

#### 9.4.6 Lower Chittering Sports and Recreation Facility\*

<b>Report date</b>	17 October 2018
<b>Applicant</b>	Shire of Chittering
<b>File ref</b>	18/07/15
<b>Prepared by</b>	Chief Executive Officer
<b>Supervised by</b>	Shire President
<b>Disclosure of interest</b>	Nil
<b>Voting requirements</b>	Simple Majority
<b>Attachments</b>	<ol style="list-style-type: none"><li>1. Feasibility Study – Summary Document</li><li>2. Master Plans, Facility Concept Drawing and 3D Image</li><li>3. Quantity Surveyors Estimate for Stage 1 Facility</li><li>4. Draft Business Case (including Cost Benefit Analysis)</li></ol>

#### Executive Summary

The purpose of this report is to seek Council endorsement for the lodgment of a funding application under the Building Better Regions Fund for Stage 1 of the Lower Chittering Sports and Recreation Facility. It is expected that the BBRF3 funding round will be announced in October 2018.

As previously advised, when BBRF funding rounds are announced, there is usually only a 6 week period to develop, finalise and lodge a sufficiently detailed funding application. In effect, this requires any substantial proposals to be developed well in advance of such announcements.

The BBRF3 funding round was announced on 27 September 2018 with applications closing on 15 November 2018 (prior to the next Council Meeting on 17 November).

As Council is aware, a substantial body of work has already been completed in preparation for the submission of a funding application, which is further explained in the body of this report.

#### Background

The Shire of Chittering has experienced rapid annual population growth in recent years (4% per annum over the last 10 years) and this is expected to continue. This increase is already placing considerable demand on existing infrastructure and facilities within the Shire. Planning is required to ensure that the provision of such infrastructure keeps pace with the expected demand.

Existing facilities are limited in capacity to accommodate larger membership bases for sporting and recreation clubs. Better and improved facilities would enable the clubs to meet the needs of a broader population base. For example, junior football has a strong membership base; however the capacity for players to progress to senior league level is hindered by the lack of facilities to support a senior competition (there is no field for a senior competition within the Shire). In addition there are no indoor sports facilities within the Shire and no rectangular format sports fields.

Most of the growth is occurring in and around Lower Chittering, in the South of the Shire. This growth is expected to escalate as proximity to Perth is significantly enhanced, principally through the Northlink project, which is due for completion in 2019. Development of the Muchea Industrial Park will also act as a driver for economic development and local jobs which will further stimulate development in Lower Chittering.

Council has a 10 hectare parcel of land in Lower Chittering adjacent to Immaculate Heart College which is reserved for future sporting facilities. The land was provided as part of a previous development contribution. The adjacent school, Immaculate Heart College, is also growing and is in the process of transitioning to a full

service secondary school (K1-12) by 2022. The school is also in need of sporting and recreation facilities to service the growing school population.

Council has been working with the local community and with Immaculate Heart College to develop plans for a sporting and community facility that would be jointly funded and used by both the school and the local community.

### **Feasibility Study**

In 2016, Council completed a feasibility study for a proposed Regional Sports Facility in Lower Chittering. The feasibility study was externally facilitated (Jill Powell and Associates) and involved a significant level of community consultation. A summary document is included as **Attachment 1**.

The primary objective of the feasibility study was to assess existing facilities, future demand, social and economic benefits and to determine the suitability of a 10 hectare Council owned green field site in Lower Chittering and the possible consolidation of existing facilities into a regional sporting.

An extensive community consultation process formed part of the feasibility study. Most respondents (88%) stated there was a need for more recreational and social facilities within the Shire. A further 76% stated they would use the proposed new facilities. Based on those responses, the utilisation rate would be 620 persons per week rising to 840 per week over the next ten years.

The feasibility study found no significant engineering factors that would prevent the development of the proposed Chittering Regional Sporting Complex on the 10ha green field site.

### **The Proposal**

Council has commissioned and funded a comprehensive planning process to develop a Master Plan, detailed facility concepts and economic analysis which can be used for the purpose of future funding applications to either the State or Federal Government.

With regard to Immaculate Heart College, their previous plans for expansion required the senior school to be developed on the opposite side of Santa Gertrudis Drive; a busy local road serving a large rural residential subdivision. Having a school which is separated by a road is never ideal; principally from the aspect of student safety.

In discussion with the school, the option of selling 3 ha of the 10 ha site to the school was raised so that the entire school could be developed on one side of the road. The balance parcel of 7 ha would be more than adequate for developing the joint use sporting facilities. The State Government has been formally engaged in these discussions and a process is underway to deliver this outcome.

Specifically, the following has been completed to date:

- Detailed site and feature survey, geotechnical investigations and service investigations.
- Valuation of 3 ha parcel to be transferred to the school.
- Formation of a community working group - that group has had a number of meetings over recent months to develop the Master Plan and to refine an affordable Stage 1 project (this work included a site visits to "like" facilities in other Wheatbelt towns)
- Engagement of an architect to develop the concept in consultation with the working group (including the coordination of supporting work – engineering, hydraulic, servicing and quantity surveyor)
- Development of costed concept plans for the proposed facility and staging options which creates for an affordable Stage 1 project

- Engagement of an independent economist to prepare a detailed cost benefit analysis (which has been completed)
- Preparation of a Grant Funding Application is underway.

The following detailed plans are provided as **Attachment 2**:

- Master Plan for development of the site
- Stage 1 project plan (proposed as the subject of a BBRF 3 funding application)
- Floor plans and sketches for the Community / Club Facility and Multipurpose / Indoor sports Facility
- 3D Rendered Concept

The independent Quantity Surveyors estimate for the project (refer **Attachment 3**) indicates a total project cost of \$16m, with the Stage 1 project being valued at \$9.6m. The proposed Stage 1 project is considered to represent the basis of an affordable and reasonable funding application under BBRF3. The amount is consistent with previous projects funded under BBRF2 and is considered affordable for all parties.

The draft Business Case Report (including Cost Benefit Analysis) is provided as **Attachment 4**. The report indicates the following in terms of Cost Benefit:

*At the selected real discount rate of 7% for this project, the analysis yields a Benefit to Cost Ratio (BCR) of 1.3 meaning that it is economically desirable and provides a net benefit. Even at the higher discount rate of 10%, the project still yields a positive NPV and BCR.*

*Under the baseline scenario (without project scenario), none of the identified benefits would be captured nor any of the costs incurred. As such, the scenario with the project provides positive economic and social benefits. Sensitivity analysis has shown that with variations in various project assumptions of +/- 30%, the project maintains a positive NPV and a BCR over one, demonstrating the strength of the project.*

### **Consultation/Communication Implications**

#### Local

Significant consultation was undertaken as part of the Feasibility Study in 2016.

A Local Reference Group was formed in May 2018 and has worked with the Architect in developing a Master Plan for the site and an affordable Stage 1 Facility.

#### State and Federal

There have been ongoing discussions with our local State and Federal Members. Our Federal Member has been fully briefed on the project offered to facilitate a visit to Canberra following the lodgment of a BBRF3 funding application.

The Regional Development Australia (Wheatbelt) office has been fully briefed on the project and will be requested to assist with the review of a draft Grant Application.

### Legislative Implications

#### State

Not Applicable at this stage. If the Grant application is successful, funds would need to be borrowed through WA Treasury. Given Council's low level of borrowings, we are not expecting there to be any issues.

#### Local

Planning and building applications would be required in due course.

### Policy Implications

Nil

### Financial Implications

At this stage, the funding application would seek a grant of \$4.8m with the funding partners making up the balance. It is noted that Council has open space and recreation reserves valued around \$500,000 and will generate around \$300,000 from the sale of land to the school. While the split of capital funding between the school and Council is yet to be negotiated, it is likely that Council would only be required to borrow between \$2m and \$3m to deliver a community sporting and recreation facility valued at around \$10m.

### Strategic Implications

#### Local

- Strategic Community Plan 2017-2027

Focus area: Our community

Objective: S1.1 An active and supportive community

Strategy: S1.1.1 Develop and enhance existing recreation and social facilities for local communities (recreational and sporting facilities to service the growing population in the Lower Chittering/Muchea area)

#### State

Nil

### Site Inspection

Site inspection undertaken: Yes

### Triple Bottom Line Assessment

#### Economic implications

The project yields a Benefit to Cost Ratio of 1.3 meaning that it is economically desirable and produces a net benefit.

#### Social implications

There will be positive social and health benefits associated with sporting and recreation facilities to service the growing population in Lower Chittering.

#### Environmental implications

Environmental implications (if any) will be dealt with as part of the planning and building approval process.

#### **Officer Comment/Details**

The project has been developed to a Stage where a comprehensive funding application, with supporting cost benefit analysis and detailed engineering assessments, could be submitted at relatively short notice.

Council, in conjunction with Immaculate Heart College, is seeking funding support for the project via a funding application under Building Better Regions Fund (BBRF3), which is expected to be announced shortly.

#### **9.4.6 OFFICER RECOMMENDATION/COUNCIL RESOLUTION 141018**

**Moved Cr Tilbury/Seconded Cr Ross**

**That Council:**

- 1. Note the significant progress which has been made towards the development an appropriately detailed and fully costed funding application with supporting technical and economic studies.**
- 2. Authorise the Chief Executive Officer to negotiate a funding commitment from Immaculate Heart College as a contribution towards the capital cost of the project.**
- 3. Authorise the Chief Executive Officer to obtain letters of support from Immaculate Heart College regarding the intention to enter into long term arrangements for the management and maintenance of such a facility.**
- 4. Authorise the Chief Executive Officer to obtain letters of support from various community groups, sporting groups and State/Federal representatives supporting the project.**
- 5. Note that the Building Better Regions Fund (BBRF3) funding round was announced on 27 September 2018 and that applications are required to be lodged by 15 November 2018.**
- 6. Authorise the Chief Executive Officer to lodge a funding application under the Building Better Regions Fund (BBRF3).**

**THE RECOMMENDATION WAS PUT AND DECLARED CARRIED 7/0**

7:58PM

**SHIRE OF CHITTERING  
REGIONAL SPORTS & COMMUNITY CENTRE**

The need for a Regional Sport and Recreation Facility for the Shire of Chittering has been the subject of numerous reports which commenced in early 2016.

The first stage of the project saw an extensive Feasibility Study undertaken by Jill Powell and Associates, Paterson Group Architects, Porter Engineering and APP.

The initial report Phase One concentrated on five key areas of investigation and included:

- **Review of Previous Reports and existing information**

The review highlighted the need for additional facilities to cater for the increase in population within the Shire

- **Development of a social profile**

⇒ The demography of the study area (Shire of Chittering) as at the 2011 Census indicates that the population comprises 4,428 people, with a distribution of 50.8% male to 49.2% female.

⇒ A total of 47.2% of the population are under 39 years of age which, when one compares this to the participation trends, would indicate that the study area has a highly active community

⇒ The Shire of Chittering, based on the median band projections is expected to have an increase in population to 7,290 by 2026

- **Assessment of participation trends and statistics**

The top ten activities by participation rates are:

- Walking for exercise
- Fitness/Gym
- Jogging/Running
- Swimming/Diving
- Cycling/BMX
- Golf
- Tennis (indoor and outdoor)
- Soccer (outdoor)
- Netball (indoor and outdoor)
- Basketball (indoor and outdoor)

The activities highlighted above cannot be undertaken within the Shire due to a lack of facilities.

These participation rates will be utilised to assist in the development of functional areas to ensure they cater for the participation of the community in relevant activities.

- **Facility inventory condition and use**

It is clear that in terms of volume of facilities the Shire of Chittering is reasonably serviced, in that most sports wishing to participate have a facility. It should be noted that not all sports are active in the area and, whilst it could be that there is no demand, the lack of facilities could limit people's choices. However the quality and location of some facilities needs some attention.

