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CENTRE FOR ECONOMIC STUDIES



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Cost Benefit Analysis of the Proposed Port Pirie Sports Precinct

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Port Pirie Regional Council

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This report was prepared by the following SACES researchers:

Steve Whetton, Deputy Director
Lauren Kaye, Research Economist
Mark Trevithick, Research Economist

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Executive Summary

The Port Pirie Regional Council is seeking funding from the National Stronger Regions Fund to contribute to a redevelopment of the Memorial Oval complex and neighbouring swimming centre. The objective is to replace ageing, and in some cases unsuitable, infrastructure with a high quality facility that will support engagement in sport in Port Pirie and allow the council to target intra- and interstate sporting events to generate event tourism activity.

Port Pirie is a relatively disadvantaged community with unemployment rate above the state average, an above average proportion of residents who self-assess as being in poor health, above average rates of obesity, and above average rates of many chronic diseases and health risk factors.

Two approaches were taken to assessing the economic impact of the proposed development, modelling the impact of the proposal on local economic activity (in this case using input-output analysis), and undertaking a cost benefit analysis.

Input output analysis provides good information on the gross changes to local employment and value added, but does not capture any of the non-market impacts of the proposal such as improvements to health or changes in the enjoyment local residents get out of participating in or viewing sport. Cost benefit analysis allows non-market impacts of the proposal to be assessed (and, where possible, monetised) relative to its costs, but does not capture the impact of direct project expenditures on the local region.

These two approaches are complementary in that they assess the impacts from different perspectives, but they are not in any sense additive.

Input output analysis

The gross economic impact of the proposed Port Pirie Sports Precinct was assessed using an Input-Output model. The construction and operational phases were modelled separately, and the construction impact is modelled separately for each of the three years of construction. Details of the methodology used, and the limitations of input output analysis, are provided in Chapter 4.

Construction activity for the redevelopment is spread over three years, with the greatest amount of activity occurring in 2017/18. The estimated total spending on the redevelopment was applied as a shock to the 'other construction' sector.

Table E.1: Gross impact of construction activity, FTE employees by year

	2015/16	2016/17	2017/18
Gross Direct Project Employment	5.3	12.7	19.7
Total Gross Employment Impact	10.5	25.3	39.1

Given the current level of unemployment in Port Pirie (see section 2.6) it is regarded as unlikely that the construction activity associate with the redevelopment would cause wage pressures in the local labour market. As such, the net impacts are likely to match the gross impacts.

The proposed redevelopment, once it is complete in 2018/19, will give the city much greater scope to host sporting events with the potential to attract intrastate and interstate visitors. The council estimates that 2 events at the Oval and 3 gymnastics or cheerleading events would be able to be secured each year once the redevelopment is completed.

The value of spending associated with these visitor numbers has been calculated using data from Tourism Research Australia (2015), and allocated between sectors using the average distribution of expenditure by overnight domestic visitors. The estimated total annual increase in tourist spending is \$2.3 million.

The **total annual gross impact** is expected to **increase employment by 18.5 FTEs** for each year from 2018/19. The direct 'project' related employment in the affected sectors is estimated to be 13.0 FTEs.

The impact on regional gross value added (the regional equivalent of GDP) is expected to be \$1.8 million per annum from 2018/19 on.

As discussed in section 2.6 there are currently a large number of unemployed persons in Port Pirie, which should mean that these gross impacts have little or no impact on prevailing wages. Therefore it would be reasonable to expect the net impacts to be similar to the gross impacts.

Cost benefit analysis

The cost benefit analysis is an economic evaluation, which aims to value costs and benefits of the project for the broad community, irrespective of the incidence of those costs and benefits. For the purposes of the economic evaluation we are interested in the value of resources (broadly defined) that are created or consumed. Although information about transactions may be used to value resources, we are not directly interested in transactions that occur, although they are included (and netted out) to highlight the financial impact on particular stakeholders.

The approach taken for the Cost Benefit Analysis is consistent with the guidelines issued by the Australian Government.

The cost benefit analysis was conducted over a period of 25 years commencing in 2015/16. A real discount rate of 7 per cent was applied to the analysis.

The assumptions underlying each of the individual cost and benefit items are detailed in section 5.3.

Each of the base case and the redevelopment scenario have quantifiable benefits that outweigh their costs, with net benefits of \$32 million and \$54 million respectively.

Assessing **the incremental benefits and costs of the redevelopment scenario** relative to the base case, the net present value of total costs are \$19.6 million higher, and total quantifiable benefits are \$42.3 million higher, with **net benefits \$22.6 million higher than in the base case**. This gives the redevelopment scenario a **cost benefit ratio of 2.2** relative to the base case.

There are a number of benefits that were unquantifiable, with slightly more unquantifiable benefits occurring under the redevelopment scenario.

The sensitivity of the results to key assumptions was also tested (see section 5.3). None of the alternative assumptions individually results in a negative present value of net benefits for the redevelopment project relative to the base case. Nor are the incremental net benefits of the redevelopment scenario negative for any of the variations in assumptions.

In general the results are not particularly sensitive to variations in the assumptions within the bands tested. The only assumptions that have a material impact on the results are the assumptions on the annual value of events tourism, and the assumption changes to participation in sport as a result of improved facilities.

1. Introduction

The Port Pirie Regional Council is seeking funding from the National Stronger Regions Fund to contribute to a redevelopment of the Memorial Oval complex and neighbouring swimming centre. The objective is to replace ageing, and in some cases unsuitable, infrastructure with a high quality facility that will support engagement in sport in Port Pirie and allow the council to target intra- and interstate sporting events to generate event tourism activity. Details of the proposed redevelopment are provided in chapter 3.

Port Pirie is a relatively disadvantaged community with unemployment rate above the state average, an above average proportion of residents who self-assess as being in poor health, above average rates of obesity, and above average rates of many chronic diseases and health risk factors (see chapter 2 for details).

As part of their application, the Council commissioned the SA Centre for Economic Studies to undertake an independent economic analysis of the proposed re-development.

There are two broad ways in which the economic impact of the proposed development could be assessed. The first is to model the impact of the proposal on local economic activity (in this case using input-output analysis). This provides good information on the changes to local employment and value added, but does not capture any of the non-market impacts of the proposal such as improvements to health or changes in the enjoyment local residents get out of participating in or viewing sport. The second approach is to undertake a cost benefit analysis. This allows non-market impacts of the proposal to be assessed (and, where possible, monetised) relative to its costs, but does not capture the impact of direct project expenditures on the local region.

Each of the approaches to assessing the project are included in this report, with the results of the input output analysis reported in Chapter 4 and the cost benefit analysis in Chapter 5.

These two approaches are complementary in that they assess the impacts from different perspectives, but they are not in any sense additive.

2. Social and Economic Profile of Port Pirie

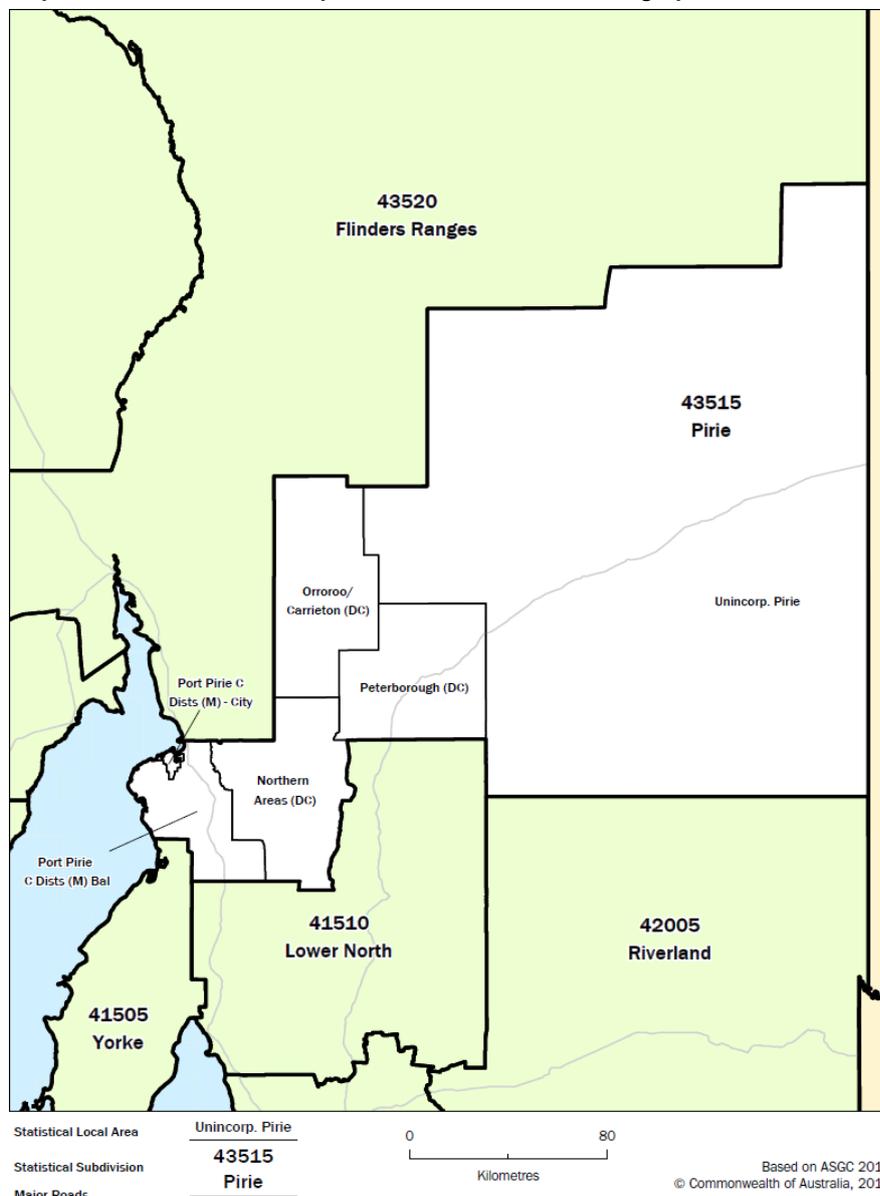
2.1 Overview

Port Pirie Regional Council is situated in the Upper Spencer Gulf region in the Southern Flinders Ranges of South Australia. The council area includes the Provincial City of Port Pirie a major manufacturing, mineral processing and commercial centre serving as a regional hub for smaller rural townships in the region including: Crystal Brook, Redhill, Koolunga, Wandearah, Munderoo, Napperby and Warnertown. Agricultural activities in surrounding districts produce livestock and cereals which are exported from Port Pirie City's main general access cargo port.

Most of the population resides in the city of Port Pirie which is the site of the largest lead smelter in the Southern Hemisphere and is the town's main employer and therefore significant driver of activity in the local economy.

2.2 Geography

Map 1: Port Pirie based upon Australian Standard Geographical Classification (ASGC)



Source: ABS (2011a), Australian Standard Geographical Classification (ASGC), South Australian Maps, Cat No. 1216.0

The Port Pirie Regional Council covers an area of 1,761 km² (0.2 per cent of South Australia's land area) (see Table 2.1). Port Pirie is located 228 kilometres north-west of Adelaide. The city includes five suburbs, Port Pirie, Port Pirie South, Port Pirie West, Risdon Park and Solomon Town, with the balance of the council area comprised of sparsely populated "Districts".

Table 2.1: Geography, Port Pirie Regional Council, South Australia, 2014

	Port Pirie City and Districts	South Australia
Area (sq/km)	1,761	984,179
Per cent of state area (sq/km)	0.2	100
Population density	10.0	1.7

Source: ABS (2014a), Regional Population Growth Australia, Cat No. 3218.0.

