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# Development forecasts for Nyora

for South Gippsland Shire Council

Tim Nott

economic analysis + strategy

and

Matters More

land use economics

## Report Data

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Prepared by:

Tim Nott  
economic analysis + strategy

ABN: 29 590 304 665

20 Scotia Street

West Preston

Victoria 3072

Australia

Tel: 0401 993 451

Email: [tim@timnott.com.au](mailto:tim@timnott.com.au)

Web: [www.timnott.com.au](http://www.timnott.com.au)

In association with:

Marianne Stoettrup

Matters More – Land Use Economics

19 Gyro Court, Gisborne 3437

Telephone 0400 995 363

email: [marianne@mattersmore.com.au](mailto:marianne@mattersmore.com.au)

ABN 59 113 066 283

### Please Note

The findings of this report have relied on professional judgement as well as on primary and secondary data sources. Whilst the authors believe any assumptions contained in the report are reasonable, the reader should bear in mind that there is no certainty in prediction.

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# 1 Introduction

## 1.1 About this Project

South Gippsland Shire Council is preparing structure plans for the townships of Nyora, Poowong and Loch to guide future development. This planning process is required as a result of the impending introduction of reticulated sewerage services to the towns. The provision of sewerage is expected to enable the provision of urban sized allotments with a potential increase in the rate of population growth as a result. The rate of business investment in the towns may also be increased.

To assist the planning process, Council is keen to understand the supply and demand issues associated with housing, commercial and industrial activity in the townships over the next 15 years and beyond.

## 1.2 About this Report

This report has been prepared by Tim Nott and Matters More to assist Council in its preparation of a structure plan for **Nyora**. The report examines the key drivers of growth in the area and provides a number of scenarios for development.

The report is in several sections:

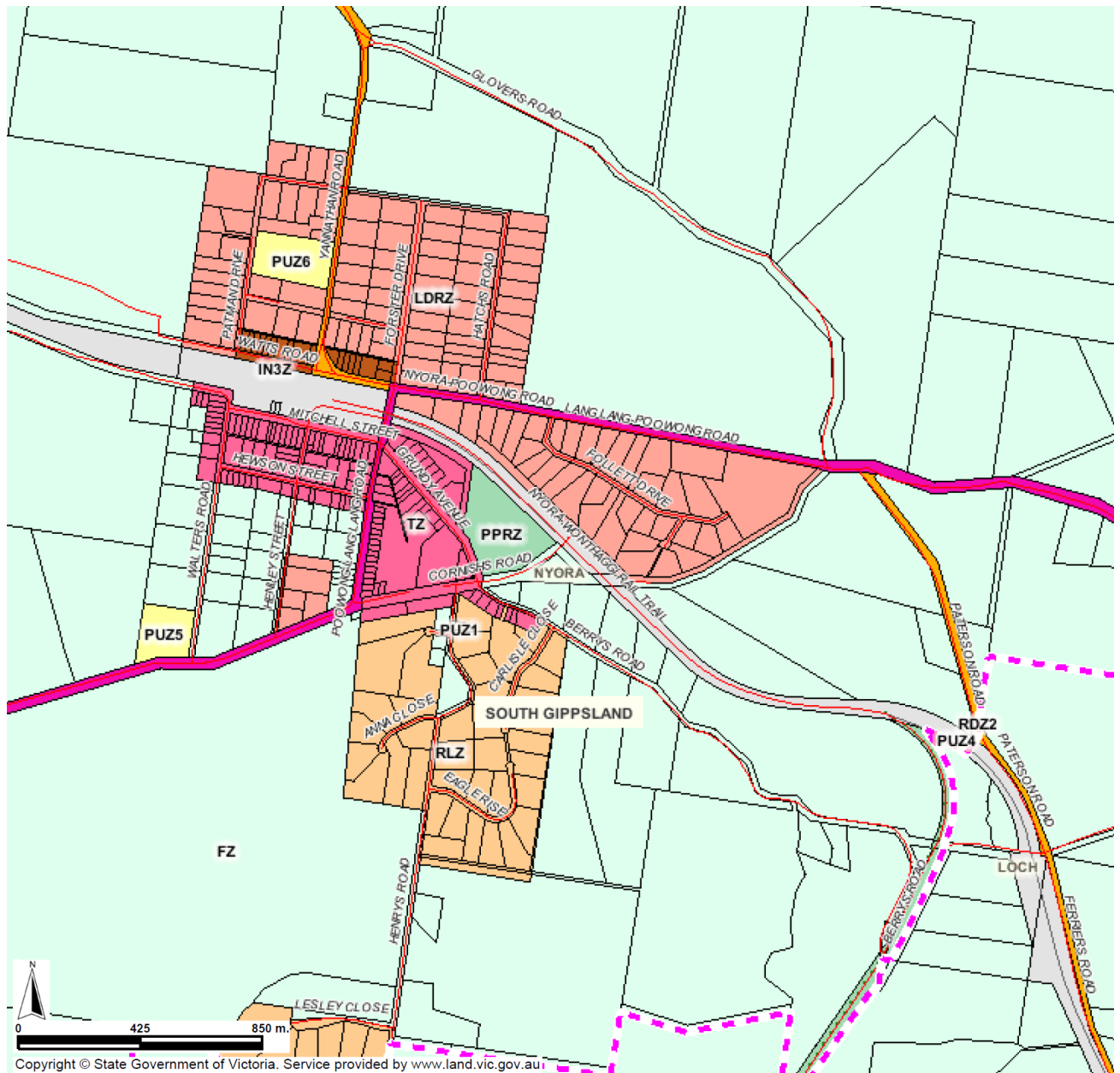
- Section 2 provides the development context of Nyora, including the current land-use, recent population and housing growth, and the external links of the population (chiefly their work destinations)
- Section 3 looks at the potential changes to land-use being contemplated in the structure planning process
- Section 4 provides several scenarios for population and housing growth in the future based on different assumptions about how the township will develop
- Section 5 uses the population scenarios to derive likely demand for retail and commercial facilities
- Section 6 provides an estimate of industrial development under each scenario, based on the existing activity and the forecasts for population growth
- Section 7 provides a summary and comparison of the various development scenarios

# 2 Development Context

## 2.1 Current Town Structure

The small Nyora township developed around the railway station which opened on the South Gippsland line in 1890. The town was not provided with sewerage and ordinary urban development was limited to only a few streets near the station. However, in latter years, the township has grown as a result of rural residential development, largely accommodating commuters to Melbourne's south eastern suburbs. This pattern is evident from the zoning map shown below.

Figure 1: Nyora – land-use zoning



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Legend

<p><b>WARRNAMBOOL</b> Major Town</p> <p><b>BOURKE STREET</b> Major Road, Road Road name</p> <p>..... Railway, Tramway</p> <p>□ □ □ □ Property/Parcel, Selected</p> <p>25 2 1C Address, Lot, Crown allotment</p> <p>— River, Stream, Coastline</p> <p>— Waterbody</p> <p>— Locality</p> <p>— Locality name</p> <p>— Local Government Area</p> <p>— Local Government Name</p> <p>— Urban Growth Bdy (UGB)</p> <p>— Area outside the UGB</p> <p>— Investigation Area</p> <p>— Land added to UGB since 2005</p>	<p><b>ZONES</b></p> <p>B1Z - Business 1</p> <p>B2Z - Business 2</p> <p>B3Z - Business 3</p> <p>B4Z - Business 4</p> <p>B5Z - Business 5</p> <p>CA - Commonwealth Land (not in scheme)</p> <p>CCZ - Capital City</p> <p>CDZ - Comprehensive Development</p> <p>DZ - Dockland</p> <p>ERZ - Environmental Rural</p> <p>FZ - Farming</p> <p>GWAZ - Green Wedge A</p> <p>GWZ - Green Wedge</p> <p>IN1Z - Industrial 1</p> <p>IN2Z - Industrial 2 (cont)</p> <p>IN3Z - Industrial 3</p> <p>LDRZ - Low Density Residential</p> <p>MUZ - Mixed Use</p> <p>PCRZ - Public Conservation &amp; Resource</p> <p>PDZ - Priority Development</p> <p>PPRZ - Public Park &amp; Recreation</p> <p>PUZ1 - Public Use - Service &amp; Utility</p> <p>PUZ2 - Public Use - Education</p> <p>PUZ3 - Public Use - Health Community</p> <p>PUZ4 - Public Use - Transport</p> <p>PUZ5 - Public Use - Crematory / Crematorium</p> <p>PUZ6 - Public Use - Local Government</p> <p>PUZ7 - Public Use - Other Public Use</p> <p>R1Z - Residential 1</p> <p>R2Z - Residential 2</p> <p>R3Z - Residential 3 (cont)</p> <p>RAZ - Rural Activity</p> <p>RCZ - Rural Conservation</p> <p>RDZ1 - Road - Category 1</p> <p>RDZ2 - Road - Category 2</p> <p>RLZ - Rural Living</p> <p>RUZ - Rural</p> <p>SUZ - Special Use</p> <p>TZ - Township</p> <p>UFZ - Urban Floodway</p> <p>UGZ - Urban Growth</p>
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Source: Land Channel, State Government of Victoria

The original township is restricted to the area marked TZ (Township Zone). This comprises mainly urban sized lots of 800 sq m to 2,000 sq m. However, development on these older lots has been problematic in more recent times: all lots have septic tanks and, nowadays, lot sizes of 4,000 sq m are considered the minimum necessary to provide acceptable standards of environmental performance. The Low Density Residential areas to the north of the township and the Rural Living Zone to the south of the township represent the later development. Also shown on the plan is an area of light industrial activity (zoned IN3) and the old railway line (PUZ4).