Gaps in service provision are evident in terms of a senior sized oval as currently no senior cricket or football can be played within the shire, additionally there are no spaces for indoor sport or fitness gym equipment.

- Community Consultation  
An extensive consultation was undertaken to gauge community needs including:
  - Random community survey to 500 households
  - Clubs and organised community groups survey
  - Advertisement in newsletter for public submissions
  - Public workshops
    - 2x Bindoon One day time and one evening
    - 2 x Muchea One day time and one evening
    - 1 x Lower Chittering on a Saturday

Phase two of the project centred on five key areas of enquiry, these being

- Development of site plans and floor plans
- Engineering Service Assessment
- Risk Analysis
- Usage and Management analysis
- Capital costs for the development

Each of these avenues of enquiry addressed the specific requirements of the project brief as well as additional information where it was considered necessary.

Some common elements were highlighted and considered for inclusion in any proposed redevelopment.

These elements include:

- Sporting Ovals (Senior)
- Gymnasium/Fitness Area
- Sportsman's Clubhouse/kitchen/functions
- Children's Activity Centre
- Multi use courts
- Multipurpose centre

Further work was undertaken to look at the potential staging of the development and modification of the initial plans to ensure affordability and viability moving forward.

Subsequent to these plans discussions have been entered into with the Immaculate Heart School which has identified the potential for a land swap to allow for an integrated development to service both the school and the community.

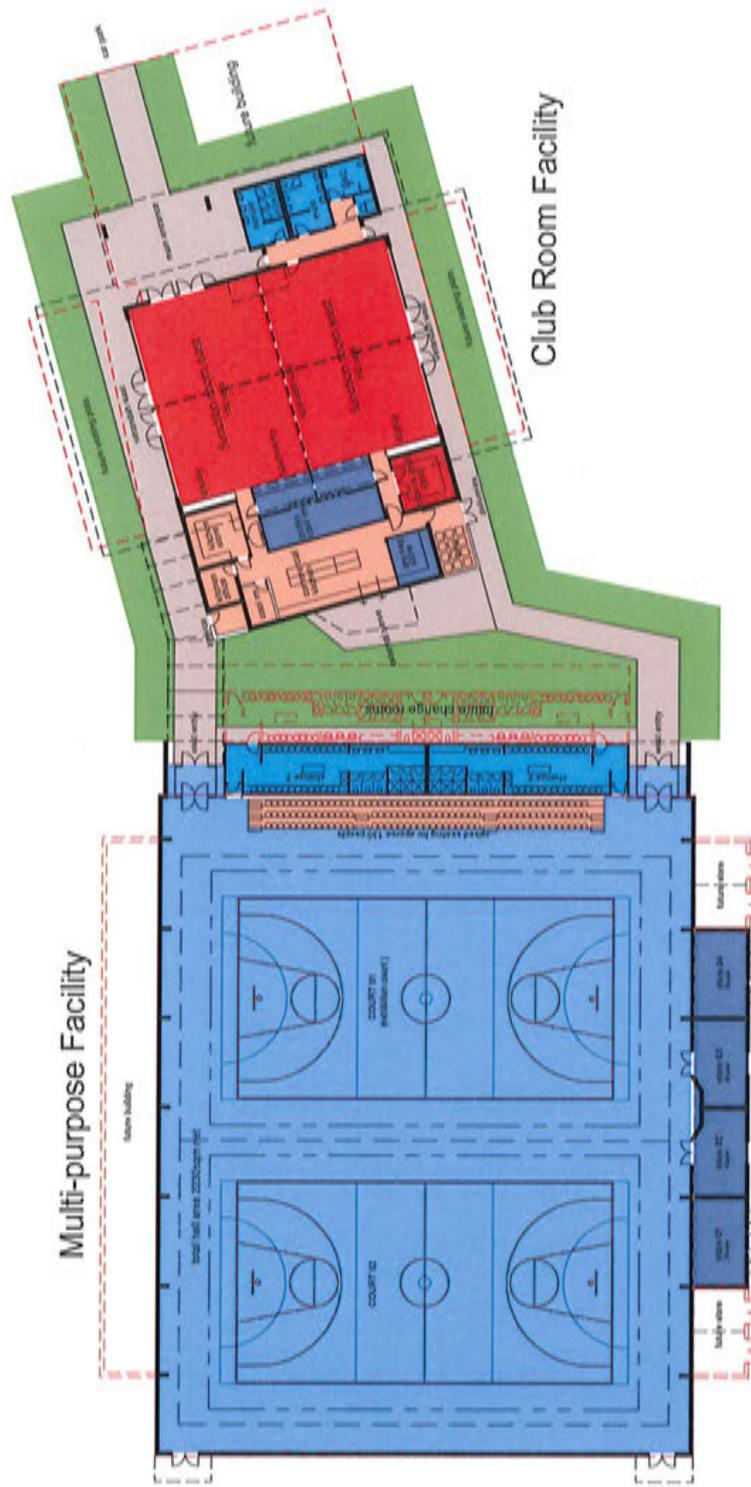
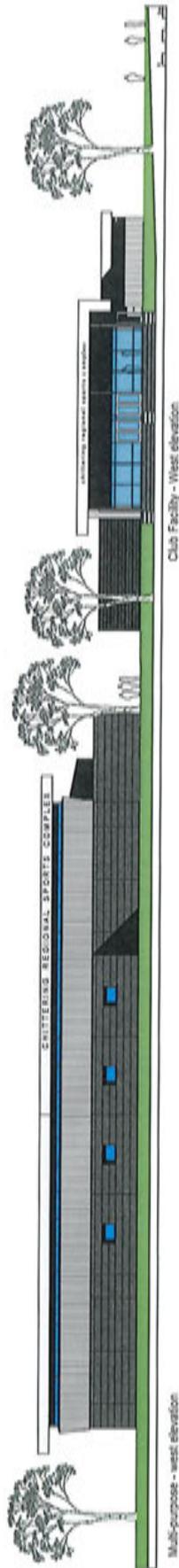


MASTER PLAN



master plan - stage 1







## Item 9.4.6

## Cost Plan No.2



Project: Chittering Sports Complex

Details: Budget

Building: Stage 1

Auto code	Description	Quantity	Unit	Rate	Total
	<b>Stage 1</b>				
1	Clubhouse	568.2	m2	3,400.00	1,931,778
2	Multi-purpose Hall	2,215.9	m2	1,650.00	3,656,219
3	Rugby/Hockey pitch - Stolons, retic, drainage	9,314.4	m2	24.00	223,545
					<b>5,811,541</b>
	<b>External Works</b>				
4	Roads and car parking	4,254.0	m2	110.00	467,940
5	Pedestrian paving	631.3	m2	95.00	59,975
6	Pergola over walkway	50.0	m2	165.00	8,250
7	Wayfinding and signage	1.0	Item	30,000.00	30,000
8	Landscaping provision	3,000.0	m2	17.00	51,000
					<b>617,165</b>
	<b>Siteworks</b>				
9	Top soil strip	8,714.0	m3	5.00	43,570
10	Site filling	10,220.0	m3	30.00	306,600
11	Excavation	2,500.0	m3	35.00	87,500
12	Open drain diversion	430.0	m3	35.00	15,050
13	Sundry site works	1.0	Item	115,000.00	115,000
					<b>567,720</b>
	<b>External Services</b>				
14	Stormwater system	1.0	Item	80,000.00	80,000
15	On-site sewer	1.0	Item	50,000.00	50,000
16	External fire service	1.0	Item	45,000.00	45,000
17	External water service	1.0	Item	25,000.00	25,000
18	Water tanks and pumps	1.0	Item	65,000.00	65,000
19	Fire tanks and pumps	1.0	Item	300,000.00	300,000
20	External communications	1.0	Item	25,000.00	25,000
21	External electrical - MSB, lighting, etc	1.0	Item	40,000.00	40,000
					<b>630,000</b>
	<b>Total Construction Cost</b>				<b>7,626,427</b>
	<b>Budget Items</b>				
22	Design contingency	10.0	%		762,643
23	Construction contingency	5.0	%		381,321
24	Provision for headworks				100,000

## Item 9.4.6

## Cost Plan No.2



**Project:** Chittering Sports Complex  
**Building:** Stage 1

**Details:** Budget

Auto code	Description	Quantity	Unit	Rate	Total
25	Allowance for professional fees	10.0	%		838,907
26	Escalation povision - Excluded	0.0	%		0
27	<b>Total Current Cost Budget - Stage 1a</b>				<b>9,709,298</b>
28	GST	10.0	%		970,930
GFA: 0.00 m2					10,680,228



# Lower Chittering Sports Complex Business Case

*Prepared for*

**Shire of Chittering**

**September 2018**



# lucid

*/'lu:sid/*

*adjective*

**1. expressed clearly; easy to understand**

**2. bright or luminous**



## Document Control

Job Name: CHITTERING – Sports Facility  
 Client: Shire of Chittering  
 Client Contact: Alan Sheridan

### Version Control

Version	Date	Authorisation
Draft v1	10/9/18	MC

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## Executive Summary

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### Background

Lucid Economics Pty Ltd (Lucid Economics) has been engaged by the Shire of Chittering to develop a business case for the future development of the Lower Chittering Sports Complex.

The Lower Chittering Sports Complex will provide important community infrastructure for the rapidly growing population as well as important sport and recreational infrastructure for the Immaculate Heart College, located directly adjacent to the sports complex. The facility will be jointly run by both the Shire and the College, providing maximum utilisation and minimised costs for the community (the Shire).

The development of the Lower Chittering Sports Complex involves a land transaction that includes a proposal to sell 3 ha of the site (owned by Council), considered as surplus, to the Immaculate Heart College for school expansion with the funds from the sale being used to contribute towards the development costs of the Sports Complex.

### Facility Need

The residents of the Shire of Chittering currently lack a variety of sport and recreation infrastructure, including a seniors oval and rugby field. While over half of the residents are estimated to participate in sports and physical activity, many of the most popular activities are not possible within the Shire, requiring local residents to drive, sometimes up to an hour one way, to access infrastructure.

In 2016, a detailed feasibility study (*Regional Sports & Community Centre Feasibility Study*) was carried out by Jill Powell & Associates for the Shire of Chittering. As part of this study, a detailed assessment of all current recreational facilities was completed and found:

- The Shire of Chittering is reasonably serviced in terms of the volume of facilities, however, the quality and location of some facilities needs some attention.
- There are a number of gaps in terms of facilities, including:
  - Senior sized oval (no cricket nor football can be played in the Shire)
  - Indoor Sports Centre
  - Fitness/gym Centre
- Most existing facilities are operating at capacity, limiting the Shire's ability to service the future expected population.
- Additional facilities will be required within the Muchea/Lower Chittering area with the additional expected population growth in this area.

Detailed community consultation was also carried out as part of the study. 88% of residents feel that additional facilities are required. A senior oval and indoor recreation centre featured as priorities for the community.

### Lower Chittering Sports Complex

The Lower Chittering Sports Complex will be completed across three separate stages. Stage 1 (highlighted below, Figure E.1) will include a Multipurpose Centre, Club Facility and a seniors rugby/hockey field. Stages 2 and 3 will include a seniors oval as well as a number of outdoor courts. The Multipurpose Centre will include two indoor courts and associated seating. The Club Facility will include a variety of function rooms, commercial kitchen and other associated areas (Figure E.2).

