

# **Scottsdale Community Economic Adaptation**

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**FINAL REPORT**

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## Key Points

### **Dorset Shire's population has stabilised at around 7,100, but there is more turnover of residents than suggested by the stability of the total population number**

- Between the 2006 and 2011 Census the 'usual resident' population for Dorset Shire shrank by 204 people. But there was a lot of churn in the population, with some 957 people moving into the Shire in that period, and a larger number moving out.
- Scottsdale's Census usual resident population fell slightly from 2,469 to 2,461 between 2006 and 2011, though there were 265 newcomers to the town in that period.

### **Long term residents may feel they are losing touch with their neighbours – and for good reason**

- Overall 15% of the population (over 5 years old) were new arrivals to the Shire between 2006 and 2011. But in some age groups this percentage was much higher – with a peak in the age group 25 to 34 years old where almost 25% were newcomers.
- In Scottsdale some 11% of 2011 population (over 5 years old) had arrived after 2006.
- Most newcomers (either from other parts of Tasmania or from interstate) have incomes under \$31,200pa.

### **The Shire's population is ageing and the labour pool is shrinking**

- The number of people of working age (15 to 64) in the Shire has peaked and is projected to fall by around 40 people per year, as a consequence of no overall population growth and ageing of the current pool of residents.
- Echoing a statewide trend, the age group with most employed people in Scottsdale and in Dorset Shire is now 50-54.
- Based on State Government figures, the number of people over 65 years of age will increase from about 1,330 in 2011 to 2,266 in 2031.
- Business opportunities will come (and go!) as a consequence.

### **Town and Shire employment mix changed**

- Scottsdale's 'rural service centre' employment profile saw the loss of over 140 jobs in wood processing, forestry and logging services between 2006 and 2011. Over half this number of new jobs were created in the service industries, including hospitality.
- The economic shock from the loss of timber-related jobs was severe, but the shift from agriculture and manufacturing jobs towards service sector jobs is part of the longer term pattern of change in Australia – influencing economies from the national to the local levels.
- With employment diversity increasing while the working population is shrinking, Scottsdale is a *turnaround town*, in the midst of long term structural adjustment.

### **Employment is becoming more focused on tertiary sector services**

- Jobs growth from 2006 to 2011 was highest in public admin, health and community services and education (as well as construction)
- This is likely to continue as more than half of the national jobs growth expected in the next 5 years will be in just four industries:
  1. Health Care and Social Assistance
  2. Professional and technical services
  3. Education and Training
  4. Construction.
- Over 440 Shire residents worked outside the Shire and 198 Scottsdale residents worked outside Dorset.

### **Business formation is strong**

- Around 10% of the Shire's businesses are new in any one year
- Business formation has been strongest in the construction and retail industries.

### **Household incomes are rising in the Shire but not the town**

- Household incomes in Dorset Shire have increased in the decade to 2011, though in 2011 Scottsdale had a higher percentage of households with low incomes (\$300 - \$600 per week) than the Shire as a whole.

### **Current investments**

There is a series of significant investments currently in train for Scottsdale and the surrounding area. They include:

- Irrigated agriculture
- *Trail of the Tin Dragon* tourism route
- Mountain biking recreational trails
- DSTO Scottsdale upgrades
- Cape Portland windfarm.

Two big questions for the community's economic future are:

1. How will these investments impact on the local economy?
2. Are local businesses positioned to capture benefits from these investments?

### **Future scenarios**

The impact on the local economy of five future economic growth scenarios for Scottsdale has been estimated. The scenarios have emerged from quantitative analysis of economic data and from interviews and community discussions. The estimated impacts are based on the current base case and trends visible in relation to each scenario driver, and to the historical experiences over the last decade of businesses interviewed.

The five future growth scenarios considered are

1. Growth in farming
2. Timber alternative industry
3. More residents working outside Scottsdale
4. Tourism/hospitality growth
5. Population growth (young families and older people)

#### *1. Growth in agriculture*

There is potential for output value growth, especially in dairy (and possibly dairy processing), beef and pyrethrum. But there is little likelihood of significant flow-on to employment for Scottsdale town residents or sourcing of supplies or value-adding through Scottsdale.

#### *2. Forestry replacement industry*

120 additional manufacturing jobs would yield an annual income contribution of around \$6 million. This is clearly only the incomes of workers, and does not include any flow-on business-to-business economic activity as this cannot be estimated while the nature of the industry is not specified.

#### *3. Highway upgrade*

100 additional commuters to Launceston and Georgetown, would show a net (assuming these people weren't already working in Scottsdale or that if they were others took over that work) gain of town income of \$4.5 million.

#### *4. Tourism boost*

Doubling the number of visitor nights in Scottsdale town would add around \$15 million to the local economy and probably much less than double the number of jobs in related businesses.

#### *5. New population*

500 new people (net gain of 250) over five years would yield an annual net income contribution of around \$4 million.

The implications of these income growth scenarios for local jobs are hard to estimate due to difficulties in measuring the number of new businesses or new jobs that an increase of, say, \$1 million in local income might bring. This is because businesses react differently to

increases in turnover and won't always employ an additional person for a set increase in turnover. Typically a business will tend to hang on to staff if turnover drops, or will delay putting on additional staff if turnover looks to be increasing, until the increase seems secure.

Reviewing 5 scenarios for possible income and employment growth in Scottsdale has shown that each has the capacity to make a contribution. In modelling the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> scenarios we have considered the impact should each base case be doubled, but this is actually only indicative and has been done to put each scenario on a common footing. It is important for the community to consider more realistic increases in each of the scenarios. What does the community see as more realistic potential?

The community also needs to consider its capacity to influence growth in these scenarios. Some (like the highway upgrade) are dependent on external decision-makers, funding and influence. Others (farming and tourism, for example) are more dependent on the vision and skills of local business people. Combining these scenarios with the Decision Support Tool, community survey and capacity research enables the people of Scottsdale to map out where they can get the biggest gains for their community.

This mapping can be used to build involvement within the community, and support for a forward rather than backward-looking perspective. It can also be used to influence external decision-makers to ensure that any assistance that comes to the community is well-targeted, and is supported by sound research and expectations of good results for the community in future.

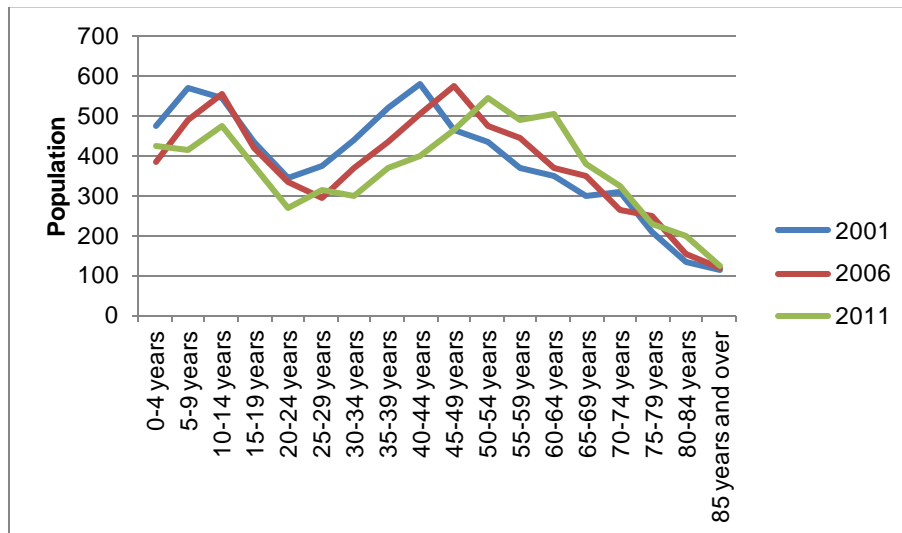
Modelling the 5 scenarios shows that none is strong enough in its own right to offer a secure pathway to a sustainable economic future, but progress in each would provide a solid foundation. As a 'turnaround town', Scottsdale needs to continue evolving and adapting, buttressing its traditional strengths and embracing new opportunities.

## Dorset Shire and Scottsdale Economic Context

### Population

Based on the Census there were 6,615 people in Dorset Shire in 2011, down from 6,979 in 2001. The figure below shows that there has been an increase in the number of people aged 45 and over and a decrease in the number of people aged less than 45 years old between 2001 and 2011. The latest Census recorded 4,044 people of working age (those aged 15 to 64) in Dorset Shire.

Figure 1 Population of Dorset Shire, 2001-2011



Source: ABS 2011 Census

The Census count is typically a little lower than the official 'estimated resident population' for a shire, and the estimated resident population of Dorset as at 30 June 2011 was 7,106 people.

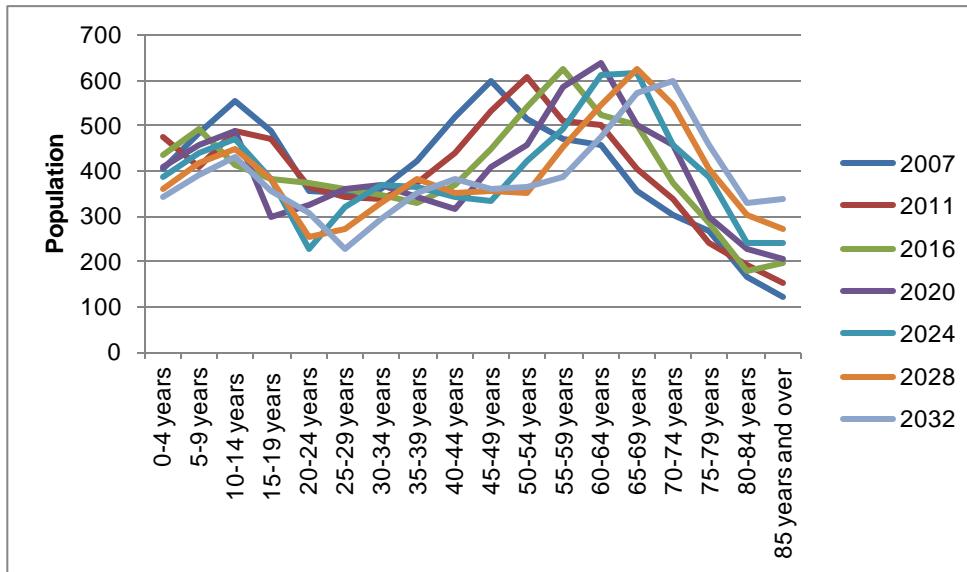
A similar ageing trend can be seen in the 'mid-range' population forecasts for Dorset released by the Tasmanian Government. By 2032, the population over 65 years old is expected to increase, almost doubling in the 20 years to 2031, while the rest of the population will decline in number.

