



# COST BENEFIT ANALYSIS

Report for the  
Shire of Chittering Muchea Club and Changeroom  
Redevelopment Project

September 2019



Prepared by NAJA Business Consulting Services



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## 1. INTRODUCTION

This Cost Benefit Analysis (CBA) has been prepared to support the Shire of Chittering's Business Case, which it is utilising in its endeavours to seek funding for redevelopment of the Muchea Club and Changerooms. This project will see the construction of a new building and facilities on the existing site, which for the purposes of this CBA are costed at \$1.875m excluding GST.

The project is a partnership between the Shire of Chittering with the Muchea Hall User Groups (MHUGs), which comprises of Chittering Junior Football Club, Chittering Junior Cricket Club, Muchea Netball Club, Muchea Senior Cricket Club, Konga and Muchea Judo Club. The project will be delivering critical community infrastructure that will increase sporting participation and physical activity, build social capital and expand regional capacity.

Investment in community infrastructure of this type is fundamental to community health, well-being and economic prosperity. The facilities and services associated with community uses, and the networks they foster, bring people together, strengthen community capacity, build community resilience and enhance community cohesion. When developed appropriately, community infrastructure can cater for intergenerational needs and provide a great legacy for all to enjoy.

In the context of this report, Community infrastructure can be described generally as "the community facilities, services and networks which help individuals, families, groups and communities meet their social needs, maximise their potential for development, and enhance community wellbeing". They can include:

- Universal facilities and services such as education, training, health, open space, recreation and sport, safety and emergency services, religious, arts and cultural facilities, and community meeting places
- Lifecycle-targeted facilities and services, such as those for children, young people and older people
- Targeted facilities and services for groups with special needs, such as families, people with a disability and Indigenous and culturally diverse people.

Delivery of community infrastructure in Australia is the responsibility of a broad range of stakeholders. It is generally shared between local government, state agencies and federal agencies, as well as the private and the community sectors.

Scarce public resources are spurring innovation and over the last decade or so, new models of delivery have emerged. Often the form of the collaboration between players has been innovative and the bringing together of the Shire of Chittering with the MHUGs with potential other partners for delivery of programs and activities, such as WACA/WAFC/AFL/Netball WA in this redevelopment should bring about improved results.

A comprehensive business case in relation to this project has been prepared and should be read in conjunction with this Cost Benefit Analysis Report.

This cost benefit analysis and the accompanying business case verifies through analysis, research and enquiry that the proposed development will achieve short-term viability and long-term sustainability and outcomes. On this basis the project should be a desirable funding target for Federal Government, State Government, the Shire of Chittering, the MHUGs and community/commercial partners.

## 2. PROPOSAL BACKGROUND

This project is a partnership between the current Muchea Hall User Groups (MHUGs) and Local Government, which will see the development of a new modern club house and change rooms to meet the needs of the local sporting and community clubs in the Central Midlands section of the Wheatbelt region of Western Australia.



The current Muchea Club and Sporting Oval are located on Archibald St, Muchea in the Shire of Chittering and is approximately one hours' drive from Perth. In addition to the sporting oval, which has an excellent surface as well as lights, the location boasts three resurfaced netball courts with lights and leading-edge cricket training nets and lights. There is also a playground and BBQ facilities.

The current clubhouse, which was constructed in 1961, is a steel framed, brick clad structure with a corrugated iron roof. Whilst upgrades have been made to the clubhouse over the years, such as replacement of the roof, the facility no longer meets current standards, expectations and the needs of a rapidly growing community.

The land on which the current clubhouse and oval sits is owned by the Shire of Chittering, with the lease of the facility being based on annual user agreements. Following completion of the new clubhouse and change rooms the Shire and MHUGs will look to establish a Service Level Agreement (SLA), which would incorporate management and management responsibilities of all parties in relation to the usage and upkeep of the facility.

This project will see the current Muchea Hall retained for community use, with the new club house and change rooms to be built on the same site adjacent to the sporting oval, netball courts, cricket nets and playground. This option is costed at \$1.875 million exclusive of GST and will provide the Shire of Chittering with the following:

- A large main club room (16230 x 8860) with access to and windows facing the sports oval;
- A slightly larger social room (10200 x 15560) also with access to and windows facing the sports oval;
- Commercial kitchen with servery to the outside of the clubhouse (under cover) and inside to the main club room;
- Full bar facilities with cool room storage and openings to the main club room and social room;
- Community amenities consisting of male and female toilets, including ambulant accessible facilities and two unisex accessible (disabled) toilets
- Two changerooms specifically for the use of sporting clubs with each changeroom comprising:
  - Two separate shower and accessible (disabled) toilets for umpires, one dedicated accessible (disabled) shower and toilet, two additional toilets and three showers, two vanity basins and hand drier;
  - Racks, benches and lockers for changing and storage of personal belongings;
  - A treatment area for rubdowns, massages and strapping
- Main foyer;
- Administration Office; and
- Storage areas

This current concept would see the facility being able to meet current and future needs of sporting groups, provide modern inclusive fit outs that meet current building codes and cater for individual access needs of disabled and ambulant community members, as well as provision of appropriate hygienic amenities with a layout that offers privacy, space and a safe environment for sports participants to get changed and shower.

This project will provide the Shire with a modern infrastructure asset where the community can gather for large events and be proud to have visitors come to the area and enjoy the facilities and picturesque setting of Muchea.

The other key outcomes of this project are:

- Elevate the status of the various MHUGs and drive an increase in membership numbers and visitor usage with the attraction of improved amenities;
- Increased participation in sport and recreation;



- Delivery of a more inclusive community facility via provision of access and facilities to accommodate disabled members of the community (and their carers) and amenities which provide for separate changerooms for males and females; and
- Provision of sports-tourism based economic drivers for the community through amenities and facilities that can attract, and host large sporting and community meets and events.

The new clubhouse has been designed in such a manner as to accommodate the future needs of sporting and community clubs within a growing region. Once completed, this facility will represent important local infrastructure that can service the entire sporting community, promoting healthy lifestyles and the opportunity for community connection.