The South Gippsland railway was closed in 1994 but has reopened as a tourist railway that operates on Sundays and Public Holidays.

The main cluster of resident services is located on Mitchell Street which also contains a park maintained by residents on the old railway reserve.

The land in and around Nyora is undulating lightly wooded farmland used largely for grazing. This is in contrast with the nearby towns of Loch and Poowong which are also being sewered and where much of the surrounding farmland is steeply sloped. The principal constraints to further development around Nyora are the land-use zoning and an identified sand resource to the west of the township.

With the advent of the large lot rural residential development, the town has been settled by families seeking a rural lifestyle in reasonable proximity to workplaces and services in Melbourne. In particular, the large allotments allow families to keep horses of which there are reportedly many in the area.

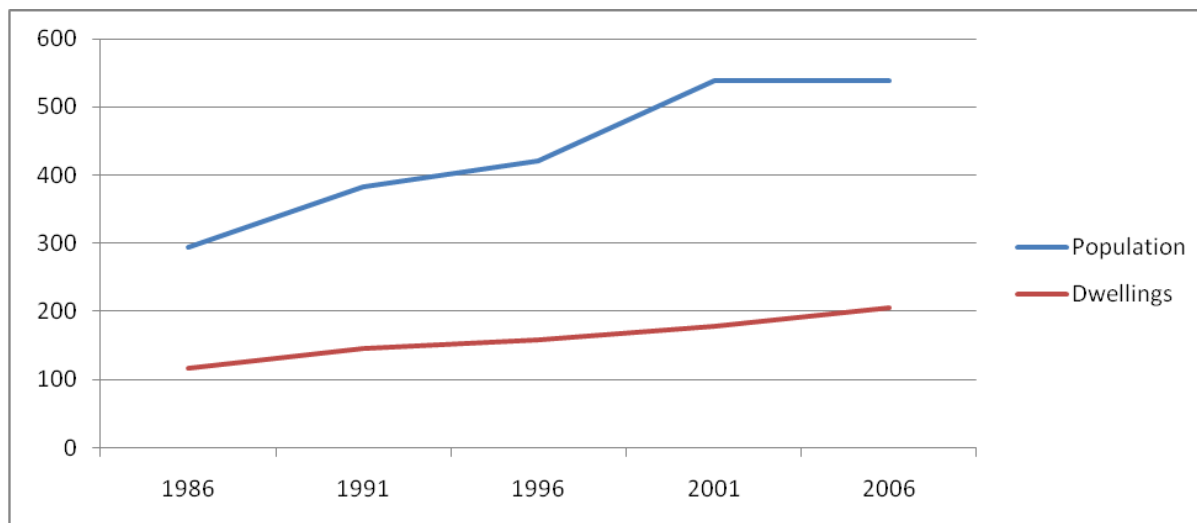
## 2.2 Recent Population and Housing Growth

In 2006, according to the last Census of Population and Housing, the immediate township of Nyora had a population of 540. However, the definition of the township for statistical purposes leaves out the more recently settled areas around Henrys Road and Follett Drive. Including these areas, and making the usual allowance for under-counting by the Census<sup>1</sup>, the estimated resident population of Nyora and immediate surrounds in 2006 is 900. Between 2001 and 2006, the population of this area grew at an average of 1.7% per year. Assuming that rate of growth has persisted, **the population of Nyora and immediate surrounds in 2010 is estimated at 960.**

The chart below shows the growth in population and housing in just the Nyora township over the period 1986 to 2006.

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<sup>1</sup> Typically, in calculations by the Australian Bureau of Statistics, the estimated resident population of an area is around 4% higher than the Census count in order to take account of under-enumeration.

**Figure 2: Change in population and housing, Nyora township, 1986 to 2006**

Source: DSE, Towns in Time, 2008

This chart and associated calculations provide the following key points:

- Population in the Nyora township has nearly doubled in the 20 years between 1986 and 2006
- Population growth averaged 3.1% per year over the period but was most between 1986 and 1991 and between 1996 and 2001, when it averaged over 5% per year
- There has been no population growth in the most recent intercensal period between 2001 and 2006; although in this period, growth in Nyora has continued in areas just outside the statistical boundaries as discussed above
- There have been an average of 4.5 new dwellings per year in the township, and most of these have been constructed in the rural residential areas of the township
- Average household size was 2.8 in 2006, reducing from around 3.0 in 1986
- The number of vacant dwellings in Nyora has remained relatively constant (19 in 1986 to 16 in 2006); there does not appear to be a significant holiday home component in new housing development

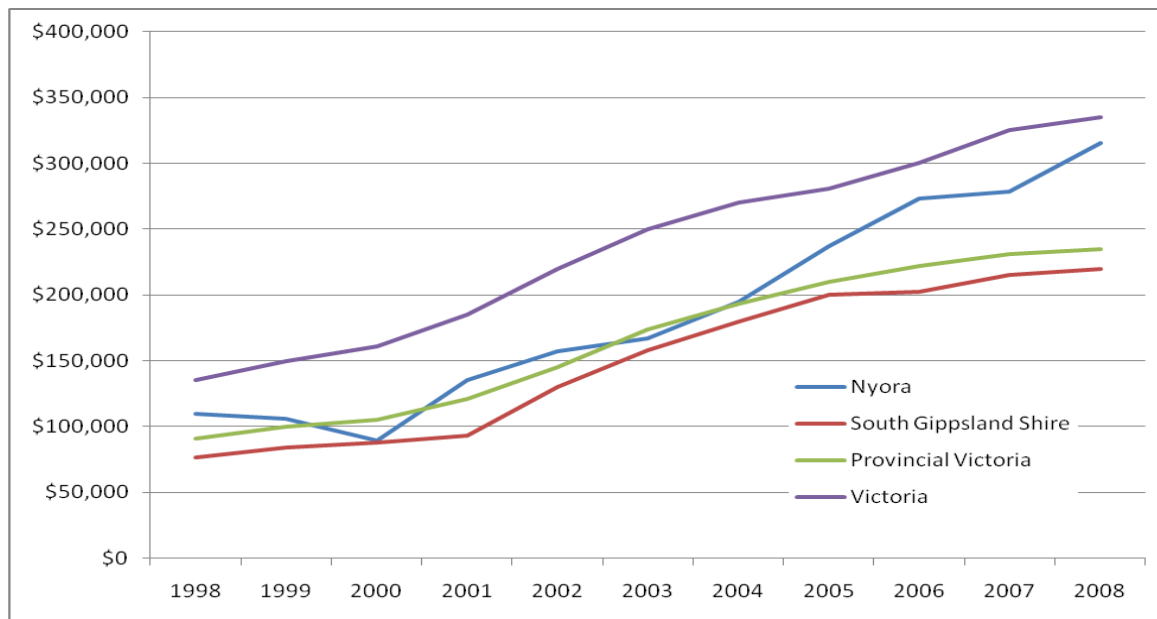
Many of the new residents are families with children looking for 'room to move'. Nyora's location, 84 km south east of Melbourne, and the expansion of and growth at Melbourne's southern perimeter has made Nyora a more feasible rural alternative for people who want a green/rural environment but still want to access Melbourne's services and job market.

As Nyora grows in size, the demographic profile of the town is likely to change and it is likely to become more reflective of the general population profile in Victoria, with a higher proportion of couples only households and single person households. In the last five years, the average household size in Nyora has declined and analysis of the household data shows that there has been an increase in the number of households comprised of couples without children (from 33 to 62 households) and a similar decrease in the number of couple households with children (from 95 to 73). This trend may increase the future demand for smaller lots in Nyora to accommodate families (couples) who wish to remain in the area but no longer require a large family home on a large allotment.

## 2.3 House prices

Other indicators show that Nyora is becoming more connected to the metropolitan area. House prices, for example, have accelerated faster in Nyora than in the rest of the South Gippsland Shire over the past decade. These trends are shown in the following chart.

