

Wagga Wagga Multisport Cycling Complex

Feasibility Study September 2016



This document has been produced in partnership with the following organisations:



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1.0 Executive Summary

Background

In November 2013 the Wagga Wagga Combined Cycling Clubs presented to the Council of City of Wagga Wagga a concept for a Multisport Cycling Complex (MSCC) to be located at Pomingalarna Reserve. In response to this presentation Council resolved to assist the Combined Cycling Clubs in developing a process for planning the complex. This feasibility study is the outcome of the planning work undertaken by the Combined Cycling Clubs with assistance from Council Officers.

The Combined Cycling Club group is made up of a representative from each of the following clubs:

1. Bicycle Wagga Wagga Inc.
2. Wagga Wagga Cycling Club Inc.
3. Tolland Cycling Club Inc.
4. MTB Wagga Inc.
5. Wagga Triathlon Inc.

Consultation and Research Undertaken

In 2015 the Combined Cycling Clubs conducted a community survey to identify cycling needs and gather responses to the proposed MSCC at Pomingalarna Reserve. The survey received 472 responses. As a result of this survey and discussions with potential user groups the scope of this study was determined. The project elements identified for inclusion are:

1. BMX track
2. Criterium track
3. Cycling education area
4. Jump/Pump track
5. Mountain Bike (MTB) playground
6. Velodrome with lights
7. Car parking
8. Amenities building with toilets, change rooms, canteen, office space, storage area, meeting room, timing area and public address space
9. BBQs and shelters
10. Fenced children's playground.

The Combined Cycling Clubs also developed a vision for the complex, which is:

“Wagga Wagga has a multisport cycling complex that is known nationally because it:

- a) Contains a unique combination of on/off road cycling and non-cycling facilities that attracts families from across the nation.*
- b) Contains modern built structures that complement the natural beauty of Pomingalarna Reserve.*
- c) Is a complex that is well connected both socially and physically to the Wagga Wagga urban area.*
- d) Is a complex that is owned and maintained by an engaged local community.”*

National, State and local cycling trends were reviewed during the development of the study. In addition, benchmarking of two similar facilities, the Stromlo Forest Park and Bathurst Bike Park, was also undertaken.



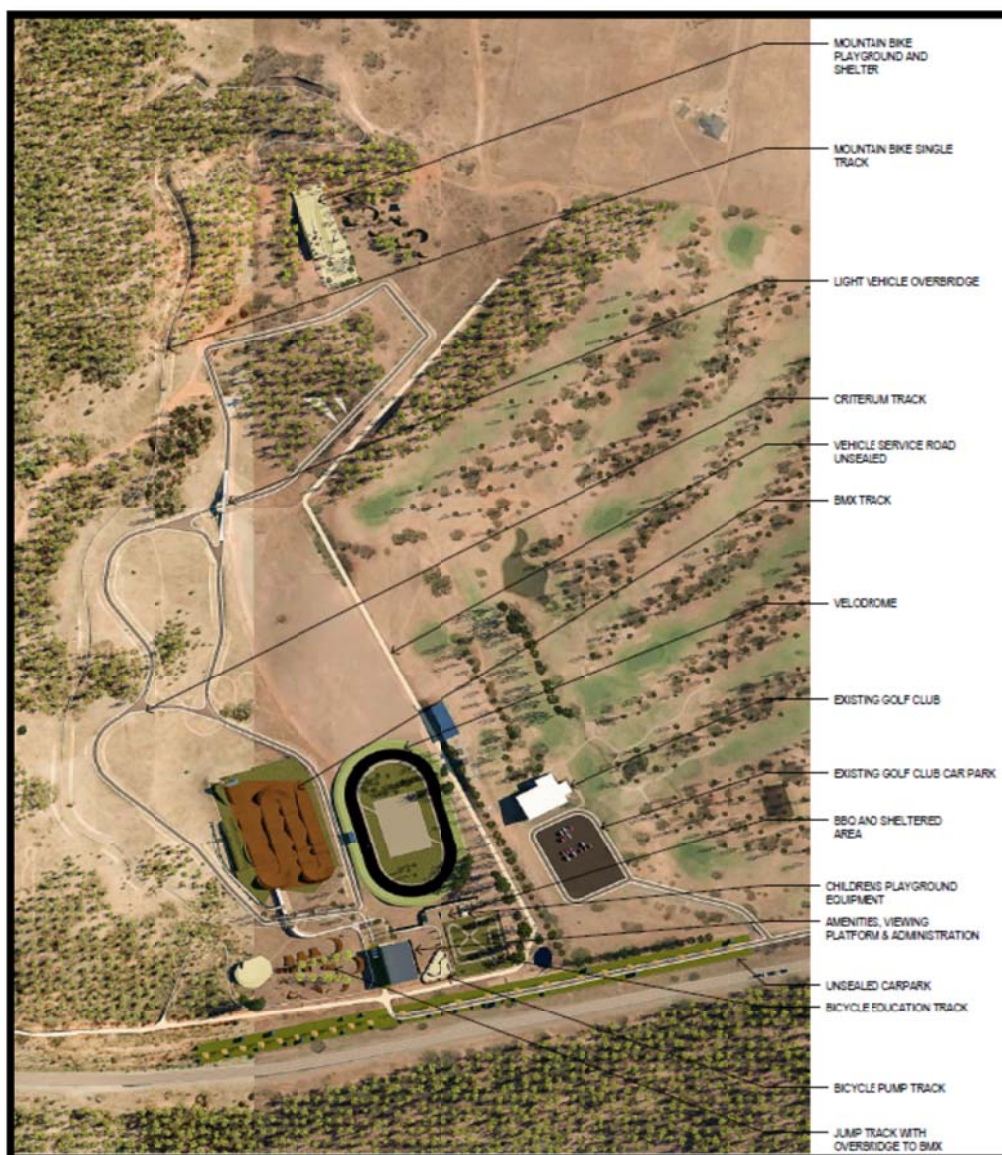
While Pomingalarna Reserve was the preferred site of the Combined Cycling Clubs, this study considered 18 alternate sites. The analysis undertaken of all sites confirmed Pomingalarna Reserve as the best site for the development because of:

- its appropriate land use zoning
- its available space
- its close proximity to the city
- its existing use and development by a cycling club.

Initial consultation on a proposed development at Pomingalarna Reserve has been undertaken with the Department of Primary Industries – Crown Lands, Local Land Services, Office of Environment and Heritage, Council's Planning Department and the Lessee of the Wagga City Golf Club. All have initially identified that the development may be suited to the site subject to the additional detailed planning steps identified in the body of this study.

Concept Layout

Figure 1.1 Layout for the Proposed Wagga Wagga Multisport Cycling Complex.





Cost and Funding

A quantity survey estimate of the capital cost of a MSCC at Pomingalarna Reserve is \$8.2M. If constructed, the economic benefit to the City is estimated to be \$11.78M annually. The estimated net cost to maintain a fully built facility is \$50,183 per year (this figure reflects in-kind contributions from host clubs).

The Combined Cycling Clubs are requesting that Council contribute \$5,000 towards the cost of completing a Review of Environmental Factors (REF) for the project.

Subject to this review confirming the suitability of the proposed site, it is anticipated that implementation of the various stages would require partnership funding from a variety of sources which could include:

- Federal Government grants
- State Government grants
- Council
- Sporting groups
- Community
- Corporate sponsorship.

Recommendations:

Given the evidence presented in this report it is recommended:

That Council,

- a contribute \$5,000 in partnership funding to allow a Review of Environmental Factors to be undertaken for the project
- b subject to the Review of Environmental Factors determining the Pomingalarna site suitable, enter into a Memorandum of Understanding with the Wagga Wagga Combined Cycling Clubs to partner in the future planning and implementation of this project.



2.0 Introduction and Definition of Cycling Facilities

2.1 Introduction

In November 2013 the Wagga Wagga Combined Cycling Clubs presented to Council a concept for a multisport cycling complex at Pomingalarna Reserve. Council resolved at the Ordinary Meeting of Council held November 18 2013:

That Council:

- a receive and note the report
- b receive and note the correspondence from the combined Wagga Wagga cycling clubs
- c note that staff will enter into further discussions with the combined Wagga Wagga cycling clubs to assist them in the implementation of a long term process for the possible development of the proposal.

The cycling clubs involved in the combined group includes:

6. Bicycle Wagga Wagga Inc.– recreational road cycling (www.bww.org.au)
7. Wagga Wagga Cycling Club Inc. – road and track cycling (www.waggacyclingclub.com)
8. Tolland Cycling Club Inc. – road cycling (<http://nsw.cycling.org.au/Contact/Club-Pages/Tolland-CC>)
9. MTB Wagga Inc. – off road cycling (www.mtbwagga.asn.au)
10. Wagga Triathlon Inc. – local triathlon (www.waggatriclub.org).

In May 2015 the clubs conducted a community survey (Appendix 1) to gauge interest in the proposal with 472 people completing the survey. Pomingalarna Reserve was chosen as the preferred location by 87% of respondents who answered the question regarding site choice. Survey respondents also suggested 18 other potential sites. These suggestions are addressed in Section 6.1 of this study.

After consideration of the survey results the Combined Cycling Clubs determined to complete a feasibility study. The following facility elements were to be included in the scope of the study.

Cycling Facilities

1. BMX track
2. Criterium track
3. Cycling education area
4. Jump/Pump track
5. Mountain Bike (MTB) Playground.
6. Velodrome with lights.

Supporting Infrastructure

1. Car parking
2. Amenities building with toilets, change rooms, canteen, office space, storage area, meeting room, timing area and public address space
3. BBQs and shelters
4. Fenced children's playground
5. Spectator facilities.



It was determined that the following were out of the scope of the project:

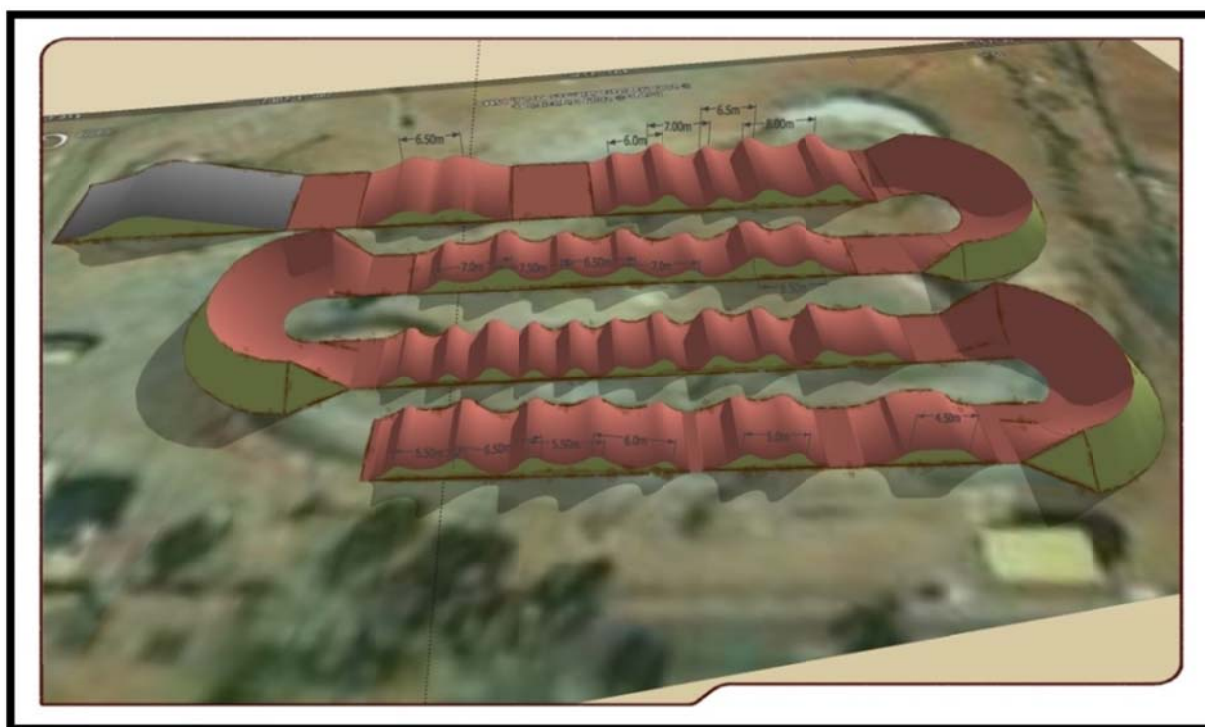
1. Bike shop
2. Coffee shop
3. Dam for triathlons
4. Anything else not listed in the scope above.

The bike shop and dam were considered cost prohibitive. The coffee shop was considered unnecessary as a mobile unit could be provided for events and that there was an opportunity for the neighbouring golf club to be a provider of food and beverages.

2.2 Definition of Cycling Terms

BMX – is an abbreviation for bicycle motocross. BMX began in the early 1970s when children began racing their bicycles on dirt tracks. BMX racing became a medal sport at the 2008 Summer Olympics in Beijing. The five disciplines of BMX riding are Street, Park, Vert, Trails and Flatland. This study is focussing on Trails BMX with the provision of a purpose built dirt track and dirt jumps. An example of a track layout can be seen in Figure 2.1.

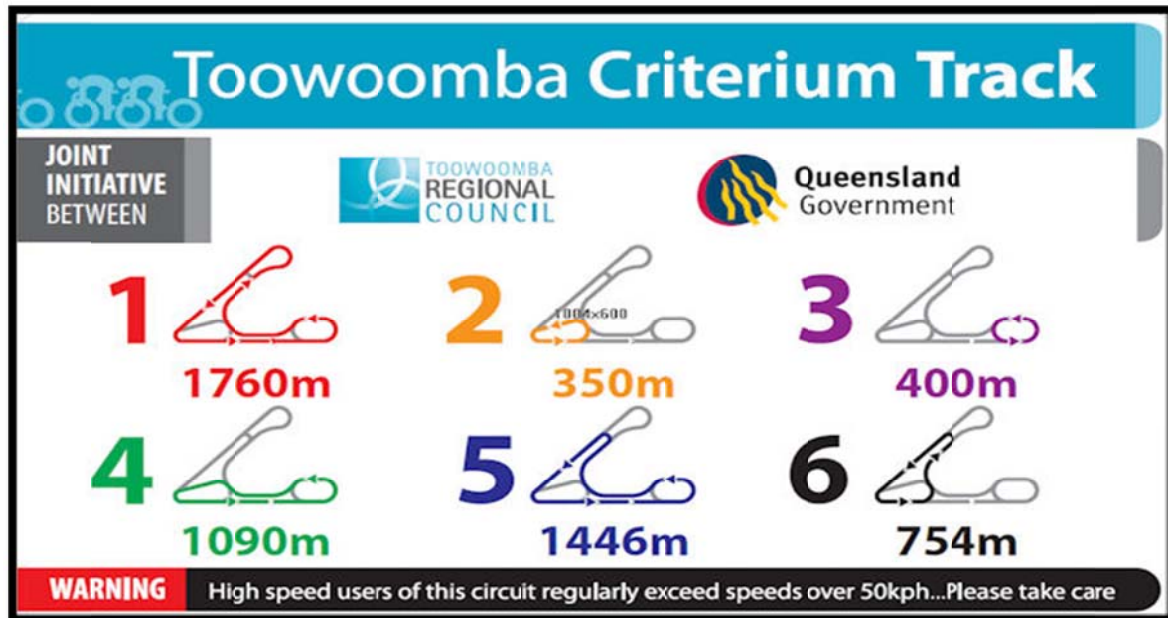
Figure 2.1: Karratha BMX - Example of a track only layout.





Criterion (Crit Track) – is a track that caters for road bike racing where cyclists complete multiple laps around a closed circuit ranging from 1 to 2km. In 2015 Toowoomba built a new criterium track that included hills. The layout of the track is shown in Figure 2.2 with six configuration options, the longest being 1760m.

Figure 2.2: Toowoomba Criterium Track Layouts.



Jump Track (Dirt Jumps) – are used mainly by BMX and dirt jump mountain bikes. Usually they are constructed on a reasonably flat site with a series of consecutive jumps. Yerrabi Dirt Jumps cover an area of 60m x 60m for dirt jumping with heights ranging from 600mm to 1.8 metres. They are located at Gungahlin in North Canberra.

Figure 2.3: Yerrabi Dirt Jumps in North Canberra.





Pump track – are usually smaller than a dirt jump area both in footprint size and jump heights. A typical footprint is 30m x 30m. It is a looping trail system of dirt berms and rollers. Riders can roll around the facility without pedalling by using a pumping motion with the upper and lower body as they ride around the track. Majura Pines in Canberra is the location of a new pump track amongst the pine forest (Figure 2.4).

Figure 2.4: Pump Track at Majura Pines Canberra.



Multisport Cycling Complex (MSCC) – is an active recreation area that has facilities for on and off-road cycling that can also be used for non-cycling activities such as, but not limited to, running, walking and skating.

MTB – Mountain Bikes are bicycles which are designed for off-road riding. The two most common forms are downhill and cross country. Downhill bikes are heavy with 200mm plus of suspension movement to enable quick descents over rough terrain. Cross country bikes are lighter and have approximately 100mm of suspension movement and are designed for a range of terrains.



MTB Playground – is a skills development area for mountain bikes that would include features such as see saws, log rides, banks and slopes to help riders improve their balance and bike handling techniques. Stromlo Forest Park in Canberra has an area of approximately 100m x 50m called 'The Playground'. Figures 2.5 highlight some typical MTB Playground features.

Figures 2.5: Typical features of a MTB Playground.