Table 1 Dorset Shire population projections

	Projected population	Working age	Over 65
2011	7,198	4,488	1,335
2016	7,174	4,302	1,535
2021	7,139	4,039	1,749
2026	7,082	3,774	2,050
2031	7,001	3,556	2,266

Source: Demographic Change Advisory Council Tasmania

Figure 2 Dorset population forecasts, 2007-2032

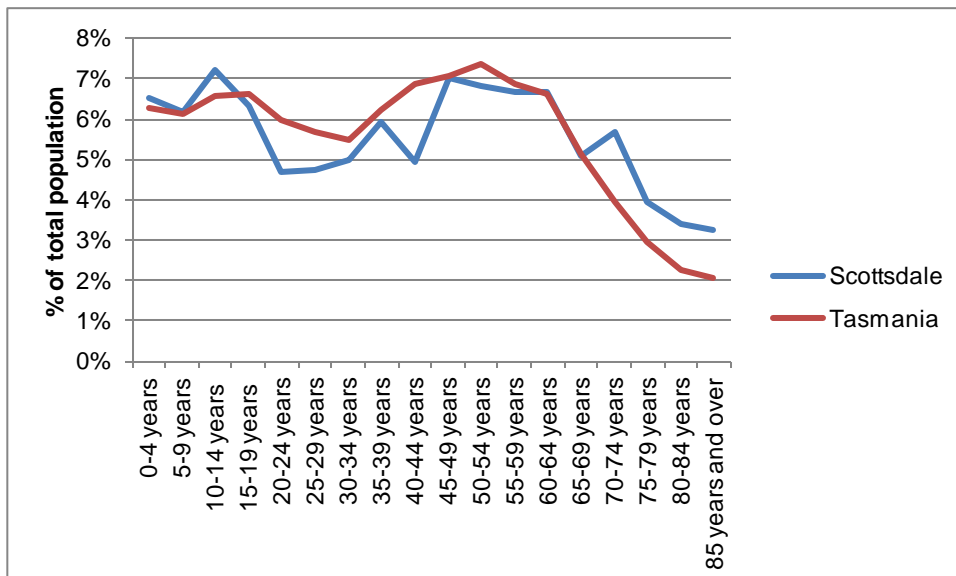


Source: Demographic Change Advisory Council Tasmania

The mid range projections show a very stable total population for the Shire – trending slowly down from an estimated 7,200 in 2011 to around 7,000 by 2032. This projected stable population brings a steady ageing of Scottsdale residents, with few newcomers staying on to refresh the age profile.

Scottsdale is Dorset’s main population centre, and with a population of 2,461 ‘usual residents’ in 2011 it accounted for 37% of the Shire’s population. The figure below shows Scottsdale’s population by age group in 2011, in comparison to the whole of Tasmania. Compared with the State, Scottsdale has a lesser proportion of its population between 15 and 64 years of age (those of working age) and a greater proportion over 65 years of age.

Figure 3 Population by age group of Scottsdale and Tasmania, 2011

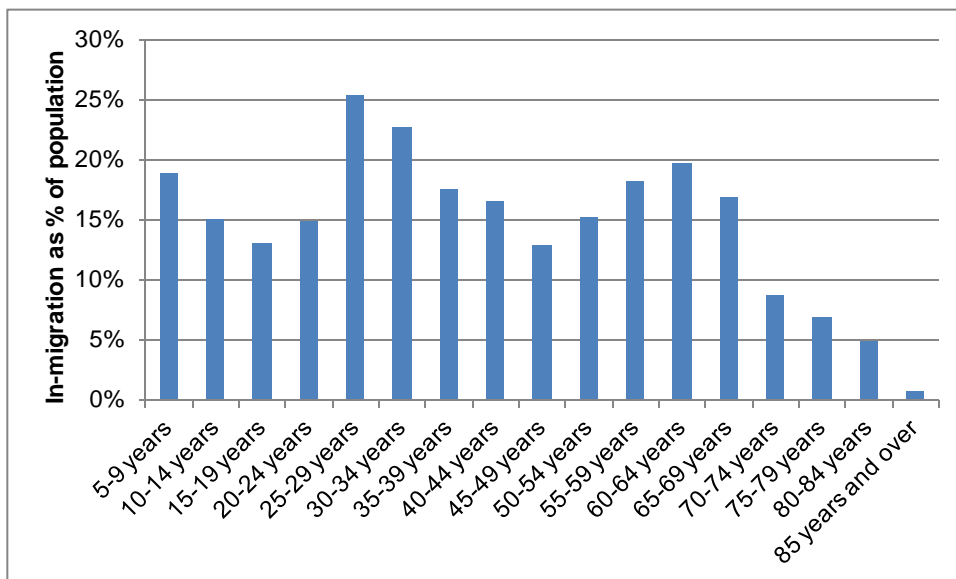


Source: ABS 2011 Census

Population stability is also an important factor in the economic and social resilience of a given area. The chart below shows the population 'churn', or the percent of each age group that has arrived in Dorset Shire in the 5 years between 2006 and 2011. While the overall population declined in that period, in fact there were some 957 new residents in Dorset in 2011 compared with 2006. This equates to a turnover of some 15% of the population aged over 5 years old.

While around 15% of the population in most age groups are recent arrivals, some age groups were much more mobile and the highest rates of arrivals were in the age group 25 to 34 years old (almost 25% of that age bracket). This underlying volatility in the population has significant implications for 'social capital' and employee/customer turnover.

**Figure 4 Population 'Churn' 2006-2011, Dorset**



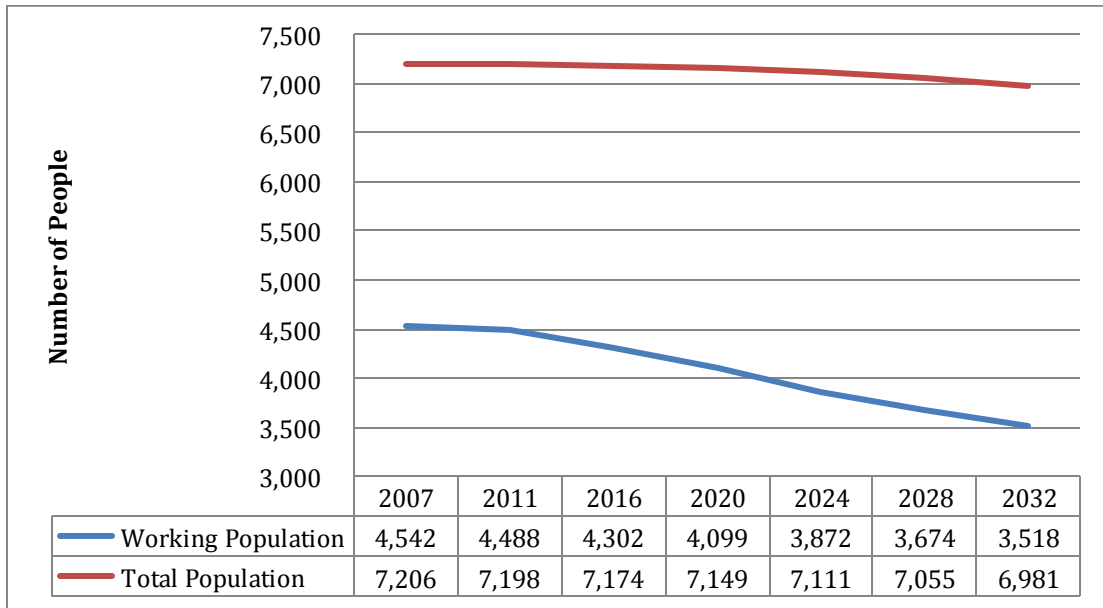
Source: ABS 2011 Census

There was proportionately less migration into Scottsdale with 265 new residents over the five years, 11.5% of the population (aged over 5 years old). Almost 20% of Scottsdale's residents had changed address in that period.

**The Labour Market**

The combination of an ageing population and low total population growth is likely to lead over time to a decrease in the number of residents of working age in Dorset Shire, a trend shown in the figure below. Based on Tasmanian Government forecasting for Dorset, by 2032 the 'working age population' (those aged 15 to 64) will decrease by about 22%, compared to a 3% decrease in the total population.

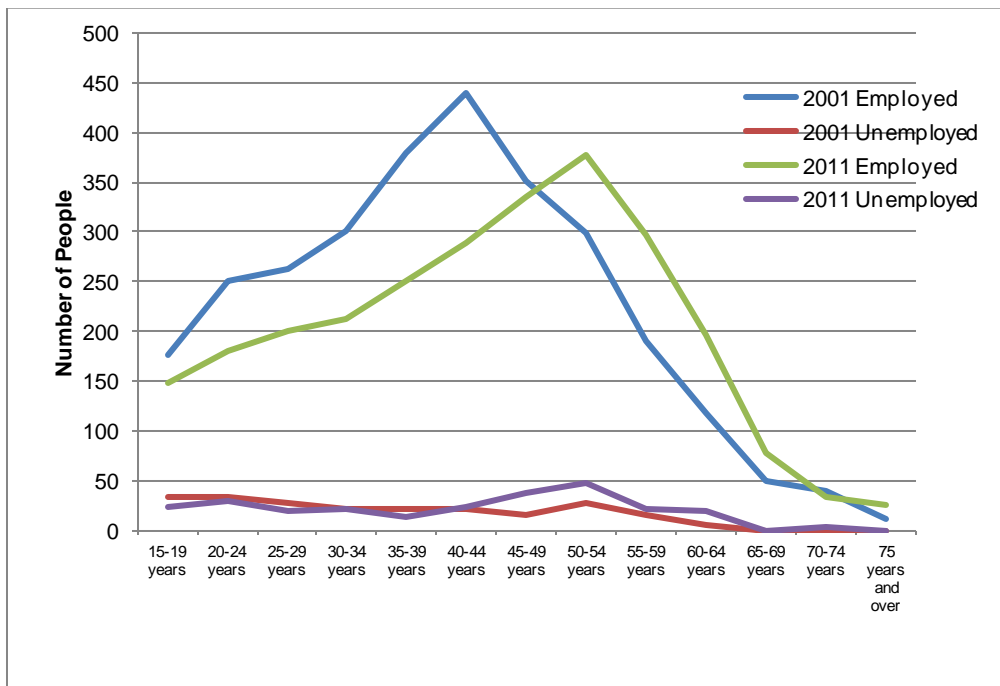
Figure 5 Decrease in working age population in Dorset Shire, 2007-2032



Source: Demographic Change Advisory Council Tasmania

The forecast for an ageing workforce is backed up by the historical trend in the age of the labour force between 2001 and 2011 in Dorset Shire (shown below). In Dorset the age bracket with the most people employed has made a clear shift, from 40 to 44 years of age to 50 to 54 years of age. There are also clearly less workers between 15 and 49 years of age. In Tasmania as a whole the trend is still for an ageing workforce, but there has not been a corresponding decline in other age groups. Unemployment also appears to be more volatile in Dorset Shire compared to Tasmania as a whole.

