

Urban Development Program



2011

Regional
Industrial
Report

Rural City
of Mildura



Department of Planning
and Community Development

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CONTENTS

EXECUTIVE SUMMARY	1
1.0 INTRODUCTION	3
1.1 Purpose and Context	3
1.2 Program Context	3
1.3 Urban Development Program Reports 2011	4
2.0 APPROACH AND METHODOLOGY	5
3.0 OVERVIEW	8
4.0 BUILDING APPROVAL ACTIVITY	9
5.0 INDUSTRIAL SUBDIVISION ACTIVITY	10
6.0 INDUSTRIAL LAND STOCKS	11
6.1 Industrial Land Stocks – Area	11
6.2 Industrial Land Stocks – Lot Size Distribution	13
6.3 Supply of Industrial Land	13
7.0 CONSUMPTION OF INDUSTRIAL LAND	15
8.0 YEARS OF SUPPLY – INDUSTRIAL LAND	16
GLOSSARY OF TERMS	19

LIST OF TABLES

- Table 1: Total Number of Industrial Building Approvals by Year
- Table 2: Value (\$) of all Industrial Building Approvals by Year
- Table 3: Number of Industrial Subdivisions by Lot Size, 2005-06 to 2010-11
- Table 4: Gross Area (hectares) of Industrial Land Stocks, 2011
- Table 5: Number of Industrial Allotments by Lot Size Cohort, 2011
- Table 6: Estimated Net Developable Industrial Land Stocks (hectares), 2011
- Table 7: Years of Supply of Industrial Land Stocks

LIST OF GRAPHS

- Graph 1: Number of Industrial Lots (supply) by Lot Size Range, 2011

EXECUTIVE SUMMARY

The Urban Development Program for Regional Victoria provides an analysis of supply and demand for residential and industrial land across parts of regional Victoria. The initial municipalities covered were Ballarat, Greater Bendigo, Latrobe and Wodonga. This round of land supply assessments is for the municipalities of Wangaratta, Greater Shepparton, Warrnambool, Horsham and Mildura. This report provides information on industrial supply and demand for the Rural City of Mildura.

The following industrial land supply assessment was undertaken by Spatial Economics Pty Ltd and commissioned by the Department of Planning and Community Development in conjunction with the Rural City of Mildura.

The report draws on information and feedback obtained through a number of comprehensive consultations with key council officers and Department of Planning and Community Development regional officers undertaken through the course of the project.

SUPPLY OF INDUSTRIAL LAND

Within the municipality of Mildura there was a total of 983 hectares of zoned industrial land as at July 2011. Of this land, 732 hectares was available for industrial development. In addition it was identified that there were 290 hectares of industrial land zoned Special Use of which 70 hectares were identified as supply. There is an area designated for future industrial development (unzoned) that is approximately 85 hectares in size within the suburb of Mildura.

Zoning of industrial land stocks is comprised of both IN1 and IN3 zoned land. Of the IN1 zoned stocks there is in total 889 hectares and 94 hectares of IN3 zoned land.

In terms of the geographic spread of zoned industrial land stocks across the Rural City of Mildura there is a relatively even spread within the major urban centres.

RECENT ACTIVITY

There was an average of 15 industrial building approvals per year for the period 2005-2006 to 2010-2011 in the Rural City of Mildura. The vast majority were located within the suburb of Mildura. Of these approvals, 49 (54%) were for warehouse construction with the remaining approvals for factory construction. Over the same period, there was an estimated \$42.8 million or \$7.1 million per annum of construction value.

For the period 2005-06 to 2010-11 there were a total of 129 zoned industrial land subdivisions, on a suburb basis there were 86 lots created in Mildura and 36 in Koorlong. Recent lot creation size was diverse, 40% of subdivisions resulted in industrial allotments sized from 1 to 5 hectares (51 lots) and 33% were sized from 0.1 to 0.5 hectares (43 lots). Of the 129 recently constructed industrial lots, 86 remain vacant as at July 2011.

CONSUMPTION

The consumption of industrial land has been determined for the period 2003 to 2011 for the municipality of Mildura. Consumption of industrial land refers to the construction on or use of previously unutilised industrial land over time. On an average annual basis there has been 2.9 hectares per annum of industrial land consumed; this has primarily been located in the suburb of Mildura. The level of consumption comprised of: 2.0 hectares per annum of IN1 zoned land and 0.9 hectares per annum of IN3 zoned land.