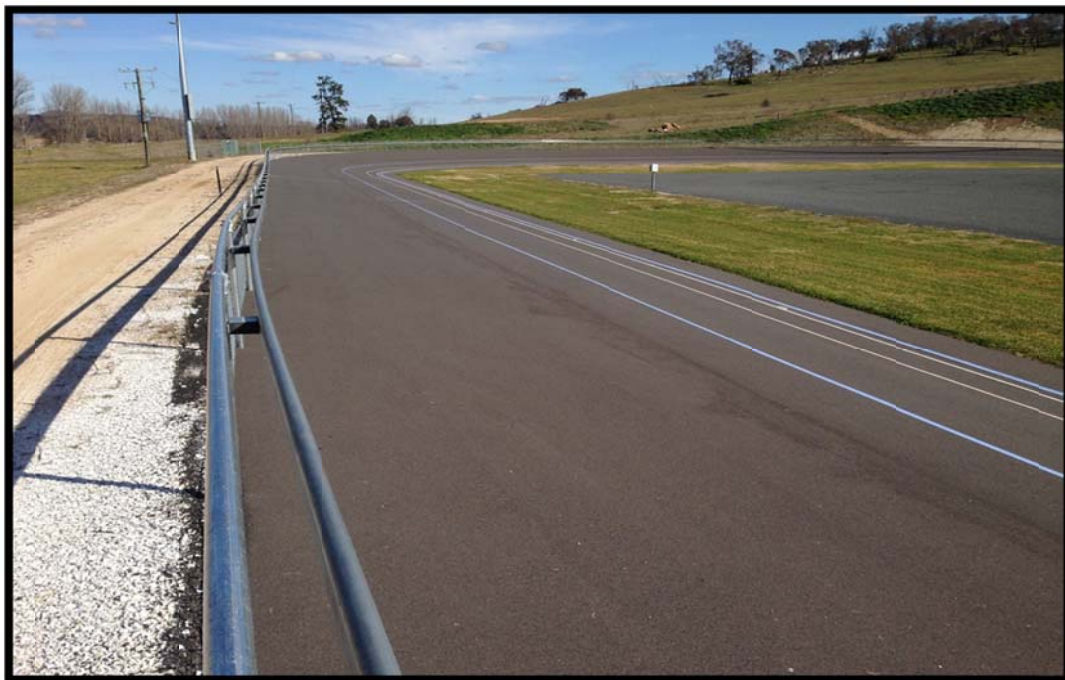




Velodromes – are an arena for track cycling. They consist of two 180 degree bends connected by two straights. They range in length from 150m to 500m, with 333m being the most common. The shorter the track the steeper the banks are. A 250m track has a slope of around 45 degrees, while a 333m track can have a slope of up to 32 degrees. International standard velodromes are usually indoors, while most grassroots facilities are outdoors.

The Bathurst Bike Park velodrome (Figure 2.6) is a 333m long outdoor velodrome that has a footprint of approximately 100m x 160m. Lighting has also been included to allow for night events. Any rainwater drains to the centre, with the straights having a 5.7 degrees (10%) slope and the corners having a maximum slope of 9 degrees (16%). The average width of the track is 7m.

Figure 2.6: Bathurst Velodrome – southern end.



3.0 Planning Context and Cycling Trends

3.1 Policy and Planning

3.1.1 Multisport Cycling Complex Vision

The Combined Cycling Clubs developed a vision for the proposed complex. It is:

“That Wagga Wagga has a multisport cycling complex that is known nationally because it:

- a) Contains a unique combination of on/off road cycling and non-cycling facilities that attracts families from across the nation.*
- b) Contains modern built structures that complement the natural beauty of Pomingalarna Reserve.*
- c) Is a complex that is well connected both socially and physically to the Wagga Wagga urban area and*
- d) Is a complex that is owned and maintained by an engaged local community.”*



3.1.2 Relevant Planning Documents

Draft Riverina Murray Regional Plan

This Riverina Murray Regional plan is being delivered by the NSW Government's Planning and Environment Department. Goal Three in the plan is, 'Strong regional cities supported by a network of liveable towns and villages that meet the community's changing needs'.

The Pomingalarna MSCC will be a regional facility that will assist meeting the needs of cyclists by providing a safe venue for the whole family to ride, run or walk.

Wagga View (Draft Community Strategic Plan)

Wagga View is Council's draft Community Strategic Plan. The development of a MSCC would assist Council in achieving the following objectives from the plan:

- Recreation is a part of our everyday life
- We create safe spaces and places
- We promote participation across a variety of sports and recreation
- We promote our city and villages
- We are a family friendly city.

Draft Wagga Wagga Integrated Transport Strategy

In September 2015 Council commenced developing the Wagga Wagga Integrated Transport Strategy (WWITS). This document, when completed will guide the future direction for transport planning and infrastructure provision for the City. The WWITS will include what Wagga Wagga values as a community and how we would like the City to look in the future. It considers how we can foster a prosperous economy, together with a socially connected and healthy community.

A separable portion of the WWITS is the Wagga Wagga Active Travel Plan - Cycling. This plan was adopted by Council at the October 31 2016 Council meeting. This plan identifies the key cycling corridors within the city to enable rider safety when commuting. This includes travelling to recreational venues such as Pomingalarna Reserve.

Recreation and Open Space Strategy 2005-2015

The Recreation and Open Space Strategy is currently being renewed. Research for this strategy found that Wagga Wagga requires more unstructured facilities for young people (strategic objective number 51). As a result, Council has constructed three skate parks and 10 half-court basketball courts. The MSCC could further fulfill this objective as young people could, at any time, ride skateboards or scooters at the criterium track, ride BMX bikes at the pump/jump track or BMX circuit, or challenge each other at the MTB playground.

Wagga Wagga Bicycle Plan 2011

The purpose of this plan was to identify preferred cycling routes and plan infrastructure works required to construct cycle paths, on or off road. The plan has no direct reference to recreational riding at Pomingalarna Reserve. It does mention Pomingalarna Reserve as a trip generator. Appendix B4 of the plan proposes a cycle path adjacent to Pomingalarna Reserve through Silverlite Reserve. This does connect to Bagley Drive under the Sturt Highway. Bagley Drive is the main access road to Pomingalarna Reserve.



Plan of Management for Pomingalarna Reserve

Pomingalarna Reserve is owned by the Crown (State Government) and is categorized as community land. A plan of management for this site is currently being updated by Council staff and is expected to be completed in early 2017.

3.2 Cycling Sports Trends

This Section reviews cycling trends from both national and local levels. It considers both participant and spectator numbers. The data from this Section will be used later in this study when estimating the economic benefit generated for Wagga Wagga by a MSCC.

3.2.1 Bicycle Network

Figure 3.1 shows Bicycle Network's data on cycling participation. It gives an indication of the popularity of cycling generally by state and region. Victoria is leading the way for the south eastern states with 1.45% of people using a bike to get to work compared to NSW at 1%. Table 3.1 shows that Melbourne (3.92%), Sydney (3.3%) and Canberra (2.76%) have a much higher proportion of commuters riding to work compared to Wagga Wagga with 1.04%. The major cities have better developed cycling networks than Wagga Wagga, which could be one of the contributing factors to the lower participation level in Wagga Wagga.

Figure 3.1: Bicycle Network statistics on commuter cycling.

Proportion of journeys to work that were taken by Bicycle Only

Source: Australian Bureau of Statistics (Census)

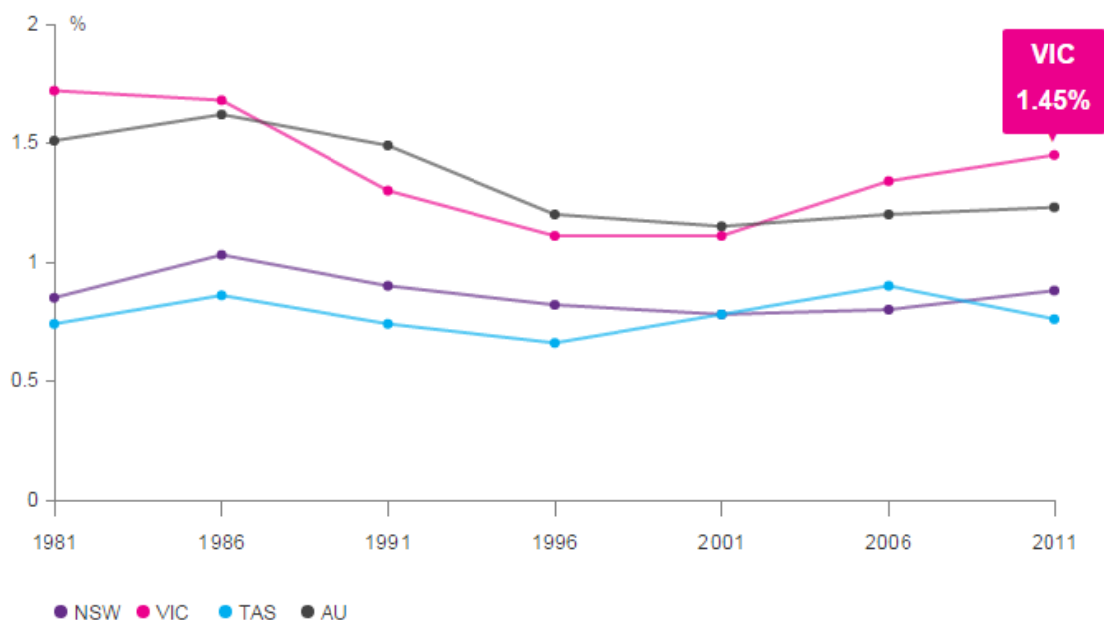




Table 3.1: Percent of Commuters Riding to Work in NSW LGAs.

Local Government Area (LGA)	% Commuters riding to work
ACT – Canberra	2.76
Armidale	1.29
Albury	1.46
Bathurst	0.69
Cootamundra	1.53
Griffith	0.64
Grafton	1.91
Leeton	1.00
Melbourne City	3.92
Orange	0.66
Sydney City	3.30
Tamworth	0.54
Tumut	0.25
Wagga Wagga	1.04
Wodonga	1.20

Comments in regard to State and National cycling trends that were received by Council staff from the Bicycle Network during a consultation session in October 2015 were:

- a) *Road Cycling is on the up generally, especially for recreation, e.g. Melbourne Adelaide, Brisbane and some regional centres – Bendigo, Canberra and Byron Bay. Road cycling events are growing, e.g. Bicycle Network events such as Ride to Work Day and challenge rides. A new trend is ‘gravel grinding’ — road biking on little used roads, sometimes dirt or gravel, well away from most vehicular traffic.*
- b) *BMX is still strong, although may be losing it (sic) appeal to the very young. Well located BMX facilities are getting good use, but skate boards (sic) are often dominant. Competitive BMX is part of the Cycling Australia portfolio and is an Olympic sport.*
- c) *Criterion racing is big in some places — the summer series around Port Phillip Bay is gaining a high profile. Again, finding appropriate circuits has been a problem, with authorities reluctant to close off suitable roads if locals complain. Internationally there has been some success from holding twilight crits in ‘downtown’ locations where the events become an attraction and activator for retail districts.*



- d) *Mountain biking has benefited from the construction of high grade facilities recently in a number of states, but the numbers in competitive events have dropped – possibly because of increased number of events. Some of the new facilities are somewhat remote and require long car trips and overnight accommodation. There is now a push for more accessible facilities that can be reached by bike or bike-train, eg. Warburton. Downhill courses have been successfully implemented at some ski resorts and MTB parks. Big events may be sustainable because television is interested in coverage of the thrills and spills. Insurance and liability issues are a concern.*
- e) *Track cycling may be suffering somewhat as its profile as an Olympic sport has been declining. There is said to be a lack of coaches and facilities for training. It is strong in Northern Tasmania where many small towns have tracks and racing is embedded in the culture.*
- f) *Cycle Tourism – a large number of Australians are travelling internationally to ride, and rail trail tourism is big in Victoria and other states are starting to invest.*
- g) *Commuters – from a physical activity perspective, a 30 minute bike commute is of more benefit than many sporting activities. There are now a large and increasing number of people commuting by bike and LGAs can contribute to communities meeting physical activity guidelines by supporting this trend.*

3.2.2 The National Cycling Participation Survey

The National Cycling Participation Survey (NCPS) is a standardised survey that has been repeated biennially since March/April 2011. March/April is considered the most popular time of the year to ride. The survey covers approximately 25,000 people who are randomly selected and interviewed via telephone.

The NCPS provides data on cycling participation at a national level and allows for estimates of participation for each state and territory, and the capital cities and non-capital areas within each state and territory. Cycling participation rates across Australia are measured over the previous week, month and year.

Measured over the previous week the cycling participation rate has changed from 18.2% in 2011 to 16.5% in 2013 and 17.4% in 2015. Nationally there has been no statistically significant change in participation measured over the previous week between 2011 and 2015.

When measured over the previous month and year there appears to have been a slight decline in Australian cycling participation since 2011:

- Cycling participation over the past month has declined from 27.1% in 2011 to 24.3% in 2015
- Cycling participation over the past year has declined from 40.2% in 2011 to 36.3% in 2015.

It is interesting that cycling participation has declined between 2011 and 2015, yet bicycle sales have increased. Based on a consultation completed in January 2016 with an Australian Bicycling Council staff member, some of the reasons for this could be:

- Fewer children are riding to appointments because of “stranger danger”
- Roads are getting busier
- With increased home entertainment options, families are less active
- More bikes are sitting in the shed.



3.2.3 BMX Trends

BMX Australia's 2014 Annual Report states that BMX is in exciting times. It also states that:

- Membership over the last eight years has grown from 6,800 to 17,000
- Membership grew 15% between 2013 and 2014
- Queensland has 36% of membership followed by WA and NSW with 19%
- 81% of participants are male and 80% of riders are under 20
- Financially the organisation is strong with a 2014 surplus of \$345,614.

A phone conversation took place on August 21 2015 between the President of BMX Australia and a Council Officer. The President stated that BMX is a sport that has a very high parent to athlete ratio involvement in events. A series or championship event can draw a lot of people to a city. A national series event could attract approximately \$3M over a three day period. The 2014 National Championships event in Shepparton, Victoria, cost \$100,000 to conduct over the seven days. It attracted \$10.85 million revenue to the city. Shepparton is only a small club with 60 members, received assistance from the Council and attracted 100 volunteers to run the National Championships.

BMX Australia produces a report on the number of participants in the national championships each year. Numbers from the last three years are recorded in Table 3.2 demonstrating that numbers increased between 2014 and 2016.

Table 3.2: Total Riders at BMX National Championships.

Year	2014	2015	2016
Location	Shepparton	Brisbane	Bathurst
Total Riders	1,362	1,437	1,500

Wagga Wagga has seven BMX tracks that get little to no use. Evidence for this is in the grass growing over the tracks and little tyre wear marks on the tread paths. The tracks are not built to standard, and the lack of appropriate maintenance to these facilities would also contribute to their low use.

Morgan Street Cycles have received four enquiries in the last 10 years regarding a BMX Club. It is likely a good track built to standard would attract riders and increase the likelihood of a club starting. Bathurst, for example, built a track in 2015 and attracted the National Championships with 1500 riders in March 2016.

The nearest BMX Club to Wagga Wagga is Border BMX at Albury-Wodonga. They have 56 members. Their membership has been growing over the last five years. Membership has been dependent on willing adults to guide the club. They have a state competition standard track.



3.2.4 Cycling Australia

Cycling Australia seeks to be the key lobby group for cycling generally across Australia. Each state has a cycling body under the Cycling Australia umbrella. Some statistics on cycling are (Source: Cycling NSW 2014 and ABS):

- Over 3M Australians participated in cycling in the last 12 months
- 1.5M people cycle at least once per week, which is 6% of the population
- 104,000 people cycled to work in 2011 and 90,000 in 2006. Both these Figures represented 1% of the working population in that year. Cars represent 60%
- Cycling Australia in 2014 has a membership of 24,269 nationally which is stable compared to the previous year. Recreational membership grew 6% and represents 28% of total membership
- NSW has the largest membership with 8,004 followed by Victoria with 5,722.

3.2.5 Local Cycling Trends

Cycling generally is growing in Wagga Wagga. Table 3.3 shows the combined sales of the three bike shops increased over the five year period 2009 to 2013 by 26% and remained steady between 2013 and 2015. These numbers do not include bikes sold at K-Mart, Big W, Anaconda, online and privately. (Population growth of Wagga Wagga increased by 9.5% in the same period 2009-2013 Source: www.wagga.nsw.gov.au/city-of-wagga-wagga/wagga-wagga/population-forecast-2031)

Table 3.3: Bicycles sold at the three bike shops in Wagga between 2009 to 2015.

Bicycle Type	2009	2010	2011	2012	2013	2014	2015
BMX	241	273	267	255	299	288	271
Cross Country MTB	919	969	1026	1040	1132	1183	1139
Downhill /All Mountain MTB	190	204	213	226	250	250	251
Road Bikes	793	855	897	951	1027	1039	1033
Grand Total	2143	2301	2403	2472	2708	2760	2694

During consultation with local bike store owners in 2015, they suggested the growth of cycling in Wagga Wagga can be mostly attributed to:

- Wagga Wagga having a relatively good climate to ride in.
- Families can ride anytime. You are not pigeon holed into specific times to participate like organised team sports.
- Purchasing a bike can equal buying into an adventure.
- There are no annual fees for riding.
- Usually all the family can participate. It is a broad, versatile market.
- Bike technology has improved dramatically meaning it is an attractive product to purchase.
- General culture is changing where cycling is becoming more fashionable and desirable.
- There are strong clubs and social groups that support new and developing riders.