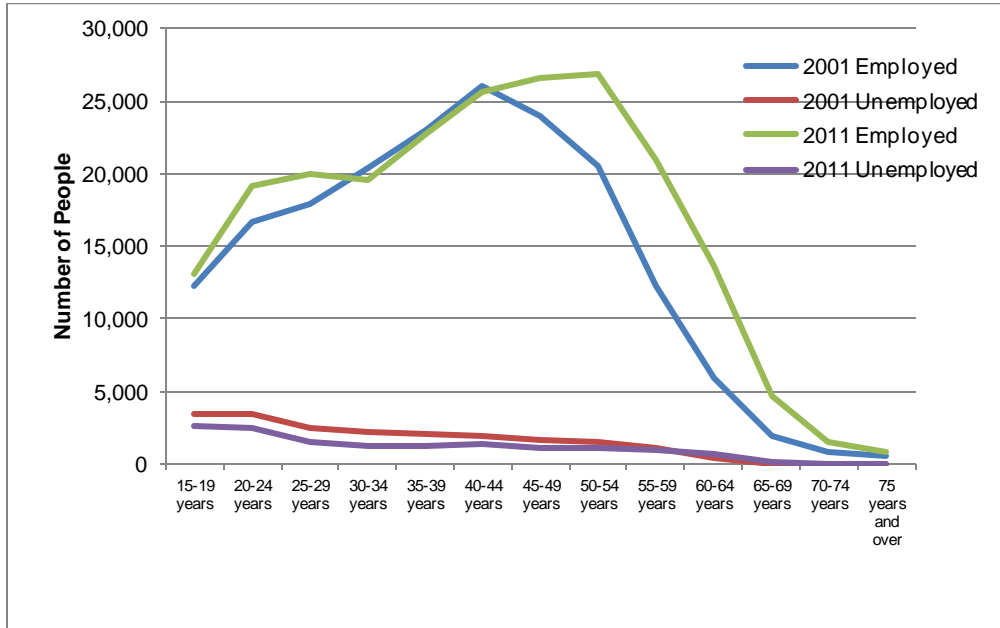
Figure 6 Trend in the age of the labour force in Dorset, 2001-2011



Source: ABS 2011 Census



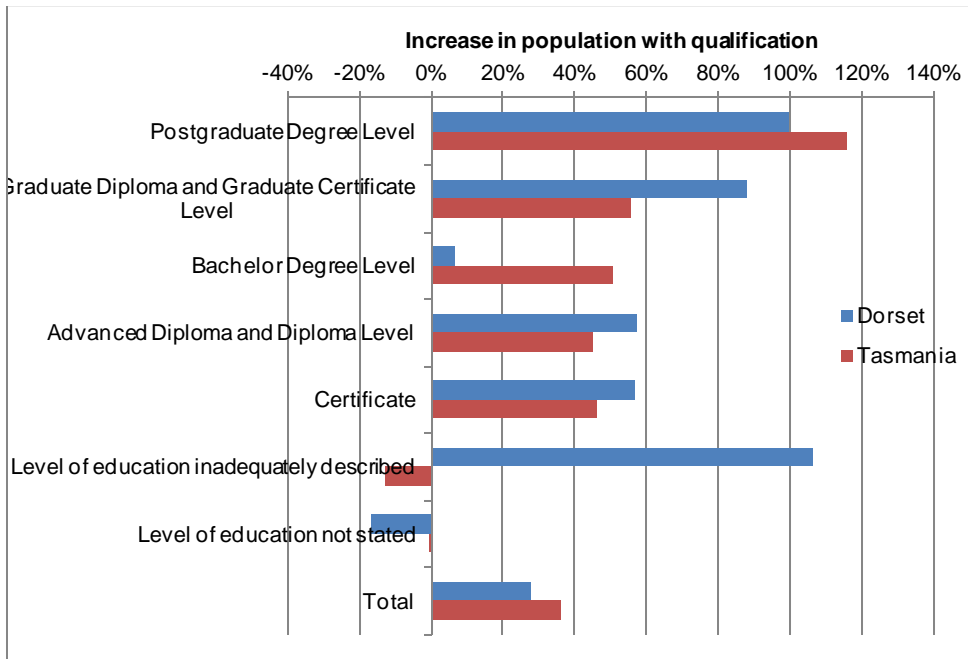
**Figure 7 Trend in the age of the labour force in Tasmania, 2001-2011**



Source: ABS 2011 Census

Despite its ageing workforce, in general the percentage increase in the number of people with tertiary qualifications between 2001 and 2011 has been similar in Dorset Shire when compared with the rest of Tasmania. However, Dorset had a much lower increase in the number of people with a bachelor degree between 2001 and 2011.

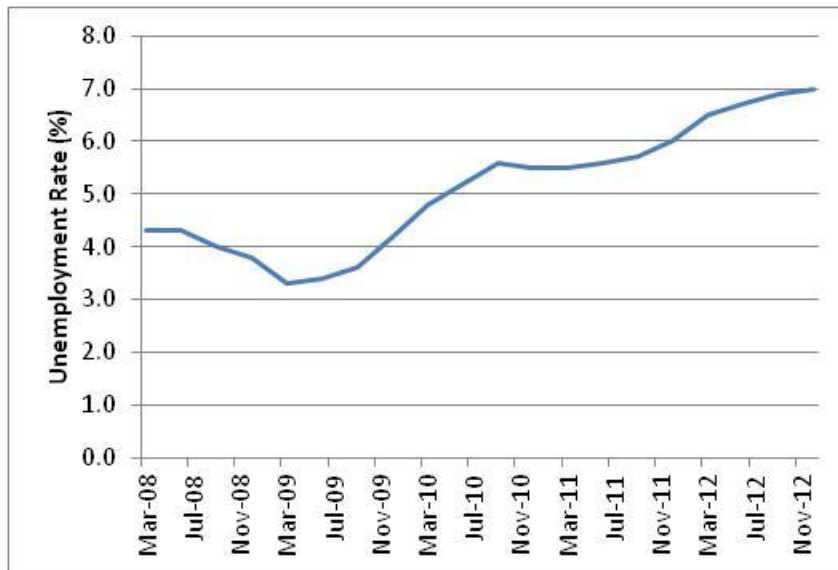
**Figure 8 Trend in tertiary qualifications, 2001-2011**



Source: ABS 2011 Census

Finally, unemployment in Dorset Shire has been trending upwards since 2008. A low of 3.3% was recorded in 2009 and in March 2013 unemployment reached 7%.

Figure 9 Unemployment in Dorset Shire



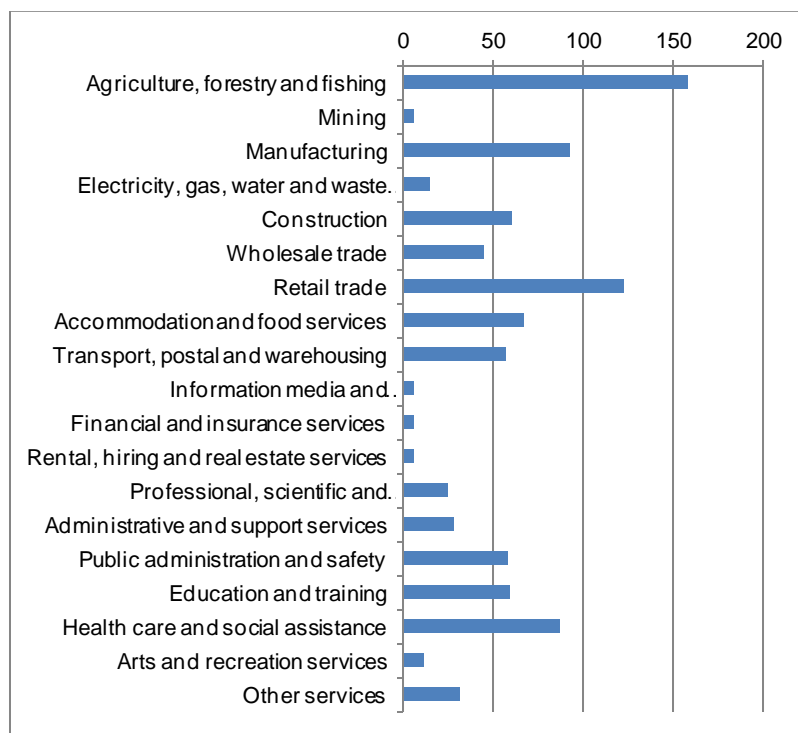
Source: DEEWR Small Area Labour Markets

### Employment by Industry

Scottsdale residents have a typical employment profile for a rural service town. Overall 962 residents were employed in 2011 and the top five industries were:

- Agriculture, forestry and fishing (158 people)
- Retail (123)
- Manufacturing (93)
- Health care & social assistance (87)
- Accommodation & food services (67)

Figure 10 Employment profile for Scottsdale, 2011



Source: ABS 2011 Census

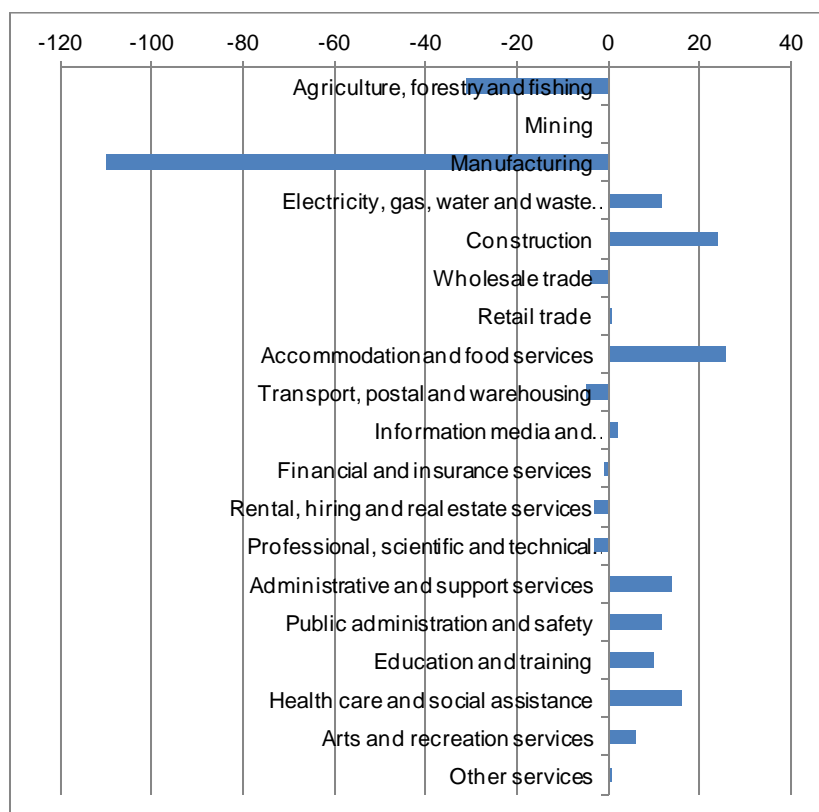
The census does not permit a count of the number of jobs in Scottsdale town itself – the closest area for which this information is available is Scottsdale-Bridport, an area which provides 750 jobs. The Census also tells us that 962 Scottsdale residents were working in 2011 and that 198 of these people were working outside Scottsdale. The jobs in Scottsdale are a mix of two broad types:

- Those that involve selling goods or services to people outside Scottsdale and visitors; and
- Those that involve selling goods and services primarily to Scottsdale residents.

The jobs which primarily sell their goods and services outside Scottsdale are in agriculture, forestry, mining and a proportion of manufacturing, as well as retail and hospitality (which also service visitors). It is likely that there are around 520 jobs in Scottsdale town that primarily service the needs of the 2,500 residents.

