

WESTERN AUSTRALIAN  
STRATEGIC CYCLING  
FACILITIES REVIEW





**Prepared and published by:**  
WestCycle Incorporated

**With funding and support from:**  
Department of Local Government,  
Sport and Cultural Industries

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**Acknowledgements:**  
WestCycle would like to acknowledge  
the contribution of the Western  
Australian cycling community in the  
development of this document.

**Photography:**  
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Queensland, Chameleon Photography,  
Cycling Victoria, Department of State  
Development QLD, Glen Eira City  
Council, Joe McCarthy, Lorna Henson  
Photography, Nick Cowie, Paula  
Shaughnessy, Perth BMX Photography,  
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**Design:**  
Media on Mars, Fremantle, WA

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Department of  
**Local Government, Sport  
and Cultural Industries**





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# EXECUTIVE SUMMARY





**Cycling is one of the most popular sport and recreation activities in Australia. In Western Australia, nearly 500,000 people (18.5% of the population) ride a bike regularly, with 85% of these people (425,000) riding for sport or recreation rather than transport.**

Despite these high participation rates, cycling infrastructure development in Western Australia to date has largely focused on bikes as a mode of transport. Although this infrastructure can and is used for leisure cycling and training, there has been limited dedicated facility provision in Western Australia for cycling as a sport and recreation activity.

This lack of dedicated facility provision is one of the greatest barriers to the long-term growth and development of sport and recreation cycling in Western Australia. It forms a significant barrier to participation with some sections of the population citing the lack of dedicated safe and accessible places to ride, train and compete as a primary reason for not riding a bike or taking part in cycling events.

The lack of provision stems from the misconception that sport and recreation cycling, unlike other activities, has no requirement for dedicated facilities. On the contrary, access to safe and sustainable dedicated facilities can yield significant benefits to riders at every stage of every cycling pathway, from local grass-roots to state, national and international level.

Dedicated facilities for sport and recreation cycling can:

- Provide an environment for recreation, training and events that is not affected by other users or activities
- Help raise the profile of cycling
- Be a home to clubs, organisations and community groups

- Host events using simplified event approvals, logistics and management processes
- Provide enhanced spectator opportunities
- Cater for bike education and skill building

It is well recognised that other sport and recreation activities require dedicated facilities for training and competition and this is reflected by the significant investments made in Western Australia to dedicated infrastructure provision. Over recent times a significant amount of money has been spent delivering major new or upgraded facilities for basketball, netball, cricket, rugby, Australian Rules Football, hockey, athletics and shooting. These activities all have lower participation rates than cycling, however, for a variety of reasons, we have not seen paralleled investment in sport and recreation cycling facilities.

The **Western Australian Strategic Cycling Facilities Review** has been developed by WestCycle, in consultation with the cycling community and funding support from the Department of Local Government, Sport and Cultural Industries, to establish a high level understanding of current provision and need for dedicated sport and recreation cycling facilities in Western Australia.

The current provision of dedicated sport and recreation cycling facilities in Western Australia is as follows:

## ROAD RACING

- All road races run on courses made from the road network. There are no dedicated road race facilities or closed road circuits in the state.
- The only dedicated criterium track is not appropriate for regular racing due to its short length, poor condition and configuration, isolated and peripheral location and high hire costs. The majority

of criterium racing takes place on tracks made from the road network and requires full or partial road closures.

- There is only one time trial course in Western Australia. The majority of time trials take place on course made from the road network and require full or partial road closures.

## TRACK CYCLING

- There is only one velodrome that can be used for track cycling or racing. Recently receiving a \$2.5 million upgrade to resurface the track and fix roofing issues, yet it is still inaccessible to the majority of Western Australians and unable to host some international and national events.

## BMX RACING

- There are no international or national standard BMX tracks in Western Australia as none of our tracks have an 8m starting ramp. We are losing our top riders to the eastern states and overseas as there is nowhere appropriate for them to train and race. We are also unable to host international and national events.

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**THE FUTURE OF SPORT AND RECREATION CYCLING IN WESTERN AUSTRALIA IS DEPENDENT ON THE DEVELOPMENT OF A NETWORK OF SAFE, ACCESSIBLE AND SUSTAINABLE CYCLING FACILITIES. THIS NETWORK NEEDS TO SUPPORTS RECREATIONAL RIDING, TRAINING AND COMPETITION AT EVERY STAGE OF EVERY CYCLING PATHWAY.**

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01

# INTRODUCTION

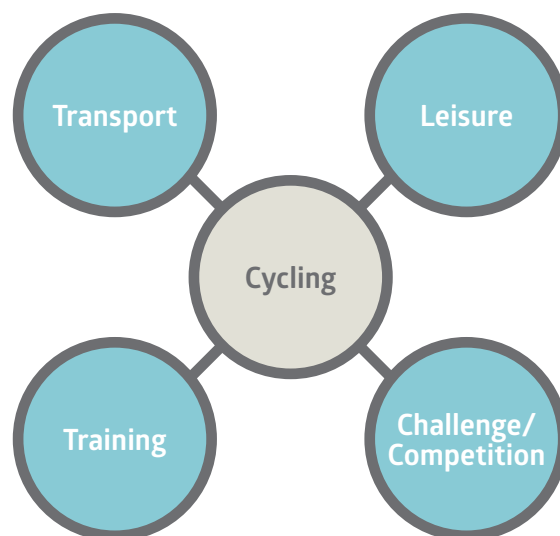




SOMETIMES CYCLING IS **TRANSPORT**. A WAY OF GETTING TO PLACES.

SOMETIMES CYCLING IS **SPORT OR RECREATION**. THE RIDE IS FOR FUN, FITNESS, PERSONAL CHALLENGE OR GLORY.

Figure 1: Reasons for riding a bike



The Western Australian Strategic Cycling Facilities Review has been developed by WestCycle with funding support from the Department of Local Government, Sport and Cultural Industries, to establish a high level understanding of current provision and need for dedicated sport and recreation cycling facilities in Western Australia.

Cycling is diverse and people ride bikes for many different reasons (Figure 1). This Review, however, focuses on the sport and recreational cycling disciplines of road, track and BMX. Facilities for mountain biking are addressed separately in the Western Australian Mountain Bike Strategy. Cycling as a mode of transport is considered elsewhere in relevant policy guidance.

This Review is comprised of three sections:

## 01 INTRODUCTION

- Sport and recreation cycling participation nationally and in Western Australia
- Western Australian cycling organisations and their growing memberships
- The value of dedicated sport and recreation cycling facilities
- The position and role of this Review in the Western Australian cycling planning hierarchy

## 02 WHERE WE ARE

- Preliminary studies of the road, track and BMX sport cycling disciplines in Western Australia, including their histories, format and operation, facility requirements, review of existing facilities, identification of gaps and desired improvements
- The role of the road, bike lane and shared path network in recreational cycling and desired improvements
- The benefits of cycling facility hubs and minimum requirements for state, regional and local cycling hubs

## 03 MOVING FORWARD

- The vision for sport and recreation cycling facilities in Western Australia and supporting strategies and recommendations

## SPORT AND RECREATION CYCLING PARTICIPATION

Cycling is one of the most popular sport and recreation activities in Australia, with more people riding a bike regularly for leisure, training, challenge or competition (10%) than play soccer (8.2%), tennis (4.4%), cricket (4.4%), netball (3.9%) or Australian Rules Football (2.9%) (Figure 2).<sup>1</sup>

Participation levels are even higher in Western Australia. Nearly 500,000 Western Australians (18.5% of the population) ride regularly, with 85% of these people (425,000) riding for sport or recreation rather than transport.<sup>2</sup>



AGE 6 - 13		AGE 14+		TOTAL	
ACTIVITY	RATE (%)	ACTIVITY	RATE (%)	ACTIVITY	RATE (%)
Swimming	48.8%	Swimming	10.1%	Swimming	14.4%
Soccer	48.7%	Cycling	7.3%	Cycling	10.8%
Cycling	37.7%	Hiking/ Bushwalking	4.4%	Soccer	8.2%
Athletics	31.7%	Aerobics	3.2%	Dancing	6.0%
Basketball	30.5%	Soccer	3.1%	Basketball	5.0%
Dancing	30.3%	Dancing	2.9%	Hiking/ Bushwalking	5.0%
Cricket	25.7%	Tennis	2.4%	Tennis	4.4%
Netball	20.5%	Netball	1.8%	Cricket	4.4%
Tennis	20.0%	Basketball	1.8%	Athletics	4.0%
Gymnastics	18.1%	Cricket	1.7%	Netball	3.9%

Figure 2: Top ten sport and recreational activities in Australia

Young Western Australians have one of the highest levels of cycling participation in the country. Across the state, 47% of 0 – 9 year olds and 37% of 10 – 17 year olds ride a bike at least once in a typical week.<sup>2</sup> Participation is even higher in regional Western Australia, with 63% of 0 – 9 year olds and 42% of 10 – 17 year olds riding at least weekly.<sup>2</sup>

Around 61% of households in Western Australia have access to at least one working bike, significantly above the national average of 56%.<sup>2</sup>

### CYCLING ORGANISATIONS AND MEMBERSHIP LEVELS

In parallel with the state's high cycling participation rates, Western Australia's sport and recreational cycling organisations are also experiencing significant membership growth (Figure 3):

- Membership of CycleSport Western Australia (CSWA), the state's peak governing body for road and track cycling, and its 16 affiliated clubs has increased by 27% since 2011.<sup>3,4</sup> This makes

Western Australia the second fastest growing road and track community in Australia (behind Tasmania).

- Membership of BMX Sports Western Australia (BMXWA), the state's peak governing body for BMX racing, and its 19 affiliated clubs has doubled in the past five years.<sup>5</sup>
- Over 2,000 people are now members of the West Australian Mountain Bike Association (WAMBA), the state's representative body for mountain biking, and its 13 affiliated clubs and groups.<sup>6</sup>
- Membership of Bicycling Western Australia (BWA), which runs non-competitive road events for recreational riders, has grown by 35% since 2011.<sup>7</sup>

In addition, cycling forms one of the three components of triathlon. As well as riding to train, many triathletes also compete in individual cycling disciplines, particularly time trials. Triathlon participation is at an all-time high in Western Australia with over 22,000 registered participations in sanction events in the 2014-15 season.<sup>8</sup> Membership of Triathlon Western



Australia (TWA) has also increased significantly in the past five years, with membership of its 18 affiliated clubs over 26% higher than in 2011.<sup>8</sup>

## THE VALUE OF SPORT AND RECREATION CYCLING FACILITIES

Cycling infrastructure development in Western Australia to date has largely focused on bikes as a mode of transport. Guided by the Department of Transport's Western Australian Bicycle Network Plan (WABN),<sup>9</sup> this has primarily been the development of the Principal Shared Path (PSP) network along freeway and railway corridors and the rollout of on-road bike lanes and other shared paths by local governments. Although this infrastructure can and is used for leisure cycling and training, there has been limited dedicated facility provision in Western Australia for cycling as sport and recreation activity.