There are five cycling clubs in Wagga Wagga. Their membership numbers are listed in Table 3.4.

Table 3.4: Membership numbers of Bicycle Clubs in Wagga Wagga.

Club	2001	2003	2005	2010	2015
Bicycle Wagga Wagga Inc.	105	160	NA	155	136
Tolland Cycling Club Inc.	30	30	30	30	45
Wagga Mountain Bike Club Inc.	-	-	180	120	128
Wagga Triathlon Club Inc.	-	-	-	37	58
Wagga Wagga Cycling Club Inc.	140	140	N/A	N/A	129

On the whole bicycle club membership in Wagga Wagga has declined between 2001 and 2015. However, as demonstrated below, cycling participation has increased.

Each week there are around 10 organised group rides for both on and off road. These groups would average 20 riders, meaning 200 riders participate in at least one organised ride each week. Many riders would on average ride three times per week.

The Strava app for smart phones is popular in Wagga Wagga. Looking at activity on Strava indicates hundreds of rides in the Wagga Wagga local government area each week. Some of the more popular routes both on and off road are listed in Table 3.5. It is estimated 50% of riders use Strava in Wagga Wagga. The Business Case for Mountain Biking in Sydney's North (June 2015) estimated between 40 to 80% of riders use Strava.



Table 3.5 Strava rider counts in the Wagga area.

Strava Segment	Riders Jan/Feb 2016	Riders All Time
Cartwrights Hill – Hampden Ave	82	331
Edward St West	61	225
Elizabeth Avenue Climb	68	372
Gap Rd Flats Northbound	129	398
Gregadoo Hill from Elizabeth Side	85	424
Gregadoo Rd East bound	169	492
Inglewood climb from Bakers Lane	135	507
Kincaid Sprint – Kincaid St	77	302
Koorungal Rd – Lake Albert to Kulgoa Flat	80	384
Lake Albert Rd (north – downhill)	97	378
Lloyd to Bridge – Red Hill Rd	48	296
Mitchell Road – Inglewood to Gregadoo	53	306
Pomi 6hr track as of 10/06/2013	117	698
Post Pomi Burn – Edward St	28	305
SMWC spring finish – Oura Rd	151	481
Third boxcar, midnight train – Riverwalk	56	254
Wagga Cycle track – Grandstand Start	28	165
Wagga Rambo 2013	29	190

In 2014 the Rotary Club of Wollundry started the Gears and Beers community cycle challenge. The focus was community participation and getting the whole family out for a ride. The finish line was at Victory Memorial Gardens where live entertainment could be enjoyed at the Beer and Cider Festival. In 2014 about 300 people rode and 1500 people attended the festival. In 2015 there were 700 riders and 2000 festival attenders. In 2016 there were 1102 riders and 3500 festival attenders.



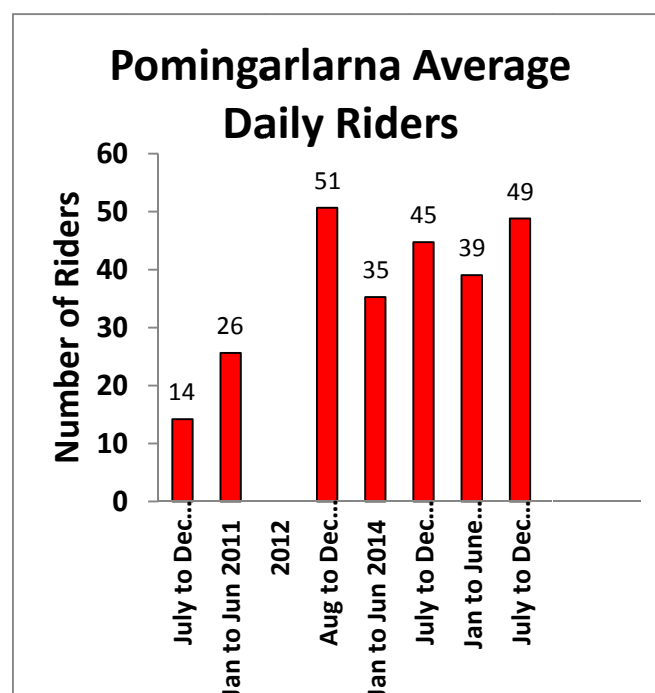
On the second Sunday of September each year the community organise the Wagga Lake Run & Ride. This event has been conducted annually since 1972. Riders and runners/walkers use the same 10km course around the Lake Albert precinct. The number of riders registering into this free event is listed in Figure 3.6. Event organisers estimate the number of riders participating on the day is double those registered. Also the number of riders has steadily decreased over the last five years. One reason for this may be the increased number of alternative events in the region during early spring.

Table 3.6: Number of Riders registering for the Wagga Lake Run & Ride

Year	Total registered cyclists
2011	439
2012	525
2013	437
2014	357
2015	324
2016	289

The Wagga MTB Club has been recording number of riders using the main trail at Pomingarlarna Reserve since 2010. The results in Figure 3.2 support MTB Australia’s observations that MTB riding has increased significantly in the last five years.

Figure 3.2: Average rider counts per day at Pomingarlarna Reserve main trail.





Given the strong growth in cycling sales and strong growth in participation, it is considered that with improved infrastructure, cycling participation would continue to grow in Wagga Wagga.

3.2.6 MTB Trends

The President of Mountain Bike Australia (MTBA), in the member newsletter July 24 2015, gave a summary of the status of MTB racing and participation trends. The message from the article was that numbers at individual events are declining, but total participation is increasing. The reasons he gave for the increase included that there are now more events and types of riding for people to choose from. Also, more people are riding recreationally.

Some of the common events now available are:

- Cross Country 3-hour, 6-hour, 12-hour and 24-hour events
- Cross Country sprint races such as the Riverina Alpine Mountain Bike Open (RAMBO) series
- Cyclocross – road bikes modified for off-road riding
- Women only MTB events
- Downhill events
- Four-cross (4X) – four bikes race together to the bottom of the hill
- Gravity Enduro – hybrid between downhill and cross country racing.

The MTBA president stated *“on any weekend now you probably have a choice of two or three events you could do within a few hours of where you live. Remember back when there was only one 24-hour race in Australia or you had to wait six weeks between other races. In the last five years we have seen increases in mountain bike sales, number of events, MTBA membership, MTBA clubs, club membership, trails being built (and professional trail builders who build some of them) and events run by private promoters. These businesses think that the mountain bike space is one worthy of their investment and that is a positive indicator to me”*.

4.0 Consultation – Cycling Desires in Wagga Wagga

4.1 Community Survey

In 2015 the Combined Cycling Clubs conducted a survey focusing on the multisport cycling concept. A copy of the survey questions are presented in Appendix 1. This survey largely captured thoughts from the cycling community.

Figure 4.1 shows the results from Question 4 “What types of cycling facilities do you believe are required to be developed or improved in Wagga Wagga? Please tick more than one if you wish”. The results demonstrate a demand for all types of facilities with 425 people responding to this question. The Combined Cycling Clubs decided to make the triathlon dam out of the scope because it had a low demand and one of the highest expected costs for construction and maintenance. Access to an ongoing water supply would also be difficult.

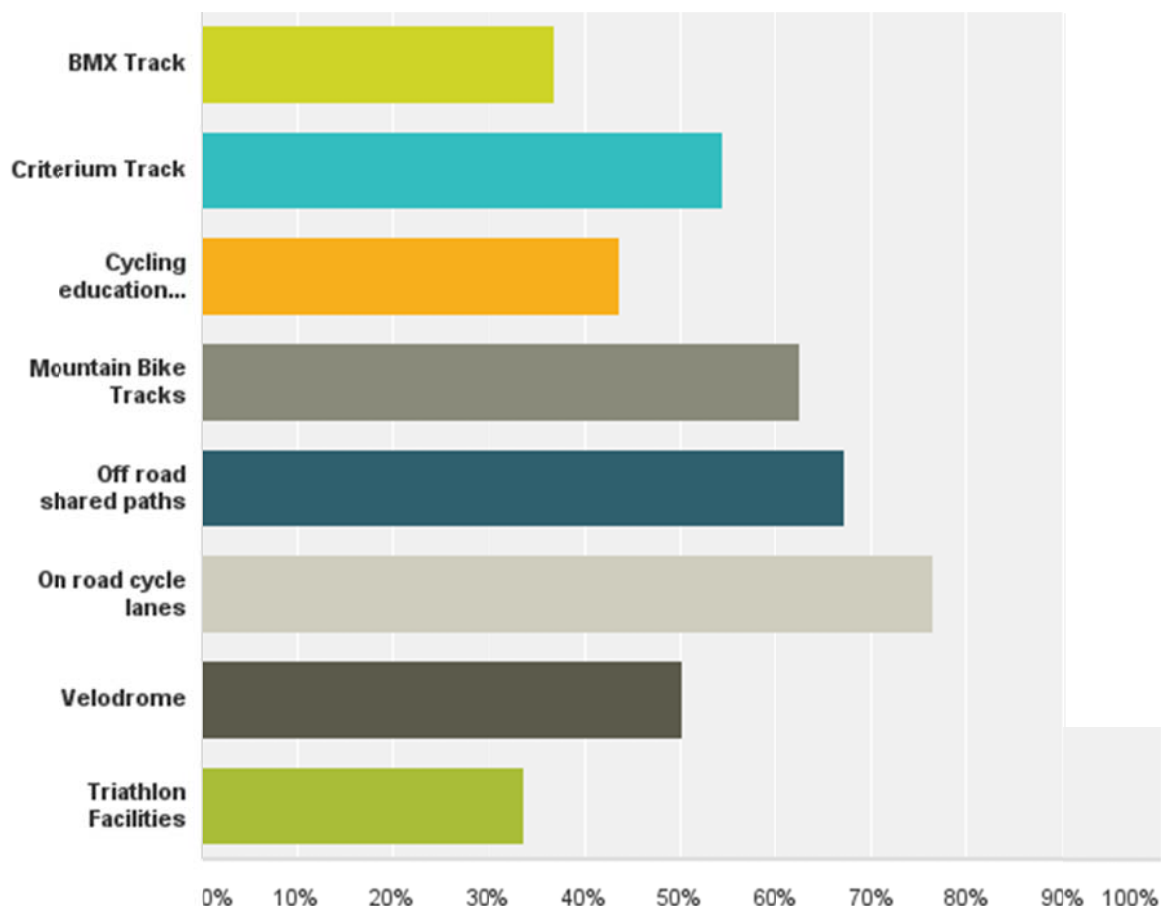


Question 4 in the survey also allowed respondents to specify other facilities desired. Other requests received that are relevant to the Multisport Cycling Complex are:

- Downhill MTB trails
- Flow II Mountain Bike tracks that could cater for gravity enduro events
- Cyclo-cross area which could be incorporated with a criterium circuit
- Timing facilities
- Public address area
- Dog facilities
- Camping/accommodation options
- Lighting for night events
- Site for mobile bike mechanic instead of full on bike shop
- Bike wash facilities
- Recovery room.

Item 1 - Downhill MTB trails - was not included in the scope of this study because it is already provided at Willans Hill. Item 2 - Flow track - was not included as the Wagga MTB Club is already developing this type of trail that will complement the MSCC. Item 6 - Dog facilities - was not included as there are already numerous dog parks around Wagga Wagga. Owners however can and do currently walk their dogs on leash at Pomingalarna Reserve. The rest of the items are included in the scope of this study.

Figure 4.1: Survey response to cycling facility needs in Wagga Wagga.





4.2 Bicycle Wagga Wagga Inc. (BWW)

Bicycle Wagga Wagga Inc. is a group of cyclists who enjoy riding as a social activity and want to promote cycling as a safe and responsible mode of transport. The Club started in 1997 and has worked to advance cycling facilities and participation. For example, members of BWW were on the committee to develop the Wagga Wagga Bicycle Plan (Source: www.bww.org.au).

BWW have regular rides throughout the year. They are:

- Each Sunday a 2-hour road ride that finishes at a café
- Coffee Grinds ride on Wednesday mornings from 9am
- A “fat tyred” off road ride on the first Sunday of each month
- A long ride about 100km on the second Sunday of each month.

On the October 13 2015 the BWW president was asked what their likely demand for a cycling complex would be. She responded saying *“they do not use the current Wagga Bike track at the Cricket Ground for example. Our activities focus around social rides on quiet streets and roads.*

However, one of BWW’s aims is to foster new people into cycling. Therefore, if such a cycling complex were available, it would provide a safe environment to learn necessary skills and would be of benefit to their club”.

During a consultation session it was also suggested the cycling complex could be a base to provide bikes for lower socioeconomic families. A range of unused second hand bikes could be stored on site and then borrowed by families to ride at the complex. This would expand the market for users and provide further social benefits to Wagga Wagga as more young people could participate in recreational activities.

4.3 Wagga Wagga Cycling Club Inc. (WWCC)

The Wagga Wagga Cycling Club Inc. is based at the Wagga Velodrome in Kincaid Street, central Wagga Wagga. The track surrounds the Wagga Wagga Cricket Ground, which is used for cricket in the summer and rugby league training in the winter. Other assets that are included in the facility are amenities, toilets, change rooms, track lighting, boundary fence, spectator facilities and twin roller door storage shed.

The Club has activities throughout the whole year, particularly training. The track season is October until mid-March. Track racing is on each Wednesday night. The road season is April until September. At this time the velodrome is in use for training.

As the facility is being shared by cycling, cricket and football it can only be used by one sport at any one time for safety reasons, for example, balls entering onto the track are a hazard to cyclists.

The Club holds a major track carnival and two road carnivals each year. These attract 100 to 200 competitors from all over the state. Each of the road carnivals requires streets to be closed at a cost of \$5,500 for traffic control. These take place in the CBD, providing a good location for attracting spectators. A dedicated criterium track at the MSCC would mean the non-event community would not be disrupted for these types of events.

The WWCC president stated that *“at the proposed MSCC cyclists could train and families teach children how to ride in a safe environment away from vehicles any time of the week”.*



The WWCC president also indicated “*the Club holds twilight criterium events at the Wagga & District Kart Racing Club off Tasman road. They hold about 10 events per year at this location. This track is hotmix, is 7.5m wide and 850m long. The challenges of running events at this location are:*

1. *Working around the Kart Club activities.*
2. *The track is locked thus cannot be used for adhoc training.*
3. *Having to book through the Kart Club for insurance purposes.*
4. *The track is marginally short at 850m (1200m minimum would be better).*
5. *The surface is in average condition with cracks (it is in a flood zone).*
6. *It is flat so there are no hill challenges”.*

4.4 Wagga Triathlon Club Inc.

The Wagga Triathlon Club Inc. was established in 1994. The Club helped establish the Riverina Triathlon Series which has six events in different towns in the Riverina during January to March. The first event of this series was the ‘Come and Try Triathlon’ at Charles Sturt University in Wagga Wagga. The 2016 event was on January 31 and had 182 participants (Source: www.waggaclub.org).

The Wagga Triathlon Club Inc. organises monthly events in Wagga Wagga (tri or duathlons subject to Lake Albert being suitable for swimming in) during the warmer months. These are usually located at Apex Park, Lake Albert where their storage shed is located.

Off road adventure racing is a growing sport (see [www. http://adventurerace.com.au](http://adventurerace.com.au) and <http://tre-x.com.au>). Triathlon Club members have commented that a criterium track at Pomingalarna Reserve, along with cross country MTB or trail running, would provide an excellent venue for adventure events.

4.5 Tolland Cycling Club Inc.

The Tolland Cycling Club was established in 1988 by Wagga Wagga Sporting Hall of Fame inductee, Barry O’Hagan. The Club’s mission is to provide a safe and friendly environment for bike riders to enjoy their sport amongst like-minded people.

The Club organises local road racing each Sunday throughout the year. They also organise the Tolland Interclub Road Race in February and the Tolland Open in April.



4.6 MTB Wagga Inc.

In July 2005 MTB Wagga was formed and has experienced consistent growth in participation since its inception. The Club has been involved in developing trails and/or running events at Pomingalarna Reserve, Willans Hill, Livingstone National Park, the Wiradjuri Trail, Plum Pudding Reserve and the Tumut bike track. Many of these areas offer great single trail riding through native bushland.

MTB Wagga runs two regional events and 10 local events per year. With the development of the 3.5km green loop in 2013 the number of women and children using the site has dramatically increased.

The MTB Wagga President stated *“the need for user support infrastructure such as amenities and BBQ shelters is increasing. Participation is increasing particularly in the women and junior categories. Also constructing other types of MTB tracks such as a jump and pump track would increase Wagga Wagga’s ability to attract a greater range and number of visitors”*.

The two regional events at Pomingalarna Reserve are the RAMBO 3-hour in July and the 6-hour in September. These two events attract riders from as far as Canberra and North East Victoria. The RAMBO has around 60 riders while the 6-hour has around 100. However in 2015 the 6-hour event joined the Evocities series and the rider numbers increased to between 150 and 220. To keep growing these events and expand into 24-hour disciplines it would be necessary to have an amenities building. Sites such as Stromlo Forest Park, that hold 24-hour events, also have formal car parking, BBQ shelters and a playground for young children.

Downhill MTB and Gravity Enduros are growing sports in Australia. Gravity Enduro is a cross between downhill and cross country racing, blending gravity and enduro challenges. To cater for these types of events at Pomingalarna Reserve, machine built trails would need to be developed with jumps, berms and drop offs. Approximately 2km of new trail on the Eastern side of Pomingalarna Reserve could be a suitable location. This is not in the MSCC scope but would complement it by finishing at an appropriate location.