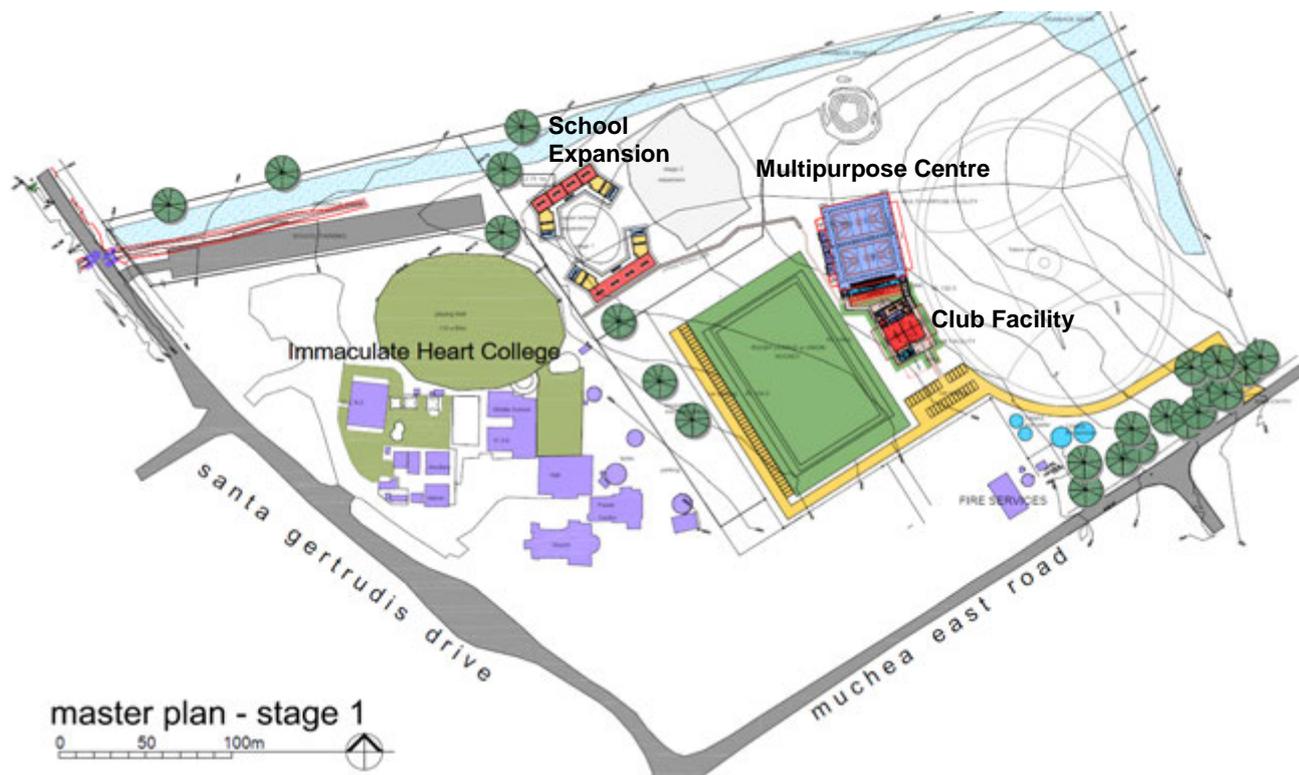
Combined, Stage 1 of the development will include 2,784 sqm of space and cost an estimated \$9.7 million.

As highlighted in the master plan, the Immaculate Heart College will develop its secondary school adjacent to the Lower Chittering Sports Complex and have access to this facility.

The development of the Lower Chittering Sports Complex strongly aligns to a number of policy and strategic documents across various levels of Government, including:

- Shire of Chittering Community Strategic Plan 2017-2027
- Shire of Chittering Community Development Plan (2014-2024)
- Shire of Chittering Sport and Recreation Plan (2012-2022)
- WA Department of Sport and Recreation Strategic Plan (2016-2018)
- WA Strategic Directions for the WA Sport and Recreation Industry (2016-2020)
- WA Department of Sport and Recreation – Sport and Recreation and Public Health (2016)
- Sport 2030 – National Sports Plan

Figure E.1: Master Plan Lower Chittering Sports Complex (Stage 1)



Source: Peter Hunt (2018)

Figure E.2: Multipurpose Centre and Club Facility, Lower Chittering Sports Complex (Stage 1)



Source: Peter Hunt (2018)

## Economic Impact

The construction of the Lower Chittering Sports Complex is expected to create a total of 22 jobs in the Shire and contribute \$4.69 million to Gross Regional Product (GRP). The operation of the project will result in a total (direct and indirect) increase in GRP of \$2.06 million and create a total (direct and indirect) of 20 jobs on an annual basis.

Table E.1: Economic Impact of the Lower Chittering Sports Complex, Construction Phase (2018\$)

	Gross State Product (\$m)	Employment (No.)
Direct	\$2.20	8
Indirect	\$2.49	14
<b>Total</b>	<b>\$4.69</b>	<b>22</b>

Notes: Employment expressed as full-time equivalent (FTE) positions.

Source: Lucid Economics

Table E.2: Economic Impact of the Lower Chittering Sports Complex, Operational Phase (2018\$)

	Gross Regional Product (\$m)	Employment (No.)
Direct	\$0.76	11
Indirect	\$1.30	9
<b>Total</b>	<b>\$2.06</b>	<b>20</b>

Notes: Employment expressed as full-time equivalent (FTE) positions.

Source: Lucid Economics

Beyond these quantifiable economic benefits, there would be numerous additional benefits, for the Shire of Chittering community, including:

- **Population Attraction:** the new facilities (combined with the expansion of the Immaculate Heart College) will act to attract future residents to the community, helping to grow the area and maintain a vibrant community.
- **Redistribution of Savings:** through joint operation of the Lower Chittering Sports Complex, the Shire of Chittering will save money that would have otherwise have to be spent. These savings can be deployed elsewhere in the community, providing additional benefits.
- **Increased Community Wellbeing:** health, sports and leisure activities is an important facet of community wellbeing, not only through the positive physical health benefits, but also through numerous mental health benefits as well. Community pride and community cohesion would also be enhanced through this project.
- **Increased participation in sport and recreation:** according to the Department of Sport and Recreation Annual Report 2016/17, the provision of facilities leads to an increase in physical activity levels and participation in physical activity. Increased participation in sport and recreation will make individuals, families and the community healthier. Evidence from other communities has shown a dramatic increase in club participation once new facilities are delivered locally. Some club memberships have grown by 200% to 300%.
- **Health benefits:** there are numerous individual and community health benefits that the new facilities would support. Healthier people provide lower cost and lower burden for the public health system.

## Cost-Benefit Assessment

A cost-benefit assessment has demonstrated that the Lower Chittering Sports Complex provides a net community benefit. The provision of health benefits for the local community is a key benefit of the facility.

Table E.3 Present Values of Costs and Benefits, Lower Chittering Sports Complex, 2018/19 – 2058/59 (\$m)

	Discount Rate (4%)	Discount Rate (7%)	Discount Rate (10%)
<b>Benefits</b>			
Operational Revenues	\$12.10	\$8.20	\$6.03
Operational Cost Savings	\$7.04	\$4.77	\$3.51
Health Benefits	\$17.66	\$10.98	\$7.54
Total Benefits	\$36.80	\$23.94	\$17.08
<b>Costs</b>			
Construction Cost	\$9.34	\$9.07	\$8.83
Maintenance	\$2.24	\$1.52	\$1.12
Operational Expenditure	\$11.83	\$8.01	\$5.89
Total Costs	\$23.41	\$18.60	\$15.84
<b>Net Present Value</b>			
NPV	\$13.39	\$5.33	\$1.24
<b>Benefit to Cost Ratio</b>			
BCR	1.6	1.3	1.1

Source: Lucid Economics

**At the selected real discount rate of 7% for this project, the analysis yields a Benefit to Cost Ratio (BCR) of 1.3 meaning that it is economically desirable and provides a net benefit.** Even at the higher discount rate of 10%, the project still yields a positive NPV and BCR.

Under the baseline scenario (without project scenario), none of the identified benefits would be captured nor any of the costs incurred. As such, the scenario with the project provides positive economic and social benefits. Sensitivity analysis has shown that with variations in various project assumptions of +/- 30%, the project maintains a positive NPV and a BCR over one, demonstrating the strength of the project.

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# 1. Introduction

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Lucid Economics Pty Ltd (Lucid Economics) has been engaged by the Shire of Chittering to develop a business case for the future development of the Lower Chittering Sports Complex.

The Shire of Chittering is one of the fastest growing local government areas in Western Australia and is situated approximately one hour from Perth. Over a number of years, there has been anecdotal evidence of local families travelling great distances to access sporting facilities. In 2016, a detailed feasibility study was completed on behalf of the Shire, which included a review of existing facilities and strategies, a demand assessment as well as considerable community consultation. The study clearly showed the requirement for new sporting facilities to support the current and future population of the Shire.

The Shire currently manages Public Open Space Reserve 52220 which is a 10.1 ha site adjacent to the Immaculate Heart College located at the junction of Santa Gertrudis Drive and Muchea East Road in Lower Chittering, which has been identified for future recreational development. As a result of the feasibility study, initial plans were drawn up for the required sporting facilities on this site.

At the same time (and in parallel), the Immaculate Heart College has been in the process of expanding to offer a high school in addition to the existing primary school (full K-12 grades). In order to support its forecasted growth, the Immaculate Heart College purchased two sites (combined 5.1 ha) across Santa Gertrudis Dr. The provision of sporting facilities for the high school is an important facet of attracting students and being able to provide a well-rounded and full curriculum of activities. As such, the Immaculate Heart College had plans to develop various sporting infrastructure on its expansion site to support its high school development.

As a part of the Shire's consultation, closer discussions with the Immaculate Heart College began and from these discussions a more comprehensive, efficient and safer plan was created. The revised plan would see the Shire sell approximately 3 ha (of its 10.1 ha site) to the College for its planned future expansion needs. The resultant proceeds from the sale would be used towards the cost of developing the Lower Chittering Sports Complex. Additionally, instead of two separate sporting facilities being developed across the street from each other, a single sporting complex to suit both the needs of the community (the Shire) and the College has been envisioned.

For the College, having both the high school and the primary school (and supporting facilities) on one site without the need to cross a busy local road provides a much safer and better outcome. For the Shire, the potential to jointly operate the sporting complex provides a more efficient operating model, saving the Shire (and the community) money. As the feasibility study showed, the majority of usage for the community would take place outside of school hours and the majority of the College's usage would take place during the day, so having a common, multiuser facility provides mutual benefits to all stakeholders.

This joint sporting complex is now the accepted vision for both the Shire and the College.

