



Lawrie Emmins Reserve Draft Plan Submission

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Introduction

The redevelopment of Lawrie Emmins Reserve is a once in a lifetime opportunity to address the issue of youth and women cycling participation rates in the west of Melbourne and the wider issues that are associated with that, eg decreasing physical activity levels and increasing health issues such as diabetes.

Cycling was a very popular past time during the late 19th century and first half of the 20th century with many clubs forming in the western suburbs. During this period, the Footscray Velodrome was constructed in Hansen Reserve in the mid-1930s and existed until the mid-2000s when it was demolished by Maribyrnong Council. Since this time there have been no cycling facilities between Brunswick and Geelong and this lack effectively provides a barrier to large sections of the community from getting on their bikes. However, this can be transformed with the redevelopment of Lawrie Emmins Reserve. Lawrie Emmins Reserve can become home to a community-cycling hub consisting of a bicycle education centre surrounded by a criterium track and velodrome. This would address many of these issues with infrastructure and inclusive programs that can encourage more people of all ages, abilities and genders to take up cycling and enjoy its many benefits. A multipurpose community-cycling hub can cater for many stakeholders including schools and sporting clubs and fits with several local government strategies.

Demand and Supply

There exist large differences in cycling infrastructure between the west and all the other parts of Melbourne. If northern Melbourne is taken as an example, as well as many cycle paths, the northern part of Melbourne is home to Coburg Velodrome, Brunswick Velodrome, Preston Velodrome and the Darebin International Sports Centre (DISC) indoor velodrome. The northern suburbs are also home to the Coburg Cycling Club, the Brunswick Cycling Club, Preston Cycling Club, Northcote Cycling Club, the Italo Australian Cycling Club and the Melbourne University Cycling Club. After the disbandment of the Footscray Amateur Cycling Club, the western suburbs is home only to Footscray Cycling Club (**Error! Reference source not found.**). However, due to Footscray Cycling Club's history as a professional club, they do not accept juniors. This means that presently there are no clubs for people under the age of 18 in the 80kms between Brunswick and Geelong.

Part of the reason no club has formed to fill this void is the lack of facilities in the west. BikeWest is very pleased to note Wyndham Council's proposed cycling infrastructure in Lawrie Emmins Reserve which will go a long way towards meeting the latent demand for cycling in the western suburbs of Melbourne.

There are many positives about the proposal, however, BikeWest feels there are some changes which could improve the cycle infrastructure even more.

Harnessing the potential of Cycling in the Western Suburbs

Recent research suggests one in three children are not learning to cycle due in part to parental fear about their safety¹. Studies have found that those who do cycle are much more likely to meet the

¹ CRAWFORD, S., BENNETTS, S. K., COOKLIN, A. R., HACKWORTH, N., NICHOLSON, J. M., D'ESPOSITO, F., GREEN, J., MATTHEWS, J., ZUBRICK, S. R., STRAZDINS, L. & PARCEL, G. 2015. Parental fear as a barrier to children's independent mobility and resultant physical activity. Final Report. Melbourne: La Trobe University.

suggested amount of activity². An additional issue is the uneven gender split of the increase in cycling rates. Super Tuesday bicycle counts consistently show that women only represent approximately 20% of commuter cyclists³.

The western suburbs of Melbourne is home to approximately 866,000 people⁴ and this is projected to grow by 18% between 2013 and 2030. This means the west of Melbourne will be the same size as Adelaide by 2030. This will lead to an increase in demand for cycling amongst certain parts of the population but leave an increasing number of young people and women effectively excluded from cycling due to the lack of infrastructure and clubs.

The reasons for an increasing number of children and women not cycling are complex, but the levels of cycling among children and women will not change unless women, children and their parents feel they are safe, and they have the skills to build their confidence. The only way this will change is through investment in infrastructure and education programs aimed at these groups.

Urgent action is needed to establish safe cycling infrastructure and programs that will support more people of all ages to get on their bikes and prevent tragedies like that witnessed in Yarraville in early 2017 where a young mother tragically lost her life, with the main issues being:

- the dearth of bicycle facilities and clubs in the western suburbs;
- the increasing popularity of cycling among some groups which is not translating into the younger generation or women taking up cycling;
- the latent demand for cycling suggested to be up to 60% of the population would cycle if it was safe and they felt confident;
- the lack of physical activity of people especially children and associated health costs, and
- the rapidly increasing population in the western suburbs

² SAHLQVIST, S., SONG, Y. & OGILVIE, D. 2012. Is active travel associated with greater physical activity? The contribution of commuting and noncommuting active travel to total physical activity in adults. *Preventive Medicine*, 55, 206-211.