Pomingalarna Reserve is the home for the MTB Wagga. It has a well-developed trail network with 23km of single track and 12.3km of fire trails (Figure 4.2). The trails have been built to align with the ‘Trail Solutions – IMBA’s Guide to Building Sweet Single Track’ (IMBA - International Mountain Bike Association). The Club aims to build interesting trails that are environmentally sustainable.



Figure 4.2: Pomingalarna Reserve Trail Network.



4.7

Police Citizens Youth Club (PCYC Wagga Wagga)

PCYC Wagga Wagga is located in Gurwood Street Central Wagga. Adjacent to their building is a Bicycle Education Area (BEA) which faces Spring Street. The BEA is owned and maintained by Council. PCYC Wagga, as part of their vacation care program, occasionally uses this area for children to informally ride their bikes.

In a phone conversation on March 10 2016 with the PCYC Club Manager, it was stated that they are planning on moving to a new site in the future. When they move it is unlikely they would use the current BEA (or one at Pomingalarna Reserve). They only use the existing one because it is next door to their venue.



4.8 Non-Cycling User Groups

The desires of non-cycling user groups that were consulted are detailed Table 4.1.

Table 4.1: Desires of Non-Cycling User Groups

Group	Date Contacted	Current Activities at Pomingalarna	Desired Activities at Pomingalarna	Facilities Desired
Road Runners	10/3/16	Trail running weekly	Trail running weekly	Toilets, shelters and water
Wagga Vintage Car Club. Also about six other car clubs come through Wagga each year	11/3/16	Nil.	Vintage Car Club Annual rally (currently held at Downside Hall - 3,000 people attend). Car shows	Carpark, toilets, meeting room, shelters, BBQs. May get more people than Downside given Pomingalarna Reserve is closer to town
Sport and Recreation - Borambola	11/3/16	Nil	If a group approached them to run a program utilising MSCC they would be supportive	Subject to groups desired activities. Open to travelling from Borambola to Pomingalarna Reserve
WaggaRoos Orienteers	11/3/16	2-3 events per year. Club members ad hoc training	In the immediate future similar use. Events will increase as the club grows. A permanent orienteering course at Pomingalarna Reserve would be desirable	Orienteers are used to events being conducted in forested areas where there are no facilities and hence come prepared accordingly. For major events WaggaRoos hire Portaloos. A toilet block could obviate this necessity depending on access arrangements. For local events current car parking facilities are suitable. For major events parking for 50-100 cars would be required



Question 10 of the community survey asked ‘Other than cycling activities, what could the proposed site be used for if facilities are provided’. This question was answered by 276 respondents with a total of 373 suggestions. The results are in Table 4.2.

Table 4.2: Non-Cycling activities suggested in the Community Survey

No.	Activity	Number
1	Running, walking, orienteering, school cross country and duathlon	155
2	School fetes, fairs, exhibitions, concerts, car shows, markets	34
3	Traditional sports – soccer, football, archery, athletics, golf and go karting	33
4	Conferences, conventions, sports club meetings, coaching clinics	32
5	Skating, skateboarding, roller blading	31
6	Camping, family picnics, parties, alfresco dining, weddings	31
7	Photography, bird watching and nature awareness education	20
8	Learn to ride or drive training	12
9	Horse riding	12
10	Crossfit, Frisbee, outdoor gym and boot camp	10
11	Radio controlled cars, planes and boats	3

These have been grouped into 11 activity themes. Theme number 1 running and walking activities received the highest number of suggestions with 155. Running and walking activities already occur regularly at Pomingalarna Reserve. The remaining themes were suggested multiple times ranging from 34 to 3. Overall the responses demonstrate the diverse range of uses possible for the proposed development.

All of the activities suggested are considered feasible at Pomingalarna Reserve given the proposed infrastructure development except for the three traditional sports and radio controlled boats. For the traditional sports (soccer, football, archery, athletics, golf, go karting) there would not be enough usable flat ground for a large sporting field. Archery and go karting would also be considered a danger amongst cycling activities. The radio controlled boats would be possible, however dam construction not in the project scope.



5.0 Facility Benchmarking

A literature review and site visits were carried out to provide a benchmark for cycling facilities. On Friday July 10 2015 a Council Officer and three cycling club members visited Canberra. The three sites visited were Stromlo Forest Park, Majura Pines Recreation Area and Yerrabi Dirt Jumps. This was followed by a Council Officer and two cycling club members visiting the Bathurst Bike Park on Wednesday July 30 2015

The features of Stromlo Forest Park and Bathurst Bike Park are compared in Table 5.1. Further details on these parks, Majura Pines and Yerrabi Dirt Jumps are in Appendix 2. Stromlo Forest Park is unique to Australia because it has on-road (criterium track) and off road cycling facilities on the one site. Because of these features it draws events and visitors from both inside and outside the ACT.

Table 5.1: Features of Stromlo Forest and Bathurst Bike Parks compared to Wagga Wagga MSCC Proposal.

Features	Stromlo Forest Park	Bathurst Bike Park	Proposed Wagga
Estimated Capital Spent	\$8 million	\$9 million	Estimated \$11.5 million
Whole site area	1,200 hectares	79 hectares	225 hectares
Maintenance Requirements	\$800,000. 1 FTE with ACT Government. 7 maintenance contracts	Not available as the site has only just been opened	Estimated \$160,521
Mountain Bikes	50km cross country trails, downhill track, jump track	12km cross country trails	25km cross country trails
Criterium Circuit	1.2km	Proposed 1.5km	Proposed 1.8km Est.: \$0.8M
Velodrome	No	Yes - \$1.4 million	Proposed Est. \$0.7M
BMX Track	No	Yes international standard \$1.5M	Proposed Est. \$1.1M
Formal Running Facilities	2.5km irrigated grass loop	No	No
Equestrian Trails	Yes	No	Informal fire trails
Amenities Block	Yes - \$800,000	Yes - \$550,000	Proposed Est. \$0.7M
Children's' playground and BBQ	Yes	No	Proposed Est. \$139K



6.0 Development Options

6.1 Site Options

The likely footprint of the MSCC is 8.7 hectares. This includes all the cycling elements and 30% movement space as per Table 6.1.

Table 6.1: Area required for multisport cycling complex elements.

	Length	Width	Number	Area m2
Amenities	31	14	1	434
BBQ Shelters	10	5	4	200
BMX Track	120	80	1	9,600
Bicycle Education Area	40	40	1	1,600
Carpark - sealed	50	20	1	1,000
Carpark - grass	600	20	1	12,000
Criterion Track	1910	10	1	19,100
Jump track	40	40	1	1,600
MTB Playground	60	30	3	5,400
Pump track	30	30	1	900
Velodrome	160	100	1	16,000
			Total	66,734
	Allow in between movement space 30%			20,020
	Total Area of MSCC Footprint			86,754
	Total Area of MSCC Footprint (Hectares)			8.7

The Wagga Cycling Survey Question 7 asked about the preferred site. Pomingalarna Reserve was suggested as one potential site. Of the 296 people that answered this question, 258 (87%) agreed Pomingalarna Reserve was the preferred site.

A complete list of the sites submitted in the survey is recorded in Table 6.2. Preliminary analysis was undertaken on each of these sites which determined Pomingalarna Reserve would be the most suitable site. Pomingalarna Reserve is home of the MTB Wagga. Volunteers from the club have spent thousands of hours developing the 23km of sustainably developed trials.



Table 6.2: Sites suggested for a Multisport Cycling Complex in the Wagga Cycling Survey

Name	Location	Votes	Zoning	Available Land (ha)	Feasible	Comments including existing facilities
Pomingalarna Reserve	Sturt Hwy Ashmont	258	RE1	17.8	✓	“Home” of MTB Wagga. It has 23km of MTB trails. Land is on the eastern side of the reserve with limited trees.
Equex	Copland St East Wagga	9	RE1	27.0	✗	Used by football, netball and equine activities. Insufficient usable land available.
Wagga Wagga Cricket Ground	Kincaid St Central	4	RE1	0.26	✗	Site has a sealed cycle track around cricket / football ground. Insufficient usable land available
Charles Sturt University (CSU)	Estella	4	SP2	1500.0	✓	CSU is open to community use of their existing recreation facilities.
Rocky Hill	North Koorungal	3	RE1	33.4	✗	Hilly and heavily wooded. Insufficient usable land available * See notes following.
Lake Albert	Lake Albert	3	RE1	15.0	✗	Long and narrow, development is inappropriate. Local residents do not want views impeded.
Old Leagues Club	Central	2	RE3	3.3	✗	No longer available – housing by private developer.
Willans Hill	Central/South Wagga	2	RE1	93.0	✗	Given the steep grades of the hill there is insufficient usable land available.
Jubilee Park	Bourkelands	1	RE1	32.0	✗	Used by hockey, touch football, athletics and rugby union. Insufficient usable land available.
Botanic Gardens	Turvey Park	1	RE1	14.0	✗	Used by botanic gardens, music bowl, parks depot and zoo. Insufficient usable land available.



Name	Location	Votes	Zoning	Available Land (ha)	Feasible	Comments including existing facilities
Silverlite Reserve	Ashmont	1	E2	62.0	✘	Mostly bushland. Not currently zoned for facility development.
Gumly Reserve	Gumly Gumly	1	RE1	40.0	✘	This site is in a flood zone and is privately owned. Considered unavailable.
Riverside	Central	1	RE1	80.0	✘	This site is in a flood zone and parts are privately owned or leased. Considered unavailable.
Showground	Turvey Park	1	RE2	16.8	✘	Used for showground activities including soccer, greyhound racing and exhibitions. Considered unavailable
Murrumbidgee Turf Club	Central	1	RE2	61.7	✘	Used for horse racing activities. Considered unavailable
Livingstone	Mangoplah	1	E1	1244.0	✘	Heavily forested and 20km from city. Considered unsuitable
Wiradjuri Reserve	Central	1	RE1	24.0	✘	This site is in a flood zone. Considered unsuitable
Borambola	Sturt Hwy Borambola	1	RU1	8.7	✘	Site has numerous sporting facilities, including a BMX track. Owned by State Government. 20km from city. Considered unsuitable
North Wagga	North Wagga	1	RE1	37.6	✘	Most of the available land is in a flood zone. Considered unsuitable



*Rocky Hill Reserve, including flats running down to Copland Street, received three votes (1%). Rocky Hill Reserve, including the flats, is owned by Council (since 2001) and is bounded by Koorungal Road to the East (near Monumental Cemetery), Copland Street to the north, north Koorungal residents to the west and Simkin Street residents to the south. The hill section of this land is quite attractive with great views, large granite boulders and pockets of trees such as Kurrajongs and Cypress Pine.

The site was inspected by Council staff on July 22 2015. It is considered to have recreational development potential for activities such as walking, running and riding. However the site is not considered feasible for a multisport cycling complex because:

- The flat land north of the railway easement and adjacent the Koorungal Road/Copland Street intersection would be needed for the velodrome and criterium track. This operational land also has a high commercial value to Council
- There is a railway easement running through the centre of the flat area
- South of the railway easement is very low and is subject to overland flows
- The large amount of exposed granite rock in the hill area would make it cost prohibitive to develop any infrastructure.

6.2 Cycling Facilities Options for Pomingalarna Reserve

6.2.1 Options for BMX

BMX Australia has produced a best practice document called 'Track Guidelines'. The guidelines outline the requirements for a track from Club level up to International Championship level. All tracks need to have at minimum three straights, be 280m to 450m long, have a starting hill, minimum three turns and have certain support infrastructure such as parking and grandstands.

Wagga currently has seven BMX tracks. None are built to the minimum club standard as required by BMX Australia. For example, the height and width of the starting ramp needs to be at least 2.5m high and 8m wide. Having a dedicated track that is well maintained could replace some of the current sites that are degrading.

In September 2015 the president of BMX Australia, Barry Knight, recommended Wagga Wagga should aim for, at a minimum, a National Championships level track. However, on the May 17 2016 Brett Barnes from Dirtz Designs and Constructions recommended aiming for an International Championship level track. Dirtz have been involved in designing and building many of the recent BMX tracks around Australia including Bathurst. The key difference between national and international standard is the eight metre high starting ramp versus five metres. This extra height will increase the chances of getting national events to Wagga Wagga because there are a number of tracks with 5m starting ramps, but less with 8m.



The key design elements for an International Championship level track are:

- Starting Hill needs to be at least 8m high and 8m wide
- Length of track 300m to 400m
- Width of track 8m first straight, rest 6m including turns
- Minimum of four straights
- Minimum of three turns
- Starting gate 7.3m wide, 50cm high and slip resistant
- First straight length of 70m
- Transponder cable at start hill and finish line
- Fencing on straights minimum two metres from track
- Two covered staging area of 10m x 8m
- Grandstand available for 3000 people. This does not have to be formal seating but can be a grassed hill side and/or marquees
- Floodlights – minimum 150 lux but proposing 500 lux for Wagga Wagga
- Parking space available for 1000 vehicles. This can be informal such as the grassed area along the side of Bagley Drive
- Drug testing area.

The expected footprint of such a facility would be 120m x 80m. (Source = BMX Australia Track Guidelines which allows for four straights around 100m long each and width 6m) Bathurst Bike Park has an international standard track which cost approximately \$1.5M. This is on a very steep site (about 30% grade) and the earthworks expense was high (see Figure 6.1). The Pomingalarna Reserve site would be on a 10% grade.

Figure 6.1: Bathurst International BMX track built in 2015/16 for \$1.5 million.





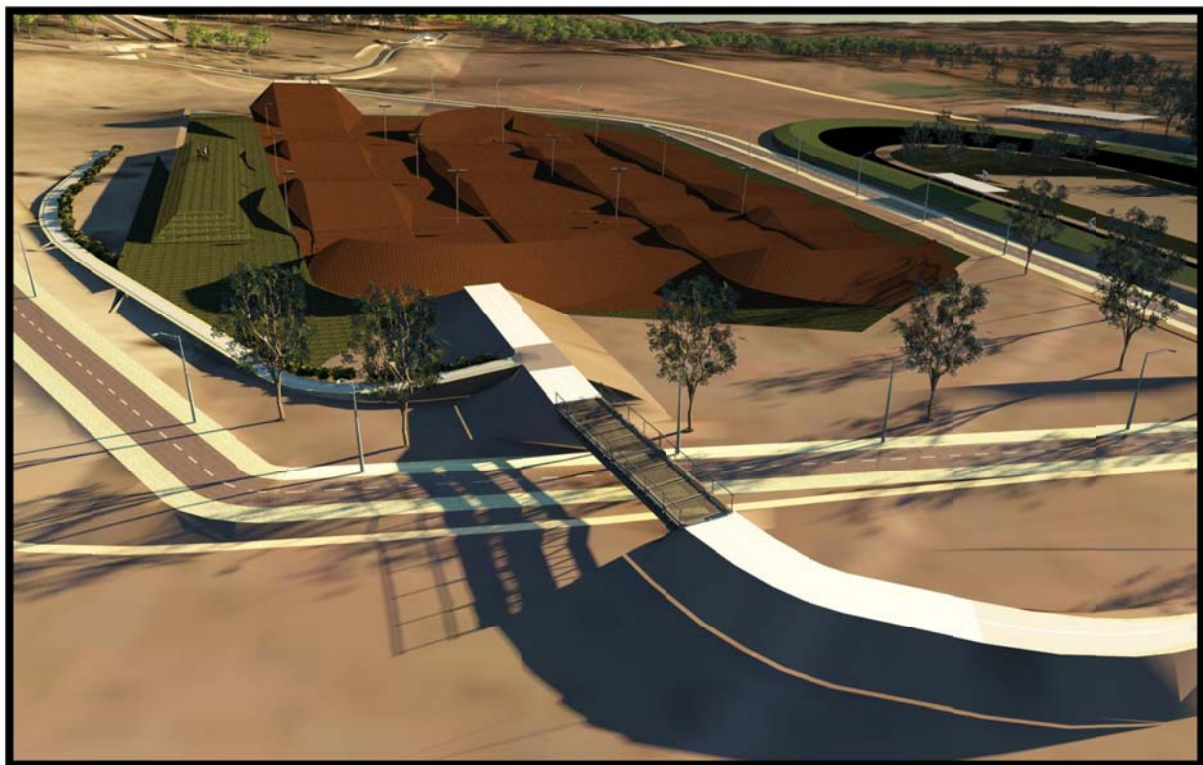
The cost of a BMX track can vary greatly depending on the slope and soil type of the site. Dirtz Design and Constructions in 2016 built the Oakleigh South track in Melbourne in three weeks for \$90,000. Another in Casey, Melbourne, was built for \$250,000.

Dirtz recommended budgeting \$250,000 for Wagga Wagga given the 10% slope and deep clay loam soil available onsite. This includes 3D drafted design, earthworks, starter ramp, transponder network and hotmix corners.

Additionally the cost of 500 lux lighting, two covered staging areas and water connection is to be included for a BMX facility at Pomingalarna Reserve.

Details on the costs proposed for the International BMX Track at Pomingalarna Reserve are in Section 7.2. When detailed design is completed for the BMX track it is recommended the spectator mounds be no more than 20% so they can be appropriately maintained. The concept BMX track proposed for Pomingalarna Reserve is presented in Figure 6.2.

Figure 6.2: View over proposed International BMX Track at Pomingalarna Reserve looking towards the North.





6.2.2 Options for Bicycle Education Area

The purpose of a bicycle education area is to provide a safe place for children and new adult riders to improve their skills and become aware of road riding rules.