YEARS OF SUPPLY

The number of 'years of supply' is measured by dividing estimates of the net developable area by the average annual rate of industrial land consumption.

In total there is in **excess of 15 years** supply of industrial zoned land across the whole of the municipality of Mildura. There is also a **15+ year** supply of additional future (unzoned) industrial land stocks, located in the suburb of Mildura.

All locations and zone types, except for Mildura suburb have in excess of 15 years of supply. However, within the suburb of Mildura it is estimated that there is approximately **7 years** supply of IN1 zoned land.

There is, however, around 62 hectares, or **over 15 years** supply, of IN3Z land located within Mildura suburb. This zoning supports the integration and provision of both office and industry uses.

Using sensitivity analysis to allow for increased demand for industrial land; two scenarios are given for a 25% increase and a 50% increase in historical demand. This results in the following adequacy for the municipality of Mildura:

- 25% increase in demand (3.7 hectares per annum)
 - Zoned (IN1Z) – 15+ years supply;
 - Zoned (IN3Z) – 15+ years supply; and
 - Future (unzoned) – 15+ years supply.
- 50% increase in demand (4.4 hectares per annum)
 - Zoned (IN1Z) – 15+ years supply;
 - Zoned (IN3Z) – 15+ years supply; and
 - Future (unzoned) – 13 years supply.

In addition, for the two accelerated demand scenarios there is **over 15 years** supply for each suburb. However, for Mildura the stock of IN1 zoned land decreases to **6 years** supply (25% increase in demand scenario) and **5 years** supply (50% increase in demand scenario)

Conclusion and Current Actions

In summary there is an adequate stock of zoned and unzoned industrial land stocks to meet trend and accelerated consumption rates across the Rural City of Mildura. Consumption of industrial land, however, should continue to be monitored to ensure there are sufficient land stocks to meet future demand.

Based on recent consumption, there are no identified deficiencies in the supply stock of industrial demand in terms of lot size configuration.

Further investigation may be required to establish the need for additional B3 zoned land. This type of zoning is generally located within close proximity to urban centres.

No competition or land monopoly issues have been identified that could restrict the timely and competitive release of industrial land to meet market needs.

Similarly, no issues have been identified in terms of land development dependent infrastructure provision that would prevent the timely delivery of industrial land subdivision and associated industrial purpose capital construction.

In late 2008, Amendment C38 to the Rural City of Mildura Planning Scheme was gazetted, which implemented the recommendations of the Mildura Industrial Land Strategy Update, and included a number of land rezonings for industrial purposes. This in turn provides longer term strategic land supply for industrial development across the municipality.

1.0 INTRODUCTION

1.1 PURPOSE AND CONTEXT

The Urban Development Program was set up in 2003 to assist in managing the growth and development of metropolitan Melbourne and the Geelong region, and help ensure the continued sustainable growth of these areas in order to maintain their high levels of liveability.

The primary purpose of the Urban Development Program is to improve the management of urban growth by ensuring that government, councils, public utilities and the development industry have access to up-to-date and accurate information on residential and industrial land availability, development trends, new growth fronts, and their implications for planning and infrastructure investment.

To achieve the primary purpose the Urban Development Program provides accurate, consistent and updated intelligence on residential and industrial land supply, demand and consumption. This in turn assists decision-makers in:

- maintaining an adequate supply of residential and industrial land for future housing and 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.

The information contained and reported within the Urban Development Program enables early action to be taken in areas where land shortfalls have been identified.

1.2 PROGRAM CONTEXT

During 2009-10, the Urban Development Program was expanded across key provincial areas across regional Victoria. Initially, this included the municipalities of Ballarat, Greater Bendigo, Latrobe and Wodonga. The next round of completed land supply assessments include the municipalities of Wangaratta, Greater Shepparton, Warrnambool, Horsham and Mildura.

In addition, land supply assessments for the following municipalities are near completion, these include: Mount Alexander, Mitchell, Macedon, Moorabool, Baw Baw, Bass Coast, South Gippsland, Moyne, Murrindindi, Colac-Otway and Golden Plains.

