

Draft1: March 28 2019

## **Economic Impact Assessment**

### **Yarrowonga Multi-Sport Stadium Feasibility Study < Stage 1: 2 Court Option >**

**MCa** <Michael Connell & Assocs.>

March 2019

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## Executive Summary

This report is an economic impact assessment of the development of the Yarrowonga Multi-Sport Stadium. The complex with expand facilities for basketball, netball, and other exercise activities, and will be used by schools and the community.

The economic impact assessment has been conducted for two development options: a 2 court option; and a 4 court option. This report covers the 2 court option.

### Economic Impact Assessment

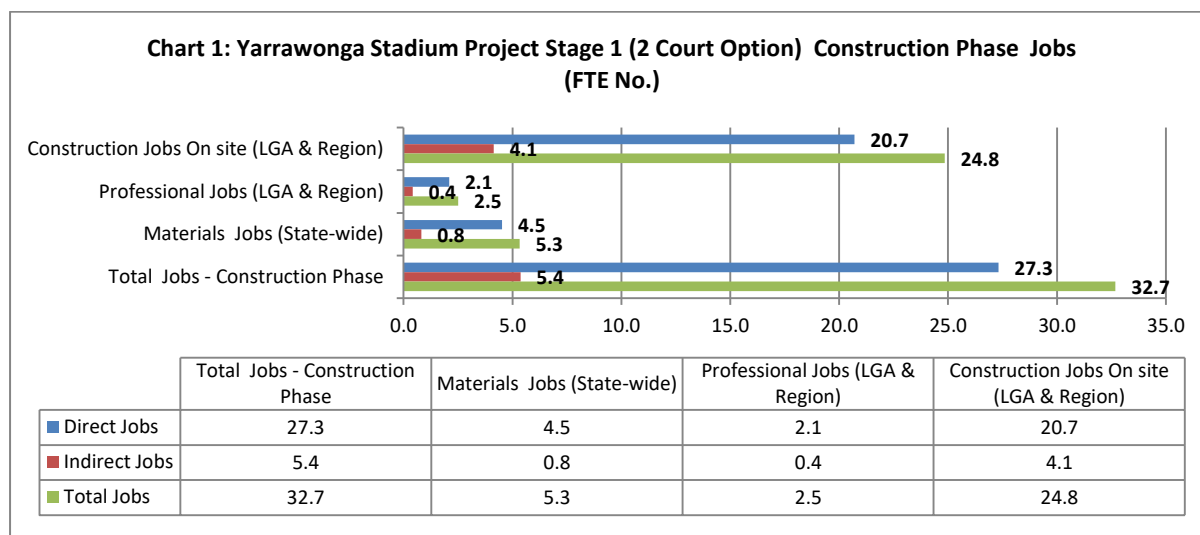
The economic impact analysis was conducted on two phases of the project: the construction phase covering a 12 month period; and the operations phase for a 10 year period. The operations analysis covered modelling of the complex and the economic benefits generated in the Yarrowonga area.

#### Construction Phase

Construction activity was modelled and estimates were developed for: onsite construction jobs in the region; and the jobs generated in the supply of materials and equipment to the project.

Construction activity was modelled and estimates were developed for: onsite construction jobs in the region; and the jobs generated in the supply of materials and equipment to the project. The number of indirect jobs generated through the spending of construction, professional and material supply employees was also estimated.

- A total of 27.3 direct jobs (FTE) would be generated during the construction period.
- This comprises: 20.7 onsite construction jobs; 4.5 jobs in the materials and equipment supply sectors; and 2.1 professional jobs. Construction jobs and some associated professional jobs are likely to be held by residents of the region, and materials/equipment supply jobs would be spread across the state.
- When the multiplier effects of employee spending are taken into account, total jobs (direct and indirect/induced jobs) associated with the project is 32.7 jobs.
- The increase in regional income generated during the construction phase was estimated to be \$3.727 million (\$3.106 million direct and \$0.621 million indirect/induced).<sup>1</sup>



Source: MCa Modelling March 2019. Note some differences due to rounding.

<sup>1</sup> Regional income is the total net income generated from the activity and covers wages and salaries of employees and profits of businesses within the region. It includes income generated directly within the business and indirect income, which is generated in other regional businesses (wages and profits) from the multiplier impacts of employee spending in the region. In the modelling of income generated income tax and GST on spending, are both treated as leakages from the region.

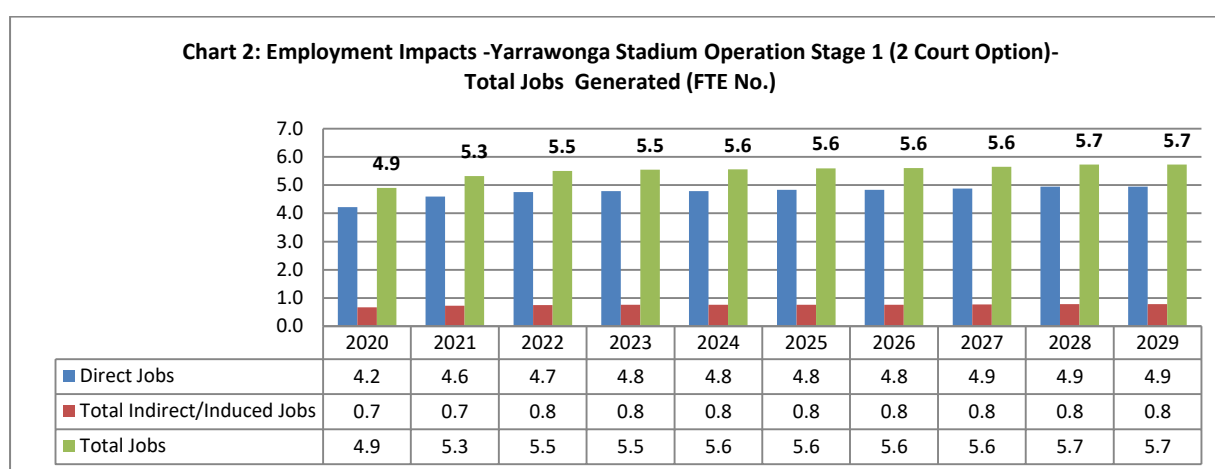
### Operations Phase

Detailed modelling was undertaken of the new facilities for a 10 year period from 2020-2029. The operational modelling (including user estimates derived from operations projections prepared by Otium Planning Group) was the foundation for the economic impact modelling.