The current facility at the Police Citizens & Youth Club, Spring Street, Central Wagga Wagga, has a footprint of 40m x 40m (Figure 6.3). Now 25 years old, it was constructed in 1991 as a joint project between then Roads and Traffic Authority now Roads and Maritime Services, PCYC and Wagga Wagga City Council. It has 35 road signs (actual size), two traffic lights, one railway crossing, 120m of asphaltic concrete (AC) path, 20m of concrete path and 12m of gravel path. The average width of the paths is 2.5m.

Figure 6.3: Wagga Bike Education Area at PCYC, Spring Street Central Wagga.



This facility is showing signs of aging as AC path is cracking and has grass growing through it and many of the signs are faded. Although the facility is aging and not up to current standards, discussion with a neighbour on August 20 2015 indicates the area is still used most days by families.

This Bicycle Education Area is proposed to be moved in the future. The land has already been classified operational so it can be sold. This was resolved by Council in consideration of the proposed Multi-Purpose Stadium and PCYC projects. If this occurs a new home for the Bicycle Education Area will be required.



The new facility could be similar to the one in Figure 6.4. It should also have a roundabout given the number of roundabouts in Wagga Wagga. It would be preferable to locate this facility close to the amenities building, playground and pump track to promote joint family activities and aid in supervision. Details on the costs proposed for the Bicycle Education Area at Pomingalarna Reserve are in Section 7.2.

Figure 6.4: Example of a Bicycle Education Area.



6.2.3 Options for a Criterium Track

Criterium tracks vary greatly in both length and width. Streets may be closed for weekend cycling events. For example, in Wagga Wagga this takes place in the CBD around the Wollundry Lagoon precinct. In Orange events are held in the industrial area on 4-lane wide roads.

Phil Ayes, CEO for Cycling NSW, recommended on May 9 2016 the minimum width should be a standard vehicle lane plus shoulder (about 5m). Length varies but loops of about 1km work well. A flat area for staging is required to set up shade tents. Cyclists set up stationary rollers to warm up, and therefore require a flat area. State and National adult events are always held in capital cities. Given races usually only last approximately 40 minutes it is difficult to get competitors to travel very far. Some junior events are held in regional areas.

For a dedicated off-road circuit the Wagga Wagga Cycling Club recommended in August 2015 a length of 1.8km to 2km and a width of 3.5m to 5m. Hume City Council in March 2015 released a feasibility study on a Criterium Cycling Facility.



The scope they used around layout was:

- Length range 800m to 3km
- Width minimum 6m except for finishing straight minimum of 8m
- Capacity to include shorter loops
- Some undulations
- Linkage with shared path network and roads.

The Toowoomba Criterium track has six circuit options ranging from 350 to 1760m. Width of this track is 8m between the white edge lines with 300mm to 500mm on the outside of each line. It was opened in 2014 and cost \$2.34M. This cost included the track, landscaping, amenities building, fencing, a bike track leading to the site, civil drainage and earthworks. The track is on a sloping site at the Toowoomba showgrounds.

Bathurst Regional Council is planning to construct a 2000m criterium track at their Bike Park. It will range from 5m to 6m wide, asphaltic concrete on a sloping site that has drainage issues. Their high level cost estimate is \$1M for the track only.

The specifications recommended for Pomingalarna Reserve is 1.8km long and an average of 6m wide (see Figure 6.5). This circuit has three loops, one being 700m, the second 1100m and the final 1800m. The Pomingalarna Reserve track is proposed to have a mix of hills and flats, tight and sweeping bends; however it is not symmetrical like some other similar facilities. Comments from professional cyclist Brad McGee on May 25 2016 indicated that a non-symmetrical course is attractive. Details on the costs proposed for the Criterium Track at Pomingalarna Reserve are in Section 7.2.

Figure 6.5: Aerial view of proposed Criterium Track at Pomingalarna Reserve.





6.2.4 Options for Jump Track

The key purpose for the Jump Track is to provide a recreation site for casual users. It is unlikely a club would use the area for an event. It should be close to the amenities and carpark so they are easily accessed.

Wagga Wagga currently has no formal Jump Track. Informal areas built by young people pop up occasionally such as in Wilks Park on the river. These tracks are usually small and temporary in nature due to their location and quality of construction.

For maintenance purposes it needs a readily accessible water supply so the face and side batters can be dampened, particularly in dry months. This minimises dust and cracking and maximises grip for riders.

Details on the costs proposed for the Jump Track at Pomingalarna Reserve are in Section 7.2. These costs have been based on using 1000^m³ of imported fill capped with 100mm of compacted gravel/clay. A proposed layout can be seen in Figure 6.6.

Figure 6.6: Aerial view of proposed Jump Track at Pomingalarna Reserve. The building to the right is the main amenities and the criterium track is above.





6.2.5 Options for Pump Track

Similar to the Jump Track, the key purpose for the Pump Track is to provide a recreation site for casual users. It is unlikely a club would use the area for an event. It should be close to the amenities and carpark so they are easily accessed. The proposed location for Pomingalarna Reserve is show in Figure 6.7.

Wagga Wagga currently has no formal pump track. Informal areas built by young people pop up occasionally such as in Wilks Park on the river. These tracks are usually small and temporary in nature due to their location and quality of construction.

For maintenance purposes it needs a readily accessible water supply so the side batters can be dampened, particularly in dry months. This minimises dust and cracking and maximises grip for riders.

Details on the costs proposed for the Pump Track at Pomingalarna Reserve are in Section 7.2. These costs have been based on using compacted earth from onsite capped with a 7mm AC surface. Total length of the track would be approximately 300m.

Figure 6.7: Proposed Pump Track between Amenities Block and Bike Education Area at Pomingalarna Reserve looking south.





6.2.6 Options for MTB Playground

The purpose of a MTB Playground is to provide a series of fun obstacles to help develop off-road riding skills. The proposed location for this facility is recommended at the north east corner of Pomingalarna Reserve, as show in Figure 6.8.

Cost estimates for the MTB Playground have been based on building a wall ride and see saws and log rides on and around the old rifle range concrete canyon. Costs include compacted gravel/clay connecting paths. Details on the costs proposed for the MTB Playground at Pomingalarna Reserve are in Section 7.2.

Figure 6.8: Proposed MTB Playground at Pomingalarna Reserve looking South East towards the existing Golf Club.



6.2.7 Options for Velodrome

Phil Ayes, CEO for Cycling NSW, recommended on May 9 2016 that an outdoor velodrome should be 333m in length. The Bathurst Bike Park design, which is based on one located at Coffs Harbour, has been proven to work well for regional areas. State and National track events are held indoor and occur in the large cities that have these facilities. There are country championships held on outdoor facilities. Currently there is one per year in Wagga Wagga. These usually attract around 150 competitors, bringing their families for about a two night stay.

Wagga Wagga currently has a velodrome which is an outdoor AC track that is 7m wide and 450m long. The seal is in average condition. It was crack sealed in 2012 but most of these have reopened allowing water into the pavement. The pavement is in average condition and deteriorating due to water ingress and poor drainage.



These cracks are starting to become a safety issue for the track cyclists. A track bike tyre is 12mm wide and runs at 110psi. The cracks, which are about 5mm wide, along with the rise and fall adjacent to the cracks, can cause wheel deviation. Cycling NSW was close to not allowing a state event to proceed because of these cracks. Also the current 7m track is not wide enough for cone work. This is where cyclists develop balancing skills by riding in and out of cones.

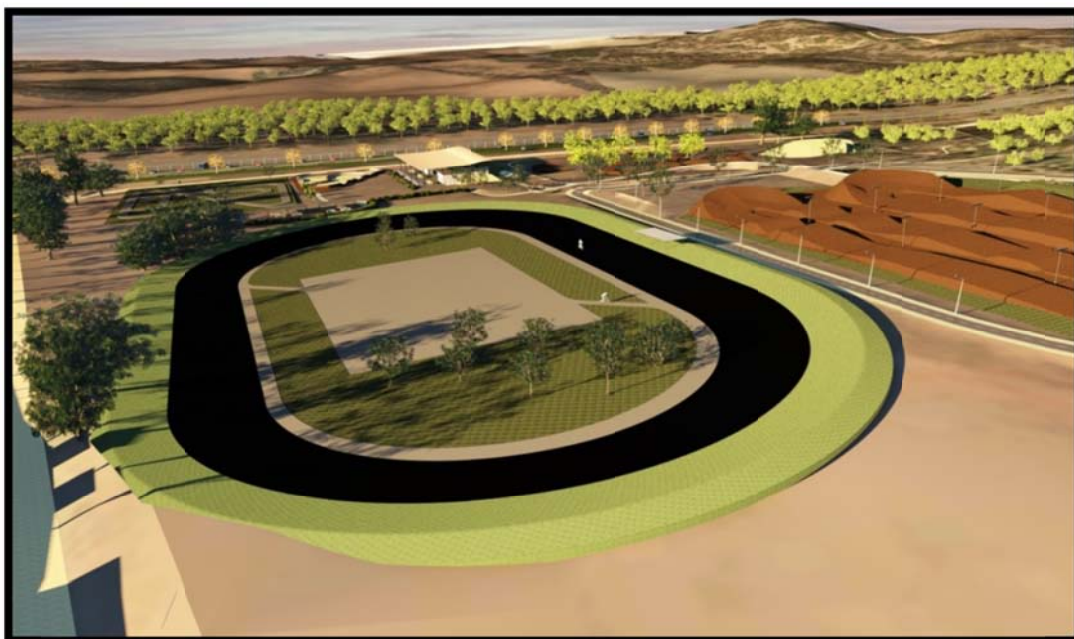
In May 2016 McMahon Earth Science drilled seven test holes for geotechnical investigations. In summary the results showed 65mm thick asphalt on top of a weak pavement of sand, silt and clay. The reason the track is holding up well on a weak pavement is because of the thickness of the asphalt. Many residential streets are only 30 to 50mm for comparison, but are built on a strong pavement.

While the track is mostly holding its shape, there is a large amount of cracking, particularly on the top edges near the concrete wall. In total there is 500 lineal metres of cracks. These cracks need to be filled over the next 12 months to protect the weak pavement.

If crack sealing is done within 12 months it is expected the pavement would then hold up for another 10 years. If the track were to be replaced it would need to be completely dug out with appropriate drainage installed. Given the poor quality of the pavement materials, these would need to be completely replaced. A velodrome project should not proceed until the existing facility approaches the end of its useful life.

Costing for the new velodrome at Pomingalarna Reserve was based on a Quantity Surveyor's estimate dated September 26 2016. The main cost activities are earthworks, track construction, 500 lux floodlights, water connection and covered staging areas. Details on the costs proposed for Pomingalarna Reserve are in Section 7.2 and the layout is shown in Figure 6.9.

Figure 6.9: Proposed Velodrome track at Pomingalarna Reserve looking South towards the Bicycle Education Area and Amenities Block.





6.2.8 Options for Support Infrastructure

The following support infrastructure is recommended for the complex:

Infrastructure	Purpose	Comments
Amenities Building	Toilets, change room, canteen, storage area, office space, meeting room, timing area and outdoor public address space.	Similar design to the Stromlo structure. Set into the side of the hill, excellent 360 degree viewing on top level and rooms underneath. See Figure 6.
Carpark - Sealed	Space for 30 vehicles to park on a sealed surface.	Needs to be adjacent to the amenities building and centrally located to the other facilities.
Carpark - Grass	Overflow parking for large events, up to 1000 vehicles.	Allowing 3m widths and 20m for 2 rows, 400 cars would fit on Bagley Drive West. The other 600 would be located between the velodrome and the MTB container.
BBQs and shelters	Picnic node – double stainless steel BBQ with shelter and picnic tables.	Adjacent facilities like pump track so carers can watch children in comfort.
Fenced Playground	Play area for children too young to ride.	Close to amenities and bicycle education area.

Details on the costs of the proposed support infrastructure for Pomingalarna Reserve are in Section 7.2. The amenities style is based on the Stromlo Forest Park building (see Figure 6.10). How this layout would look at Pomingalarna Reserve is shown in Figure 6.11.

The main items on the support infrastructure costing sheet in Section 7.2 are:

- Sound fit out
- CCTV system with 30 cameras
- Carparks, formal (sealed) and informal (grass)
- Sealed access road from the Golf Club entrance to amenities
- Locked security gate on Bagley Drive near Golf Club entrance
- Internal gravel service roads
- Site drainage and detention basin
- Sheltered BBQs x two
- Fenced playground
- Connecting services to the site – communications (Wi-Fi), power, water (for building and bicycle wash down bays) and sewer.



Figure 6.10: Amenities Building at Stromlo Forest Park, Canberra.



Figure 6.11: Proposed Amenities Building (right) at Pomingalarna Reserve looking to the South West towards the Sturt Highway.





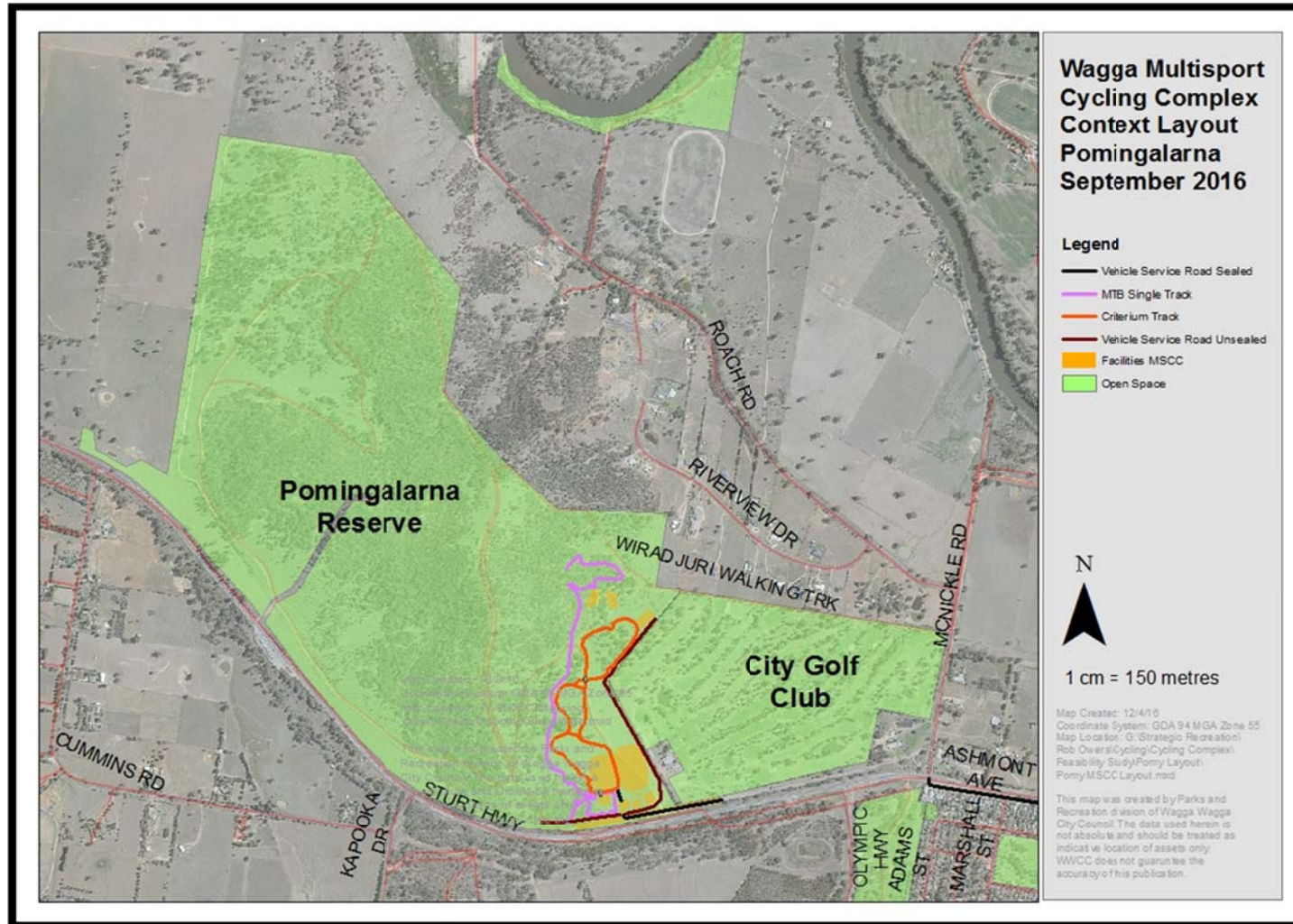
7.0 Analysis of the Pomingalarna Reserve Option

7.1 Preferred Pomingalarna Reserve Layout

One of the important goals of the layout is to utilise the open area on the south east side of Pomingalarna Reserve (Figure 7.1). The preferred layout would have minimal impact on existing vegetation. The MTB Playground is the only component of the complex that is in bushland. It would be built amongst trees so it would not require any trees to be removed. The complex overall would have some impact on native grasses and small trees (Cootamundra Wattle and Cypress Pine suckers). This is one component that would need to be addressed in a REF.



Figure 7.1: Pomingalarna Reserve showing context of Multisport Cycling Complex.