2.3 Population

As of 30 June 2014 the Port Pirie Regional Council had an Estimated Resident Population (ERP) of 17,646 persons (preliminary estimate) comprising 1.0 per cent of South Australia's population (see Table 2.2). As at 30th June 2013 the ERP of Port Pirie City was 14,319 persons, accounting for 81 per cent of population in the council area.¹

Port Pirie Regional Council lags behind South Australia in terms of population growth. Over the ten year period between 2005 and 2014, the population of the Port Pirie Regional Council grew by 0.8 per cent compared with 9.5 per cent across South Australia. Flat population growth in the council area relative to the rest of the state over the prior ten years likely reflects local economic factors and labour market conditions – lack of employment opportunities and rising unemployment (see section 2.6 Labour force). Consequently there is outward migration of labour from the region to more prosperous surrounding areas, regional centres and states (Adelaide, mining centres, etc.).

Table 2.2: Estimated resident population, Port Pirie Regional Council, South Australia, 2014

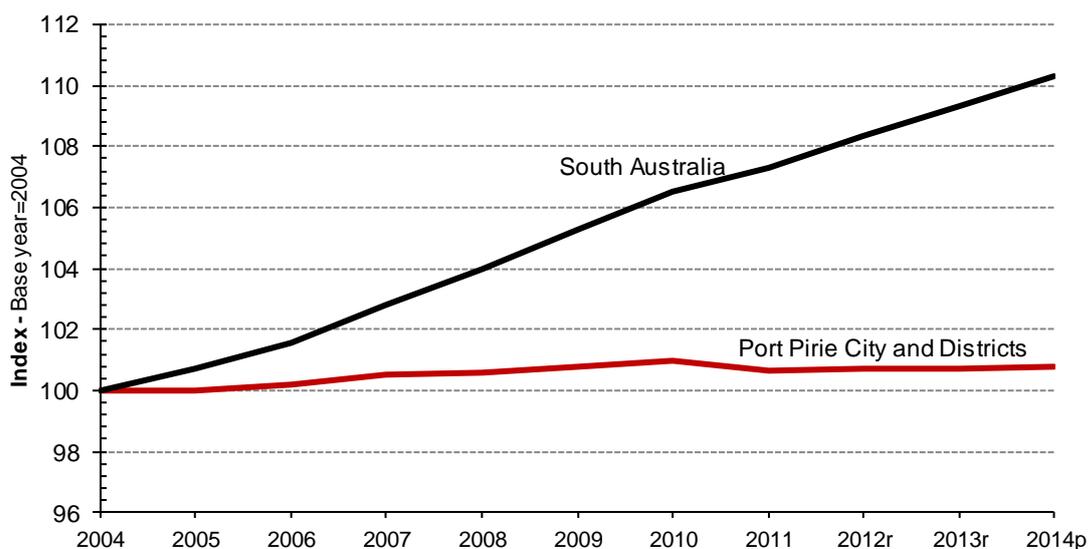
	Port Pirie City and Districts ^(a)	South Australia ^(a)
Estimated Resident Population (ERP)	17,646	1,685,714
Per cent of state ERP	1.0	100
Change in ERP 2013-2014 (per cent)	0.03	0.9
Change in ERP 2010-2014 (per cent)	-0.2	3.6
Change in ERP 2005-2014 (per cent)	0.8	9.5

Source: ABS (2014a), Regional Population Growth Australia, Cat No. 3218.0.

An index of population growth (based upon changes in ERP 2004-2014; Base year =2004) shows the extent of population growth divergence between the Port Pirie Regional Council and South Australia (see Figure 2.1).

¹ ABS, Population by Age and Sex, Regions of Australia, Table 6. ERP by Age, South Australia, Persons - 30th June 2013, Cat No. 3235.0.

Figure 2.1: Index of change in population, Port Pirie Regional Council, South Australia, 2004-2014



Source: ABS (2014a), Regional Population Growth Australia, Cat No. 3218.0.

2.4 Economy

Port Pirie city’s economy is dominated by industrial activity within the manufacturing and mining sectors – the city’s most significant employer being Port Pirie’s lead smelter which is owned and operated by Nyrstar. Flinders Ports operates Port Pirie city’s major port which exports lead, zinc concentrates and agricultural products (grains and seeds). Surrounding districts are engaged in various types of agricultural production (e.g. cereal cropping, viticulture and livestock) which are supported by retail, education and health services located in Port Pirie city.

Median total personal income across the Port Pirie Regional Council in 2011 was \$406/week compared with \$534/week across South Australia and \$577/week across Australia (see Table 2.3). Average annual wage and salary income across the Port Pirie Regional Council in 2012/13 was \$48,430 compared with \$49,760 across South Australia.

Table 2.3: Income, Port Pirie Regional Council, South Australia, Australia, Census 2011, ATO statistics 2012/13

	Port Pirie City and Districts		South Australia	Australia
	Non-indigenous	Indigenous		
Median total personal income - \$/week (2011)	406	332	534	577
Median total household income - \$/week (2011)	776	635	1,044	1,234
Average annual wage and salary income (2012/13)	48,430	-	49,760	55,442

Source: ABS (2011b) Aboriginal and Torres Strait Islanders Peoples (Indigenous) Profile, Port Pirie and City Districts, Cat No. 2002.0, Table I04. ABS (2011c, 2011d, 2011e) Basic Community Profiles, Port Pirie and Districts, South Australia and Australia, ABS Cat No. 2001.0, Table B02. Australian Taxation Office (2013) Taxation Statistics 2012-13, Table 6 Individuals.

Primary determinants of income are skill level, qualifications and occupation, with skilled employees receive higher remuneration than unskilled or semi-skilled workers. The occupational profile of Port Pirie City and Districts has a significantly higher proportion of persons who have not completed year 12 than the state or national average and significantly less likely to have a Diploma or higher qualification (see section 2.9 Education). The industry structure is also likely to be a contributory factors with relatively more of the population employed in low wage sectors such as Agriculture and Retail Trade.

Median personal income and household income for Indigenous persons and households across the Port Pirie Regional Council is below the non-Indigenous average, reflecting national patterns.

2.5 Labour force

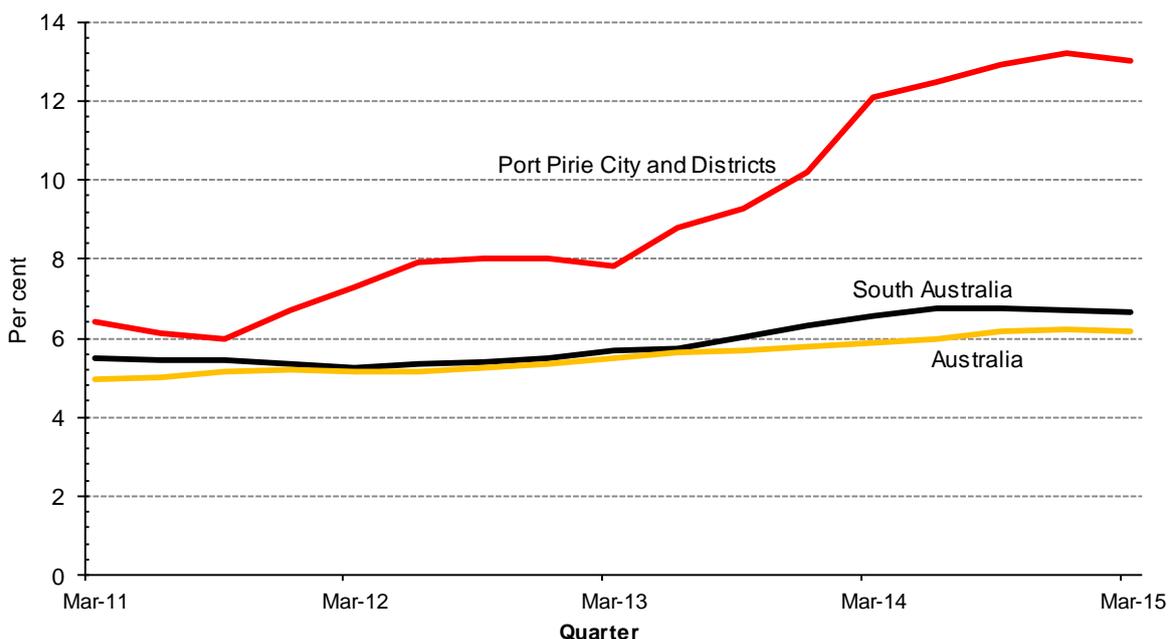
Estimates for the rate of unemployment and participation rate indicate the Port Pirie Regional Council area’s labour market is performing worse than the state average. As at the March quarter of 2015 the rate of unemployment for the Port Pirie Regional Council area was 13 per cent (smoothed estimate) compared with 7.8 per cent (trend estimate) across South Australia and 6 per cent Australia wide (see Table 2.4).

The employment to population ratio, which is regarded as the best indicator of labour market activity, is significantly lower in relative to the rest of the state (47.8 per cent cf. 56.5 per cent) indicates some persons have been discouraged from seeking work and have dropped out of the labour force.

Indigenous unemployment was more than double the rate of the total unemployment rate in the March quarter of 2015 based upon the Census 2011 which estimated the Indigenous unemployment rate to be 28.8 per cent.

Port Pirie has had consistently higher rates of unemployment than the rest of the state and Australia due to reliance on manufacturing (a declining industry) and in more recent times reduced mining activity across the state and Australia (see Figure 2). Since the March quarter of 2013 unemployment in the Port Pirie Regional Council has risen by 5.2 percentage points from 7.8 per cent to 13 per cent.

Figure 2.2: Unemployment rate, Port Pirie Regional Council, South Australia, Australia, March 2011 - March 2015



Note: Australian unemployment rate data is based on a 3-month moving average.
Source: Unemployment rates for the Port Pirie Regional Council and South Australia sourced from Department of Employment (2014) LGA data tables - Small Area Labour Markets - March quarter 2015. Unemployment rates for Australia sourced from ABS (2015a) Labour Force Australia, Jun 2015, Cat No. 6202.0

Table 2.4: Labour force, Port Pirie Regional Council, South Australia, Australia, total labour market (2015) and Indigenous (2011)

Labour market indicator	Port Pirie City and Districts		South Australia		Australia	
	Total labour market ^(a)		Total labour market ^(b)		Total labour market ^(b)	
	March qtr 2015	Indigenous ^(c) 2011	June 2015	Indigenous ^(c) 2011	June 2015	Indigenous ^(c) 2011
Unemployment rate (per cent)	13.0	28.8	7.8	18.0	6.0	17.1
Participation rate (per cent)	58.6 ^(d)	39.6	62.5	46.6	64.8	50.7
Employment to population ratio (2011 - Census)	47.8	28.2	56.5	38.2	57.9	42.0
Labour force (persons)	8,125	-	873,945	-	12,520,998	-
Unemployed (persons)	1,053	-	67,778	-	753,777	-
Employed (persons)	7,072	-	806,167	-	11,767,220	-

Note: (a) smoothed estimates for the March quarter 2015 unless otherwise indicated.

(b) trend estimates June 2015.