³ BICYCLE NETWORK. 2016. *Super Tuesday Results* [Online]. Melbourne: Bicycle Network. Available: <https://www.bicyclenetwork.com.au/general/for-government-and-business/982/> [Accessed 12 July 2017].

⁴ LEADWEST. 2017. *Community Profile* [Online]. Melbourne: Leadwest. Available: <http://www.leadwest.com.au/Melbournes-West/Community-Profile> [Accessed 12 July 2017].

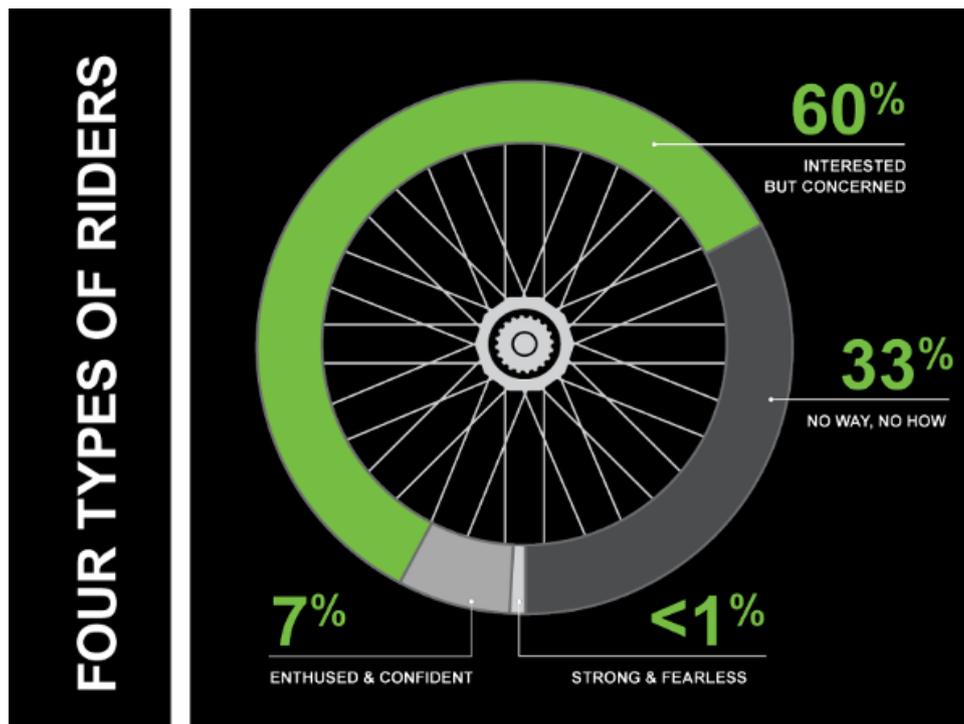


Figure 1: 4 Types of Cyclists⁵

Lawrie Emmins Reserve

The proposal for a Destination for 2 wheeled Sports addresses some of these issues, however, the above factors regarding children and women must be taken into consideration if the infrastructure is to meet its maximum usage potential and utility.

Criterion Circuit

There are several aspects of the current design that could be changed to improve the variety and interest of the criterium circuit. Many of these design principles exist at other international venues. The main sources of reference are the Tom Dumoulin Bike Park in the Netherlands and the Lee Valley VeloPark in London

The Tom Dumoulin Bike Park, Netherlands

The Tom Dumoulin Bike Park (Figure 2) is located in the south of the Netherlands near Maastricht. It is approximately 150m wide and 450m long with multiple tracks forming many loops (Figure 3). The advantage of this multiple track and loop approach is that there 6 independent courses that can run races separate of each other with potentially up to 22 different courses within the approximately 6.7 hectare site. The multiple tracks can vary in length between 370m and 2.8 km and between completely flat to courses and those with a 20% gradient (Figure 4). This compares to the approximately 16 hectares the Lawrie Emmins Reserve Draft plan allocates to cycling. Therefore clearly there is space to incorporate a more varied course as well as incorporating a hill at the western end of the cycling section. The hill at the Tom Dumoulin Bike Park is 10m high and offers panoramic views. Incorporation of a similar track design at Lawrie Emmins Reserve would increase

⁵ Geller, R. (2009). Four types of cyclists. PortlandOnline.