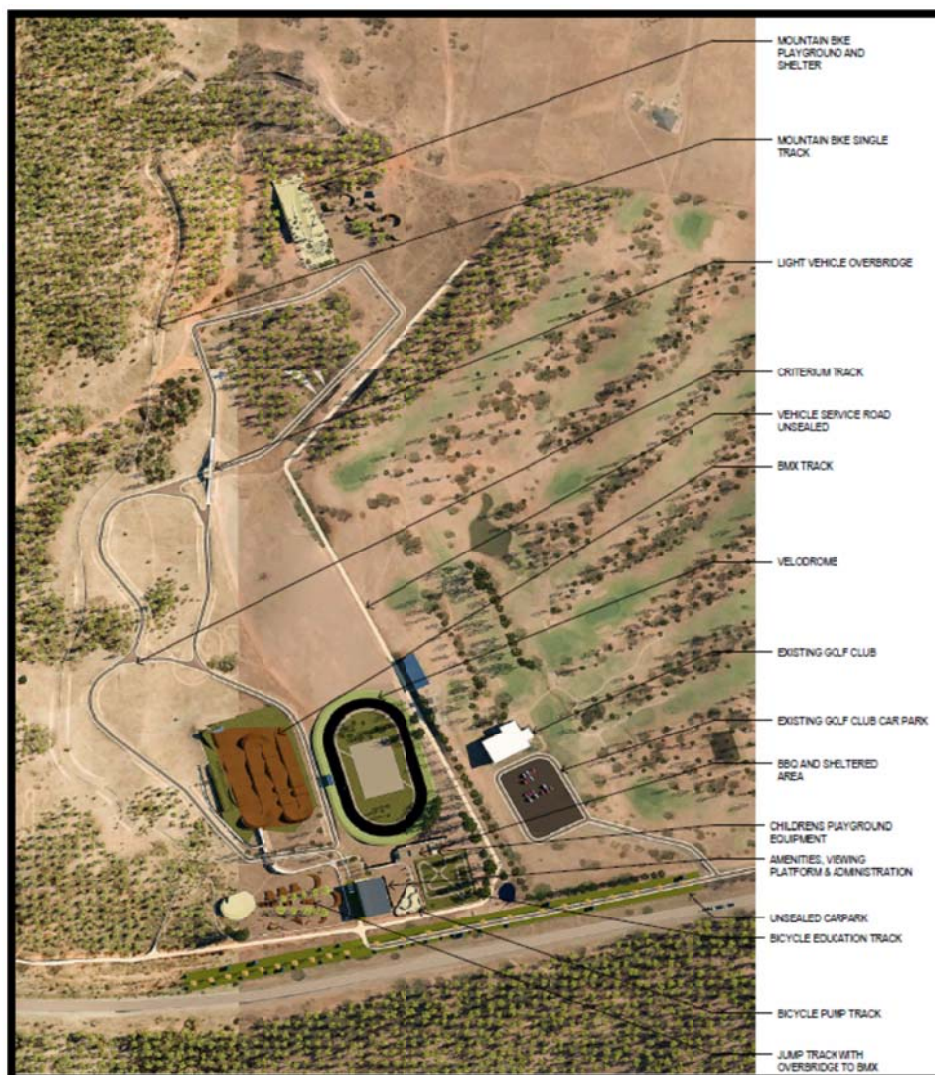


In September 2015 an aerial image map of the eastern side of Pomingalarna Reserve was printed. Scaled cutouts of each of the proposed facilities were then used to give Stakeholder groups an opportunity to suggest a layout at Pomingalarna Reserve. Fifteen were received. The Combined Cycling Clubs and Council then used these as a guide to develop a preferred layout (see Figure 7.2).

Many stakeholders have requested that the natural beauty of Pomingalarna Reserve be retained. For example, the WaggaRoos (Orienteering Club) President said *“our primary interest is that the bushland be retained as unchanged as possible and that vehicles and motorbikes be kept out”*.

The preferred layout uses the footprint dimensions listed in Table 6.1: Area required for multisport elements. Section 6 of this study addressed the layout specifics for each cycling facility. One element that was not addressed is a camping area. This would only be occasionally used for larger events and therefore it is not proposed to develop any infrastructure for camping. Mobile facilities such as toilets would be brought in as required for events.

Figure 7.2: Preferred layout of Multisport Cycling Complex at Pomingalarna Reserve.





7.2 Asset Management – 30 Year Lifecycle Costs and Income

Estimated lifecycle costs for the following elements are presented in Appendix 3:

- Amenities
- BMX Track
- Criterium Track
- Bicycle Education Area
- Jump Track
- Pump Track
- Mountain Bike (MTB) Playground
- Velodrome
- Support Infrastructure.

Tables 7.2.1 to 7.2.3 are a summary of the key financial results using the life cycle costs. The key financial estimate summaries displayed are:

- a) Capital Costs for all elements of the development.
- b) Annual operational income and expenses which produces an annual loss.
- c) Renewal costs to replace assets at the end of their useful life.
- d) Annual estimated economic benefit to the Wagga Wagga Local Government Area.

7.2.1 Estimated Capital Costs

A summary of the capital costs are in table 7.2.1. Finer details on capital costs for each element are in Appendix 3.

Table 7.2.1: Summary of whole site capital costs.

Capital Cost Item	Cost – Est.
Amenities	\$666,235
BMX	\$1,103,596
Bicycle Education Area	\$152,681
Criterium Track	\$823,455
Jump Track	\$64,600
Pump Track	\$115,600
MTB Playground	\$45,400
Velodrome	\$718,503
Support Infrastructure	\$2,186,200
Review of Environmental Factors	\$10,015
Detailed Designs and Costings 8%	\$470,903
Preliminaries (install of site services)	\$333,291
Legal Advice	\$50,000
Project management (10%) & procurement (1%)	\$741,453
Contingencies 10%	\$748,193
Total Capital Costs	\$8,230,124



7.2.2 Annual Operational Income and Expenses

Table 7.2.2 shows the MSCC operations, maintenance and renewal costs. Lighting income is based on Council's fees and charges which are cost recovery. Other income is from events and annual user fees for cycling club members. This is based on Council's standard seasonal charge for sports users which is \$21 per season or \$42 per year.

Maintenance expenses allow for a person to spend eight hours per week on managing bookings and organising maintenance and repairs. Maintenance activities include cleaning, mowing, security inspections, sweeping of tracks and general repairs from vandalism and wear and tear. Utility charges are also included for electricity, water, gas, sewer and garbage rates. Details on these costs are presented in Appendix 3.

Table 7.2.2: Summary of whole of site operational income and expenses.

Income Operational	Total
Trade shows, car shows, exhibitions, markets	\$675
Floodlight user fees - BMX Hours	\$7,230
Floodlight user fees - Criterium Hours	\$7,230
Floodlight user fees - Velodrome Hours	\$7,230
Charge for incidental users	\$4,200
Venue Sponsorship	\$10,000
Cycling Clubs Home Status Annual User Fee	\$12,600
	\$44,965
Operational and Maintenance Costs	\$/Year
Site Management - user bookings and organising repairs	\$4,160
Amenities	\$26,263
BMX Track	\$10,773
Criterium Track	\$10,283
Bicycle Education Area	\$9,680
Jump Track	\$1,613
Pump Track	\$1,613
MTB Playground	\$7,200
Velodrome	\$10,283
Support Infrastructure	\$13,280
TOTAL Operation and Maintenance Costs	\$95,148
Annual Operating Loss	-\$50,183



7.2.3 Estimated Renewal Costs

Renewal costs have been calculated for each cycling facility. A renewal is the replacement or refurbishment of an existing asset that is in poor condition. Examples at the MSCC are painting, replacing the AC on the criterium track or resealing the entrance road. A summary of the renewal costs are in table 7.2.3. Finer details on renewal costs for each element are in Appendix 3.

Table 7.2.3: Summary of whole site renewal costs.

Renewal/Refurbishment Costs	Av \$/Year
Amenities	\$10,659
BMX Track	\$2,439
Criterium Track	\$24,513
Bicycle Education Area	\$1,852
Jump Track	\$1,280
Pump Track	\$1,210
MTB Playground	\$2,653
Velodrome	\$3,782
Support Infrastructure	\$17,768
Total Renewal Costs	\$66,156



7.2.4 Estimated Economic Benefit to Wagga Wagga

The economic benefit to Wagga Wagga has been calculated based on the number of visitors coming to Wagga for events at the MSCC. These events are listed in table 7.2.4. Additional to participant visitors, the economic impact calculations also include estimated people accompanying the participant and number of days staying.

Table 7.2.4 Annual events at MSCC and associated visitors numbers.

Sport	Event / Activity	Number per year	Participants from Wagga	Participants Out of Town
BMX	National Championships	0.1	30	2989
BMX	State events	1	50	500
BMX	Regional events	3	100	200
MTB Cross Country	Worlds – 24-hour or National CC	1	30	600
MTB Cross Country	Evocities 6-hour - extra participants	1	50	50
MTB Cross Country	RAMBO - extra participants	3	40	30
MTB Cross Country	NSW Schools MTB Championships	1	50	400
Road Cycling	Track Opens (Velodrome) - extras	2	100	50
Road Cycling	Regional events (Crit) - extras	2	100	50
Road Cycling	Regional schools championships	2	100	300
Running	Regional schools cross country	2	300	300
Running	Orienteering nationals or state	1	50	100
Cycling / Running	Sports training camps	3	30	30
Cycling / Running	Trail duathlons	6	50	100
Tourism	Cycling tourist	1	0	2000
Trade shows	Cars, bikes, exhibitions, markets	4	1000	1000
	TOTALS	33.1	2080	8699

Using these event figures the total number of extra visitor nights generated in Wagga Wagga that could be attributed to the MSCC is 38,744. This figure was then used to determine the economic benefit via the use of Economy ID*. The total economic impact on Wagga Wagga is presented in table 7.2.5. Further explanation of how the economic benefit is calculated is recorded in Appendix 4.

* Economy ID is a web based package officially adopted by Wagga Wagga City Council for demographic and economic analysis.



Table 7.2.5 Estimated Annual Economic Benefit to Wagga Wagga.

Benefit	Amount
Economic Benefit - Direct spend impact	\$7,500,838
Economic Benefit - Industrial Impact	\$3,489,008
Economic Benefit - Consumption Impact	\$796,932
Total Annual Benefits	\$11,786,778

7.3 Land Owners and Neighbour Considerations

On February 2 2016 the Chairperson of the Combined Cycling Clubs and Council Officers met at Pomingalarna Reserve with Officers from the Department of Primary Industry - Crown Lands and Local Land Services and Office of Environment and Heritage. They indicated an in principle support of the project subject to:

- a) A REF including consideration of Aboriginal Heritage and impact on fauna and flora.
- b) Standard approvals are obtained from Crown Lands given Council manages the land under trusteeship to the Crown.
- c) The Local Land Services requested the travelling stock route be passable for cattle in an emergency. The last time it was officially used was in the 1974 floods; therefore an informal carpark would be adequate.

Consultation with the Lessee of the Wagga City Golf Club occurred in March 2016 with the President of the Combined Cycling Clubs, and again on June 21 2016 and July 15 2016 with Council Officers and the Combined Cycling Clubs President. Overall the Lessee had no objection to the complex proposal. He indicated an openness to negotiate shared use of facilities where there is a win for both parties. He did request that, if possible, space be left for the golf driving range. He did understand though there could be conflicts between straying golf balls and riders that would have to be managed.

The nearest residential area is Riverview Drive. The distance from Riverview Drive to the BMX track is approximately 850m. These houses are buffered by the golf course vegetation and a hillside and impact on these residents is likely to be minimal, if at all. Similar can be said regarding San Isidore residents. It is recommended that consultation with these residents be completed during the REF stage of the project.

7.4 Technical Assessment of Pomingalarna Reserve

7.4.1 Geotechnical Assessment

In May 2016 McMahon Earth Science drilled five bore holes across the MSCC footprint. The full report titled 'Pomingalarna Reserve Geotechnical Investigation May 2016' was produced. In summary the results showed the site is moderately reactive which is 'normal' for Wagga. The bearing capacities and CBR are good indicating stiff soils with a low risk of concrete corrosion and are favourable to supporting built infrastructure.



7.4.2 Traffic Considerations

A formal sealed carpark has been planned for 30 vehicles to cover daily casual users. An overflow grassed carpark for 1,000 vehicles has been planned for events. It is proposed to have a locked gate and low cable fencing adjacent to entries to prohibit illegal vehicle entry. Effects of casual user traffic, at an average daily estimate of 100 vehicles, on McNickle Road intersections (Sturt Highway and Bagley Drive) is considered negligible by Council's Traffic Engineer and of similar character to current use by the Golf Club.

Managing vehicles for events however needs to be assessed on a case by case basis through Council's Development Application process. Some events such as the BMX National Championships could have up to 1,000 vehicles requiring parking.

Emergency vehicular access needs to be maintained between Riverview Estate and the Sturt Highway. In times of high floods Roche Road goes under water near the McNickle Road intersection. In these times residents require emergency access through Pomingalarna Reserve. This has been allowed for in the MSCC design with the inclusion of an internal gravel service road.

7.4.3 Development Application (Council DA)

Based on advice from Council's Planning Directorate, the MSCC proposal at Pomingalarna Reserve will not be considered as a major recreation facility. This has been determined because, while the BMX track or MTB trails could attract a major recreational event, most of its use will be by local day to day visitors and clubs. If a major event were to happen, a Development Application may need to be submitted at that time.

Wagga Wagga City Council will be the owners of the proposed infrastructure and therefore do not require development approval. Under the State Environment Planning Policy (SEPP Infrastructure Clause 65 and 66) 2007 development can occur as complying development.

A condition of the SEPP is that Council consider the impacts of the development. This can be done through a REF. A quote has been obtained from a local provider for a REF at approximately \$10,000. The REF would consider the effects on the environment of all the project elements.

The key environmental issues the REF will need to consider are:

- Maintaining biodiversity and natural character of Pomingalarna Reserve
- Effects on flora and fauna
- Heritage including Aboriginal Heritage
- Effects of built infrastructure
- Traffic and access
- Management of run-off and potential impact on nearby watercourses
- Noise
- Dust
- Effects of camping
- Management of large events
- Visual impacts
- Waste management.



An important consideration of the REF will be that, while the concept drawings do not show tree planting between the cycling facilities, it is proposed that native trees and native landscaped garden beds will be planted within the complex. The main purpose of the concept drawings is to show how the cycling facilities fit within the existing landscape. The current site landscape has no trees where the facilities are proposed which will ensure no large tree removals within the complex footprint. Some small Cypress Pine suckers and native grasses would be disturbed and the impact of this will need to be considered as part of the REF.

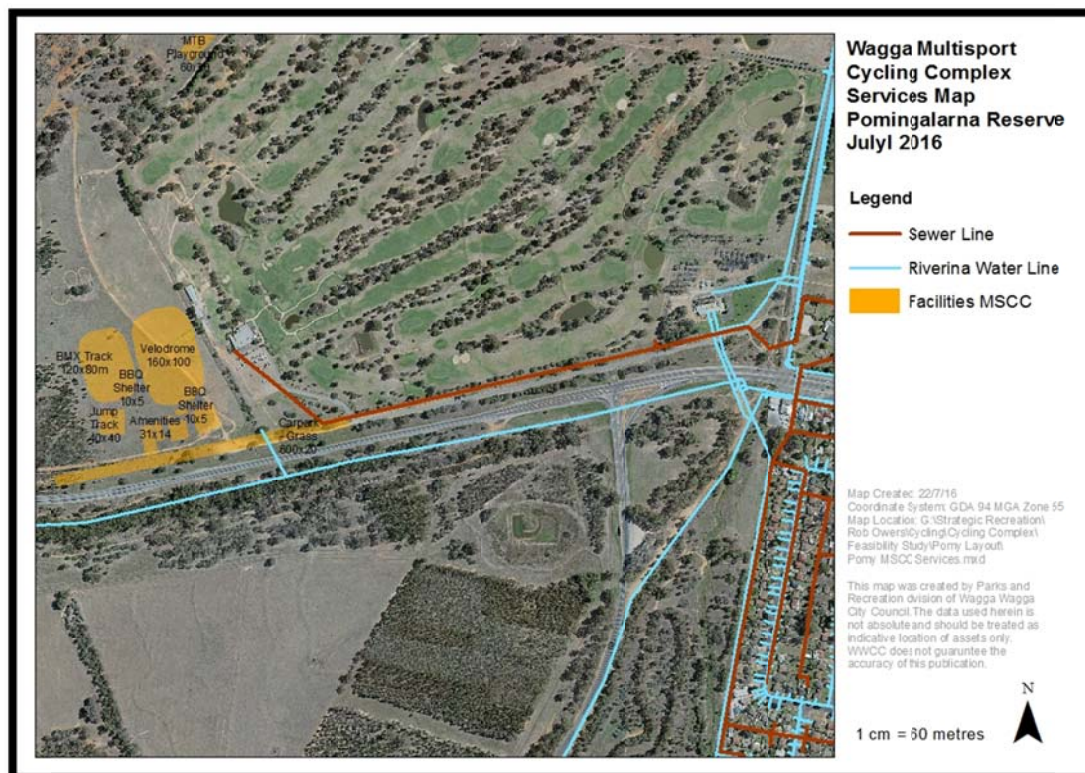
7.4.4 Services

The nearest water is a 150mm main on the southern side of the Sturt Highway. (Figure 7.3) This would require an under bore of the highway. This has been included in the costings. Advice received from Riverina Water in June 2016 is that the main has capacity to supply a 32mm service to Pomingalarna Reserve.

Providing power will be expensive as it would require the installation of a power transformer with 1250 amps per phase. This would supply enough power to run the flood lighting systems. For communications it is proposed to utilise mobile technology. This would include a 4G booster and free Wi-Fi access.