The expanded Urban Development Program into regional Victoria will build local and regional data bases and, importantly, provide a platform for mapping and spatial analysis in each region. This will in turn allow councils and other key stakeholders in the planning and development sectors to make more informed decisions in the growth and investment of these key areas across regional Victoria.

The industrial and residential land supply assessments for the municipalities of Wangaratta, Greater Shepparton, Warrnambool, Horsham and Mildura were undertaken by Spatial Economics Pty Ltd, and commissioned by the Department of Planning and Community Development in conjunction with the associated councils.

These areas form the initial expansion of the Urban Development Program across regional Victoria. Other areas will be incorporated into the Urban Development Program in the future.

1.3 URBAN DEVELOPMENT PROGRAM REPORTS 2011

The 2011 Urban Development Program Reports for Wangaratta, Greater Shepparton, Warrnambool, Horsham and Mildura, as well as the 2011 Urban Development Program Report for metropolitan Melbourne, are available online at www.dpcd.vic.gov.au/urbandevelopmentprogram

Interactive online maps are also available. MapsOnline enables users to search for specific projects, generate reports and print or download maps and statistical reports. It allows users to search for specific land supply areas by region or municipality, estate name, Melway reference, street address or lot number.

To access the Regional Urban Development Program MapsOnline visit www.land.vic.gov.au/udp

For more information about the Urban Development Program, email the Department of Planning and Community Development at urbandevelopment.program@dpcd.vic.gov.au

2.0 APPROACH AND METHODOLOGY

For the purposes of the Regional Urban Development Program, land is either zoned for industrial purposes or identified for future industrial use.

Industrial land identified by the Regional Urban Development Program includes land within the Industrial 1 Zone (IN1Z), Industrial 2 Zone (IN2Z), Industrial 3 Zone (IN3Z) and Business 3 Zone (B3Z) as well as land that have been identified for future industrial development by the relevant Council.

In addition, where appropriate land zoned Special Use (SUZ) has been included i.e. the specific purpose of the zone is to recognise or provide for the use and development of land to support industrial type uses.

The IN1Z is the most commonly used industrial zone. The Industrial 2 Zone is designed for heavy industrial uses.

The IN3Z is a specialised zone that focuses on the needs of light industry, while the B3Z is aimed at facilitating the needs of industries with a high office based component.

Assessments of land supply are dependant on the availability of aerial imagery. The most current imagery available for this assessment was taken during the summer of 2009/2010.

Note that for the purposes of this report the regional component of the expanded Urban Development Program is referred to as the 'Regional Urban Development Program'.

The report retains ABS terminology for the geographic areas, however it is appreciated that the term 'suburbs' includes urban and rural areas.

METHODOLOGY FOR ASSESSING INDUSTRIAL LAND STOCKS

Industrial land data is collected and assessed using lot boundary, planning scheme information and aerial imagery. Additional information on the status of specific sites is gathered through stakeholder consultation, primarily discussions with relevant Council officers.

Industrial land supply and consumption data presented as part of the Regional Urban Development Program is based on the 2009/2010 aerial photography and updated to July 2011 via the consultation process. Information relating to zoning, overlays and other planning matters relates to the same period.

IDENTIFYING LAND STOCK

Industrial land stock includes all zoned industrial land within the municipality as well as land that have been identified by Council for future industrial development (unzoned stock).

In determining zoned land stock, each zoned industrial land parcel is assessed as either:

- **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.

In instances where industrial land was in the process of being approved for rezoning to another use (for example a Business, Residential or Mixed Use Zone) and, based on Council feedback, the land is identified as unavailable.

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. This has been undertaken where these instances have been identified by the relevant Council officer.

ASSESSING THE STOCK OF INDUSTRIAL LAND

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. Subsequently, a further assessment is conducted to determine a net measure of supply ('net developable area').

Using a net measure of industrial land supply provides a more accurate basis for determining adequacy, as it measures the likely area available for development after accounting for local roads, open space, infrastructure requirements and environmental considerations. This varies from locality to locality, depending on site and regional-specific issues.

During 2008, the Department of Sustainability and Environment released maps indicating the location and extent of significant native vegetation across Victoria utilising satellite imagery. These maps were used as part of the assessment in determining the estimated net developable area.

Where native vegetation mapping indicated a classification of 'high' or 'very high' against vacant zoned land or land identified for future industrial purposes, the area impacted was removed from the gross area of land supply.