Each discipline of sport and recreation cycling has different facility requirements:

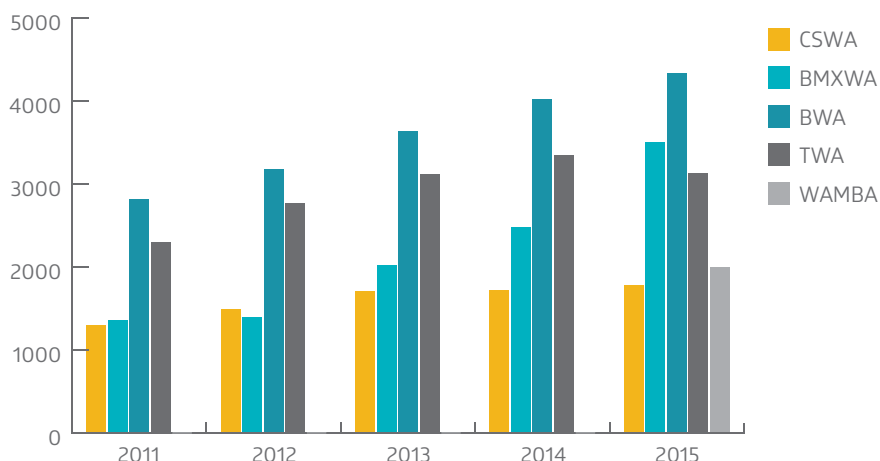


Figure 3: Membership of cycling organisations

### ROAD

- Road race courses
- Criterium tracks
- Time trial courses

### TRACK

- Indoor velodromes
- Outdoor velodromes

### BMX

- BMX racing tracks

### RECREATIONAL CYCLING

- Safe, high quality and accessible cycling routes

The sport and recreation cycling facilities that exist in Western Australia are overviewed in Section 2, however there are significant gaps at all levels. Despite the significant increases in people riding regularly, this lack of dedicated facility provision is one of the greatest barriers to the long-term growth and development of sport and recreation cycling in Western Australia. It forms a significant barrier to participation with some sections of the population citing the lack of dedicated safe and accessible places to ride, train and compete as a primary reason for not riding a bike or taking part in cycling events.<sup>2</sup>





The lack of provision stems from the misconception that sport and recreation cycling, unlike other activities, has no requirement for dedicated facilities. On the contrary, access to safe and sustainable dedicated facilities can yield significant benefits to riders at every stage of every cycling pathway, from local grass-roots to state, national and international level.

Dedicated facilities for sport and recreation cycling can:

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The future of sport and recreation cycling in Western Australia is dependent on the development of a network of dedicated, safe and accessible cycling facilities. This network needs to support recreational riding, training and competition at every stage of every cycling pathway.





# WESTERN AUSTRALIAN CYCLING PLANNING HIERARCHY

This Review forms a crucial tier of the Western Australian cycling planning hierarchy (Figure 5). At the head of the hierarchy, WestCycle's 'Our Bike Path 2014 – 2020' provides the strategic framework for cycling in Western Australia.<sup>10</sup> This framework specifically targets building participation, particularly amongst females and young people, and increasing the sporting success of Western Australian riders across the road, track, BMX and mountain bike disciplines. The development of a statewide network of dedicated sport and recreation cycling facilities is seen as integral to this, with the provision of appropriate standards of facilities for each discipline supporting riders at every stage of every cycling pathway.

Prepared by WestCycle, with funding support from the Department of Local Government, Sport and Cultural Industries, this Review underpins the objectives of 'Our Bike Path 2014 – 2020'. As a second tier document in the planning hierarchy, this Review promotes cycling as a leading sport and recreation

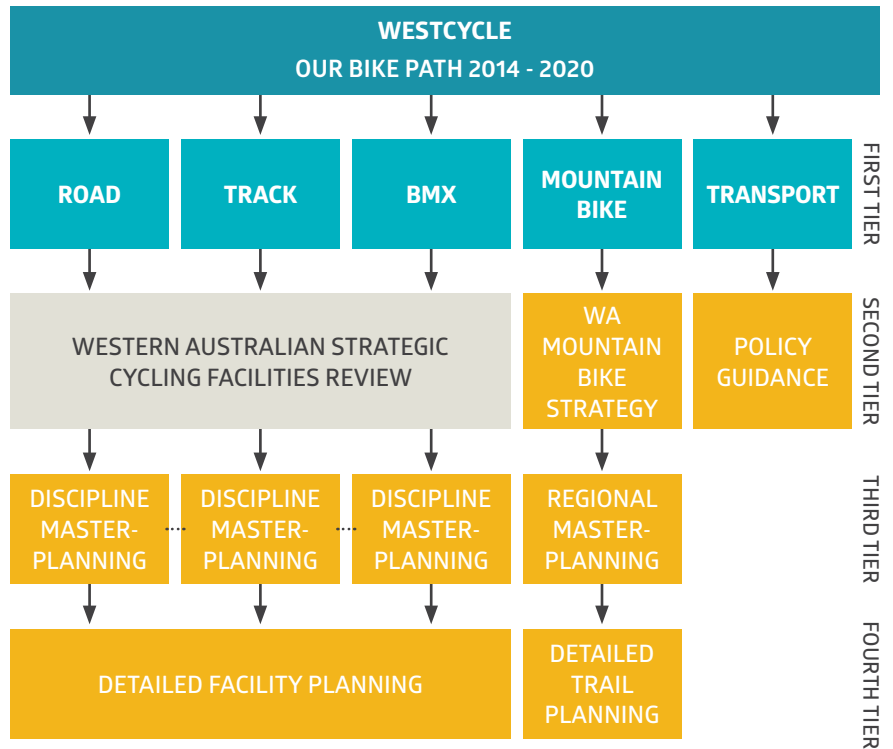


Figure 5: Western Australian cycling planning hierarchy

activity in Western Australia and provides a high level understanding of current provision and need for dedicated sport and recreation cycling facilities. It will also be used to help guide government (local, state and national), decision-makers, landowners and land managers, clubs, communities, and everyone else involved in bike riding in the future investment and development of facilities.

Guided by this Review, the lower tiers of the planning hierarchy will ensure that the right facilities are established in the right places, in the right way and for the right reasons. Discipline masterplanning (third tier) will identify and prioritise locations where road, track and BMX facilities could be developed. Detailed facility planning (fourth tier) will guide and facilitate the delivery of facilities at locations identified by masterplanning.





02

# WHERE WE ARE





# ROAD RACING

Road racing is a major part of sport cycling in Western Australia, however there are currently no dedicated, safe and appropriate road racing facilities in the state for riders to build skills, train or race. This forms a major barrier to participation and significantly affects our ability to host races and other events. As a community this is something we must look at changing to ensure that road racing in Western Australia has an accessible and sustainable future.

## WHAT IS ROAD RACING?

Road racing is the generic name given to cycling races held outdoors on roads or closed road circuits. Dating from at least the mid nineteenth century, road racing is the oldest discipline of competitive cycling. The first recognised road racing World Championship was held in 1893 and the discipline has featured at every edition of the modern Olympic Games. Road racing also has a long history

in Western Australia - the first edition of the Beverley to Perth Road Race was held in 1897 whilst in 2015 the Collie to Donnybrook & Return Classic celebrated its 90<sup>th</sup> anniversary.

Three distinct types of road racing take place in Western Australia – road races, criteriums and time trials. In addition to differences in their format and how they operate, each type of road racing also has its own specific course requirements.

## ROAD RACE COURSES IN WESTERN AUSTRALIA

**In Western Australia, all road races are run on courses made from the road network. There are no dedicated road race facilities or closed road race circuits in the State.**

Road races take place on a variety of courses with different course lengths, styles and terrains (e.g. flat, rolling, hilly etc.) offering a range of experiences

and providing opportunities for riders with different skill sets and physical attributes. Road race courses can be: linear and run from point-to-point, out-and-back with riders following a linear route to the halfway point and returning the same way, involve one or more laps of a circuit, or be a combination of several styles. In addition, courses can be flat, rolling, hilly, or combine several different terrain types.

Road races are usually graded by gender, ability (e.g. from A Grade through to F Grade) or age (e.g. open or masters) and this provides opportunities and fair competition for different types of riders. Races are based on distance rather than duration. With the exception of handicapped racing, riders in the same grade start simultaneously with the winner the first to cross the finish line. Different grades typically compete over the same course, although there can be





variation in course configurations and race lengths. A Grade, for example, typically race for 80km – 120km whilst F Grade compete over 10km – 30km. Depending on the volume and abilities of riders and the length and configuration of the course, it can be possible to run multiple road races for different grades on the same course at the same time.

In handicapped racing, such as the Collie to Donnybrook & Return Classic, the North Dandalup Handicap and the Goldfields Cyclassic, all riders compete on the same length course with riders starting at intervals based on their ability. The slowest riders start first and the fastest riders start last. The first rider to cross the finish line, regardless of their start time, wins.

Stage road racing consists of multiple road races, or ‘stages’, ridden consecutively by the same riders the same day or over a number of days. In addition to the winners of each individual stage, the rider with the lowest cumulative finish time across the stages is declared the overall, or general classification (GC), winner. Western Australia has hosted some

ROAD RACE COURSE	LOCAL GOVERNMENT	EVENTS/YEAR
1. Pickering Brook	Kalamunda	8
2. Casuarina	Kwinana	7
=3. Herne Hill	Swan	5
=3. Baldivis Dog Hill	Rockingham	5

Based on 2014-2015 season<sup>12</sup>

Figure 6: Most frequently used road race courses in Western Australia

notable stage races such as the Tour de Perth, which was the first event of the elite-level 2015 Cycling Australia National Road Series. The Tour of Margaret River, one of the largest road racing events for professional and amateur cyclists in Australia, also takes place in November each year.

In Western Australia, road race courses are planned and designed by event organisers, including clubs, with approval to run racing secured from local government, the police, Main Roads Western Australia and CycleSport Western Australia (CSWA), as appropriate. The requirements necessary to secure event approvals have increased significantly in recent years. This has been paralleled by an increase in the financial costs incurred by event organisers in meeting these requirements, such as traffic

management by trained marshals and supporting infrastructure such as temporary toilets.

Road race courses typically remain open to traffic during races although some have partial or rolling road closures. Regardless of whether closures are in place or not, traffic management is required for all road races using the road network with a Traffic Management Plan (TMP) mandatory for securing event approval.<sup>11</sup> Application of sound and appropriate traffic management procedures before, during and after a road race:

- Provide for a safe environment for all road users
- Provide protection to riders, organisers and the general public from traffic hazards that may arise as a result of the road race
- Minimise the disruption, congestion and delays to all road users
- Ensure performance of the road network is maintained at an acceptable level throughout the duration of the road race
- Ensure access to adjacent residential/business premises is maintained at all times.