A key aspect of the project is to accommodate growth of the various sporting clubs, in particular female participation. Trends in sporting participation for females rapidly decline in teenage years with part of the reason being lack of access to appropriate facilities. The new club house will deliver separate female change rooms providing privacy and safety with appropriate sanitary provisions. The various sporting codes in Muchea are keen to grow female memberships and these new facilities will do much to support this endeavour.

The demand for this redeveloped facility is real and pressing given the current inadequate facilities of the club house and changerooms, which are operating at capacity. The Shire of Chittering is a rapidly growing community and the demand for suitable sporting facilities is likely to grow simultaneously. The opportunity to upgrade sporting and community facilities is an important step for the Shire to take.

### 3. PROPOSED COSTS

The following assumptions regarding costs have been made for this analysis:

<b>Establishment</b>	Upfront costs of \$1,875,000 (excluding GST and all spent in construction and fit out phase)  <b>Total - \$1,875,000 (once off)</b>
<b>Recurrent Costs</b>	The recurrent (ongoing) costs of \$203,135 per annum in line with the whole of life model and sustainability analysis for the existing and new facilities and oval, broken down as follows: <b>Total Annual Operating Costs - \$118,035 indexed at CPI</b> <b>Maintenance &amp; Asset Renewal Reserve Fund - \$37,500 per annum indexed at CPI for maintenance (note that this figure is reduced for the first 10 years but will then significantly increase as the buildings and infrastructure age – refer to whole of life sustainability section of business case ) and \$47,600 per annum cash backed depreciation to a building and infrastructure asset renewal reserve fund.</b>

The new facility is expected to be sustainable, with all ongoing and maintenance costs funded by the Shire of Chittering. (refer to Section 4 Operational Funding section).

The Total Annual Operating Costs include \$37,500 per annum for maintenance and \$47,600 cash backed depreciation to a facility renewal reserve account.



## 4. PROPOSED FUNDING AND OPERATIONAL BUDGET

### Project funding

The project is intended to be funded through a combination of State grant funds, other sporting grants, business sponsorship and donations, the Shire of Chittering and the MHUGs contributions.

Proposed funding contributions and status based on the QS cost estimate including a 10% regional index and excluding the 10% regional cost estimate to build the new facility are:

Source of Funds exc GST	QS excluding 10% Regional Index \$	QS including 10% Regional Index \$	Funding confirmed	Funding Details
Local Government	650,000	650,000	Yes	Shire of Chittering committed between \$450,000 to \$650,000 in cash
MHUGs Contributions	86,174	86,174	Projected to be raised over next 18 months	MHUGs cash and fundraising
Business Sponsorship	78,700	78,700	\$58,700 confirmed \$20k pending	The MHUGs have already achieved a total of \$58,700 in corporate sponsorship, with a strong likelihood of at least a further \$20,000 for the project over the next 18 months.
Volunteer Labour	22,954	22,954	Yes	Electrical run in power laying, trenching, recovering etc. 6 people spending 13.84 hours at \$25 per hour - \$2076 Painting, sanding, patching, dust for the building. 20 people spending 40 hours each at \$25 per hour - \$20,878
Local Businesses Donated Materials	170,059	170,059	\$143,893 confirmed \$27k pending	The MHUGs have secured commitments from local suppliers to donate materials free of charge towards the build.
AFL	100,000	100,000	Application submitted & Pending	Australian Football Facilities Fund (AFFF) Grant
WAFC	10,000	10,000	Application to be submitted in October 2019	WA Football Commission Grant
WACA	50,000	50,000	Application to be submitted in October 2019	WACA Grant
Netball WA	10,000	10,000	Application to be submitted in October 2019	Netball WA Grant
CBH	20,000	20,000	Application submitted & Pending	CBH Grant
State Government	550,000	550,000	Application submitted & Pending	CSRFF Grant
<b>Total Funds Available if completely secured</b>	<b>1,747,887</b>	<b>1,747,887</b>		
<b>Total Quoted Cost to build</b>	<b>1,703,846</b>	<b>1,875,000</b>		
<b>Surplus/(Shortfall)</b>	<b>44,041</b>	<b>(127,113)</b>		
<b>Cash Reserves or Self-Supporting Loan</b>	<b>-</b>	<b>127,113</b>		

In the case of any shortfall or grants not being successful the Shire of Chittering and the MHUGs will look to utilise their cash reserves and the possibility of the MHUGs taking a self-supporting loan through the Shire to cover the difference. There is also a number of alternative grants that could be applied for to make up any shortfall.



### Current Indicative Forward Operating Budget for Existing Muchea Hall, Oval and New Club and Changerooms

In order to estimate the likely future operating budget for the existing and new facilities, the 2018/19 operating and maintenance costs and revenues for the existing Muchea Hall and Oval were first considered. These were then added to the expected operating and maintenance costs for new club and change rooms, which were then projected over a five-year period based on the following assumptions:

- The existing Muchea Hall and Oval operating and maintenance costs will continue to be incurred along with the new club and changerrooms as per Option 2 chosen in the business case.
- 2018/19 Operating (\$12,916) and maintenance costs for the existing hall (\$28,105) and oval (\$62,014) have been indexed at CPI of 2% per annum for 2019/20 onwards. This is comparable with the last five-year average cost of \$105,000 that Shire has incurred to operate and maintain the hall and oval. These figures exclude any expenditure spent on capital renewal or upgrades.
- Operating costs for the new facilities are estimated to be on par with the existing facilities e.g. estimated to start at \$15,000 per annum indexed at CPI of 2% per annum.
- Maintenance for the new facilities in its initial 5 to 10 years is expected to be around 2% of cost per annum (\$37,500) indexed at CPI of 2% per annum.
- As part of the Whole of Life Sustainability of the facility, an Asset Renewal Fund should be set up to enable the replacement of the facility at the end of its useful life. This is expected to be approximately \$47,600 per annum based on the capital cost for the new facilities.
- Operating Revenue is based on 2018/19 figures and is conservative in nature. Expect that with the new facilities this could be increased further but will still be significantly lower than the operating costs.
- There are some 475 users per week of the facility (based on club members and casual use) = 24,700 participation uses per annum.
- It should be noted the revenue is significantly less than what the Shire spends on the premises and this will continue with the new facilities. Effectively the Shire subsidises users to utilise the facilities as a community service.
- The Shire's subsidy per participant use of the facilities in 2018/19 was \$3.98 (Net Operating Result - \$98,430 / 24,700 participation uses during the year).