The following chart shows the estimated FTE jobs generated by operations at Yarrowonga Stadium which are a combination of jobs onsite managing the facility and the jobs generated in the precinct /region by visitors' spending.<sup>2</sup>

- Onsite operations account for 1.3 FTE jobs (1.1 direct on site and 0.2 indirect/induced jobs in the region).
- Spending in Yarrowonga by users/visitors would generate 3.6 FTE jobs (3.1 direct and 0.5 indirect /induced jobs) in Year 1, increasing to 4.4 jobs (3.8 direct and 0.6 indirect /induced jobs) from Year 9 onwards.
- The combination of stadium operations and /visitor spending would generate 4.9 FTE jobs in Year 1 (4.2 direct and 0.7 indirect/induced jobs) increasing to 5.7 jobs (4.9 direct and 0.8 indirect/induced jobs) from Year 9 onwards.

Most of the jobs generated are in food service, recreational services and other retail.



Source: MCA modelling and analysis, March 2019

### Regional Income

The increase in activity and employment provides a boost to regional income.

- For the Yarrowonga Stadium operations, annual regional income arising would be an average of \$0.303 million per year higher, when both direct and indirect/induced impacts are taken into account.
- Over a 10 year period of operations of the new facilities, total regional income generated would be \$3.035 million (in constant 2019 prices).

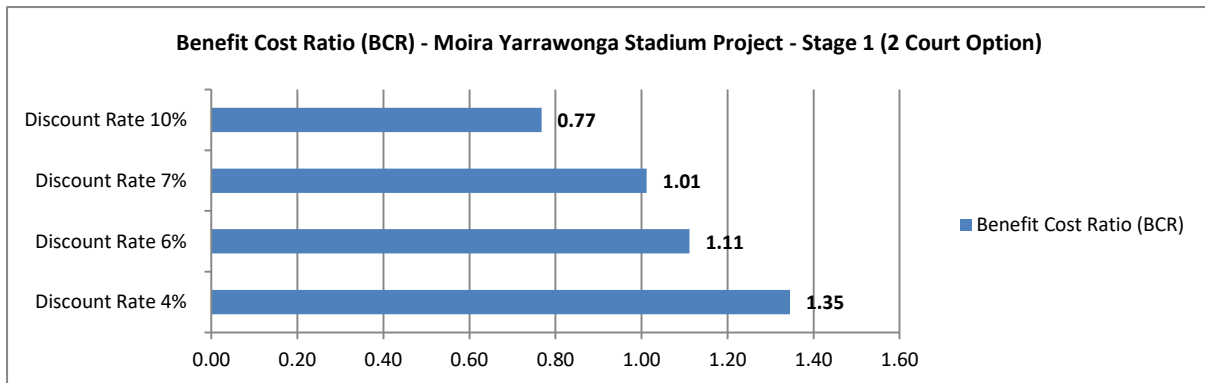
### Benefit Cost Analysis

The benefits and costs associated with the new sports complex were examined for a 10 year period. A full range of benefits were quantified including: direct user benefits; regional income generated; and health benefits.

- The benefits measured are: the value to users of the services provided by the new facilities (at market value and measured by user fees paid and consumer surplus); the increase in regional income arising from the increase in employment and activity in the complex and precinct/region; and an estimation of the health benefits (net avoided health costs due to exercise).
- The estimated total value of these benefits over a 10 year period was \$20,401,632 (in constant prices \$ 2019).
- Total costs for Stage 1 are \$9.146 million (comprising total construction costs of \$9.996 million less contingencies of \$850,000). Ten year maintenance costs of \$1.100 million (average \$110,000 per year in constant 2019 prices) are also included as a project cost.

2. These jobs are full time equivalent (FTE) jobs and may represent part of a job spread across a large number of businesses in the region (rather than jobs concentrated in a few enterprises in each sector).

- Four discount rates were applied to the benefits of the project (discount rates of 4%, 6%, 7% and 10%).
- The project delivers positive Benefit Cost Ratios (BCR) for all discount rates except 10%. An appropriate discount rate for a sports and recreation project (6%), delivers a BCR of 1.11 and 1.35 for a 4% discount rate.



Source: MCa modelling and analysis, March 2019

## 1. Introduction

This report is an economic impact assessment of the proposed development of the Yarrowonga Multi-Sport Stadium. The complex will expand facilities for basketball, netball, and other exercise activities, and will be used by schools and the community. It will also include some community meeting facilities.

The project will deliver a high quality regional facility for competition, training, other programs and schools sports and PE use.

This report covers the Stage 1 development, which comprises the 2 Court Option.

The assessment was undertaken by MCa <Michael Connell & Assocs.> - economic consultants utilising information from the other project consultants.<sup>3</sup>

The report provides an assessment of the construction phase impacts; a detailed analysis of the facilities over a 10 year period of operations (including estimation of direct and indirect benefits); and a benefit/cost analysis.

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<sup>3</sup> This comprised: business analysis and user projections from Otium Planning Group; and construction costings from Turner & Townsend.

## 2. Yarrawonga Multi-Sport Stadium

### 2.1 Proposed Stadium

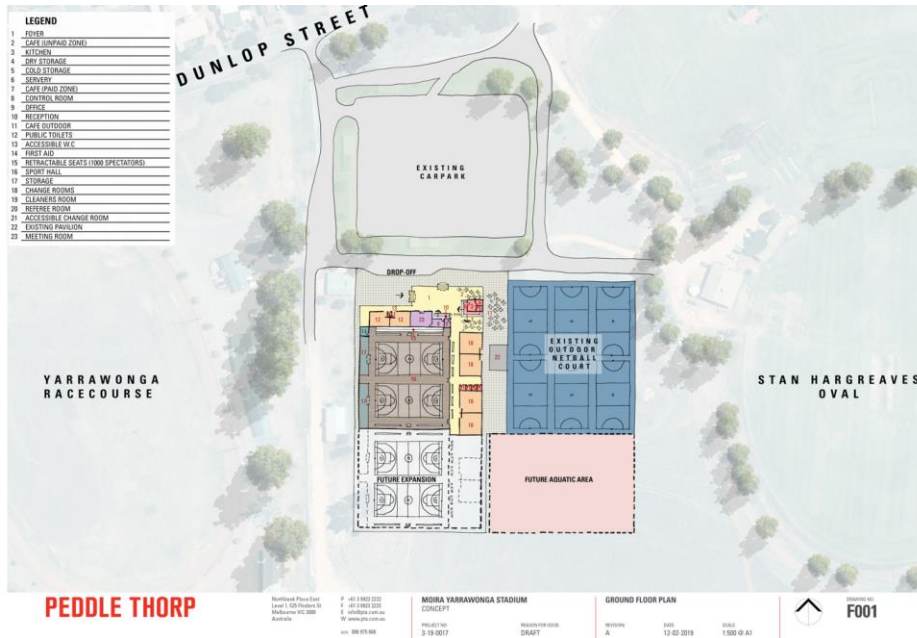
The site is located adjacent to other sports facilities and the secondary college, and is accessible to the Yarrawonga's main street and retail precinct. The complex will expand facilities for basketball, netball, and other exercise activities, and will be used by schools and the community. It will also include some community meeting facilities.