The level of supporting infrastructure and services available at each road race course can vary significantly. Some courses are headquartered at a school, recreation centre or other community building and have access to permanent infrastructure and services, such as toilets, warm up areas, car parking and spectator





provision, whilst others only have access to basic temporary facilities provided by the event organiser.

The frequency that different road race courses in Western Australia are used varies significantly – a number are only utilised once a year to host some of Western Australia’s most prestigious road races (e.g. Tom Lowry Memorial Race, Collie to Donnybrook & Return Classic) whilst others are used regularly by several event organisers across the race season (Figure 6).<sup>12</sup>

Road race courses in the Perth Metropolitan and Peel regions are typically in peri-urban locations, and often surrounded by light industrial or semi-agricultural areas. Historically such positioning at the fringe of population centres maximised the likelihood of securing event approval and minimised traffic volumes and management requirements during races. Urban growth and encroachment is, however, threatening the future of many of these courses with the transformation of surrounding land into residential use having the potential to significantly impact on the ability of a course to successfully and safely host road race events.

Growing residential densities can lead to increased traffic volumes, affect speed limits, and result in infrastructure changes being made without regard to bike racing – such as road narrowing and the introduction of roundabouts, traffic lights and other street furniture. The potential for conflict with neighbouring residents, businesses and others who require access to the course area on certain days and at particular times is also likely to increase. Racing on the road can also foster concerns about safety. This can be a significant barrier to participation,



particularly amongst young people and less experienced riders.

A number of road race courses have already been affected by urban sprawl, with the Wandi course now unavailable for racing. In response to increasing traffic volumes in the area, the local authority took the decision to refuse event approval unless a full road closure is in place. Implementing full closure would, however, cause significant logistical and financial strain and event organisers have been forced to abandon the course.

Further abandonments are likely as urban growth continues and, in response, event organisers are increasingly seeking alternative arrangements to ensure the future of road races, particularly in the Perth Metropolitan and Peel regions. This has included increasing the use of existing established road race courses and creating new courses at the new urban limit. Whilst this does enable road races to take place, neither solution provides the optimal experience for event organisers or riders.

Intensification of existing road race courses can place them at capacity, forcing different event organisers to compete to secure a finite number of event approvals available per day, week, month or season. Increased event use can also have a detrimental impact on neighboring residents, businesses and others who require access and can lead to course fatigue with riders frustrated by the limited choice and variety of racing experiences available.

Creating new road race courses at the new urban limit pushes racing further from population centres, with people needing to travel a considerable distance to compete or spectate. Typically, this means that courses are neither feasible nor desirable to use on a regular basis and this can have a detrimental impact on participation and involvement.

As the traditional heart of the oldest sport cycling discipline, it is essential to ensure continued appropriate facility provision for road races in Western Australia.





There is a need to:

- Maximise availability, accessibility and variety of road race courses
- Work with key stakeholders, including landowners, land managers, local government, Main Roads Western Australia, event organisers, clubs and the local community, to safeguard and improve established road race courses, and supporting infrastructure and services, wherever possible
- Identify and prioritise locations within or in close proximity to population centres and/or as part of cycling facility hubs where new road race courses, and supporting infrastructure and services, could be established

- Maintain road race courses to a high standard, ensuring that any changes to surfacing or road infrastructure has regard to bike racing.

Further, there is significant value in developing a network of closed road race circuits to support and complement the road race courses that use the road network. In addition to providing a traffic-free environment for competition, circuits can provide safe and accessible spaces for recreation, training, bike education and skill building.

Closed road race circuits should be longer than criterium tracks (see below) and different circuits should provide varied experiences and opportunities for different styles

of rider. To achieve this, circuits should be designed specifically to their location, optimising layout and topography.

Recreational cycling challenge events are also growing in popularity in Western Australia. Whilst events such as Bicycling Western Australia's Cyclo Sportif series and Dams Challenge are non-competitive events, organisers and participants have similar safety concerns, traffic management requirements and need for supporting infrastructure and services as road races.



## CRITERIUM TRACKS IN WESTERN AUSTRALIA

**In Western Australia, the only dedicated criterium track is not appropriate for regular racing due to its short length, poor condition and configuration, isolated and peripheral location and high hire costs. The majority of criterium racing takes place on tracks made from the road network and require full or partial road closures.**

Criterium racing involves multiple laps of a short track (typically 0.8km – 2.5km). In Western Australia, criteriums are typically held over a set time period plus two laps with the race duration, and therefore also usually the length, varying by grade (e.g. A Grade: 50 minutes + 2 laps, F Grade: 15 minutes + 2 laps).

In criterium racing, riders in the same grade start simultaneously with the winner the first to cross the finish line. Depending on the volume and abilities of riders and the length and

configuration of the track, it can be possible to run multiple criterium races on the same track at the same time.

Due to their short durations and use of compact tracks, criteriums can provide an excellent introduction to road racing and are often the first step into competitive cycling for many people.

Criterium track characteristics, and the level of supporting infrastructure and services, can vary depending on the standard of the facility. However, well-designed and accessible dedicated criterium tracks can typically provide:

- Permanent and unrestricted access for cycling (and other activities such as skating) with a simplified event approval and management process
- A safe traffic-free environment for recreation, training and competition

- A base for high performance teams and training
- A home for clubs and organisations and a valuable community resource for the wider public
- Bike-specific surfacing and multiple track configurations, enabling flexibility and variety in circuit layout and length
- Access to supporting infrastructure and services
- Enhanced opportunities for spectators
- An off-road venue for bike education and skill building.

Other states have already recognised the need for dedicated criterium tracks. The following case studies illustrate the value of the well-designed and accessible criterium tracks in Toowoomba, Queensland (Case Study 1) and Cranbourne, Victoria (Case Study 2).







**CASE STUDY 1:  
TOOWOOMBA CRITERIUM TRACK - TOOWOOMBA, QLD**

<b>Description</b>	<ul style="list-style-type: none"> <li>▪ National standard criterium track</li> <li>▪ Joint initiative between Toowoomba Regional Council, Queensland Government and the Royal Agricultural Society of Queensland</li> </ul>
<b>Cycling Facilities</b>	<ul style="list-style-type: none"> <li>▪ Six different track configurations, with circuit lengths varying from 350m to 1.7km</li> <li>▪ Hosts local, state and national racing, including 2014 U17/U15 Road National Championships and Stage 4 of the 2014 Tour of Toowoomba, part of the elite-level National Road Series</li> <li>▪ Free public use, except during events or private hire</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>▪ Located at Royal Toowoomba Showgrounds, 7km from Toowoomba CBD</li> <li>▪ Links to recreational cycling routes</li> </ul>
<b>Infrastructure and Services</b>	<ul style="list-style-type: none"> <li>▪ Infrastructure includes toilets, showers, change rooms, function areas, clubroom, car parking</li> <li>▪ \$2.63 million build cost</li> </ul>

**CASE STUDY 2:  
CASEY FIELDS CRITERIUM CYCLING TRACK - CRANBOURNE, VIC**

<b>Description</b>	<ul style="list-style-type: none"> <li>▪ Regional standard criterium track</li> <li>▪ Joint initiative between City of Casey and Sport and Recreation Victoria</li> <li>▪ A popular club and community resource</li> </ul>
<b>Cycling Facilities</b>	<ul style="list-style-type: none"> <li>▪ Four different track configurations, with total track length of 2.2km</li> <li>▪ Hosts local and state level racing</li> <li>▪ Open for public use, except during events or private hire</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>▪ Located at Casey Fields multi-sports complex, 5km from Cranbourne and 55km from Melbourne CBD</li> </ul>
<b>Infrastructure and Services</b>	<ul style="list-style-type: none"> <li>▪ Access to toilets, showers, change rooms, function areas, clubroom, car parking</li> <li>▪ \$4.2 million build cost</li> </ul>

Criterium racing is an increasing popular type of road racing in Western Australia with 60 – 70 events typically held each season. The frequency that different criterium tracks are used varies significantly – a number are only utilised once a year to host some of Western Australia’s most prestigious criterium races (e.g. Stan Gurney Memorial Race, Pemberton Classic Criterium) whilst others are used regularly by several event organisers across the race season.

Despite the popularity of criterium racing however, there is the only one dedicated criterium track in Western Australia – the Midvale Criterium Track.

Located adjacent to the Midvale SpeedDome in Midland, this track is however little used due to the fact it was shortened and also perceptions amongst event organisers and riders about its poor condition and configuration, isolated and peripheral location and high hire costs. Instead, events are either held on temporary criterium tracks created using the road network or occasionally on circuits designed for other activities, such as the Perth Motorplex motorsport venue in Kwinana Beach. Whilst this does enable criterium racing to take place, neither solution provides the optimal experience for event organisers or riders.

Creating temporary criterium tracks using the road network often requires full or partial road closures as well as event approval. This can place significant logistical and financial strain on event organisers as well as weaken relationships with neighboring residents, businesses and others who require access to the area. Racing on the road also requires extensive risk management and can foster concerns about safety. This can be a significant barrier to participation, particularly amongst young people and less experienced riders. In addition, these temporary facilities often have limited access to supporting infrastructure and





## MIDVALE CRITERIUM TRACK - MIDVALE, WA

Description	<ul style="list-style-type: none"> <li>Part of the Midvale SpeedDome complex</li> <li>Little used due to location, configuration and high costs</li> </ul>
Cycling Facilities	<ul style="list-style-type: none"> <li>700m track</li> <li>Not open for public use</li> <li>Surface is in poor condition</li> </ul>
Location	<ul style="list-style-type: none"> <li>20km east of Perth CBD</li> </ul>
Infrastructure and Services	<ul style="list-style-type: none"> <li>Access to toilets, showers and change rooms, if the SpeedDome is open</li> </ul>

services, such as toilets, warm up areas, car parking and spectator seating. Their nature and use by motor vehicles also means that they can be unsuitable for training outside of events.

Hosting criterium racing at locations designed for, and predominantly used by, other activities – such as at motorsport venues - can also be challenging. Sometimes cycling may not be wholly compatible with the other user groups whilst the configuration and surfacing of tracks may not be ideal for bike racing, leading

to conflict and increasing risk. Whilst they usually have good access to supporting infrastructure and services, these locations are often already in intensive use and therefore have very limited capacity to regularly host criterium races. Public access is also normally restricted, with the tracks unavailable for training outside of events. In addition, motorsport venues are typically located away from residential areas to limit their noise impact. This means, therefore, that people need to travel a considerable distance to compete or spectate and this can have a

detrimental impact on participation and involvement. As such, using these venues to host criterium racing on a regular basis is neither feasible nor desirable.

