CHAPTER 5

A closer look at change in regions

Key points

- The early histories of many towns reflect the importance of basic industries to their growth and development.
- Transport has been a key contributor to the success or failure of many towns, with those not positioned along a rail or major highway particularly disadvantaged.
- Many towns have changed their functions over the period, as some transition towards more service and recreationally-based economies.
- Small agricultural towns that have been unable to develop new functions have struggled against the rise of the regional centre. However, some small towns close to a large labour market, usually a regional centre, have been able to partly shift towards a commuting function and retain an important social element.
- The effects of mining on settlement patterns vary—many small mining towns have been created, many have also disappeared with only a few transitioning towards large service centres.
- Coastal locations have been significant growth areas, with some coastal towns transitioning to significant regional service centres.
- Past government policies have had a strong influence on the location of Indigenous settlements.

Introduction

Investigating settlement change at the regional scale provides an opportunity to consider more localised drivers, while also highlighting more common factors across diverse regions.

With large population changes occurring throughout the twentieth century, growth and decline of individual towns varied over time. Some towns first flourished then declined, others started with a stable population and grew later, while others still never grew significantly at all. By investigating local histories, changes in the fortunes of towns provide more of a guide to the major factors determining Australia's current settlement patterns.

Several regions have been chosen to provide a diverse sample and to enable consideration of some of the changes occurring. The regions considered in order include:

- I. Upper North and surrounds, South Australia
- 2. Western Australian Goldfields
- 3. Wimmera, Victoria
- 4. Toowoomba and surrounds, Queensland
- 5. Hervey Bay, Bundaberg and surrounds, Queensland
- 6. Griffith and surrounds, New South Wales
- 7. Central West, New South Wales
- 8. Tennant Creek and Ali Curung, Northern Territory.

Population change is presented in map²⁰ form for 1911 and 2006 at the regional scale, along with the position of rail and major roads networks.

I. Upper North and surrounds, South Australia

The history of the Upper North at the head of the Spencer Gulf in South Australia provides an illustration of many of the changes which occurred in Australia's settlement pattern. These include the formation of many agricultural settlements, the impact of rail, mining and manufacturing on local economies and later the 'loss' of smaller towns as their functions declined.

A discussion on several locations in this region will draw out the changes occurring and provide some insight into the contributing factors. The Upper North region is vast and encompasses some of South Australia's largest regional cities as of 2006, including Whyalla, Port Pirie, and Port Augusta (see Map 5.1). Yet, in 1911, of the three, only Port Pirie was a hub, with Port Augusta just another small town and Whyalla (then called Hummock Hill) not yet large enough to be classed as a town. Table 5.1 shows the population change for some of the key towns in this area from 1911 to 2006.

Outside the growth of the three major centres, Map 5.1 also shows the 'thinning out' of smaller towns. This is particularly noticeable in the area between Peterborough²¹ and Port Pirie, and also to the southeast of Clare. The towns that survived to 2006 tended to be amongst the largest in 1911. These include Moonta, Kadina and Wallaroo, near the coast, as well as Peterborough, Jamestown, Crystal Brook, Clare and Balaklava.

²⁰ In all the maps in this chapter, the size of the circle represents the population of the town. It should be remembered that these maps only represent two points in time. The maps are also not at a consistent scale for different regions. Different areas cannot be directly compared, since regardless of scale, the size of the population circles remains the same.

²¹ Like many other towns with names of German origin, Petersburg changed its name to Peterborough towards the end of the First World War.

Town	1911	1961	2006
Whyalla	119	3 7	21 123
Port Augusta	855	9711	13 255
Port Pirie	7 988	15 609	13 205
Kadina	2 747	3 102	4 025
Moonta	3 772	5	3 352
Clare	22	622	3 061
Wallaroo	5 282	2 237	3 049
Peterborough	2 530	3 430	690
Balaklava	55	30	628
Jamestown	630	304	I 408
Crystal Brook	35	44	88

Table 5.1Population, the Upper North, South Australia, 1911, 1961 and 2006

Source: ABS/CBCS Census of Population and Housing 1911, 1961 and 2006.

The following section will explore the factors that have contributed to changes in the Upper North region more generally along with closer investigations of Whyalla and Port Pirie.

The Upper North region

The opening up of the Upper North region, about 200 kilometres north of Adelaide, came about through land reform legislation in the 1860s. This transformed the region from large pastoral properties into smaller agricultural land holdings. In fact, this transformation of the region's economic base occurred within a decade (Bell 1998), with wheat becoming the backbone of local industry.

The separation of pastoral and cropping land was based on Surveyor-General George Goyder's map of the region, which quickly became known as 'Goyder's Line'. Goyder also set up a policy of establishing a town every 16 kilometres (Bell 1998), modelled on the English countryside with dense populations of closely spaced villages and towns.

The primary motivation for opening up the region was increasing population demanding access to farmland and a desire to exploit the wealth of the natural resources, particularly through wheat harvests. In the short term, it worked, with wheat farms booming in the 1870s (Bell 1998).

The boom was consolidated by the construction of railway lines, enabling farmers to have easy access to ports. For example, an independent rail line was built between Port Pirie and Peterborough by 1881. This line became the principal transport axis for the region and raised economic activity for those towns along its route such as Crystal Brook, Gladstone and Jamestown (see Map 5.1). It was built principally to transport grain, and as a result, a cheaper narrow gauge line was used (National Railway Museum n.d.p.).

In contrast, the northbound rail link was established between the copper mining town of Burra and Terowie, and then extended towards Peterborough—establishing a rail connection between Port Pirie and Adelaide. This rail line was broad gauge because these tracks were able to carry faster and more comfortable trains for passenger transport (National Railway Museum n.d.p.).



Map 5.1 Upper North South Australia, 1911 and 2006

Note: Rail lines are from MapInfo StreetPro (2007), and include both modern and disused lines. Source: BITRE derived estimates from ABS/CBCS Censuses 1911 and 2006.

The true importance of the rail line for the region became apparent with the opening of the Trans-Australian Railway in 1917, running from Port Augusta to Kalgoorlie. This made Peterborough an important railway hub for the continent for long distance passenger and

freight movements. In time, the town became 'the busiest railway junction in South Australia' with large maintenance workshops, holding sheds, and a large workforce (Bell 1998). A primary reason Peterborough became the rail hub was the independent development of three different types of gauges and Peterborough's rail yards accommodating all three. In addition, at a smaller scale, Port Pirie, Terowie and Gladstone also had break-of-gauge stops, requiring the construction of sheds and passenger facilities, resulting in rail becoming an important industry for these towns.

The rail industry declined over the later part of the twentieth century, resulting in a rationalisation of the system. The result was a loss of function for several towns. For example, Terowie, Yongala and Mundoora had populations of around 1000 persons in 1911, based on rail, but the loss of this economic foundation resulted in their decline.

- Terowie evolved with the establishment of the rail industry and in its prime in the 1940s and 1950s reached a population of over 2000 people (Regional Council of Goyder n.d.p., Terowie n.d.p.). The railway yards were 'immense' as they extended for almost three kilometres to swap trains from broad gauge to narrow gauge (Regional Council of Goyder n.d.p.).Terowie was chosen as the break-of-gauge site on the basis that wool was transported via broad gauge for processing and marketing facilities to Port Adelaide, while grain was transported to Port Pirie on narrow gauge (National Railway Museum n.d.p.). However, in 1969 the broad gauge line was extended from Terowie to Peterborough resulting in the town becoming a 'whistle-stop' (Regional Council of Goyder n.d.p.).The loss of the major industry and the bypass of the Barrier Highway resulted in the town's decline.
- Yongala 'developed because people felt that the railway would come through the town but the swift development of Peterborough as an important railway junction' meant that expectations of Yongala developing into a major centre were not met (Peterborough Tourism Inc 2012).
- Mundoora was connected to Port Broughton but was effectively stranded with the closure of the short rail link in 1942 (Bell 1998). Combined with not being positioned along a major highway, the decline of the town was almost inevitable; with a loss of population from 878 persons in 1911 to only 177 by 1961 (no estimates are provided for 2006).

Another feature of the changes in the Upper North settlement patterns has been the loss of many towns based on servicing the local agricultural industry. Productivity gains, declines in labour requirements, amalgamation of farms to achieve economies of scale and increasing global competition has resulted in a substantial decline in population numbers, resulting in the loss of many small towns²². Bell (1998, p.33) starkly describes the visible effect on the landscape 'where unoccupied houses surrounded by wheatfields are a common sight'. Bell (1998, p.34) goes on to estimate, by citing the work by Michael Williams, that between the 1930s and the 1970s, an average of three houses were abandoned each month.