Figure 1: Yarrawonga Multi-Sport Stadium Location



Source: Google Earth Pro (accessed March 20 2019)

Figure 2: Preliminary Concept Plan – Yarrawonga Multi-Sport Stadium



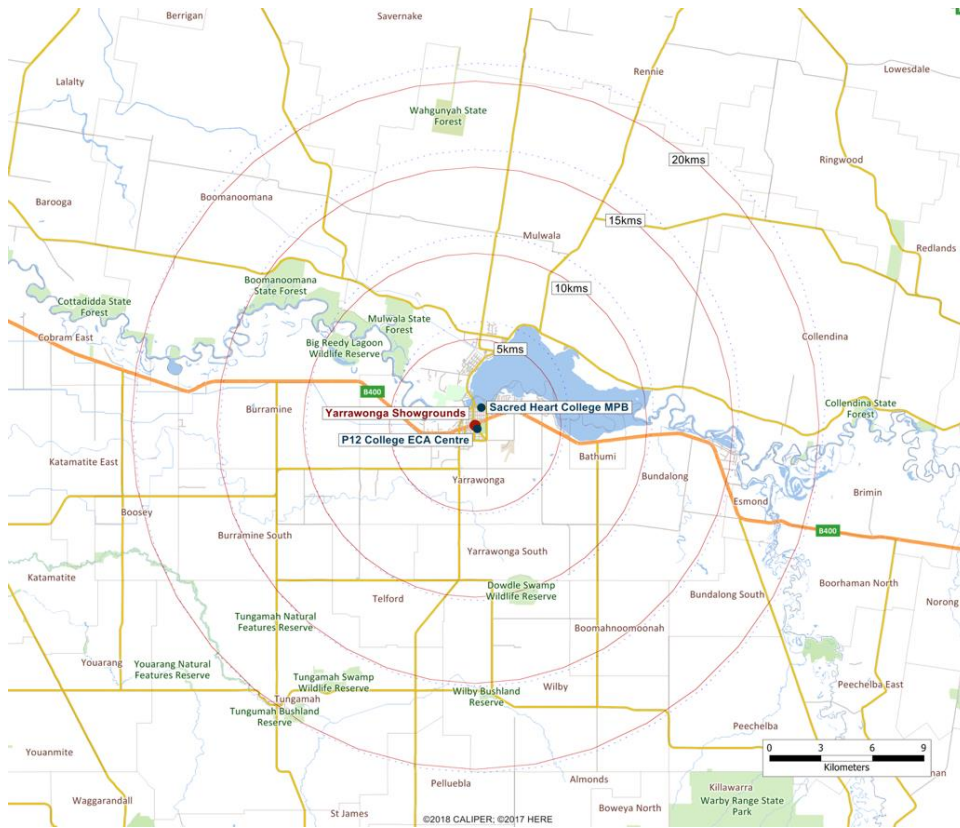
Source: Yarrawonga Multi-Sport Stadium Feasibility Study, Draft Report, Otium Planning Group, February 2019



## 2.2 Stadium Catchment Area

The stadium will: service the local schools for physical education and sports program; be used by regional teams for training and competition; and deliver exercise and fitness programs. The regional catchment is cross border extends for a radius of around 20 kms.

Figure 3: Yarrowonga Multi-Sport Stadium Catchment



Source: Yarrowonga Multi-Sport Stadium Feasibility Study, Draft Report, Otium Planning Group, February 2019



### 3. Economic Impact Analysis – Yarrawonga Stadium

#### 3.1 Overview

The economic impact analysis was conducted on two phases of the project: the construction phase in 2019/20; and the operations phase covering ongoing operations from 2020/21 onwards. The operations analysis covered modelling of schools use, regular competition, training, and exercise programs. The analysis in this section covers the 2 court option.

#### 3.2 Economic Impacts – Construction Phase

The construction phase was analysed utilising the cost data for the new facility. The development comprises basketball and netball courts, other sports facilities and community meeting facilities.

The following are estimated development and construction costs for the new facilities, with total costs estimated (including contingencies and excluding GST) at \$9.996 million for Stage 1 and \$6.896 million for Stage 2 (combined \$16.892 million including contingencies).

**Table 1. Yarrawonga Multi-Sport Stadium Development - Cost Estimate Stages 1 & 2 (2019)**

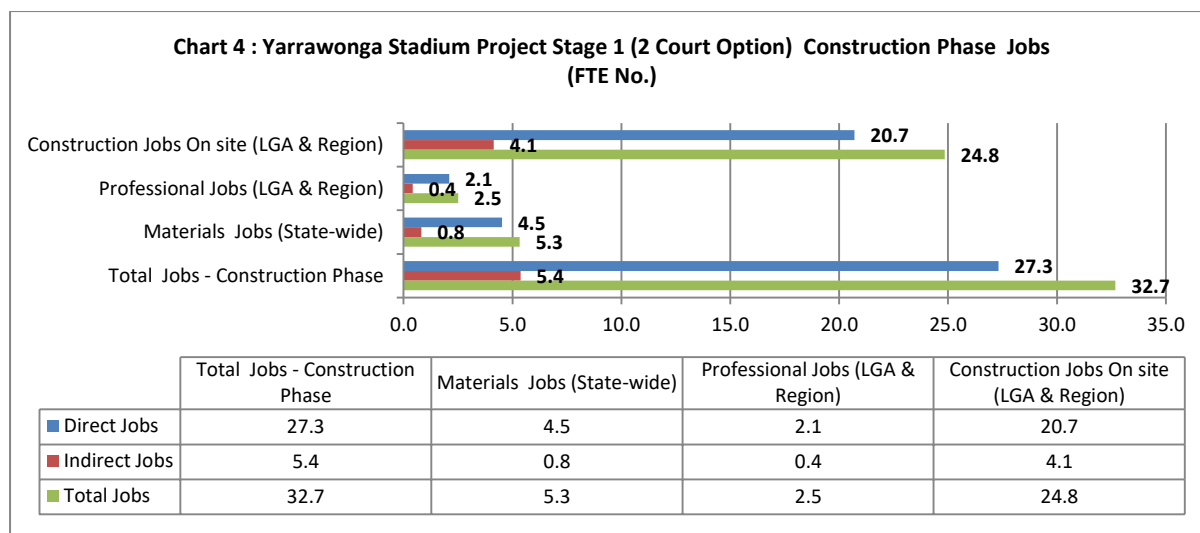
Moira Yarrawonga Stadium Development	Stage 1	Stage 2	Total Stage 1 & 2
	2 courts	2 additional courts	Total 4 Courts
Costs	Stage 1	Stage 2	
Total Building Works	\$7,301,500	\$5,183,600	
External Works & Services	\$980,640	\$557,000	
<b>Construction Cost</b>	<b>\$8,282,140</b>	<b>\$5,740,600</b>	<b>\$14,022,740</b>
Design Contingency	\$415,000	\$288,000	
Construction Contingency	\$435,000	\$302,000	
<b>Total contingencies</b>	<b>\$850,000</b>	<b>\$590,000</b>	<b>\$1,440,000</b>
Professional Fees	\$731,000	\$507,000	
Authority Fees & Charges	\$83,000	\$58,000	
Substation contribution	\$50,000	\$0	
<b>Total</b>	<b>\$864,000</b>	<b>\$565,000</b>	<b>\$1,429,000</b>
<b>Project Total (ex GST)</b>	<b>\$9,996,140</b>	<b>\$6,895,600</b>	<b>\$16,891,740</b>