Operating Budget	FY18/19 Budget	FY19/20 Budget	FY20/21 Budget	FY21/22 Budget	FY22/23 Budget	FY23/24 Budget
<b>Operating Costs</b>						
Operations for Existing Hall	\$12,916	\$13,174	\$13,438	\$13,707	\$13,981	\$14,260
Maintenance for Existing Hall	\$28,105	\$28,667	\$29,240	\$29,825	\$30,422	\$31,030
Operations & Maintenance for Oval	\$62,014	\$63,254	\$64,519	\$65,810	\$67,126	\$68,468
Operations for New Club & Changerooms	-	\$15,000	\$15,300	\$15,606	\$15,918	\$16,236
Maintenance for New Club & Changerooms	-	\$37,500	\$38,250	\$39,015	\$39,795	\$40,591
Asset Renewal Fund for New Club & Changerooms	-	\$47,600	\$47,600	\$47,600	\$47,600	\$47,600
<b>Total Operating Costs</b>	<b>\$103,035</b>	<b>\$205,196</b>	<b>\$208,348</b>	<b>\$211,563</b>	<b>\$214,842</b>	<b>\$218,187</b>
<b>Operating Revenue</b>						
Annual Club Fees	\$4,221	\$4,500	\$4,590	\$4,682	\$4,775	\$4,871
Casual Hire Income	\$384	\$500	\$510	\$520	\$531	\$541
<b>Total Operating Revenue</b>	<b>\$4,605</b>	<b>\$5,000</b>	<b>\$5,100</b>	<b>\$5,202</b>	<b>\$5,306</b>	<b>\$5,412</b>
<b>Net Operating Result</b>	<b>-\$98,430</b>	<b>-\$200,196</b>	<b>-\$203,248</b>	<b>-\$206,361</b>	<b>-\$209,536</b>	<b>-\$212,774</b>



## 5. BENEFITS AND MODEL ASSUMPTIONS

The key benefit categories identified in relation to this project encompass:

Economic	Social
Employment	Community Health plus Productivity
Gross Regional Product	Social Connectedness
	Volunteering

The following cost benefit analysis seeks to map the expected benefits of the project in comparison to the costs, however it is noted that cost benefit analysis findings often overstate the actual benefits, along with the difficulties in the Western Australian context of applying outdated data and multipliers which may not be directly transferrable to the state’s regional economic conditions<sup>1</sup>. As such, a very conservative approach has been taken to the development as the Shire of Chittering and the MHUGs do not want to imply the potential of creating an unrealistic impact. This project has been undertaken in a considered manner and it is recommended that this cost benefit analysis be read in conjunction with the business case prepared for the project.

### 5.1. Economic Benefits – Employment and Gross Regional Product

#### 5.1.1. Economic Impact Model

To calculate the employment benefits and gross regional product for this cost benefit analysis, we have used the Flinders University – Australian Urban Research Infrastructure Network - Economic Impact Analysis Tool (EIAT)<sup>2</sup>. The EIAT is developed based on the location quotient adaptation of the 2009/10 national input-output (I-O) table of 19 industry sectors (consistent with the 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC) 1-digit level) using the 2016 Census industry employment data for local government areas in all the states and territories of Australia.

The EIAT allows us to conduct a preliminary I-O analysis for estimation of local regional economic impacts for regional infrastructure investment projects.

I-O models provide a standard approach for the estimation of the economic impact of a particular activity (e.g. construction of a new infrastructure project). Regional economic impact statements regarding the impact of major projects and policies has become a critical part of regional development analysis and is an extensive component of the applied economic literature. The linkages between employment opportunities and residents – and business to business linkages – affect urban design, infrastructure demand and provision, regional taxes etc.

The EIAT draws on 2016 Census industry of employment data and the 2009/10 national I-O table to calculate industry multipliers which in turn provide estimates of economic impacts of regional infrastructure investment projects.

There are a number of important assumptions that underpin the use of an I-O model, these must be considered in interpreting the predicted impacts. They include:

- a) increases in demand in the region are serviced by industries with constant proportions, there are no significant price adjustments that occur

<sup>1</sup> Department of Treasury and Finance (WA). (March 2002). Economic Research Articles. Retrieved from <https://www.treasury.wa.gov.au/uploadedFiles/ecoresearchchart2002.pdf>

<sup>2</sup> <https://aurin.org.au/archived-pages/input-output-tables/>





- b) industries have a linear production function, which implies constant returns to scale and fixed input proportions
- c) firms within a sector are homogeneous, which implies they produce a fixed set of products that are not produced by any other sector and that the input structure of the firms are the same, and
- d) the model is a static model that does not take account of the dynamic processes involved in the adjustment to an external change.

### 5.1.2. Method of Analysis

#### Location Quotient Method

The Australian Bureau of Statistics produces I-O tables, consistent with the 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC) 4-digit industry codes (114 sectors), at the national level only with the latest for 2009/10 year.

At the regional level, the easily accessible data generally available is industry of employment data by Place of Usual Residence and Place of Work – this data is available from the 2016 Census and reflects the responses with respect to industry and location of residency and employment. It is somewhat limited in that it depends on the Census respondents own “identification” of the industry, is influenced by the July timing of the Census and involves some degree of non-response (particularly with respect to detail of industry). It is however the only data collected consistently across all economic sectors at once.

Given that the key regional data is employment based, WISeR developed regional I-O tables based on the location quotient adaptation of the 2009/10 national I-O table of 19 industry sectors using the 2016 Census employment in the region. Under the location quotient method, the basis of the mathematical distribution is to assume that if the industry is “as significant” in the region as in the nation it has the capacity to supply to local industries at the same proportion as in the nation as a whole. Otherwise it supplies proportionally less. The location quotient ratio for each industry was calculated based on the industry’s regional employment significance to its national employment.

#### Input-Output (I-O) Multipliers

Regional I-O models are used to calculate industry multipliers which in turn can be applied to estimate regional economic impacts of various developments or change scenarios (see ‘Impact Factor Analysis’ section below).