The nearest sewer main is approximately 300m to the east of the site. This is the service to the Golf Club. The current sewer connection estimate is based on using 150mm PVC with a manhole access every 80m (3 off). There is good fall from Pomingalarna Reserve to the sewer main therefore the trenching depth will not need to be significant.

Figure 7.3: Location of Water and Sewer services near Pomingalarna Reserve.





7.5 Financial Variables for Future Consideration

If the MSCC were to proceed, the following scope changes and operational issues could be considered during the detailed design and costing phase to allow for project savings. The financial figures presented in this feasibility study do not include these scope changes. The considerations have been grouped below.

7.5.1 Capital Cost

The following changes to the scope of the project could significantly reduce the capital costs:

- a) Remove the crisscross bridge on the criterium track near the MTB container and make it touch at this location. This would achieve a similar aligned track at a much reduced cost.
- b) The overhead bridge on the SW corner of the BMX track to go under the Crit and MTB tracks rather than over.
- c) The building footprint of the amenities block could be decreased so there is only a small meeting room, storage and showers/toilets similar to Stromlo. The current footprint is based on Bathurst which has a large meeting room and a kitchen/kiosk.
- d) Not provide lighting on the criterium track (700m circuit) given the velodrome will be lit.
- e) Build the Bicycle Education Area in town; hence it would not be a cost to the MSCC. This could free the area up to move the MTB playground down from the old rifle range to this area below the Pump Track.
- f) Cap the Pump Track with compacted clay rather than asphalt.
- g) Leave the velodrome at Kincaid Street.
- h) Build limited internal fencing and instead have a locked gate adjacent the Golf Club entrance on Bagley Drive
- i) Not build a fenced playground. This was not identified as required in Wagga Wagga City Council's Playground Strategy.

7.5.2 Operations, Maintenance and Renewal Costs

- a) Clubs provide in kind resources for cleaning of amenities, repairs of dirt riding surfaces, organising and implementing minor building repairs.
- b) Resourcing of operation and maintenance needs to be shared between user groups and Council.
- c) Council already has a renewal infrastructure back log so this may have to be funded from other sources like grants, sponsorship and in kind support.
- d) Savings will be made for maintenance and renewal costs as Council will be able to close a number of cycling related facilities when the Pomingalarna Reserve facility is constructed.

7.5.3 Return on Investment

Operational income is predicted to be minimal given the nature of the site and activities. A nominal user fee has been applied that is commensurate with other sporting groups' seasonal charges. Charges for lights per hour have also been included which are based on full cost recovery.

The biggest return on investment will be the economic benefit for Wagga Wagga, through event income and cycling tourism it has been estimated the economic benefit to Wagga Wagga would be \$11.78M per year.



In addition the economic impact of constructing an \$8.2M multisport cycling complex in Wagga Wagga would produce boost the Wagga Wagga City economy by \$14.38M (Source: Economy.id).

Possible income sources for the capital costs are grants, loans, cash, business sponsorship and user group fundraising. Peak bodies such as BMX Australia and Cycling Australia may assist with sourcing grants and possibly providing resources themselves. The State and Federal Government run annual programs that could be a source of grant funding. Examples are:

- Local Sport Grant Program (NSW Office of Sport - <https://sportandrecreation.nsw.gov.au/clubs/grants>)
- Social Housing Grants given proximity to Ashmont and Tolland
- National Stronger Regions Fund
- Club Grants Category 3 – Liquor & Gaming NSW
- Community Development Grants Program with Department of Infrastructure
- Stronger Communities Program
- RMS and Service Clubs for the Bicycle Education Area
- Public Reserve Management Fund with Crown Lands.

Under the NSW Government State Infrastructure Strategy, recommendations have been made to release \$300M for regional tourism and between \$500M and \$1.2B for sports and cultural infrastructure.

(Source:www.infrastructure.nsw.gov.au/media/42966/inf_j14_871_sis_report_ch09_web.pdf)

This could be a source of income for the MSCC. In preparation, the local State Member of Parliament Daryl Maguire was briefed on this project in August 2016 by the President of MTB Wagga.

Loans could be applied for with Council and Crown Lands. Sourcing funding from Council would require a robust business case, addressing asset tenure and identify who will commit to perpetual maintenance.

Business sponsorship is a possibility however advertising would have to be carefully considered as large bill boards at Pomingalarna Reserve would not be in keeping with the natural beauty of the reserve. Signage would also need to comply with the Sports Ground Signage Strategy and Crown Land policies on advertising.



7.6 Conclusion and Recommendations

This feasibility study into a Multisport Cycling Complex at Pomingalarna Reserve has identified that:

- a) There is sufficient physical space at the site.
- b) The site topography and soil geology is suitable for the development.
- c) A facility could provide the service level desired by on and off-road cyclists.
- d) No development application would be required.
- e) A Review of Environmental Factors is required to assess impacts on flora, fauna and Aboriginal Heritage
- f) The proposed facility could provide an economic benefit to the Wagga Wagga that is greater than the lifecycle costs.

It is recommended:

That Council,

- a) contribute \$5,000 in partnership funding to allow a Review of Environmental Factors to be undertaken for the project
- b) subject to the Review of Environmental Factors determining the Pomingalarna site suitable, enter into a Memorandum of Understanding with the Wagga Wagga Combine Cycling Clubs to partner in the future planning and implementation of this project

7.7 Recommended Staging of Works

Based on the experience of other Councils such as Bathurst, the expected timeframe to build the MSCC is approximately 10 years. Table 7.5 has an order of priority for the project elements.

Stage 1 is to carry out a Review of Environmental Factors. This is required to determine if there are any environmental factors that would prohibit the project from proceeding.

If it is determined the development is appropriate, the second stage is detailed engineering designs, drawings and costings. This would ensure the project elements are at "shovel ready" status and allow for the bidding for capital funds.

Stage 3 and beyond are flexible given they are dependent on funding availability.



Table 7.5 Recommended Project Priorities.

Stage	Item
Stage 1	Feasibility Study, Project Adopted by Council and Review of Environmental Factors.
Stage 2	Detailed designs and costings. Funding bids.
Stage 3	Criterium track, Small Amenities, BBQ & shelter, Informal Carpark and Dirt Access upgraded.
Stage 4	BMX Track, Jump/Pump Tracks, BBQ & Shelter and Fenced Playground.
Stage 5	Large Amenities, Formal Carpark and MTB Playground.
Stage 6	Velodrome and Bicycle Education Area.

8.0 References

- BMX Australia (2013). BMX Australia Track Guidelines. BMX Australia
- BMX Track Guide (2014). Union Cycliste Internationale (UCI)
- Bikes Parks IMBA's Guide to New School Trails (2014). International Mountain Biking Association, Boulder, Colorado USA.
- Hume City Council (2015) Criterium Cycling Facility Feasibility Study, Hume City Council, Victoria Australia.



9.0 Appendices List

Appendix 1 Multisport Cycling Complex Survey Questions

Appendix 2 Details On Site Visits For Benchmarking

Appendix 3 Lifecycle Costs For Each Cycling Facility

Appendix 4 Details On Economic Impact Calculations



Appendix 1 Multisport Cycling Complex Survey Questions

Launched by the Wagga Combined Cycling Clubs – March 18 2015.

Survey was open for four weeks, closing Wednesday April 15 2015.

Cycling, in its many different forms, is becoming more and more popular to many in our community. All Wagga Wagga cycling clubs including Wagga Wagga Cycling Club, Tolland Cycle Club, Mountain Bike Wagga, Bicycle Wagga Wagga and Wagga Triathlon Club together with Wagga Wagga City Council are considering the future development of cycling facilities.

One proposal put forward is a multisport complex that would be on a single site with combined cycling facilities along with amenities and car parking. This facility is planned to be multipurpose and open for use by other groups, not just the cycling community, for example, runners, roller bladers, bushwalkers and small children learning to ride.

To view images of the types of facilities that occur at a multisport complex with a cycling theme do a Google images search on 'criterium tracks and mtb parks'.

Your time taken to complete this survey will benefit the planning process. The clubs are offering a **\$500 lucky draw prize** to someone who completes this survey.

For families each individual is encouraged to complete their own survey. Cyclists, potential cyclists and non-cyclists are encouraged to complete the survey.

The Wagga Combined Cycling Clubs representatives would like to thank you for your time.

1. Do you participate in cycling activities?

Yes No (If no, proceed to question 3)

2. What type of cycling activities do you participate in?

(Please tick more than one if appropriate)

- Recreationally for personal fitness
- Family riding together
- Alternate transport to driving eg. commuting to work and other appointments
- Road racing
- Downhill mountain biking
- Mountain Biking
- BMX
- Track Racing
- Socially with a club
- Triathlon
- Cycling education for children
- Other (Please specify) _____

3. Do you think that feeling unsafe on the roads is a deterrent to your cycle experience?

Yes No



4. What types of cycling facilities do you believe are required to be developed or improved in Wagga Wagga?

(Please tick more than one if you wish.)

- BMX Track
- Criterium Track
- Cycling education area
- Mountain Bike Tracks
- Off road shared paths
- On road cycle lanes
- Velodrome
- Triathlon Facilities
- Other (please specify) _____

5. Other than the shared paths and cycle lanes, should these facilities be located on the one site?

6. Yes No

Comment why? _____

7. If a single site was developed, which of the following support facilities do you believe would be beneficial to have? Select yes or no. If you select yes give a priority rating (1 = Highest priority down to 3 lowest priority).

Support Facility	Yes / No	Priority
Toilets		
Change rooms		
Car parking		
Shelters		
BBQs		
Playground		
Spectator facilities		
Bike shop		
Coffee shop		
Office space		
Meeting room		
Other (please specify)		

8. Where could this proposed site be and comment why you selected this location?

(One potential site that has been previously identified is the Pomingalarna Reserve, Sturt Highway just on the western outskirts of Wagga Wagga.)



9. Do you see a multisport cycling complex being an asset into the future for Wagga Wagga?

Yes No

Briefly state why?

10. If the cycling facilities you think are necessary in Wagga were developed, would it affect how often on average you ride per week?

	Number
Average rides per week NOW	
Average rides per week after facility is provided	

11. Other than cycling activities, what could the proposed site be used for if facilities are provided?

12. Do you have any other comments, questions, or concerns?

13. Contact Details _____

These are optional; however you need to at least put a first name and phone contact to be eligible for the \$500 lucky draw prize.

Name:

City/Town:

Postcode:

Email Address:

Phone Number:



Appendix 2 Details on Sites visited for Benchmarking

Stromlo Forest Park

Facilities

- a) Mountain Bikes - 50km of signed cross country trails, downhill track, jump track and a skills playground.
- b) Road Bikes – 1.2km criterium circuit.
- c) Cross Country Running – 2.5km irrigated grass loop.
- d) Equestrian Trails – fire trails with directional signage.
- e) Support Infrastructure – amenities block (with hot showers, store room and meeting room), playground, BBQ, carpark.
- f) Total cost \$6 million initially, with \$2 million capital spent since opening.
- g) Amenities building \$800k. It has free 250-meg Wi-Fi per month. Has fibre optic cable.
- h) There are power bollards adjacent to event transition areas.

Figure 9.1: Stromlo Visit July 2015. Ronan Burke (MTB Wagga), James Vickers (Wagga Wagga Cycling Club), Paul Johanson (MTB Wagga), Rod Florence and Jeff Van Aalst from ACT Government Territory Venues and Events Section





General Comments

- a) The site is 1200 hectares. It has three emergency phones.
- b) Original concept design driven by Canberra Off-Road Cyclists (CORC) and Robert DeCastella.
- c) Opening hours in summer is 6am to 9pm; winter is 6am to 6pm.
- d) The downhill track takes about 2.5 minutes for the good riders to get down.
- e) All MTB trails are one way. Riders are to keep on designated trails.
- f) Users have requested lights for the criterium track.
- g) Design error - runners have to cross the criterium track to get to the cross country track.
- h) There are counters on the cross country trails – about 80,000 passes per year.
- i) About 20 school cross country events are held per year.
- j) The four cycling clubs each use the criterium track one evening per week.
- k) Group bookings are charged \$2 per head. Meeting room hire is \$50.
- l) The site originally planned to have a velodrome. Decided the Narrabundah velodrome is sufficient to service Canberra. Recently had \$700k spent on it.
- m) Canberra has two BMX tracks. Decided not to build one at Stromlo.
- n) Stromlo has a website. The Facebook site is used more however.
- o) Planning is in motion for an indoor swim centre and bunk style accommodation on the NW side of the entrance gate.
- p) No camping is allowed except for major events such as the Scott 24-hour in October.
- q) Little user group conflict except occasionally with horses.
- r) About 12 major events occur each year, some at international level such as the world solo 24-hour championships.

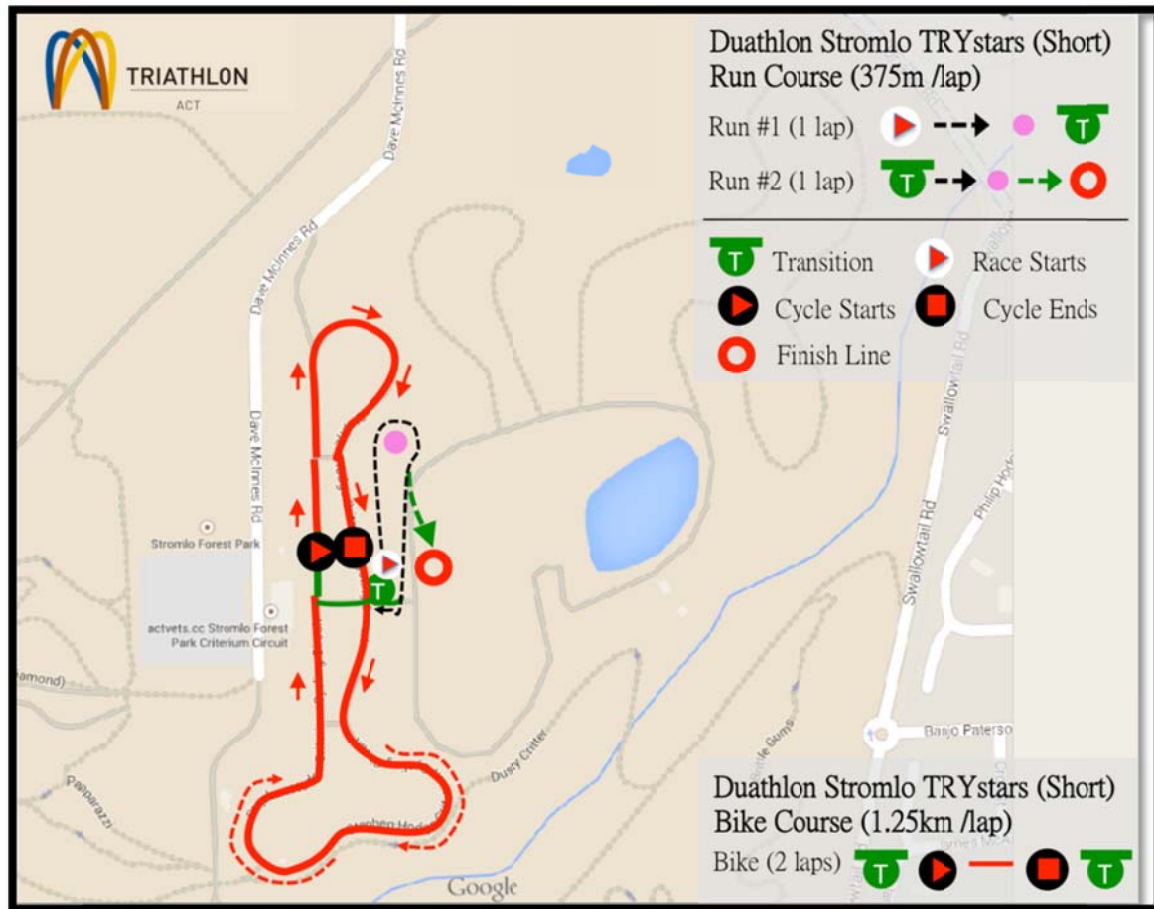
Maintenance

- a) One FTE employed by ACT Government Territory Venues and Events.
- b) Maintenance contract for MTB trail inspections, MTB trail maintenance, cleaning, asset building, horticultural, weeds and security.
- c) Trail inspections every two months by Jarrod Rando. 1.5 days for inspecting and 0.5 day to write up report.
- d) Inspection reports include trail name, length, last update, condition, wear, weather damage, overgrowth, comments, work needed, and safety concerns.
- e) Annual maintenance budget of approximately \$800k.
- f) Annual capital budget of \$200k.
- g) Irrigation water supply is dam plus bore. Town water as a backup only.
- h) Occasional volunteer days for trail maintenance. These are poorly attended.
- i) Gates and toilets are locked overnight by security contractors.
- j) Users are quite vocal and keep an eye on things.
- k) Vandalism is low. The amenities are alarmed.
- l) Entrances are big “thumping” gates worth about \$10k each. Cannot be knocked over by 4WDs.
- m) Dumped cars were a problem but due to area growth it rarely occurs now.

Stromlo Forest Park in Canberra has a 1.2km criterium course. The layout is shown in Figure 9.2 below.



Figure 9.2: Stromlo Forest Park Criterium Track.



Majura Pines Recreation Area - Canberra

Majura Pines is improved and maintained by 'The Majura Pines Trail Alliance'. The Majura Pines are some of the oldest and most famous mountain bike trails in Canberra. However these trails were closed for two years between 2012 and 2014 whilst the Majura Parkway was constructed and extensive thinning of the pines was undertaken. Due to these works many of the old trails were destroyed or very well hidden.