Source: Indicative Cost Plan, Moira Yarrawonga Stadium, Turner & Townsend March 13 2019

Construction activity was modelled and estimates were developed for: onsite construction jobs in the region; and the jobs generated in the supply of materials and equipment to the project. The number of indirect jobs generated through the spending of construction, professional and material supply employees was also estimated.

- A total of 27.3 direct jobs (FTE) would be generated during the construction period.
- This comprises: 20.7 onsite construction jobs; 4.5 jobs in the materials and equipment supply sectors; and 2.1 professional jobs. Construction jobs and some associated professional jobs are likely to be held by residents of the region, and materials/equipment supply jobs would be spread across the state.
- When the multiplier effects of employee spending are taken into account, total jobs (direct and indirect/induced jobs) associated with the project is 32.7 jobs.
- The increase in regional income generated during the construction phase was estimated to be \$3.727 million (\$3.106 million direct and \$0.621 million indirect/induced).<sup>4</sup>

<sup>4</sup> Regional income is the total net income generated from the activity and covers wages and salaries of employees and profits of businesses within the region. It includes income generated directly within the business and indirect income, which is generated in other regional businesses (wages and profits) from the multiplier impacts of employee spending in the region. In the modelling of income generated income tax and GST on spending, are both treated as leakages from the region.



Source: MCA Modelling March 2019. Note some differences due to rounding.

**Table 2. Construction Phase – Yarrawonga Stadium Stage 1 (2 Court Option) - Increase in Regional Income (\$)**

Increase in Regional Income	\$ million
Direct Income	\$3.106
Indirect/Induced Income	\$ 0.621
<b>Total Regional Income</b>	<b>\$3.727</b>

Source: MCA Modelling March 2019. Note some differences due to rounding.

### 3.3 Economic Impacts - Operations Phase

#### 3.3.1 Economic Impact Modelling

Detailed modelling was undertaken of the operations of the new facilities for a 10 year period from 2020-2029.

The operational modelling of the facilities (including user estimates by activity and timetabling and financial projections prepared by Otium Planning Group) was the foundation for the economic impact modelling. This economic modelling covered:

- Employment (FTE jobs) in operations of the complex. Estimates were also made of the indirect/induced jobs generated in the region by the spending of these employees.<sup>5</sup>
- Jobs generated in the broader precinct by spending of users and other visitors (accompanying persons and spectators). Spending was modelled based on assumptions in relation to the percentage of persons, who spend (mainly food and beverages and other retail) in the nearby precinct before or after their visit to the facility or attendance at an event.
- Estimates were also made of increase in regional income generated by these operations and spending by users/visitors.<sup>6</sup>

#### 3.3.2 Employment in Sports Complex

The Moira Yarrawonga Stadium would have an estimated 1.1 full time equivalent (FTE) on-site jobs for the 2 court operations. This does not include jobs in businesses using the facilities for the delivery of exercise or recreation programs (eg. personal trainers and instructors etc.). The new facilities and population growth could see a growth in these programs and an increase in employment in these external businesses. In addition it does not include association staff and volunteers, who are involved in coaching and managing competitions.

<sup>5</sup> The model allows for a significant leakage outside of the LGA/region in the case of consumer spending and other spending by employees.

<sup>6</sup> Regional income is the total net income generated from the activity and covers wages and salaries of employees and profits of businesses within the region. It includes income generated directly within the business and indirect income, which is generated in other regional businesses (wages and profits) from the multiplier impacts of employee spending on the region. In the modelling of income generated income tax and GST on spending, are both treated as leakages from the region.

**Table 3. Employment – Yarrowonga Stadium Stage 1 (2 Court Option) (Jobs FTE)**

Yarrowonga Stadium Employment	Jobs (FTE)
Indoor stadium staff	1.0
Meeting/Social Rooms	0.1
<b>Total Staffing</b>	<b>1.1</b>

Source: Yarrowonga Multi-Sport Stadium Feasibility Study, Draft Report, Otium Planning Group, February 2019

### 3.3.3 Complex User/Visitor Numbers

The following table shows estimates of users and visitors for several categories: schools use; and non-school use (competition and training; exercise programs; spectators and accompanying persons). The estimates are based on activity schedules prepared by Otium Planning Group.

- The Stadium is a major regional facility that will service a broad catchment area. It will be used by schools for their programs and student numbers make up around two thirds of annual users. It will be used for competitive team sports and training and for a range of community recreational programs.
- The major activities to be serviced – netball and basketball are both growing sports, with regional associations and expanding competitions.
- The estimates of annual visitors allows for school users, competitors, training and accompanying persons and spectators at games. Numbers of accompanying persons for game, training and other programs have been estimated based on an average of 0.3 accompanying persons per user at games or training.
- Population growth in the catchment area and an increased capacity for teams, competitions and programs will drive some growth in users and other visitors over the first 10 years of operations. The following table provides estimates of users and visitors over a 10 year period. The total for all users/visitors increases from around 97,500 in year 1 to over 120,000 in Year 10.
- School use makes up around two third of users (64% eg. 62,475 users of a total of 97,461 in Year 1).