**Figure 3: Trends in Median House Prices, Nyora, South Gippsland Shire, Provincial Victoria and Victoria, 1998 to 2008**



Source: Department of Sustainability and Environment, 2009

## 2.4 External Linkages

In 2006, there were 243 people in Nyora in the labour force, while 150 were not in the labour force. Labour force participation was at 62%. In line with population growth, there has been an increase in the number of people in Nyora who are in the labour force. In 1986 there were 112, in 1991 there were 199, and in 1996 there were 233. Unemployment was relatively high in the 80s and 90s at around 8%, but was 6.6% in 2006. More recent unemployment data from Department of Employment and Work Place Relations indicate that unemployment has since declined and is now approximately 2.6%.

Information about the place of work is available for 219 of the 227 employed residents in Nyora (custom data sourced from the ABS Census 2006). This information is shown in the following table.



**Table 1: Location of work, Nyora work force, 2001 and 2006**

Work distance from Nyora	Local government destination	2001		2006	
		No	%	No	%
0 – 30km	South Gippsland	39	19%	58	27%
31 – 50km	South Gippsland, Casey, Cardinia, Baw Baw	64	32%	60	27%
51 – 70km	Casey, Greater Dandenong, Frankston, Mornington Peninsula	65	33%	59	27%
71km and over	Kingston, Knox, Melbourne, Monash, Yarra Ranges	17	9%	25	11%
No fixed location		13	7%	17	8%
Total		198	100%	219	100.00%

Source: ABS, Census of Population and Housing – custom data

The table shows that the majority of Nyora workers travel over 30km to work, whereas about one quarter of the workers work 'locally', i.e. within 30km of Nyora. The trend from 2001 to 2006 shows that a higher proportion of workers are able to work locally (27% in 2006 compared to 19% in 2001), and that a higher proportion also travel further to work (principally to inner Melbourne).

Movement for work is generally north and north west to the southern suburbs of Melbourne, i.e. Cranbourne, Casey, Monash and Dandenong where there is a concentration of economic activity in industrial, commercial or educational areas. Interestingly, while the Latrobe Valley is within the typical commuting distance of workers from Nyora there are no workers living in Nyora that have jobs in the Latrobe Valley.

## 3 Structure Planning

### 3.1 Key Issues

A new Structure Plan for Nyora is now being contemplated by Council. Key considerations in the development of the structure plan include:

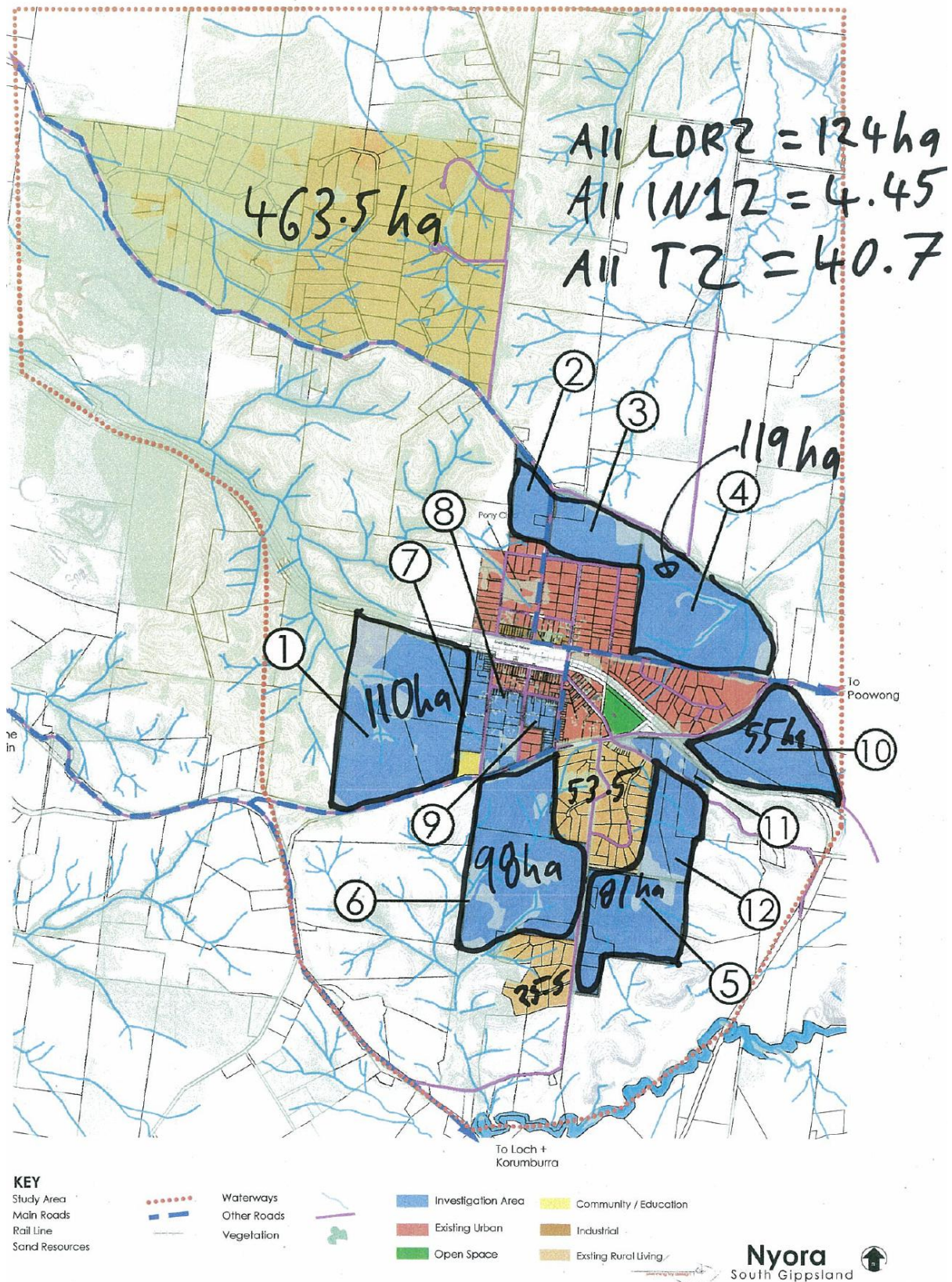
1. **The township is to be sewered.** South Gippsland Water expects to complete the Poowong, Loch and Nyora Sewerage Scheme by 2013 at a cost of \$16 million (South Gippsland Water, 2009). This will allow a more urban style development with smaller lot sizes. More urban-scale development will enable more people to live in the township at higher densities. This may change the existing socio-economic patterns in the township.
2. **There is interest in housing development.** The Shire has received expressions of interest from land-holders in developing urban-density housing on land adjacent to the township that is currently zoned for farming purposes. This reflects existing interest in development of the town where there are approximately 50 to 60 lots remaining in vacant rural residential sub-divisions and potential urban allotments in the town centre.

3. **Market demand is unclear.** The extent of demand for urban-density living in Nyora is not clear because there is currently little supply; all recent development has been, by necessity, at rural residential densities.
4. **Melbourne's south east continues to grow.** The growth of south east Melbourne creates demand for all types of lifestyles, including those offered by small towns such as Nyora (whether on large or small lot subdivisions).
5. **More extensive urban development will require infrastructure services to be provided.** Sewerage is not the only additional infrastructure required for urban development. Extensions to reticulated water, storm water, roads, energy and telecommunications services will also be required. Fairly apportioning the cost of these services will be an issue.
6. **More residents will generate more demand for commercial and community services.** The level of service provided locally will depend on the number of additional people that move into the township and surrounds. The provision of new services – more shops, doctors, community services, etc – is triggered at various threshold populations, and will also depend on the location and quality of competing services. Services are best clustered in an activity centre; however, there may be pressure to create a new focus for service activity away from the existing loose cluster of services on Mitchell Street.
7. **The Evolving Policy Framework.** The Department of Planning and Community Development (DPCD) is currently preparing 'Assessment Tools' to assist councils plan for growth in the peri-urban area (the hinterland surrounding the metropolitan boundary). While South Gippsland Shire is not strictly within the defined peri-urban area, many of the peri-urban development issues are likely to be applicable to Nyora. Council should seek to inform itself of the ongoing development of this work (and other regional planning initiatives) to assist informing the development of the structure plan.

### 3.2 Options Being Considered

The following diagram illustrates the areas being considered for urban expansion of Nyora by Council and/or by land-owners. ***It should be stressed that this is a preliminary illustration prepared for discussion purposes only. The map identifies land adjoining the established township that has characteristics that may be suitable for residential development. No decision on the zoning of these areas has yet been taken.***

Figure 4: Areas being considered for urban expansion (preliminary draft for discussion purposes only)



Source: South Gippsland Shire Council, unpublished 2010

Potentially, the total additional supply of land around Nyora is 463 ha. The following table provides a broad calculation of the potential housing lot numbers this area of land might generate.