In early 2015 Jindabyne Landscaping were engaged to build 7km of new trails. Majura Pines Trail Alliance contributed around 1000 hours of volunteer work to add 8km of new and recovered existing trails, a pump track area and a high quality dirt jump park. These trails have been signed, mapped and were officially opened in May 2015.

The jump track is used by experienced riders. The pump track is used by riders of any level. The jump track requires more maintenance than a pump track because it has higher and steeper jumps.



Yerrabi Dirt Jumps at Yerrabi Ponds - Canberra

- a) Yerrabi Dirt Jumps was built in 2014.
- b) Initiative of Canberra Off Road Cyclists (CORC) with support from ACT Government, Lions Club, Rotary Club, and Dirt Art Trail Designers.
- c) Has jumps for beginners (up to 0.6m), intermediate (up to 1.2m), and advanced riders (up to 1.8m).
- d) Jumps are closed during wet weather.
- e) Unauthorised modification of jumps is strictly prohibited.
- f) Water from Yerrabi Ponds Lake is used for maintenance works.

Figure 9.3: Bathurst Bicycle Park





Bathurst Bike Park

Designs of the Bathurst Bike Park, BMX track and velodrome can be seen in Figure 9.3.

- a) Bathurst is a growing community with a current population of 40,000. Main industries are hospitality (racing), manufacturing and agriculture. It has three bike shops.
- b) Total approximate expenditure is \$9 million on the bicycle park. Breakdown is:
 - Velodrome \$1.4M
 - Amenities \$0.5M,
 - International BMX track \$1.5M
 - MTB Cross Country trails \$1M (in kind)
 - Kermesse/Criterium \$1M
 - Bicycle education facility \$0.1M
 - Civil infrastructure \$2.0M
 - Council staff wages for design and project management (in kind) \$1M
 - Contingencies \$0.5M.
- c) All funded by Bathurst Council from sub-division profits. Part of strategy to increase visitor numbers outside of motor race seasons and thus support the hospitality industry across the calendar.
- d) Velodrome budget was \$1.2M. Ended up around \$1.5M. Has 250mm DGB road base for pavement with 50mm AC finish.
- e) Drainage was not a big cost – track and internals all slope to the centre with pits draining water to the east near railway line.
- f) Central area of velodrome has a 2-coat aggregate seal finish. Will be used for steward areas and standing zone for competitors.
- g) Lesson learnt – velodrome was built first but could not be officially used for events until the amenities' building was finished. AC becoming brittle because of lack of use.
- h) Amenities block budget was \$350k. Ended up around \$550k. Big variation was onsite sewer system required because they were unable to connect into town sewer.
- i) BMX track was half built. It will be huge with massive earthworks on the side of a steep slope. Built to international standard with 8-person wide track and 5-7mm deco granite 100mm thick finish. The return path up the hill will be of deco granite with a polymer stabilizer.
- j) MTB trails have been constructed by the Bicycle Club - MTB riders. In kind works valued at close to \$1M. About 12km of single trails with numerous natural features to make the trails quite interesting to ride.
- k) Criterium track not yet built. Proposed 1500m track with 50mm AC finish, starting at the amenities building and heading south.
- l) The velodrome and criterium track will also cater for Kermesse (French street racing) events.
- m) Renewal planning for the bicycle park has been incorporated into Bathurst's Asset Management Plans.
- n) The Bathurst Cycling Club (Road and MTB) along with the Bathurst and District (BAD) BMX Club organised the bike park feasibility study.
- o) Site masterplan was done by Bathurst Council. They are revising their business case now.



Appendix 3 Lifecycle Costs For Each Facility

Lifecycle Costs - MSCC Amenities		
Capital Construction	Costs in 2016 \$	
Design and construction 31m x 14m similar to Bathurst	\$636,038	
Landscaping including flat concreted staging area	\$30,197	
TOTAL Capital Costs	\$666,235	
Operational and Maintenance Costs	Over 30 years	Annual
Building repairs and maintenance	\$177,000	\$5,900
Cleaning (Toilets only. Rest of building cleaned by users)	\$63,300	\$2,110
Security	\$270,390	\$9,013
Electricity	\$129,870	\$4,329
Water	\$5,190	\$173
Gas	\$20,790	\$693
Sewer Rates	\$20,880	\$696
Garbage Rates	\$24,960	\$832
Insurance	\$75,510	\$2,517
TOTAL Operation and Maintenance Costs	\$787,890	\$26,263
Rehabilitation/Renewal Costs	Over 30 years	Each
Iron Roof Replace/Upgrade	\$20,089	\$20,089
Renew vinyl floor coverings	\$46,221	\$18,488
Replace gas instant hot water units x 3	\$6,750	\$4,500
Replace 4 x reverse cycle air-conditioners	\$49,728	\$24,864
Refurbish wet areas - mainly tiling (Kitchen, toilets, showers)	\$60,000	\$60,000
Kiosk - replace appliances	\$17,280	\$14,400
Painting internal and external (minimal)	\$119,700	\$39,900
TOTAL Renewal Costs	\$319,768	
Average Renewal Costs per year	\$10,659	



Lifecycle Costs - BMX Track		
Capital Construction	Costs in 2016 \$	
Earthworks and track construction	\$579,046	
Starter ramp and pad	\$53,550	
Start gates	\$40,000	
Transponder network	\$20,000	
7mm asphalt 30mm deep for corners (lay 1 year after construct)	\$70,000	
Lighting 8 poles 40 lamps 1500 Watt 2 phase metal halide	\$300,000	
Two covered staging areas 7m x 5m colourbond shelters	\$30,000	
Connection to Water	\$11,000	
TOTAL Capital Construction	\$1,103,596	
Operational and Maintenance Costs	Over 30 years	Annual
Repairs and maintenance including erosion repairs of dirt surfaces (half in kind from users)	\$86,400	\$2,880
Crack sealing of asphalt corners	\$14,700	\$490
Electricity for floodlight use and power for events	\$216,900	\$7,230
Water for track maintenance / preparation	\$5,190	\$173
TOTAL Operation and Maintenance Costs	\$323,190	\$10,773
Rehabilitation/Renewal Costs	Over 30 years	Each
Shelters iron roof replace/upgrade	\$10,173	\$10,173
Replacing/re-compacting of gravel capping	\$47,040	\$47,040
Replace asphalt surface - profile out and relay	\$15,960	\$15,960
TOTAL Renewal Costs	\$73,173	
Average Renewal Costs per year	\$2,439	



Lifecycle Costs - Criterium Track		
Capital Construction	Costs in 2016 \$	
Design and installation	\$505,070	
Concrete culvert underpass	\$84,840	
Two covered staging areas 7m x 5m colourbond shelters	\$30,870	
Lighting of short circuit 700m on southern end	\$202,675	
TOTAL Capital Construction	\$823,455	
Operational and Maintenance Costs	Over 30 years	Annual
General maintenance including erosion repairs of batters & clearing drains (half in kind from users)	\$86,400	\$2,880
Electricity for floodlight use and power for events	\$216,900	\$7,230
Water for track maintenance/preparation	\$5,190	\$173
TOTAL Operation and Maintenance Costs	\$308,490	\$10,283
Rehabilitation/Renewal Costs	Over 30 years	Each
Shelters Iron Roof Replace/Upgrade	\$10,173	\$10,173
Crack sealing of asphalt corners	\$14,700	\$4,900
Replacing/re-compacting of gravel capping	\$275,040	\$275,040
Replace asphalt surface - profile out and relay	\$435,480	\$435,480
TOTAL Renewal Costs	\$735,393	
Average Renewal Costs per year	\$24,513	



Lifecycle Costs - Bicycle Education Area		
Capital Construction	Costs in 2016 \$	
35 road signs at \$200 each installed	\$7,000	
5 traffic lights at \$6K each. Allow 100m trenching for power	\$31,400	
360m ² of Asphalt path at \$52.27 per m ²	\$18,817	
150 m ² of concrete path at \$81.93 per m ²	\$12,290	
90 m ² of compacted gravel path at \$31 per m ²	\$2,790	
Kerb and gutter each side of path 400m total @ \$99.66/m	\$39,864	
Pallisade fence 2.1m high and 160m long	\$33,600	
Site establishment + Bobcat 2 days for site levelling	\$6,920	
TOTAL Capital Construction	\$152,681	
Operational and Maintenance Costs	Over 30 years	Annual
Repairs and maintenance including vandalism of signs and lights	\$260,400	\$8,680
Electricity for traffic lights	\$30,000	\$1,000
TOTAL Operation and Maintenance Costs	\$290,400	\$9,680
Rehabilitation/Renewal Costs	Over 30 years	Each
Shelters iron roof replace/upgrade	\$10,173	\$10,173
Crack sealing of asphalt	\$14,700	\$4,900
Renew signs	\$3,500	\$3,500
Renew gravel surface	\$8,370	\$2,790
Renew asphalt surface	\$18,817	\$18,817
TOTAL Renewal Costs	\$55,560	
Average Renewal Costs per year	\$1,852	



Lifecycle Costs - Jump Track		
Capital Construction	Costs in 2016 \$	
Landscaping quote to construct jump tracks	\$31,000	
100mm gravel/clay capping material delivered to site	\$3,000	
1000 m ³ metres of fill delivered to site	\$10,000	
Allow \$9 m ³ cost to purchase fill 1000 m ³ fill	\$9,000	
Bobcat to finish off and landscaping	\$11,600	
TOTAL Capital Construction	\$64,600	
Operational and Maintenance Costs	Over 30 years	Annual
Repairs and maintenance including erosion repairs of dirt surfaces (half in kind from users)	\$43,200	\$1,440
Water for track maintenance/preparation	\$5,190	\$173
TOTAL Operation and Maintenance Costs	\$48,390	\$1,613
Rehabilitation/Renewal Costs	Over 30 years	Each
Replacing/re-compacting of earthen track area	\$38,400	\$38,400
TOTAL Renewal Costs	\$38,400	
Average Renewal Costs per year	\$1,280	



Lifecycle Costs - Pump Track		
Capital Construction	Costs in 2016 \$	
Pump Track construction	\$90,000	
600 m ² asphalt surface capping AC7mm at 40mm depth	\$15,600	
Landscaping	\$10,000	
TOTAL Capital Construction	\$115,600	
Operational and Maintenance Costs	Over 30 years	Annual
Repairs and maintenance including erosion repairs of dirt surfaces	\$43,200	\$1,440
Water for track maintenance / preparation	\$5,190	\$173
TOTAL Operation and Maintenance Costs	\$48,390	\$1,613
Rehabilitation/Renewal Costs	Over 30 years	Each
Crack sealing of asphalt surface - 1 crew visit each 10 years	\$14,700	\$4,900
Replacing/re-compacting of gravel batters	\$21,600	\$21,600
TOTAL Renewal Costs	\$36,300	
Average Renewal Costs per year	\$1,210	



Lifecycle Costs - MTB Playground		
Capital Construction	Costs in 2016 \$	
Materials cost for Stromlo MTB Playground	\$15,000	
Labour to build wall ride, see saws and log rides	\$19,200	
100mm gravel/clay capping material delivered to site	\$3,000	
500 m ³ metres of fill moved	\$5,000	
Bobcat, roller and water cart to shape and compact paths	\$3,200	
TOTAL Capital Construction	\$45,400	
Operational and Maintenance Costs	Over 30 years	Annual
Repairs and maintenance including erosion repairs of dirt surfaces	\$43,200	\$1,440
Repairs to PG elements wear and tear and vandalism	\$172,800	\$5,760
TOTAL Operation and Maintenance Costs	\$216,000	\$7,200
Rehabilitation/Renewal Costs	Over 30 years	Each
Replacing/re-compacting of gravel connecting paths	\$11,200	\$11,200
Replace and renew playground elements	\$68,400	\$34,200
TOTAL Renewal Costs	\$79,600	
Average Renewal Costs per year	\$2,653	



Lifecycle Costs - Velodrome		
Capital Construction	Costs in 2016 \$	
Construct Velodrome earthworks, asphalt surface and fencing	\$482,923	
Lighting 400w single phase metal halide - 30 poles from Kincaid Street	\$204,000	
Two covered staging areas 7m x 5m colourbond shelters	\$20,580	
Connection to water	\$11,000	
TOTAL Capital Construction	\$718,503	
Operational and Maintenance Costs	Over 30 years	Annual
Repairs and maintenance including sweeping and vandalism (half in kind from users)	\$86,400	\$2,880
Electricity for floodlights for events and training	\$216,900	\$7,230
Water charges	\$5,190	\$173
TOTAL Operation and Maintenance Costs	\$308,490	\$10,283
Rehabilitation/Renewal Costs	Over 30 years	Each
Shelters iron roof replace/upgrade	\$10,172.80	\$10,173
Crack sealing of asphalt	\$14,700	\$4,900
Replace asphalt surface - profile out and relay	\$88,578	\$88,578
TOTAL Renewal Costs	\$113,451	
Average Renewal Costs per year	\$3,782	



Lifecycle Costs - Support Infrastructure		
Capital Construction	Costs in 2016 \$	
Sound fit out for amenities building and site generally	\$21,500	
Carpark – asphalt and sealed aggregate access road	\$783,100	
Internal gravel service roads and concrete paths	\$154,000	
Site Drainage and detention basin	\$428,100	
Sheltered BBQs x 2	\$86,000	
Closed Circuit TV (CCTV) for security	\$91,000	
Security gate and fencing	\$97,500	
Fenced junior (balance bikes) playground with a bike theme	\$53,000	
Services to site - communications Wi-Fi or 4G booster	\$30,000	
Services to site - power including transformer	\$263,000	
Services to site - water	\$20,000	
Services to site - sewer 830m to nearest existing line	\$159,000	
TOTAL Capital Construction	\$2,186,200	
Operational and Maintenance Costs	Over 30 years	Annual
Cleaning of BBQs, mowing and whipper snipping of small area (half in kind from users)	\$374,400	\$12,480
Playground inspections and repairs	\$24,000	\$800
TOTAL Operation and Maintenance Costs	\$398,400	\$13,280
Rehabilitation/Renewal Costs	Over 30 years	Each
Shelters iron roof replace/upgrade	\$10,173	\$10,173
Resealing of access road	\$42,480	\$14,160
Crack sealing of carpark - 0.5 day for sealing crew	\$7,350	\$2,450
Re-sheet internal gravel service roads	\$308,000	\$154,000
Replace CCTV system	\$154,500	\$103,000
Replace asphalt carpark - profile out and relay	\$10,530	\$10,530
TOTAL Renewal Costs	\$533,033	
Average Renewal Costs per year	\$17,768	



Appendix 4 Details On Economic Impact Calculations

The proposed Multisport Cycling Complex will hold events of National and State significance and is estimated to attract 38,744 extra visitor days spent in Wagga Wagga. Their average spend per person per day is \$242. This equals a total visitor spend of \$9,376,048 attributed to this complex. Assuming the events will be held in Wagga Wagga City, it is calculated to have the following potential impact:

Impact on Output

The total visitor spend of \$9,376,048 attributed to staging events at the Multisport Cycling Complex would lead to a direct impact on output of \$7,500,838. This additional direct output from the economy would also lead to an increase in indirect demand for intermediate goods and services across related industry sectors. These indirect industrial impacts (Type 1) are estimated to be an additional \$3,489,008 in output.

There would be an additional contribution to the Wagga Wagga City economy through consumption effects as correspondingly more wages and salaries are spent in the local economy. It is estimated that this would result in a further increase in output of \$796,932.

The combination of all direct, industrial and consumption effects would result in total estimated rise in output of \$11,786,778 in the Wagga Wagga City economy.

Impact on Value-add and GRP

The impact of an additional of \$9,376,048 spend to the local economy as a result of running events at the Multisport Cycling Complex in Wagga Wagga City would lead to a corresponding direct increase in Value-added of \$3,455,413. A further \$1,867,419 in Value-added would be generated from related intermediate industries.

There would be an additional contribution to Wagga Wagga City economy through consumption effects as correspondingly more wages and salaries are spent in the local economy. It is estimated that this would result in a further increase in Value-added of \$431,688.

The combination of all direct, industrial and consumption effects would result in an estimated addition in Value-added of \$5,754,521 in Wagga Wagga City economy.

Value-added by industry represents the industry component of Gross Regional Product (GRP). The impact on Wagga Wagga City's GRP as a result of staging this event is directly equivalent to the change in Value-added outlined above.

In summary, GRP in Wagga Wagga City is estimated to increase by \$5,754,521.



Impact on Employment (jobs, 12mth FTE)

The employment impact of an event is expressed in Full Time Equivalent (FTE) jobs. For example, an event that generates four weeks of full time work for 13 people (52 weeks of full time work in total), would have an employment impact equivalent to 1.0 annual FTE job.

The direct addition of \$9,376,048 spend to the local economy as a result of staging events at the Multisport Cycling Complex in Wagga Wagga City is estimated to lead to a corresponding direct increase of employment equivalent to 18.2 annual FTE jobs across a range of industries. From this direct expansion in the economy it is anticipated that there would be flow on effects into other related intermediate industries, creating an additional employment equivalent to 9.4 annual FTE jobs.

This addition of employment in the local economy would lead to a corresponding increase in wages and salaries, a proportion of which would be spent on local goods and services, creating a further increase equivalent to 3.7 annual FTE jobs through consumption impacts.

The combination of all direct, industrial and consumption effects would result in a total estimated increase of employment equivalent to 31.3 annual FTE jobs located in Wagga Wagga City.

Source: <http://economy.id.com.au/wagga-wagga>