**Table 4. Yarrowonga Stadium Stage 1 (2 Court Option) - Estimated Annual Users/ Visitors – 10 Years (no.)**

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Annual Users - 2 Courts	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Court Users - Total	97,461	108,927	114,660	115,807	116,953	118,100	119,246	120,393	120,393	120,393
School Users	62,475	69,825	73,500	74,235	74,970	75,705	76,440	77,175	77,175	77,175
<b>Non School Users</b>										
<b>Non School Users</b>	<b>34,986</b>	<b>39,102</b>	<b>41,160</b>	<b>41,572</b>	<b>41,983</b>	<b>42,395</b>	<b>42,806</b>	<b>43,218</b>	<b>43,218</b>	<b>43,218</b>
Stadium Hire Spectators	1360	1520	1600	1616	1632	1648	1664	1680	1680	1680
Other Activities	1020	1140	1200	1212	1224	1236	1248	1260	1260	1260
Meeting Room Users	1020	1140	1200	1212	1224	1236	1248	1260	1260	1260
<b>Total Users (Non - School)</b>	<b>38,386</b>	<b>42,902</b>	<b>45,160</b>	<b>45,612</b>	<b>46,063</b>	<b>46,515</b>	<b>46,966</b>	<b>47,418</b>	<b>47,418</b>	<b>47,418</b>
<b>Accompanying Persons</b>										
Training & Events	10,496	11,731	12,348	12,472	12,595	12,718	12,842	12,965	12,965	12,965
<b>Total Users (Non- School) &amp; Other Visitors</b>	<b>45,482</b>	<b>50,833</b>	<b>53,508</b>	<b>54,043</b>	<b>54,578</b>	<b>55,113</b>	<b>55,648</b>	<b>56,183</b>	<b>56,183</b>	<b>56,183</b>

Source: MCA estimates and analysis March 2019. Derived from Otium Planning Group facility use schedules and user estimates. Note it is assumed that accompanying persons average 0.3 persons per non-school user.

### 3.3.4 Spending by Users/Visitors

Spending in the Yarrowonga was assumed to only involve non-school users - competitors, program participants, accompanying persons and spectators. The spending impacts come from spending outside of the complex (any internal spending is captured in the centre's operating revenue) in the adjacent precincts.

#### Spending Assumptions

The proximity of the stadium to Yarrowonga's main street means that there will be considerable spill over of spending by users before/after their sessions/competitions or by parents and accompany persons (eg. waiting for the completion of their child's programs) and during events.

In this modelling of expenditure, conservative assumptions have been used and spending is restricted only to purchases of food and beverages and some other retail/services spending. This is additional spending that is linked to a visit to the complex. Any other spending by users/visitors at a retail precinct during a visit (eg. doing a supermarket shop) is treated as normal spending, and is not included in this impact assessment.

Spending is based on assumptions in relation to the percentage of users/accompanying persons, who spend in the precincts and an average spend per person. It is assumed that 40% of competitors/users/visitors (non-school) spend an average of \$30 per person in Yarrowonga.

Table 5. Yarrowonga Stadium - Assumptions Spending by Visitors Users

Spending Assumptions	% of persons Spending in Yarrowonga	Ave Spend per person (Constant Prices \$ 2019) \$
Competitors/Users/Spectators/Accompanying Persons	40%	\$30

Source: MCA estimates March 2019

#### Spending in Yarrowonga

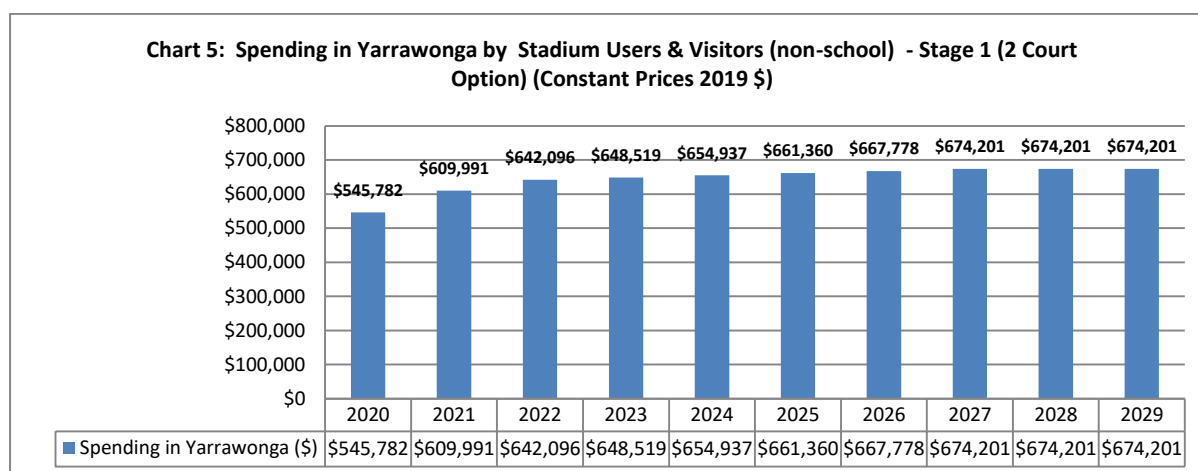
The following table shows estimates of annual spending in the Yarrowonga area by users and visitors to the complex over a ten year period from 2020 to 2029. Year 1 spending was estimated at \$0.546 million, with this increasing over time (with the increase in catchment area population and the number of users of the facility) to \$0.674 million in Year 10 (in constant prices \$ 2019).

This spending supports will support a number of jobs in food service and other retail and services in Yarrowonga.

Table 6. Users & Visitors - Spending in Yarrowonga by Stadium Users (Non-School) - Stage 1 (2 Court Option) 10 Years

	Y1 2020	Y2 2021	Y3 2022	Y4 2023	Y5 2024	Y6 2025	Y7 2026	Y8 2027	Y9 2028	Y10 2029
Total Users (Non-School) & Other Visitors	45,482	50,833	53,508	54,043	54,578	55,113	55,648	56,183	56,183	56,183
Persons Spending in Yarrowonga (no.)	18,193	20,333	21,403	21,617	21,831	22,045	22,259	22,473	22,473	22,473
<b>Spending in Yarrowonga (Constant prices \$2019)</b>	<b>\$545,782</b>	<b>\$609,991</b>	<b>\$642,096</b>	<b>\$648,519</b>	<b>\$654,937</b>	<b>\$661,360</b>	<b>\$667,778</b>	<b>\$674,201</b>	<b>\$674,201</b>	<b>\$674,201</b>

Source: MCA estimates March 2019. Persons spending: assumes 40% of users & visitors spend an average of \$30 per person in Yarrowonga.