**Table 2: Broad estimate of potential housing lots capable of being developed on proposed new housing areas around Nyora**

Parcel location	Total area	Developable land (assumes 75% developable)	Potential urban residential allotments (assumes 12 lots per ha)	Potential low density residential allotments (assumes 2 lots per ha)	Potential rural living allotments (assumes 0.9 lots per ha)
	ha	ha	no.	no.	no.
North	119	89	1,071	179	80
West	110	83	990	165	74
East	55	41	495	83	37
South West	98	74	882	147	66
South East	81	61	729	122	55
Total	463	347	4,167	695	313

Source: Tim Nott, Matters More

Note: Calculations assume that only 75% of land is developable for housing, with the remainder providing open space or other community uses, or being otherwise constrained

Clearly, the number of housing lots that can be provided is highly dependent on the land-use zoning. If all the land is developed for urban residential allotments, the additional land could notionally accommodate a further 4,200 lots; if the land is developed for low density residential – 700 lots; if for rural living – 300 lots.

The following table provides an indication of the potential population capacity of Nyora and immediate surrounds given the various options for zoning the land illustrated above.

**Table 3: Potential population capacity of Nyora and surrounds**

	Urban development	Low density development	Rural living development
Assumed persons per dwelling	2.5	2.8	2.8
Population capacity of new areas	10,420	1,940	880
Population capacity of existing township	1,110	1,110	1,110
Total capacity of town	11,530	3,050	1,990

Source: Tim Nott, Matters More

Depending on the zoning and development, Nyora could evolve into a significant rural town, growing larger than the present Leongatha and Korumburra or it could become a substantial rural residential settlement. If no further land is made available, the population capacity of the township and surrounds is around 1,100 people, perhaps 150 more than at present.

## 4 Forecasting Urban Development

### 4.1 Development Scenarios

The previous section has examined the scale of potential development in Nyora and surrounds. This section provides evidence about the potential future rate of development. The rate of development is important since it is this that will determine if and when various infrastructure and community services will be required.

The rate of development cannot be known with any certainty since there are a multitude of variables, many of which are not within the control of local land-owners or Council. In order to assist the planning process, it is common practice in this situation to create a set of scenarios based on different policy directions or influences.

In this case, the scenarios are taken to 2030, 20 years from now.

There are six main scenarios:

#### 4.1.1 No further land

Council and the community may decide that Nyora should not grow significantly; that no further land should be made available for urban or rural residential development. In this case, new housing development would be restricted to lots which are already zoned. The consultants estimate that there are around 26 vacant rural residential allotments in and around the township and that the Township Zone contains land which could be subdivided to produce a further 30 lots. If average household size in Nyora continues to reduce as it did between 1986 and 2006, then by 2030 it will be 2.6 persons per household.

- Occupied houses in Nyora in 2006: 313 (ABS Census of Population and Housing, 2006)
- Growth in houses, 2001 to 2006: 2.3% per year (ABS Census of Population and Housing, 2006)
- Estimate of houses in 2010: 343
- Estimate of additional houses developed by 2030: 56
- Total housing capacity of Nyora and surrounds by 2030: 399
- Estimate of household size in 2030: 2.6 persons per household
- Total population estimate by 2030: 1,040
- Estimated rate of growth, 2010 to 2030: 0.4% per year

#### 4.1.2 Past growth continued

Between 2001 and 2006, Nyora and surrounds grew at 1.7% per year and this could continue for the foreseeable future:

- The population of Nyora and surrounds in 2030: 1,350
- Average household size: 2.6 persons per household
- Number of occupied houses by 2030: 510, a growth of 170, or approximately 9 per year on average over the period

### 4.1.3 Growth Forecasts of State Government

Victorian State Government (DPCD) release population forecasts on a periodic basis for areas as small as Statistical Local Areas (SLAs) and these can be used to provide a forecast for smaller areas. The latest forecasts are Victoria in Future 2008 and go out to 2026 for SLAs.

The SLA containing Nyora – South Gippsland West SLA – grew from 7,770 to 8,051 between 2001 and 2006 or by 281 persons. During the same period, the estimated resident population of Nyora and surrounds increased by an estimated 72 persons. In this period, Nyora’s share of the population increase in the SLA was 25.5%.

This scenario assumes that Nyora will continue to capture 25.5% of the growth in the SLA.

- Population growth forecast in South Gippsland – West SLA between 2010 and 2026 is forecast to increase from 8,339 to 9,816, a forecast increase of 1,477 residents.
- Nyora’s share of this growth is 377 (25.5%), and the forecast estimated resident population of Nyora will therefore be 1,337 by 2026. This represents an average annual growth rate of population in Nyora of 2.1%pa.
- Continuing that growth rate, by 2030, Nyora will have a population of 1,460.
- By 2030, Nyora will have 560 occupied houses, a growth of 210 houses compared with the present. This represents 11 new houses per year over the period on average, an annual average growth rate of 2.1%.

The implication of this growth scenario is that the population in South Gippsland – West is likely to be more concentrated in townships by 2026 compared to the present, unless some towns in the SLA decline over the period. Nyora will be larger in comparison with the rural hinterland as a significant share of the SLA’s population growth is directed at Nyora. In terms of population share, at the outset of the forecast period Nyora housed approximately 11.5% of the SLA’s population (960 of 8,339); by 2026 this share is forecast to have increased to 13.6% (1,337 of 9,816).

### 4.1.4 Growth History of Similar Towns

Recent growth in Nyora may *not* be a good guide to future growth patterns since key factors are changing. In particular, the provision of sewerage and the potential availability of large areas of land for urban development are new features of the town. Some understanding of how these changes may affect the growth rate of the town may be found by examining the experience of other towns in proximity to Melbourne.

Nyora’s location 84km South East of the Melbourne CBD puts it within the range of commuting to Melbourne and in the outer band of towns that are experiencing growth due to the influence of metropolitan Melbourne.

Population growth is not uniform across these bands, and each town experiences a different scenario. Some towns become the focus of a large-scale residential development and experience substantial growth off a very small base, becoming completely different types of settlement. Other towns experience more steady growth that is a continuation of the existing trend of settlement and maintain their township identity as they grow. Some towns become dormitory suburbs of Melbourne, while others develop to provide a good range of services to their residents and thereby sustain a level of community adhesion. The table below provides a list of small towns within a 20 – 50km range of the perimeter of metropolitan Melbourne. Towns with a population of 200 to 5,000 have been included as towns within this range are the most relevant points of comparison for Nyora’s future development scenario. Note that the population estimates may in some cases

underestimate the town's size if the town has spread over a larger geographic area and these new boundaries not recognised in the data.

The towns are located within four general development corridors. These are

- The western/south-western corridor towards Geelong and Ballarat. Towns located in this corridor are not unilaterally Melbourne focused as Geelong and Ballarat provide competition to Melbourne as employment centres and therefore the experience in this corridor is less relevant to Nyora. Towns in this corridor have good rail access via the Geelong and Ballarat lines;
- The northern/north-western corridor which includes towns along the Calder and Hume Freeways. Towns in this corridor have good rail access via the Bendigo and Albury rail lines;
- The eastern corridor which extends into the Yarra Valley and north east into Murrindindi Shire. Towns in this corridor have limited rail access with the closest trains departing from Lilydale;
- The south-eastern corridor which extends along the Princes and South Gippsland Highways. Towns in this corridor along the Princes Highway have good rail access via the Traralgon Line, whereas there is no rail access along the South Gippsland Highway.

Towns in the following table are sorted according to distance from Melbourne, based on an assumption that there is a relationship between population growth and distance: the further towns are from Melbourne (as the growth driver) the lower their growth rate will be. Analysis of the three broad corridors shows that there is a (negative) correlation between distance from Melbourne and population growth in 2001-2006 in the northern and eastern corridors. However this relationship is not valid for the south eastern corridor where substantial population growth in Dalyston, Nilma and Darnum skews the result.