As an increasingly popular form of road racing and an important step into competitive cycling, it is essential to develop a cohesive, planned network of accessible, sustainable and appropriate criterium tracks in Western Australia. This network should include existing, revitalised and new facilities, with both dedicated and temporary criterium tracks evaluated for their suitability for upgrading and continued use.





## TIME TRIAL COURSES IN WESTERN AUSTRALIA

**There is only one closed circuit time trial course in Western Australia. The majority of time trials take place on courses made from the road network and require full or partial road closures.**

Time trials are a distinct type of road racing and can also provide an important training and racing tool for triathletes and other multisport athletes.

In individual time trials (ITT), single riders set off at intervals (typically 30 seconds, 1 or 2 minutes apart) and race alone against the clock over a set course. The winner is the rider with the fastest time. In team time trials (TTT), groups of riders (usually between 2 and 9) ride as a team against the clock. There is no grading in time trials, although riders may be seeded based on past performance.

Time trials are a popular type of road racing in Western Australia with 50 – 60 events typically held each season. The frequency that different time trial courses are used varies significantly – a number are only utilised once a year whilst others are used regularly across the race season (Figure 7).

Time trial courses vary considerably in length, style and terrain. Courses are typically between 15km and 40km, although longer and shorter courses do exist. Courses can be: linear and run from point-to-point, out-and-back with riders following a linear route to the halfway point and returning the same way, involve

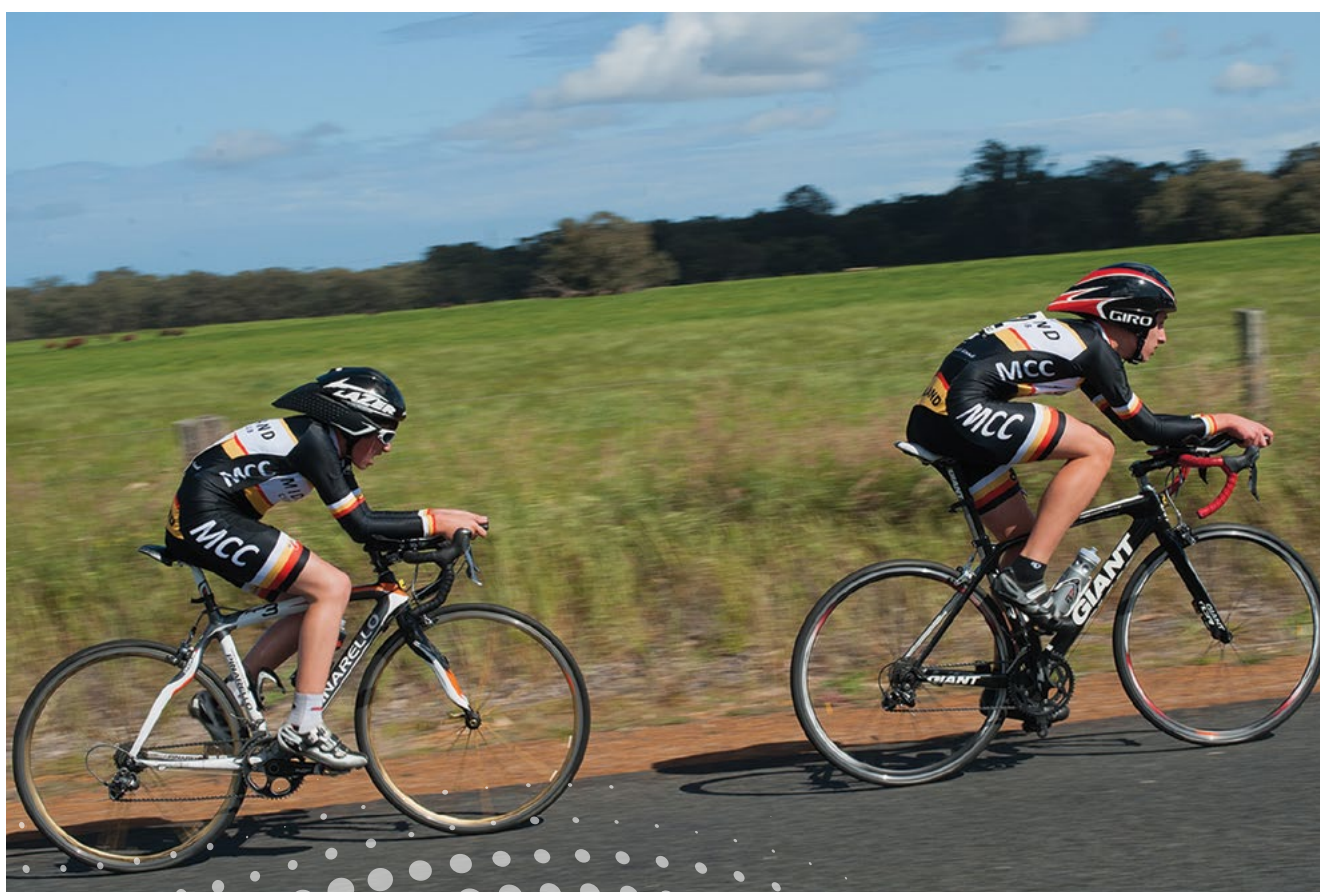
one or more laps of a circuit, or be a combination of several styles. In addition, courses can be flat, rolling, hilly, or combine several different terrain types.

The level of supporting infrastructure and services available at each course can vary significantly. Some courses are headquartered at a school, recreation centre or other community building and have access to permanent infrastructure and services, such as toilets, warm up areas, car parking and spectator seating, whilst others only have access to basic temporary facilities provided by the event organiser.

ROAD RACE COURSE	LOCAL GOVERNMENT	EVENTS/YEAR
1. Hopelands	Serpentine-Jarrahdale	17
2. Champion Lakes	Armadale	9
3. Kings Park	Perth	6

Based on 2014–2015 season<sup>12</sup>

Figure 7: Most frequently used time trial courses in Western Australia







With the exception of the closed circuit at Champion Lakes, all time trial courses in Western Australia use the road network. Courses typically remain open to traffic during races although some have partial or rolling road closures. Regardless of whether closures are in place or not, traffic management is required for all time trials using the road network with a Traffic Management Plan (TMP) mandatory for securing event approval.<sup>11</sup>

Like road race courses, urban growth is having an adverse impact on the ability of many time trial courses to successfully and safely host events. Increased traffic volumes, affected speed limits and the introduction of infrastructure such as roundabouts and traffic lights has already restricted the use of some courses at certain times and forced the abandonment of other courses. These patterns are likely to continue with further urban sprawl, undermining the long-term future of the sport in Western Australia.

As a popular form of road racing and an important tool for triathletes and other multisport athletes, there is a need to safeguard and improve the availability and accessibility of time trial courses in Western Australia. Existing courses should be maintained and improved to a high standard where possible, ensuring that any changes to surfacing or road infrastructure has regard to bike racing. Opportunities to establish new courses, including closed time trial circuits, within or in close proximity to population centres and/or as part of cycling facility hubs should also be explored. In addition, the provision of permanent infrastructure and services at courses that are used regularly should be considered.

## DESIRED IMPROVEMENTS

- A statewide network of accessible road race courses, criterium tracks and time trial courses that provide for riders at every stage of the cycling pathway from local grassroots to international level
- Existing road racing facilities, and supporting infrastructure and services, are safeguarded and improved where appropriate
- Locations for new, reestablished and upgraded road race courses, criterium tracks and time trial courses and supporting services and infrastructure identified and prioritised by discipline masterplanning that is underpinned by extensive consultation and involvement with key stakeholders
- Road racing facilities are delivered through detailed facility planning, using a standardised development process to ensure the right facilities are developed in the right places, in the right way and for the right reasons
- International and national road racing events hosted regularly in Western Australia, with at least one National Series round held each year and National Championships held at least every five years
- Road racing facilities are delivered as part of cycling facility hubs where appropriate

# TRACK CYCLING

Despite having the lowest provision for track cycling in Australia, Western Australia's successful track cycling program provides a consistent flow of world-class track athletes. However, our single velodrome is aging and beginning to compromise the training and racing environment. We need a statewide network of dedicated community-level outdoor velodromes to increase participation and a new highly accessible indoor velodrome that will provide a world-class home for our high performance athletes and host international and national events.

## WHAT IS TRACK CYCLING?

Track cycling dates from the mid-to-late nineteenth century and is one of the oldest forms of sport cycling. With the exception of the 1912 Games, track cycling has featured at every edition of the modern Olympics.

Track cycling takes place on purpose-built banked oval tracks known as velodromes. Tracks can vary in length (between 133m and 500m) and steepness. Indoor tracks are generally shorter and have sharper banking, whilst outdoor tracks are typically longer and have shallower banking (Figure 8). The UCI, track cycling's world governing body, requires 250m tracks at velodromes that are used for international events and recommend that any tracks where high performance riders train and compete should be this length. Indoor tracks are usually surfaced with timber, whilst outdoor tracks are often concrete or asphalt.

Track cycling events fit into two broad categories: sprint and



INDOOR: Darebin International Sports Centre - Melbourne, VIC



OUTDOOR: Lidcome Oval - Sydney, NSW

Figure 8: Examples of indoor and outdoor velodromes

endurance, with each typically requiring different skill sets and physical attributes. Sprint events are raced individually or against one or more competitors and focus on explosive power and high-speed skills over a small number of laps. Endurance events are held over longer distances and test the endurance abilities of individual or groups of riders.

Track cycling offers the highest elite-level medal count of the cycling disciplines, with 10 Olympic events and 19 events in the World

Championships. Its cross-training gains are also widely recognised, with training and racing on the track consistently shown to build fitness, improve bike skills and technique and develop tactical knowledge. Multiple elite road cyclists, including Western Australians Luke Durbridge (national road and time trial champion) and Melissa Hoskins (world team pursuit champion) have had prestigious track careers before moving to the road.



STATE/TERRITORY	NUMBER OF VELODROMES	STATE/TERRITORY POPULATION	VELODROME TO POPULATION RATIO	VELODROMES COMPARED TO THE NATIONAL AVERAGE
AUSTRALIA	56	23,576,000	1:421,000	-
TAS	9	515,000	1:57,000	8 over
NT	2	246,000	1:123,000	2 over
SA	6	1,688,000	1:281,000	2 over
ACT	1	387,000	1:387,000	On par
VIC	13	5,866,000	1:451,000	1 under
NSW	14	7,544,000	1:538,000	4 under
QLD	7	4,741,000	1:677,000	4 under
WA	1*	2,589,000	1:2,589,000	5 under

\* There are outdoor velodromes in Collie, Narrogin and Esperance however they are unusable for track cycling and racing.

Figure 9: Velodrome to population ratios in Australia

## VELODROMES IN WESTERN AUSTRALIA

Western Australia punches well above its weight in track cycling with multiple national, world and Olympic champions, but we have the lowest provision of track cycling facilities in Australia. There is only one velodrome in the state that can be used for track cycling and racing.