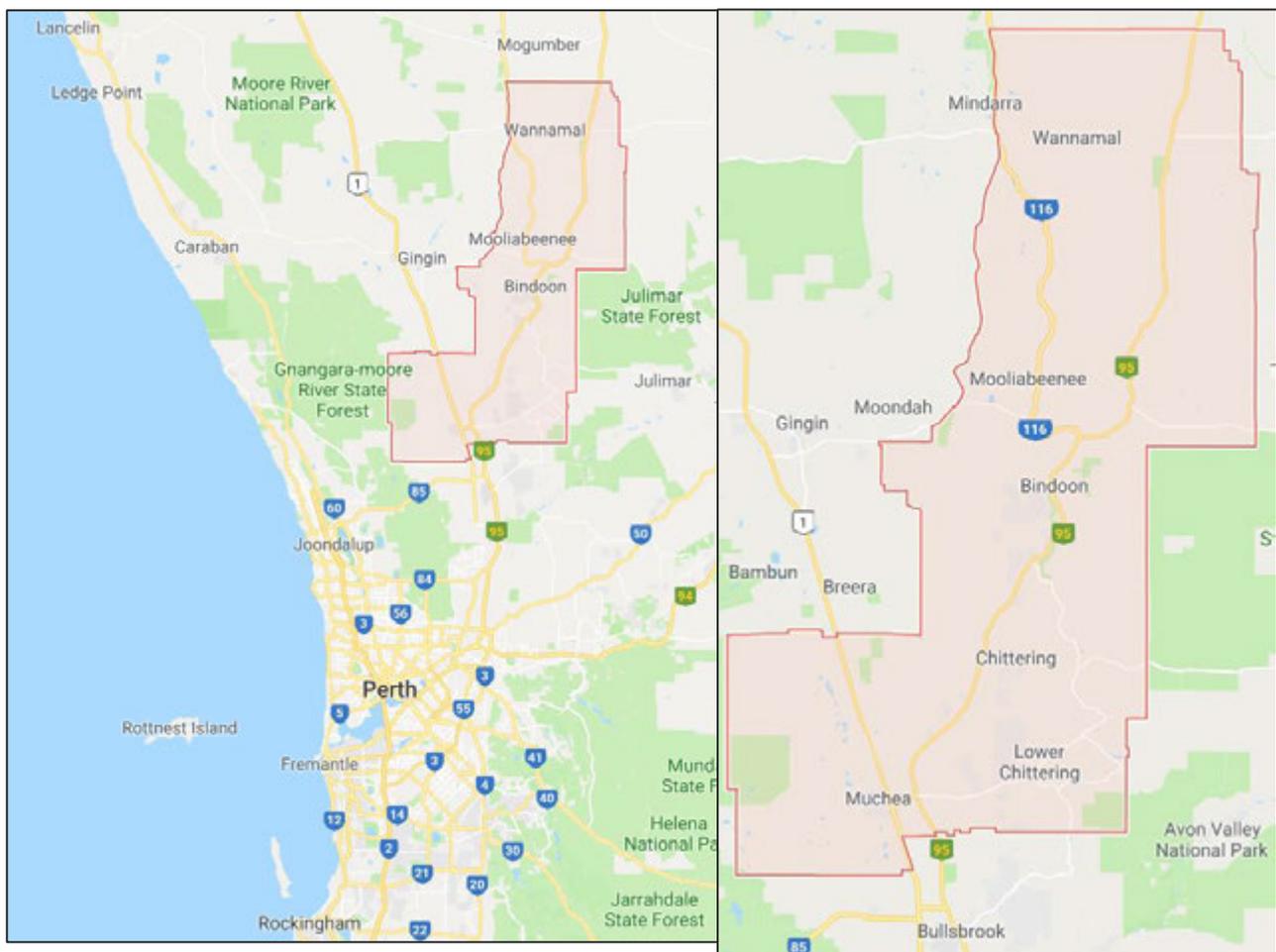
This assessment provides an economic impact assessment and cost-benefit assessment of the project to identify and measure all future costs and benefits of the sporting complex over time. This assessment has been conducted in accordance with relevant guidelines from the State and Federal Government.

## 2. Local Environment

### 2.1 Overview

The Shire of Chittering is located in the southern portion of the Wheatbelt region, adjacent to the Perth and Peel Metropolitan Region. The main towns in the Shire include Bindoon, Chittering, Lower Chittering, Mooliabeenee, Muchea and Wannamal. The southern portion of the Shire (Muchea and Lower Chittering) are approximately 1 hours’ drive from Perth and have experienced strong population growth in line with communities in the North-East growth corridor, such as Ellenbrook and Bullsbrook.

Figure 2.1: Shire of Chittering



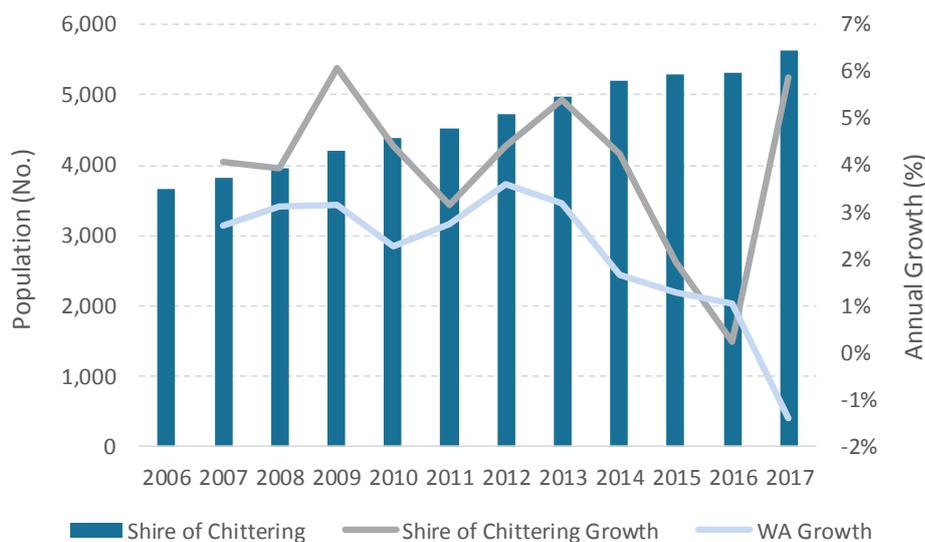
Source: Google Maps

## 2.2 Population and Demographics

The population of the Shire of Chittering was 5,623 in 2017 and since 2006 has grown at an average rate of 4% per year, which has consistently outpaced population growth across the State (Figure 2.2). Based on the latest population forecasts from the WA Planning Commission, the high growth rate of the Shire is expected to continue, with the population estimated to reach 8,500 people by 2031, an increase of over 50% (Figure 2.3). As recent population growth has outpaced forecasted growth from 2015, it is possible that the population could increase beyond these levels.

In order to service the current and future population, the Shire of Chittering has to provide suitable recreational opportunities and facilities to cater for its growing population.

Figure 2.2: Historical Population, Shire of Chittering



Source: ABS (2018)

Figure 2.3: Future Estimated Population, Shire of Chittering



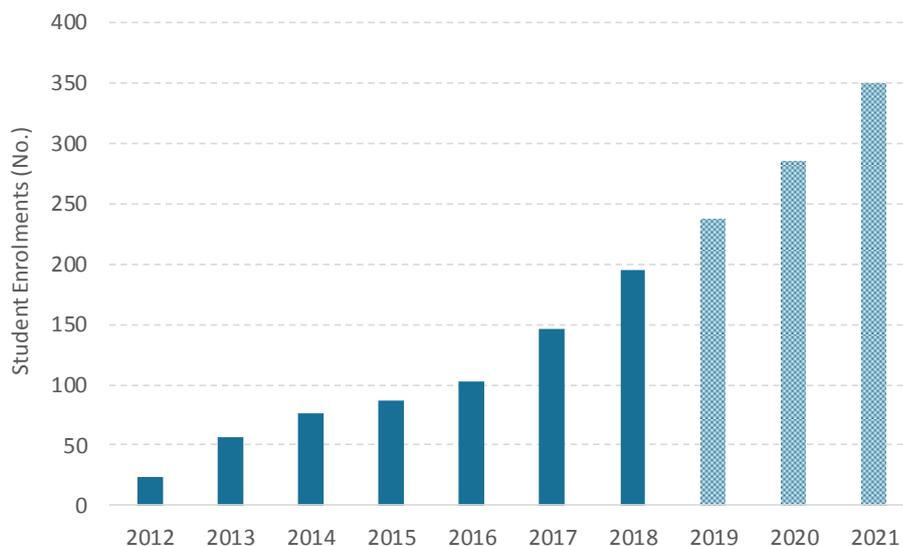
Source: ABS (2018); WA Tomorrow (2015); Lucid Economics

## 2.3 Immaculate Heart College

Immaculate Heart College is an Independent, co-educational, Catholic school that started in 2012. The College is located on Santa Gertrudis Drive off of Muchea East Road in Lower Chittering. The catchment for the College is large and expands well beyond the boundary of the Shire of Chittering servicing families spanning from Gin Gin in the West to West Toodyay in the East and Bullsbrook in the South.

Student numbers have grown rapidly since 2012 and the College is currently in the process of developing a Secondary School. By 2021, the College will operate as a K-12 school and have an estimated enrolment of 350 students (Figure 2.4).

Figure 2.4: Student Enrolments, Immaculate Heart College



Source: Immaculate Heart College (2018)

As part of the shift to the provision of a full K-12 student experience, the College will need to expand its current educational facilities as well as its recreational facilities. The provision of adequate sports and recreational facilities for Secondary School students (i.e. Year 9- Year 12) will be critical in the delivery of a well-rounded and enriching curriculum. Having sporting facilities suitable for this older age group of children will also increase the attractiveness of the College to both parents and students, positively contributing to the College attracting the future projected student enrolments.

In order to meet its projected growth, the Immaculate Heart College will have to expand its sporting and recreational facilities.

## 2.4 Infrastructure Improvements

Northlink WA is an \$1.12 billion investment by the State and Federal Government to establish a significant 50km road transport corridor that will allow for a direct freight connection between Muchea and Kewdale, freeing up congestion along the Great Northern Highway. Additionally, Northlink WA will provide a significant increase in access for identified northern industrial areas including the Muchea Industrial Estate and the North Ellenbrook and South Bullsbrook Industrial Areas. Combined, these areas offer 3,600 ha of future industrial land that is strategically located at the northern intersections of Northlink WA.

This considerable economic capacity combined with the strategic access to Northlink WA will drive future investment and job growth over the coming decades. As businesses establish in these areas, many of the workers will likely seek to live close to where they work, which will translate to a further increase in population for the southern portion of the Shire of Chittering, increasing pressure on existing (and future) community infrastructure, such as sporting and recreational facilities.

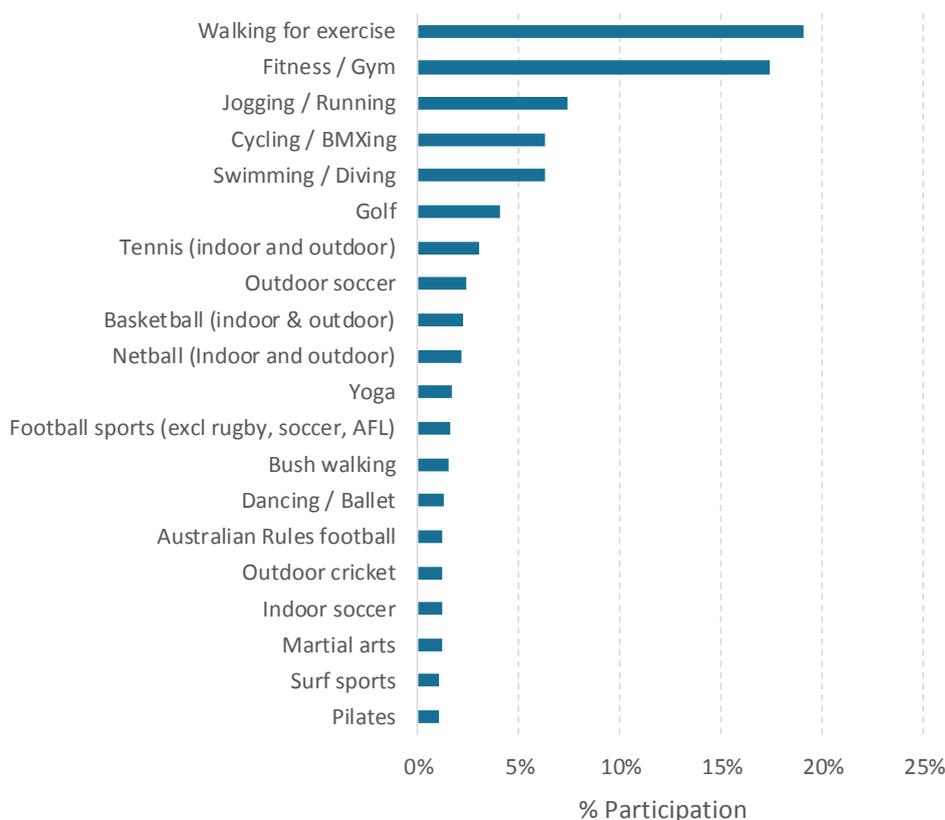
### 3. Community Need

#### 3.1 Demand for Recreation

Based on ABS information, over half of the population in the Shire of Chittering participates in sport and physical recreation. The top twenty activities are highlighted in Figure 3.1 (ABS, 2015a).