Further higher level (or regional) take outs were removed from larger key parcels of vacant zoned land or from land identified for future industrial development. This was carried out in consultation with the relevant Council.

Finally, the total area of remaining vacant land was separated into parcels of differing gradients of size to allow for local discounts (specifically for local roads and open space). This was done through both consultation and by calculating typical take out rates for such factors from recently completed development.

Discount factors (at each level) differ between municipalities depending on a variety of factors, specifically local geography.

CALCULATING CONSUMPTION

To determine consumption based trends, the Regional Urban Development Program has examined available aerial photography between specific periods. Given the limited availability of photography, for each municipality at least two prior periods (years) have been assessed using the methodology outlined above (i.e. assessing each lot as either 'unavailable or 'supply').

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.

Industrial land consumption for Mildura was calculated from aerial imagery capture dates at 2003 and 2009. Consumption of industrial land was updated to July 2011 via the consultation process.

YEARS OF SUPPLY

The number of 'years of supply' is measured by dividing estimates of the net developable of both zoned and unzoned areas by the average annual rate of industrial land consumption.

3.0 OVERVIEW

Mildura Rural City is a rapidly growing municipality that includes Mildura city as well as a number of other communities including Red Cliffs, Merbein and Irymple near the Murray River, and Ouyen and Murrayville further inland.

The region is a key service and economic hub of inland Australia. Key industries include: dry-land farming, irrigated horticulture (table grapes, wine grapes, dried grapes, citrus and vegetables), tourism, food and beverage manufacturing, transport and logistics, retail, health and community services. Emerging industries include: renewable energy generation, aquaculture, mineral sands mining and recycling¹.

Regional Victorian cities such as Mildura require an adequate supply of industrial land for jobs and services, such as manufacturing, service uses, logistics and warehousing to support continued economic development. The Urban Development Program for Regional Victoria provides the State Government and other stakeholders with a strategic overview of the supply and demand of industrial land across key regional Victorian cities.

Urban Mildura is represented by Mildura – Part A Statistical Local Area.

The following industrial land supply assessment for the Rural City of Mildura is presented in a number of sections. These include:

- An assessment of industrial building approval activity by location (Statistical Local Area) in terms of both volume and value. This includes the breakdown of factory and warehouse building approvals from 2005-06 to 2010-11;
- Presentation of all net industrial land subdivision activity by resultant lot size distribution from 2005-06 to 2010-11;
- Detailed analysis of existing industrial land stocks in terms of:
 - Stock by zone type
 - Future (unzoned) stock
 - Lot size configuration and area
 - Supply/unavailable stock
 - Net developable area
- Summary of industrial land consumption i.e. built form construction on vacant industrial allotments from 2001 to 2011. This is expressed as average annual land consumption (hectares). This forms the basis of projecting future demand for industrial land and therefore the assessment of the 'years of supply';
- An assessment of the years of supply of industrial land supply by zone type and location. This is also expressed in terms of accelerated growth assumptions of industrial land consumption; and
- Identification of any potential major impediments to the supply of industrial land to the market such as lack of competition and provision of required infrastructure to develop the land.

¹ Mildura Rural City Council website

4.0 BUILDING APPROVAL ACTIVITY

A variety of factors influence the level of industrial building activity. In regional locations the key factors include:

- the investment and business activity behaviour of the private sector;
- trends in the global and local economy;
- the availability of credit and borrowings for business decisions such as a decision to make a capital investment in property for a business;
- levels of land supply in the area;
- economic activity within the region; and
- the degree to which other regional centres compete for investment.

The following provides an overview of Industrial Building Approval activity within the Rural City of Mildura from 2005-06 to 2010-11 in terms of volume and estimated value of industrial building approvals.

From 2005-06 to 2010-11 there was on an average annual basis 15 industrial building approvals, the vast majority of which were located within the Mildura Part A (SLA) or primarily in the urban area of Mildura. Building approval activity has significantly declined over time, peaking at 28 approvals in 2006-07 down to 4 in 2009-10 and 9 in 2010-11

Of these industrial building approvals, 54% (49) were for warehouse construction and the remaining 42 approvals were for factory construction. Table 1, summarises the volume of total industrial building approval activity by year and SLA.