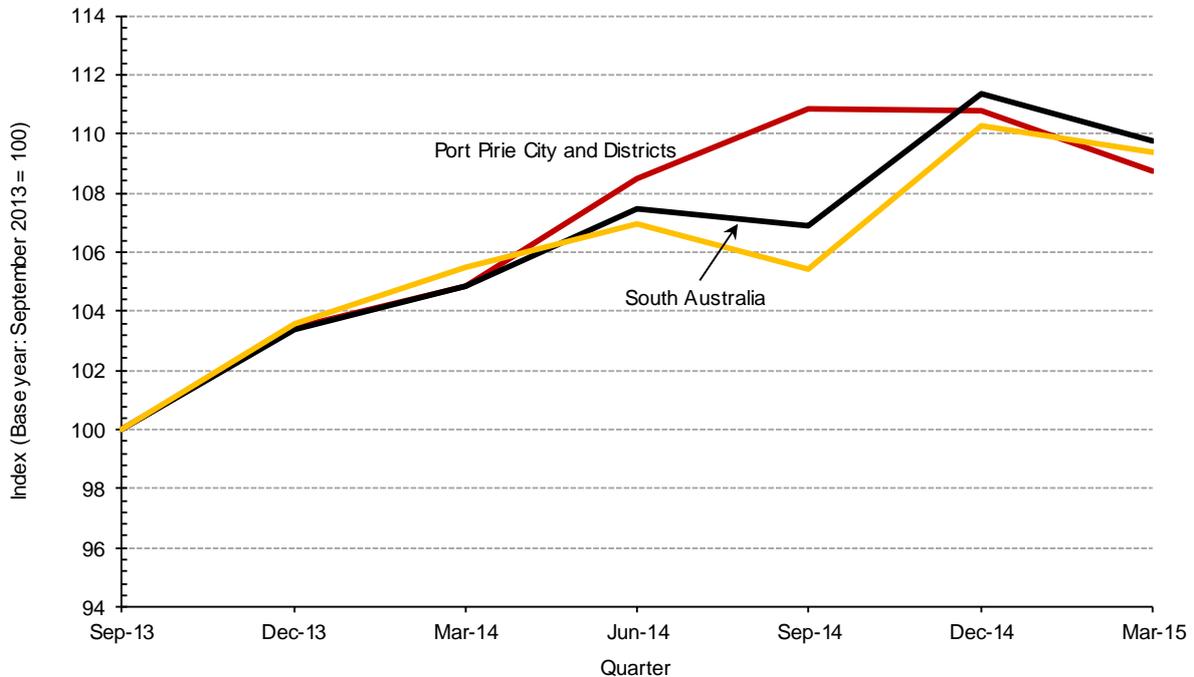
(c) Census estimates 2011.

(d) Calculated using working age population from the 2011 Census and the labour force estimate for the March quarter 2015.

Source: Department of Employment (2014) LGA data tables - Small Area Labour Markets, smoothed estimates - March quarter 2015. ABS (2011c, 2011d) Basic Community Profiles, Port Pirie and City Districts and South Australia, ABS Cat No. 2001.0, Table B37; ABS (2015a) Labour force Australia, June 2015, Cat No. 6202.0; ABS (2011b) ABS (2011b, 2011f, 2011g) Aboriginal and Torres Strait Islanders Peoples (Indigenous) Profile, Port Pirie and City Districts, South Australia and Australia, Cat No. 2002.0, Table I14.

A rise in the number on persons receiving Newstart Allowance across the Port Pirie Regional Council area corresponds with an increase in rate of Unemployment (see Figure 3). In the March quarter of 2015 there were 1,011 persons in receipt of Newstart Allowance an increase of 3.7 per cent over 12 months (up 36 persons).

Figure 2.3: Newstart Allowance recipients, Port Pirie Regional Council, South Australia, Australia, September 2013 – March 2015



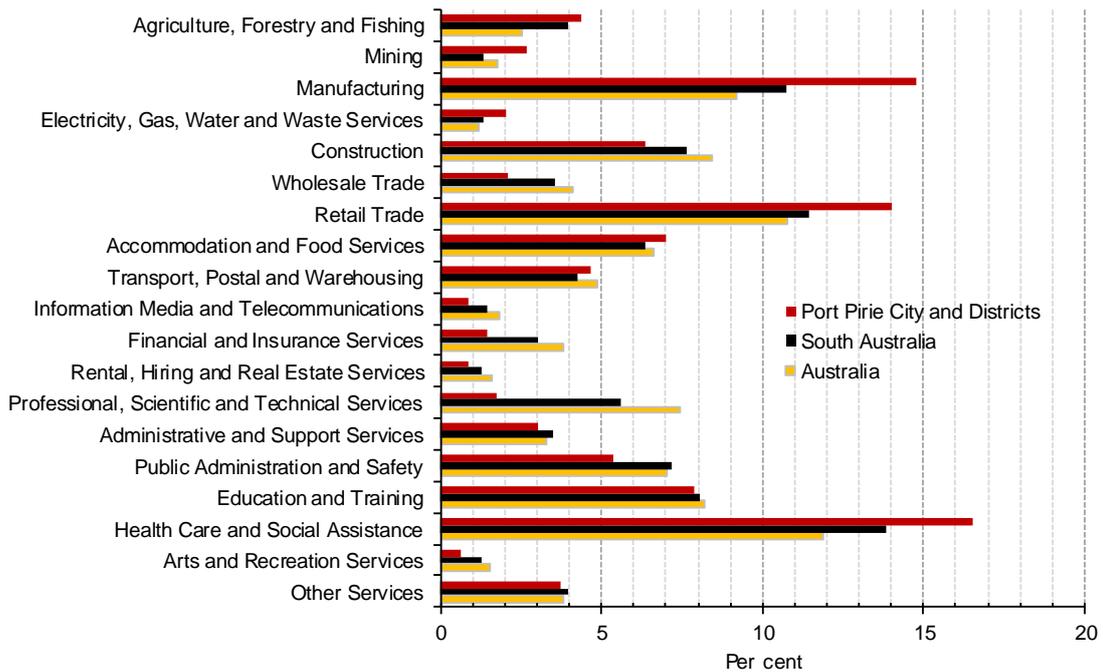
Source: DSS (2015), Payment Demographic Data

2.6 Employing industries

Employment in the Port Pirie Regional Council area is concentrated in the industries of health care and social assistance (16.5 per cent), manufacturing (14.8 per cent), retail trade (14 per cent) and education and training (7.9 per cent) (see Figure 2.4). Professional, scientific and technical services is a minor industry in the Port Pirie Regional Council area, accounting for only 1.7 per cent of employment compared with 5.6 per cent across South Australia and 7.4 per cent across Australia.

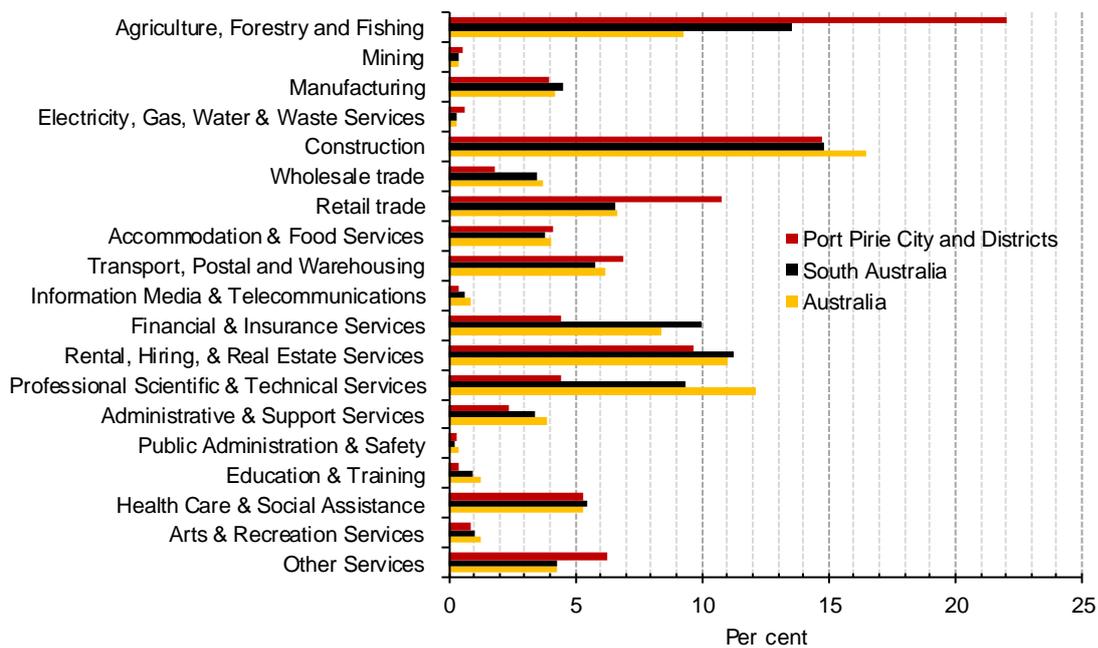
Persons with occupations such as Labourer, Machinery Operator and Sales Worker are more common in the Port Pirie Regional Council compared with South Australia and Australia, which have higher proportions of professionals (see Figure 2.5).

Figure 2.4: Employment by industry, Port Pirie Regional Council, South Australia and Australia, Census 2011



Source: ABS (2012) Table Builder Basic, 2011 Census of Population and Housing.

Figure 2.5: Employment by occupation, Port Pirie Regional Council, South Australia, Australia, Census 2011

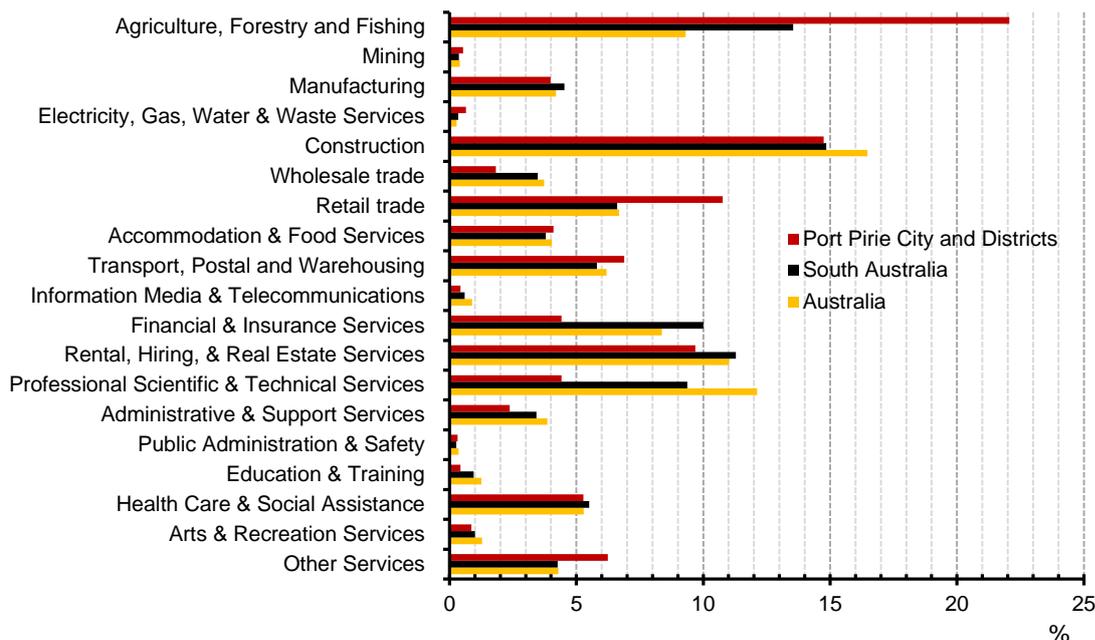


Source: ABS (2012) Table Builder Basic, 2011 Census of Population and Housing.

2.7 Businesses

Businesses across the Port Pirie Regional Council region are concentrated in agriculture, forestry and fishing (22.1 per cent), followed by construction (14.7 per cent) and retail trade (10.8 per cent) (see Figure 2.6). By comparison businesses in South Australia and Australia were much more likely to be in service industries such as professional scientific and technical services and financial and insurance services.