As highlighted in Section 2.2, the population of the Shire of Chittering is likely to grow by 50% by 2031, which means that demand for recreational facilities will continue to grow. There is already anecdotal evidence of families travelling up to an hour (one-way) to access sporting facilities in Perth.

Figure 3.1: Top 20 Sport and Recreational Activities



Source: ABS (2015a)

Many of the identified activities above (Figure 3.1) are not currently possible in the Shire of Chittering due to lack of facilities.

## 3.2 Supply of Recreational Facilities

In 2016, a detailed feasibility study (*Regional Sports & Community Centre Feasibility Study*) was carried out by Jill Powell & Associates for the Shire of Chittering. As part of this study, a detailed assessment of all current recreational facilities was completed.

The study found:

- The Shire of Chittering is reasonably serviced in terms of the volume of facilities, however, the quality and location of some facilities needs some attention.
- There are a number of gaps in terms of facilities, including:
  - Senior sized oval (no cricket nor football can be played in the Shire)
  - Indoor Sports Centre
  - Fitness/gym Centre
- Most existing facilities are operating at capacity, limiting the Shire's ability to service the future expected population.
- Additional facilities will be required within the Muchea/Lower Chittering area with the additional expected population growth in this area.

These findings were further acknowledged through a benchmarking assessment with other similar towns. In particular, the lack of a senior oval for cricket and football as well as the lack of an indoor sports centre were highlighted.

## 3.3 Community Consultation

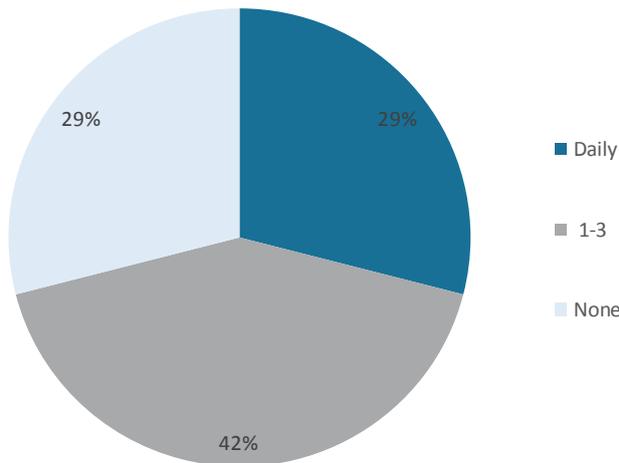
As part of the *Regional Sports & Community Centre Feasibility Study* (July 2016) a community consultation survey was conducted.

As highlighted in Figure 3.2, the survey found that the participation rate in sports and recreation in the Shire of Chittering was 71%, well above the 50% participation from the ABS survey in 2013-14. Additionally, the survey found that there was a high degree of home based activity and informal activities (both indoor and outdoor), which combined represented two-thirds of the activities undertaken by residents. Formal outdoor activities (such as football, cricket, etc.) as well as formal indoor activities represented 11% and 4% of activities of residents (Figure 3.3). These relatively underutilised activities may be associated with the lack of appropriate facilities (i.e. indoor recreational facility and seniors oval).

Overall, the survey found that 88% of residents agreed with the statement 'is there a need for more facilities' (Jill Powell & Associates, 2016). The survey also asked residents to identify the required facilities and overall, an indoor recreational facility was identified by most residents as the top priority. A seniors centre was ranked second and a fitness studio/gym was identified as the third highest priority (Figure 3.4).

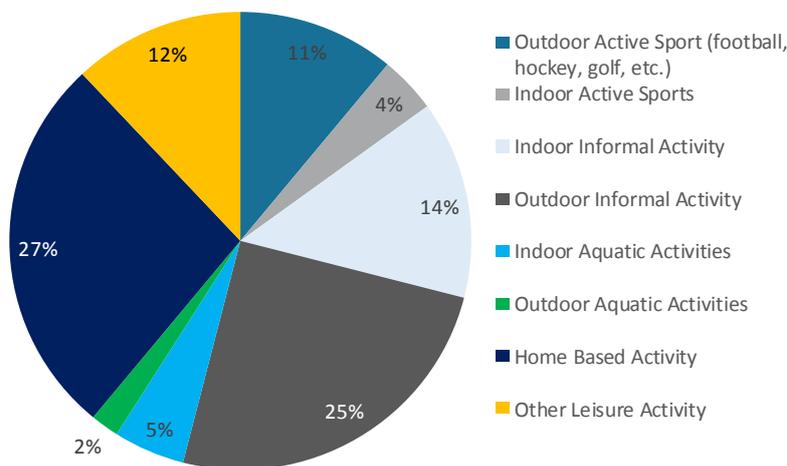
The community consultation provides support for the development of a new indoor recreational facility and a seniors oval. This information supports various anecdotal evidence as well as the demand analysis above (Section 3.1).

Figure 3.2: Participation in Sports and Recreation (2016)



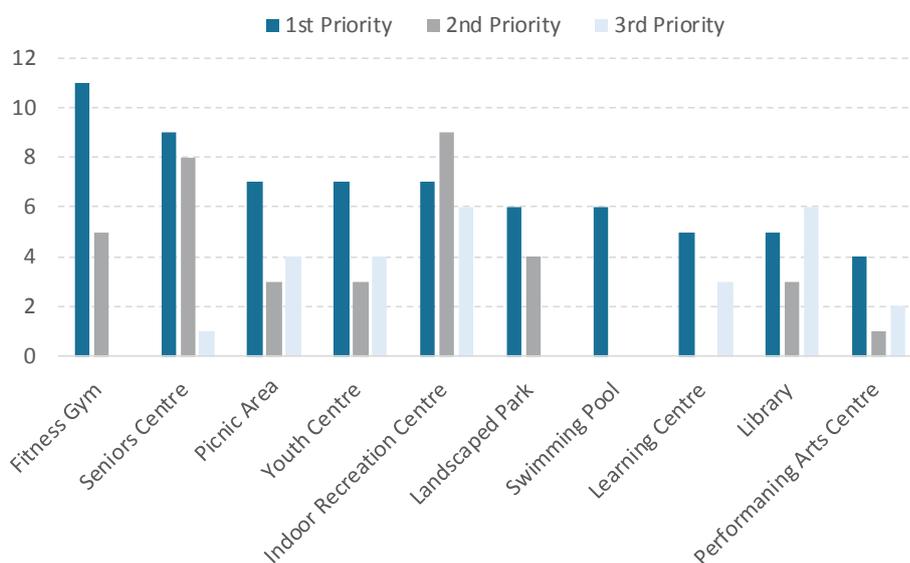
Source: Jill Powell & Associates (2016)

Figure 3.3: Participation in Activities (2016)



Source: Jill Powell & Associates (2016)

Figure 3.4: Priority Rating List



Source: Jill Powell & Associates (2016)

## 4. Lower Chittering Sports Complex

### 4.1 The Site

The identified site for the Lower Chittering Sports Complex is Public Open Space Reserve 52220, which is 10.1 ha in are. Only approximately 7 ha of the site is required to house the Lower Chittering Sports Complex, providing 3 ha of excess, surplus land. Furthermore, given the layout of the site and its irregular shape, it would be difficult to utilise various portions of the site.

Figure 4.1: Proposed Site (Public Open Space Reserve 52220)



Source: Landgate (2018)

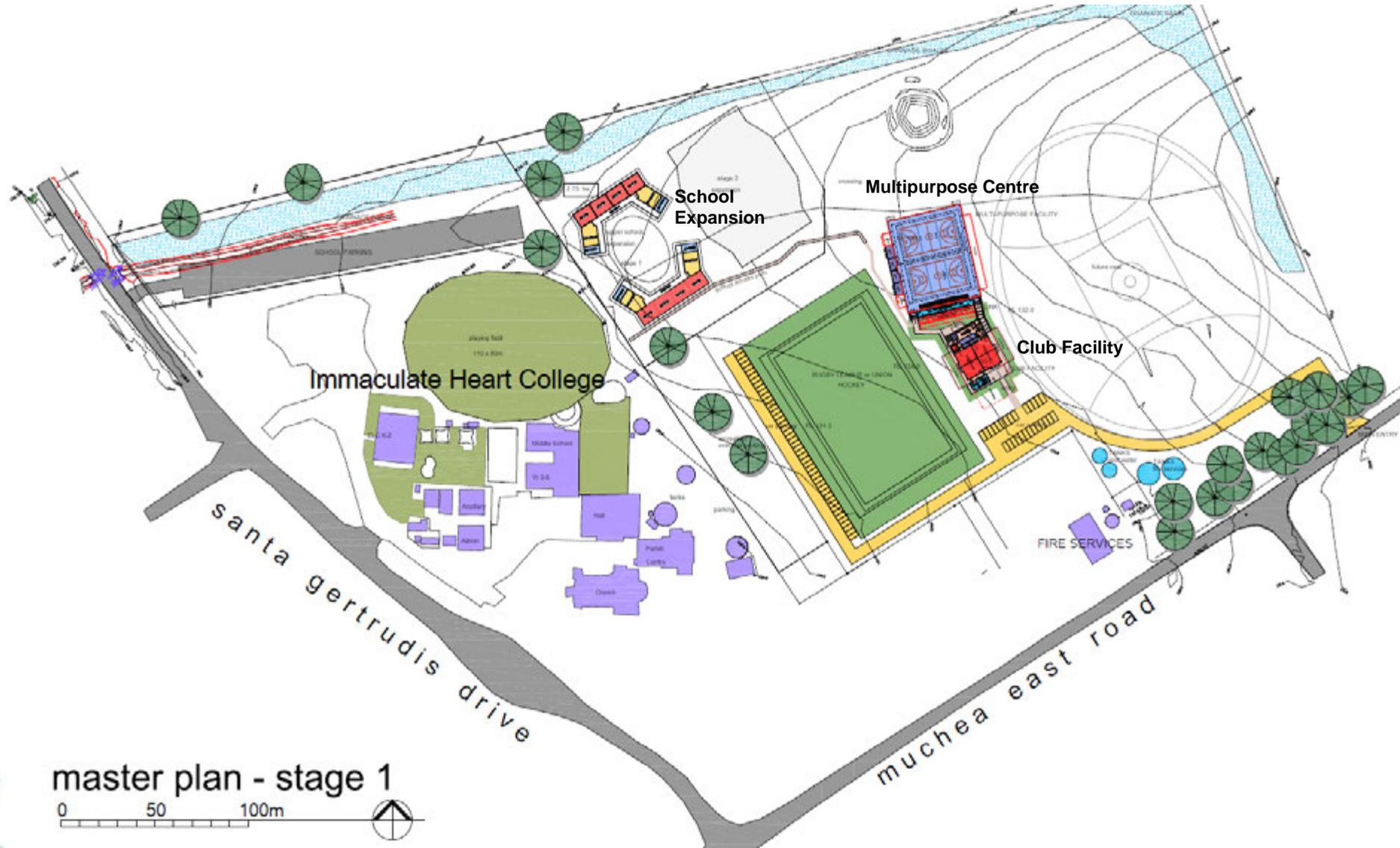
### 4.2 Lower Chittering Sports Complex

The Lower Chittering Sports Complex will be completed across three separate stages. Stage 1 (highlighted below, Figure 4.2) will include a Multipurpose Centre, Club Facility and a seniors rugby/hockey field. Stages 2 and 3 will include a seniors oval as well as a number of outdoor courts. The Multipurpose Centre will include two indoor courts and associated seating. The Club Facility will include a variety of function rooms, commercial kitchen and other associated areas (Figure 4.3).