Table 1: Total Number of Industrial Building Approvals by Year

SLA/LGA	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11 ¹
Mildura (RC) – Pt A	23	28	10	14	4	n.a.
Mildura (RC) – Pt B	1	0	0	2	0	n.a.
Mildura LGA	24	28	10	16	4	9

1: From June 2010 the ABS only report industrial building approvals at an LGA level.

Source: Australian Bureau of Statistics

Table 2 summarises the estimated construction value of industrial building approvals activity over the same period. In total there was an estimated total value of approximately \$42.8 million or an average of \$7.1 million per annum. Of this estimated construction value, 59% was for factory construction, the residual for warehouse construction.

Table 2: Value (\$) of all Industrial Building Approvals by Year

SLA/LGA	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11 ¹
Mildura (RC) – Pt A	7,799,000	22,902,000	3,347,000	4,265,000	1,449,000	n.a.
Mildura (RC) – Pt B	70,000	0	0	291,000	0	n.a.
Mildura LGA	7,869,000	22,902,000	3,347,000	4,556,000	1,449,000	2,668,000

1: From June 2010 the ABS only report industrial building approvals at an LGA level.

Source: Australian Bureau of Statistics

5.0 INDUSTRIAL SUBDIVISION ACTIVITY

Detailed analysis of the cadastral database across industrial zoned areas across Mildura was undertaken to establish the location, volume and resultant lot size of industrial subdivision activity. Table Three summarises the results of this analysis.

From 2005-06 to 2010-11 there were a total of 129 zoned industrial land subdivisions, essentially all of which were located within the Mildura Part A SLA. On a suburb basis there were 86 lots created in Mildura and 37 in Koorlong.

Recent lot creation size was diverse, 40% of subdivisions resulted in industrial allotments sized from 1 to 5 hectares (51 lots) and 33% were sized from 0.1 to 0.5 hectares (43 lots).

Of the 129 recently constructed industrial lots, 86 remain vacant as at July 2011.

Table 3: Number of Industrial Subdivisions by Lot Size, 2005-06 to 2010-11

SLA/Suburb/LGA	Less than 0.1 ha	0.1 to 0.5 ha	0.5 to 1 ha	1 to 5 ha	5 to 10 ha	10+ ha	Total Lots
Mildura (RC) – Pt A	9	43	9	51	7	9	128
Irymple	0	0	4	0	0	0	4
Koorlong	0	0	0	28	4	5	37
Mildura	9	43	5	23	2	4	86
Red Cliffs	0	0	0	0	1	0	1
Mildura (RC) – Pt B	0	0	0	0	0	1	1
Red Cliffs	0	0	0	0	0	1	1
Mildura LGA	9	43	9	51	7	10	129

Source: Spatial Economics Pty Ltd and Department of Planning and Community Development 2011

6.0 INDUSTRIAL LAND STOCKS

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 the Rural City of Mildura is essentially distributed across the urban settlements across the municipality. The major industrial precinct is located within the south east urban edge of Mildura and is comprised of IN1, IN3 and designated future industrial land stocks. To a large degree the IN1 stocks are significantly depleted and there are significant available stocks of land zoned IN3.

There are significant industrial precincts located in Irymple, Merbein, Koorlong and Red Cliffs.

6.1 INDUSTRIAL LAND STOCKS – AREA

As at July 2011, there was a total of 983 hectares of zoned industrial land stock, of which 732 hectares were assessed as available (supply) for industrial purpose development. In addition it was identified that there were 290 hectares of industrial land zoned Special Use of which 70 hectares were identified as supply. This relates to Special Use Zoned land located around Mildura Airport.

This quantum of zoned industrial supply relative to unavailable industrial land stocks equates to a total land vacancy rate of 74%. Table Four summarises the gross area of industrial land stocks by status across the Rural City of Mildura.

In terms of the geographic spread of zoned industrial land stocks across the Rural City there is a relatively even spread within the major urban centres. By suburb the total stock of zoned industrial land (excluding SUZ) includes:

- Koorlong – 402 gross hectares (land vacancy rate of 94%);
- Red Cliffs – 226 gross hectares (land vacancy rate of 96%);
- Mildura – 229 gross hectares (land vacancy rate of 38%);
- Irymple – 94 gross hectares (land vacancy rate of 46%); and
- Merbein – 32 gross hectares (land vacancy rate of 17%).