Figure 2.6: Business counts by industry, Port Pirie Regional Council, South Australia, Australia, 2013

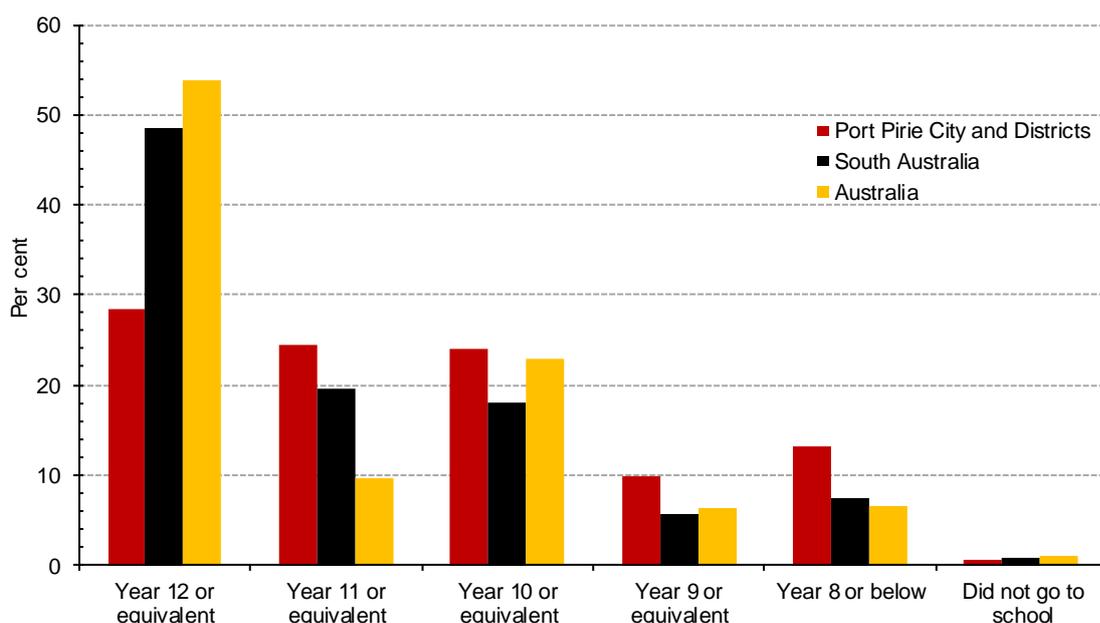


Source: ABS (2014a), National Regional Profile, Economy, 2009 to 2013, Cat No. 1379.0.55.001.

2.8 Education

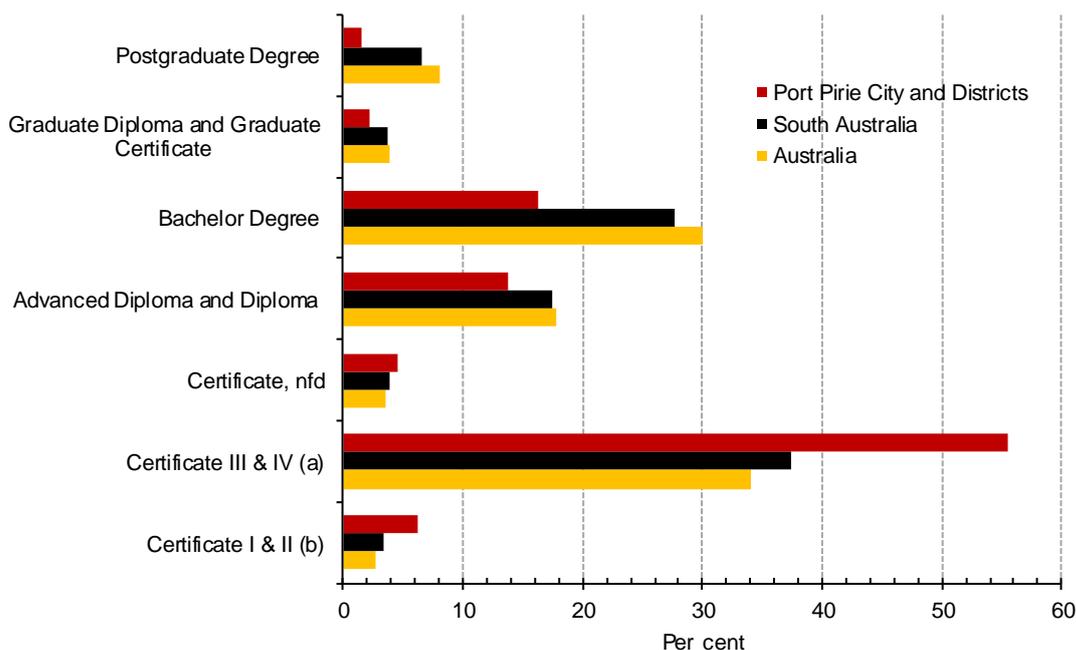
2011 Census estimates for highest year of schooling completed show that levels of educational attainment the Port Pirie Regional Council are significantly below the State and national average (see figure 2.7). Persons in the Port Pirie Regional Council area were much more likely to not to have completed year 12. This pattern can also be seen in the data on non-school qualifications with qualification levels at Certificate IV or below more common than the state and national averages, and qualifications at Diploma and above less common (see figure 2.7).

Figure 2.7: Highest year of schooling completed, Port Pirie Regional Council, South Australia, Australia, Census 2011, as a proportion of those aged 15+ who are no longer in



Source: ABS (2011c, 2011d, 2011e) Basic Community Profiles, Port Pirie City and Districts, South Australia, Australia, Cat No. 2001.0, Table B16

Figure 2.8: Non-school qualifications
Port Pirie City and Districts, South Australia, Australia, Census 2011



Note: (a) Includes 'Certificate III & IV Level, not further defined.
(b) Includes 'Certificate I & II Level, not further defined.

Source: ABS (2011c, 2011d, 2011e) Basic Community Profiles, Port Pirie City and Districts, South Australia, Australia, Cat No. 2001.0, Table B40b.

2.9 Social disadvantage

The relative socio-economic advantage or disadvantage of statistical regions in Australia is assessed by the ABS using a scoring system known as the Social Economic Indexes for Areas (SEIFA).² The SEIFA is standardised such that the average score is 1000, lower scores indicate higher rates of relative disadvantage and vice versa. The Port Pirie City and Districts statistical area has a SEIFA score of 882 (ABS 2011h) indicating that the council area is relatively disadvantaged. Indicators from the Social Health Atlas (PHIDU, 2015) indicate higher rates of social and economic disadvantage in the Port Pirie Regional Council region compared to South Australia and Australia (see Table 2.5). The council had approximately double the proportion long-term unemployed and youth unemployed (16-24 year olds receiving an unemployment benefit) compared to the state and national average. Lower levels of educational attainment, low incomes, narrow industry base and less opportunity contribute to higher rates of social disadvantage.

Table 2.5: Social and economic disadvantage, Port Pirie Regional Council, South Australia, Australia, June 2014

Indicator - per cent	Port Pirie City and Districts	South Australia	Australia
Age pensioners	85.0	73.7	69.5
People receiving an unemployment benefit longer than 6 months	10.2	5.6	4.3
Persons aged 16-24 years receiving an unemployment benefit	12.8	5.0	4.0
Children in low income, welfare-dependent families	38.3	26.0	23.3
Pensioner concession card holders	39.1	25.0	21.0

Source: PHIDU (2015) Social Health Atlas of Australia, Local Government Areas, South Australia, June 2015 release.

² For more information on how SEIFA is constructed see Explanatory notes of ABS (2011h), Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2011, Cat No. 2033.0.55.001.

2.10 Health

Residents of the Port Pirie Regional Council have lower levels of self-assessed health, higher rates of many health risk factors such as obesity and smoking, and higher rates of many forms of chronic disease (see Table 6).

Table 2.6: Health and wellbeing, Port Pirie City and Districts, South Australia, Australia, PHIDU, 2010 & 2011-13

Indicator - Age standardised rate per 100 persons	Port Pirie City and Districts	South Australia	Australia
Health status disability 2010			
Self-assessed health status of fair or poor (persons aged over 18 years)	20.9	17.9	16.6
Profound/severe/moderate/mild core activity restriction (persons aged over 18 years)	13.1	11.2	11.7
Estimates of self-assessed health 2011-13			
Self-assessed health status of fair or poor (persons aged over 15 years)	19.7	15.6	14.6
Estimated population with chronic diseases 2011-13			
Diabetes mellitus (persons aged over 18 years)	7.2	6.5	5.4
High blood cholesterol (persons aged over 18 years)	34.3	34.7	32.8
Estimated total population with mental and behavioural problems	17.0	14.7	13.6
Circulatory diseases - persons aged two years and over	18.1	16.9	17.3
Hypertensive disease	10.5	10.4	10.2
Respiratory diseases	31.7	30.9	28.7
Asthma	14.0	10.8	10.2
Chronic obstructive pulmonary disease	2.7	2.2	2.4
Musculoskeletal diseases	31.3	28.1	27.7
Arthritis	19.0	15.6	14.8
Estimates of risk factors 2011-13 (persons aged 18 years and over)			
Population who are current smokers	25.9	18.6	18.0
Population consuming alcohol at levels considered to be a high risk to health	4.8	3.9	4.6
Total population who were overweight (but not obese)	35.9	36.7	35.3
Total population who were obese	34.9	29.5	27.5

Source: PHIDU (2015) Social Health Atlas of Australia, Local Government Areas, South Australia, June 2015 release.

2.11 Summary of region

In comparison to South Australia and Australia the Port Pirie City and Districts region can be summarised as:

- located approximately 228kms north of Adelaide, sparsely populated with the majority of persons residing in Port Pirie City the region's main service centre;
- above average rates of unemployment and below average rates of labour force participation;
- lower personal and household weekly incomes, narrow industry base, economic activity based around resources and processing, primary products and farming, heavily reliant on manufacturing, mining, construction and retail trade for employment;
- lower rates of educational attainment and professional qualifications, higher proportions of certificate level qualified persons;
- greater levels of social disadvantage, long-term unemployed, youth unemployment, concession card holders, children in low income families;
- poorer general health and well-being in terms of indicators on health status disability, self-assessed health, chronic diseases and risk factors.

3. The Proposed Redevelopment

Current sports facilities in Port Pirie are aged and no longer suit the needs of the community. Due to the age and volume of sports facilities owned by the council maintenance costs are high: there is a need for modern sports and leisure facilities.

When sports facilities were established in Port Pirie (at least 30 years ago for most facilities) they were not so much planned as evolved, the result is that facilities are spread throughout Port Pirie. As such, the proposal includes relocating most facilities to the same precinct.

The proposal intends to reduce the number of sports facilities in Port Pirie by relocating select sports from six facilities to four. The facilities affected by the proposal are the Memorial Oval, Swimming Pool Complex, YMCA, Savoy Park, Pirie West Oval and Globe Oval.

Council has identified several problems with current facilities. Problems with Memorial Oval are that:

- there is inadequate lighting for night-time sports, specifically baseball, football and cricket;
- the canteen is unlikely to meet current health standards, for example there is no hot running water in the canteen;
- change rooms are not big enough and do not have shower and toilet facilities that meet modern requirements;
- viewing facilities are limited and contain asbestos; and
- there are no facilities to host after match events that may increase club incomes.

The proposed redevelopment at the Memorial Oval precinct will make it possible to host more sports at the precinct. Removing the cycling track currently at the site will enable Memorial Oval to be expanded. Memorial Oval will be upgraded with new lighting, new fencing, upgrades to the heritage grandstand and a new scoreboard. A new building built on site to service the needs of clubs. The Pirie West Oval will be incorporated into the site and will get a new scoreboard.

The swimming pool was upgraded and relined in 2009 but the surrounds were not. The canteen, kiosk, toilets, entrance and change facilities are not generally accessible to those with a disability and require upgrades. The proposal includes renovations to the swimming pool surrounds to include a new amenities block and facilities to accommodate gymnastics, squash, and other related activities. The new building will also have meeting rooms and wet and dry change rooms.

Savoy Park is currently used by a soccer club but it has ageing and inadequate facilities. The club owns the grounds but this is a financial burden. The new Memorial Oval precinct will incorporate this soccer club and therefore make the maintenance of Savoy Park unnecessary.

Pirie West Oval is owned and managed by the Port Pirie West Primary School. Facilities and services at the oval are not of an acceptable standard and the oval itself is in poor condition. There is also inadequate lighting at the oval. The cost of maintaining the oval is a financial challenge to the school. The new Memorial Oval precinct would incorporate Pirie West Oval improving the quality of the oval surface and the available facilities, with the maintenance costs being shared between the school and the council.