²² This is examined further in Chapter 9.

Port Pirie

Port Pirie is located on the eastern shore of the Spencer Gulf in South Australia, some 230 kilometres from Adelaide. In 2006, the city had a population of just over 13 000 persons, the eighth largest urban centre in the state. It is an important industrial base for South Australia, with a strong focus on metal product manufacturing (10 per cent of employed residents in Port Pirie worked in basic non-ferrous metal manufacturing in 2006 (ABS 2006a).

Port Pirie's economy has undergone several changes, with each building on the city's fortunes. Bell (1998) describes the city as having 'five roles' over its history: a wool port for local pastoralists, then a grain port for the agricultural industry, then a regional rail hub with the construction of the rail link, followed by being a major port for Australia's base metal mines and finally a smelter location for mineral concentrate.

Rail has been an important driver for the type and scope of economic activity that has developed in the city. Of particular importance were the extension of the Port Pirie rail line to Cockburn near the New South Wales border and its location only 56 kilometres from the major mining town of Broken Hill. The rail line was extended privately over the final 56 kilometres by the Silverton Tramway Company (STC) as the New South Wales government would not allow the South Australian government to build over the border.

The result was a dramatic increase in activity for Port Pirie and surrounding locations. This rail line was the supply support for mining operations for Broken Hill and was the export link to the outside markets, raising both shipping and rail activity. This in turn prompted the Broken Hill Proprietary Co Ltd (BHP) to build a smelter in Port Pirie, and later a lead refinery plant.

A substantial stimulus for this type of economic activity for the town was the First World War. Germany was a large importer of Australia's concentrate for smelting but with the outbreak of war this stopped. In addition, shipping was disrupted and stockpiles of concentrate accumulated. The effect was the formation of the Broken Hill Associated Smelters (BHAS), a joint venture that by 1918 resulted in the largest smelters in the world (Blainey 1968 cited in Bell 1998).

Whyalla

Whyalla's growth over the period is striking, with the initial impetus being iron ore mining (City of Whyalla n.d.p.). At the beginning of the twentieth century, the town (then called Hummock Hill) was minimal. It grew from the construction workforce for a tramway to Iron Knob, where deposits were located, and a jetty to load them (City of Whyalla n.d.p.). At this stage, there was only basic accommodation (such as tents), unsealed roads, and no telephone. It was renamed Whyalla in 1914, and in the subsequent years gained services such as police, a bank and sporting associations (City of Whyalla n.d.p.).

Another boon for the town's growth was the start of construction of a blast furnace and harbour at the end of the 1930s. The population grew again as the Second World War created demand for the town to build patrol ships for the Australian Navy, stimulating the creation of more town facilities. A water pipeline from Morgan in 1944 'enabled industry and the population to grow at an ever increasing rate', and the next year, Whyalla transitioned from being a BHP company town to having a local government (City of Whyalla n.d.p.).

After the war, the city shifted from building navy ships to commercial ones, and the population increase was aided by the arrival of post-war refugees. Over the next few decades, industrial operations continued to expand, including the construction of an integrated steelworks. However, when the shipyards closed in the 1970s, the population began to decline from its peak of 33 000 in 1976 to 21 100 by 2006 (City of Whyalla n.d.p.; ABS 2006a). However, Whyalla remains a major centre in South Australia and retains a strong industrial base, with 18 per cent of employed residents working in basic ferrous metal manufacturing in 2006 (ABS 2006a).

The Upper North: key themes

The Upper North region demonstrates the importance of industry and transport in shaping settlement patterns. All three major regional centres in the area (Whyalla, Port Pirie and Port Augusta) were established as industry transport nodes (pastoral, agricultural and mining ports). The coming of rail created opportunities both in terms of transport and employment in the rail industry itself. The growth of Whyalla (and Port Augusta) demonstrated the conditions under which these towns became large centres. They evolved with newer emphasis on secondary industry using materials from their primary industries. The Upper North also followed a wider pattern of thinning out of small, agriculturally-based or railway support towns.

2. Western Australian Goldfields

Western Australia's development occurred later than the eastern colonies and it is possible that this has contributed to a different settlement pattern than those observed on the east coast. For instance, the loss of small towns based on servicing agriculture has not been as marked. One important factor in the development of the state has been mining activities. The Goldfields region, positioned several hundred kilometres to the east of Perth, provides an illustration of this evolution (see Map 5.2).

Like Victoria, a considerable part of Western Australia's development was due to gold rushes (in the 1890s), but in a much tougher environment. Mining operations at this time meant setting up a town to meet the needs of miners and their families. Mines were points of wealth attracting activity, and to open a mine was to open a town.

Map 5.2 illustrates the 1911 and 2006 populations around the goldfields region, illustrating the contrasting fortunes of many goldfields towns, while Table 5.2 presents the populations of several of these towns over the period.

Table 5.2Population, Kalgoorlie and surrounds, Western Australia, 1911, 1961 and
2006

Town	1911	1961	2006
Kalgoorlie-Boulder	26 321	15 469	28 241
Norseman	I 057	2 104	860
Coolgardie	2 533	625	801
Kambalda West	-	-	2 703
Laverton	296	57	313
Kanowna	1 029	-	-

Source: ABS/CBCS Census of Population and Housing 1911, 1961 and 2006.



Note: Rail lines are from MapInfo StreetPro (2007), and include both modern and disused lines. Source: BITRE derived estimates from ABS/CBCS Censuses 1911 and 2006.

As the maps show, Kalgoorlie-Boulder has been the dominant population centre in the area throughout the twentieth century. Kalgoorlie was established in 1893 with the onset of the gold rushes—attracting thousands of people that saw the development of 93 hotels and 8 breweries in only a short space of time (Kalgoorlie Boulder Pure Gold n.d.p.). By 1905, Kalgoorlie was described by the Australian Handbook as a 'thriving municipality' which had six bank branches, five hospitals, was the junction of four railway lines, all in support of about 15 000 miners. The conditions, however, were very difficult, with water sometimes more valuable than gold. This led to the development of the Golden Pipeline, constructed between 1894 and 1903, that pumped fresh water uphill some 500 kilometres from Perth to Kalgoorlie. This significant piece of infrastructure reinforced the dominance of Kalgoorlie as the major centre in the goldfields (Pipeliner 2007). In fact, it is still in use today, providing water to over 100 000 people in Kalgoorlie and various towns along the way (Australian Geographic 2012).

In contrast with the fortunes of Kalgoorlie, the population of Coolgardie, the 'birthplace of the great gold rush', has declined significantly over the century (Goldfields Esperance Development Commission n.d.p.). As the surface gold began to run out, people moved away.

The decline in Coolgardie's fortunes was not unusual, as many surrounding towns became ghost towns. The 1911 Census does not reveal the complete picture of the number of disappearing towns. Map 5.3 presents over 60 gold mining 'ghost towns' (appearing as boxes) that were established during the gold rush period in the 1890s. Many were gone by the 1911 Census. The factors that led to their demise included the depletion of the resource, the increasing concentration of activity towards Kalgoorlie, the rough environment (lack of water and heat) and price slumps.

The ghost town of Kanowna, established in 1893 just 20 kilometres north of Kalgoorlie, is an example. At its peak, it was a city of around 12 000 people, yet little remains of it today. The town was also the scene of controversy in 1898 as Father Long, following the decline of population numbers, alluded to a vague location of a 100 pound gold nugget in the vicinity of Kanowna (SMH 2004). This created a stampede of gold prospectors into the town (The West Australian 1898). Unfortunately, this temporary growth in population quickly dissolved as the discovery was later believed to be a hoax (SMH 2004). For the past few decades, however, there has been a goldmine next to the former town site (Kanowna Belle), but today there is no longer a town.



Map 5.3 Abandoned gold mining towns in Western Australia

Source: Landgate (n.d.p.).