Benchmarked against the national context, Western Australia has a significant shortfall of track cycling facilities. There are 56 velodromes in Australia. Nationally, this equates to one velodrome per 421,000 people. Western Australia has one velodrome for over 2.5 million

people, a deficit of five under the national average (Figure 9). Western Australia has the lowest provision of track cycling facilities in Australia.

The Midvale SpeedDome indoor velodrome in Midland is the only velodrome that can be used for track cycling and racing in Western Australia. Opened in 1989, the SpeedDome is an important community recreation resource and training venue for club and Western Australian Institute of Sport (WAIS) Developing Champions program athletes. It has also hosted multiple local, state, national and international events, including the 1997 UCI World Track Cycling Championships.



### MIDVALE SPEEDDOME - MIDVALE, WA

Description	<ul style="list-style-type: none"> <li>Home of all track cycling based clubs</li> <li>Training facility for WAIS athletes</li> </ul>
Cycling Facilities	<ul style="list-style-type: none"> <li>250m timber track (recently replaced in 2017)</li> </ul>
Location	<ul style="list-style-type: none"> <li>20km east of Perth CBD</li> </ul>
Infrastructure and Services	<ul style="list-style-type: none"> <li>Change rooms and toilets</li> <li>Seating for 1500 spectators</li> <li>Inadequate car parking and supporting infrastructure</li> </ul>



Use of the SpeedDome declined significantly following the World Championships and the track was threatened with closure in 2002. Since then, however, track cycling has experienced a resurgence with Track Cycling Western Australia (TCWA) and WAIS working to increase participation and develop clear pathways enabling riders to progress from local grassroots to state, national and international level. This strategy is yielding results with almost 30,000 people using the velodrome each year and

significant success for Western Australian riders who have come through the high performance system, including Cameron and Travis Meyer, Luke Durbridge, Melissa Hoskins, Josie Tomic, Scott Sunderland and Michael Storer who have secured multiple world and national track cycling titles.<sup>13</sup>

However, despite a thriving development program and strong desire within the cycling community to participate in track cycling, the SpeedDome is not operating at

or near capacity. This is largely attributable to its location and affordability:

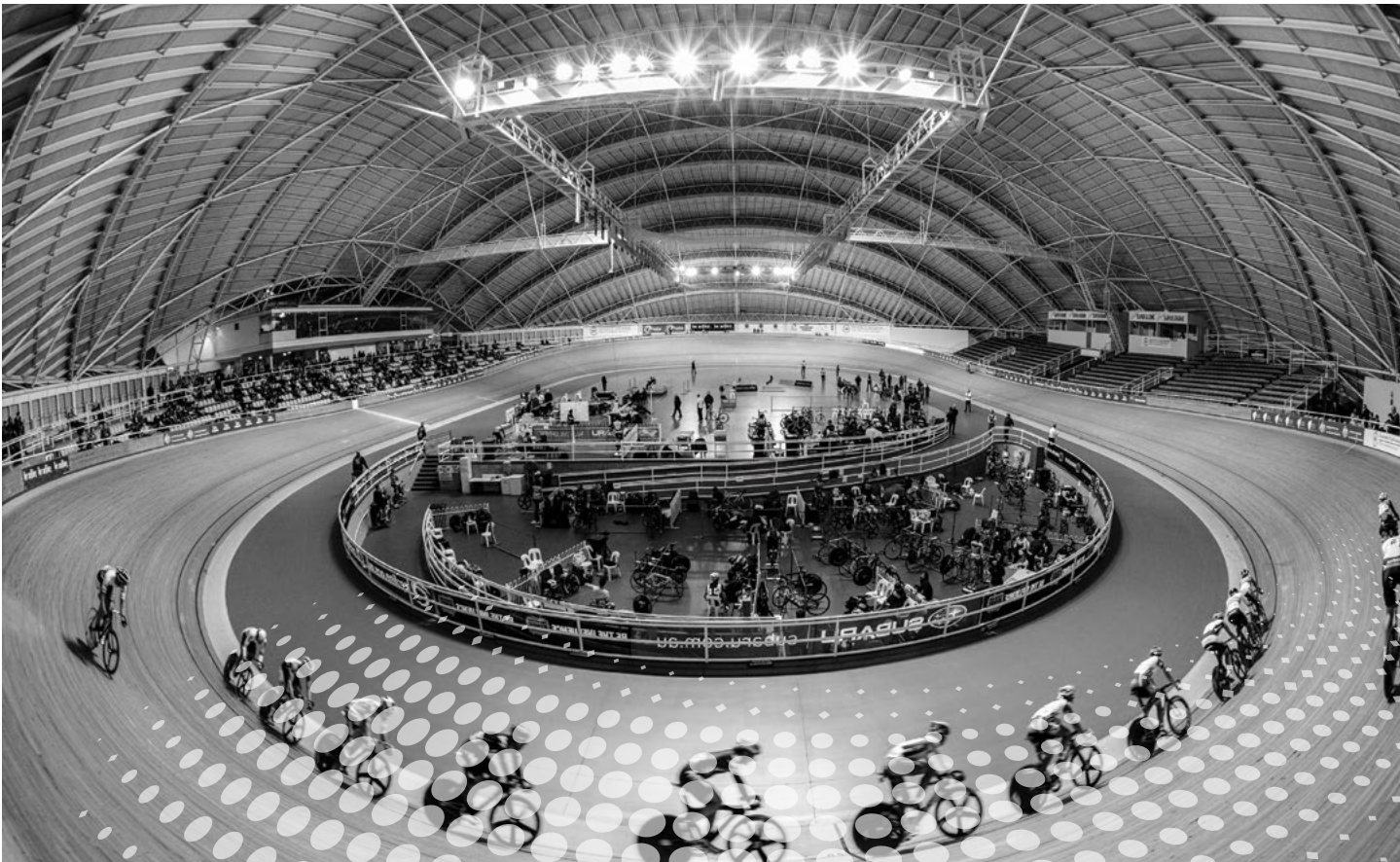
- The isolated and peripheral location at the eastern edge of Perth means that most people need to travel considerable distance to train, race or spectate. Typically this means that for much of the state's population the track is neither feasible nor desirable to use on a regular basis
- Access is generally only practicable by private vehicle with



**CASE STUDY 3:  
ADELAIDE SUPER-DROME - ADELAIDE, SA**

<p><b>Description</b></p>	<ul style="list-style-type: none"> <li>■ International standard indoor velodrome</li> <li>■ Home of Cycling Australia's high performance track program</li> <li>■ Training venue for Australian Institute of Sport (AIS) and South Australia Sports Institute (SASI)</li> <li>■ Administrative centre for Cycling South Australia</li> <li>■ Significant club and community resource</li> <li>■ Owned and operated by the Office for Recreation and Sport, an agency of the Government of South Australia</li> </ul>
<p><b>Cycling Facilities</b></p>	<ul style="list-style-type: none"> <li>■ 250m timber track</li> <li>■ Infield can be configured for a variety of other indoor sports</li> <li>■ Regularly hosts national and international events, including 2014 Track National Championships, the International Track Series and 2015 Oceania Track Championship</li> </ul>
<p><b>Location</b></p>	<ul style="list-style-type: none"> <li>■ Part of the State Sports Park, 12km from Adelaide CBD</li> <li>■ Adjacent to major arterial routes</li> <li>■ Direct bus access</li> </ul>
<p><b>Infrastructure and Services</b></p>	<ul style="list-style-type: none"> <li>■ Cycling South Australia office space, spectator grandstands (2,000 seating and 1,000 standing), food and drink, toilets, showers, change rooms, hospitality suites, gym, professional coaching, sport science/sport medicine, physio, bike hire, on-site car parking</li> </ul>





bike and public transport access limited or unviable. This can limit participation and involvement, particularly amongst young people

- The building is halfway through its design life and in the near future will require a full replacement
- Track hire costs are considered high, especially in comparison to other state indoor velodromes, making hosting events financially unviable

Due to the extremely high costs to hire the facility Western Australia misses out on the significant exposure and potential community and economic benefits that hosting high level international and national track cycling events can bring. The state's high performance riders also miss the valuable experience of competing at the very highest level on home soil.

In 2017, the State Government invested \$2.5million to partially renovate the SpeedDome. This

investment resulted in the installation of a new timber track and a replacement roof.

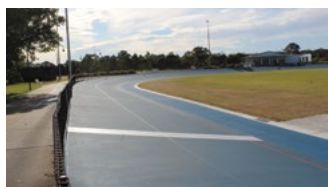
However, despite the investment, issues relating to the SpeedDome's isolated and peripheral location and its poor accessibility will remain. The facility will also remain unable to host World Championships and some other UCI international events due to lack of appropriate supporting infrastructure and services. Without addressing these significant barriers to participation and use, track cycling in Western Australia is unlikely to reach its full potential.

Other states have already recognised the need for highly accessible indoor track cycling facilities that maximise participation, involvement and use across every stage of the performance pathway. The Adelaide Super-Drome is an example of an indoor velodrome capable of hosting national and international events (Case Study 3).

The majority (45 of 56) of velodromes in other states and territories are outdoor tracks with shallow banking (Figure 10). The Western Australian climate is ideal for outdoor track cycling, however there are no outdoor facilities suitable for track cycling and racing in the state.

STATE/TERRITORY	NUMBER OF VELODROMES
AUSTRALIA	45
TAS	8
NT	2
SA	5
ACT	1
VIC	10
NSW	13
QLD	6
WA	0

Figure 10: Outdoor velodromes in Australia



#### CASE STUDY 4: PACKER PARK VELODROME - CARNEIGE, VIC

Description	<ul style="list-style-type: none"> <li>Community facility and home of Carneige Caulfield Cycling Club</li> <li>Owned and managed by Glen Eira City Council</li> <li>Open to the public during daylight hours</li> </ul>
Cycling Facilities	<ul style="list-style-type: none"> <li>335m track around the perimeter of an oval</li> </ul>
Location	<ul style="list-style-type: none"> <li>Suburb of Carneige, south east Melbourne</li> <li>Part of Packer Park recreation area</li> </ul>
Infrastructure and Services	<ul style="list-style-type: none"> <li>Club rooms</li> <li>Floodlights</li> </ul>

These outdoor velodromes are typically:

- Located in recreation areas or adjacent to other sporting facilities within population centres
- Owned and operated by local governments
- A valuable skills, training and racing resource for local communities and cycling clubs
- An excellent introductory base for track cycling and a talent feeder into high performance programs based at national and international standard indoor velodromes

- Used throughout the year, subject to weather conditions

The Packer Park Velodrome in Carneige, Victoria is an example of a community-level outdoor velodrome (Case Study 4).

There is significant opportunity for Western Australia to build on the rising popularity of track cycling. Growing participation, enabling riders to fulfill their potential and securing high level events is dependent on providing a cohesive, planned network of accessible, sustainable and

appropriate velodromes. This network should include existing, revitalised and new facilities, with existing velodromes evaluated for their suitability for continued use, reestablishment or upgrading.