Box 3.1: Changes to be made to sites

Memorial Oval precinct	Swimming Pool Site	Croquet Club
<ul style="list-style-type: none"> • remove cycling track and associated fencing • removal of buildings and structures at the Memorial Oval site that are no longer required, including football clubrooms, croquet clubrooms and greens and toilets in the centre and south of the site • new fence between ovals and lawn bowls • maintain Memorial Oval in current configuration with: <ul style="list-style-type: none"> ➢ upgraded fencing to allow general access and controlled access for events ➢ expansion of oval to old bike track ➢ revision to levels and irrigation ➢ a new electronic scoreboard ➢ realignment of cricket pitches and cricket oval ➢ new lighting • incorporation of Pirie West Oval into site • revision of car parking layout and improvements to surfaces • provide new cricket nets and baseball batting cage • new coaches/players' boxes for both ovals • new electronic scoreboards for both ovals • maintain and upgrade existing heritage grandstand • upgrade seating in grandstand • new building with: <ul style="list-style-type: none"> ➢ change rooms ➢ first aid/strapping rooms ➢ umpires rooms ➢ canteen ➢ toilets ➢ viewing areas ➢ bar facilities ➢ kitchen facilities ➢ meeting and function spaces ➢ media/scorers area ➢ cleaner's area ➢ an area for clubs to store memorabilia 	<ul style="list-style-type: none"> • demolish the existing main pool building and sheds • revision of fencing to the pool area • a new store shed for pool equipment and a new shed for filtration etc. • new main building on the swimming pool site with: <ul style="list-style-type: none"> ➢ reception, canteen and shop ➢ administration ➢ staff lunch room ➢ staff toilets ➢ meeting rooms ➢ first aid room ➢ squash courts ➢ gymnastics hall ➢ viewing areas ➢ cleaner's area ➢ general public amenities 	<ul style="list-style-type: none"> • relocate croquet club and greens to new location • new transportable building at the new facility that includes: <ul style="list-style-type: none"> ➢ meeting space ➢ kitchenette ➢ office ➢ unisex accessible toilet • two new croquet greens • perimeter fencing for the club

Globe Oval is used for football, cricket and softball training. As with other ovals included in the proposal lighting is inadequate. The facilities at the oval (change rooms and toilets) are aged and inadequate. The oval and facilities are costly to maintain.

The former YMCA facility, which is used by both the squash and gymnastics clubs,³ has been sold and is scheduled for demolition, both clubs therefore need to find new facilities. Also, the provision of a specific space for the gymnastics club will mean that their equipment can be permanently set up as opposed to the current situation where equipment must be set up and taken down for each session held in the high school gymnasium.

There is also an allowance in the budget to relocate the croquet club. Box 3.1 outlines specific changes to be made.

Improvements to the Memorial Oval and Swimming Pool precincts will result in Globe Oval and Savoy Park being excess to requirements, as Council intends to incorporate sports played at these ovals into the new facility. Therefore, council intends to sell part of Globe Oval for residential development with the remainder of Globe Oval being retained as a reserve. It has also been assumed that the Savoy Soccer Club will sell Savoy Park once the redevelopment is completed.

Benefits of the proposal listed by the Council in a special edition of their newsletter (Pirieodical) about the sports development were:

- replacement of old sporting infrastructure that is beyond its usable economic life;
- reduction in operating and maintenance costs;
- facilities will meet current needs and standards;
- event tourism will increase;
- there will be cost savings to Council, clubs, associations and the general community; and
- the development provides opportunities for economic growth.

³ The gymnastics club also uses a high school hall.

4. Impact of Expenditure

4.1 Assessing economic impact

The gross economic impact of the proposed Port Pirie Sports Precinct was assessed using an Input-Output model. The construction and operational phases were modelled separately, and the construction impact is modelled separately for each of the three years of construction. The methodology employed involves estimating the total direct and indirect employment and gross regional product arising from expenditures on the Sports Precinct.

The impacts were modelled using the detailed (78 industry sector) 'Yorke and Mid-North' Input Output tables developed for the Department of Premier and Cabinet, modified to adjust for actual and projected changes in the compensation of employees by sector.

An input-output table describes the linkages between sectors of the economy based on their patterns of purchase and supply. For each of the sectors in the economy (e.g., accommodation, cafes and restaurants; food and beverages manufacturing) it details the inputs the sector uses (to produce output in the case of producing sectors; for consumption in the case of "consumer" sectors), and what sectors it sells its output to.

The intuition of the input-output approach is best illustrated by example. Suppose the Port Pirie Council spends \$1,000 on landscaping services from a local contractor. That landscaping contractor then uses the \$1,000 to purchase inputs from "primary" and "intermediate" suppliers. "Primary" suppliers are employees, providers of capital, indirect taxation, and "imports" from suppliers of goods and services located outside of the Port Pirie region. Primary income payments are therefore labour compensation (wages), profits to owners, indirect taxes (net of subsidies) and imports. The landscaping contractor will also purchase inputs (e.g., fuel, plants, soil, tools etc.) from intermediate suppliers in the Port Pirie region which, by and large, are other business. Payments to those business enterprises then flow to their own primary incomes and intermediate suppliers. And this process carries on repeatedly, with ultimately all of the payments flowing to primary incomes. The input-output table lets us trace through, and aggregate, this chain of impacts.

The employment to output ratios in the 'Yorke and Mid-North' IO table have been adjusted to allow for increased in actual wage costs by broad sector from 2006-07 to 2015, and then to reflect projected changes in wage rates for the following four years. This involves discounting the published multipliers by just under 14 per cent on average. The discounting factor is based on the average rate of labour cost inflation in by broad industry in Australia over this period (ABS, 2014b).

The modified Port Pirie input-output table was then transformed to derive input-output multipliers (see Box 4.1) for expenditures in Port Pirie in 2015/16, 2016/17, 2017/18 and 2018/9. It was assumed that maintenance and operational costs would, on average, increase in line with projected increases in the wage price index, hence the 2018/19 input output multipliers were used to assess the real impacts of the operational phase for each year thereafter.

The multipliers were then combined with annual expenditure data to estimate the direct and indirect impacts of the Port Pirie Sports Precinct on the Port Pirie economy, in terms of the employment and gross regional product created.

Limitations of the Approach

There are some important limitations associated with input-output models that should be considered when interpreting the results of the input-output analysis.

Box 4.1 Input-output multipliers

An increase in the output of one industry will (at least in gross terms) lead to increased outputs in other sectors due to the purchases for intermediate inputs to production, and the spending of capital and labour income locally. A multiplier measures the total change across the entire regional economy arising from a unit change in the final demand for the output of an industry (the initial “shock” to the model). Multipliers can be calculated for a range of economic variables, such as individual and business income, gross value added, and employment, according to one’s interest.

In some cases the interest in the model results will be restricted to Type I impacts, also known as the production impact. This is the impact of the initial expenditure traced through the chain of intermediate good usage for the relevant industry sectors. However, no allowance is made for the expenditure of primary incomes (e.g. increases in local wage and capital income arising from the change in production). The total impact of an output change is derived from the production and consumption impacts. The consumption impact arises when primary factors – e.g. households in receipt of wage income – spend the incomes that they receive.

Most importantly, the results of input-output models represent the **gross** impacts in the absence of capacity constraints. In reality, except in economic downturns where there is substantial unused labour and capital, anything that boosts one form of economic activity is likely to increase wages and returns to capital to attract the additional resources it needs, this in turn leads to reduced economic activity in other sectors or regions. At the national level, the net impact of any new project on employment is likely to only be a small fraction of the gross impact when the national economy is close to full employment, with the benefits coming through increased wages and increased returns to capital. At the regional level (particularly for small regions) net impacts can be much closer to gross impacts as labour and capital can be drawn in from surrounding regions, and there can be existing unemployed labour and capital.

Secondly, in the absence of a better alternative, the South Australian input-output tables are based on data that would only approximate the actual pattern of linkages between industries in the Port Pirie regional economy. No input-output data is available for the Port Pirie region. Instead, in developing the regional I-O table the ABS’s Australian Input Output table was modified to reflect the local distribution of economic activity and therefore likely consumption of intermediate inputs to production from suppliers in the region, and conversely, likely “leakages” out of the region for goods and services purchased from suppliers outside the region - using a technique called locational quotients. And the Australian level input-output table on which the local tables are based is now rather dated.

Thirdly, an input-output analysis assumes that the industrial structure of the pre-existing regional economy remains unchanged as a result of the new project. This will not necessarily be the case as the structure of the regional economy can change to take advantage of the opportunities arising from the new project. For example, the extent to which mining companies in Western Australia have to source specialist business and financial services from firms interstate is much lower than it was 30 years ago as firms have opened offices in Perth to take advantage of the opportunities arising from Western Australia’s resources boom.

Given the scale of the proposed development, and its complementary nature to the existing industry structure of Port Pirie, this limitation is unlikely to be significant.

Finally, in interpreting the modelling impact on employment it should be noted that the estimates of the model effectively represents an increase in estimated hours worked which has been converted to full-time equivalent positions. In many cases the modelled impact (to the extent that the net impact matches the gross impact) will occur through increases in the hours worked by existing employees rather than the creation of new positions.

4.2 Construction phase

Construction activity for the redevelopment is spread over three years, with the greatest amount of activity occurring in 2017/18. The estimated total spending on the redevelopment was applied as a shock to the 'other construction' sector.

Table 4.1: Gross impact of construction activity, FTE employees by year

	2015/16	2016/17	2017/18
Gross Direct Project Employment	5.3	12.7	19.7
Total Gross Employment Impact	10.5	25.3	39.1

Given the current level of unemployment in Port Pirie (see section 2.6) it is regarded as unlikely that the construction activity associate with the redevelopment would cause wage pressures in the local labour market. As such, the net impacts are likely to match the gross impacts.

4.3 Operational phase

Any change to direct employment in the operational phase, and the extent to which it represents a net increase in total activity is currently unknown and is therefore not included in this analysis.

The redevelopment will give the city much greater scope to host sporting events with the potential to attract intrastate and interstate visitors, such as the Masters Games, AFL NAB cup matches, junior and amateur soccer tournaments, and gymnastics and cheerleading events and competitions. The council estimates potential attendance at these events (based on past events such as the Masters Games) at 3,000 visitors for each large scale event staged at the Memorial Oval and 1,200 visitors (including competitors) for each gymnastics or cheerleading event. Council assumes that 2 events at the Oval and 3 gymnastics or cheerleading events would be able to be secured each year once the redevelopment is completed.

The value of spending associated with these visitor numbers has been calculated using data from Tourism Research Australia (2015) on the average spend per visitor night in regional areas (\$138 per night in 2014/15 values) converted to 2015/16 nominal values using an expected inflation rate of 2.5 per cent. This gives a total impact of \$2.3 million.

The spending was allocated between sectors using the average distribution of expenditure by overnight domestic visitors whose purpose of trip was a holiday with long distance travel costs excluded from the calculation, with the following sectors in the input output table experiencing additional spending.

- Retail;
- Accommodation;
- Food and Beverages;
- Road Transport; and
- Cultural and recreational services.

The total annual impact is expected to increase employment by 18.5 FTEs for each year from 2018/19. The direct 'project' related employment in the affected sectors is estimated to be 13.0 FTEs.

The impact on regional gross value added (the regional equivalent of GDP) is expected to be \$1.8 million per annum from 2018/19 on.

Given the irregular nature of the impacts from event tourism the increases in FTEs will be larger during the events and lower for the remainder of the year. Businesses are likely to adjust to this through a combination of taking on additional casual employees around an event and through increasing the hours of existing workers.

As discussed in section 2.6 there are currently a large number of unemployed persons in Port Pirie, which should mean that these gross impacts have little or no impact on prevailing wages. Therefore it would be reasonable to expect the net impacts to be similar to the gross impacts.

5. Cost Benefit Analysis

5.1 Methodology

The cost benefit analysis is an economic evaluation, which aims to value costs and benefits of the project for the broad community, irrespective of the incidence of those costs and benefits. A financial analysis, in contrast, focuses on impacts from the point of view of a particular stakeholder.