Detailed explanations on calculating I-O multipliers, including the underlying assumptions, are provided in any regional economics or I-O analysis textbook (see, for example, Miller R. E., Blair P. D. 2009, Input-Output Analysis: Foundations and Extensions, Second Edition, Cambridge University Press). A multiplier is essentially a measurement of the impact of an economic stimulus. In the case of I-O multipliers the stimulus is normally assumed to be an increase of one dollar in sales to final demand by an industry sector.

Gross regional product and employment multipliers refer to changes in gross regional product per initial change in output and changes in employment per initial change in output. These multipliers are expressed as 'per unit' measurement and described as Type I and Type II multipliers. For example, with respect to gross regional product:

Type I gross regional product multiplier = [initial + production induced]/initial; and

Type II gross regional product multiplier = [initial + production induced + consumption induced]/initial



### Impact Factor Analysis

The economic impact in terms of contribution to gross regional product and employment can be identified in terms of direct, flow-on (indirect) and total impacts. Direct or initial impacts refer to the impact of the assumed dollar increase in sales directly in the sector. The dollar change in final demand is the stimulus or the cause of the impacts. Associated directly with this dollar increase in output is an own sector increase in household income (wages and salaries, drawings by owner operators etc.) used in the production of that dollar. Household income together with other value added, provide the total GRP from the production of that dollar of output. Also associated is own sector increase in employment, represented by the size of the employment coefficient. The employment coefficient represents an employment/output ratio and is usually calculated as 'employment per million dollars of output'.

Flow-on or indirect impacts are the sum of production-induced impacts and consumption-induced impacts. Production-induced impacts are the sum of first-round impacts and industrial support impacts. The first-round impact refers to the effect of the first round of purchases by the sector providing the additional dollar of output. Industrial-support impacts are the second and subsequent round effects as successive waves of output increases occur in the economy to provide industrial support, as a response to the original dollar increase in sales to final demand, excluding any increases caused by increased household consumption. Consumption-induced impacts are defined as those induced by increased household income associated with the original dollar stimulus in output.

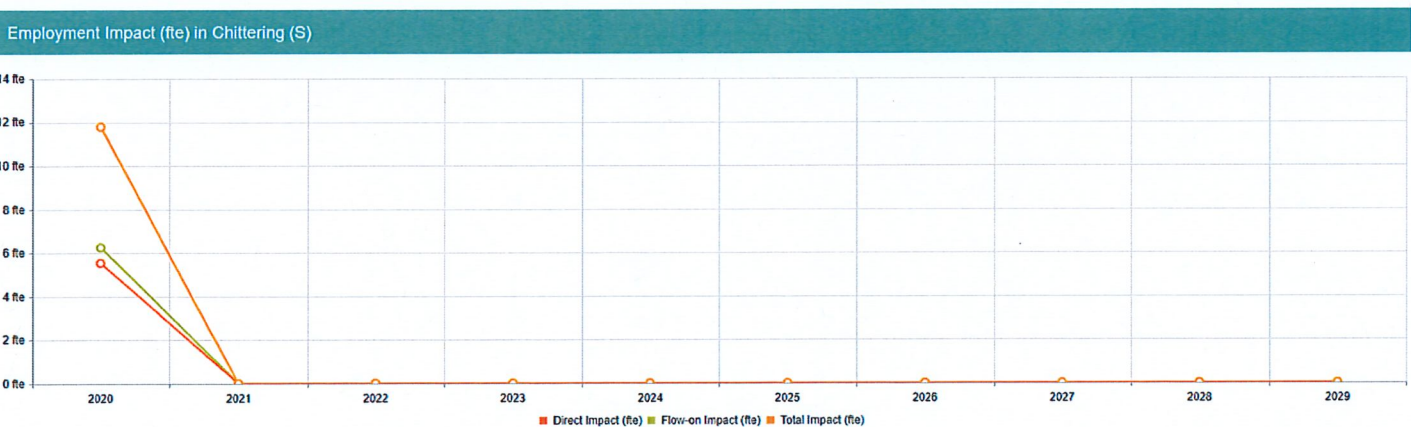
Total impacts are the sum of direct and flow-on impacts.

#### 5.1.3. Economic Impact Analysis Tool Results for Employment Benefits and Gross Regional Product

##### Employment Benefits

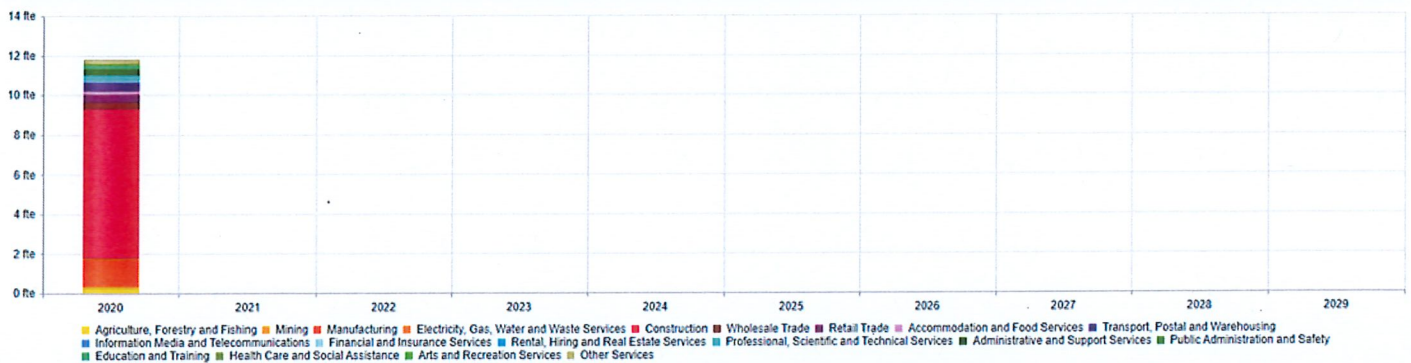
The results from the EIAT for the full construction of the Muchea Club and Changerooms built over a twelve-month period showed that it would result in an additional 12 Full time equivalents (FTEs) being employed during the construction of the project, commencing in 2020. Of the 12 FTE in 2020, 6 FTE would be employed directly on the build and 6 FTE as flow on within related industry sectors used by the EIAT model (see graphs and tables below).