Figure 4: Tom Dumoulin Bike Park hill

In addition to multiple tracks, the criterium circuit would benefit from a cobble stone section (Figure 5) and lighting (Figure 6). The cobblestone section would provide additional variety to the course and improve bike handling skills. Lighting is important as it increases the available times the criterium circuit may be used. If there is no lighting, then during the winter months, the course could effectively only be used on the weekends apart from school usage during the day. This severely limits the utility of the circuit.



Figure 5: Tom Dumoulin Bike Park cobblestone section



Figure 6: Tom Dumoulin Bike Park lighting

Velodrome

There are many different sized velodromes even in Melbourne and Victoria. Internationally, the cycling's world governing body, the UCI, acknowledges 167m, 250m, 400m and 500m (eg Roubaix Velodrome), however, these have not been followed in Australia, where in the past tracks have generally been laid out to fit the available space either between buildings or around football ovals.

- Preston (320m, 5-10 degrees)
- Brunswick (320m 30 degrees)
- Coburg (250m 45 degrees)
- DISC (250m 45 degrees)
- Hawthorn (320m 5 degrees)
- Blackburn (300m 35 degrees)
- Packer Park (370m 5-10 degrees)
- Edithvale (500m 5 degrees)
- Geelong West (450m 5 degrees)
- Kyneton (275m, 35 degrees)
- Wesley Hill, Chewton (450m 5 degrees)

The current proposal is for a 250m velodrome. BikeWest considers this to be an inappropriate length track if it is to be used by as many people as possible in the west, including women and children. A 250m track has a 45 degree corner at each end. These corners are extremely intimidating and scary for young people and novice riders (Figure 7).

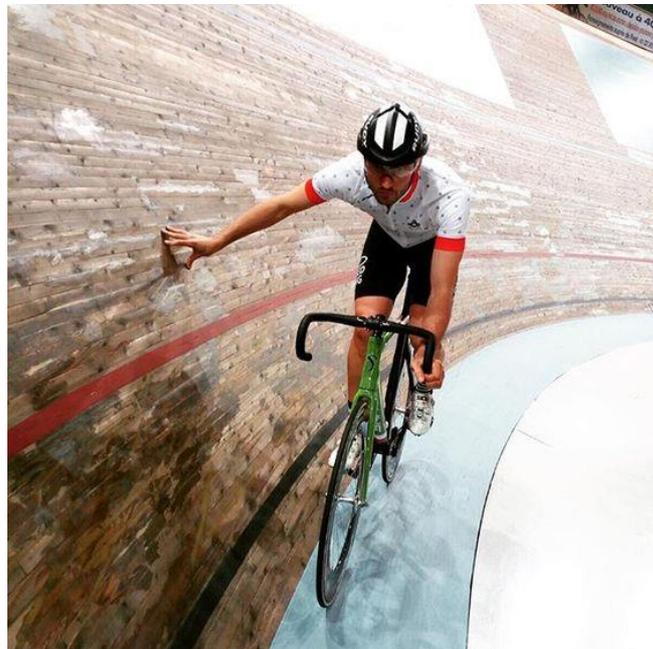


Figure 7: 250m Velodrome 45 degrees

A 5-10 degree track is much more appropriate for all ages and abilities such as the Packer Park velodrome in Carnegie (Figure 8) and would still allow racing and training (Figure 9).



Figure 8: Packer Park Velodrome with kids (before recent resurfacing).



Figure 9: Packer Park Velodrome race

Building a 250m velodrome would effectively exclude children and novice riders. It is also a structure that is quite high and visually imposing. A 6 metre wide track will be approximately 4.2metres high which provides a large visual barrier. While a hill on the criterium circuit would be beneficial, such a high barrier around the velodrome would be the opposite. This is because the criterium hill would be accessible to the top and provide views in all directions, whereas the banking around a 250m velodrome is essentially a wall that cannot be climbed and no use can be made of the elevation. All it would do is provide a barrier.