Zoning of industrial land stocks is comprised of both IN1 and IN3 zoned land. There is 889 hectares of IN1 zoned land and 94 hectares of IN3 zoned land. The supply (undeveloped) stock by zone type is outlined in more detail below.

There is an area designated for future industrial development (unzoned) that is approximately 85 hectares in size within the suburb of Mildura, bounded by Benetook and Cowra Avenues.

Table 4: Gross Area (hectares) of Industrial Land Stocks, 2011

SLA/Suburb/LGA	IN1Z			IN3Z			SUZ			Total Zoned Stocks			Future Unzoned
	Supply	Unavailable	Land Area % Vacancy Rate %	Supply	Unavailable	Land Area % Vacancy Rate %	Supply	Unavailable	Land Area % Vacancy Rate %	Supply	Unavailable	Land Area % Vacancy Rate %	
Mildura (RC) – Pt A	450.7	233.4	66%	76.7	17.7	81%	70.0	220.4	24%	597	472	56%	84.9
Irymple (Vic.)	43.3	50.4	46%				43	50		43	50	46%	
Koorlong	379.7	22.8	94%				380	23		380	23	94%	
Merbein	5.5	26.3	17%				5	26		5	26	17%	
Mildura	15.9	124.5	11%	70.7	17.7	80%	70.0	220.4	24%	157	363	30%	84.9
Red Cliffs	6.4	9.5	40%	5.9		100%				12	9	57%	
Mildura (RC) – Pt B	204.5		100%							204	0	100%	
Red Cliffs	204.5		100%				204	0		204	0	100%	
Mildura LGA	655.2	233.4	74%	76.7	17.7	81%	70.0	220.4	24%	802	472	63%	84.9

Source: Spatial Economics Pty Ltd and Department of Planning and Community Development 2011

6.2 INDUSTRIAL LAND STOCKS – LOT SIZE DISTRIBUTION

Table 5 below details the number of zoned industrial lots by selected lot size cohorts. As at July 2011, there was a total of 719 zoned industrial allotments, of which 147 lots were identified as available supply.

Across the Rural City of Mildura 74% or 533 lots were sized less than 0.5 hectares, these were mainly located in the urban area of Mildura. In terms of larger allotments there were eight sized from 5 to 10 hectares and 13 over 10 hectares. The larger allotments are predominantly located within the suburb of Koorlong.

However, there are a few industrial users on land parcels greater than five hectares.

Table 5: Number of Industrial Allotments by Lot Size Cohort, 2011

SLA/Suburb/LGA	Less than 0.1 hectares		0.1 to 0.5 hectares		0.5 to 1 hectares		1 to 5 hectares		5 to 10 hectares		10+ hectares		Total Lots	
	Supply	Unavailable	Supply	Unavailable	Supply	Unavailable	Supply	Unavailable	Supply	Unavailable	Supply	Unavailable	Supply	Unavailable
	Mildura (RC) – Pt A	8	225	41	259	15	35	67	48	7	1	8	4	146
Irymple (Vic.)	3	24	4	29	5	3	11	11	0	0	0	1	23	68
Koorlong	0	0	0	0	0	0	28	0	4	0	4	1	36	1
Merbein	0	2	0	3	0	3	2	3	0	0	0	1	2	12
Mildura	3	195	35	222	7	26	24	29	2	1	4	1	75	474
Red Cliffs	2	4	2	5	3	3	2	5	1	0	0	0	10	17
Mildura (RC) – Pt B	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Red Cliffs	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Mildura LGA	8	225	41	259	15	35	67	48	7	1	9	4	147	572

Source: Spatial Economics Pty Ltd and Department of Planning and Community Development 2011

6.3 SUPPLY OF INDUSTRIAL LAND

As previously outlined there was, at July 2011, 732 gross hectares of zoned industrial land supply (undeveloped) excluding land zoned SUZ and 85 gross hectares of land identified for future industrial development (unzoned).

Of this identified supply, there will be a proportion of land not available for development. Such land development take-outs include, but not limited to include: local and regional roads, supporting infrastructure, open space requirements, native vegetation, excessive slope and other environmental constraints (water-ways). 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 (excluding SUZ land stocks) for zoned industrial land supply across the municipal area there is approximately 600 net developable hectares. In terms of future identified industrial land stocks (unzoned) there is an estimated 60 net developable hectares.