## DESIRED IMPROVEMENTS

- The number of velodromes in Western Australia meets or surpasses the national average
- An international standard indoor velodrome centrally-located in the Perth Metropolitan area that provides for riders at every stage of the cycling pathway from local grassroots to international level and can host national and international events
- A statewide network of accessible outdoor velodromes that provide training and racing opportunities for local communities and cycling clubs
- Western Australian Institute of Sport (WAIS) Developing Champions program access to appropriate and safe track cycling facilities is safeguarded
- Locations for new, reestablished or upgraded velodromes identified and prioritised by discipline masterplanning that is underpinned by extensive consultation and involvement with key stakeholders
- Velodromes delivered through detailed facility planning, using a standardised development process to ensure the right facilities are developed in the right places, in the right way and for the right reasons
- International and national track cycling events hosted regularly in Western Australia, with the elite National Championships held at least every five years
- Velodromes are delivered as part of cycling facility hubs where appropriate
- A cost structure that makes hosting events financially viable



# BMX RACING

Western Australia's BMX racing community is the second largest in Australia, with more young people participating than in any form of other sport cycling. We have a strong development program and our athletes are competitive at national and world level. This is despite not having a track with an 8m start ramp, the required standard for elite-level training and competition. We are seeing an exodus of our top athletes to the eastern states and overseas as they seek locations that do have the facilities that they require. We need a statewide network of dedicated community-level BMX tracks to increase participation and tracks with 8m start ramps to provide a world-class home for our high performance athletes and host international and national events.

## WHAT IS BMX RACING?

BMX racing started in the early 1970s and is one of the youngest forms of sport cycling. BMX racing takes place on purpose-built single-lap tracks. Tracks are typically constructed from compacted dirt and asphalt, have a start ramp and feature tabletops, gap jumps and rhythm sections. The winner is the first rider to cross the finish line. BMX racing differs from BMX Freestyle where riders perform tricks. BMX Freestyle is not considered as part of this Review.

Participation in BMX racing has increased dramatically since the discipline made its Olympic debut at the 2008 Beijing Games and Australia is now the second largest BMX nation in the world. Membership of BMX Australia (BMXA) has almost tripled since 2008 (6,800 members in 2008, 19,000 members in 2015).<sup>14</sup>

Membership at state level doubled during the same period.<sup>5</sup> Western Australian riders now account for over 20% of the national membership base, making the state's BMX community the second largest in Australia.

BMX racing in Western Australia has a young demographic, with 84% of riders under 20 years old and 60% between 2 and 10 years old.<sup>ibid</sup> The discipline is widely recognised as a primary gateway in bike riding for young people, with participating, training and competing in BMX building skills, physical attributes and tactical knowledge. Skills developed through BMX racing are also readily transferrable to other cycling disciplines with multiple elite cyclists, including 12-time Tour de France stage winner Robbie McEwen and 6-time Olympic champion track cyclist Sir Chris Hoy, beginning their careers in BMX.



## BMX TRACKS IN WESTERN AUSTRALIA

**There are no international or national standard BMX tracks in Western Australia. We are losing our top riders to the eastern states and overseas as there is nowhere appropriate for them to train and race. We are also unable to host international and national events.**

Western Australia currently has 19 BMX tracks that are in active use for training and racing and are home to a BMX club (Figure 11). The majority of tracks are located in the southwestern corner of the state with the highest concentration in the southern suburbs of the Perth Metropolitan region. The South West and Pilbara regions are also hotspots for BMX racing.

The condition of the riding surface and the available infrastructure and services at each BMX track

in Western Australia varies. The majority of tracks are able to host state-level events, however there are no BMX tracks that meet international event standards or fully meet national event standards.

The UCI, BMX racing's world governing body, requires a 8m start ramp for elite class racing and recommends that any BMX tracks where high performance riders train and compete should be this length. There are no tracks in Western Australia with an 8m start ramp. The UCI also set minimum international and national event requirements for spectator seating and associated infrastructure, including car parking availability. There are no BMX tracks in Western Australia that meet these requirements. As such, the state is unable to host UCI sanctioned international events and has very limited capacity to host national level events.

BMX Australia has been operating with special dispensation from the UCI to run national championships and national series events on tracks with only a 5m start ramp. The WestSide BMX Club in Balcatta hosted Rounds 5 and 6 of the 2015 National Series and Rounds 3 and 4 of the 2014 National Series on this basis.

However, the UCI regulation is likely to be strictly enforced in future, and BMX tracks without an 8m start ramp will be ineligible to host any national level events. Major events will be held in other states and territories at BMX tracks meeting the required standards. Western Australia will miss out on the significant exposure and potential community and economic benefits that hosting international and national events can bring. The state's high performance riders will also miss the valuable experience of competing at the highest level on home soil.

REGION	NAME OF BMX TRACK	LOCAL GOVERNMENT	BMX CLUB
Perth Metropolitan (North)	<ul style="list-style-type: none"> <li>▪ Balcatta</li> <li>▪ Wanneroo</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stirling</li> <li>▪ Wanneroo</li> </ul>	<ul style="list-style-type: none"> <li>▪ Westside</li> <li>▪ Wanneroo</li> </ul>
Perth Metropolitan (South)	<ul style="list-style-type: none"> <li>▪ Bibra Lake</li> <li>▪ Bull Creek</li> <li>▪ Lesmurdie</li> <li>▪ Medina</li> <li>▪ Rockingham</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cockburn</li> <li>▪ Melville</li> <li>▪ Kalamunda</li> <li>▪ Kwinana</li> <li>▪ Rockingham</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cockburn</li> <li>▪ Southside</li> <li>▪ Hills</li> <li>▪ Southern Districts</li> <li>▪ Rockingham</li> </ul>
Peel	<ul style="list-style-type: none"> <li>▪ Byford</li> <li>▪ Mandurah</li> </ul>	<ul style="list-style-type: none"> <li>▪ Serpentine-Jarrahdale</li> <li>▪ Mandurah</li> </ul>	<ul style="list-style-type: none"> <li>▪ Byford</li> <li>▪ Mandurah</li> </ul>
South West	<ul style="list-style-type: none"> <li>▪ Bunbury</li> <li>▪ Cowaranup</li> <li>▪ Margaret River</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bunbury</li> <li>▪ Augusta-Margaret River</li> <li>▪ Augusta-Margaret River</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bunbury</li> <li>▪ Cowaramup</li> <li>▪ Margaret River</li> </ul>
Wheatbelt	<ul style="list-style-type: none"> <li>▪ Northam</li> </ul>	<ul style="list-style-type: none"> <li>▪ Northam</li> </ul>	<ul style="list-style-type: none"> <li>▪ Northam</li> </ul>
Goldfields-Esperance	<ul style="list-style-type: none"> <li>▪ Kalgoorlie</li> </ul>	<ul style="list-style-type: none"> <li>▪ Kalgoorlie-Boulder</li> </ul>	<ul style="list-style-type: none"> <li>▪ Eastern Goldfields</li> </ul>
Mid West	<ul style="list-style-type: none"> <li>▪ Geraldton</li> </ul>	<ul style="list-style-type: none"> <li>▪ Geraldton</li> </ul>	<ul style="list-style-type: none"> <li>▪ Woorree Park</li> </ul>
Pilbara	<ul style="list-style-type: none"> <li>▪ East Pilbara</li> <li>▪ Karratha</li> <li>▪ Port Hedland</li> <li>▪ Tom Price</li> </ul>	<ul style="list-style-type: none"> <li>▪ East Pilbara</li> <li>▪ Karratha</li> <li>▪ Port Hedland</li> <li>▪ Ashburton</li> </ul>	<ul style="list-style-type: none"> <li>▪ East Pilbara</li> <li>▪ Karratha</li> <li>▪ Hedland</li> <li>▪ Tom Price</li> </ul>

\* There are BMX tracks in Narrogin, Collie and Albany but they unusable for training and racing

Figure 11: BMX tracks in Western Australia





With the discipline based on explosive power and high speed skills, the performance of a rider on the start ramp can have a significant influence on the outcome of a race. The lack of opportunities to train on an 8m start ramp in the state immediately places our riders at a disadvantage against competitors who are able to regularly train and race on a higher ramp. A number of Western Australian high

performance riders have already relocated interstate or overseas in order to train and race regularly on international and national standard BMX tracks. The continued failure to meet the facility needs of riders will likely exacerbate this drain of talent, undermining the state's future ability to deliver on the global and Australian stage and removing the opportunity for grassroots riders to train alongside,

compete against and be inspired by high performance athletes. Other states have already recognised the need for BMX tracks facilities that cater for every stage of the performance pathway and meet the needs of their high performance riders. The Sleeman BMX Supercross Track in Brisbane, Queensland is an example of a BMX track capable of hosting national and international events (Case Study 5).



**CASE STUDY 5:  
SLEEMAN BMX SUPERCROSS TRACK - BRISBANE, QLD**

<b>Description</b>	<ul style="list-style-type: none"> <li>International standard outdoor BMX track</li> <li>Training venue of BMX Queensland</li> <li>Significant club and community resource</li> </ul>
<b>Cycling Facilities</b>	<ul style="list-style-type: none"> <li>Dual 5m and 8m start ramps</li> <li>Hosts local, state, national and international racing, including 2013, 2015 and 2017 BMX National Championships</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>Located at Sleeman Sports Complex, 15km from Brisbane CBD</li> </ul>
<b>Infrastructure and Services</b>	<ul style="list-style-type: none"> <li>Access to toilets, showers, change rooms, function areas, gym, professional coaching, sport science/sport medicine, physio, on-site car parking, on-site athlete accommodation</li> <li>\$4.2 million build cost</li> </ul>



There is significant opportunity for Western Australia to build on the rising popularity of BMX racing. Growing participation, enabling riders to fulfill their potential and securing high level events is dependent on providing a cohesive, planned network of accessible, sustainable and appropriate BMX tracks in local communities across the state. This network should include existing, revitalised and new facilities, with existing BMX tracks evaluated for their suitability for continued use, reestablishment or upgrading.

Discipline master planning should be used to guide the development of the network. This should include the identification and prioritisation of locations capable of supporting international and national training and racing. Focus should also be given to maximising availability and accessibility to BMX tracks in areas with a young demographic and exploring opportunities to support the reestablishment of facilities that are currently disused.