In recent years there has been a significant change in the industries employing Scottsdale residents. Figure 11 shows that between 2006 and 2011 Scottsdale lost 110 manufacturing jobs, mostly in forestry/logging and wood manufacturing (see Table 2 for the Shire). Almost half this number of jobs was created in the services industries: Health care & social assistance (16 jobs), Professional services (14 jobs) and Administrative & support services (private sector, 12 jobs).

**Figure 11 Change in employment by industry 2006-2011, Scottsdale**

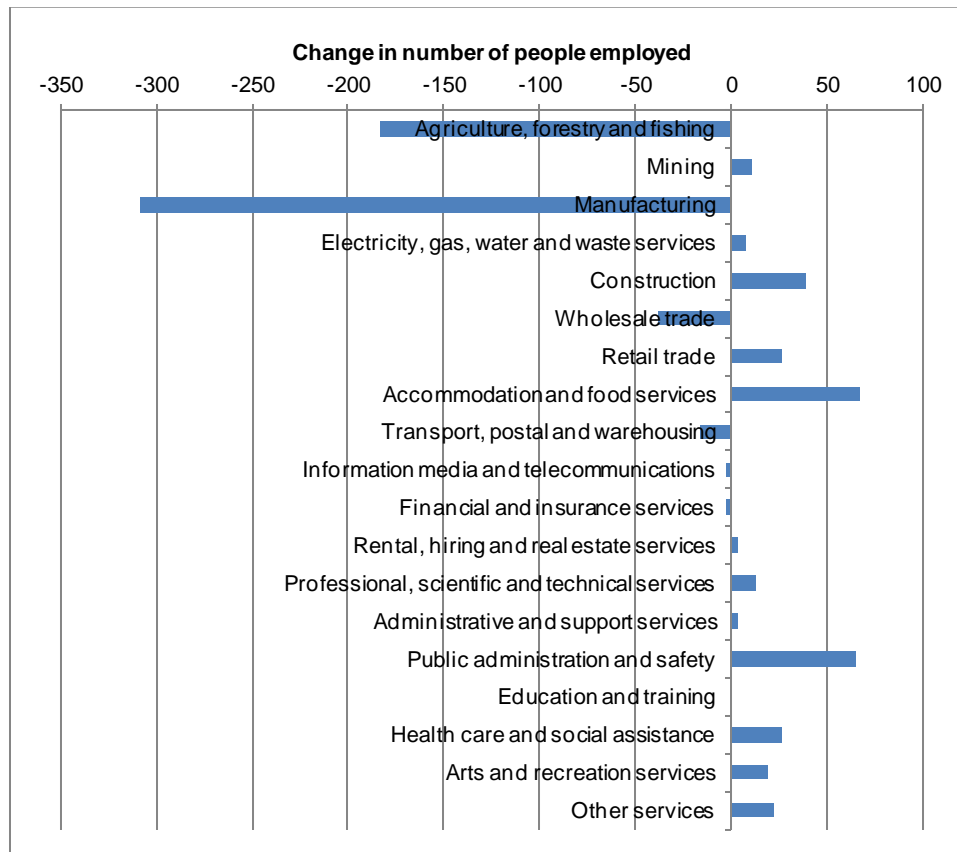


Source: ABS 2011 Census

The next figure shows the bigger picture in terms of the trend in employment by industry in Dorset Shire between 2001 and 2011. It can be seen that 'manufacturing' lost over 300 employees in that time, and 'agriculture, forestry and fishing' also had

significant losses. 'Public administration and safety' and 'accommodation and food services' had the largest gains: over 50 employees each.

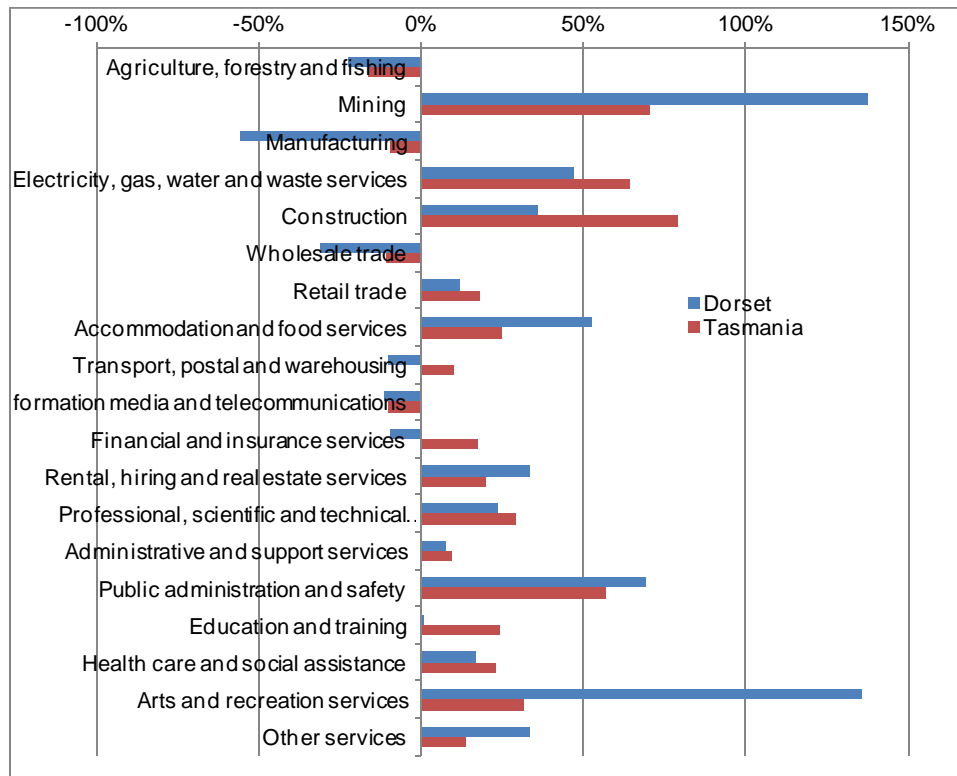
Figure 12 Trend in employment by industry in Dorset Shire, 2001-2011



Source: ABS 2011 Census

Figure 13 compares these trends with those of Tasmania as a whole. While the loss of 'agriculture, fisheries and forestry' employment is similar in Tasmania and Dorset as a proportion of the total workforce, Dorset has lost proportionally much more of its manufacturing sector than Tasmania as a whole. Dorset has also lost employees in 'financial and insurance services' and 'transport, postal and warehousing', whereas Tasmania has had gains in these industry sectors. More positively, Dorset has had strong growth in 'arts and recreation services', 'mining' and 'accommodation and food services.'

Figure 13 Trend in employment by industry for Dorset and Tasmania, 2001-2011



Source: ABS 2011 Census

Despite having lost many workers in agriculture and manufacturing, these industries are still significant employers in Dorset and Scottsdale, though the number of people employed in the Shire in wood manufacturing has fallen to about 20% of its 2006 level. The table below looks in more detail at the number of people employed in these two industries in 2011 and 2006 (based on ABS 'place of work' census data). For the former, it can be seen that agriculture (455 employed) was by far the largest employer in 2011, followed by forestry and logging (77) and support services (24). In the manufacturing industry the main employment sectors are wood product manufacturing (59) and food product manufacturing (32).

The five years to 2011 saw over 230 jobs lost in wood products manufacturing and over 100 jobs lost in agriculture, forestry and related services.

**Table 2 Employment in 'agriculture, forestry and fishing' and 'manufacturing' in Dorset Shire, 2006 and 2011**

<b>Agriculture, forestry and fishing</b>	<b>Number of jobs in Dorset</b>		
	<b>2006</b>	<b>2011</b>	<b>Change</b>
Agriculture, forestry and fishing, no further detail	0	3	3
Agriculture	509	455	-54
Aquaculture	8	10	2
Forestry and logging	114	77	-37
Fishing, hunting and trapping	10	5	-5
Agriculture, forestry and fishing support services	35	24	-11
<i>Total</i>	<i>676</i>	<i>574</i>	<i>-102</i>
<b>Manufacturing</b>			
Manufacturing, no further detail	24	10	-14
Food product manufacturing	41	32	-9
Beverage and tobacco product manufacturing	4	3	-1
Textile, leather, clothing and footwear manufacturing	3	3	0
Wood product manufacturing	292	59	-233
Pulp, paper and converted paper product manufacturing	0	0	0
Printing (including the reproduction of recorded media)	0	3	3
Petroleum and coal product manufacturing	0	0	0
Basic chemical and chemical product manufacturing	5	9	4
Polymer product and rubber product manufacturing	3	0	-3
Non-metallic mineral product manufacturing	0	3	3
Primary metal and metal product manufacturing	7	0	-7
Fabricated metal product manufacturing	0	3	3
Transport equipment manufacturing	17	11	-6
Machinery and equipment manufacturing	3	0	-3
Furniture and other manufacturing	0	7	7
<i>Total</i>	<i>399</i>	<i>143</i>	<i>-256</i>

Source: ABS 2011 Census

### Trends in industry diversity

Scottsdale’s employment mix in 2011 was not as diverse as that for Tasmania as a whole, which reflects Scottsdale strong employment numbers in a small number of industries (notably agriculture, retail and manufacturing).

The Herfindahl index can be used to measure industry concentration, and a higher score indicates a higher concentration of employment in a few industries, while a lower score suggests lower concentration and a greater diversity of employment. Typically, a score more than 30 would indicate a high concentration of employment in a small number of industries. The Herfindahl index score for Scottsdale in 2011 is 29.4, while for Tasmania as a whole in 2011 it is 27.1 (indicating greater industry diversity in the State than in Scottsdale). But industry diversity increased in Scottsdale in the five years to 2011, as the index number for 2006 was 33.4. In comparison, there was no change for the State.

Scottsdale’s local economy can therefore be summarised as “Employment diversity increasing while working population is essentially decreasing (though ageing)”. These are the hallmarks of an economy in transition as Scottsdale continues on its journey of economic structural adjustment. Most turnaround towns have economies that are shifting out of primary industries (agriculture, forestry, fishing and mining), and two larger examples are Mt Isa and Whyalla.

Figure 14 Typology of Australian regions

Working population	<b>Increasing</b>	Growing around dominant industries, exposure to external shocks <i>Muscle town</i>	Growing and diversifying <i>Thriving/reviving town</i>
	<b>Decreasing</b>	Consolidating around dominant industries – no structural adjustment <i>Dying town</i>	Effective ‘structural adjustment’ <i>Turnaround town</i>
		<b>Decreasing</b>	<b>Increasing</b>
		Employment diversity	

Source: *Characteristics of economic sustainability in regional Australia* (Houghton and Fell, 2012)

### Commuting

The table below shows a comparison of the number of people who work in Dorset Shire in a given industry (place of work) and those who work in a given industry and also live in the Shire (place of usual residence). A positive ‘difference’ indicates that there are residents travelling out of the Shire to work in a given industry, whereas a negative ‘difference’ indicates that there are people commuting into the Shire to work in a given industry. It can be seen that a relatively large number of workers leave the Shire to work in ‘agriculture forestry and fishing’ (71), ‘manufacturing’ (90) and ‘construction’ (58). In total, 443 workers commute out of the Shire to their place of work.