In contrast, an interesting former ghost town is Kambalda (made up of Kambalda East and Kambalda West), just to the south of Kalgoorlie-Boulder. Like many other mining towns, Kambalda's history included some striking changes. Eklund (2012, p.205) called it 'a town with two histories'. It was established during the Western Australian gold rush in 1897 when gold was discovered in the area, but the town effectively closed by 1907. Then, in the 1960s, it was revived by the Western Mining Corporation, when nickel was discovered in the area. First Kambalda East and then Kambalda West were built to serve the mine (it is also near a large gold mining operation at St Ives) and by 2006 the town grew to a population of 2700 (ABS 2006a), with 56 per cent of employed residents working in mining (ABS 2006a).

The development of the new town also illustrates a contrast to mining towns developed at the beginning of the twentieth century in terms of amenity and comfort. In describing the new mining town, the Australian Women's Weekly (1973) reported that:

'Kambalda is much younger [than Kalgoorlie]...and much smaller...But Kambalda is new, with all mod cons, such as air-conditioning, smart new houses, up-to-date working conditions with the latest machinery for working the mines. It appeals to young couples. The company which runs Kambalda—Western Mining—has poured 100 million dollars into the town. It is well-planned with parks and trees, has a thriving shopping centre, schools, and community centres'.

Western Australian goldfields: key themes

The economic value of the gold finds in the goldfields region created activity. The economic wealth in the area is reflected in the size of the towns established. These towns served the gold mines, and the size of the towns reflected the economic potential of the mines. While the exact siting of the towns could be due to chance, historical factors or particular geographic conditions, the size of potential economic wealth in the area determined the presence of towns and the amount of activity within them.

The Western Australian goldfields differ to gold-related settlement in New South Wales and Victoria. The Western Australian goldfields region is a much harsher and dryer environment, which impacts both on the productivity of the land and amenity appeal. These tough conditions contributed to the loss of many small mining towns, even prior to the 1911 Census. Their survival depended on their function as service centres for miners, and had no reason to continue when the mine disappeared. In contrast, the largest towns in 1911 (Kalgoorlie-Boulder and Coolgardie) survived, aided by investment in water and town infrastructure developed at their peak.

The goldfields are also much further away from other settlements. Kalgoorlie is almost 600 km from Perth, whereas (for example) Ballarat is 113 km from Melbourne, and Bathurst 200 km from the centre of Sydney (albeit on a more difficult path), but these towns are also near other settlement.

The difference between Western Australian and Victorian goldfield towns was that the Western Australian towns struggled to find other non-mining opportunities that enabled towns in Victoria to continue. This was due to the basic fertility of the land in Victoria, enabling agriculture that led to the development of a more closely-settled environment.

3. Wimmera, Victoria

The Wimmera is a wheat and wool growing district in western Victoria. Pastoral pursuits were the main economic activity in its beginnings. However, from the 1870s, these pastoral properties were being divided up through the closer settlement schemes, as a means to promote cropping activities and population growth. This has made the Wimmera one of the most important cropping districts in the country.

While this economic base formed the backbone of the district's growth it also presented major challenges. As highlighted by Museum Victoria (n.d.p.), 'the history of cropping in this area is one of coping with much adversity brought about by variable rainfall and drought, economic downturns, depressions and unstable prices, plant disease, declining soil fertility and soil structure, and the effect of two world wars'. The visible effect of this change on the settlement pattern is provided in Map 5.4, with the population of key towns over the period provided in Table 5.3.



Note: Rail lines are from MapInfo StreetPro (2007), and include both modern and disused lines. Source: BITRE derived estimates from ABS/CBCS Censuses 1911 and 2006.

Town	1911	1961	2006
Horsham	3 554	9 240	14 120
Ararat	5 402	7 934	7 172
Stawell	4 843	5 506	5 878
Warracknabeal	2 484	3 061	2 491
St Arnaud	4 096	3 150	2 275
Nhill	528	2 233	9 7
Dimboola	435	923	1 492
Murtoa	47	35	790
Natimuk	933	490	444
Rupanyup	539	576	398

Table 5.3Population of towns, the Wimmera, Victoria, 1911, 1961 and 2006

Source: ABS/CBCS Census of Population and Housing 1911, 1961 and 2006.

Table 5.3 shows that Horsham grew to become the important service centre for the region, with a population of around 14 000 people in 2006 compared with 3500 in 1911. The reason that Horsham has dominated as a centre even though Stawell, Ararat and Warracknabeal were comparable sizes in 1911 is likely to be related to transport and its position relative to other centres. Horsham is a hub both for road and rail, including being on the route between Adelaide and Melbourne, and is the closest regional centre for many towns to the west. Horsham is also further from the large centre of Ballarat than Stawell and Ararat: perhaps far enough to avoid severe competition.

The growth of Horsham is in contrast to the 'loss' of small settlements. While many of the settlements still exist, some are small, and no longer classified as urban centres or localities by the ABS. For example, Jung, a small village close to Horsham, had a population of close to 500 persons in 1911, but today Jung's population is estimated to be only 100 on the Jung community website (Jung Township 2010).

Jung also provides an illustration of the loss of function for many small towns positioned near a major centre. In 1905, it had many more services than today: money-order, savings bank and telegraph office, one hotel, two stores, several tradesmen's shops, mechanics institute and library, a school and several places of worship (Australian Handbook 1905). It was also a hub for industry as 'in its early days Jung relied on the production and transportation of wheat, and trucks could be seen lined up as far as the eye could see, waiting their turn at the Wheat Board Office prior to unloading at the silos' (Jung Township 2010).

Today, a lot of these services are accessed from Horsham. As the Jung community website acknowledges, the decline of business (and sporting communities) from the 1970s was related to improvements in roads and cars. In fact, the church, school and post office all closed within seven years of each other, from the late 1980s and early 1990s (Jung Township 2010).

This town provides an illustration of the experience of many towns. There are several forces leading to businesses and families slowly moving away. One is the economic decline of the local industry. The other is proximity (and improvements in access) to a large centre, resulting in local shops not surviving.

A defining feature of this type of population decline is the long timeframe for these changes to occur. These towns still retain an important social function. The strong community ties that are not easily measured are a key factor in their resilience.

Being close to large centres has also resulted in some towns actively shifting their functions, such as adopting the role of commuting towns. For example, the DPCD (2007) investigation into Murtoa (east of Horsham) found a part of this town's new direction has been the development of its commuting function, as Murtoa offers a small-town lifestyle (this is examined further in Chapter 11).

The changing economic functions of towns is also apparent in localities such as Halls Gap, which did not appear in 1911 (as it had a population of 50 persons) but had grown to 281 persons by 2006 and increased further to 305 persons in 2011 (ABS 2006a; 2011). A clear point of difference for this town is its function. Halls Gap is a gateway to the Grampians National Park, a popular tourist destination. This function is reflected in the employment structure. In 2006, 27 per cent of employed residents worked in accommodation, followed by 10 per cent in cafes, restaurants and takeaway food services, 5 per cent in school education and 4 per cent in both parks and gardens operations and in travel agency and tour arrangement services.

Another feature is that the biggest towns in 1911 which are now on the major road network (such as Stawell, Warracknabeal, St Arnaud, Nhill, Ararat and Dimboola) have fared much better than those smaller towns off the major highways. These larger towns, with the exception of St Arnaud, have had fairly stable populations over roughly a hundred years, possibly because they had a sufficient population to maintain a threshold of activity and were able to draw people from the surrounding areas, particularly those towns not positioned on a main highway.

The Wimmera: key themes

The Wimmera area is an example of centralisation, and the importance of transport hubs in favouring one town's growth over others. This is typical of the patterns in the Australian wheat-sheep belt. Despite Horsham being one of many similar-sized towns in 1911—and in fact, smaller than several others in the region—it had become the dominant centre in 2006. Changes in the Wimmera's settlement pattern also highlight the loss of small towns, and the changing functions, particularly towards commuting and social activities.

4. Toowoomba and surrounds, Queensland

Drayton was the first inland town established in Queensland beyond the Great Dividing Range, but today it is a suburb of the expanding major regional city of Toowoomba in the Darling Downs region. Ivan McDonald Architects (2001, p.10) reported that the town of Drayton was 'doomed almost from the start since the motivation for its siting was its intermediate position between three stations (Eton Vale, Westbrook and Gowrie) rather than any strategic consideration of the natural resources or topographical advantage required of a growing township'. The result was the establishment of nearby Toowoomba, with a better geographic location due to permanent water supply, even ground and 'an immediate descent over the range' as the focal point for activity (Ivan McDonald Architects 2001, p.10) (see Map 5.5).