Combined, Stage 1 of the development will include 2,784 sqm of space.

As highlighted in the master plan, the Immaculate Heart College will develop its secondary school adjacent to the Lower Chittering Sports Complex and have access to this facility.

Figure 4.2: Master Plan Lower Chittering Sports Complex (Stage 1)



Source: Peter Hunt (2018)

Figure 4.3: Multipurpose Centre and Club Facility Layout, Lower Chittering Sports Complex (Stage 1)

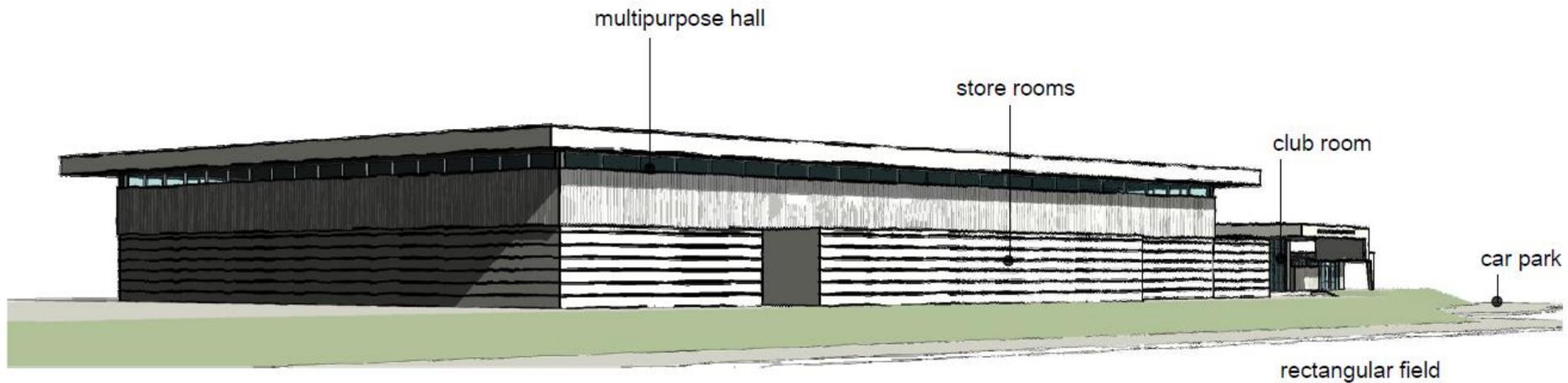


Source: Peter Hunt (2018)

Figure 4.4: Multipurpose Centre and Club Facility Concept Imagery, Lower Chittering Sports Complex (Stage 1)



south east view



north west view

Source: Peter Hunt (2018)

## 5. Strategic and Policy Alignment

The development of the Lower Chittering Sports Complex aligns with various Shire and State Government strategic plans and delivers on various strategic goals, as highlighted in the following table (Table 7.1).

Table 5.1: Strategic and Policy Documents Overview

Strategic Document	Overview	Implication
<b>Shire of Chittering Community Strategic Plan 2017-2027</b>	<p>The Community Strategic Plan is a long term (10 year) plan for the future, which reflects both the Community's and Council's aspirations for the future of the Shire.</p> <p>One of the goals of the plan is 'an inclusive, active, safe and healthy community for all to enjoy'. The plan specifically mentions that the Shire will provide recreational and sporting facilities to service the growing population in Lower Chittering/Muchea area.</p>	<p>The development of the Lower Chittering Sports Complex specifically addresses a key element from the Strategic Plan and will support the achievement of the plan's goal to be 'an inclusive, active, safe and healthy community for all to enjoy'.</p>
<b>Shire of Chittering Community Development Plan (2014-2024)</b>	<p>The Community Development Plan provides a (10) year Strategy to assist for future planning and provide the community with a strategic direction. The Strategy provides for the high-level objectives of the Shire in relation to the wider community development.</p> <p>Specifically, the plan addresses various imperatives for the Shire, including the provision of a high standard of sports and recreation infrastructure. The plan has a specific action to conduct a feasibility study on the development of a new sports and recreation facility for Lower Chittering.</p>	<p>The identified feasibility study on the development of a new sports and recreation facility in Lower Chittering was conducted in 2016. The study identified the demand for the facility.</p> <p>The development of the Lower Chittering Sports Complex is specifically supported by the Community Development Plan and will specifically deliver on an aspiration of the Plan.</p>

Strategic Document	Overview	Implication
<b>Shire of Chittering Sport and Recreation Plan (2012-2022)</b>	The plan provides strategies and actions designed to improve the planning and provision of sport and recreation in the Shire of Chittering over the next ten years. The plan highlights the importance and the value of physical activity in the promotion and achievement of a healthy community. Furthermore, the plan encourages joint use and multi-purpose facilities as an innovation solution to the provision of local facilities.	The Lower Chittering Sports Complex will increase access to sport and recreation infrastructure, thereby increasing participation in sport and recreation, which will contribute to a healthier community. The current plan for the Lower Chittering Sports Complex will also utilise a joint management model, as espoused by the plan.
<b>WA Department of Sport and Recreation Strategic Plan (2016-2018)</b>	The strategic plan provides specific direction regarding the Department's mission, purpose and strategies regarding sport and recreation in WA. It is built around participation, places and spaces, achievement and capacity building.  Specifically, the plan highlights the importance of built spaces in which sport and active recreation can occur and the importance of availability and access to these places can contribute to participation in sport and recreation.	The development of the Lower Chittering Sports Complex aligns strongly to the State's plan, specifically around the provision of spaces for sport and recreation. This increased access will increase participation in sport and recreation locally, which also aligns strongly with the plan.
<b>WA Strategic Directions for the WA Sport and Recreation Industry (2016-2020)</b>	The paper was developed to provide vision and direction for WA's sport and recreation industry, including the findings of in-depth consultation.  It highlights key desired outcomes of increased participation, improved performance, enhanced social capital and enhanced wellbeing.	The Lower Chittering Sports Complex will help to deliver on the identified outcomes from the State's paper, including increased participation in sport and recreation as well as enhanced social capital and community wellbeing.

Strategic Document	Overview	Implication
<p><b>WA Department of Sport and Recreation – Sport and Recreation and Public Health (2016)</b></p>	<p>This document highlights the important role that Local Governments play in the provision of sport and recreation facilities.</p> <p>Specifically, it underscores the benefits of participation in physical activity through sport and recreation. It also highlights the benefits of social interaction, connection to community and involved in community events.</p>	<p>The Lower Chittering Sports Complex is an example of how local governments provide sport and recreation infrastructure as well as the important role of local governments in sport and recreation across the State.</p> <p>The Lower Chittering Sports Complex will increase participation and physical activity through the community, positively contributing to social interaction and connection to community, which are highlighted as important outcomes for sport and recreation.</p>
<p><b>Sport 2030 – National Sports Plan</b></p>	<p>Sport 2030 sets out the vision of “Australia being the world’s most active, healthy sporting nation”. One of the strategic priorities is ‘building a more active Australia’, in order to reduce inactivity amongst Australians.</p>	<p>The Lower Chittering Sports Complex will increase participation in sport and active recreation, which will help to achieve Sport 2030 goals to reduce inactivity amongst Australians.</p>

Source: Lucid Economics from various strategic documents

## 6. Stakeholder Engagement

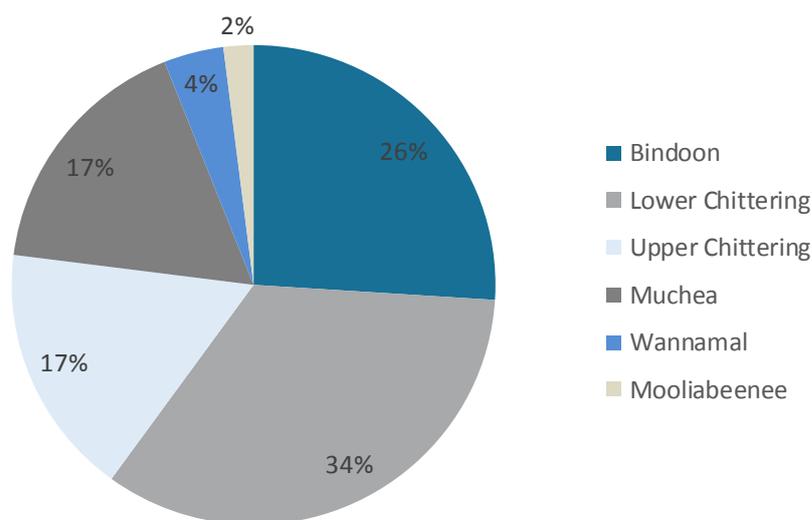
Over the last four years, considerable engagement with the community has been conducted. Extensive community consultation was included as the basis for the *Community Strategic Plan (2017-2027)* and the *Community Development Plan (2014-2024)*. Both of these plans have highlighted the community's desire for a sport and recreation facility in Lower Chittering. This project was highlighted as a specific action and project in both of these strategic documents.

Furthermore, the *Regional Sports & Community Centre Feasibility Study* (July 2016) included an extensive community and stakeholder engagement process, including:

- A survey of residents
- A survey of local clubs
- Five public workshops

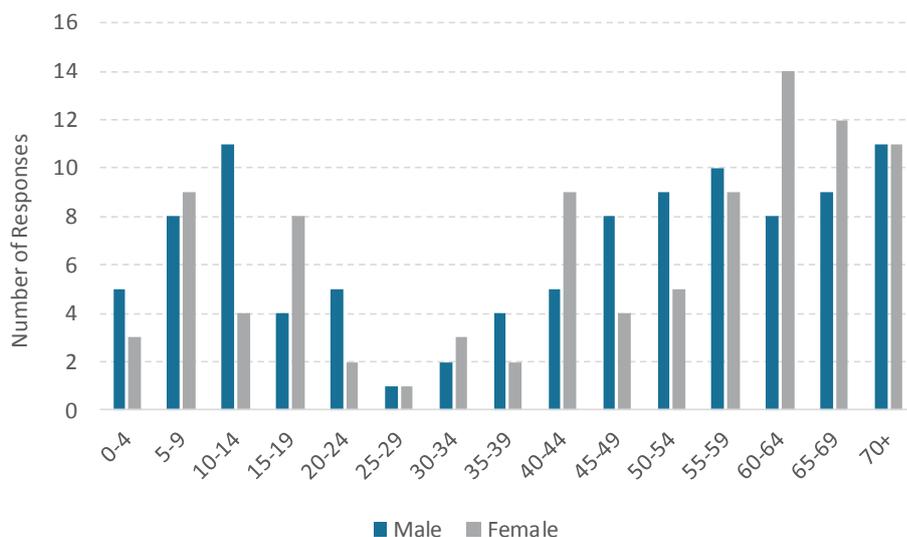
A survey was sent randomly to 500 local residents across the Shire by Australia Post. 76 survey responses were received, representing 196 residents. This level of response provides a confidence interval of +/- 6.8% at a 95% confidence level, meaning the results of the survey are statistically representative of resident sentiment. Responses were received from all of the various towns in the Shire (Figure 6.1) as well as across a diverse range of ages (Figure 6.2).