**Table 4: Selected small towns, enumerated population 1981 to 2006**

	Distance from Melbourne	1981	1986	1991	1996	2001	2006	aagr 2001-2006
<b>Western Corridor</b>								
Ballan	80km W	689	857	1,190	1,451	1,766	1,770	0.1%
<b>North and North Western Corridor</b>								
Bulla	23km NW	-	258	294	345	373	397	1.3%
Beveridge	37km N	-	-	-	-	-	342	n.a.
Wallan	43km N	1,198	1,802	2,381	3,262	4,075	5,322	5.5%
Riddells Creek	45km NW	1,076	1,375	1,592	1,795	2,337	2,548	1.7%
Romsey	53km N	945	1,409	2,209	2,555	3,021	3,457	2.7%
Macedon	54km NW	1,137	1,236	1,354	1,385	1,419	1,377	-0.6%
Mount Macedon	54km NW	805	980	1,017	1,066	1,202	1,066	-2.4%
Kilmore	54km N	1,862	2,213	2,865	23,088	3,866	4,703	4.0%
Lancefield	62km N	633	837	1,080	1,146	1,160	1,160	0%
Broadford	65km N	1,640	1,983	2,339	2,508	2,794	2,999	1.4%
Tylden	72km NW	213	230	250	244	291	254	-2.7%
Pyalong	76km N	-	-	-	-	238	259	1.7%
Tallarook	78km N	213	230	250	244	291	254	-2.7%

	Distance from Melbourne	1981	1986	1991	1996	2001	2006	aagr 2001-2006
Malmsbury	93kmNW	445	458	518	514	494	616	4.5%
<b>Eastern and North Eastern Corridor</b>								
Yarra Glen	39km NE	1,016	1,181	1,196	1,244	1,385	1,870	6.2%
Yarra Junction	56km E	1,543	1,812	1,962	2,083	2,210	2,297	0.8%
Don Valley	55km E	-	-	-	-	273	270	-0.2%
Warburton	63km E	1,743	1,956	2,110	1,992	1,997	1,894	-1.1%
Powelltown	67km E	190	193	198	176	205	201	-0.4%
Warburton East	68km E	391	541	632	740	708	708	0.0%
Buxton	78km NE	-	-	-	-	206	213	0.7%
<b>South Eastern Corridor</b>								
Cannons Creek	53km SE	-	-	-	-	481	495	0.6%
Warneet	54km SE	-	-	-	-	455	492	1.6%
Maryknoll	60km SE	-	-	-	-	516	460	-2.3%
Nar Nar Goon	60km SE	346	522	625	596	607	607	0.0%
Koo Wee Rup	62km SE	1,047	1,081	1,106	1,118	1,305	1,403	1.5%
Tynong	64km SE	238	262	298	261	335	320	-0.9%
Garfield	69km SE	517	577	674	658	703	867	4.3%
Lang Lang	72km SE	582	569	696	825	921	894	-0.6%
Corinella	77km SE	173	235	340	391	478	495	0.7%
Coronet Bay	80km SE	193	342	504	520	622	630	0.2%
Grantville	82km SE	195	323	383	389	401	458	2.7%
Nilma	96km SE	-	-	-	-	-	206	n.a.
Dalyston	97km SE	-	-	-	-	171	275	10.0%
Darnum	100km SE	180	255	325	293	316	362	2.8%

Source: Towns in Time, DSE, 2008

The advent of reticulated sewerage was also analysed to identify whether this affected township growth and if so, by how much. Four towns were identified that had been seweraged in the last decade; Dalyston (2000), Lancefield (2003), Macedon and Mount Macedon (both in 2006). Westernport Water completed the seweraging of Dalyston in 2000, but this did not immediately lead to any growth as Dalyston was not a suburb of choice. Growth has increased since 2005, as land availability in nearby Wonthaggi has become in short supply and Dalyston is now emerging as a first home buyer's area for current or new residents to the Wonthaggi area. The development of the desalination plant near Wonthaggi is also spurring growth in the region, as is the coastal location. Located north of Melbourne, Lancefield is an inland historic town, having been settled already in the 1830s with an agricultural base. Its population grew steadily in the 1980s and early 1990s but has stabilised since. Seweraging by Western Water in 2003 has not lead to any discernible growth, however the current structure plan recognises that infill development and smaller lot development can now occur and land towards the south west and north is earmarked for residential expansion and land to the east for low density residential development. Macedon and Mount Macedon are also located north of Melbourne with good commuter access via train (Bendigo line) and the Calder



Freeway. The provision of sewerage was completed in March 2006, but this has not lead to planning scheme amendments to rezone land.

Included in the table are also the so-called railway towns in West Gippsland - Nar Nar Goon, Tynong and Garfield - which are located on the Traralgon railway line and the Princes Highway. Garfield is a similar size to Nyora. These towns have all experienced long term growth, however in the 2001-2006 period only Garfield's population increased. Garfield is the largest of the towns and the furthest distance from Melbourne, nevertheless Garfield had an average annual population growth rate of 4.3% over 2001-06 indicating that proximity to Melbourne alone is not sufficient to drive growth.

Another driver of growth is interest from large-scale developers. Towns that grew (or will grow) rapidly because they have become the focus of large scale residential development include Beveridge, Wallan, and Kilmore. In all three towns there are new subdivisions with standard residential allotments and house and land packages available<sup>2</sup>. Wallan and Kilmore have experienced population growth of 5.5%pa and 4.0%pa respectively over 2001-06, with distance from Melbourne in this case being an indicator for growth. If Nyora were to experience similar developer interest, Nyora would also be able to grow substantially in the future. However, both Wallan and Kilmore enjoy a location on a commuter train line, a factor which is quite significant in determining growth in the outer band of towns, and an advantage that Nyora does not have.

Several towns in proximity to Nyora have strong policies to contain growth, with an urban growth boundary established in the planning scheme. In particular, Lang Lang and Koo Wee Rup have urban growth boundaries. Restrictions on growth in these towns may force developers to seek opportunities further out from Melbourne in towns such as Nyora.

In the following table the towns are grouped according to growth in 2001-2006: negative growth, low growth, medium growth and strong growth, and factors that are likely to contribute to growth or decline are noted. These bands are used to identify the towns that share conditions with Nyora and develop a growth scenario based on experiences elsewhere.

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<sup>2</sup> Kilmore – house and land packages starting at \$230,000, residential allotments at \$70,000. Wallan – house and land packages starting at \$280,000, residential allotments at \$116,000. Beveridge – house and land packages starting at \$320,000.

**Table 5: Growth hierarchy of towns around Melbourne**

	Town	Distance from Melbourne	Population 2006	aagr 2001-2006	Development factors
<b>Negative Population Growth</b>	Tylden	72km NW	254	-2.7%	Land for development not available
	Tallarook	78km N	254	-2.7%	Land for development not available
	Mount Macedon	54km NW	1,066	-2.4%	Not planning for growth
	Maryknoll	60km SE	460	-2.3%	
	Warburton	63km E	1,894	-1.1%	Closure of large employer
	Tynong	64km SE	320	-0.9%	Land for development not available
	Macedon	54km NW	1,377	-0.6%	Not planning for growth
	Lang Lang	72km SE	894	-0.6%	Planning constraints
	Powelltown	67km E	201	-0.4%	Land for development not available
	Don Valley	55km E	270	-0.2%	Land for development not available
<b>Growth of more than 0% but less than 2%pa</b>	Lancefield	62km N	1,160	0.0%	Better serviced towns closer to City (no train)
	Nar Nar Goon	60km SE	607	0.0%	Outcompeted by Garfield, Pakenham
	Warburton East	68km E	708	0.0%	Better serviced towns closer to City (no train)
	Ballan	80km W	1,770	0.1%	Growth in rural surrounds
	Coronet Bay	80km SE	630	0.2%	Coastal attraction, many holiday homes
	Cannons Creek	53km SE	495	0.6%	
	Buxton	78km NE	213	0.7%	Rural setting, low service level
	Corinella	77km SE	495	0.7%	Coastal attraction, many holiday homes
	Yarra Junction	56km E	2,297	0.8%	Little land available
	Bulla	23km NW	397	1.3%	Not planning for strong growth, limited land released
	Broadford	65km N	2,999	1.4%	Future growth destination (after Kilmore)
	Koo Wee Rup	62km SE	1,403	1.5%	Well serviced town close to growth area
	Warneet	54km SE	492	1.6%	
	Pyalong	76km N	259	1.7%	
Riddells Creek	45km NW	2,548	1.7%	Current growth destination, on train line	
<b>Growth of more than 2% but less than 4%pa</b>	Grantville	82km SE	458	2.7%	Current growth destination, coastal access
	Romsey	53km N	3,457	2.7%	Current growth destination, village w services
	Darnum	100km SE	362	2.8%	Suburb town to Warragul where aagr is 1.8%pa
<b>Growth of 4% pa or more</b>	Kilmore	54km N	4,703	4.0%	Strong growth, on train line, developer focus
	Garfield	69km SE	867	4.3%	Strong growth, on train line, services
	Malmsbury	93kmNW	616	4.5%	Data questionable, changed count method
	Wallan	43km N	5,322	5.5%	Strong growth, on train line, developer focus
	Yarra Glen	39km NE	1,870	6.2%	New land release after years of pent up demand
	Dalyston	97km SE	275	10.0%	Strong growth, supply shortage in area
<b>no data</b>	Beveridge	37km N	342	n.a.	Developer focus
<b>no data</b>	Nilma	96km SE	206	n.a.	Suburb town to Warragul where aagr 1.8%pa

