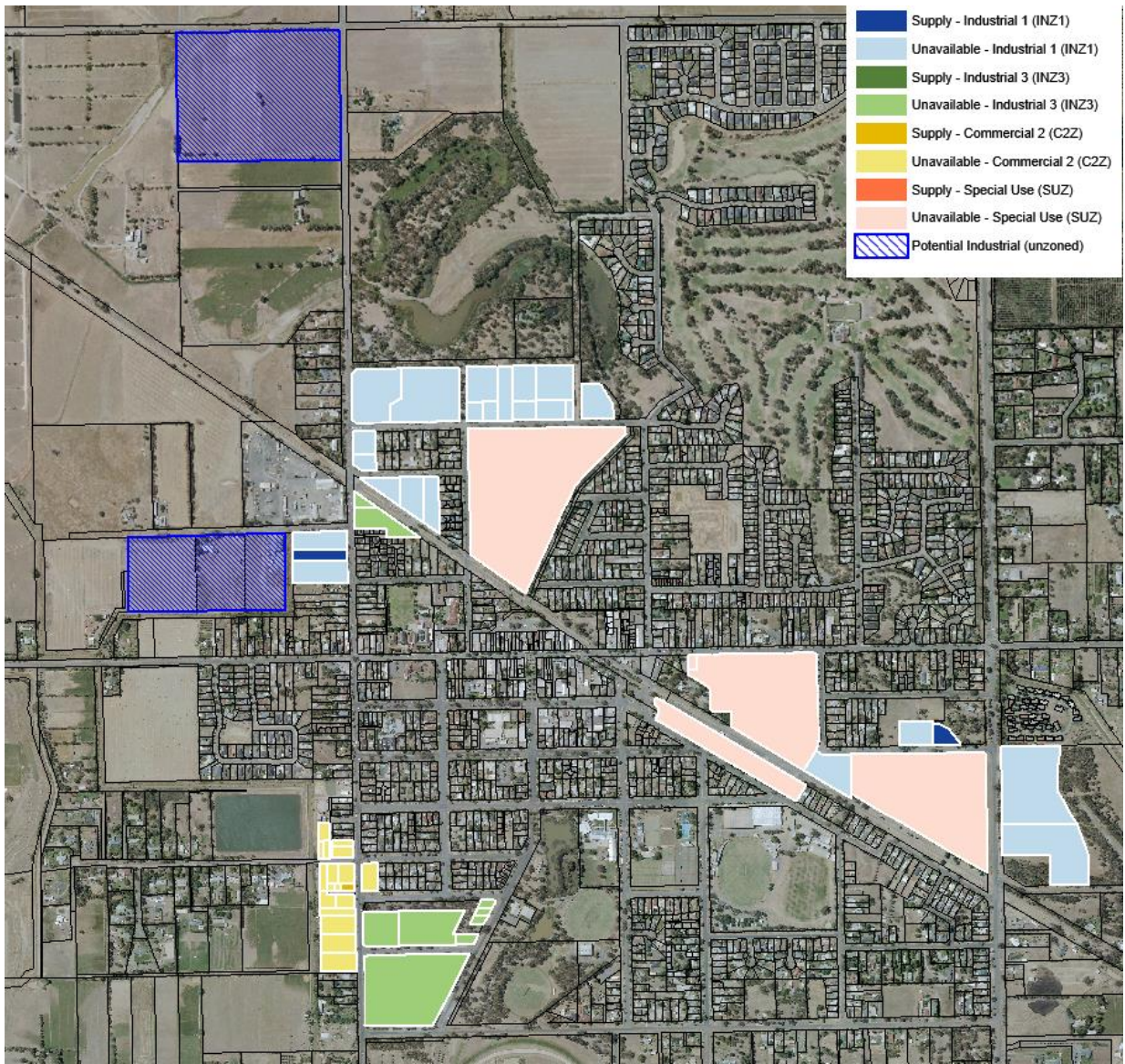
Map 6: North Shepparton Industrial Precinct



Map 7: North West Shepparton Industrial Precinct



Map 8: Tatura Industrial Precinct



Key Issues

Spatial Economics consider there are currently insufficient zoned industrial broadhectare land stocks to meet the requirements in the medium to longer term. Greater Shepparton is currently experiencing a rapid increase in the actual consumption of industrial land at unprecedented levels.

In total, there are only 109 vacant industrial allotments, representing a lot vacancy rate of just 11%. Both the quantum and vacancy rate relative to metropolitan Melbourne and other major regional Victorian centres is considerably low. Typically, the lot vacancy rate is from 25 to 30%.

Outside of the industrial precincts of East Shepparton and Kialla there are minimal vacant zoned industrial lots, specifically by industrial precinct:

- Lemnos – 2 lots;*
- Mooroopna – 8 lots;*
- North Shepparton – 4 lots;*
- North West Shepparton – 2 lots; and*
- Tatura – 2 lots.*

Furthermore, there are significant deficiencies in the lot size composition. Since 2009, 30% of all industrial land consumption was on lots sized greater than 0.5 hectares. Currently there are only 31 vacant lots sized over 0.5 hectares. In addition, there are only 5 lots sized greater than 5 hectares, and none over 10 hectares. This provides limited choice for potential large industrial land users and limited stock for further subdivision to smaller allotments.

There are currently 233 industrial land users on lots sized less than 1,000 sqm, but only 5 vacant lots in this size.

With the eventual development of the GV Link Freight and Logistics Centre there will be less pressure for other precincts in Shepparton to provide land for logistic (or logistic related manufacturing). This means that there will be less demand for larger lots in the other precincts and it is likely that the larger lots will be subdivided for smaller uses. However, the GV Link Freight and Logistics Centre requires significant up-front infrastructure investment to enable the site for freight and logistic development.

For example, the highly successful Ballarat West Employment Zone (BWEZ) required upfront infrastructure investment from both the State and Federal Governments to enable subsequent private sector investment and development. The BWEZ has been designed and constructed to enhance business productivity, with a freight hub, access for high productivity freight vehicles, secure top-quality infrastructure and strong access to road, rail and ports. Without similar upfront infrastructure investment, the land within the GV Link Freight and Logistics Centre will unlikely come to market due to the upfront cost prohibitive infrastructure requirements.



GLOSSARY OF TERMS

Future industrial land

Land identified by the relevant municipal authority for future industrial development and current zoning not supportive of industrial development. Land which has an 'Urban Growth Zone' applied, and where a precinct structure plan has not yet been approved, may also fall into this category.

Gross industrial land area

Measures the area of industrial land at a cadastral lot/parcel level.

Industrial Precinct

An identified group of industrial allotments that are generally adjacent to each other or exhibit a high degree of substitutability between sites. In general, the smaller townships with industrial land have been allocated one industrial precinct each, with larger towns being divided into separate precincts based primarily on location.

Lot (industrial)

Discrete area of land defined by a parcel boundary identified in the Vicmap Property Database. Each lot has an associated land title and is either zoned for industrial purposes or identified for future industrial use.

Net industrial land supply

Measures the estimated area available for industrial development after accounting for local roads, open space, infrastructure and environmental considerations.

Supply (industrial land)

Zoned industrial land classified as suitable for industrial development. This includes land that is vacant, disused or assigned to marginal non-industrial uses with little capital value, such as farm sheds or vehicle storage.

Unavailable (industrial Land)

Zoned industrial land classified as unavailable for industrial development. This includes land already occupied by industrial uses, construction sites, major infrastructure, intensive farming operations, established residential premises or where ownership development intentions indicate the land will not be developed in the foreseeable future.