**Table 3 Commuting workers to and from Dorset Shire, 2011**

	Place of Usual Residence	Place of Work	Difference
Agriculture, forestry and fishing	645	574	71
Mining	26	8	18
Manufacturing	233	143	90
Electricity, gas, water and waste services	28	19	9
Construction	153	95	58
Wholesale trade	82	69	13
Retail trade	257	254	3
Accommodation and food services	199	191	8
Transport, postal and warehousing	140	115	25
Information media and telecommunications	15	10	5
Financial and insurance services	17	16	1
Rental, hiring and real estate services	18	13	5
Professional, scientific and technical services	67	61	6
Administrative and support services	59	41	18
Public administration and safety	157	153	4
Education and training	170	170	0
Health care and social assistance	195	160	35
Arts and recreation services	37	38	-1
Other services	90	80	10
Inadequately described/Not stated	93	28	65
<b>Total</b>	<b>2,681</b>	<b>2,238</b>	<b>443</b>

Source: ABS 2011 Census

### Individual incomes

Individual incomes in Scottsdale are closely linked to each persons labour force status – ie whether they are working, looking for work, or are not in the labour force (either retired or otherwise not looking for work).

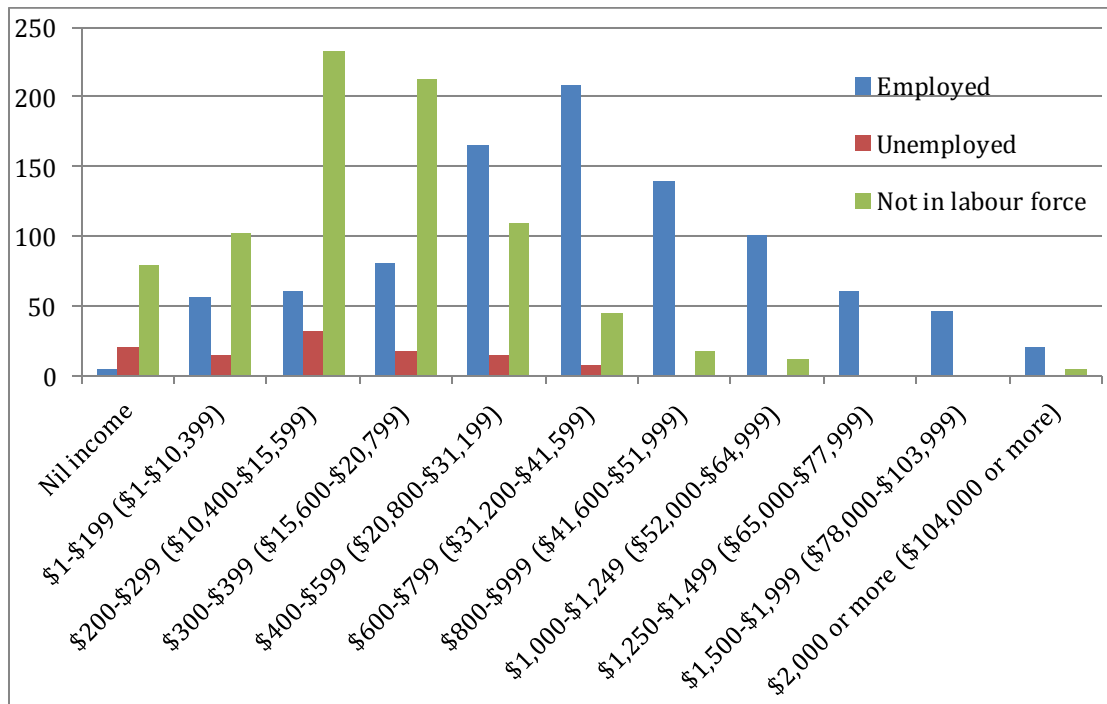
#### Labour force status of Scottsdale residents

	All residents	2,462
Over 15 years old	Working (part-time and full-time)- 942	942
	Looking for work - 109	109
	Not in the labour force - 813	813
Under 15 years old	487	487

The average individual income for Scottsdale residents (aged over 15yo) in 2011 was \$409 per week. This is quite low, as it includes everyone living in Scottsdale, not just those in work. The average household income was \$762pw, indicating that most households had two income earners. More relevant for looking at economic prospects is the distribution of income of people in work. This is shown below.



Figure 15 Income by labour force status, Scottsdale town 2011



Source: ABS Census 2011 Table Builder customised data

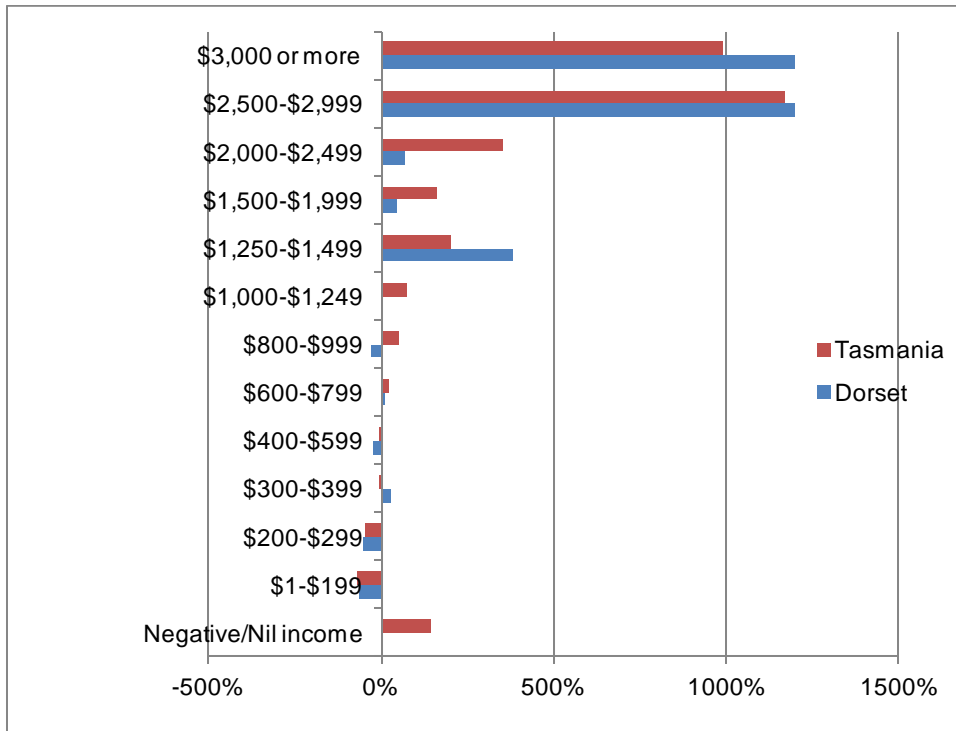
It is clear from the chart that people in work (whether it be part-time or full-time work) had higher incomes than those not in work (and living on savings or benefits). The average individual income of the 942 working Scottsdale residents was \$787pw (\$40,900pa) in 2011, bringing a total of \$38 million into the local economy. This is an important benchmark as it shows the level of income required of any new jobs in Scottsdale in order to add to overall average income levels, and contribute to the overall town economy through local spending.

The average individual income of \$409pw in 2011 means that the total weekly income reported by all Scottsdale residents (over 15yo) in that year was \$49 million per annum. This income (and business-to-business purchasing activity) sustained all the local businesses servicing the local market. Additions to this income base can be expected to enable the local business mix to expand in numbers or in people employed, while reductions will eventually lead to job shedding and business closure.

### Household Income

Figure 14 shows the percent change in household income in each income bracket for Tasmania and Dorset Shire between 2001 and 2011. Dorset has had greater increases in households with income between \$1,250 and \$1,499 per week and above \$2500 per week.

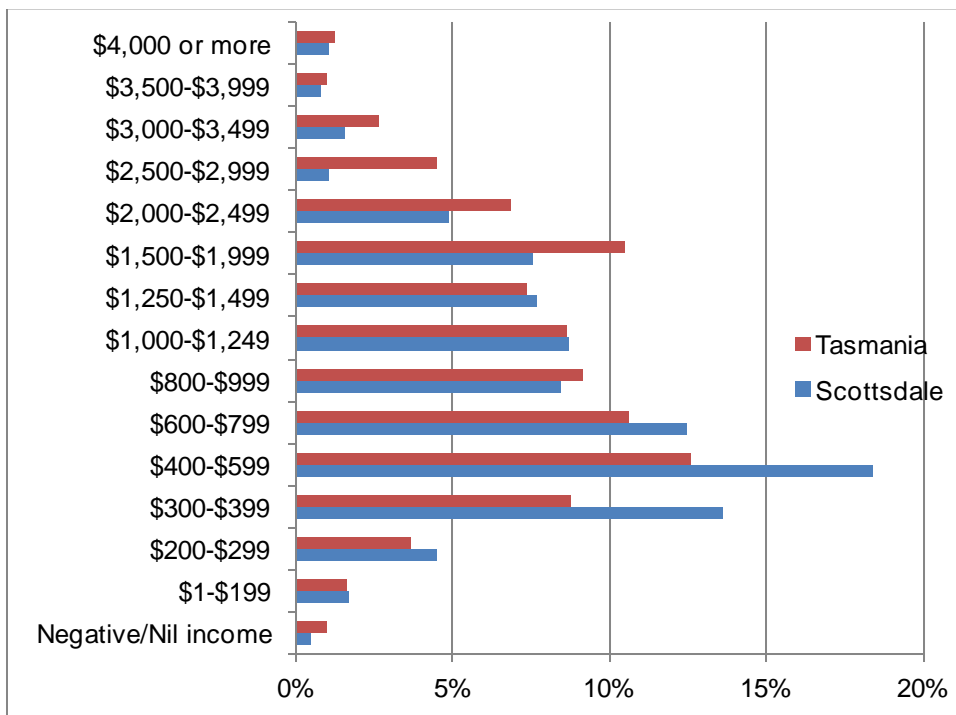
Figure 16 Change in household income by income bracket, 2001-2011



Source: ABS 2011 Census

The next figure shows the proportion of households in each income in Scottsdale and in Tasmania as a whole. It can be seen that Scottsdale has a less wealthy population, with more households in the lower income brackets and particularly those between \$200 and \$800 per week. Despite this, the trend in Dorset Shire is for households to become wealthier.

Figure 17 Number of households in each income bracket, 2011



Source: ABS 2011 Census

## Migration

The next two tables show the migration of the population in and out of Dorset Shire between 2006 and 2011, respectively. For those moving to Dorset between 2006 and 2011, most people came from 'Launceston and North East' or from Queensland. A relatively large number of people also moved from New South Wales, Victoria and Western Australia.

**Table 4 Dorset Shire in-migration, 2006-2011**

Place of Residence in 2006	Reside in Dorset in 2011*
Tasmania	
<i>Hobart</i>	48
<i>Launceston and North East</i>	5462 (5142 stayed in Dorset)
<i>South East</i>	17
<i>West and North West</i>	32
New South Wales	96
Victoria	88
Queensland	168
South Australia	40
Western Australia	72
Northern Territory	15
Australian Capital Territory	3
Overseas	53
<b>Total</b>	<b>6,094</b>

\* People over 5 years old in 2011

Source: 2011 ABS Census

In terms of people moving out of the Shire, most moved within 'Launceston and North East' or to Queensland. A relatively large number of people also moved to Hobart, Victoria and New South Wales.