Source: Refer table 3, and consultants estimates

In terms of grouping, Nyora has some similarities with the group of towns that have growth of 2% but less than 4%. In general, these towns are:

- similar distances from the nearest metropolitan growth corridor
- attractive for different reasons including coastal access (Grantville); large urban lots and historic town centre (Romsey); proximity to regional centre and freeway access (Darnum)
- in the case of Romsey and Grantville, identified by the planning scheme as towns which have the capacity to grow, with structure plans in place
- not directly linked to the rail network (although the train runs through Darnum the station is closed)
- available residential lots

Nyora is a similar distance from the job markets of Melbourne as Grantville; it is in an attractive setting; it is not directly linked to the rail network; and may have a variety of housing lots available. As a result, a growth rate of 2.7% is adopted for this “Commuter town” scenario (that is, the average for the three similar towns) with the following results:

- the population of Nyora in 2030 rises to 1,640
- the household size, in keeping with the other scenarios, is assumed to fall to 2.62
- the number of occupied houses in 2030 is 625, a growth of 280 compared with the present, an average growth of 14 per year over the period at a growth of 3.1% per year

#### 4.1.5 Rapid growth scenario

Nyora may become a favoured growth area. This could happen if land-holders undertake extensive urban developments that are aggressively marketed to metropolitan residents. Looking at the small towns in the peri-urban area of Melbourne where this has happened, the range of recent growth rates is from 4% per year and upwards. However, those towns with the highest growth rates are those with freeway and rail access. Because Nyora has neither of these attributes, the lower end of the range is adopted here.

- population growth rate: 4.0% per year between 2010 and 2030
- population of Nyora by 2030: 2,110
- average household size by 2030: 2.62
- occupied households by 2030: 800, a growth of 460 from 2010
- average annual growth of occupied houses: 23, or 4.4% per year

#### 4.1.6 Explosive growth scenario

It is conceivable, although unlikely, that Nyora will experience explosive growth. This could happen through the conjunction of a number of favourable factors including:

- Reinstatement of the rail line providing a commuter rail service
- Encouragement of growth in small towns in the fringing metropolitan area as one means of managing Melbourne’s overall growth
- Restrictions on growth in intervening towns such as Koo Wee Rup and Lang Lang
- Aggressive marketing of attractive new housing developments in Nyora

- Increased levels of migration to Australia, particularly Victoria.

For this scenario, it has been assumed that Nyora's population will reach 5,000 by 2030.

- Population growth rate: 8.6% per year between 2010 and 2030
- Population growth, 2010 to 2030: 4,040
- Average household size by 2030: 2.62
- Occupied households by 2030: 1,910, a growth of 1,570
- Average annual growth of occupied houses: 78, or 9.0% per year

While the consultant has been requested to prepare this scenario it should be noted that such levels of growth are considered rare. Explosive growth is most typically found in areas adjoining, or in close proximity to, established high growth area, or in non metropolitan locations where such factors as large infrastructure projects or the establishment of new industries may stimulate rapid growth.

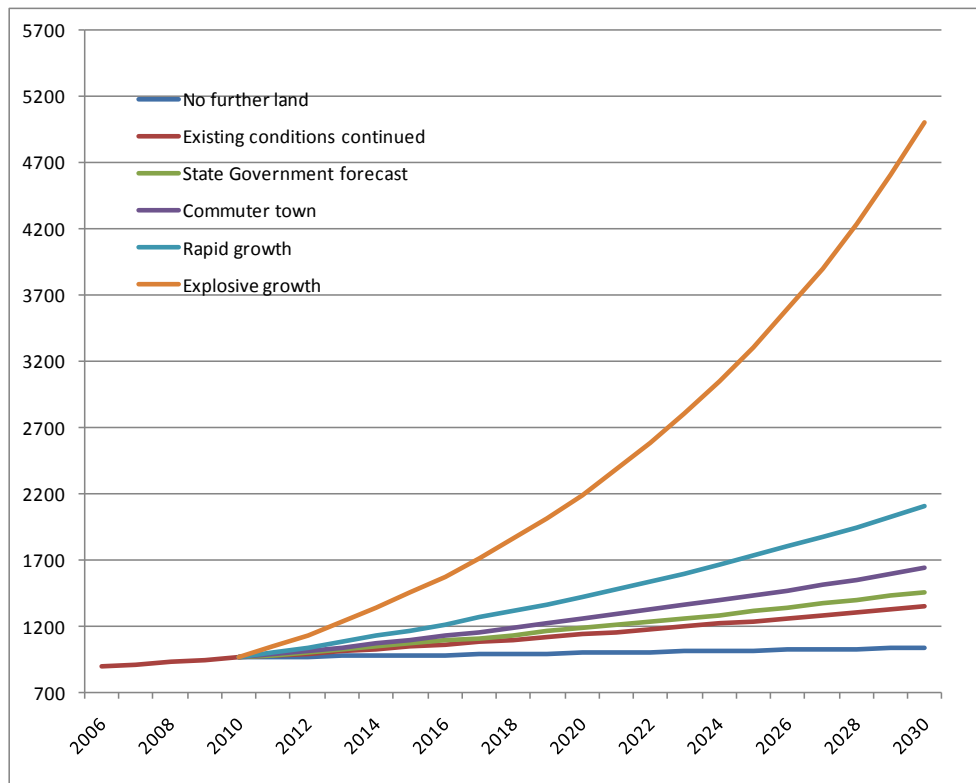
## 4.2 Comparison of growth scenarios

The following figure and table provide a comparison of the population and housing outcomes of the various scenarios.

**Table 6: Comparison of growth scenarios for Nyora**

	No further land	Existing conditions continued	State Government forecast	Commuter town	Rapid growth	Explosive growth
Scenario	No further land zoned for housing and take up of existing/potential allotments	Current growth rate in Nyora continued, mainly in low density housing	State government forecast with share allocated to Nyora based on historic share of growth in South Gippsland – West	Experience in towns with similar characteristics as Nyora	Aggressive marketing by land developers	Reintroduction of rail; government encouragement of small town growth; aggressive marketing by land developers
<b>Population</b>						
Forecast annual growth rate	0.4%	1.7%	2.1%	2.7%	4.0%	8.6%
ERP in 2010	960	960	960	960	960	960
ERP in 2030	1,040	1,350	1,460	1,640	2,110	5000
Net change 2010 to 2030	80	390	500	680	1,150	4040
<b>Occupied dwellings</b>						
Net change 2010 to 2030	53	171	213	282	461	1568
Average annual growth	3	9	11	14	23	78
Average annual growth rate	0.7%	2.0%	2.4%	3.1%	4.4%	9%

Source: Tim Nott, Matters More

**Figure 5: Population outcomes of six growth scenarios in Nyora, 2006 to 2030**

Source: Tim Nott, Matters More

Comparison of the various growth scenarios shows that the availability of land is a key factor in the outcome; if land is not made available, Nyora will barely grow over the period to 2030. The mid-range growth scenarios are clustered between 1.7% and 2.7% population growth per year, and this scale of growth is typical of many small commuter settlements in Melbourne's peri-urban area. Rapid growth of the town at rates of 4% per year or more will depend both on the availability of land and aggressive marketing by land developers. The most rapid growth will depend further on policy encouragement and substantial transport infrastructure improvements, such as the reintroduction of commuter rail services.

Comparison of these scenarios with the assessment of land capability in the previous section shows that, with the exception of the two most rapid scenarios, the population growth envisaged by 2030 could be accommodated no matter whether the land is zoned Residential 1 or Rural Living. However, under the Rapid Growth scenario, the land identified would be insufficient to accommodate the anticipated growth if it were zoned Rural Living. Under the Explosive Growth scenario, the identified land would be insufficient if it were all zoned Low Density Residential. Some urban density housing areas are likely to be needed to accommodate these scenarios.

### 4.3 Considerations for the Structure Plan

The various growth scenarios have several implications for the Nyora structure plan:

- **Impacts on urban character**

Only the most rapid population growth over the period to 2030 will necessitate some of the new land to be zoned for urban density residential purposes (Residential 1 Zone).

- **Commuting**

Under the most rapid growth scenarios, the proportion of people commuting into Melbourne to work is likely to be higher given the limited capacity of the local area to generate jobs. This will have implications for the arterial road network in the region and for the roads linking Nyora to the network.

- **Local jobs**

The low growth scenarios will preserve the existing activity in Nyora without providing pressure for improved facilities. This means that the current low level of service provision in the township will be maintained and that residents will be forced to continue to travel to larger or better served centres for their daily needs.

The following sections examine the impact of the scenarios on activity centres and industrial land.