When the flat 400m circular velodrome in Footscray was being rebuilt in the late 1960s the council began construction of a 250m velodrome with 4.2 m high banking. The backlash from the local residents was so strong about the visual and physical barrier the 250m velodrome created, that the partially finished velodrome was pulled down and replaced with a 370m velodrome with banking 1 metre high (Geoff Salter ex FCC President pers. comm.). Despite the relative isolation of Lawrie Emmins Reserve, all of these factors suggest that a 250m velodrome is inappropriate and a velodrome between 320-400m in length and banking of 5-10 degrees is more appropriate such as the Packer Park Velodrome. In addition, velodromes with banking in the 5-10 degree range are much

cheaper to construct compared with 250m velodromes. Low angle velodromes can use compacted earth to construct the banking whereas steep angled velodromes, ie 250m, need large amounts of reinforced concrete and engineering.

Other Infrastructure

Grandstand

A small grandstand opposite the pavilion or on the inside of the track to provide seating for spectators for the BMX track also would greatly add to the utility of the venue such as the one at Herne Hill Velodrome in London (Figure 10).



Figure 10: Herne Hill Velodrome Grandstand

Storage

The pavilion or an area near it should have sufficient room to store over 50 bicycles. This is the arrangement at Brunswick Velodrome under the pavilion where they store bicycles that young people may borrow each Sunday morning as part of the junior clinic. Such a storage facility would be very useful for bicycle education programs as well and schools who wished to run cycling programs.

Pits

A wider area along the main start/finish straight of the criterium track would be very beneficial for students when testing their vehicles for the RACV Energy Breakthrough challenge (discussed below). This area would form a type of “pits” similar to motor racing which would provide easy access to and from the course (Figure 11).



Figure 11: Pits on the RACV EB circuit in Maryborough

Events

Duathlons (Cycling and running)

In addition to running criterium cycle races the Lawrie Emmins course is suitable to run duathlons which occurs at the Lee Valley Velopark.

At the Lee Valley Velopark they have a built in timing loop, which makes set up and pack up after each event very quick. This efficiency enables other groups to use the track very soon after the duathlon has finished. In addition, built in bike racking in the transition area would be enormously beneficial for the safe and smooth running of the event (Figure 12).



Figure 12: Bike racking for duathlons

Duathlons at Lee Valley are held with the running section held on the same track as the cycling section, separated by witches' hats. This is less than ideal. If the walking/running paths around the wetlands and through the arboretum area at Lawrie Emmins Reserve could be used for duathlons, this would enable the participants to transition from the cycling segment to the running segment safely and smoothly as well as provide a much more interesting event for participants. This would

mean the transition and racking area would be located on the western section of the north south part of the criterium track.

Cyclocross Venue

Cyclocross (CX) is a form of bicycle racing. Races are usually held in autumn and winter and consist of numerous laps of a short (1-3 km) circuit featuring several of the following features: pavement, wooded trails, grass, steep hills and obstacles requiring the rider to quickly dismount, carry the bike while navigating the obstruction and remount. Races are commonly between 30 minutes and an hour long.

Cyclocross has several features in common with mountain bike racing, cross-country cycling and road criterium racing (races around a short road circuit 1-2km in length). As such it is a popular cross over for road cyclists and mountain bike riders of all ages and genders.

Lawrie Emmins Reserve would be an ideal location for future CX events, especially if a hill were incorporated into the criterium track. Cyclocross races are also held at the Brunswick Velodrome where they race on the inner section of the track as well as part of the course leaving the velodrome and racing along Merri Creek (Figure 13).



Figure 13: Cyclocross racing at Brunswick Velodrome

RACV Energy Breakthrough Challenge Venue

The RACV Energy Breakthrough is a joint initiative of the Country Education Project (CEP), Central Goldfields Shire Council (CGSC), and the Royal Automobile Club of Victoria (RACV).

The RACV Energy Breakthrough provides opportunities for students, teachers, parents and local industry to work together to design and construct a vehicle, a machine or innovation in technology that will represent an 'energy breakthrough. The RACV Energy Breakthrough is not just a once-a-year event as school groups work throughout the year to design, build and test vehicles or machines within detailed specifications. It requires a team effort and an across-the-curriculum approach. These groups then bring their vehicles and machines to Maryborough in the Central Goldfields Shire, Victoria to demonstrate and trial them in action (Figure 14).



Figure 14: RACV Energy Breakthrough Challenge

The categories include innovations in Technology, pushcarts, Human Powered Vehicles, Try-athlon and Energy Efficient Vehicles.