Toowoomba grew into the major economic, administrative and education centre, initially from pastoral activities dominating the region in the early 1840s, followed by closer-settlements schemes in the 1870s to the 1890s attracting people into the region. Later, there was an influx of soldiers during the Second World War.

The fertility of the region underpinned the economic potential of industry, and in turn, the potential growth of the Darling Downs, and Toowoomba as its centre. The land was suitable for grazing, cereal growing and dairying, while timber growing in the area could be used for the mills. This fertility supported early secondary industry, including agricultural equipment and flour milling (Centre for the Government of Queensland 2013). The Toowoomba City Centre Heritage Study also lists a range of influences such as Toowoomba's strategic location being 'a gateway to the west', its role as a cultural and social hub as well as diversification of industry, trade and commerce (Ivan McDonald Architects 2001). Toowoomba is also an example of a major regional city existing in close proximity to a capital. That proximity on the one hand is constrained by Toowoomba's position to the west of the Great Dividing Range escarpment, but enhanced by improved roads and the expansion of Brisbane.



Note: Rail lines are from MapInfo StreetPro (2007), and include both modern and disused lines. Source: BITRE derived estimates from ABS/CBCS Censuses 1911 and 2006.

Table 5.4 lists the population of Toowoomba and some key surrounding towns and centres from 1911 to 2006. While Toowoomba illustrates the rise of a major regional centre, there are a number of other towns in close proximity whose populations have also increased. These include Gatton to the east, Oakey to the west and Highfields to the north. The growth of the main regional centre has been complemented by growth in the surrounding towns. However, consistent with other areas, a number of smaller towns have declined or disappeared, particularly those further away or not positioned along a major road.

Town	1911	1961	2006
Toowoomba	16 160	50 34	95 263
Warwick	5 562	9 843	12 564
Dalby	2 454	7 400	9 778
Highfields	378	184	5 909
Gatton	307	2 623	5 295
Oakey	332	87	3 653
Pittsworth	684	5 3	2 564
Laidley	2 086	543	2 386
Crows Nest	034	810	445
Goombungee	774	311	717

Table 5.4Population, Toowoomba and surrounds, Queensland, 1911, 1961 and2006

Source: ABS/CBCS Census of Population and Housing 1911, 1961 and 2006.

A number of towns in Table 5.4 had declining populations between 1911 and 1961, and then grew between 1961 and 2006. This includes Highfields, Pittsworth, Laidley, Crows Nest and Goombungee. This suggests that there were separate circumstances under which the towns declined in the first half of the century and grew in the second. The decline in the first half is likely to relate to centralisation of population and industry. However, the growth in the second half is likely to be due to improved personal transport coupled with an overall growth in the regional population. This enabled these towns to be revitalised by attracting residents who could still access Toowoomba for its employment opportunities and services but preferred a smaller-town lifestyle. At the same time, the expansion of the Toowoomba region, perhaps related to its strategic position close to Brisbane, created extra population demand in Toowoomba itself as well as the nearby towns.

Goombungee, for example, is about 35 kilometres to the north of Toowoomba, and has survived despite being small and off a major highway. Its 2006 population was very similar to its 1911 population (over 700 people), but it experienced a decline in the interim years. Despite the similar population numbers, its functions and town infrastructure has vastly changed. At the beginning of the century, there were dairy and fodder crop farms, dairy factories, a railway line, churches, hotels, a hospital and shops (Centre for the Government of Queensland 2013). The town declined in the 1960s, with the closure of the rail line and butter factory (the latter in a broader context of amalgamation).

However, the resurgence of Goombungee came about from the 1970s as it offered ruralresidential living (Centre for the Government of Queensland 2013). The Goombungee website (2013) describes the town's current businesses and facilities as 'a local shopping centre consisting of a local shop, doctor, chemist, real estate agent, hair dresser, Toowoomba Regional Council Office and Depot, Library, Art Gallery and antique store, post office...Goombungee-Haden showgrounds, primary school, golf club, Guides Australia, public hall, four churches, kindergarten, historical society, hotel, police station, fire station and SES' as well as several other businesses (dealing in sheds, cars and so on). This indicates that services with a social character have been retained in town, despite this area's proximity to Toowoomba.

The growth of towns closer to Toowoomba is also part of the influence of its labour market. BITRE has previously considered the commuting patterns from the 2006 journey-to-work Census data and found that large regional cities were increasing their sphere of influence on local labour markets. Map 5.6 presents the population size of towns around Toowoomba from Map 5.5, with the inclusion of the commuting working zone in blue (based on Statistical Local Areas (SLAs)).



Note: Rail lines are from MapInfo StreetPro (2007), and include both modern and disused lines. Source: BITRE derived estimates from ABS/CBCS Censuses 1911 and 2006.

The working zone region provides an indication of the geographical influence of Toowoomba for the surrounding towns and regions, as illustrated by the large commuting flows:

- Cambooya and its surrounding hinterland retain only 12 per cent of its workforce, whereas roughly 65 per cent commute to Toowoomba for employment.
- Within Crows Nest 22 per cent of commuters remain within the SLA, while nearly 60 per cent commute to Toowoomba for employment.
- Gatton is much more self-contained with around 55 per cent working within the same SLA; however, Toowoomba continues to draw people from Gatton. That said, the role of Brisbane would be expected to increase over time with Gatton's focus potentially shifting more towards the state capital.

As a result, an easy commuting distance provides towns with an alternative or additional component to their function. In contrast, Dalby is much more self-contained. It retains 90 per cent of its workforce, with only I per cent working in Toowoomba. Located about 85 kilometres northwest of Toowoomba on the Warrego Highway, it was able to grow because of its distance from the major centre. Unlike some of the towns surrounding Toowoomba, Dalby is a centre in its own right. This role was established early, with agricultural shows and grain and livestock selling by the 1870s (Centre for the Government of Queensland 2013).

Dalby was connected to Toowoomba via rail in 1868. Later, like Oakey, it benefited from being a rail hub, with three branches commencing operation between 1906 and 1914 (Centre for the Government of Queensland 2013). Pugh (1911) described it as 'the centre of a large agricultural and dairying district', with a butter factory opening in 1906. Its services included multiple agricultural machinery depots and machinery agents and importers (Pugh 1911). Population growth was also assisted by pastoral runs being turned into smaller blocks.

In the decades up to the 1930s, more town infrastructure was established, such as a central school, council chambers, swimming pool and a picture theatre (Centre for the Government of Queensland 2013).

Dalby's service centre role continued with the establishment of more institutions and infrastructure—for example, it now has the Dalby Agricultural College, a large livestock market, the biggest grain receival depot in Queensland and a bio-refinery making ethanol fuel from sorghum (Centre for the Government of Queensland 2013, Dalby.INFO n.d.p., United 2013). From the 1980s, cotton growing increased, and Dalby now has two cotton gins (Centre for the Government of Queensland 2013).

In 2006, Dalby's population was 9778, and its main industries (by resident employment) were school education, specialised machinery and equipment manufacturing, cafes, restaurants and takeaway food services, local government administration and supermarkets and grocery stores (ABS 2006a).

Toowoomba and surrounds: key themes

The growth of Toowoomba has reflected the economic potential of the Darling Downs lands, manifested in its industry activity, and the city's role as the main urban centre in this wider region.

Toowoomba provides an example of the influence that a large centre has on its surrounds. Many small towns around Toowoomba have disappeared since 1911, but at the same time, towns such Highfields, Gatton and Oakey have grown in the second half of the twentieth century. However, proximity to Toowoomba means that some towns are not as servicecentre oriented as they would otherwise be in more isolated circumstances. In contrast, a town like Dalby, further away from Toowoomba, is more self-contained and is a service centre in its own right.

5. Hervey Bay, Bundaberg and surrounds, Queensland

Coastal Queensland has experienced a substantial amount of population growth, with people attracted to the beaches and sunshine. This case study provides an illustration of this growth and its influence on the surrounding regions.

Map 5.7 shows the area of Queensland covering Bundaberg, Hervey Bay and surrounds. The map illustrates the loss of many small inland towns and the growth of coastal ones.

In 1911, the two biggest towns in this area were Bundaberg and Maryborough. By 2006, both had grown, but coastal Hervey Bay—in 1911, existing as just a few discrete settlements—had overtaken Maryborough to become the second largest city in the area. Table 5.5 (following) lists the population for these three centres in 1911, 1961 and 2006.