Figure 6.1: Responses by Suburb



Source: Jill Powell & Associates (2016)

Figure 6.2: Responses by Age Group



Source: Jill Powell & Associates (2016)

As highlighted in Section 3.3, the following facilities received the strongest support from the community survey:

- Indoor Recreation Centre
- Seniors Centre
- Fitness Gym
- Picnic Area
- Youth Centre
- Library

A total of 64 surveys were distributed to all known organisations and clubs in the shire and a total of 18 responses were received. The following clubs provided a response:

- Bindoon and Districts Agricultural Society
- Bindoon and Districts Historical Society
- Bindoon and Districts Little Athletics
- Bindoon Chittering Retirees
- Bindoon Netball Association
- Bindoon Singers
- Bindoon Tennis Club
- Chittering Art Society
- Chittering Junior Football Club
- Chittering Valley Progress Association
- IHC Playgroup
- Lower Chittering Cricket Club
- Muchea Netball Club
- South Midlands Netball Association
- South Midlands Polocrosse Club
- Wannamal Community Centre
- Wannamal Indoor Bowling Club
- Wannamal Tennis Club

These clubs represent 799 members. The survey of clubs identified the need for new sporting ovals and new courts (tennis and netball). Specifically, the need for indoor, multi-use courts was highlighted by the netball clubs.

The *Regional Sports & Community Centre Feasibility Study* (July 2016) concluded from the consultation with the community that there is a need for (and broad community support for):

- Sporting ovals (senior)
- Gymnasium/fitness area
- Sportsman's clubhouse/kitchen/functions
- Children's activity centre
- Multi-use courts
- Multipurpose centre

## 7. Economic Impact Assessment

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### 7.1 Modelling Approach

This assessment leverages Input-Output (IO) modelling and considers the net economic benefits created from the construction and operation of the Lower Chittering Sports Complex on the local economy.

The economic impact is based on the latest Input-Output tables provided by the Australian Bureau of Statistics (ABS) (ABS, 2016).

Economic impact analysis identifies a series of economic metrics. For this assessment, the following metrics have been used:

- **Gross Regional Product:** value of the total economic output minus the costs of goods and services used as inputs, plus net taxes. Gross regional product is a preferred measure of the economy as it focuses on the net contribution. Gross regional product is similar to Gross State Product or Gross Domestic Product.
- **Employment:** employment positions generated, expressed on a full-time equivalent (FTE) basis.

These metrics are measured in terms of the direct impact as well as the indirect (flow-on) impact. For this assessment, both Type I and Type II impacts have been considered, which include:

- **Type I:** Production effect or supply chain impacts linked to the direct impact.
- **Type II:** Consumption induced effect, which measures expenditure paid by employees related to the project in the broader economy.

IO modelling has various limitations, as highlighted in **Appendix A**.

### 7.2 Assumptions

#### Construction Phase

For the construction phase, the estimated capital expenditure has been used to identify the economic benefits. As highlighted in the following table (Table 7.1), the project is anticipated to cost \$9.7 million.

Table 7.1: Lower Chittering Sports Complex, Capital Expenditure

Element	Cost- ex GST (\$)
<b>Sporting Infrastructure</b>	
Clubhouse	\$1,931,778
Multipurpose Hall	\$3,656,219
Rugby/Hockey pitch	\$223,545
<b>Subtotal</b>	<b>\$5,811,541</b>
<b>External Works</b>	
Roads and car parking	\$467,940
Pedestrian paving	\$59,975
Pergola over walkway	\$8,250
Wayfinding and signage	\$30,000
Landscaping provision	\$51,000
<b>Subtotal</b>	<b>\$617,165</b>
<b>Siteworks</b>	
Top soil strip	\$43,570
Site filling	\$306,600
Excavation	\$87,500
Open drain diversion	\$15,050
Sundry site works	\$115,000
<b>Subtotal</b>	<b>\$567,720</b>
<b>External Services</b>	
Stormwater system	\$80,000
On-site sewer	\$50,000
External fire service	\$45,000
External water service	\$25,000
Water tanks and pumps	\$65,000
Fire tanks and pumps	\$300,000
External communications	\$25,000
External electrical	\$40,000
<b>Subtotal</b>	<b>\$630,000</b>
<b>Budget Items</b>	
Design contingency	\$762,643
Construction contingency	\$381,321
Provision for headworks	\$100,000
Allowance for professional fees	\$838,907
<b>Subtotal</b>	<b>\$2,082,871</b>
<b>Total</b>	<b>\$9,709,297</b>

Source: Natshell Pty Ltd (2018)

Table 7.2: Construction Impact, Key Assumptions

Industry Sector	% Split	% Local Capture
Non-Residential Building Construction	64%	60%
Heavy and Civil Engineering Construction	13%	60%
Construction Services	6%	80%
Professional, Scientific and Technical Services	17%	30%

Source: Lucid Economics, Natshell Pty Ltd (2018)

**Operational Phase**

Once operational, the Lower Chittering Sports Complex is expected to employ 11 people (on a full-time equivalent basis). In order to identify the operational impact, this level of employment has been used.

**7.3 Results****Construction Phase**

The construction phase is expected to create a total of 22 jobs in the Shire and contribute \$4.69 million to Gross Regional Product (GRP).

**Table 7.3: Economic Impact of the Lower Chittering Sports Complex, Construction Phase (2018\$)**

	<b>Gross State Product (\$m)</b>	<b>Employment (No.)</b>
Direct	\$2.20	8
Indirect	\$2.49	14
<b>Total</b>	<b>\$4.69</b>	<b>22</b>

Notes: Employment expressed as full-time equivalent (FTE) positions.

Source: Lucid Economics

**Operational Phase**

The operational phase of the project will result in a total (direct and indirect) increase in GRP of \$2.06 million and create a total (direct and indirect) of 20 jobs.

**Table 7.4: Economic Impact of the Lower Chittering Sports Complex, Operational Phase (2018\$)**

	<b>Gross Regional Product (\$m)</b>	<b>Employment (No.)</b>
Direct	\$0.76	11
Indirect	\$1.30	9
<b>Total</b>	<b>\$2.06</b>	<b>20</b>

Notes: Employment expressed as full-time equivalent (FTE) positions.

Source: Lucid Economics

## 7.4 Other Benefits

Beyond the quantifiable economic benefits presented above, there would be numerous additional benefits, for the Shire of Chittering community stemming from the Lower Chittering Sports Complex, including:

- **Population Attraction:** the new facilities (combined with the expansion of the Immaculate Heart College) will act to attract future residents to the community, helping to grow the area and maintain a vibrant community.
- **Redistribution of Savings:** through joint operation of the Lower Chittering Sports Complex, the Shire of Chittering will save money that would otherwise have to be spent. These savings can be deployed elsewhere in the community, providing additional benefits.
- **Increased Community Wellbeing:** health, sports and leisure activities is an important facet of community wellbeing, not only through the positive physical health benefits, but also through numerous mental health benefits as well. Community pride and community cohesion would also be enhanced through this project.
- **Increased participation in sport and recreation:** according to the Department of Sport and Recreation Annual Report 2016/17, the provision of facilities leads to an increase in physical activity levels and participation in physical activity. Increased participation in sport and recreation will make individuals, families and the community healthier. Evidence from other communities has shown a dramatic increase in club participation once new facilities are delivered locally. Some club memberships have grown by 200% to 300%.
- **Health benefits:** there are numerous individual and community health benefits that the new facilities would support. Healthier people provide lower cost and lower burden for the public health system.

## 8. Cost Benefit Assessment

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### 8.1 Modelling Approach

Cost-Benefit Assessment (CBA) is an analytical tool used to inform decisions regarding complex investment projects. A CBA has advantages over other modelling techniques (like an Economic Impact Assessment), in that a CBA seeks to measure not just the net benefits but also the net costs of a project. Equally, through a CBA framework, it is possible to measure multiple costs and benefits derived from a project (as opposed to just the economic components).

This CBA was carried out using a discounted cashflow (DCF) approach to analyse all costs and benefits that would occur if the project were to proceed. In this sense, two scenarios were considered, a baseline ('without the project') scenario and a 'with the project' scenario. The CBA considered the effect of real costs and benefits, which excludes inflation, taxes or subsidies.

The geographic boundary for this assessment is the Shire of Chittering.

In a CBA framework, decisions are made based on two criteria, net present value (NPV) and the benefit cost ratio (BCR). The NPV shows the difference between the present value of all future benefits and all future costs. The BCR is calculated by dividing the present value of future benefits by the present value of the future costs. In such a manner a project is deemed 'desirable' if the NPV is positive and the BCR is above '1'. In general, if the NPV is negative and the BCR is below '1', the project is deemed as undesirable as the future costs will outweigh the benefits.

### 8.2 Definition of Costs and Benefits

The following table (Table 8.1) provides the detailed assumptions for the CBA.

According to the ATO, the new buildings will have a useful life of 40 years, which has been used as the timeframe for the assessment.

Table 8.1: Definition of Costs and Benefits, Proposed Gas Pipeline Project

Impact	Description	Assumption	Source
<b>Costs</b>			
Construction and Development	The costs to design, develop and construct the Lower Chittering Sports Complex.	<ul style="list-style-type: none"> <li>Capital costs of \$9.7 million</li> </ul>	Natshell (2018).
Maintenance	The maintenance of the Lower Chittering Sports Complex, including the multipurpose centre, club facility and new field.	<ul style="list-style-type: none"> <li>Annual costs of \$114,000, which is estimated as 1.5% of capital expenditure on fixed assets</li> </ul>	Industry benchmark
Operating Costs	The costs of operating the Lower Chittering Sports Centre, including labour, utilities marketing, etc.	<ul style="list-style-type: none"> <li>Annual costs of \$604,000 based on industry benchmarks</li> </ul>	CERM (2016)
<b>Benefits</b>			
Operational Revenues	Revenues generated by the centre including rental, food and beverage, etc.	<ul style="list-style-type: none"> <li>Annual revenues of \$618,000 based on industry benchmarks</li> </ul>	CERM (2016)
Reduced Operating Costs	As the facility will be jointly run by the Shire and the Immaculate Heart College, the Shire will only have to fund half of the operating costs, generating a substantial operating cost saving.	<ul style="list-style-type: none"> <li>Annual cost savings of \$358,000, which is half of the annual operating costs</li> </ul>	Shire of Chittering
Health Benefits	The facility will greatly enhance the provision of sport and recreation infrastructure, thereby increasing access to this infrastructure for the residents of the Shire. The increased access will lead to greater levels of local participation in sport and recreation, which will provide health benefits to local residents. Increasing health (decreasing obesity) provides benefits in terms of lower healthcare costs.	<ul style="list-style-type: none"> <li>Prevalence of obesity (27.9% of population)</li> <li>Inflation adjusted cost per person of obesity (\$1,981)</li> <li>20% reduction in obesity achieved through increased access to sport and recreation infrastructure</li> </ul>	ABS (2015b) PWC (2015)

Source: Lucid Economics

### 8.3 Results

The results of the CBA for the Lower Chittering Sports Complex are highlighted in the following table (Table 8.2).

Table 8.2 Present Values of Costs and Benefits, Lower Chittering Sports Complex, 2018/19 – 2058/59 (\$m)

	Discount Rate (4%)	Discount Rate (7%)	Discount Rate (10%)
<b>Benefits</b>			
Operational Revenues	\$12.10	\$8.20	\$6.03
Operational Cost Savings	\$7.04	\$4.77	\$3.51
Health Benefits	\$17.66	\$10.98	\$7.54
Total Benefits	\$36.80	\$23.94	\$17.08
<b>Costs</b>			
Construction Cost	\$9.34	\$9.07	\$8.83
Maintenance	\$2.24	\$1.52	\$1.12
Operational Expenditure	\$11.83	\$8.01	\$5.89
Total Costs	\$23.41	\$18.60	\$15.84
<b>Net Present Value</b>			
NPV	\$13.39	\$5.33	\$1.24
<b>Benefit to Cost Ratio</b>			
BCR	1.6	1.3	1.1

Source: Lucid Economics

**At the selected real discount rate of 7% for this project, the analysis yields a Benefit to Cost Ratio (BCR) of 1.3 meaning that it is economically desirable and provides a net benefit.** Even at the higher discount rate of 10%, the project still yields a positive NPV and BCR.