The assumption here is that the facility will be constructed by a local regional builder and that during the construction phase this will mean this money will be spent and retained within the local economy.





Employment-Total Impact (fte) by Industry in Chittering (S)



Employment Impact (fte) in Chittering (S)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Direct	5,531	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Flow-on	6,249	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>Total</b>	<b>11,781</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

Employment Impact (fte) by Industry Sector Chittering (S)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Agriculture, Forestry and Fishing	0.291	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mining	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Manufacturing	1.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Electricity, Gas, Water and Waste Services	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Construction	7.559	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wholesale Trade	0.352	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Retail Trade	0.391	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Accommodation and Food Services	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Transport, Postal and Warehousing	0.464	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Information Media and Telecommunications	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Financial and Insurance Services	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Rental, Hiring and Real Estate Services	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Professional, Scientific and Technical Services	0.242	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Administrative and Support Services	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Public Administration and Safety	0.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Education and Training	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Health Care and Social Assistance	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Arts and Recreation Services	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other Services	0.176	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>Total</b>	<b>11,781</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

Once operational it is expected that ongoing annual direct employment for the Muchea Club and Changerooms project and the current Muchea Hall and Oval will require the equivalent of 3 FTE contained within the Shire of Chittering. These FTE will contain portions of administration, maintenance and operational staff costs at the Shire. It is also expected that indirectly a further 3 jobs will be created to support the ongoing operations and maintenance of the facilities.



### Estimation Method for Dollar Value of Employment Benefits

The expected direct and indirect dollar value of employment benefits for the project during construction and operations over ten years is \$5,299,720, which has been included in the Cost Benefit Analysis calculated as follows:

#### During Construction

During a twelve-month construction phase: 6 FTE are estimated to be directly employed for this size of building. The estimated dollar value benefit of these 6 FTE salaries over the twelve-month period for the build phase is \$504,894 based on the average annual construction/builder’s wage in Western Australia is \$84,189<sup>3</sup> e.g. \$84,189 x 6 FTE = \$504,894 benefit during construction over 2020.

During the same timeframe a flow on benefit of a further 6 FTE are expected to be employed across related industry sectors that support the building and construction sector. The estimated dollar value benefit of these 6 FTE salaries is \$401,250 based on the average mean employee income in Chittering being \$66,875<sup>4</sup> and the construction timeframe for the project taking 12 months – e.g. \$66,875 x 6 FTE = \$401,250 benefit during construction over 2020.

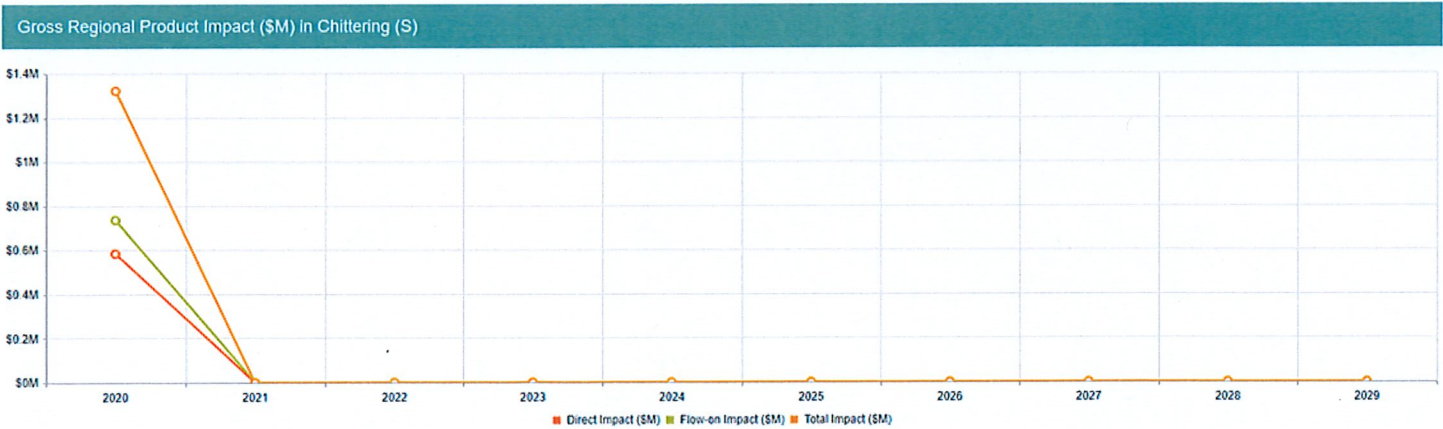
#### During Operations

During operations: 3 FTE are estimated to be directly employed annually by the Shire of Chittering to maintain and operate this size of building plus the existing hall and oval. The estimated annual dollar value benefit of these 3 FTE salaries is based on the average mean employee income in Chittering being \$66,875 e.g. \$66,875 x 3 FTE = \$200,625 per annum. This figure was then indexed at the rate of CPI over the 10-year period equating to \$2,196,788.

Also, a further 3 FTE are expected to be indirectly employed across related industry sectors to support the Shire of Chittering in the operations and maintenance of these facilities and oval. The estimated annual dollar value benefit of these 3 FTE indirect salaries is also based on the average mean employee income in Chittering being \$66,875 e.g. \$66,875 x 3 FTE = \$200,625 per annum. This figure was then indexed at the rate of CPI over the 10-year period equating to \$2,196,788.

### Gross Regional Product (GRP) Benefits

The results from the EIAT for the full construction of the Muchea Club and Change rooms showed that it would result in a total GRP Benefit of \$1.32m (\$0.61m in direct benefits and \$0.71m in flow on benefits, see graphs and tables below).