Map 5.7 Bundaberg, Hervey Bay and surrounds, Queensland, 1911 and 2006

Note: Rail lines are from MapInfo StreetPro (2007), and include both modern and disused lines. Source: BITRE derived estimates from ABS/CBCS Censuses 1911 and 2006.

Town	1911	1961	2006
Bundaberg	8 727	22 799	46 962
Hervey Bay	-	4 9	41 226
Maryborough	9410	19 126	21 498

Table 5.5Population, Bundaberg, Hervey Bay and Maryborough, Queensland, 1911,1961 and 2006

Source: ABS/CBCS Census of Population and Housing 1911, 1961 and 2006.

Hervey Bay

The growth of Hervey Bay is linked to the increasing importance of amenity, and the preference for coastal locations. In particular, this city illustrates the ability of people—particularly those with a loose connection to the labour force, like retirees—to choose attractive locations in which to live. This is reflected in the high proportion of persons older than 65 years (22 per cent) compared to 13 per cent nationally in 2006 (ABS 2006a).

Hervey Bay began as a group of small localities based on the sugar industry—growing and processing sugar cane. The area was not recorded in the Census as 'Hervey Bay' until 1954, although the bay had been named that by Captain Cook (Centre for the Government of Queensland 2013). In 1896, Pialba (one of the localities, as seen on the map) was connected with Maryborough via a rail line, which meant that sugar growers could access the Maryborough sugar mill and people from Maryborough could access the coast for leisure (Centre for the Government of Queensland 2013).

While this shows that the area has long been recognised for its amenity, a greater modern emphasis on tourism and amenity living means that Hervey Bay has been in a better position to capitalise on this. One striking example of the tourism industry capitalising on natural amenity relates to whale watching. The first commercial whale watching operation started in 1987, and in the early 2000s, Hervey Bay was receiving about 65 000 visitors each year (Stoeckl et al. 2005).

Hervey Bay's growth did not take place over the whole of the century, but was concentrated in later decades. Holmes et al. (2005, p.23) found that a 'major shift in population relativities' experienced between Hervey Bay and Maryborough occurred between 1971 and 2001, when Hervey Bay grew from about 6000 to 36 000 people, while Maryborough only increased from about 20 000 to 21 000. Holmes et al. (2005, p.23) also observed the close proximity of 'prime tourism/retirement/lifestyle destinations alongside declining sugar towns', suggesting a transition of town functions in this area. One of the triggers for this growth was the abolition of death duties on estates in the 1970s in Queensland, attracting many older residents to the state (Grossman 1989).

Hervey Bay, with a 2006 population of 41 226, is now a service and tourism area (ABS 2006a). The main industries by resident employment are school education, cafes, restaurants and takeaway food services, accommodation, residential building construction and supermarket and grocery stores, with the building construction being reflective of its population growth.

Bundaberg

Bundaberg grew around the sugar industry in the late 1800s, after brief trials of other industries (timber and corn production) (Bundaberg Regional Council n.d.p.). By 1883, the Bundaberg district was producing 20 per cent of Queensland's sugar, from producing only 3 per cent in 1881 (Centre for the Government of Queensland 2013).

By 1905, sugar, golden syrup and sawn timber were Bundaberg's 'great staple exports' (Australian Handbook 1905, p.534), and Bundaberg was the manufacturing centre for the primary produce of its hinterland: 'The town is connected by rail to the Isis scrub, and large quantities of cane and juice are brought hither to be manufactured into sugar at Millaquin Refinery and other factories' (Australian Handbook 1905, p.534).

Millaquin Refinery, established in 1882 (Nolan 1977), stimulated growth in the number of plantations in the area, and it also had the effect of raising land prices (Nolan 1977). The refinery was connected with nearby crushing mills on plantations via under-road pipes for mills up to seven or eight miles away, and other mills conveyed their juice to the refinery by river (Nolan 1977, Australian Handbook 1905). As Nolan (1977, p.160) reported, '[g]iven the lack of transport facilities, this method was an important factor in making potential sugar-growers' aspirations a reality'. In 1905, 32 mills were in operation, with about half of them selling to factories, and the other half making sugar themselves (Australian Handbook 1905).

This industry meant that Bundaberg became a major centre. The 1905 Australian Handbook reports that Bundaberg at the turn of the century had distilleries, district and circuit court sittings, a lands office, an immigration depot, schools, churches, library, general stores, hotels, butchers, brickyards, a foundry, a steam joinery, gas works, banks, a hospital, and other institutions.

Bundaberg's secondary industry evolved in connection with its sugar growing—for example, with the manufacturing of rum, soft drinks and sugarcane harvesters. The harvester technology evolved locally throughout the century, and Bundaberg became a major manufacturer and exporter of these machines in the 1960s, while the local sugar cane industry naturally benefited from this technological progress (The Institution of Engineers, Australia 1984). While rum is still being produced, the last sugar cane harvester manufacturer in Australia closed its factory in Bundaberg in 2004. This was due to lower sugar cane prices and the size of the sugar industry in Brazil (where the business was relocating) (AM 2004).

By 2006, Bundaberg had grown to be a major regional centre with a population of nearly 47 000. Its role as a service centre is evident by the industry structure. The most common industries of resident employment were school education (5.9 per cent), cafes, restaurants and takeaway food services (4.1 per cent), hospitals (3.6 per cent), supermarket and grocery stores (3.5 per cent) and residential care services (2.8 per cent) (ABS 2006a).

Maryborough

Maryborough was a 'hinterland railway town' in the nineteenth century, and a river port for wool (Centre for the Government of Queensland 2013). In the 1860s, Maryborough also had a growing sugar industry and a large timber mill. By the close of the nineteenth century, timber and mining were important industries, while 'closer-settlement and improvements in dairy technology' resulted in a number of butter factories being established in Wide Bay at the start of the twentieth century (Centre for the Government of Queensland 2013).

In 1905, Maryborough was described as 'the port of shipment for the greater portion of the produce of the Wide Bay and Burnett Nanango and Gayndah districts, and Burrum coal-fields, and is also the principal town in the district' (Australian Handbook 1905). In the early decades of the twentieth century, the rail line heading west was extended through Eidsvold, linking more farm areas to Maryborough. Eventually this line was extended north to Gladstone, allowing Gladstone to compete for export business with Maryborough (Centre for the Government of Queensland 2013).

A transition for Maryborough, similar to Whyalla, was the development of the shipbuilding industry during the Second World War (Centre for the Government of Queensland 2013). This transition prompted the Australian Blue Book to report that Maryborough was 'the most highly industrialised city in Queensland', and while it used to be the main port for produce from the surrounding area, this had changed with increasing emphasis on road and rail freight rather than shipping (the Australian Blue Book 1949 cited by the Centre for the Government of Queensland 2013).

However, from being an industrialised city, following the war the national trend in moving away from manufacturing towards service employment is also well-illustrated here. Manufacturing and dairying declined in Maryborough, and between 1971 and 1981, manufacturing employment went from 28 per cent to 22 per cent of employment in the district (Centre for the Government of Queensland 2013). In 2006, log sawmilling and timber dressing was the third largest industry by employment of residents, but the other industries among the five most prominent were all services: school education, hospitals, cafes, restaurants and takeaway food services and supermarket and grocery stores (ABS 2006a).

Hervey Bay, Bundaberg and surrounds: key themes

The changing settlement pattern in the area encompassing Bundaberg, Maryborough and Hervey Bay shows how these cities have changed relative importance with the shifting emphasis of different industries, transport methods and amenity. Like other traditional port towns, Maryborough was able to grow when its port was a key transport hub, before the new modes of rail and road made this less important. Both Maryborough and Bundaberg demonstrate the shifting emphasis of industry types: primary to secondary through to tertiary (services) based. As in the Upper North of South Australia, the secondary industry is connected with the primary industry. This area also captures the shift towards amenity areas. Not only has Hervey Bay grown into a city on the back of amenity, but smaller towns inland have declined as coastal towns have grown.

6. Griffith and surrounds, New South Wales

Just after 1911, a major government intervention impacted on settlement patterns in southern New South Wales, changing the productivity of the land and stimulating the creation of towns. This was the New South Wales Government's creation of the Murrumbidgee Irrigation Area (MIA), whose primary purpose was to stimulate industry (Freestone 2010).