Source: MCA estimates March 2019. Spending: assumes 40% of users & visitors spend in Yarrowonga & spend an average of \$30 per person.

### 3.3.5 Employment Impacts

The following table and chart show the estimated FTE jobs generated by operations at Yarrowonga Stadium which a combination of jobs onsite are managing the facility and the jobs generated in the precinct /region by visitors' spending.<sup>7</sup>

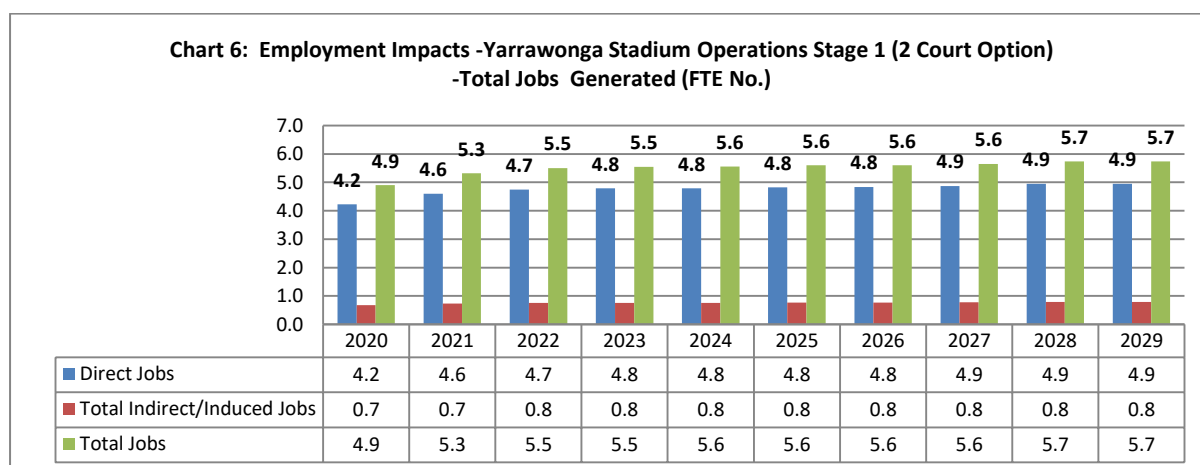
- Onsite operations account for 1.3 FTE jobs (1.1 direct on site and 0.2 indirect/induced jobs in the region)
- Spending in Yarrowonga by users/visitors would generate 3.6 FTE jobs (3.1 direct and 0.5 indirect /induced jobs) in Year 1, increasing to 4.4 jobs (3.8 direct and 0.6 indirect /induced jobs) from Year 9 onwards.
- The combination of stadium operations and /visitor spending would generate 4.9 FTE jobs in Year 1 (4.2 direct and 0.7 indirect/induced jobs) increasing to 5.7 jobs (4.9 direct and 0.8 indirect/induced jobs) from Year 9 onwards.

Most of the jobs generated are in food service, recreational services and other retail.

Table 7. Employment Impacts Yarrowonga Stadium Operations Stage 1 (2 Court Option) – Jobs (FTE) Generated in Yarrowonga (no.)

Yarrowonga Stadium	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Stadium Employment (On Site Jobs)</b>										
Direct Jobs	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Total Indirect/Induced Jobs	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Total Jobs</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>
<b>Expenditure Impacts (Users/Visitors Spending Impacts in Yarrowonga)</b>										
Direct Jobs	3.1	3.5	3.6	3.7	3.7	3.7	3.7	3.8	3.8	3.8
Total Indirect/Induced Jobs	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
<b>Total Jobs</b>	<b>3.6</b>	<b>4.0</b>	<b>4.2</b>	<b>4.2</b>	<b>4.3</b>	<b>4.3</b>	<b>4.3</b>	<b>4.3</b>	<b>4.4</b>	<b>4.4</b>
<b>Total Employment</b>										
Direct Jobs	4.2	4.6	4.7	4.8	4.8	4.8	4.8	4.9	4.9	4.9
Total Indirect/Induced Jobs	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
<b>Total Jobs</b>	<b>4.9</b>	<b>5.3</b>	<b>5.5</b>	<b>5.5</b>	<b>5.6</b>	<b>5.6</b>	<b>5.6</b>	<b>5.6</b>	<b>5.7</b>	<b>5.7</b>

Source: MCa modelling and analysis, March 2019



Source: MCa modelling and analysis, March 2019

7. These jobs are full time equivalent (FTE) jobs and may represent part of a job spread across a large number of businesses in the region (rather than jobs concentrated in a few enterprises in each sector).

**Table 8. Employment Generated by Yarrowonga Stadium Operations Stage 1 (2 Court Option) (Jobs FTE)**

Total Jobs	Jobs FTE
Industry Sector	Average 10 Years
Food Service	2.5
Retail	0.2
Recreation Services	1.3
Health	0.1
Education	0.0
Transport & Fuel	0.2
Other Services	1.3
<b>Total Jobs</b>	<b>5.5</b>

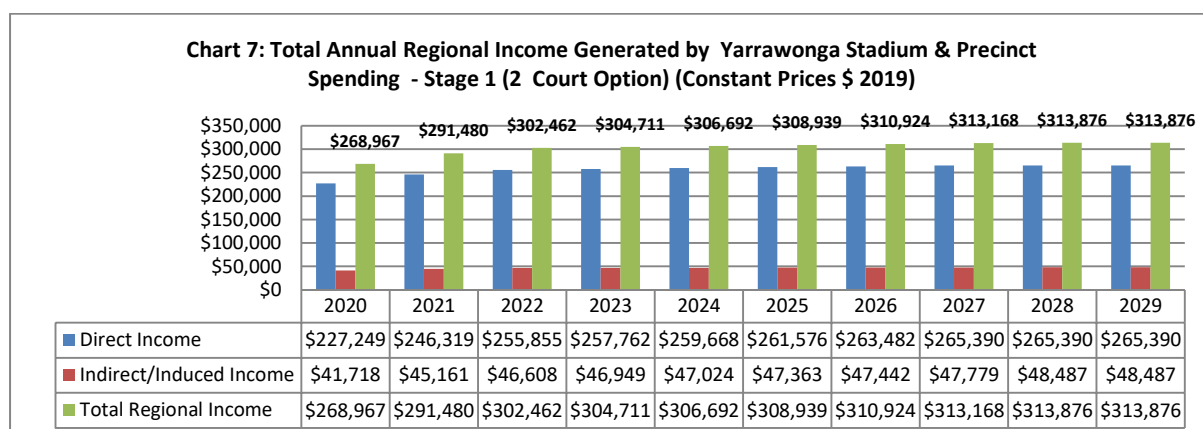
Source: MCa modelling and analysis, March 2019

### 3.3.6 Regional Income Impacts

The operation of the new facilities and the estimated user/visitor numbers will provide a boost to regional income over a 10 year period of operations.