<sup>3</sup> <https://au.neuwoo.com/salary/Construction-salary-in-Western-Australia>

<sup>4</sup> [https://quickstats.censusdata.abs.gov.au/census\\_services/getproduct/census/2016/quickstat/LGA51680?opendocument](https://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/LGA51680?opendocument)



Gross Regional Product-Total Impact (\$M) by Industry in Chittering (S)



Gross Regional Product Impact (\$M) in Chittering (S)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Direct	0.585	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Flow-on	0.735	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>Total</b>	<b>1.320</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

GRP Impact (\$M) by Industry Sector in Chittering (S)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Agriculture, Forestry and Fishing	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mining	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Manufacturing	0.162	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Electricity, Gas, Water and Waste Services	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Construction	0.799	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wholesale Trade	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Retail Trade	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Accommodation and Food Services	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Transport, Postal and Warehousing	0.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Information Media and Telecommunications	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Financial and Insurance Services	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Rental, Hiring and Real Estate Services	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Professional, Scientific and Technical Services	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Administrative and Support Services	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Public Administration and Safety	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Education and Training	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Health Care and Social Assistance	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Arts and Recreation Services	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other Services	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>Total</b>	<b>1.320</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>



## 5.2. Community Health plus Productivity Benefits

Community connectiveness is extremely important in combating positive health and productivity outcomes and also addresses issues of isolation. Loneliness and social isolation are on the rise in Australia, with more than eighty percent of Australians believing that our society is becoming a lonelier place, and of these, sixty percent reported that they ‘often felt lonely’. Evidence demonstrates direct correlations between loneliness, isolation and mental and physical health issues of individuals (including issues related to lack of exercise, obesity or smoking), and the subsequent impact on overall community wellbeing. For this reason, the Muchea Community Hall and proposed new club and change rooms is a very important part of the Shire of Chittering community as it provides a place and avenue for participants to connect.

The evidence is mounting that links community connectedness and well-being to mental health. It is important for the individual community members’ mental health that isolated communities can connect through clubs, events, social and sporting activities. Without a replacement for the existing Muchea Community Hall facility, the local community would not have the enhanced capacity to sporting activities, community events, meetings and other functions.

A review of current literature indicates that people who participate in sports clubs and organised recreational activity enjoy better mental health, are more alert, and more resilient against the stresses of modern living. Participation in recreational groups and socially supported physical activity is shown to reduce stress, anxiety and depression, and reduce symptoms of Alzheimer’s disease. Violent crime also decreases significantly when participation in community activities increases<sup>5</sup>. Being physically active: protects against mental health problems, decreases depression in older adults, reduces the symptoms of post-natal depression, is as effective as medication for mild to moderate anxiety and depression, improves self-esteem and cognitive function in young people, playing sport reduces psychological distress by 34% 1-3 times a week and 46% 4+ times a week, people who participate in sports clubs and organised recreational activity enjoy better mental health<sup>6</sup>.

The Department of Sport and Recreations (DSR) 2017 Community Perceptions Survey also found in relation to physical activity and mental health within community sport and recreation, that:



- Around 8 in 10 Western Australians believe it’s important for sport and active recreation to help us feel good about ourselves and build our confidence and self-esteem.
- More than 8 in 10 Western Australians feel it’s important and agree that sport and active recreation creates close friendships.
- More than 8 in 10 Western Australians feel it’s important that sport and active recreation involve people like coaches who can have a positive impact on children’s lives<sup>7</sup>.

<sup>5</sup> Carcach C, Huntley C. Community Participation and Regional Crime. Canberra: Australian Institute of Criminology; 2002.

<sup>6</sup> <https://www.dsr.wa.gov.au/support-and-advice/research-and-policies/organised-recreational-activity-and-mental-health>

<sup>7</sup> <https://www.dsr.wa.gov.au/support-and-advice/research-and-policies/organised-recreational-activity-and-mental-health>



Physical inactivity is second only to tobacco as a contributing factor to the burden of disease and injury in Australia<sup>8</sup>. Regular physical activity is widely recognized as protective against the overall burden of disease<sup>9</sup>. In 2002, more than a third (37.6%) of adult Australians reported no participation in sports and physical recreation<sup>10</sup>. Approximately half of the remainder (31.5%) participated in organized sports and physical recreation, with a further 30.9% reporting that they undertook some form of physical activity<sup>10</sup>. For both males and females, walking was the most popular form of recreational physical activity<sup>10</sup>. Approximately 40% of children do not participate in organised sporting activity outside of school<sup>10</sup>.

All of this research emphasizes why it is so important for people in the Shire of Chittering to have access to quality sporting and community infrastructure to ensure that community members have the best opportunity to participate in physical activity and events, in turn reducing their chances of disease, mental health, depression and obesity.

An increased participation in sporting and social activities by Muchea and Chittering locals, and visitors is likely with improved facilities presented by this proposal. A simple, single factor approach has been used to calculate health benefits, however there are likely significant health benefits that have not been specifically quantified, nor has productivity benefits of a healthier community.

The World Health Organisation<sup>11</sup> identifies physical inactivity as a leading risk factors of death worldwide, and health professionals urging the adopting of less sedentary lifestyles to combat this growing health problem. The Muchea Club and Change rooms offer a unique proposition in terms of exercise as is shown in section 5.3 of this CBA.

With an increased opportunity for people to be more active from this proposal comes an improved likelihood of better health outcomes – both in terms of physical fitness as well as the improved mental wellbeing typically associated with increased opportunities to be engaged in social interactions.

The flow-on benefits to the local economy point to improved worker productivity when the workforce is engaged in more physical activity, there is a lower burden on the local health system due to conditions associated with inactivity and an improvement to the liveability of the local area strengthening the ability to attract and retain a robust local workforce.

### Estimation Method

- The annual health benefit of being physically active is assumed to be \$675<sup>12</sup>. This was multiplied by the number of MHUGs club members provided at the time of undertaking this Cost Benefit Analysis equating to \$347,625.
- Assumption that this benefit is experienced each year.
- Note across the ten years we have not increased the membership numbers, even though it is expected to increase with new Muchea Club and Change rooms. This allows for a very conservative value of benefit.

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<sup>8</sup> Mathers C, Vos T, Stevenson C. The burden of disease and injury in Australia. Canberra: Australian Institute of Health and Welfare; 1999.

<sup>9</sup> Roberts CK, Barnard RJ. Effects of exercise and diet on chronic disease 10.1152/jappphysiol.00852.2004. J Appl Physiol 2005;98(1):3-30

<sup>10</sup> Australian Bureau of Statistics. Sport and Recreation: A Statistical Overview. In. Canberra: Australian Bureau of Statistics; 2006.