## DESIRED IMPROVEMENTS

- An international standard BMX track centrally-located in the Perth Metropolitan area that provides for riders at every stage of the cycling pathway from local grassroots to international level and can host national and international events
- At least one BMX track with dual 5m and 8m start ramps in each region, beginning with the Perth Metropolitan, South West and Pilbara BMX racing hotspots
- A statewide network of accessible BMX tracks that provide training and racing opportunities for local communities and BMX clubs
- Existing BMX tracks, and supporting infrastructure and services, are safeguarded and improved where appropriate
- Locations for new, reestablished, upgraded and consolidated BMX tracks identified and prioritised by discipline master planning that is underpinned by extensive consultation and involvement with key stakeholders
- BMX tracks delivered through detailed facility planning, using a standardised development process to ensure the right facilities are developed in the right places, in the right way and for the right reasons
- International and national BMX events hosted regularly in Western Australia, with at least one round of the National Series held each year and the National Championships held at least every five years
- BMX tracks are delivered as part of cycling facility hubs where appropriate



# RECREATIONAL CYCLING

Recreational cycling is a major part of the cycling culture in Western Australia. As well as providing a valuable resource for leisure riders, the state’s road, bike lane and shared path network also provides a provide a training environment for riders from all competitive sport cycling disciplines. We must work to ensure that road, bike lane and shared path developments consider the specific requirements of recreational cyclists.

## WHAT IS RECREATIONAL CYCLING?

Recreational cycling is the generic name given to any form of non-transport and non-competitive cycling that uses the state’s road, bike lane and shared path networks.

These networks are critical to recreational cycling in Western

Australia, providing a significant resource for leisure and training rides. This importance shall continue even with increased availability and accessibility of dedicated facilities for road racing, track cycling and BMX racing.

Two broad types of recreational cyclists exist in Western Australia

– leisure riders and sport riders (Figure 12). Each type has their own characteristics and there is a need to develop recreational cycling routes appropriate to their different habits and aspirations to ensure safe and high quality riding experiences for everyone.

LEISURE RIDERS	SPORT RIDERS
<p>Typically:</p> <ul style="list-style-type: none"> <li>Use shared paths and on-road bike lanes</li> <li>Ride for pleasure and fitness</li> <li>Range of experience and confidence</li> <li>Low to moderate speed</li> <li>Ride as individuals or in small groups</li> <li>Ride morning and afternoon, weekdays and weekends</li> <li>Select routes based on safety and quality of experience</li> </ul>	<p>Typically:</p> <ul style="list-style-type: none"> <li>Use the road and on-road bike lanes</li> <li>Ride for training and fitness</li> <li>Experienced and confident</li> <li>High speed</li> <li>Ride in medium to large groups</li> <li>Ride early morning, weekdays and weekends</li> <li>Regularly use the same routes</li> <li>Select routes based on efficiency, connectivity and safety</li> </ul>

Figure 12: Types of recreation cyclists in Western Australia





## PROVISION FOR RECREATIONAL CYCLING IN WESTERN AUSTRALIA

Road, bike lane and shared path developments in Western Australia to date have largely focused on bikes as a mode of transport and infrastructure has been planned, designed and constructed with little regard to the specific requirements of recreational cyclists. The behaviour and usage patterns of transport cyclists can, however, differ markedly from recreational cyclists. The lack of tailored provision for cycling as a leisure and sport activity can:

- Increase hazards and foster concerns about safety. This can be a significant barrier to participation, particularly

amongst young people and less experienced riders

- Increase the risk of confrontation between cyclists, motor vehicles and pedestrians
- Reduce connectivity between areas where people want to ride
- Adversely affect the quality and enjoyment of a ride.

Establishing the right routes in right places, in the right way and for the right reasons is central to the development of an effective recreational cycling network. This is achievable through the use of route hierarchy, with routes categorised depending on their characteristics and associated infrastructure.

A recreational cycling route hierarchy should be defined with parameters established for the different hierarchical tiers. These should include, but not be limited to:

- The purpose of the route
- Location
- Rider type
- Connectivity
- Types and extent of traffic management treatments
- Speed limits
- Signage – directional and warning
- Surfacing – treatments and route markings.

The recreational cycling route hierarchy should be driven by local conditions and reflect best practice. A number of agencies, including the Department of Transport, Main Roads Western Australia and Austroads, have already developed guidelines for cycling infrastructure development. However, whilst valuable, these documents primarily focus on cycling for transport and also differ in some policies, recommendations and approach. Such discrepancies can foster uncertainty during planning,







design and delivery and result in inappropriate infrastructure and cycling routes that change in character, such as across different local government areas.

A unified set of aspirational guidelines for recreational cycling infrastructure should be developed in partnership with key stakeholders. These guidelines should feed into the development of the recreational cycling route hierarchy and be promoted widely to maximise buy-in and roll out. Through wide application of the hierarchy by the agencies responsible for the road, bike lane and shared path network, the guidelines will maximise the likelihood that recreational cycling routes across the state are consistent with no noticeable change between different local government areas and are appropriate to the requirements of recreational cyclists.

Mobile apps and GPS trackers (e.g. Strava, MapMyRide) offer a useful tool for investigating the movement patterns, volumes and habits of recreational riders, including how and when they use the road and

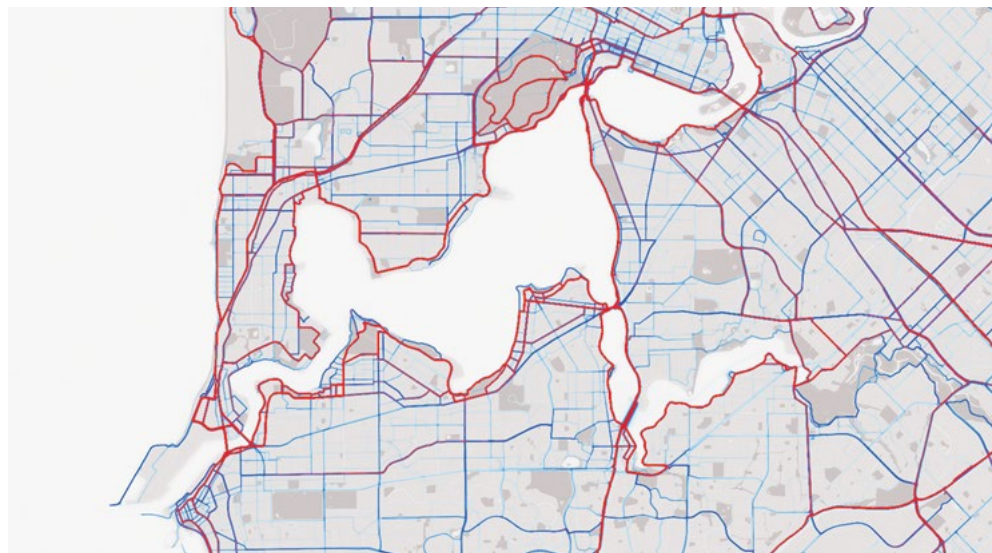


Figure 13: Strava heat map of popular recreational cyclists routes in Perth. Note the high activity in Kings Park and around the Swan River foreshore (Strava Metro)

shared path network (Figure 13). Recreational rider GPS data should be used in the establishment and application of the route hierarchy to ensure that informed cycling infrastructure decisions that accurately reflect the behaviours of recreational riders are made.

## DESIRED IMPROVEMENTS

- Development of recreational cycling routes is underpinned by a recreational cycling route hierarchy and unified infrastructure guidelines
- Increased provision of recreational cycling routes that meet the needs of leisure and sport recreation cyclists, along with the rapidly growing cycle tourism market
- Recreational cyclist GPS data used to inform cycling infrastructure decisions



# CYCLING FACILITY HUBS

Clustering facilities for multiple cycling disciplines together in hubs creates opportunities to share infrastructure and services, knowledge, staff and running costs. Hubs can form important community resources, increase participation and facilitate crossover between disciplines. We need to create a statewide network of cycling facility hubs to optimise the provision of dedicated facilities and maximise participation.

## WHAT ARE CYCLING FACILITY HUBS?

Cycling facility hubs cluster facilities for multiple cycling disciplines together on the same site or in very close proximity. A hub should provide for at least two disciplines.

The benefits of cycling facility hubs are significant. Whilst each discipline requires distinct facilities and has specific technical requirements, hubs provide opportunities for integration and interaction between disciplines



through shared infrastructure and services, cross-use, knowledge-sharing, joint training, shared staff and running costs.

## CYCLING HUBS IN WESTERN AUSTRALIA

A hierarchical network of accessible, high quality cycling facility hubs should be developed across Western Australia. This will optimise

the provision of safe, accessible and sustainable dedicated facilities by maximising participation, usage, value and vitality. It is recommended that the network comprises a primary state hub supported by a series of regional hubs, local hubs and individual facilities (Figure 14). Figure 15 sets the minimum requirements for each hierarchical level.