The increase in activity and employment provides a boost to regional income and this is summarised in the following table and chart.

- For the Yarrowonga operations, annual regional income arising would be an average of \$0.303 million per year higher, when both direct and indirect/induced impacts are taken into account.
- Over a 10 year period of operations of the new facilities, total regional income generated would be \$3.035 million (in constant 2019 prices).



Source: MCa modelling and analysis, March 2019

**Table 9. Increase in Regional Income from Yarrowonga Stadium Operations & Precinct Spending (Constant Prices \$ 2019)**

Regional Income	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Stadium Employment</b>										
Direct Income	\$65,152	\$65,152	\$65,152	\$65,152	\$65,152	\$65,152	\$65,152	\$65,152	\$65,152	\$65,152
Indirect/Induced Income	\$12,455	\$12,455	\$12,455	\$12,455	\$12,455	\$12,455	\$12,455	\$12,455	\$12,455	\$12,455
<b>Total Income</b>	<b>\$77,607</b>	<b>\$77,607</b>	<b>\$77,607</b>	<b>\$77,607</b>	<b>\$77,607</b>	<b>\$77,607</b>	<b>\$77,607</b>	<b>\$77,607</b>	<b>\$77,607</b>	<b>\$77,607</b>
<b>Regional Spending</b>										
Direct Income	\$162,097	\$181,167	\$190,703	\$192,610	\$194,516	\$196,424	\$198,330	\$200,238	\$200,238	\$200,238
Indirect/Induced Income	\$29,263	\$32,706	\$34,152	\$34,494	\$34,569	\$34,908	\$34,987	\$35,324	\$36,031	\$36,031
<b>Total Income</b>	<b>\$191,360</b>	<b>\$213,873</b>	<b>\$224,855</b>	<b>\$227,104</b>	<b>\$229,085</b>	<b>\$231,332</b>	<b>\$233,317</b>	<b>\$235,561</b>	<b>\$236,269</b>	<b>\$236,269</b>
<b>Total Regional Income</b>										
Direct Income	\$227,249	\$246,319	\$255,855	\$257,762	\$259,668	\$261,576	\$263,482	\$265,390	\$265,390	\$265,390
Indirect/Induced Income	\$41,718	\$45,161	\$46,608	\$46,949	\$47,024	\$47,363	\$47,442	\$47,779	\$48,487	\$48,487
<b>Total Regional Income</b>	<b>\$268,967</b>	<b>\$291,480</b>	<b>\$302,462</b>	<b>\$304,711</b>	<b>\$306,692</b>	<b>\$308,939</b>	<b>\$310,924</b>	<b>\$313,168</b>	<b>\$313,876</b>	<b>\$313,876</b>

Source: MCa modelling and analysis, March 2019

## 4. Benefit Cost Analysis

### 4.1 Measuring Benefits

For the analysis, the benefits that have been quantified are: the direct benefits to users measured by the value in exchange (user fees paid) and the consumer surplus (value to user above user fee paid); health and welfare benefits; and the benefits to the region from increased spending by stadium users/visitors. The project delivers positive Benefit Cost Ratios for discount rates that are appropriate for a community sports facility.

Table 10. Measuring Benefits of Yarrowonga Stadium Operations – Stage 1 (2 Court Option)

Measuring Benefits	Definition	Value of Benefits (2018 prices)
<b>Direct Benefits Users (estimates)</b>	<p>Value that users place on their use of the facility. This has 2 components:</p> <p><b>Value in exchange</b> – what users pay for use of the facility – measured by <u>total revenue</u> of the facility.</p> <p><b>Consumer surplus</b>: the additional value a consumer places on the value of the service delivered. As most of the sports use is team sport, the competitors are not paying directly for use. Rather the use fees are imbedded in other much higher team fees paid by competitors. For this analysis we have assumed the total value of the consumer surplus is an additional 50% of user charges.</p> <p>Similarly schools are paying a reduced facilities use fee compared with the community users. Therefore we have assumed that there is a consumer surplus for school users.</p>	<p><b>Direct Benefits Users</b></p> <p><b>Value in exchange</b> - facility revenue total 10 years: \$2,359,026</p> <p><b>Consumer surplus</b>: additional 50% of facility revenue : \$1,179,513</p> <p><b>Total value in use</b>: value in exchange + consumer surplus: \$3,538,539</p>
<b>Health &amp; Welfare Benefits (reduction in health costs)</b>	<p>There are significant long term health costs savings (private expenses &amp; government Medicare payments) for persons who exercise. For the purpose of this analysis we have assumed that the health cost savings average \$8 per hour of competition for each competitor and with game playing accounting for an average 1.5 hours per week.</p>	<p><b>Health Benefit (health cost saving)</b></p> <p>Annual: <b>\$1,382,800</b></p> <p>Total 10 years: <b>\$13,827,996</b></p>
Direct Benefits Regional Income	<p>Increase in regional income that is generated by facility in the Yarrowonga region, Average per year over 10 years: \$303,510 (constant 2019 prices).</p>	<p><b>Regional Income Benefits</b></p> <p>Annual: <b>\$303,510</b></p> <p>Total 10 years: <b>\$3,035,097</b></p>
<b>Total Benefits</b>	<p>Estimated all measurable benefits</p>	<p><b>Total Benefits</b></p> <p>Annual: <b>\$2,040,163</b></p> <p>Total 10 years: <b>\$20,401,632</b></p>



## 4.2 Project Costs

The following are the 10 year project costs used in the benefit cost analysis. Total costs for Stage 1 are \$9.146 million (comprising total construction costs of \$9.996 million less contingencies of \$850,000). Ten year maintenance costs of \$1.100 million (average \$110,000 per year in constant 2019 prices) are also included as a project cost.