No schools in the western suburbs enter this competition despite its obvious appeal. One factor inhibiting entries is the lack of a training venue to test and improve their vehicles that could be catered for at the Lawrie Emmins Reserve Criterium circuit. Schools in the eastern suburbs make use of the Casey Fields criterium track, however, this is too far from the western suburbs to be suitable. By encouraging the use of Lawrie Emmins Reserve as a test and race venue for the RACV EB, Wyndham Council could help stimulate interest and activities in STEM activities for primary and high school students. This year entries to the RACV EB were full 34 seconds after entries went online. This indicates the massive popularity of the event and highlights how the western suburbs do not get to participate.

Key Stakeholders

Women and Children

In Australia cycling is commonly perceived to be a middle aged man's recreation and sport. This is borne out by the number of men versus women who cycle for everyday transport (80% men and 20% women) and who join bicycle racing clubs (70% men, 30% women in Victoria). In addition, the problem is exacerbated by the fact 1 in 3 children in Australia do not know how to ride a bicycle⁶. This is primarily due to parental concerns around safety. This is not the case in northern European countries where safe infrastructure and bicycle education programs ensures most students from the age of 6 cycle or walk to school and the gender split is 50:50.

Increasing levels of physical inactivity are creating an ever increasing health problem for our society and consequently everything should be done to encourage young people to learn to cycle and ride their bikes as often as possible. This also applies to women men who are increasingly wishing to return to their bicycles in their 30s and 40s and they should be supported also. The cycling infrastructure at Lawrie Emmins Reserve provides a fantastic opportunity to facilitate more young people and women on to their bicycles.

⁶ CRAWFORD, S., BENNETTS, S. K., COOKLIN, A. R., HACKWORTH, N., NICHOLSON, J. M., D'ESPOSITO, F., GREEN, J., MATTHEWS, J., ZUBRICK, S. R., STRAZDINS, L. & PARCEL, G. 2015. Parental fear as a barrier to children's independent mobility and resultant physical activity. Final Report. Melbourne: La Trobe University.

Footscray Cycling Club

Footscray Cycling Club (FCC) is over 100 years old and was formed as a professional cycling club after the original Footscray Cycle Club became a social only institution (now the Footscray Club in Paisley St, Footscray). The Footscray Amateur Cycling Club was formed in the 1920s and both clubs raced at the Hansen Reserve Velodrome until its closure as a racing venue in the 1990s.

FCC is known as one of the pre-eminent road racing cycling clubs in Melbourne. They organise weekly road races in the Little River and Brisbane Ranges areas over winter and criterium races at Drake Boulevard in Altona and at the VU campus in Hoppers Crossing over summer. Currently FCC do not have a physical base to operate from and rely upon club members organising events and committee meetings at different venues. FCC would benefit from having a physical base to operate from and as a training and racing centre.

However, BikeWest cannot emphasise enough that FCC should NOT have exclusive access to Lawrie Emmins Reserve. Due to historical reasons associated with their foundation as a professional club 100 years ago, FCC do not accept junior members, ie under 18, and have a very low female membership base (10% compared with the state average of 30%). Despite numerous requests to change their policy of not accepting junior members, FCC has consistently refused to do so.

Given these factors, Wyndham Council would effectively be banning young people and women from using the cycling facilities if it gave exclusive access to FCC. BikeWest proposes that FCC share the facilities with other groups to ensure that as many people as possible, people of all ages and abilities, have access to the cycling facilities.

Bicycle Education Providers

Bike Ed is a program developed by VicRoads. Bike Ed is delivered in schools and community settings and aims to help children aged 9 to 13 years develop the skills they need to ride safely and independently on roads and paths.

Bike Ed is delivered in schools and community settings. It is often delivered by teachers. However, municipalities, the police and community groups/volunteers can play a role in supporting the implementation of Bike Ed programs in schools.

Bike Ed inspires children to develop their bicycle riding skills and their physical capability. Other benefits include enhanced health, fitness and wellbeing, confidence and independence and learning and social development

Bike Ed aims to enable students to:

- gain knowledge and understanding of the road traffic environment and the road rules
- develop the physical and cognitive skills to manage the road traffic environment safely as a cyclist
- develop responsible behaviours, attitudes and decision-making skills for the safe use of bicycles both on and off the road through participation in enjoyable learning experiences relevant to their ages and abilities.

Together with a building for indoor learning activities and an off road cycling space both in the middle of the cycling track and on the track itself would provide an ideal venue for Bike Ed

Primary and High Schools

Lawrie Emmins Reserve is located centrally to numerous primary schools and high schools. Primary schools and high schools could utilise the cycling facilities at Lawrie Emmins Reserve to run Bike Ed courses as well as incorporate the venue into their curriculum the way Dromana Secondary College has done with the mountain bike track located around the school. Mountain biking is now offered as a subject at Dromana Secondary College which includes cycling skills, maintenance skills, health and nutrition as well as business skills.