Under the baseline scenario (without project scenario), none of the identified benefits would be captured nor any of the costs incurred. As such, the scenario with the project provides positive economic and social benefits.

### 8.4 Sensitivity Analysis

Sensitivity analysis was carried out on key project variables to test the results in the case of changes to core assumptions. The following elements were tested with +/-10%, +/-20% and +/-30% change in the following variable:

- Capital cost
- Operating and maintenance cost
- Revenues
- Health benefits

The results are highlighted in the tables below. As highlighted in the tables below, the project maintains a positive NPV and BCR above '1' for all scenarios, demonstrating that across various variations the project continues to provide a net benefit to the community.

Table 8.3 Sensitivity Analysis of Capital Costs

Variation	Present Value Costs	Present Value Benefits	NPV	BCR
30%	\$21.33	\$23.94	\$2.61	1.1
20%	\$20.42	\$23.94	\$3.52	1.2
10%	\$19.51	\$23.94	\$4.43	1.2
<b>0%</b>	<b>\$18.60</b>	<b>\$23.94</b>	<b>\$5.33</b>	<b>1.3</b>
-10%	\$17.70	\$23.94	\$6.24	1.4
-20%	\$16.79	\$23.94	\$7.15	1.4
-30%	\$15.88	\$23.94	\$8.05	1.5

Note: Discount rate 7%.

Source: Lucid Economics

Table 8.4 Sensitivity Analysis of Operating and Maintenance Costs

Variation	Present Value Costs	Present Value Benefits	NPV	BCR
30%	\$21.46	\$25.37	\$3.90	1.2
20%	\$20.51	\$24.89	\$4.38	1.2
10%	\$19.56	\$24.41	\$4.86	1.2
<b>0%</b>	<b>\$18.60</b>	<b>\$23.94</b>	<b>\$5.33</b>	<b>1.3</b>
-10%	\$17.65	\$23.46	\$5.81	1.3
-20%	\$16.70	\$22.98	\$6.29	1.4
-30%	\$15.75	\$22.51	\$6.76	1.4

Note: Discount rate 7%.

Source: Lucid Economics

Table 8.5 Sensitivity Analysis of Revenues

Variation	Present Value Costs	Present Value Benefits	NPV	BCR
30%	\$18.60	\$26.40	\$7.79	1.4
20%	\$18.60	\$25.58	\$6.97	1.4
10%	\$18.60	\$24.76	\$6.15	1.3
<b>0%</b>	<b>\$18.60</b>	<b>\$23.94</b>	<b>\$5.33</b>	<b>1.3</b>
-10%	\$18.60	\$23.12	\$4.51	1.2
-20%	\$18.60	\$22.30	\$3.69	1.2
-30%	\$18.60	\$21.48	\$2.87	1.2

Note: Discount rate 7%.

Source: Lucid Economics

Table 8.6 Sensitivity Analysis of Health Benefits

Variation	Present Value Costs	Present Value Benefits	NPV	BCR
30%	\$18.60	\$27.23	\$8.63	1.5
20%	\$18.60	\$26.13	\$7.53	1.4
10%	\$18.60	\$25.03	\$6.43	1.3
<b>0%</b>	<b>\$18.60</b>	<b>\$23.94</b>	<b>\$5.33</b>	<b>1.3</b>
-10%	\$18.60	\$22.84	\$4.24	1.2
-20%	\$18.60	\$21.74	\$3.14	1.2
-30%	\$18.60	\$20.64	\$2.04	1.1

Note: Discount rate 7%.

Source: Lucid Economics

## 9. Risk Assessment

There are three groups of significant risks:

- Development risk
- Operational risk
- Governance risk

There are multiple aspects to each group of risks and in each, the project has been designed to mitigate these risks.

### 9.1 Risk Methodology

A Likelihoods and Consequences-based matrix approach has been used for assessing the risk profile of the project. This approach considers both:

- The likelihood that a risk will occur
- The subsequent consequences to the project

By doing so, a weighted assessment of project risk is undertaken, allowing for risks to be ranked in terms of their seriousness and management plan initiatives and actions appropriately targeted.

An example of the risk assessment matrix is illustrated below.

Table 9.1: Risk Assessment Matrix (Sample)

		Likelihood				
		1	2	3	4	5
Consequence	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

Source: Lucid Economics

There are four different categories of risks:

- **Low Risk (Total Scores 1-4):** risks with a low likelihood and consequence
- **Moderate Risk (Total Scores 5-10):** risks that have a more moderate likelihood/consequence combination (either both having moderate scores or one has a high score and the other a low score)
- **High Risk (Total Score 12-16):** risks where both likelihood and consequences scores are moderate or high
- **Extreme Risk (Total Score 20-25):** risks where both likelihood and consequences scores are very high

The treatment of each of these risks categories varies. While it is generally sufficient to simply note Low Risks, Moderate Risks usually require some form of ongoing monitoring. In contrast, High and Extreme Risks should be the subject of target mitigation actions as part of a Risk Management Plan.

## 9.2 Identified Risks

The following major risks for the project have been identified:

### Development Risk

1. **Capital expenditure costs:** Capital expenditure costs can vary once projects are underway, for a variety of unforeseen reasons. As a significant cost for the project, variations (often increases) can lead to project budgets being exceeded and various financial issues.
2. **Development timing:** A specific development timeframe has been established for this project and if the timeframe is extended due to some sort of complication during the construction period, project revenues and benefits could be delayed.

### Operational Risk

3. **Low demand:** While demand for the facility has been modelled and confirmed through extensive consultation with the community, it is still uncertain whether or not the projected demand will be realised. Once operational demand for the facility (increase or decrease from the projected) could differ from projections, which would impact both costs and benefits identified.
4. **Higher than expected operating and/or maintenance costs:** the successful operation of the facility expects operating costs in line other similar facilities in Australia. If any operational or maintenance cost were to significantly differ from industry benchmarks, it would directly impact the identified costs (and benefits) of the project and have financial consequences for the Shire.
5. **Operational management:** Poor management of these types of facilities can significantly impact revenues and costs of the facility, which would have impacts on project benefits and costs.

### Governance Risk

6. **Governance risk:** Given the multi-purpose nature of the facility and its joint management with the Immaculate Heart College, there will be a range of governance risks to consider in terms of the various legal agreements between the College and the Shire regarding the operation of the facility (and in particular the payment of costs).

These risks have been assessed and mitigation actions suggested in the following pages.

### Risk Assessment

The following table outlines the assessment of major risks to this Project (Table 9.2).

Table 9.2: Risk Assessment

Risk	Likelihood	Consequence	Risk Level	Comments	Mitigation Actions
<b>Capital expenditure costs</b>	3	4	<b>High</b>	Capital costs can vary for construction projects for a wide variety of reasons.	<ul style="list-style-type: none"> <li>• A certified Quantity Surveyor (QS) has been used to estimate construction costs based on specific architectural plans for the facility</li> <li>• A tender process will identify the most cost effective building company to develop the facility</li> <li>• A contract will be put in place with the builder that stipulates the budget allocated and confirms the costs</li> </ul>
<b>Development timing</b>	3	2	<b>Moderate</b>	The project has been identified by the community four years ago. Given the facility is for sport and recreational use, there is no required timeframe for its delivery and the facility is not a critical input into other developments, therefore any delays in construction will not drastically impact the community.	<ul style="list-style-type: none"> <li>• A specified construction schedule will be a part of the contract with the builder</li> <li>• Development and implementation of a detailed project management plan</li> </ul>

Risk	Likelihood	Consequence	Risk Level	Comments	Mitigation Actions
<b>Low demand</b>	3	3	<b>Moderate</b>	Actual demand for the facility will only be known once it is operational. Demand modelling and consultation with the community has indicated that the facility is currently in demand and will be well utilised.	<ul style="list-style-type: none"> <li>Detailed community consultation regarding their future sport and recreation needs</li> <li>Detailed modelling based on both the increase in student enrolments at Immaculate Heart College as well as future population growth of the Shire</li> <li>A strong communications and marketing effort as part of the project implementation plan</li> </ul>
<b>Higher than expected operating and maintenance costs</b>	3	3	<b>Moderate</b>	Operating and maintenance costs have been based on industry benchmarks for other similar facilities, however, actual costs are unknown until the facility is operational. Under the proposed joint management model, costs will be significantly less than if the Shire operated the facility alone.	<ul style="list-style-type: none"> <li>Utilisation of a joint operating model</li> <li>Implementation of energy efficiency measures</li> <li>Strong capital management for on-going maintenance</li> </ul>
<b>Operational management</b>	2	4	<b>Moderate</b>	Poor management could lead to poor financial performance (well below the identified benchmarks). However, local governments and schools have operated this type of infrastructure for decades, which has created a strong pool of potential facility managers.	<ul style="list-style-type: none"> <li>A competitive process will be undertaken to identify the best candidate to manage the facility</li> <li>A specific set of key performance measures (KPIs) will be established to manage the operations of the facilities and assure it delivers identified benefits</li> </ul>

Risk	Likelihood	Consequence	Risk Level	Comments	Mitigation Actions
<b>Governance</b>	2	4	<b>Moderate</b>	As a jointly operated facility, the Shire will share management of the facility with the College. Conflict or discontent for either partner could put pressure on the relationship, which would negatively impact the management of the facility.	<ul style="list-style-type: none"> <li>• Development and implementation of a detailed project management plan</li> <li>• Development of a contract between the Shire and the College specifying all relevant obligations (including financial) of each party</li> </ul>

Source: Lucid Economics

## 10. Summary

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This analysis has demonstrated that the proposed Lower Chittering Sports Complex provides an economic and social benefit to the local community.

As highlighted in the *Regional Sports & Community Centre Feasibility Study*, the residents of the Shire of Chittering do not currently have sufficient access to sport and recreational infrastructure, particularly a seniors oval and rugby field. A survey of the community found that 88% of residents feel that there is a need for more sports and recreational infrastructure.

The provision of the Lower Chittering Sports Complex not only solves an existing community issue, but it provides important infrastructure to support the expansion of the Immaculate Heart College. Joint operation of the centre will also help to maximise its utilisation as well as minimise costs to the Shire for running the facility.

The Lower Chittering Sports Complex will also provide economic and social benefits during its construction and subsequent operation.

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## Appendix A: Input-Output Modelling Limitations

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Input-output (IO) modelling is a common technique for economic impact assessment and has been used for a range of purposes, including to inform strategic or government policy decision making.

However, IO modelling has certain limitations and weaknesses, including:

- **Lack of supply-side constraints:** IO multipliers assume that extra output can be produced in one area of activity without taking away resources from other activities. Actual impacts would be dependent on the availability of appropriate labour and capital and other productive inputs.
- **Fixed prices:** IO systems assume fixed prices, so that the effects of relative price changes play no role in the allocation of scarce resources between activities. Essentially, prices are fixed and do not change relative to changes in supply and demand. Actual impacts would be affected by relative price changes due to constraints on the availability of labour, capital and other inputs and policy changes as well as changes in demand.
- **Fixed ratios for intermediate inputs to production and outputs from production:** IO modelling uses fixed input structures for each industry so that changes in production technology and the use of inputs in production play no role in impact assessment. Actual impacts could be affected by changes in production technologies including in the use of domestic and imported inputs and the mix of outputs including in the supply of products to household, investment and export demands.
- **No allowance for household purchasers' marginal responses to change:** IO modelling assumes that consumption is fixed to initial budget shares, so that real budget shares remain unchanged with changes in household income and relative prices. In practice, the level and composition of household purchases would be affected by income and relative price changes.
- **Absence of budget constraints:** IO modelling assumes that consumption is unconstrained so that changes in household or government consumption occur without reducing demand elsewhere. In practice, the level of consumption expenditure by households and government would be budget constrained.

Despite its flaws, IO modelling has proven an effective tool in understanding the economic benefits of a specific project, strategy or policy.



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