## 5 Retail and Commercial Growth Forecast

### 5.1 Current Activity

The existing commercial sector of Nyora comprises a post office and a general store with around 120 sq m of shop space. Both these are located on Mitchell Street, where there are a number of former shops which have been converted entirely into residences. At the corner of Mitchell Street and Lang Lang-Poowong Road is a hotel that is currently vacant. Also on Lang Lang-Poowong Road is a vacant pizza restaurant. Both these properties appear to be for sale.

Of the three towns in the new sewerage scheme, Nyora has the largest resident population but the lowest level of local services. The Mitchell Street hub provides a “local activity centre”; as well as the general store and post office, this location also boasts the town’s main community centre (with the CFA station to the rear). In the normal hierarchy of activity centres, the role of a “local centre” is to provide a limited range of local services – top-up groceries, fast food, newsagency, post-office, perhaps some medical services and rural supplies. The extent of services in Nyora is presently very limited. Residents must travel elsewhere for take-away food, pharmacy and medical services, not to mention supermarket shopping and shopping for comparison goods.

The following table provides an understanding of the hierarchy of activity centres operating in South Gippsland Shire. This hierarchy uses retail development as the key indicator; however, it is important to recognise that activity centres also often contain a wide range of other functions such as tourism, financial, professional and community services.

**Table 7: Activity centre hierarchy in the South Gippsland region**

Centre type	Retail role	Relevant example	Typical catchment size	Typical retail floorspace	Typical share of trade area retail spending
			<i>persons</i>	<i>sq m</i>	<i>%</i>
<b>Capital City</b>	High order comparison goods shopping with entertainment	Melbourne CBD	1 million +	300,000	5 to 10%
<b>Regional Centre</b>	Mainly comparison goods shopping	Dandenong CBD, Fountain Gate	100,000+	100,000	30%-40%
<b>Sub-regional centre</b>	Routine comparison goods and groceries	Mid-valley Wonthaggi	50,000+	15,000 to 50,000	15% to 25%
<b>Community Centre</b>	Groceries and some comparison goods	Leongatha	20,000+	10,000 to 25,000	30% to 40%
<b>Neighbourhood Centre</b>	Extensive food and groceries and local services	Korumburra	8,000+	4,000 to 10,000	25% to 35%
<b>Small Neighbourhood Centre</b>	Food and groceries and local services	Poowong Lang Lang	1,500+	1,000 to 4,000	10% to 20%
<b>Local Centre</b>	Top-up groceries and local services	Loch Nyora	800+	up to 1,000	2-5%

Nyora and its wider surrounds have an existing population of well over 1,000 people and should be capable of supporting a larger local activity centre. However, there is a high degree of commuting from the township which encourages people to shop elsewhere. In addition, the low-density nature of much of the town discourages walking to the shops and encourages car-travel, tending to favour larger centres nearby such as Lang Lang and Korumburra.

## 5.2 Retail Analysis

Retail analysis can be used to determine the scale of the activity centre likely to be required to service the needs of the population in each scenario. Here the current retail situation is used as a guide to the future.

### 5.2.1 Current situation

Data is available from a microsimulation model developed by MDS Market Data Systems (Market Info) to estimate retail spending in small areas. The following table provides an estimate of retail spending by Nyora residents.

**Table 8: Retail spending per person, Nyora and Victoria, 2010**

	Food and groceries	Other retailing	Total retail spending
Nyora	\$5,600	\$6,400	\$12,000
Victoria	\$5,800	\$7,300	\$13,100
Nyora as % of Victoria	97%	88%	92%

Source: Market info, 2005/06 and ABS Retail Trade Australia, 2010

Based on the population of 960 residents of the township and immediate surrounds, and using the information from the table above, the following table provides an estimate of retail floorspace supported by each resident of Nyora. (And this retail floorspace is located in all the shops visited by Nyora residents, not just in Nyora.)

**Table 9: Retail floorspace supported by Nyora residents, 2010**

	Retail spending by Nyora residents	Retail turnover density	Retail floorspace	Retail floorspace per person
	\$m	\$/sq m	sq m	sq m
Food and groceries	\$5.4	\$7,000	770	0.8
Other retailing	\$6.1	\$5,000	1,230	1.3
Total retail spending	\$11.5	\$5,800	2,000	2.1

Source: Tim Nott

The table shows that total retail spending by Nyora residents is approximately \$11.5 million and that this supports around 2,000 sq m of retail floorspace, a rate of 2.1 sq m per person.

### 5.2.2 Future situation

Retail floorspace per person is likely to change over the period to 2030 as a result of a growth in spending per person (forecast here to be 1% per year, which is conservatively low compared with recent trends) and a growth in retail turnover density (forecast here to be 0.5% per year as retail space becomes more and more efficient). As a result, by 2030, the retail floorspace per person is forecast to be 2.3 sq m per person.

This information, together with the estimates of the retail hierarchy above, can be used to estimate the number of residents required to support various levels of activity centre. The following table provides an estimate of the minimum population catchment needed to support local, small neighbourhood and neighbourhood centres.

**Table 10: Forecast of catchment required to support various activity centres in Nyora, 2030**

Activity centre	A. Typical share of retail spending captured	B. Proportion of average turnover achieved in this centre	C. Retail floorspace per person at this level of the hierarchy	D. Minimum size of retail floorspace in centre	E. Minimum catchment size
	(from hierarchy table)	(adjustment factor)	(A/B times 2.1 sq m per person)	(from hierarchy table)	(D/C)
	%	%	sq m/person	sq m	persons
Local	3%	60%	0.2	100	500
Small neighbourhood	20%	60%	0.8	1,000	1,300
Neighbourhood	33%	90%	0.8	4,000	4,800

Source: Tim Nott (figures rounded)

Notes: A local centre usually contains a general store and possibly some other food and local services (take-away food, hair-dressing etc). From the hierarchy table, a local centre can take 2-5% of the sales generated in



the catchment. Turnover per sq m is estimated at 60% of the average; operators can accept a lower turnover per sq m because their costs are lower.

A small neighbourhood centre usually contains a small supermarket and a small range of other food and grocery stores and local retail and other services. From the hierarchy table, a small neighbourhood centre typically captures 20% of the sales generated in the catchment. Turnover per sq m is estimated at 60% of the average; operators can accept a lower turnover per sq m because their costs are lower.

A neighbourhood centre is characterised by a medium to large supermarket (usually 2,000 to 4,000 sq m) and a broader range of convenience shopping as well as non-retail activity such as community, financial and professional services. From the hierarchy table, a neighbourhood centre typically captures 33% of the sales generated in the catchment. Turnover per sq m is estimated at 90% of the average; operators can accept a lower turnover per sq m because their costs are lower.

Not all communities are served by activity centres at every level of the retail hierarchy.

Usual minimum catchment size is the size used when planning thresholds for new activity centres. Existing centres may have smaller or larger catchments for a variety of historical reasons and depending on the nature of the other centres in the local network.

From this table, the usual minimum population size required to support a local activity centre in 2030 will be 500 people; a small neighbourhood centre will be 1,300 and a full neighbourhood centre will be 4,800. In practice there is likely to be some flexibility around these figures as retailers may be willing to accept lower returns to be in a smaller, lower cost centre.

At present, the population catchment required to support a small neighbourhood centre in Nyora is around 1,000 people. Nyora easily meets this catchment threshold because, as well as the 960 people adjudged to live in the township and immediate surrounds, the catchment also includes at least 500 additional people in surrounding rural areas (particularly in the rural residential areas to the north west).

### 5.3 Considerations of Growth Scenarios

The following table provides an estimate of the kind of retail activity centres that would be supported by the various levels of population growth predicted for Nyora under each scenario.

**Table 11: Notional support for retail activity centres under five growth scenarios, Nyora, 2030**

Development scenarios	No further land	Existing conditions continued	State Government forecast	Commuter town	Rapid growth	Explosive growth
Population in each scenario by 2030	1,040	1,350	1,460	1,640	2,110	5,000
People in surrounding rural areas	500	500	500	500	500	500
Total catchment population	1,540	1,850	1,960	2,140	2,610	5,500
Support for local centre	Yes	Yes	Yes	Yes	Yes	Yes
Support for small neighbourhood centre	Yes	Yes	Yes	Yes	Yes	Yes
Support for neighbourhood centre	No	No	No	No	No	Yes

The table shows that, by 2030, a neighbourhood activity centre will be required for the **Explosive growth** scenario. This would involve the development of a medium to large supermarket (around 3,000 sq m) plus a range of specialty shops, including specialty food (baker, butcher, greengrocer etc), a chemist, newsagent, take-away food, hair-dressing, cafe and so on.

Under all other scenarios it will be prudent to allow for the development of a small neighbourhood centre. This would be likely to involve the development of a small supermarket (up to 1,000 sq m in the case of the **Rapid growth** scenario) and a number of other specialty shops providing local services. These could include a newsagent, chemist, cafes, take-away food stores and potentially a rural supplies outlet.