A large infrastructure project, the MIA was established to 'control and divert the flow of local river and creek systems for the purpose of food production' (House of Representatives 2013). The MIA was given water from 1912, 'progressively turning extensive tracts of semi-arid Mallee country into a patchwork of highly productive farms' (Freestone 2010, p.123). Pastoral land was resumed to create smaller farms, but many were granted to inexperienced ex-servicemen as part of the soldier settlement schemes, and some were too small to be economically viable (Singh et al. 2005).

Initially, the MIA was managed by a Trust of the Ministers for Lands, Works and Agriculture (SMH 1912). A Commissioner for Water Conservation and Irrigation, Leslie Wade, was then appointed in 1913. Wade's job, beyond the MIA and farm infrastructure itself, was also to manage the construction of infrastructure and several towns: '[Wade] was looking to new railways to service the area, new business enterprises to handle and market the produce, processing facilities, power generation, and domestic water supplies and commercial service centres to support the expected population. The crowning glory would be new cities and towns...' (Walter Burley Griffin Society n.d.p.).

During the construction of the irrigation canals, a temporary town called Bagtown arose for the workers, so called because the accommodation was constructed from the cement bags (Griffith City Council n.d.p.(a)). This also had some key town services: a post office, stores, offices and basic sanitation.

The New South Wales government then established Griffith and Leeton as permanent service centres for the irrigation area, designed by Walter Burley Griffin. Griffith is less than 10 kilometres from the Bagtown site (Griffith City Council n.d.p.(a)).

Residential and business sites were sold to the public in both towns. In Leeton, 140 sites were sold in April 1913, while 129 sites in Griffith were auctioned in September 1916 (Walter Burley Griffin Society n.d.p.; Irrigation Record 1916). Griffith was planned as a city for 30,000 people, but its population currently stands at 16,000 (Walter Burley Griffin Society n.d.p.).

The hands-on approach to the population centres of the MIA by government continued after the establishment of Griffith and Leeton. Until 1928, the Water Conservation and Irrigation Commission (WC&IC) was responsible for local government services, at which point a newly formed shire council took on these duties (Griffith City Council n.d.p.(b)). At the same time, farms moved from leasehold to freehold and the WC&IC also handed other control to banks and farmer co-operatives (Murrumbidgee Irrigation Ltd 2012).

By 2006, the two irrigation towns of Leeton and Griffith were the largest in the area (see Table 5.6), with Griffith having city status for almost 20 years.

Town	9	1961	2006
Griffith	-	7 696	16 185
Leeton	-	5 354	6 827
Narrandera	2 888	4718	3 961
Wyalong/ West Wyalong	3 301	2 977	3 189
Ardlethan	465	504	379

Table 5.6Population, Griffith and surrounds, New South Wales, 1911, 1961 and
2006

Source: ABS/CBCS Census of Population and Housing 1911, 1961 and 2006.

In the 1960s, a similar irrigation project—the Coleambally Irrigation Area (CIA)—was developed south of Griffith, to take advantage of diverted water from the Snowy Mountains Hydro-Electric Scheme (Freestone 2010). As part of this, the town of Coleambally was established in 1968.

Map 5.8 shows the area of southern New South Wales surrounding what is now Griffith. The impact of irrigation has been profound, representing a fundamental shift in economic circumstances that was powerful enough to establish new towns and cities. This is an example of how new technology, infrastructure and government intervention affected settlement patterns. Towns such as Ariah Park, Coolamon, Ganmain and Ardlethan are outside the MIA, and have been under pressure during the latter half of the twentieth century.



Note: Rail lines are from MapInfo StreetPro (2007), and include both modern and disused lines. Source: BITRE derived estimates from ABS/CBCS Censuses 1911 and 2006.

The smaller farms around Griffith are horticultural (fruit), with larger farms having rice, cereals, sheep and beef (Griffith City Council 2006). The growth of primary industry has promoted the establishment of downstream industries. Griffith's main industry by employed residents in 2006 was beverage manufacturing (7.3 per cent), a reflection of its wine and juice industries, followed by meat and meat product manufacturing (4.7 per cent). These indicate the importance of processing industries to the local economy. Griffith's other main industries for resident employment were school education, hospitals and supermarket and grocery stores (ABS 2006a), reflecting the city's role as a service centre.

Wyalong and West Wyalong, mining and agricultural service towns in close proximity, were already established in the area prior to the irrigation schemes ²³. After a gold discovery brought miners to the area, Wyalong was established in 1894 to house them. However, they were already camped in the place that would become West Wyalong, and so this area was established as a town itself, a year later. While gold was mined, the towns diversified into agriculture as closer settlement was pursued (pastoral areas becoming smaller wheat farms). Therefore when the gold mining declined by 1910 and stopped a decade later due to lower yields, the town was able to survive, becoming 'the largest cereal-growing centre in New South Wales' (SMH 2008a). There was some resumption of activity in the 1930s enabled by new mining technology (cyanide processing) (SMH 2008a).

Today, West Wyalong is the administrative centre of its shire, and since it is on a hub of two major highways, the town has more accommodation and shopping than would be expected given its population (Business West Wyalong n.d.p.). However, key employment for its residents includes metal ore mining and farming, as well as the service-based industries. It has an almost static population.

The density and growth of the settlement pattern reflects the underlying industry. Similar to the Wimmera, these towns are based on dryland agriculture, and the requirements of the industry are reflected in the size of the town.

23 The ABS UCL definition of 'West Wyalong' in 2006 included Wyalong.

Griffith and surrounds: key themes

Griffith, Leeton and surrounds show the effect of a major government infrastructure program on settlement. This was a program that included not just the industry infrastructure of a dam and canals system, but also several towns. This represented a fundamental change to the nature of the land and enabled industry to flourish. Because of this intervention, the town settlement pattern has drastically changed in this area. This demonstrates the importance of a strong economic engine to drive change, as it generates investment and wealth, and so decision makers such as households and firms respond.

7. Central West, New South Wales

The Central West of New South Wales is a long-established area, with the key centres predating the railways. Map 5.9 shows the settlement in this area, including the regional centres (Bathurst and Orange, and the smaller Lithgow and Cowra) and their proximity to the 2006 Statistical Division boundary of Sydney, to the east. The maps reveal how over time, the regional centres (Orange and Bathurst in particular) have grown, while the surrounding small towns have thinned out.

Prior to 1911, the area had experienced some significant events impacting on its developing settlement pattern. Less than 30 kilometres north of Orange is Ophir, the site of the first payable gold discovery in Australia, and consequently the site of the first Australian gold rush in April 1851. However, while there were some buildings (hotels, blacksmiths) and plans for a town at the site, the rush did not last long, even though some mining has continued over the years (SMH 2008b).

However, the discovery of gold did have a more permanent effect on the surrounding area and increased Australia's population as a whole. In particular, many small towns were established in the area to support miners, and the nearby centre of Bathurst doubled its population in a decade (to 4000) as diggers arrived (SMH 2009). However, the downside was that people working in the town also wanted to find gold: 'Bathurst was practically abandoned by able workers during the Ophir rush' (Aplin 2011b).

The town of Lucknow, on the road between Orange and Bathurst, was established on the second site where payable gold was discovered in May 1851, although the settlement wasn't named Lucknow until 1863 (SMH 2008c). Lucknow appears on the map in 1911 with a population of 459 but its mining operations were made viable through newer technology at this time. Orange City Council (n.d.p.) reported that the Wentworth Mine's main income came from extracting gold and ore from the 'old tailings dump' using a cyanide extraction process that was unknown during the rushes. It indicated that '[t]he cyanide vats were crucial to the settlement's viability in the early 1900s' (Orange City Council n.d.p., p.2)²⁴.

However, like other mining towns, the town's fortunes shifted as mining enterprises opened and closed. The last mine closed in the late 1930s (SMH 2008c), and by 1961 the population was only 191 persons. The Wentworth Mine site has recently been opened as a historical tourism site (Orange City Council 2013).

²⁴ Aplin (2011b) more generally reports that '[n]ew techniques such as dredging brought renewed life to old mines, as at Araluen'. Even today, Aplin reports, a revived mining era in the Central West 'is most likely to involve open-cut mining and possibly re-working of past deposits and waste dumps. Some historic centres are involved, such as Hillgrove, Hill End and Peak Hill'





Note: Rail lines are from MapInfo StreetPro (2007), and include both modern and disused lines. Source: BITRE derived estimates from ABS/CBCS Censuses 1911 and 2006.