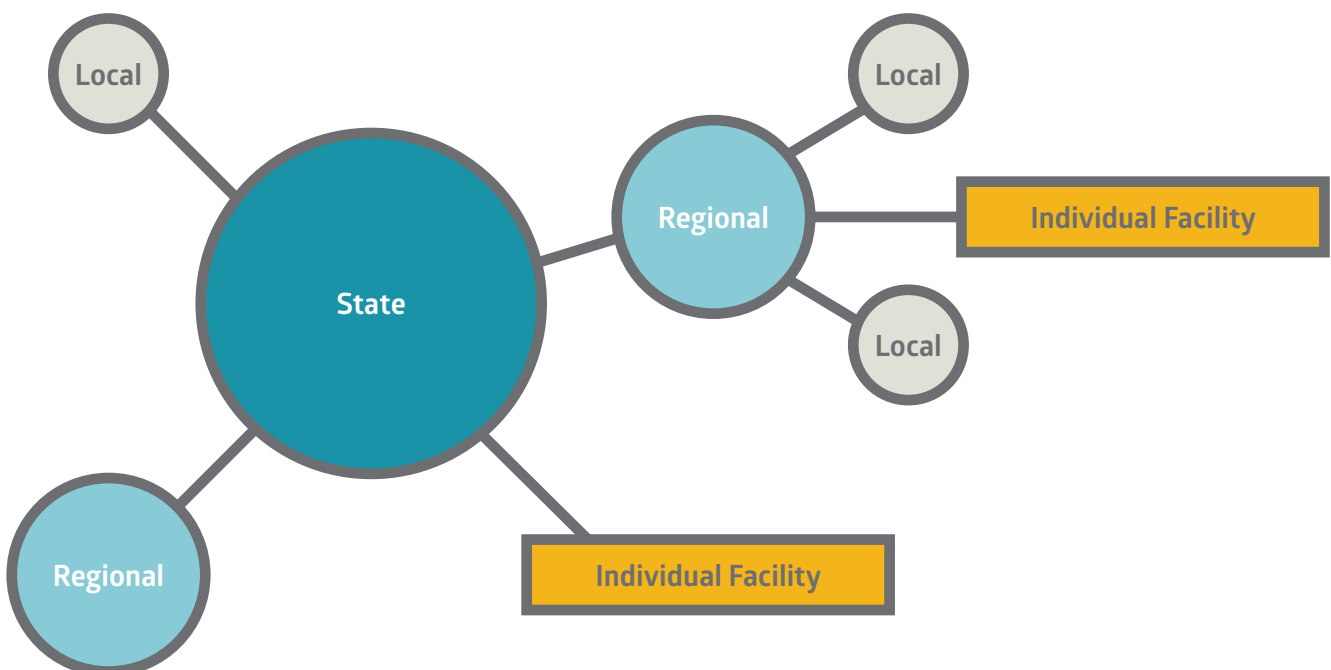


Figure 14: Hierarchical network of cycling facility hubs



	STATE CYCLING HUB	REGIONAL CYCLING HUB	LOCAL CYCLING HUB
Description	<p>The home of cycling in Western Australia.</p> <ul style="list-style-type: none"> <li>International, national, regional and local events venue</li> <li>Primary training venue for Western Australian Institute of Sport (WAIS) Developing Champions program and Western Australian state team athletes</li> <li>Administrative centre for WestCycle and member organisations</li> <li>Club and community resource</li> </ul>	<ul style="list-style-type: none"> <li>National, regional and local events venue</li> <li>Regional base for WAIS and Western Australian state team athletes</li> <li>Club and community resource</li> </ul>	<ul style="list-style-type: none"> <li>Regional and local events venue</li> <li>Club and community resource</li> </ul>
Cycling Facilities	<ul style="list-style-type: none"> <li>Provision for at least 3 different cycling disciplines</li> <li>At least 1 facility built to international standard</li> <li>At least 1 facility built to national standard</li> <li>Other facilities built to at least regional standard</li> <li>Links to recreational cycling routes desirable</li> <li>Links to mountain bike trails desirable</li> </ul>	<ul style="list-style-type: none"> <li>Provision for at least 2 different cycling disciplines</li> <li>At least 1 facility built to national standard</li> <li>At least 1 facility built to regional standard</li> <li>Other facilities built to at least local standard</li> <li>Links to recreational cycling routes desirable</li> <li>Links to mountain bike trails desirable</li> </ul>	<ul style="list-style-type: none"> <li>Provision for at least 2 different cycling disciplines</li> <li>At least 1 facility built to regional standard</li> <li>Other facilities built to at least local standard</li> <li>Links to recreational cycling routes desirable</li> <li>Links to mountain bike trails desirable</li> </ul>
Location	<ul style="list-style-type: none"> <li>Centrally located in the Perth Metropolitan region</li> <li>High profile site with excellent access by bike and public transport and links to major roads</li> <li>Connections to other recreation, sport and community facilities desirable</li> </ul>	<ul style="list-style-type: none"> <li>At least one in every Western Australian region</li> <li>Within or in close proximity to a large or small population centre</li> <li>Well connected site with good access by bike and public transport and links to major roads</li> <li>Connections to other recreation, sport and community facilities desirable</li> </ul>	<ul style="list-style-type: none"> <li>Within or in close proximity to a small population centre or large community</li> <li>Good access by bike and links to road network</li> <li>Good access by public transport desirable</li> <li>Connections to other recreation, sport and community facilities desirable</li> </ul>
Infrastructure and Services	Office space, spectator grandstands, food and drink (kiosks, cafés, restaurants, bars), toilets, showers, change rooms, function areas, clubrooms, gym, professional coaching, sport science/sport medicine, physio, bike hire and sales accommodation	Food and drink (kiosks, café), toilets, showers, change rooms, function area, clubroom, gym, access to professional coaching staff, bike hire, on-site car parking	Food and drink (kiosk), toilets, clubroom, club coaches, on-site car parking desirable
Development Quality	<ul style="list-style-type: none"> <li>High quality buildings, structures and landscapes</li> <li>Distinctive, innovative and sustainable design and construction</li> </ul>	<ul style="list-style-type: none"> <li>Good quality buildings, structures and landscapes</li> <li>Sustainable design and construction</li> </ul>	<ul style="list-style-type: none"> <li>Good quality buildings, structures and landscapes</li> <li>Sustainable design and construction</li> </ul>

Figure 15: Minimum requirements for cycling hubs in Western Australia



**CASE STUDY 6:  
SLEEMAN SPORTS COMPLEX - BRISBANE, QLD**

<p><b>Description</b></p>	<ul style="list-style-type: none"> <li>▪ Administrative centre and training venue of Cycling Queensland and BMX Queensland</li> <li>▪ A significant club and community resource for track and BMX</li> <li>▪ Includes facilities for other sport, recreation and entertainment activities</li> </ul>
<p><b>Cycling Facilities</b></p>	<ul style="list-style-type: none"> <li>▪ International standard outdoor BMX track, with dual 5m and 8m start ramps and a comprehensive activity program for riders of all abilities (beginner to elite). The track regularly hosts national level events and will host the BMX competition for the Gold Coast 2018 Commonwealth Games</li> <li>▪ International standard indoor velodrome. The track will host the track cycling completion for the Commonwealth Games and is jointed funded by Queensland Government and Australian Government. This track will replace the site's existing outdoor velodrome</li> </ul>
<p><b>Other Facilities</b></p>	<ul style="list-style-type: none"> <li>▪ Brisbane Aquatic Centre, 2,700-seat indoor sports arena, State Gymnastics Training Hall, State Weightlifting Centre, 1,500-seat Chandler Theatre</li> </ul>
<p><b>Location</b></p>	<ul style="list-style-type: none"> <li>▪ 15km from Brisbane CBD</li> <li>▪ 15km from Brisbane Airport</li> <li>▪ Direct bus access</li> <li>▪ Adjacent to major arterial routes</li> </ul>
<p><b>Infrastructure and Services</b></p>	<ul style="list-style-type: none"> <li>▪ Cycling Queensland and BMX Queensland office space, spectator grandstands, food and drink, toilets, showers, change rooms, hospitality suites, gym, professional coaching, sport science/sport medicine, physio, on-site car parking, on-site athlete accommodation</li> </ul>





Cycling facility hubs may be new or involve the revitalisation of existing cycling facilities. Opportunities to incorporate other recreational, sport and community facilities or to link with other existing sport/recreation facility hubs should also be explored.

The number, types and standard of facilities provided at each hub will vary depending on the needs of the community, the activities and potential catchment of users and the hierarchical standard of surrounding hubs and individual facilities. Not all disciplines will be provided for at each hub. Equally the hub may contain facilities of different standards.

Other states have already recognised the value of cycling facility hubs. The Sleeman Sports Complex in Brisbane, Queensland is an example of a state-level cycling hub (Case Study 6).

Masterplanning is fundamental to the establishment of the statewide hierarchical network of cycling facility hubs. It should be undertaken to identify and prioritise locations where different levels of hubs should be delivered, drawing on any masterplanning undertaken for individual cycling disciplines. Detailed facility planning should then be undertaken to guide and facilitate the delivery of hubs identified by masterplanning.

## DESIRED IMPROVEMENTS

- A statewide hierarchical network of cycling facility hubs, with each hub providing facilities for multiple cycling disciplines plus shared services and infrastructure
- A state cycling facility hub centrally-located in the Perth Metropolitan area
- At least one cycling facility hub in the north, south, east and west of the Perth Metropolitan region
- At least one regional cycling facility hub in every region of Western Australia, with supporting local hubs as appropriate
- Existing cycling facility hubs evaluated for their suitability for continued use, revitalisation or consolidation
- Locations for cycling facility hubs identified and prioritised by masterplanning that is underpinned by extensive consultation and involvement with key stakeholders
- Cycling facility hubs delivered through detailed facility planning, using a standardised development process to ensure the right facilities are developed in the right places, in the right way and for the right reasons



03

# MOVING FORWARD





# OUR VISION IS FOR WESTERN AUSTRALIA TO HAVE A NETWORK OF DEDICATED, SAFE AND ACCESSIBLE SPORT AND RECREATION CYCLING FACILITIES.

## A NETWORK THAT SUPPORTS RECREATIONAL RIDING, TRAINING AND COMPETITION AT EVERY STAGE OF EVERY CYCLING PATHWAY.

### WE NEED TO:

#### **OBJECTIVE 1 BUILD SUPPORT FOR CYCLING FACILITIES**

We need to turn Western Australia into a place where sport and recreation cycling facilities are as widely supported, accepted and encouraged as facilities for other recreation and sport activities.

#### **STRATEGIES**

- 1.1 Quantify and advocate the benefits and value of sport and recreation cycling facilities to key stakeholders, decision-makers and our communities
- 1.2 Encourage and facilitate the development of state and local government strategies, plans and policies that recognise and support the development of sport and recreation cycling facilities

#### **OBJECTIVE 2 DEVELOP THE RIGHT FACILITIES IN THE RIGHT PLACES**

We need to deliver sport and recreation cycling facilities that are appropriate to the needs, aspirations and potential of our riders and communities, now and in the future.

#### **STRATEGIES**

- 2.1 Undertake discipline masterplanning to identify and prioritise locations for road racing, track cycling and BMX racing, including cycling facility hubs
- 2.2 Undertake detailed facility planning to deliver at locations identified by discipline masterplanning
- 2.3 Pursue revitalisation and upgrading of existing facilities where appropriate
- 2.4 Pursue facility consolidation and rationalisation where appropriate
- 2.5 Apply minimum requirements to new and revitalised cycling facility hubs
- 2.6 Apply appropriate governing standards to new and revitalised event venues
- 2.7 Facilitate the application of the recreational cycling route hierarchy in all infrastructure development

#### **OBJECTIVE 3 DELIVER FACILITIES CONSISTENTLY**

We need to apply a standardised process across every stage of sport and recreation cycling facility development to ensure consistent high quality and sustainability.

#### **STRATEGIES**

- 3.1 Establish and implement a staged development process to guide detailed facility planning
- 3.2 Define the recreational cycling route hierarchy, establishing parameters for the different hierarchical tiers
- 3.3 Develop and promote guidelines for recreational cycling infrastructure



# GLOSSARY





<b>Bicycling Western Australia (BWA)</b>	A community-based cycling advocacy organisation and event promoter.
<b>BMX Australia (BMXA)</b>	The national governing body for competitive BMX.
<b>BMX Sports Western Australia (BMXWA)</b>	The peak body for competitive BMX in Western Australia.
<b>CycleSport Western Australia (CSWA)</b>	The peak body for competitive and recreational road and track in Western Australia.
<b>Cycling Australia</b>	The national governing body for competitive and recreational cycling.
<b>Main Roads Western Australia</b>	The agency responsible for Western Australia's highways and main roads.
<b>Track Cycling Western Australia</b>	A community organisation focused on increasing track participation.
<b>UCI</b>	Union Cycliste Internationale/International Cycling Union. The world governing body for competitive cycling.
<b>WAMBA</b>	West Australian Mountain Bike Association. The representative body for mountain biking in Western Australia
<b>Western Australian Institute of Sport (WAIS)</b>	An elite sports institute to support high performance athletes in Western Australia.
<b>WestCycle</b>	The peak body for cycling in Western Australia.

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