Victoria University

Sport, Health and Active Living Strategy

Sport, Health and Active Living is a key flagship area for Victoria University. Over the course of 2016, Professor Greg Blatch and Professor Hans Westerbeek have been leading University-wide processes that have been focused on shaping and clarifying the vision and strategic directions for both sport and health at VU. The work has been focussed on exploring Sport and Health across the whole of VU and the community in the western suburbs of Melbourne.

Victoria University has identified the West of Melbourne has 93 sports facilities⁶ and 467 playing fields across the region, however, there is not one cycling facility. This represents both a significant gap and significant opportunity for Victoria University.

Institute of Sport, Exercise and Active Living (ISEAL)

ISEAL research covers a range from human development to high performance sport and makes significant contributions to exercise science globally beyond the traditional sporting settings. ISEAL is a leading research institute in terms of understanding the relationships between exercise, physical activity, and chronic disease prevention, including the mechanisms by which exercise can prevent, reduce or reverse disease progression.

ISEAL also researches how to promote and engage individuals and communities in more active lifestyles. Their main research focus in this field is on the psycho-social and environmental factors which might explain health behaviour change and in particular community participation in sport, exercise and physical activity. As a research facility they aim to make significant impacts on the whole life cycle from children's physical health through to the elderly.

The cycling facilities at Lawrie Emmins Reserve would be an ideal research venue for ISEAL and facilitate their community participation and make impacts on health and wellbeing.

Women's Cycling Groups eg Wheel Women

Wheel Women is a registered provider of AustCycle courses and all of their teachers are Level 1 NCAS accredited coaches. Wheel Women provide programs and rides that allow women to motivate and challenge themselves, while supporting others along the way. With guidance from accredited coaches, Wheel Women creates a judgment-free learning environment to build confidence and achieve goals. Currently Wheel Women are based in Flemington and provide all of their classes on public roads. In the past Wheel Women have expressed great support for dedicated cycling facilities and consider it would be an ideal off road bike education facility. The support of Wheel Women is vital due to the underrepresentation of women in cycling.

Western Suburbs Triathlon Club

The Western Suburbs Triathlon Club was formed in 1983 to provide a supportive structure for athletes on the Western side of Melbourne and has clubrooms on the Altona Foreshore. The club has been one of (if not 'the') biggest clubs in Victoria for many years. Since 1983 the club has held in excess of 300 races on the Altona foreshore area which provides one of the fastest and safest race venues anywhere.

Currently the WSTC offer stationary bike (turbo trainers) training sessions at their clubrooms twice a week. However, stationary bike training is limited in its appeal. WSTC members could utilise Lawrie Emmins Reserve for training and duathlon races which they currently hold on the Altona foreshore in winter.

Conclusion

The cycling facilities as part of the Lawrie Emmins Reserve Draft Plan proposed by Wyndham Council are to be commended and will go a long way towards filling the enormous gap in cycling infrastructure in the west of Melbourne.

The benefits of the Lawrie Emmins Reserve cycling facilities would include increased engagement, physical activity (better health) and skill development for people of all ages. Such projects help build community and foster social inclusion as well as encourage the 60% of people to cycle who are interested but concerned. However, if the cycling facilities are to reach their maximum potential there should be a considerable number of changes made to the design.

Firstly the criterium track should incorporate more track layouts as per the Tom Dumoulin Bike Park. It should also incorporate a hill, a cobblestone section, lighting, bike racking area and timing loop for duathlons, a grandstand, bicycle storage and pits.

The velodrome should be changed to a 320-400m velodrome with dramatically reduced angle of banking from the proposed 250m track. A 250m velodrome is too intimidating for young people and novices and would limit its appeal. A velodrome similar to the Packer Park velodrome in Carnegie would be more appropriate.

It is important that the key stakeholders of cycling facilities are actively encouraged to participate in the use of Lawrie Emmins Reserve as without such active engagement its use will fall far short of its potential. This means actively engaging with social infrastructure such as cycling clubs, triathlon clubs, bicycle education providers, primary and high schools. Such engagement would ensure the cycling facilities would be in near constant daily use and help promote the physical activity we as a society desperately need.