For the purposes of the economic evaluation we are interested in the value of resources (broadly defined) that are created or consumed. Although information about transactions may be used to value resources, we are not directly interested in transactions that occur. For example, the South Australian Government subsidy to the project is not regarded as a benefit of the project; the benefit lies in the service stream produced by the project. Nonetheless, it can be useful to show transactions in the benefit cost analysis in order to observe the financial impact on particular stakeholders.

The approach taken for the Cost Benefit Analysis is consistent with the guidelines issued by the Australian Government.

The cost benefit analysis was conducted over a period of 25 years commencing in 2015/16. A real discount rate of 7 per cent was applied to the analysis, with sensitivity analysis undertaken using real discount rates of 3 per cent and 10 per cent. A residual asset value is included so as to make allowance for the service provided beyond that time.

It has been assumed that the construction activity is spread over the first three years of the analysis period starting in 2015/16 with the facilities available for community use at the start of 2018/19.

The analysis is conducted in real terms and all cash flows are entered in 2014/15 prices. Therefore no assumptions need to be made about actual inflation outcomes

Only first round impacts of establishing a new facility are considered. This is done in order to avoid any potentially contentious issues arising from multiplier effects, and difficulties in identifying the extent to which any changes represent a net increase in spending rather than a transfer between uses. An input output analysis exploring the potential gross employment and gross value added impacts of the project is provided in Chapter 5.

5.2 Results of the cost benefit analysis

Each of the base case and the redevelopment scenario have quantifiable benefits that outweigh their costs, with net benefits of \$32 million and \$54 million respectively.

Assessing the incremental benefits and costs of the redevelopment scenario relative to the base case, total costs are \$19.6 million higher, and total quantifiable benefits are \$42.3 million higher, with net benefits \$22.6 million higher than in the base case. This gives the redevelopment scenario a cost benefit ratio of 2.2 relative to the base case.

There are a number of benefits that were unquantifiable, with slightly more unquantifiable benefits occurring under the redevelopment scenario.

Table 5.1: Result of the cost benefit analysis, net present values over a 25 year analysis period (\$,000 2015/16 values)

	Base Case	Redevelopment scenario	Incremental change relative to base case
Port Pirie Council			
COSTS			
Capital costs			
Works to Memorial Oval Precinct	1,900	8,318	6,418
Works to Swimming Pool site	1,223	4,887	3,664
Works to Globe Oval	930		-930
Croquet Club relocation		455	455
Once off operating expenditure		561	561
Ongoing operating costs	3,242	3,677	435
Total Port Pirie Council Costs	7,295	17,898	10,603
BENEFITS			
Usage fees charged to clubs	243	311	68
Commonwealth government grant		4,522	4,522
State government grant		4,522	4,522
Residual value of capital works		374	374
Revenue from function hire of facilities		436	436
Sale of Globe Oval land parcel		187	187
Total Port Pirie Council Benefits	243	10,352	10,109
Port Pirie Council Net Benefits/Costs	-7,052	-7,546	-494
Savoy Soccer Club			
COSTS			
Capital costs	0	0	0
Maintenance costs	499	112	-386
Usage fees at Memorial Oval site	0	77	77
Total Savoy Soccer Club Costs	499	190	-309
BENEFITS			
Participation in soccer - players	243	261	18
Participation in soccer - spectators	632	691	59
Sale of Savoy Park		93	93
Total Savoy Soccer Club Benefits	874	1045	171
Savoy Soccer Club Net Benefits/Costs	376	855	480
Community			
COSTS			
Usage fees at facilities for sports clubs	243	243	0
Function fees at facilities	0	436	436
Other costs of attending functions	0	436	436
Port Pirie West Primary School contribution to oval maintenance costs	686	686	0
Port Pirie Regional Gymnastics Academy - set up costs	584	0	-584
Total community costs	1,513	1,800	287
BENEFITS			
Open space at Globe Oval	nq	nq	nq
Open space at Savoy Park	nq	0	nq
Value of sport played at Memorial and Globe Ovals - players	14,247	16,948	2,701
Value of sport played at Memorial and Globe Ovals - spectators	11,974	13,263	1,289
Participation in gymnastics	5,142	9,472	4,330
Participation in squash	175	876	701
Participation in swimming	8,473	8,657	184
Increased population	0	nq	nq
Increased property values neighbouring development	0	nq	nq
Value of additional events tourism	0	21,794	21,794
Function revenue for sports clubs	0	814	814
Benefit of attending functions	0	582	582
Total Community Benefits	40,010	72,406	32,396
Community Net Benefits/Costs	38,497	70,605	32,108
Commonwealth Government			
COSTS			
Commonwealth Grant	0	4,522	4,522
Total Commonwealth Costs	0	4,522	4,522
Commonwealth Government Net Benefits/Costs	0	-4,522	-4,522
State Government			
COSTS			
State Grant	0	4,522	4,522
Total State Government Costs	0	4,522	4,522
State Government Net Benefits/Costs	0	-4,522	-4,522
TOTAL COSTS	9,306	28,932	19,626
TOTAL BENEFITS	41,128	83,803	42,675
NET PROJECT BENEFITS/COSTS	31,821	54,870	23,049
COST BENEFIT RATIO			2.2

Note: 0 indicates that there is no cost of benefit for the item under that scenario, nq indicates that the value of the cost or benefit could not be quantified.

5.3 Parameters used to assess the base case scenario

The base case scenario is a business as usual scenario. Only necessary expenditures are made. In the base case, some facilities will need modifications to so they meet current building and safety standards. The base case assumes that usage at sports facilities remains unchanged.

Upgrade costs at Memorial Oval facilities (cost item)

Current sporting facilities in Port Pirie are aged and a number are not compliant with current building standards. Therefore, if the base case were to proceed, council would need to modify these buildings to make them compliant.

At Memorial Oval the following modifications are necessary:

- upgrade to the canteen;
- upgrades to the grandstand;
- new change rooms;
- new scoreboard;
- new oval lighting;
- replacement of cycling track; and
- returf the oval and install new irrigation.

An upgrade to the canteen would make it comply with current health regulations. Currently there is no hot running water. Food safety standards require that supply of water is potable and available at a volume, pressure and temperature that is adequate for the purposes of the water. Water supply at the canteen does not meet these standards. Council has also stated that the canteen is beyond its useable life. Council estimates that upgrades to the canteen will cost \$300,000.

The grandstand at Memorial Oval is locally heritage listed. However, it needs upgrades and maintenance in order for it to continue to meet requirements, be safe and to be of a standard appropriate for a heritage structure. The roof on the grandstand is asbestos, in the base case this will be replaced with Colorbond roofing, council estimates that this will cost \$200,000. The flooring, seating and time keepers' box will be upgraded at a cost of \$80,000. There is cracking and damage from salt damp below the grandstand, council estimates that to repair this it will cost \$20,000. The structure is in need of painting and council estimates that this will cost \$40,000.

The current change rooms are past their useful life as they are no longer large enough for sports played at the oval and do not have showers and toilets that meet modern standards. Council estimates that replacing the change rooms will cost \$600,000.

The scoreboard at Memorial Oval does not comply with appropriate workplace health and safety standards therefore it needs to be replaced. Council estimates that a new scoreboard will cost \$40,000.

Lighting at the oval will be replaced in the base case as it currently does not meet standards. Council estimates that this will cost \$350,000.

The cycling track around the oval is no longer used. It is a safety hazard for sports using the oval, as it is concrete. Council estimates that removing and replacing the cycling track will cost \$70,000.

The turf on the oval needs replacing, as does irrigation. Council estimates that this will cost \$200,000.

Port Pirie Regional Council would incur these costs. As these works are urgent, the analysis assumes they all occur in 2015/16.

Upgrade costs at Port Pirie Swimming Pool facilities (cost item)

The large swimming pool was upgraded in 2009 however, other facilities at the swimming pool site were not. Council estimates that required upgrades to facilities will cost \$1.55 million.

Estimates include \$700,000 to replace the current small pool as it is cracking and damaged from ground movement, the analysis assumes this expenditure occurs in 2019/20. There is an allowance of \$800,000 to replace the amenities and canteen blocks due to damage from ground movement and them not being disability access compliant; the analysis assumes this cost occurs in 2018/19. The final component is \$50,000 to replace the pump shed as it is nearly 60 years old; the analysis assumes this cost will occur in 2020/21.

Port Pirie Regional Council would incur these costs.

Upgrade costs at Globe Oval (cost item)

The toilet block and change rooms at Globe Oval are not disability compliant and are past their useable lives. Council estimates that replacing the toilet block will cost \$180,000 and replacing the change rooms will cost \$600,000.

Lighting at Globe Oval is substandard and thus will be replaced in the base case. Council estimates that it will cost \$150,000 to replace the lighting.

Port Pirie Regional Council would incur these costs. The analysis assumes that due to noncompliance issues these costs will occur in 2015/16.

Ongoing operating costs (cost item)

If the base case proceeds, council will incur maintenance costs on Memorial Oval, Pirie West Oval and Globe Oval. Council estimates that these costs are \$143,000, \$5,000 and \$112,000 annually respectively. These costs occur annually from year 1 and are assumed to remain constant in real terms.

Port Pirie Regional Council would incur these costs.

Value of participation in soccer at Savoy Soccer Club (benefit item)

Participation in soccer at the Savoy Soccer Club at the venues in question was estimated from data provided by the council on membership of the club and data from the club website on the number of home games per season.

The value of participation in soccer contains two elements, the intangible value of the activity to participants and the health benefits they receive from being physically active.

In the absence of contingent valuation studies on the value placed on sports, we have valued participation based on the time spent playing and training. This is likely to underestimate the value of participation in sport as it effectively assumes that the value of participation is only equal to the value of the time spent, whereas for many players it will be higher.

The value of players' time is based on the values recommended for household time (\$17.5 per hour in 2011 dollars) in SA government guidance on regulatory impact assessments (SACES, 2011) updated to 2015 nominal values and then increased at a real rate of 1.5 per cent per annum thereafter.

The annual health benefit of being physically active is assumed to be \$500 in 1998 US dollars (WHO quoted in Frontier Economics (2009). This was converted to a weekly value and applied per match/game participated in. The value was converted to Australian dollars at the average exchange

rate in 1998 (RBA, 2010) and then to nominal 2015 values using the change in nominal GDP per capita (ABS 2015b). It was assumed to increase at a real rate of 1.5 per cent thereafter.

Value of watching soccer at Savoy Soccer Club (benefit item)

The number of spectators attending soccer at the Savoy Soccer Club was estimated from data provided by the council on attendance and data from the club website on the number of home games per season.

In the absence of contingent valuation studies on the value placed on viewing sports, we have valued attendance based on the time spent watching the game. This is likely to underestimate the value of watching sport as it effectively assumes that the value is only equal to the value of the time spent, whereas for many spectators it will be higher.

The value of spectators' time is based on the values recommended for household time (\$17.5 per hour in 2011 dollars) in SA government guidance on regulatory impact assessments (SACES, 2011) updated to 2015 nominal values and then increased at a real rate of 1.5 per cent per annum thereafter.

User fees charged to clubs (transfer)

Council currently charges sports clubs to use facilities. Under the base case these charges will be unchanged. This is a transfer from sporting clubs to the Port Pirie Regional Council and is netted out in the analysis. It is assumed that usage fees are \$19,500 annually.

Port Pirie West Primary School contribution to Pirie West Oval maintenance costs (cost item)

The Port Pirie West Primary School currently owns and manages the Pirie West Oval. This costs the school \$55,000 annually. This cost occurs annually from year 1 and is assumed to remain constant in real terms.

Maintenance costs at Savoy Park (cost item)

Council estimates that it costs the Savoy Soccer Club \$40,000 annually to maintain their facilities. These costs occur annually from year 1 and are assumed to remain constant in real terms.