Some other small towns seen on the 1911 map but not on the 2006 map include Lewis Ponds (a silver mining town), Forest Reefs (a gold mining town which in 1905 was already described as having 'faded glories' (Australian Handbook 1905, p.377)), Newbridge (with an iron mine and gold diggings), Sofala, Hill End, Stuart Town (all gold mining) and Rockley (farms, sheep stations, and gold). Georges Plains, on the other hand, was described as a post and telegraph station on the Great Western Line, suggesting that its primary function was a connecting one (Australian Handbook 1905). This wider context suggests that not all towns were expected to last forever, but only started because they had a specific use at the time which became irrelevant later. Some towns were able to change to be relevant to new circumstances, while others declined and disappeared.

Another significant event in the growth of settlement in the area was the construction of the railway in the 1870s, to convey rural produce to Sydney and Newcastle. McKillop (2009, p.53) discusses the impact of railways on town settlement, reporting that '[g]enerally, only larger towns, such as Goulburn, Bathurst, Dubbo and Tamworth, received a sustainable boost from the arrival of the railway'. However, McKillop (2009, p.53) also emphasised the differential impact for towns—whether they would benefit from the link or be passed by and suffer a comparative disadvantage:'for inland settlements prosperity and growth depended on whether the railway linked them with the wider world or bypassed them; while for established coastal centres, the railway boosted their role as an entrepot of trade and ultimately facilitated their growth into metropolises'.

This was similar to the impact of the gold rushes, where towns without gold were subject to the effects of other areas thriving and taking their professionals and population. Even if a town was not the recipient of these new circumstances, they were impacted as part of the larger settlement system as their competitive position diminished.

An example of this was Carcoar, which prior to the railway's construction in 1876 was the administrative and commercial centre for the area to the west. However, it was superseded by Blayney and Orange when the rail line was built through these towns (McKillop 2009). Carcoar got a station on a branch line to Cowra from Blayney 12 years later, but this was not enough and the town was already in decline. By the beginning of the twentieth century, Blayney was the 'junction station' connecting the west and the south (Australian Handbook 1905), while Carcoar became 'the town that time forgot' (Carcoar Village Association 2011).

In today's terms, Carcoar and Blayney are close: 15 kilometres apart, and linked by the Mid-Western Highway. In 2006, Carcoar had a population of 218, while Blayney had a population of 2747 (ABS 2006a). Carcoar's continued decline has more recently been attributed in part to the closure of the railway station and the highway bypassing the town centre (Carcoar Village Association 2011). Orange and Bathurst are the dominant centres, both with populations of about 30 000 (see Table 5.7).

Town	1911	1961	2006
Orange	5 263	18 977	31 545
Bathurst	9219	16 938	28 991
Lithgow	6 991	14 229	11 296
Blayney	I 729	I 852	2 747
Carcoar	737	364	218

Table 5.7Population, Bathurst/Orange and surrounds, New South Wales, 1911,
1961 and 2006

Source: ABS/CBCS Census of Population and Housing 1911, 1961 and 2006.

Bathurst

One of the Central West's large regional centres, Bathurst is Australia's oldest inland settlement (Bathurst Regional Council 2005). It was 'considered the third town of the colony' in 1905 (with a 1911 population of nearly 10 000) and 'the principal city in the western district' of New South Wales (Australian Handbook 1905, p.362). At the time, industry in and around Bathurst included agriculture and gold and copper mining. Manufacturing was also present—'... tanneries, coach factories, Government railway workshops, breweries...four flour mills... soap, candles, glue, boots and shoes, and furniture are also manufactured extensively in the town' (Australian Handbook 1905, p.362). By 2006, Bathurst's population was very similar to Orange's, at almost 29 000. In 1961, their populations were also on par—Bathurst's population was 17 000 and Orange's was 19 000, demonstrating that these proximate towns had grown in tandem (ABS 2006a).

Bathurst Regional Council (n.d.p.) cites several key developments for the city in the twentieth century: the growth of secondary and tertiary industry including manufacturing (such as the Edgell brand), the moving of some state government departmental staff to Bathurst, the development of education facilities and the creation of a Migrant Reception and Training Camp (formerly an army camp) for refugees and displaced persons following the Second World War (Bathurst Regional Council n.d.p.).

Following the Second World War, Bathurst grew for a short period due to a shift towards manufacturing, as well as people settling locally after being in the migrant camp. This was followed by a few decades of stagnation, then stronger growth in the 1970s and 1980s (Bathurst Regional Council 2005 citing Bowie 1989). During this time, there was net migration to Bathurst from Sydney and the movement of often affluent families on to hobby farms and rural residences within the expanded commuting zone of Bathurst', despite rural employment falling over many decades (Bathurst Regional Council 2005 citing Bowie 1989, p.9). The urban employment growth reflected 'dramatic growth in commerce, community services and government employment as well as in manufacturing and tourist related employment', as well as the work of the Bathurst-Orange Development Corporation (BODC), which existed for almost twenty years from 1974 (Bathurst Regional Council 2005 citing Bowie 1989, p.9).

The BODC was a statutory body established to develop Bathurst and Orange economically. It was created as part of the New South Wales Government's decentralisation policy, when Bathurst and Orange were chosen as pilot growth centres (The State Records Authority of NSW n.d.p.). The BODC had powers for acquiring land, property construction, financial management and promotion and marketing of the district (The State Records Authority of NSW n.d.p.).

In 1961, more than a quarter of residents in the Bathurst district worked in primary industry and over half in tertiary. For residents of the Municipality of Bathurst, almost three quarters (72.5 per cent) worked in tertiary, and only 5.5 per cent worked in primary industry (Bathurst Regional Council 2005). The largest components of the tertiary industry in 1961 in the city were 'public authority and professional' and 'commerce'. In the same year, the teachers' college dominated educational employment. Bathurst Regional Council (2005, p.8) argued that this institution 'gave Bathurst City a cultural advantage over many other cities of the same size by virtue of the fact that there is a concentration of academically trained professional people'. This all reveals an emphasis on services in the city.

The relocation of 301 staff of the Central Mapping Authority (CMA) and their families in 1976 to Bathurst increased the population by 609. The CMA became part of the Department of Lands, and over the next three decades, the department recruited 1100 staff in Bathurst (Kelly 2006).

Some of these developments are still reflected in the dominant industries (by employed residents) in town.²⁵ School education and tertiary education together accounted for over 10 per cent of employed residents in 2006, with the other three highest industries being cafes, restaurants and takeaway food services (4.4 per cent), hospitals (3.6 per cent) and state government administration (3.4 per cent), the latter reflected in the location of a number of state regional offices in the city.

Lithgow

Map 5.9 also demonstrates how the larger towns do not always remain the dominant ones over time—at least, they don't necessarily keep the same ranking. The smaller centre (in 2006) of Lithgow, in the Blue Mountains, was actually the second largest in the area in 1911. With a population of 7000, it was larger than Orange but smaller than Bathurst at the time.

Lithgow grew from the railway established in 1869, supplying coal for trains, leading to industrial development. This encouraged population growth, but housing was inadequate. Lithgow was 'a worktown and a man's town' (Cremin 1989, p.35), and amenities came later as the population increased in the late 1800s. In the 1880s, '...Lithgow was acquiring, for the first time, a set of townsfolk, whose livelihood came from the town, not from its surrounding industries. These were the publicans, professional people and government employees' (Cremin 1989, p.38). However, industry still dominated geographically (coal, iron-making, copper-smelting, brick making), with housing 'confined to marginal areas' until 1908, when land from a major pastoral estate (acquired by forced sale) was used to extend the town (Cremin 1989).

²⁵ For its 2009 Statistical Profile, Bathurst Regional Council surveyed local businesses in 2008, and found the main employers to be 'Charles Sturt University (1059 employees), Greater Western Area Health Service (802 employees), Country Energy (503 employees), Simplot (429 employees), Bathurst Regional Council (425 employees), Land and Property Information (282 employees), Devro (248 employees), Mars Petcare (222 employees), and Bathurst Correctional Centre (214 employees)' (Bathurst Regional Council 2009).

The maps of 1911 and 2006 do not reveal the rise and decline of Lithgow's population which occurred in the intervening years. In 1905, Lithgow had a population of just over 5000. There were six collieries, an ironworks, and copper refining activity. Other manufacturing included brick making, a major pottery, terracotta works, steam sawmills and a tweed factory (Australian Handbook 1905). In 1911, Lithgow's population was 6991, and in 2006, it had grown by almost exactly 4000 people (11 296). However, in between these two periods, Lithgow was even larger. Its population actually peaked in 1929, when it reached 18 000 people and was then the fourth largest town in New South Wales, including Sydney (Cremin 1989). By 1961, it had declined to 14 000.