By zone type there is estimated to be a total net developable area of 534 hectares for land zoned IN1 and 66 hectares for land zoned IN3. By location, Mildura is estimated to have approximately 76 hectares of net developable industrial land, of which 62 hectares is zoned IN3. Whereas Koolong has an estimated stock of 330 hectares, Red Cliffs 149 hectares and Merbein 5 hectares.

Table 6 details the stock of the net developable industrial land stocks by zone type and location.

Table 6: Estimated Net Developable Industrial Land Stocks (hectares), 2011

SLA/Suburb/LGA	IN1Z	IN3Z	SUZ	Total Zoned Area	Future (unzoned)
Mildura (RC) – Pt A	391.3	66.1	49	565.8	60
Irymple	36.1	0	0	36.1	0
Koorlong	330.1	0	0	330.1	0
Merbein	4.9	0	0	4.9	0
Mildura	14.4	61.9	49	184.7	60
Red Cliffs	5.8	4.2	0	10	0
Mildura (RC) – Pt B	143.1	0	0	143.1	0
Red Cliffs	143.1	0	0	143.1	0
Mildura LGA	534.4	66.1	49	708.9	60

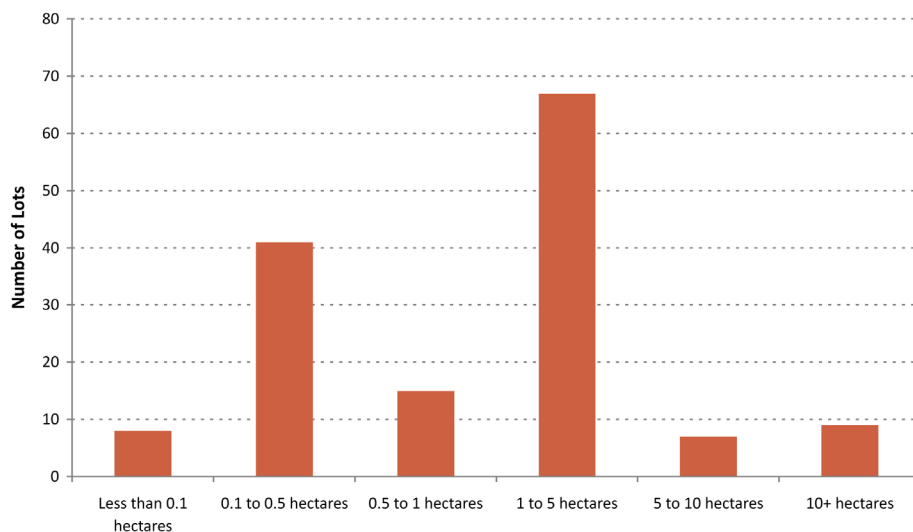
Source: Spatial Economics Pty Ltd and Department of Planning and Community Development 2011

The graph below illustrates the supply of industrial allotments (undeveloped) by selected lot size cohort. The majority (46% or 67 lots) of the allotments identified as supply are sized from 1 to 5 hectares. There are seven lots sized from 5 to 10 hectares and nine lots over 10 hectares in size.

In terms of ‘smaller’ allotments, 28% of the existing supply is sized from 0.1 to 0.5 hectares. There are only eight vacant industrial allotments sized less than 0.1 hectares.

Given recent consumption rates the existing industrial land stocks by lot size ranges is sufficient for both the potential for large industrial land users and/or for further subdivision into smaller allotments.

Graph 1: Number of Industrial Lots (supply) by Lot Size Range, 2011



Source: Spatial Economics Pty Ltd and Department of Planning and Community Development 2011

7.0 CONSUMPTION OF INDUSTRIAL LAND

Detailed analysis of existing and historic aerial imagery combined with zoning and cadastral information from 2003 to 2009 has been used to establish the consumption of industrial land. From 2009 to 2011, consumption of industrial land has been supplemented with 'intelligence' gathered from consultation with council and DPCD regional officers.

Consumption of industrial land refers to the construction on or use of 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.

From 2003 to 2011 on an average annual basis, 2.9 hectares per annum of industrial land has been consumed. Industrial land consumption has been concentrated solely in the suburb of Mildura. Only marginal levels of consumption have occurred outside of Mildura.