<sup>11</sup> WHO. (February 2017) Physical Activity: Fact Sheet. Retrieved from <http://www.who.int/mediacentre/factsheets/fs385/en/>

<sup>12</sup> Frontier Economics (2009), "The economic contribution of sport to Australia, prepared for The Australian Sports Commission", November.



### 5.3. Social Connectiveness Benefits

The need for sport and recreation in regional communities is well recognised and documented. The then Department of Sport and Recreation commissioned a study into the benefits of sport for regional communities in 2006 titled *Sport and Community Cohesion in the 21st Century*.

This report reveals direct links between participation in sport and the development of cohesive social communities. The report provides evidence of sport being linked to social benefits to both the individual and the community, such as community integration, cohesion, cooperation, and community identity and pride. Local sporting clubs have played a key role in regional communities across Australia providing better physical and mental health outcomes for people of all ages. They also help teach values, volunteerism, cooperation, leadership, teamwork, and help in overcoming adversity. It is now highly recognised by all levels of government that sport and recreation in regional communities are integral to bringing people together and improving community cohesion, social capital and resilience.

Redevelopment of the Muchea Club and Change Rooms for Muchea and its surrounding areas will have the benefit of making these facilities a central point in town for the community to gather and socialize. This is likely to encourage more people to get involved in sports and activities that can use the new facilities and to become more physically active. Exposing children to these sports on a regular basis will hopefully create a desire to be involved. In addition to the physical health benefits from the various sport related activities offered by the MHUGs, the new facilities also offer acknowledged benefits in terms of connectedness and wellbeing.

A recent Australian based sporting study conducted by the La Trobe University, Centre for Sport and Social Impact titled, 'Value of a Community Football Club'<sup>13</sup>, highlights the potential value of investment in community sporting club facilities, and showed that for every dollar invested in a community club will return \$4.40 in social value in terms of increased social connectedness, wellbeing and mental health status; employment outcomes; personal development; physical health; civic pride and support of other community groups.

Another recently completed and released report commissioned by the West Australian Football Commission (WAFC), "The economic and social benefits of club based football in Western Australia"<sup>14</sup>, conducted by ACIL Allen Consulting, found that for every dollar spent, club based football in Western Australia produces \$2.16 of attributable benefit back to the community. It also stated that club-based football delivered attributable social benefits of over \$224 million to over 75,000 participants in WA, with physical and mental health benefits of participation valued at \$78.6 million. The other quantitative core social benefits included suicide prevention, reduced recidivism, volunteering hours, workforce productivity, personal wellbeing, job matching, and education attainment. NAJA Business Consulting Services also undertook a review of this report for the WAFC, before its official release to the public in September 2019.

While both these results could be used to estimate the social impact of the Muchea Club and Changeroom investment, for the purposes of this CBA we have taken the La Trobe University report above the WAFC report in our estimations. The reason for this is that the WAFC report was focused more around the industry wide impact of club-based participation in football and the report did not include activities such as Auskick, school programs or club-run non-football activities. The La Trobe University report did include these areas so we believe this is a better reflection on the potential social impact that this investment by the Shire of Chittering could have on the local community.

<sup>13</sup> La Trobe University, Centre for Sport and Social Impact. (2015). Value of a Community Football Club. Retrieved from <http://www.aflvic.com.au/wpcontent/uploads/2015/02/Latrobe-Value-of-a-Community-Football-Club-Final-PDF.pdf>

<sup>14</sup> The West Australian Football Commission (2018), The Economic and Social Benefits of Club-Based Football in Western Australia. Acil Allen Consulting





## Estimation Method

In order to establish an indicative measure of the potential health and productivity benefits, the following approach has been applied:

- Calculate the social value in terms of increased social connectedness, wellbeing and mental health status; employment outcomes; personal development; physical health; civic pride and support of other community groups based on a \$4.4 multiplier for \$1,875,000 invested, which equals \$8,250,000.
- Assumption that this benefit is experienced once-off.

### 5.4. Volunteering Benefits

In 2015, Volunteering WA commissioned the Institute of Project Management to undertake a research study to quantify and present a comprehensive analysis of the economic, social and cultural value of volunteering to Western Australia. The study applied a model of value creation to locate the discrete values of volunteering activity in Western Australia and, for the first time, illustrate the dynamic ways in which they interact. The findings depicted how individuals, businesses and all levels of government use their time, resources and money to enable volunteering across the State and how this alters individual and community states of physical, human, social and symbolic capital.

The research findings<sup>15</sup> place volunteering front and centre as one of Western Australia's largest industries, annually contributing \$39 billion in benefits to the community. It also showed that volunteering offers a significant return on investment, with \$4.50 returned for every dollar invested, with each hour of volunteering costing the community \$6.15. It noted that volunteering is both essential to the wellbeing of Western Australians, impacting positively upon the welfare of society and also a key driver of economic growth influencing fiscal growth across a range of other sectors.

The various Muchea Sporting clubs that operate out of the current and proposed facilities (including junior cricket, football, senior cricket, netball and judo) are essentially all run as volunteer operations, and they deliver not only an essential service to the Muchea and Shire of Chittering community, but also provide a significant contribution to the local and State economy based on the research undertaken by Volunteering WA.

#### Estimation Method

To estimate the value of the volunteering benefits for all of the Muchea Sporting Clubs, we have utilised the Volunteering WA's Volunteer Benefits Calculator<sup>16</sup>. The volunteer benefits calculator looks at two main factors when coming up with the benefits as follows:

##### 1. What is the 'replacement cost'?

The replacement cost of an individual's time is calculated with reference to the Australian Bureau of Statistics' 2015 data for Western Australia on the average part-time wage earnings of each age cohort, indexed for employer on-costs. This is added to the cost of relevant resources acquired by the individual in pursuit of their volunteering. In other words, it is the amount of money a Western Australian business would have to spend to replace the overall contribution of the individual volunteer.