Gymnastics Set-up costs (volunteer time) (cost item)

Currently the Port Pirie Regional Gymnastics Academy does not have permanent facilities. They use the YMCA building (to be demolished) and the John Pirie Secondary School hall for training. As such, equipment cannot be permanently set up. Volunteers have to set up and pack up equipment for each session.

Based on information supplied by the council we assume that setting up and packing away the equipment takes 40 volunteer hours per week.

The value of volunteers' time is based on the values recommended for household time (\$17.5 per hour in 2011 dollars) in SA government guidance on regulatory impact assessments (SACES, 2011) updated to 2015 nominal values and then increased at a real rate of 1.5 per cent per annum thereafter.

Value of open space at Globe Oval (benefit item)

If the base case were to proceed, all of Globe Oval would remain open space. The existence of open space usually has a benefit for neighbouring residents, however it has not been possible to quantify this benefit. This is an annual benefit to the community.

Value of open space at Savoy Park (benefit item)

If the base case were to proceed, Savoy Park would remain open space. The existence of open space usually has a benefit for neighbouring residents, however it has not been possible to quantify this benefit. This is an annual benefit to the community.

Value of participation in sports undertaken at Memorial Oval, Globe Oval and Port Pirie West Oval (benefit item)

Participation in sport at the venues in question was estimated from data provided by the council on membership of the respective clubs and the length of sporting seasons.

The value of participation in Australian Rules Football, Cricket and Baseball contains two elements, the intangible value of the activity to participants and the health benefits they receive from being physically active.

In the absence of contingent valuation studies on the value placed on sports, we have valued participation based on the time spent playing and training. This is likely to underestimate the value of participation in sport as it effectively assumes that the value of participation is only equal to the value of the time spent, whereas for many players it will be higher.

The value of players' time is based on the values recommended for household time (\$17.5 per hour in 2011 dollars) in SA government guidance on regulatory impact assessments (SACES, 2011) updated to 2015 nominal values and then increased at a real rate of 1.5 per cent per annum thereafter.

The annual health benefit of being physically active is assumed to be \$500 in 1998 US dollars (WHO quoted in Frontier Economics (2009). This was converted to a weekly value and applied per match/game participated in. The value was converted to Australian dollars at the average exchange rate in 1998 (RBA, 2010) and then to nominal 2015 values using the change in nominal GDP per capita (ABS 2015b). It was assumed to increase at a real rate of 1.5 per cent thereafter.

Value of watching sports undertaken at Memorial Oval, Globe Oval and Port Pirie West Oval (benefit item)

The number of spectators attending sport at the venues in question was estimated from data provided by the council on attendance and the length of sporting seasons.

In the absence of contingent valuation studies on the value placed on viewing sports, we have valued attendance based on the time spent watching the game. This is likely to underestimate the value of watching sport as it effectively assumes that the value is only equal to the value of the time spent, whereas for many spectators it will be higher.

The value of spectators' time is based on the values recommended for household time (\$17.5 per hour in 2011 dollars) in SA government guidance on regulatory impact assessments (SACES, 2011) updated to 2015 nominal values and then increased at a real rate of 1.5 per cent per annum thereafter.

Value of participation in gymnastics (benefit item)

Participation in sport at the venues in question was estimated from data provided by the council on membership of the respective clubs and the length of sporting seasons, with 90 children currently participating in gymnastics or cheerleading programs.

As roughly half of the gymnastics program is currently delivered in the former YMCA building that will be demolished at some point in the future, and as there is little capacity to expand participation in the school gymnasium, we have assumed that participation will fall by 50 per cent from year four on in the base case.

In the absence of contingent valuation studies on the value placed on gymnastics, we have valued participation based on the time spent playing and training. This is likely to underestimate the value of participation in sport as it effectively assumes that the value of participation is only equal to the value of the time spent, whereas for many players it will be higher.

The value of participants' time is based on the values recommended for household time (\$17.5 per hour in 2011 dollars) in SA government guidance on regulatory impact assessments (SACES, 2011) updated to 2015 nominal values and then increased at a real rate of 1.5 per cent per annum thereafter.

The annual health benefit of being physically active is assumed to be \$500 in 1998 US dollars (WHO quoted in Frontier Economics (2009)). This was converted to a weekly value and applied per match/game participated in. The value was converted to Australian dollars at the average exchange rate in 1998 (RBA, 2010) and then to nominal 2015 values using the change in nominal GDP per capita (ABS 2015b). It was assumed to increase at a real rate of 1.5 per cent thereafter.

Value of participation in squash (benefit item)

Squash is undertaken at the former YMCA building. The council has provided data on the weekly number of squash games played.

The value of participation in squash contains two elements, the intangible value of the activity to participants and the health benefits they receive from being physically active.

In the absence of contingent valuation studies on the value placed on squash, we have valued participation based on the time spent playing. This is likely to underestimate the value of participation in squash as it effectively assumes that the value of participation is only equal to the value of the time spent, whereas for many players it will be higher.

The value of players' time is based on the values recommended for household time (\$17.5 per hour in 2011 dollars) in SA government guidance on regulatory impact assessments (SACES, 2011) updated to 2015 nominal values and then increased at a real rate of 1.5 per cent per annum thereafter.

The annual health benefit of being physically active is assumed to be \$500 in 1998 US dollars (WHO quoted in Frontier Economics (2009)). This was converted to a weekly value and applied per match/game participated in. The value was converted to Australian dollars at the average exchange rate in 1998 (RBA, 2010) and then to nominal 2015 values using the change in nominal GDP per capita (ABS 2015b). It was assumed to increase at a real rate of 1.5 per cent thereafter.

As the building is scheduled for demolition, it has been assumed that this benefit is only available for three years in the base case.

Value of participation in swimming (benefit item)

Swimming is available for member and casual users at the Port Pirie swimming pool from October to March each year. Participation is quite variable year to year as it is heavily influenced by temperatures (the pool is located outdoors). Average use over the past three years has been just over 11,000 visits per year.

The value of participation in swimming contains two elements, the intangible value of the activity to participants and the health benefits they receive from being physically active.

In the absence of contingent valuation studies on the value placed on swimming, we have valued participation based on the time spent at the centre. This is likely to underestimate the value of participation in squash as it effectively assumes that the value of participation is only equal to the value of the time spent, whereas for many players it will be higher.

The value of participants' time is based on the values recommended for household time (\$17.5 per hour in 2011 dollars) in SA government guidance on regulatory impact assessments (SACES, 2011) updated to 2015 nominal values and then increased at a real rate of 1.5 per cent per annum thereafter.

The annual health benefit of being physically active is assumed to be \$500 in 1998 US dollars (WHO quoted in Frontier Economics (2009)). This was converted to a weekly value and applied per match/game participated in. The value was converted to Australian dollars at the average exchange rate in 1998 (RBA, 2010) and then to nominal 2015 values using the change in nominal GDP per capita (ABS 2015b). It was assumed to increase at a real rate of 1.5 per cent thereafter.

5.4 Parameters used to assess the redevelop sporting facilities scenario

The policy option under consideration is the proposed redevelop sporting facilities in the Memorial Oval precinct in Port Pirie. Current sporting facilities in the city are beyond their useable life and several do not meet current safety standards.

Capital works to Memorial Oval precinct (cost item)

The majority of project funding will be spent on the Memorial Oval precinct – a total of \$9.13 million. The project will make the Memorial Oval precinct a multiuse facility. Included in the cost is:

- demolition;
- minor upgrade to the heritage grandstand;
- new seats for the grandstand;
- re-profiling and extension of existing Memorial Oval (including removal of cycling track);
- gravel ring road and parking;
- baseball diamond and fencing for diamond;
- extension and upgrade of Pirie West Oval;
- practice nets for cricket and baseball;
- new hub building;
- four new interchange benches;
- fencing for boundaries of the site, between buildings, behind bowling greens and around the scouts area; and
- landscaping.

Port Pirie Regional Council would pay these costs. The analysis assumes that 13 per cent of these costs occur in 2015/16, 33 per cent occur in 2016/17 and 53 per cent occur in 2017/18.

Capital works at the swimming pool site (cost item)

The main expenditure item at the swimming pool site is the new building. This building will include areas for the squash and gymnastics clubs. It is estimated that this building and associated works will cost \$5.4 million. The budget allows for landscaping at the site, minor demolition works and slight modifications to car parking.

Port Pirie Regional Council would pay these costs. The analysis assumes that 13 per cent of these costs occur in 2015/16, 33 per cent occur in 2016/17 and 53 per cent occur in 2017/18.

Croquet club relocation (cost item)

Changes at the Memorial Oval precinct will require removal of the croquet facilities. Council proposes to relocate the croquet club to Pasmenco Park. Consultants to the council estimated that this relocation would cost approximately \$500,000. Included in this cost is \$250,000 for new croquet greens, \$180,000 for transportable buildings that will have a meeting space, kitchenette, unisex accessible toilets and access ramps and \$70,000 for landscaping.

Port Pirie Regional Council would incur these costs. The analysis assumes that 13 per cent of these costs occur in 2015/16, 33 per cent occur in 2016/17 and 53 per cent occur in 2017/18.

Once off operating expenditure (cost item)

Council has indicated that the sports precinct redevelopment will have once off operating costs of \$600,000 in 2016. As the project is scheduled to be completed in December 2016 the analysis assumes that Port Pirie Regional Council incurs this cost in 2016/17.

Operating costs of Memorial Oval (cost item)

Annual maintenance and operating costs for Memorial Oval are expected to be \$245,000 following the redevelopment. This figure includes the council's share of costs related to Pirie West Oval as it will be incorporated into the Memorial Oval precinct. Port Pirie Regional Council will incur these costs on an annual basis.

Operating costs of Globe Oval (cost item)

Council intends to retain part of Globe Oval as open space. The size will be reduced compared to the previous size of Globe Oval. Council therefore expect operating costs to be \$60,000. Port Pirie Regional Council will incur these costs on an annual basis.

Commonwealth government grant (transfer)

Port Pirie Regional Council has applied for project funding from the Commonwealth National Stronger Regional Fund. The value of this funding contribution is \$5 million. This is a transfer from the Commonwealth government to Port Pirie Regional Council and is netted out in the analysis. The analysis assumes that 10 per cent of this transfer occurs in 2015/16, 30 per cent occurs in 2016/17 and 60 per cent occurs in 2017/18.

South Australian government grant (transfer)

As part of its election commitment to the Member for Frome (Geoff Brock) the South Australian government has committed \$5 million in funding to the project. This is a transfer from the South Australian government to Port Pirie Regional Council and is netted out in the analysis. The analysis assumes that 10 per cent of this transfer occurs in 2015/16, 30 per cent occurs in 2016/17 and 60 per cent occurs in 2017/18.

Residual asset value (benefit item)

At the end of the analysis period the project will have remaining useable life. A residual asset value is included in the analysis to acknowledge this remaining life. For the purposes of this analysis it is assumed that the useable life of the project is 25 years. Given the three year development period and the scheduling of works, at the end of the analysis (2039/40) the project will have an average remaining useable life of 2.4 years. The gross undiscounted residual asset value is therefore a proportionate share of the original capital costs, this equates to \$1.9 million. This benefit accrues to Port Pirie Regional Council in 2039/40.

User fees charged to clubs (transfer)

Council will continue charge sports clubs to use facilities. This is a transfer from sporting clubs to the Port Pirie Regional Council and is netted out in the analysis. It is assumed that usage fees are \$19,500 for the first three years and then \$26,500 annually, once the Savoy Soccer Club begins to use the Port Pirie West Oval.

Function hire of facilities (transfer)

The new facilities will have function facilities available for hire. Council expects that the annual income from hiring facilities will be \$20,000 for the first two year of operation and \$50,000 per year thereafter. This is an annual transfer from the clubs to council.