**Table 5 Dorset Shire out-migration, 2006-2011**

Place of Residence in 2011	Resided in Dorset in 2006*
Tasmania	
<i>Hobart</i>	70
<i>Launceston and North East</i>	5813 (5142 still in Dorset)
<i>South East</i>	12
<i>West and North West</i>	57
New South Wales	63
Victoria	86
Queensland	117
South Australia	28
Western Australia	45
Northern Territory	10
Australian Capital Territory	3
<b>Total</b>	<b>6,304</b>

\* People over 5 years old in 2011

Source: 2011 ABS Census

## Business Counts

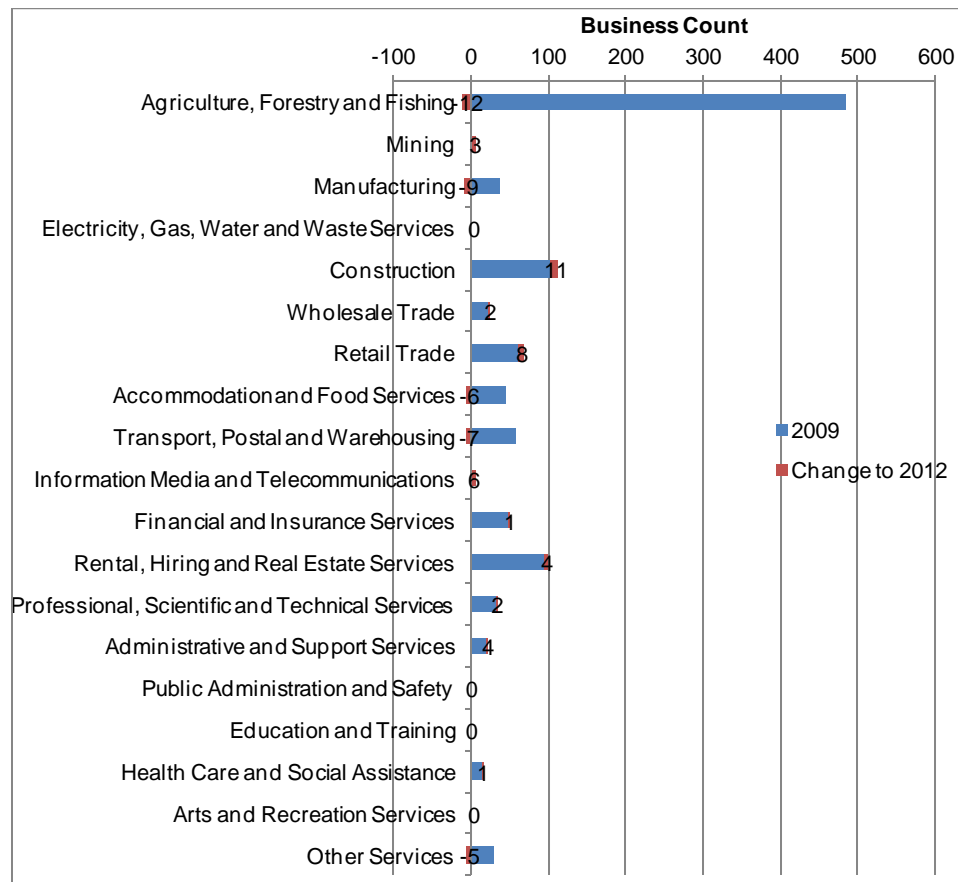
The table below shows business counts in the Scottsdale-Bridport Statistical Area 2 (SA2) between 2009 and 2012 (the area covered is made up of Dorset LGA and Flinders Island). It can be seen that the number of small businesses (employing up to 4 people) had been increasing up to June 2011, but then over 40 businesses in this category were lost in the next year. In comparison, the number of businesses employing over 5 people has been stable or declining. By industry, agriculture and manufacturing have had the biggest declines, losing 12 and 9 businesses respectively between 2009 and 2012. In the same time period construction increased by 11 businesses and retail trade by 8 businesses.

**Table 6 Business Counts (including entries and exits) for Scottsdale-Bridport SA2**

	2009 (June)	2010 (June)	2011 (June)	2012 (June)	Change 2009-12
Non employing businesses	659	671	684	664	5
Businesses employing 1-4	219	238	249	221	2
Businesses employing 5-19	142	145	147	141	-1
Businesses emp 20-199	38	31	34	38	0
Businesses emp 200+	3	0	0	0	-3
<b>Total</b>	<b>1,061</b>	<b>1,085</b>	<b>1,114</b>	<b>1,064</b>	<b>3</b>

Source: ABS Business Counts

**Figure 18 Change in business numbers in Scottsdale-Bridport SA2, 2009-2012**



Source: ABS Business Counts

## Future Scenarios

### Modelling the future

An important aim of the Scottsdale sustainable communities project is to help the community understand what the future holds for them – especially under some different scenarios.

Economic aspects of looking into the future usually use some type of economic modelling. Economic modelling has been likened to driving forwards while looking only in the rear vision mirror, as it can only use historical data, and that this can be a poor guide to what will happen in the future. Economic forecasting (modelling with more courageous assumptions) has been described as an activity invented to make fortune telling look respectable. These light-hearted definitions are based on the poor record that economic analysis has in predicting the future, especially in the many cases where the future does not continue a trend visible in the recent past. Economic models are based on long run relationships and ratios, and on some strong underlying assumptions that constrain human behaviour and decision-making. Were these constraints removed, it is often perceived that modelling would be too inconclusive to be useful.

#### *Usual approaches*

The most commonly used economic modelling approaches are Input-Output (IO) modelling and Computable General Equilibrium (CGE) modelling. The regional Input-Output approach is the most common way of building a predictive model of how a regional economy will react to external shocks. Unfortunately, while input output models have been used effectively at the national scale, at the regional and local scale they cannot reflect enough of the local specialisations, strengths and weaknesses to be reliable.

#### *Local production systems approach*

The alternative to scaling down a national economic model is to build up a local economic model. While this approach is likely to be weak in its ability to track the flow-on effects and links between all the different parts of the economy (the strength of input-output and CGE modelling) it gives a much more accurate picture of the scale of activities along a local supply chain, and the responses to increased or decreased activity (a weakness of input-output and CGE modelling).

The local production systems approach used here is based on the collection of information from local farmers and other businesses on their scale of operations (including employment), the factors that determine this, and the main upstream and downstream links in the supply chain.

A series of interviews with farms and businesses in the supply chains were used to gather this information. While it would be ideal to interview all the farmers and businesses in these supply chains, to gather current and historical activity data, the cost of this would be prohibitive so the approach here uses a sample of interviews coupled with a picture of the scale of the whole supply chain for the area drawn from ABS sources. Two sources are used to round out the picture:

1. The latest Census – for its details on the number of people employed in industry sub-sectors along the supply chain in the local areas; and
2. The Australian Business Register for its detailed counts of business in industries and industry sub-sectors in the local areas.

In the next section of this report, trend data and a local production systems approach are used as the basis for estimating the impact on the local economy of five future economic growth scenarios for Scottsdale. The scenarios have emerged from quantitative analysis of economic data and from interviews and community discussions. The estimated impacts are based on the current base case and trends visible in relation to each scenario driver, and to the historical experiences over the last decade of businesses interviewed.

The five future growth scenarios considered are

1. Growth in farming
2. Timber alternative industry
3. More residents working outside Scottsdale
4. Tourism/hospitality growth
5. Population growth (young families and older people)

Is the past a good guide to the future? Past experience shows the real changes that have been brought to a community, but there is always the possibility that future external challenges will be handled differently. All modelling is quite sensitive to the assumptions underlying the relationships and expected behavioural changes. Fortunately, the local production systems approach is able to integrate the findings from the community adaptation work which has also been undertaken as part of this overall project. The community adaptation survey sheds more light on the 'tipping points' within the community, and on the changes in behaviour that occur when these thresholds are crossed. These tipping points in the community sense mirror the tipping points already flagged by businesses in the supply chain – where their reactions to a large change in commodity prices, or harvest volume or visitor numbers will be quite different to their reactions to a small change in these circumstances.

## **1. Farming growth**

*Agriculture current situation:*

Agriculture is a foundation of the Scottsdale area economy, and the familiar drivers of weather, production, prices and competition will be overlaid by prospects over the next few years of new irrigation systems.

Agricultural employment in Scottsdale and Dorset has been falling as the agricultural activity mix has changed. But good prospects for irrigation and dairy expansion are signs that agricultural output, if not employment, may be on the increase.

Technological improvements in cropping and water use have brought possibilities of new crops, and this has broadened the economic base of agriculture. While technological changes and economies of scale have reduced the need for labour in agriculture, and hence reduced the most direct flow-on from farming to the rest of the local economy, the need for skilled labour has increased – just at a time when the skills needed are becoming harder to secure.

The key trends in agriculture that have the most impact on the local economy are:

1. Farm numbers
2. Farm activity and productivity
3. Farm local spending and employment.

### *1. Farm numbers*

The recent *Dorset Agricultural Study*<sup>1</sup> shows the importance of agriculture in the Shire and highlights key trends:

- Agriculture is a major employer with 422 people employed – down from 474 in 2006. Dairy, specialised beef and vegetable growing are the major agricultural employers.
- There are currently around 280 agricultural businesses in the Dorset municipality, down from 340 10 years ago.
- The total area farmed is around 110,000 hectares which is an average of 390 hectares per farm.

In Scottsdale town some 158 residents were employed in agriculture in 2011.

### *2. Farm activity and productivity*

Farming activity has changed significantly in the municipality over the decade to 2011, driven by changes in profitability and productivity:

- The total value of agricultural production has increased from \$86 million in 2005-06 to \$103 million in 2010-11 – representing a 3.7% compound rate of increase over the period. This increase has happened with a decrease in farm employment, signifying significant increases in labour productivity on farms.
- Grazing (dairy, beef and sheep) occupies around 80% of total farm area and produces 70% of the gross value of production.
- Crops occupy around 5% of total farm but contribute 30% of the gross value of production.
- The remaining 25% is made up of native forest, plantations, buildings and roads etc.
- There are currently 65 dairy farms in the municipality, milking around 20,000 cows or an average of 310 cows per farm. This represents 15% of the state herd, or around 120 million litres out of a state total of close to 800million litres.
- Beef cattle numbers have increased markedly over the past 10 years from 44,000 in 2000-01 to 58,000 in 2010-11.
  - This has been at the expense of sheep and lambs which have declined from 169,000 to 69,000 head.
- Vegetables, especially potatoes, make up the largest proportion of total cropping land followed by broadacre crops which includes poppies and cereals.

### *3. Farmer local spending and employment*

Farm output value has been increasing in the municipality, and much of this seems to stem from more efficient production processes designed to deliver higher yields and higher returns. For many of these processes (such as increasing beef cattle quality and growth rates, or dairy cattle productivity) there is a flow-on to local purchases of inputs, and use of local know how. Working against this trend towards localising purchasing and knowledge, many farmers are using proprietary products and processes which use materials and know how based outside the district. Overall, local distributors are maintaining their activity levels (including seasonal employment) while the mix of what they sell is changing. This is important as

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<sup>1</sup> *Dorset Agricultural Study*, prepared by Macquarie Franklin for Dorset EDG June 2013

employment in farm services is the first crucial link between farm activity and the local economy.