##### 2. What is 'value'?

The value a volunteer-involving organisation delivers to the Western Australian community is a different measure to replacement cost. It aggregates the commercial, community and individual benefits created by each act of volunteering, and includes things like:

<sup>15</sup> Institute of Project Management (2015), "The Economic, Social, and Cultural Value of Volunteering to Western Australia, prepared for Volunteering WA"

<sup>16</sup> <https://www.volunteeringwa.org.au/resources/volunteer-benefits-calculator>



- The employment and tax revenue created by the direct expenditure of individuals and organisations on volunteering
- The costs avoided by civic institutions such as government departments of health, education, emergency services and the like
- The productivity surplus enjoyed by employers as a result of their employees' volunteering
- The wellbeing benefits returned to individuals and the community

You can use the replacement cost and value calculators interchangeably for individuals and organisations; however, the value calculator is not sensitive to age differences.

To calculate the Muchea Sporting Clubs volunteer benefit we utilized the following collated number of volunteer hours provided by each club, that was then input into the calculator to provide these benefits:

**Muchea Club Rooms Redevelopment - Combined Sporting Clubs Volunteer Hours & Committee Expenditure Benefits and Value Delivered to WA Community**

Individual Age Group Hours	Hours per week	Hours per year	Individual Benefits per year
15-24	17	886	\$20,378
25-34	45	2340	\$95,940
35-44	84	4393	\$215,257
45-54	5	253	\$12,650
55-64	7	350	\$18,200
65-74	0	0	\$0
75+	0	0	\$0
<b>Total volunteer hours</b>	<b>158</b>	<b>8222</b>	<b>\$362,425</b>
<b>Organisational Volunteer hours</b>			<b>Organisation Benefits per year</b>
Netball Club Committees	32	1650	\$126,335
Junior Cricket Club Committees	27	1413	\$108,189
Junior Football Club Committees	46	2397	\$183,530
Senior Cricket Club Committees	49	2543	\$194,709
Judo Club	1	68	\$5,206
<b>Total Organisational hours</b>	<b>155</b>	<b>8071</b>	<b>\$617,969</b>
<b>Total volunteer hours</b>	<b>313</b>	<b>16293</b>	<b>Total Individual &amp; Organisational Benefits</b>
	<b>Per week</b>	<b>Per Year</b>	<b>\$980,394</b>
<b>Total Personal Committee Expenditure</b>	<b>\$1,035.69</b>	<b>\$53,855.96</b>	<b>Total Personal Committee Expenditure Benefits</b>
			<b>\$242,136</b>
			<b>Total Value of Benefits Delivered to WA Community</b>
			<b>\$1,222,530</b>



This calculation results in the Muchea Sporting Clubs providing \$1,222,530 in value to the Shire of Chittering community and the Western Australia economy each year through its volunteering hours.

## 6. RESULTS

The breakdown of costs and benefits, as defined above is provided below, along with a cost-benefit assessment.

<b>Establishment</b>	Upfront costs of \$1,875,000 (excluding GST and all spent in construction and fit out phase) <b>Total - \$1,875,000 (once off)</b>
<b>Recurrent Costs</b>	The recurrent (ongoing) costs of \$203,135 per annum in line with the whole of life model and sustainability analysis for the existing and new facilities and oval, broken down as follows: <b>Total Annual Operating Costs - \$118,035 indexed at CPI</b> <b>Maintenance &amp; Asset Renewal Reserve Fund - \$37,500 per annum indexed at CPI for maintenance (note that this figure is reduced for the first 10 years but will then significantly increase as the buildings and infrastructure age – refer to whole of life sustainability section of business case ) and \$47,600 per annum cash backed depreciation to a building and infrastructure asset renewal reserve fund.</b>

Benefit Area	Future Value of Benefits over 10 years
Employment	\$5,299,720
Gross Regional Product	\$1,320,000
Community Health plus Productivity	\$3,476,250
Social Connectedness	\$8,250,000
Volunteering	\$12,225,300

A standard cost-benefit framework was used to develop a 10-year discounted cash flow analysis of the benefits and costs identified in the preceding sections. Assuming a discount rate of 6%, the project is expected to yield a Net Present Value Benefit of \$23,681,644 over 10 years. The Benefit Cost Ratio is 7.62 to 1. For reference, calculations at a discount rate of 2% have also been shown in the following tables.

Discount Rate	2%	6%
Present value of costs – project plus ongoing renewal (\$m)	\$3,887,079	\$3,579,932
Present value of benefits (\$m)	\$30,022,663	\$27,261,575
Net Present Value (\$)	\$26,135,583	\$23,681,644
Benefit to Cost Ratio	7.72 : 1	7.62 : 1



A breakdown of the present value of benefits, assuming a discount rate of 6% over ten years, yields ratios for economic benefits (1.89 to 1) and social benefits (5.73 to 1).

### Economic Benefits

Discount Rate	2%	6%
Present value of costs – project plus ongoing renewal (\$m)	\$3,887,079	\$3,579,932
Present value of benefits (\$m) - Economic	\$7,386,531	\$6,761,709
Net Present Value (\$)	\$3,499,452	\$3,181,777
Benefit to Cost Ratio - Economic	1.90 : 1	1.89 : 1

### Social Benefits

Discount Rate	2%	6%
Present value of costs – project plus ongoing renewal (\$m)	\$3,887,079	\$3,579,932
Present value of benefits (\$m) - Social	\$22,636,132	\$20,499,866
Net Present Value (\$)	\$18,749,052	\$16,919,934
Benefit to Cost Ratio - Social	5.82 : 1	5.73 : 1

As discussed earlier, given the very conservative approach taken in this analysis, it is likely that the actual economic benefits could be higher than estimated, especially if the Shire was to increase the hire and lease fees for the new facilities.

However, on current figures as just a stand-alone economic investment proposal, the development at a 6% discount rate provides a positive net present benefit of \$3,181,777 and benefit cost ratio of \$1.89 returned for every dollar invested over the 10-year period. This would mean that even without taking into consideration the significant social benefits, that the Shire could proceed with the investment with confidence in its economic return.

With the addition of the social and community benefits taken into consideration this becomes an even more attractive proposition, with the project expected to yield a Net Present Value Benefit of \$23,681,644 over 10 years and a benefit cost ratio of \$7.62 for every dollar invested. On the basis of these returns the Shire of Chittering is justified in proceeding with this investment.