**Table 11. Cost Estimates Used in Benefit Cost Analysis - Moira Yarrowonga Stadium**

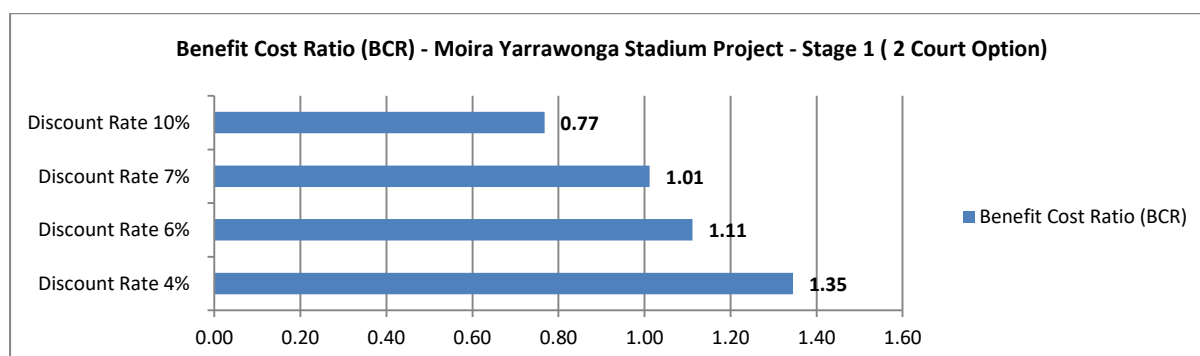
Moira Yarrowonga Stadium Development	Stage 1	Stage 2	Total Stage 1 & 2
	2 courts	2 additional courts	Total 4 Courts
Costs	Stage 1	Stage 2	
Total Building Works	\$7,301,500	\$5,183,600	
External Works & Services	\$980,640	\$557,000	
<b>Construction Cost</b>	<b>\$8,282,140</b>	<b>\$5,740,600</b>	<b>\$14,022,740</b>
Design Contingency	\$415,000	\$288,000	
Construction Contingency	\$435,000	\$302,000	
<b>Total Contingencies</b>	<b>\$850,000</b>	<b>\$590,000</b>	<b>\$1,440,000</b>
Professional Fees	\$731,000	\$507,000	
Authority Fees & Charges	\$83,000	\$58,000	
Substation contribution	\$50,000	\$0	
<b>Total</b>	<b>\$864,000</b>	<b>\$565,000</b>	<b>\$1,429,000</b>
<b>Project Total (ex GST)</b>	<b>\$9,996,140</b>	<b>\$6,895,600</b>	<b>\$16,891,740</b>

Source: Indicative Cost Plan, Moira Yarrowonga Stadium, Turner & Townsend March 13 2019

## 4.3 Benefits and Costs

The benefits and costs associated with the new sports complex were examined for a 10 year period.

- The benefits measured are: the value to users of the services provided by the new facilities (at market value and measured by user fees paid and consumer surplus); the increase in regional income arising from the increase in employment and activity in the complex and precinct/region; and an estimation of the health benefits (net avoided health costs due to exercise); and urban consolidation benefits associated with the clustering of sports facilities in proximity to community services, education facilities and retail areas.
- There are a number of other benefits that cannot be quantified including physical, life and organisation skills developed by participants in sports activities (players, coaches, volunteers etc.); volunteer benefits; reductions in work days lost due to a fitter workforce.
- The capital cost used in the analysis is the total cost (\$9,146,140 in 2019 prices) for the new facility.<sup>8</sup>
- Four discount rates were applied to the benefits of the project (discount rates of 4%, 6%, 7% and 10%).
- The project delivers positive Benefit Cost Ratios (BCR) for all discount rates except 10%. A discount rate for a sports and recreation project (6%) delivers a BCR of 1.11, 1.01 for 7% and 1.35 for a 4% discount rate.



Source: MCa modelling and analysis, March 2019

<sup>8</sup> Total construction costs of \$9.146 million (project costs less contingencies)

Table 12. Benefit /Cost Analysis - Yarrowonga Stadium (2 Court Option)

Yarrowonga Stadium Period : 10 Years (All Constant Prices \$ 2019)	Discount Rate 4%	Discount Rate 6%	Discount Rate 7%	Discount Rate 10%
<b>Costs</b>				
Capital Costs 2019 (\$)	\$9,146,140	\$9,146,140	9,146,140	\$9,146,140
Maintenance (10 Years Constant Prices \$2019)	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000
<b>Total Costs (\$)</b>	<b>\$10,246,140</b>	<b>\$10,246,140</b>	<b>\$10,246,140</b>	<b>\$10,246,140</b>
<b>Benefits (10 Years)</b>				
<b>Direct Benefits</b>				
Direct Benefits Users : Value in Exchange (users- fees paid)	\$2,359,026	\$2,359,026	\$2,359,026	\$2,359,026
Consumer Surplus (value to users above fees paid) (\$)	\$1,179,513	\$1,179,513	\$1,179,513	\$1,179,513
<b>Total Value In Use (to users) (\$)</b>	<b>\$3,538,539</b>	<b>\$3,538,539</b>	<b>\$3,538,539</b>	<b>\$3,538,539</b>
Direct Benefits Region (increase in regional income \$)	\$3,035,097	\$3,035,097	\$3,035,097	\$3,035,097
<b>Total Direct Benefits (\$)</b>	<b>\$6,573,636</b>	<b>\$6,573,636</b>	<b>\$6,573,636</b>	<b>\$6,573,636</b>
<b>Indirect Benefits</b>				
Health & Welfare Benefits (reduction in health costs \$)	\$13,827,996	\$13,827,996	\$13,827,996	\$13,827,996
<b>Total Indirect Benefits (\$)</b>	<b>\$13,827,996</b>	<b>\$13,827,996</b>	<b>\$13,827,996</b>	<b>\$13,827,996</b>
<b>Total Benefits (\$)</b>	<b>\$20,401,632</b>	<b>\$20,401,632</b>	<b>\$20,401,632</b>	<b>\$20,401,632</b>
<b>Total Benefits (\$) Present Value</b>	<b>\$13,782,611</b>	<b>\$11,392,164</b>	<b>\$10,371,155</b>	<b>\$7,865,712</b>
Net Present Value (\$)	\$3,536,471	\$1,146,024	\$125,015	<b>-\$2,380,428</b>
NPV Costs	0.35	0.11	0.01	<b>-0.23</b>
<b>Benefit Cost Ratio (BCR)</b>	<b>1.35</b>	<b>1.11</b>	<b>1.01</b>	<b>0.77</b>

Source: MCA modelling and estimates, March 2019

## References

Indicative Cost Plan, Moira Yarrowonga Stadium, Turner & Townsend March 13 2019

Yarrowonga Multi-Sport Stadium Financial Modelling, March 2019, Otium Planning Group

Yarrowonga Multi-Sport Stadium Feasibility Study, Draft Report, Otium Planning Group, February 2019

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