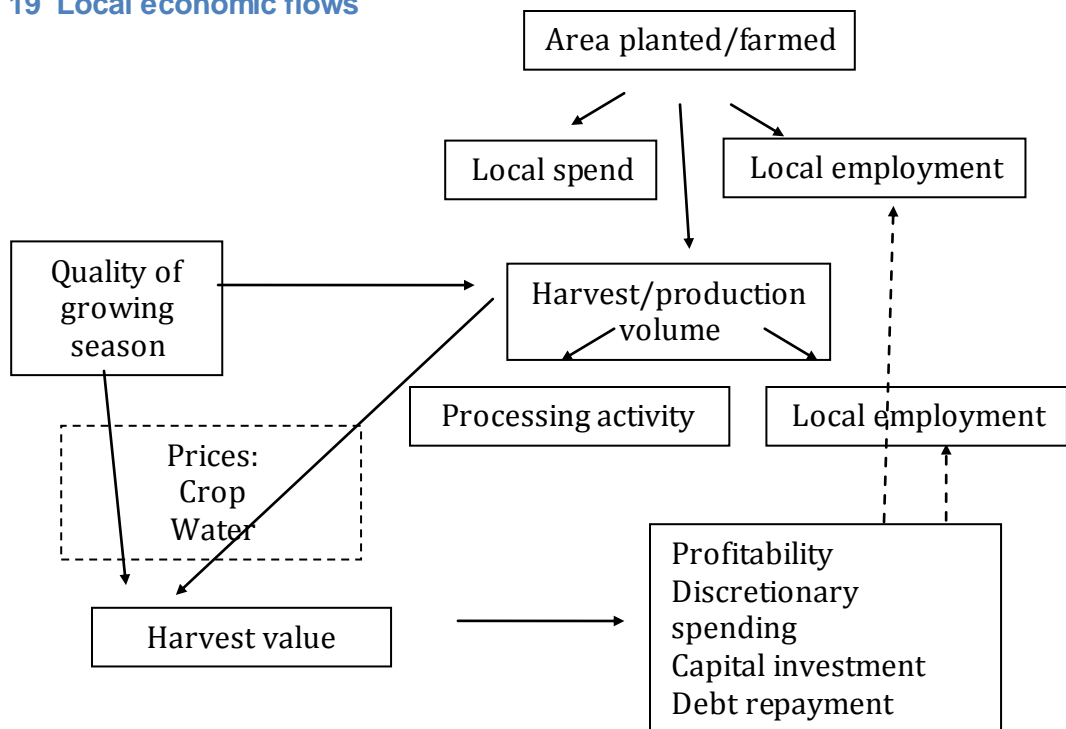
### Assessing wider impacts

Agriculture is the foundation of the Dorset municipality, and local farmers will no doubt continue to adapt their practices. To understand how these future adaptations will impact on their local economies, it is important to understand how agriculture is linked to the wider local economy.

As noted above, measured in terms of employment or business numbers, agriculture is a significant activity. But how much difference does a change in agricultural activity make to the local economy?

A schematic representation of the main agricultural supply chain is shown below. The first of two main drivers is the area to be planted/actively farmed each season. This farm-level decision has significant implications for the extent of local spending by growers. The second driver is the quality of the growing season and the consequent yield, with its implications for downstream businesses and their activity levels. Employment from processing/handling businesses has some impact on the surrounding local economies.

**Figure 19 Local economic flows**



The schematic above is based on the following links:

- Area planted/farmed determines local spend and local employment
- Quantity of harvest/production determines processing activity levels and employment
- Value of harvest/production determines debt repayment, capital investment and discretionary spending in the community
- Production value is offset by water availability and cost influences on aggregate operating costs, and therefore profitability.



A 2005 report into the impacts of drought 'beyond the farm gate' on non-farm businesses and communities<sup>2</sup> identified four types of businesses in a rural or regional community with quite different linkages to (and dependencies on) agriculture (Figure 20).

This model also applies to other supply chains – eg core tourism/hospitality and flow on businesses that service the core businesses (give examples).

**Figure 20 A Model of Primary Production Impacts on Small Business**

Dependence on farmers	Low	3 <sup>rd</sup> quadrant <i>Local essentials businesses</i>	4 <sup>th</sup> quadrant <i>Local luxuries businesses</i>
	High	1 <sup>st</sup> quadrant <i>Bedrock businesses</i>	2 <sup>nd</sup> quadrant <i>Crop services businesses</i>
		Essential	Luxuries
Discretionary purchases			

From *Beyond the Farm Gate, Drought Impacts on Non-Farm Businesses and Communities*, DOTARS 2005

This model proposes that the immediate sphere of influence of the farm sector is strongest on those businesses with direct supply chain links (first and second quadrants), and is weakest for businesses that supply the goods and services that keep the community going (3<sup>rd</sup> quadrant).

The 'Bedrock Businesses' and those that rely on farmers as essential customers, and they purchase goods/services are purchased even when production levels are low. Typical examples are the stock and station 'seed, feed & weed' suppliers, machinery dealers and farm maintenance providers.

The 'Rural Support Businesses' are those that also rely on farmers as essential customers, but there is some discretion in what is purchased and when, and purchases are closely aligned to production. Typical examples are crop purchase brokers / wholesalers, farm-related transport, motor vehicles, hardware and plumbing/drainage suppliers.

For the 'Local Essentials Businesses' farmers and farming families are important customers, but their significance is diluted as these businesses draw customers from other parts of the community as well. Typical examples of these 'essentials' are businesses that sell food, health care, essential services, news and local paper (but not magazines or books), some (work) clothes, real estate.

<sup>2</sup> *Beyond the Farm Gate, Drought Impacts on Non-Farm Businesses and Communities*, DOTARS 2005

Farmers form just part of the customer base for the 'Local Luxuries Businesses', and the goods and services sold are seen more as 'luxuries' that can be done without when cash is tight. Typical examples are gift shop, florist, hairdresser, non-work clothes, travel services.

Interviews conducted for the 'beyond the farm gate' research showed that the many farmers continued purchasing their core goods and services during the drought, meaning that while turnover in the bedrock businesses was lower than in good years, they were still busy. The businesses most affected by the drought were those that relied on decent production levels, and with production way down these rural support businesses had very little work. Without crops to harvest or transport, or wool to aggregate and sell there was no demand for these particular businesses. The research also found that with on-farm incomes falling very low, the Exceptional Circumstances payments for farming families had a significant impact in ensuring there was enough local spending to enable people to stay in the district, keep shopping locally and keep the local 'essential services' businesses going.

### **Economic adaptation and employment potential from agriculture**

Agricultural employment in Scottsdale and Dorset has been falling as the agricultural activity mix has changed. Overall, agricultural productivity is high in Dorset in comparison with national benchmarks. Across Australia, each \$100,000 Value of Agricultural Production requires around 1.8 workers, while in Dorset it requires just 0.4 workers. This indicates the high level of labour productivity already on Dorset farms, as relatively few farm workers (422) are needed to produce the \$103 million of agricultural value for the municipality.

Expansion possibilities<sup>3</sup> are strongest in dairy (2 major expansions being planned in the Bridport and Waterhouse areas which should employ another 35-40 people). There may also be scope for further dairy processing in the district, though there are no firm plans as yet. Expansion prospects also appear strong in beef and pyrethrum (though this is unlikely to have major flow-on impacts) and to a lesser extent grapes.

The 5-year trend in productivity growth in Dorset has seen the number of workers employed per \$100,000 of output drop from 0.55 to 0.4 between 2006 and 2011. While this is evidence of increasing on-farm labour efficiency, it also indicates that any future increases in farm value will bring only modest demand for labour.

With positive signs ahead for both dairying and irrigated farming, there is likely to be more diversification and more productive use made of farming land in the municipality and in the Scottsdale area as well. What is not yet clear is how this will flow through the economy – in terms of direct and indirect employment, and local purchasing of inputs. The trends suggest that future farm output growth will induce only small increases in employment and flow-on economic activity.

## **2. Replacing forestry with another manufacturing industry**

In the five years to 2011 the forestry and logging sector in Dorset Shire lost 37 jobs, while the wood processing sector (timber mills and other value –adding) lost 233. Around 120 of these forestry/logging and wood processing jobs were done by Scottsdale residents. This was a sizeable share (10%) of the jobs in Scottsdale in 2006.

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<sup>3</sup> *Dorset Agricultural Study 2013* and interviews

There have been suggestions of alternative businesses, such as ethanol processing or perhaps dairy processing, that might be suited to operation in Scottsdale, and also suggestions that one or both of the mills might be re-opened at some stage or adapted for use by some other type of business operation. We cannot really assess the economic potential of these suggestions until clear proposals with a solid business case have been prepared. Nevertheless there is always hope that valuable infrastructure like the mills, and valuable skills available in the local workforce, would be put to productive use. Should 120 local jobs eventuate to service such an enterprise, it would be well on the way to replacing the immediate employment impact of the timber industry.

The average income of Scottsdale's manufacturing workers was \$49,900 pa in 2011, so an additional 120 workers at this wage level would bring \$6 million into the local economy.

Aside from alternative manufacturing businesses, it is clear from the analysis earlier in this report that employment growth in Scottsdale has been strongest in construction (adding 24 more jobs in the five years to 2011), hospitality (adding 26 jobs) and in the service industries (health, education, support services and public sector) which added 58 jobs in the period. It is likely that the trends in growth in these industries will continue (though construction is cyclical) in line with national projections that show that the most new jobs in Australia in the next five years will be in these same industries.

It is not hard to imagine another 10 or so new jobs per year in the service industries (public and private, community sector as well as specialised personal services) which could accumulate to another 50 jobs by the time of the 2016 Census. The greatest risk to this type of growth is centralisation of government services and specialised private and public services which would mean that the jobs providing these services to Scottsdale residents might not be located in the town.

### **3. Highway upgrades and more out of Shire employment**

Another scenario facing the town is that with improvements in the highways to Launceston and George Town, more residents would be able to find work in those centres while still continuing to live in Scottsdale. The impact of this can be estimated, and the results are presented below.

In 2011 some 198 Scottsdale residents worked outside the district (189 elsewhere in Tas and only 9 interstate – including 6 health workers in Qld). The largest numbers of these worked in:

Launceston (63) across a diverse range of industries  
Georgetown (33) mostly in manufacturing (22).

Another 82 worked in unspecified parts of Tasmania and only 11 Scottsdale residents nominated places of work other than Launceston or Georgetown.

Looking in detail at these jobs it is clear that most are part-time, with incomes under \$41,600pa. Just 49 of the 96 people who worked in Launceston or George Town earned over \$41,600, 32 in manufacturing – mostly in Georgetown with 8 of these earning over \$78,000pa plus 3 working in hospitality in Launceston, plus 5 public sector workers in Launceston (earning \$65,000 to \$78,000) plus 9 health care, arts and other service workers in Launceston.