In addition to the retail space required, space for other activities would also be needed (and would be best co-located within the activity centre in order to minimise travel and generate customers for the commercial activities). These could include doctors and other health practitioners, veterinarians, professional services, real estate agents and so on. Research previously undertaken on the requirements of neighbourhood activity centres suggests that in these centres, non-retail space is generally between 30% and 60% of total floorspace. In smaller centres such as these, the proportion of non-retail space is likely to be low as most health, professional and civic space is concentrated in larger towns. For the purposes of planning, non-retail space is therefore assumed to be 30% of the total.

Allowing for retail space of 1,500 sq m under the **Rapid growth** scenario, total space in the activity centre would be of the order of 2,200 sq m. Assuming single storey development, the total area needed for the activity centre, including buildings, car parking and landscaping would be approximately 0.5 ha. However, the existing pattern of allotments also needs to be taken into account; 0.5 ha is likely to be a minimum size. An allowance for this area of land should be made to accommodate town centre growth for all the mid-range growth scenarios in order to safeguard long term development options.

Under the **Explosive growth** scenario, the area of land for retail space would be 4,400 sq m (0.8 sq m for 5,500 people). Under this scenario it would be prudent to allow 50% of the centre to be non-retail space since this sized centre could also accommodate a higher level of community services (meeting halls, maternal and child health clinics, recreational facilities etc) as well as a wider range of commercial services (petrol stations, banks, travel agents and so on). Providing for car-parking, the total area required for the centre would be 1.9 ha. Again, this would be a minimum size given that the pre-existing allotment pattern creates constraints in the most efficient use of land.

## 5.4 Considerations for the Structure Plan

The location of the town's activity centre should be central and/or accessible to residents. It should be in a location which is accessible on foot for the greatest number of people in order to promote walking. In order to maximise the use of existing infrastructure, it should also build around the existing activity centre.

Mitchell Street, the existing centre, can be redeveloped to accommodate single specialty shops and offices. However, a significant supermarket (the rapid growth or explosive growth scenario) would require a relatively large site (around 0.3 ha for a 1,000 sq m store and around 1 ha for a 3,000 sq m store). This would require consolidation of several blocks on Mitchell Street or development on land owned by VicTrack (on the north side of Mitchell Street). Alternatively, larger sites could be found in Hewson or Henly Street or on Lang Lang-Poowong Road. Careful thought would need to be given to creating a compact centre that serves the needs of residents.

There may be some pressure for the development of an activity centre in a location away from the existing town centre and in conjunction with a significant residential development on the outskirts of the existing town. This should be resisted unless it can be clearly demonstrated that such a location would be more accessible by means of sustainable transport options.

## 6 Industrial Growth Forecast

### 6.1 Current Activity

Nyora has a significant amount of industrial land and activity for a relatively small town. In the main, the existing industrial activity is tied to the local economy:

- Farm supplies and animal feed
- Construction materials and earthmoving
- Engineers
- Septic tank supplies
- Equine equipment and supplies

However, some firms export their products to other regions in Australia and internationally (Levey Engineering, Skye Park Rugs, and Australian Country Outfitters). The cluster of horse equipment producers is a result of the strong local interest in equine pursuits.

Automotive and other machinery repairs are missing from the local industrial scene, along with some other activities that may serve the needs of the local population and other businesses (plant sales, hardware, storage, and so on). These services are presently accessed in the nearby towns of Loch, Poowong, Lang Lang, or in larger centres such as Korumburra, Leongatha, Cranbourne and Pakenham.

There are approximately 10 industrial enterprises in the township, eight of which are located in the land zoned IN3 (for light industrial activity) on Watts Road and Lang Lang-Poowong Road.

In the existing industrially zoned land there appear to be six vacant lots, each of approximately 1,400 sq m. Other parts of the industrial zone are underutilised or used for housing and so may be available for redevelopment over time.

Over the four years 2006 to 2009, according to Council records, building approvals have been given for three small industrial/commercial buildings in Nyora. Of these, perhaps one approval has involved development of an additional industrial allotment.

### 6.2 Development Forecast

The rate of industrial development depends on comparative and competitive advantages in a wide range of variables, not simply the size of the local residential market. In assessing future requirements for industrial land it is common to forecast the development that might be expected as a result of population growth and then to make an allowance for larger or more export-oriented industries.

The small industrial lots will generally be required to provide auto repairs and machinery servicing, construction supplies and workshops as well as storage facilities and sales of large goods.

In this case, the demand for small industrial lots (typically 0.1 to 0.2 ha) has been forecast using the recent demand for small lots and the population growth rate forecast under each development scenario. The results are provided in the following table.

**Table 12: Demand for small industrial lots in Nyora under each development scenario**

	No further land	Existing conditions continued	State Government forecast	Commuter town	Rapid growth	Explosive growth
Population growth rate, 2010 to 2030	0.4%	1.7%	2.1%	2.7%	4.0%	8.60%
Recent industrial growth rate (small lots per year)		0.75				
Proportional growth in small lots per year	0.17	0.75	0.93	1.19	1.76	3.79
Small lots required 2010 to 2030	3.4	15.0	18.5	23.8	35.3	75.9
Total additional industrial land required by 2030 (ha)	0.51	2.25	2.78	3.57	5.29	11.38

Source: Tim Nott, Matters More

Note: Calculations assume small lots are an average of 0.15 ha

The table shows that the demand for industrial land ranges from 0.5 ha (3 lots) under the **No further land** scenario to 11.4 ha (76 lots) under the **Explosive growth** scenario. Only the **No further land** scenario can be accommodated by the existing stock of 6 lots of industrial land in the township.

In addition to the demand for small lots there may be demand from export-related industries. However, the location of land for larger industrial lots is a matter of public policy. In South Gippsland, the larger towns of Korumburra and Leongatha have been designated as the location for larger industrial activities. These towns have the necessary services (such as natural gas and high voltage electricity) and labour-force to sustain significant industries. Nyora is not a location for larger industries and there appears to be no reason why it should become so.

### 6.3 Considerations for the Structure Plan

In order to meet the projected growth in demand for small industrial lots under all development scenarios apart from **No further land**, more industrial land will be required than is currently zoned. Taking into account the existing vacant land (approximately 0.9 ha), the various growth scenarios will require an additional 1.4 ha (**Existing conditions continued**) to 10.5 ha (**Explosive growth**).

An extension of the industrial precinct may be possible and could yield at least another 1.4 ha which could be sufficient to accommodate growth envisaged in the **Existing conditions continued** scenario. To accommodate other scenarios it may be necessary to designate another industrial precinct. Ideally, this should be located with access to the main road but sufficiently removed from housing areas to reduce conflicts and amenity problems. Alternatively, Nyora residents and businesses could continue to rely on industrial goods and employment in larger and more well-served industrial areas elsewhere in the Shire and beyond.

## 7 Summary

This report has examined the key factors affecting growth and development in Nyora township and surrounds. The existing township and recent trends in its development has been described and a number of development scenarios have been prepared in order to help Council planners and decision-makers in the structure planning process for the township.

Key characteristics and outcomes of the various development scenarios are summarised below.

**Table 13: Summary of development scenarios for Nyora, 2010 to 2030**

	No further land	Existing conditions continued	State Government forecast	Commuter town	Rapid growth	Explosive growth
Scenario	No further land zoned for housing and take up of existing/potential allotments	Current growth rate in Nyora continued, mainly in low density housing	State government forecast with share allocated to Nyora based on historic share of growth in South Gippsland – West	Experience in towns with similar characteristics as Nyora	Aggressive marketing by land developers	Reintroduction of rail; government encouragement of small town growth; aggressive marketing by land developers
<b>Population</b>						
Forecast annual growth rate	0.4%	1.7%	2.1%	2.7%	4.0%	8.6%
ERP in 2010	960	960	960	960	960	960
ERP in 2030	1,040	1,350	1,460	1,640	2,110	5,000
Net change 2010 to 2030	80	390	500	680	1,150	4,040
<b>Occupied dwellings</b>						
Net change 2010 to 2030	53	171	213	282	461	1,568
Average annual growth	3	9	11	14	23	78
Average annual growth rate	0.7%	2.0%	2.4%	3.1%	4.4%	9%
<b>Activity centre</b>						
Largest centre likely to be required by 2030	Small neighbourhood centre	Small neighbourhood centre	Small neighbourhood centre	Small neighbourhood centre	Small neighbourhood centre	Neighbourhood centre
<b>Industrial activity</b>						
Additional small industrial lots generated by 2030	3	15	19	24	35	76
Additional industrial zoned land required by 2030 (ha)	0	1.4	1.9	2.7	4.4	10.5

## 8 References

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