Of the recent industrial land consumption, 2.0 hectares per annum was on land zoned IN1 and 0.9 hectares for land zoned IN3.

8.0 YEARS OF SUPPLY – INDUSTRIAL LAND

The number of 'years of supply' is measured by dividing estimates of the net developable area by the average annual rate of industrial land consumption.

Table 7 below summarises the estimated years of supply by location and supply type. The industrial land zoned Special Use has not been included within the 'adequacy' assessment due to its designated 'special use' as opposed to 'general' industrial land requirements.

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 'number of years' 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.

In total, there is in **excess of 15 years** industrial zoned land across the Rural City of Mildura based on the average annual rate of land consumption in the period 2003 to 2011. In terms of future (unzoned) industrial land stocks it is estimated that there is approximately an additional **15+ years of supply**.

Table 7: Years of Supply of Industrial Land Stocks

SLA/Suburb/LGA	Years of Supply			
	IN1Z	IN3Z	Total Zoned Area	Future (unzoned)
Mildura (RC) – Pt A	15+	15+	15+	15+
Irymple	15+		15+	
Koorlong	15+		15+	
Merbein	15+		15+	
Mildura	7	15+	15+	15+
Red Cliffs	15+	15+	15+	
Mildura (RC) – Pt B	15+		15+	
Red Cliffs	15+		15+	
Mildura LGA	15+	15+	15+	15+

Source: Spatial Economics Pty Ltd and Department of Planning and Community Development 2011

All locations and zone types, except for Mildura have in excess of 15 years of supply. However, within the suburb of Mildura it is estimated that there is approximately 7 years supply of IN1 zoned land.

Historical industrial land consumption 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 increase 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. Due to this uncertainty relating to forecasting industrial land requirements two demand scenarios and related adequacies are presented, namely a 25% and 50% increase in the demand for industrial land.

With increased land demand scenarios the adequacy of industrial land stocks result in:

- 25% increase in demand (3.7 hectares per annum)
 - Zoned (IN1Z) – 15+ years supply;
 - Zoned (IN3Z) – 15+ years supply; and
 - Future (unzoned) – 15+ years supply.
- 50% increase in demand (4.4 hectares per annum)
 - Zoned (IN1Z) – 15+ years supply;
 - Zoned (IN3Z) – 15+ years supply; and
 - Future (unzoned) – 13 years supply.

In addition, for the two accelerated demand scenarios there is over 15 years supply for each suburb. However, for Mildura the stock of IN1 zoned land decreases to **6 years supply** (25% increase in demand scenario) and **5 years supply** (50% increase in demand scenario)

Based on identified existing stocks of industrial land, there is an adequate supply of zoned and unzoned industrial land to meet trend and accelerated consumption rates across the Rural City of Mildura and within each urban area/suburb.

Based on recent rates of consumption it is estimated that there is approximately **7 years supply** of IN1 zoned land in the suburb of Mildura. There are, however, **in excess of 15 years** supply of IN3 zoned land, which allows the integration and provision of both office and industry uses.

In terms of future (unzoned) industrial land stocks it is estimated that there is approximately an additional **15+ years of supply**. This stock is located in the suburb of Mildura.

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.

LOCAL GOVERNMENT AREA (LGA)

A geographical area that is administered by a local council.

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.

MAPSONLINE

An interactive online program that gives users the ability to search for specific projects, generate reports, and print or download maps and statistical reports. It also allows the user to search for specific land supply areas by region or LGA, estate name, Melway reference, street address or lot number, and contains mapping and statistical information sourced through the Urban Development Program. Registered users can also make site-specific feedback on-line.

NET INDUSTRIAL LAND SUPPLY

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

PRECINCT STRUCTURE PLANS

In the Urban Growth Zone (UGZ), the precinct structure plan (PSP) is the key document that triggers the conversion of non-urban land into urban land. A precinct structure plan is a long-term strategic plan that describes how a precinct or a series of sites will be developed.

STATISTICAL LOCAL AREA (SLA)

A geographical area created by the Australian Bureau of Statistics for statistical purposes. Victoria is divided into 200 SLAs. SLAs may be the same as an LGA or in most cases several SLAs aggregate to form LGAs.

SUBURB (AUSTRALIAN BUREAU OF STATISTICS)

This is a census-specific area where Collection Districts are aggregated to approximate suburbs.

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.