The housing problems at Lithgow continued throughout the first half of the twentieth century, and Cremin reveals that it wasn't until the 1950s that housing could be considered adequate. But at the same time, 'major changes in coalmining methods created many redundancies', and five collieries closed within 6 years (Cremin 1989, p.40).

More recently, Cremin describes the state of Lithgow in the 1980s as being headed towards gentrification with acknowledgement of industrial heritage. Industry had changed focus to light manufacturing, and the town was 'now being absorbed into the western fringes of the Sydney megalopolis' (Cremin 1989, p.40).

Central West: key themes

This section showed the thinning out of small towns around Bathurst and Orange, including those based around mining. It also revealed that these two centres grew together to be dominant in the area. They have moved from agricultural centres to adopt more secondary industry (manufacturing) and services (such as higher education and health services). Lithgow is an example of a once-dominant mining (and related manufacturing) area that has changed with technology reducing employment requirements, and a shift in industry.

8. Tennant Creek and Ali Curung, Northern Territory

This section focuses on Tennant Creek and the discrete Indigenous community of Ali Curung. The Census population data in 1911 and 1961 is incomplete for Aboriginal people, as until 1971, Census counts excluded those considered 'full blooded' Aboriginal. Therefore, rather than using the dot maps to illustrate the change between the two periods, this section uses other sources to discuss this change over time. Map 5.10 shows the settlement pattern of Tennant Creek and surrounds in 2006.



Note: Rail lines are from MapInfo StreetPro (2007), and include both modern and disused lines. Source: BITRE derived estimates from ABS/CBCS Censuses 1911 and 2006.

For decades, Tennant Creek was a telegraph station on the overland telegraph established between Port Augusta and Darwin in 1872, with the local Aboriginal people being the Warumungu. By 1900, ration depots existed at each of these telegraph stations along the route, and Aboriginal people were employed in various capacities (including tracking and herd minding) (Bell 2002). This contributed to pastoral development using Aboriginal labour, and led to pastoral settlements for workers' families (Memmott and Moran 2001). A gazetted Aboriginal reserve had also been established in 1892 (Aboriginal Land Commissioner 1981).

Many decades later, in the 1930s, the town of Tennant Creek was established due to the discovery of gold. The Aboriginal reserve established in 1892 was revoked at the same time for mining on the land, and the Warumungu were moved (CLC 1994). During this time, the basic services of a police station, hospital, school and post office were established, but the town's water supply remained 'precarious' (Lea 1989, p.10).

Before the war, mining was the main industry of Tennant Creek. After Darwin was bombed in the Second World War, Tennant Creek was occupied by the military and mining declined (Lea 1989). The Stuart Highway, passing through Tennant Creek, was also the subject of reconstruction and sealing works (from a basic, dry weather road) because it was a key wartime supply route (Alice Springs to Larrimah railhead) (ABS 1974). After the war, gold and copper mining became more company-based, rather than the work of individuals. However, employees could live outside town by the mines. In the 1960s, one of the mines introduced specific policies to assist town growth by providing travelling allowances so that employees could live in town and commute, and a policy to increase its married workforce from a third to one half (Lea 1989).

In the 1940s, Aboriginal employment in the town was restricted, and those visiting were 'moved on' (Lea 1989, p.17), although a few worked at the smaller mines. It was not until 1952 that even one Aboriginal person considered 'full blooded' was allowed employment in town, to assist the sanitary contractor—and this was due to the difficulty of finding a white person for the job (Lea 1989). Aboriginals not considered 'full blooded' were treated differently. They are recorded, for example, as being among the schoolchildren in town in 1938 (Lea 1989).

The reduction of Aboriginal employment in the pastoral industry was in part related to the achievement of Award Wages, implemented in 1968. May (1994) and Lea (1989) also cite changing technology as a reason for the reduction of Aboriginal employment in the cattle industry. Factors like motor vehicle and helicopter use in mustering reduced the need for traditional skills in the 1960s and 1970s and demand for labour was reduced as a result of greater mechanisation. Locally this led to a decline in employment in the pastoral industry and a shift of Aboriginal population into Tennant Creek from the pastoral areas (Memmott and Moran 2001, Lea 1989).

Later, Tennant Creek diversified into more service and tourism-based industries as mining employment fell in the 1980s. In 1985, one of the major mines (Nobles Knob) closed (Lea 1989). The Adelaide-Darwin railway (carrying both freight and passengers) has also passed through Tennant Creek since 2004 (ABS 2005). Lea (1989, p.105) considers Tennant Creek's survival 'until diversification' to be due to 'a combination of resilience in base metals mining in the district, considerable government support and human tenacity'.

Settlement patterns

In 1943, a ration depot was set up for evacuees from Darwin, 'thus swelling the population' of Tennant Creek (Bell 2002, p.70). By 1945, most Aboriginal people in the area were moved from the existing ration area to a settlement 43 kilometres from Tennant Creek called Manga-Manda (at Phillip Creek). About a decade later, they were moved to another settlement called Warrabri—later known as Ali Curung—170 kilometres from the town (Lea 1989). Different groups were moved into this settlement, including Warumungu, Kaytetye, Alyawarra and Walpiri people, which created 'tension and discontent' (Aboriginal Land Commissioner 1982).

In the 1950s, a town camp called the 'Village' was established at Tennant Creek, occupied by Aboriginals in government employment (Lea 1989). By 1964, the Village had 84 residents, about half of whom were children, and the following year, 15 males were working in the town at award rates (Lea 1989).

By the 1960s, Aboriginal people in the area tended to live in one of three settlement types: those in Housing Commission dwellings with comparatively higher income, those in the town camps, and those in the small bush camps (Lea 1989). The small bush camps were valued by their residents as they gave them more freedom to move between areas and live in their own cultural groups (Lea 1989).

These settlement types were in addition to the discrete settlement at Warrabri/ Ali Curung. After the Aboriginal Land Rights (Northern Territory) Act (1976), traditional owners were able to reclaim land, including Ali Curung (Memmott and Moran 2001).

In 2006, Ali Curung was recorded as having about 350 usual residents from four main tribal groups, each with their own language (ABS 2006a). This is a legacy of the way it was established. Some of the services included a small supermarket, a school, a police station, health centre, and art centre and gallery (Barkly Shire Council n.d.p.).

Memmott and Moran (2001) described the modern pattern of aboriginal settlement in and around Tennant Creek as fitting into five categories:

- a large Aboriginal settlement (Ali Curung)
- eight town camps
- 38 outstations on former reserve land
- 14 outstations on pastoral properties
- dispersed housing within Tennant Creek itself.

Lea (1989, p.68) argued that '[i]t is now possible to see the Aboriginal urban settlement of Tennant Creek over the past 50 years as a dynamic process with its origins in the dispossession of tribal lands, leading to displacement via ration stations, mission and welfare settlements, army labour camps and cattle stations, to the growing opportunities for personal involvement in the cash economy of the town'. By 2006, the Tennant Creek population was about 50 per cent Indigenous (ABS 2006a).

Tennant Creek and Ali Curung: key themes

Indigenous settlement patterns in the last 100 years have been shaped by interaction with non-Indigenous people, and in particular, government policies determining Indigenous people's locations. Around Tennant Creek, the settlement of Ali Curung has remained as a legacy of the government policy of establishing compounds and resettling local Aboriginal groups. The historic element to this is reflected in the different language groups still living there together today. The town camps emerged from increasing involvement with the town economy—particularly employment—as non-Indigenous attitudes and government policies changed, with the next stage of this being the dispersed town housing. Some Indigenous people have also chosen to live on outstations, with the location being determined by existing connections to the land, and partly enabled by land rights legislation.

Conclusion

Investigating settlement change at the regional scale provides an opportunity to consider more localised drivers, while also highlighting more common factors across diverse regions. The amount of potential economic wealth or activity in a region has shaped the settlement pattern. The wealth potential in fertile areas, whether in terms of agriculture or other natural resources, has been the economic engine shaping industry activity and population.

Three important features are the increasing concentration of activity into larger regional centres, the role of industry development and change over an extensive period, and the rise of amenity in the expansion of and shift towards coastal areas.