The combined income from those working in Launceston and Georgetown in 2011 was \$4.6 million per annum. If we assume that all the Scottsdale residents working in other parts of Tasmania are still living in Scottsdale and bringing their income into the Scottsdale economy as well then the total contribution from these workers was \$7.6 million per annum in 2011. Scottsdale residents working in other states earned around \$1.2 million in 2011, but we are not sure how much of this income came back into Scottsdale.

The income earned is clearly of value to the community, though the number of residents working outside Scottsdale is quite small, and many are working part-time. If the highway link to Launceston and Georgetown improved and, for example, the number of people who commuted out of Scottsdale for work in these areas doubled to 200, then we can estimate an additional income flow into the area (assuming these people were not already employed in Scottsdale or that if they were someone else took over their previous jobs). Based on the income mix of the residents working in those two areas in 2011, doubling their number would double the income (in constant dollar terms) to around \$9 million, an increase of \$4.5 million pa.

#### **4. Tourism/hospitality growth**

Dorset Shire has a number of tourist attractions and sees a steady flow of Tasmanian and interstate visitors. The latest available data for the Scottsdale-Bridport district<sup>4</sup> shows an estimated 57,000 Australian overnight visitors staying an average of 3 nights. Additional visitors would have come from overseas (though the numbers were too small to be included in the data source) and domestic day visitors. The Australian overnight visitors spent an average of \$185/night if they were from interstate, or \$154 if they were visiting from other parts of Tasmania. Day visitors spent around \$115 each if they were on holiday or around \$70 if they were in Scottsdale visiting friends or relatives or on business.

On these statistics, if Scottsdale had 25% of the district's visitor nights by Australian multi-day visitors (125 people per day) they would have injected some \$7.6 million into the local economy over that year. Putting this in perspective, the total estimated income for Scottsdale residents was \$49 million in 2011 – meaning that visitor spending might be as much as 15% of this value.

A variety of new attractions are being developed or expanded:

- Rail trail extension for recreational use
- Trail of the Tin Dragon
- Lilydale to Derby mountain bike tracks
- Barnbogle Dunes and Bridestowe Lavender farm

These attractions will appeal to some tourism market segments and are likely to lead to increased numbers of day and overnight visitors. If overnight visitor numbers in Scottsdale were to double to 250 per day, then an additional \$15 million would flow into the town's economy.

Visitor spending is mostly on accommodation and food, alongside fuel and some recreational shopping and entertainment. A doubling of overnight visitor numbers

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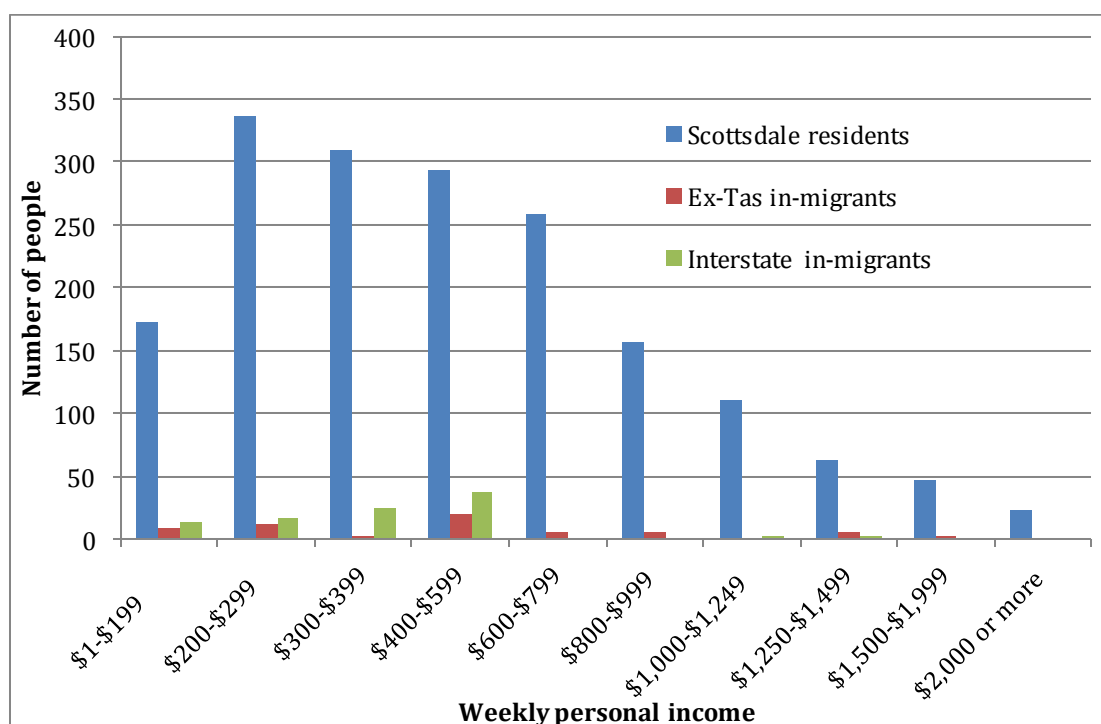
<sup>4</sup> Tourism Research Australia Regional Tourism Profiles 2011-12 (pub April 2013 at [www.tra.gov.au](http://www.tra.gov.au))

would have most impact on businesses servicing these needs. Interviews with some tourism business operators showed that there is sufficient available capacity that doubling visitor numbers and spending would not double the number of businesses or the number of people employed in tourism-related activities.

## 5. Population growth

Scottsdale town saw substantial turnover in residents over the 5 years to 2011. Some of these new residents (112) came from other parts of Tasmania, while more (136) came from interstate. Income data is available for most of these new residents, as shown in the chart below. There were more newcomers from interstate with slightly higher incomes, while there was a wider overall range of incomes amongst new residents from other parts of Tasmania. Interstate arrivals had a higher overall income profile than long term Scottsdale residents, but their incomes were still below \$31,200 pa.

**Figure 21 Income mix by residency and source region**



Source: ABS Census 2011, customised Table Builder data

A common perception amongst town residents is that new residents fall into two types:

1. Young low income families
2. Older low income retirees.

The demographic data from the census confirms that these two age groups account for much of the in-migration and shows some differences between in-migrants who came from other parts of Tasmania in comparison with those who came from interstate.

Detailed census data shows that young families (people aged under 40 and their children) came from other parts of Tasmania but also from interstate. Of the 85 new arrivals from other parts of Tasmania, 12 were under 40 and had incomes under

\$31,200 with another 11 having incomes in the \$31,200 to \$52,000 range. Almost as many under 40 year olds came from interstate, with 16 of these people earning under \$31,200 and another 6 over \$52,000. So while the perception that the young families are coming with low incomes is partially true, but there are also many coming with higher incomes – especially from interstate.

There is a similar mixed picture when looking at older new residents. Of those over 60, all 40 people coming from interstate had low incomes under \$31,200pa, while 22 from other parts of Tasmania had this income level. While there were no high income retiree newcomers from interstate, there were 3 retiree newcomers from other parts of Tasmania had incomes over \$65,000pa. The second largest group of newcomers from interstate also had low incomes (under \$31,200) but were in their 50s rather than their 60s and are probably people looking to retire in Scottsdale.

**Table 7 Income by age and source region**

	<b>From within Tas</b>	<b>From interstate</b>
Under 40 and under \$31,200	12	16
Under 40 and \$31,200 to \$52,000	11	0
Under 40 and over \$52,000	6	6
50 to 59 and under \$31,200	3	27
Over 60 and under \$31,200	22	40
Over 60 and over \$65,000	3	
	57	89
Not in labour force	22	32
All (incl small numbers in other age and income groups)	85	130

Source: ABS Census 2011, customised Table Builder data

Overall the smaller number of in-migrants from other parts of Tasmania had higher incomes and therefore brought almost as much income into the community as the larger number from other states:

- Newcomers from other states total annual income \$1,978,600
- Newcomers from other parts of Tasmania total annual income \$1,885,000

So Scottsdale saw around 250 new residents and \$4 million added to the community between 2006 and 2011. The net population and income flows need to take account the equivalent number of people who left (and their incomes).

Doubling the number of new residents in the next 5 years would bring in 500 more residents, and some \$8 million into the community –an addition of \$4 million.

## Summary of Five Future Scenarios

### 1. *Growth in agriculture*

There is potential for output value growth, especially in dairy (and possibly dairy processing), beef and pyrethrum. But there is little likelihood of significant flow-on to employment for Scottsdale town residents or sourcing of supplies or value-adding through Scottsdale.

### 2. *Forestry replacement industry*

120 additional manufacturing jobs would yield an annual income contribution of around \$6 million. This is clearly only the incomes of workers, and does not include any flow-on business-to-business economic activity as this cannot be estimated while the nature of the industry is not specified.

### 3. *Highway upgrade*

100 additional commuters to Launceston and Georgetown, would show a net (assuming these people weren't already working in Scottsdale or that if they were others took over that work) gain of town income of \$4.5 million.

### 4. *Tourism boost*

Doubling the number of visitor nights in Scottsdale town would add around \$15 million to the local economy and probably much less than double the number of jobs in related businesses.

### 5. *New population*

500 new people (net gain of 250) over five years would yield an annual net income contribution of around \$4 million.

The implications of these income growth scenarios for local jobs are hard to estimate due to difficulties in measuring the number of new businesses or new jobs that an increase of, say, \$1 million in local income might bring. This is because businesses react differently to increases in turnover and won't always employ an additional person for a set increase in turnover. Typically a business will tend to hang on to staff if turnover drops, or will delay putting on additional staff if turnover looks to be increasing, until the increase seems secure.

## Conclusion

Economic sustainability is all about adaptation, about the abilities of communities, their business owners and staff to keep adapting their activities to stay ahead of the local and external forces that drive changes in the local economy. While the Scottsdale district has demonstrated great capacity to adapt in the past, a key question for each community is how to prepare for the changes ahead.

The dramatic changes to the timber industry in the last decade have seen a significant number of direct and indirect jobs disappear. Employment growth has come from the service industries, especially in fields like health, education and community services.

Reviewing 5 scenarios for possible income and employment growth in Scottsdale has shown that each has the capacity to make a contribution. In modelling the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> scenarios we have considered the impact should each base case be doubled, but this is actually only indicative and has been done to put each scenario on a common footing. It is important for the community to consider more realistic

increases in each of the scenarios. What does the community see as more realistic potential?

The community also needs to consider its capacity to influence growth in these scenarios. Some (like the highway upgrade) are dependent on external decision-makers, funding and influence. Others (farming and tourism, for example) are more dependent on the vision and skills of local business people. Combining these scenarios with the Decision Support Tool, community survey and capacity research enables the people of Scottsdale to map out where they can get the biggest gains for their community.

This mapping can be used to build involvement within the community, and support for a forward rather than backward-looking perspective. It can also be used to influence external decision-makers to ensure that any assistance that comes to the community is well-targeted, and is supported by sound research and expectations of good results for the community in future.

Modelling the 5 scenarios shows that none is strong enough in its own right to offer a secure pathway to a sustainable economic future, but progress in each would provide a solid foundation. As a 'turnaround town', Scottsdale needs to continue evolving and adapting, buttressing its traditional strengths and embracing new opportunities.