Costs of attending functions (transfer)

It is assumed that sporting clubs will charge a margin over the facility hire costs for their functions to raise funds to support their club. In the absence of any clear guide as to the level of this margin it has been assumed that it will mirror the function fees paid to the council. Thus attendees at functions will pay clubs a total of \$40,000 per year for the first two years of operation and \$100,000 per year thereafter. This is an annual transfer from attendees to the clubs.

Sale of Globe Oval land parcel (benefit item)

Should Option 1 proceed, Globe Oval will be excess to council and community requirements. Council intends to sell most of Globe Oval as residential land, with the exception of a small portion to be retained as green space. Council expects to sell this land for \$200,000. The analysis has assumed that this sale occurs in 2016/17.

As Port Pirie is not currently experiencing a shortage of land suitable for development it has been assumed that the sale of this land parcel will not impact on the rate of growth of the housing stock, and consequently no increase in construction activity or council rates income has been assumed.

Pirie West Oval maintenance costs for Port Pirie West Primary School (cost item)

The Port Pirie West Primary School currently owns and manages the Pirie West Oval. If Option 1 proceeds Pirie West Oval will be incorporated into the Memorial Oval Precinct, however council expects that the school will continue to contribute to maintenance costs for Pirie West Oval. For the analysis, we assume that maintenance costs to the school will continue to be \$55,000 annually.

Savoy Soccer Club usage fees for Port Pirie West Oval (transfer item)

Once they have shifted from Savoy Park, the Savoy Soccer Club will pay usage fees of \$7,000 per annum. This is a transfer from the club to the Port Pirie Regional Council and is netted out in the analysis.

Sale of Savoy Park land parcel (benefit item)

Should Option 1 proceed, Savoy Park will be excess to community requirements, as Savoy Soccer Club will move to the redeveloped Memorial Oval Precinct. Savoy Park will be sold for residential use. The analysis has assumed that this sale occurs in 2016/17. It is assumed that the value of Savoy Park is \$100,000; this accrues to the Savoy Soccer Club.

As Port Pirie is not currently experiencing a shortage of land suitable for development it has been assumed that the sale of this land parcel will not impact on the rate of growth of the housing stock, and consequently no increase in construction activity or council rates income has been assumed.

Value of additional sports tourism (benefit item)

The redevelopment will give the city much greater scope to host sporting events with the potential to attract intrastate and interstate visitors, such as the Masters Games, AFL NAB cup matches, junior and amateur soccer tournaments, and gymnastics and cheerleading events and competitions. The council estimates potential attendance at these events (based on past events such as the Masters Games) at 3,000 visitors for each large scale event staged at the Memorial Oval and 1,200 visitors (including competitors) for each gymnastics or cheerleading event. Council assumes that 2 events at the Oval and 3 gymnastics or cheerleading events would be able to be secured each year once the redevelopment is completed.

The value of spending associated with these visitor numbers has been calculated using data from Tourism Research Australia (2015) on the average spend per visitor night in regional areas (\$138 per night in 2014/15 values) converted to 2015/16 nominal values using an expected inflation rate of 2.5 per cent. This gives a total impact of \$2.3 million.

Value of participation in sports undertaken at Memorial Oval, and Port Pirie West Oval (benefit item)

The benefits of participation in sports are calculated on the same basis as for the base case.

As substantially improved facilities will be available to players it has been assumed that once the redevelopment has been completed participation in each of the sports will increase by 10 per cent, and the satisfaction derived by players will increase by 10 per cent.

Value of watching sports undertaken at Memorial Oval, and Port Pirie West Oval (benefit item)

The benefits of watching sports are calculated on the same basis as for the base case.

As substantially improved facilities will be available to spectators it has been assumed that once the redevelopment has been completed attendance by spectators at each of the sports will increase by 10 per cent, and the satisfaction derived by spectators will increase by 5 per cent.

Value of participation in gymnastics (benefit item)

The benefits of participation in gymnastics and cheerleading are calculated on the same basis as for the base case.

However, as the redevelopment will provide a long-term location for gymnastics it is assumed that not only will current participation continue from year four onwards (rather than fall in the base case) but that participation will increase by 10 per cent.

The redevelopment scenario also avoids the set-up costs incurred by gymnastics under the base case scenario.

Value of participation in squash (benefit item)

The benefits of participation in squash are calculated on the same basis as for the base case.

As the redevelopment will provide a long-term location for squash it is assumed that squash will continue to be played over the full analysis period, rather than ceasing in year four as is the case in the base case scenario.

Value of participation in swimming (benefit item)

The benefits of participation in swimming are calculated on the same basis as for the base case.

It has also been assumed that the better quality facilities available after the redevelopment will increase average participation by 10 per cent from the base case once the works are complete.

Income from functions (transfer item)

The new hub building at Memorial Oval will have function facilities allowing sporting clubs to undertake fundraisers. These facilities will be available to the community for hire. In the absence of good data of likely use, it has been assumed that total revenue for sporting clubs will be \$40,000 in the first two years of operation and \$100,000 per year thereafter.

Benefit of attending functions (benefit item)

Attendees at functions hosted by clubs receive a benefit equal to their consumer surplus from the expenditure. It has been assumed that the consumer surplus⁴ for attending a sporting club fundraiser or function matches that of charitable donations. Estimates of the consumer surplus from charitable donations vary widely (from 0.5 to 2.0) but a value of 0.7 is a common median estimate (c.f. Scharf and Smith 2010, Huck, Rasul and Shepherd 2012, Randolph 1995, Auten, Sieg and Clotfelter 2002, and Bakija and Heim 2008).

Using this price elasticity, the value of attending functions is \$29,000 for the first two years of operation and \$71,000 thereafter.

Increased population (benefit item)

National and international evidence suggests that improvements to community facilities, including improved sporting facilities, acts to increase migration to a city.

The available data is not sufficient to assess the extent to which the proposed redevelopment of the Memorial Oval precinct will increase Port Pirie's population growth rate.

Increased property values (benefit item)

There is some evidence that redevelopments of sporting infrastructure increase the property values in their immediate surrounds (Department of Sport and Recreation (Western Australia), 2012). However the existing evidence is not sufficient to estimate a benefit for adjacent properties in Port Pirie.

5.5 Sensitivity testing

The purpose of the sensitivity analysis is to illustrate the sensitivity of the results to the key assumptions that underpin the analysis. The sensitivity tests reported here vary key assumptions one by one. Table 5.2 shows the net benefit the base case, the redevelopment scenario, and the incremental net benefit for the redevelopment scenario relative to the base case under alternative assumptions.

None of the alternative assumptions individually results in a negative present value of net benefits for the redevelopment project relative to the base case. Nor are the incremental net benefits of the redevelopment scenario negative for any of the variations in assumptions.

In general the results are not particularly sensitive to variations in the assumptions within the bands tested. The only assumptions that have a material impact on the results are the assumptions on the annual value of events tourism, and the assumption changes to participation in sport as a result of improved facilities.

⁴ Consumer surplus is a measure of the net satisfaction consumers derive from the consumption of a good or service. It is the difference between the amount which the consumer pays for a good or service, and the maximum amount which the consumer would have been prepared to pay. For example, if you buy an apple for \$1.00, but you would in fact have been willing to pay up to \$1.50 for it, you have received a consumer surplus benefit of 50¢. At the aggregate level, total consumer surplus within the market for a good or service is calculated as the value of expenditure divided by two times the price elasticity of demand (the extent to which demand changes in response to a change in the price).

Table 5.2: Result of the sensitivity testing assessing the impact on , Net Present Values over a 25 year analysis period (\$,000 2015/16 values)

	Base Case	Option 1	Incremental change relative to base case
Central scenario	31,821	54,870	23,049
Alternative discount rates			
4 per cent	43,342	80,604	37,261
10 per cent	24,398	38,490	14,091
Port Pirie Sports Precinct capital costs			
33 per cent lower	33,159	59,378	26,220
33 per cent higher	30,484	50,362	19,879
Events tourism revenue			
50 per cent lower	31,821	43,973	12,152
50 per cent higher	31,821	65,767	33,946
Participation in sport			
No increase in sporting participation, spectator numbers or satisfaction from sport	31,821	47,279	15,458
Participation and spectator numbers increase by 20 per cent as a result of redevelopment	31,821	64,671	32,850

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Annex A. Evidence of the Impact of Sports Facilities

Sports have many positive outcomes. These positives accrue not only to people engaged in sports but also to the communities in which they live. Improvements in sports facilities that promote sporting participation will lead to benefits. We summarise these benefits below.

Atherley (2006a) asserts that sport has a strong role in developing social capital. Improvements in sports on offer should therefore improve the social capital of a community. Putnam (2000) (cited in Department of Sport and Recreation (Western Australia), no date) states that when social capital is higher places are generally safer, better governed and more prosperous. Further, Tonts (2005) refers to sports as a 'glue' that helps keep communities together; sports also create social networks and social bonds. Tonts (2005) notes that when a rural Australian town dies out sports clubs are usually the last institutions to close, they tend to last longer than shops, pubs and churches. Such observations show the importance of sports to rural communities in Australia.

Improved sports facilities can be used to attract new residents to towns and they provide alternative places to gather (Tonts and Atherley 2010).

Frontier Economics (2009) noted that there are positive externalities from sport in Australia. These externalities are decreases in the burden of health care funding because of increased mental and physical health, improved social cohesion and improvements in socialisation. Evidence on the relationship between sports and improvements in social cohesion and socialisation is mainly of a qualitative nature. Improvements in social cohesion improve the way in which relationships between members of a community are formed. Improved socialisation leads to community members contributing more to their community, specifically Frontier Economics (2009) argue that increased socialisation will reduce participation in antisocial behaviours; sports provide alternatives to antisocial behaviours (Department of Sport and Recreation (Western Australia), 2012). Coalter et al (2000) noted that sports divert time from delinquent leisure activities but that to be effective in reducing antisocial behaviour sport must be voluntary, committed and salient.

Coalter et al (2000) noted that the health benefits associated with physical activity tend to be those to do with the heart and circulation, bones, joints and tendons, metabolism and hormones but the links between mental health and physical activity are not as well established.

Frontier Economics notes World Health Organisation estimates of savings of US \$500 per year in health costs for physically active people in developed countries (1998 dollars). When considering an entire community this saving can be sizeable. Further, the World Health Organisation estimates that in the U.S.A. an investment of US \$1 in time and equipment for physical activity leads to US \$3.20 in medical cost savings (1998 dollars).

Dependent on the location of a new stadium there can be savings to the community in time spent getting to and from venues (Townsville City Council, no date). This will result in savings in petrol costs to the community. The Port Pirie proposal is to relocate a number of sports to the same (or closer) premises so there should be savings in time and petrol as community members will not have to travel between venues to participate in sports.

A proposed new multi-sports stadium in Northern Ireland⁵ had a number of benefits for the community. There would be increased economic activity from additional events attracted to the complex, potential improvements in participation in sports leading to increased standards and quality of sport played, greater community cohesion and improved community pride (PricewaterhouseCoopers, 2007). Whilst the proposed facility that PricewaterhouseCoopers (2007) related to is larger than that proposed in Port

⁵ Larger development than the Port Pirie proposal.

Pirie, the development in Port Pirie can still lead to these benefits. Further, PricewaterhouseCoopers (2007) note other research that indicates new stadiums need to be developed as multi-use facilities to encourage economic growth and research indicating that public sector spending on staging and infrastructure costs for sporting events generate greater value in economic benefits to the community.

Coalter (2007) notes that people involved in arts and sports are more likely to contribute to their community in other ways.

People who are fit and healthy are more likely to be productive employees (Department of Sport and Recreation (Western Australia), no date). Improvements in the quality of sporting facilities available to people therefore should lead to improvements in the output of firms and economic gains. Additionally sport can increase a participant's employability as participation in sport increases a person's self-esteem and self-confidence.

Grieve and Sherry (2012) note that the main community benefits identified in relation to a new sports facility in Darebin (Victoria) were increased amenity, increased public safety, enhanced community pride and image, increased leisure opportunities and increased social opportunities.