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Rockhampton Motorsports Precinct

MASTERPLAN REPORT

NOVEMBER 2020

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INTRODUCTION

1 a Introduction by Rockhampton Regional Council





The Rockhampton Motorsports Precinct aims to provide motorsport clubs and recreational users in the region with a new destination to share improved facilities in a single location, offering new experiences for participants and spectators alike.

The establishment of a multi-purpose Motorsports Precinct will overtime, attract and facilitate varying levels of competition and events, in one centralised location at Rockhampton.

In October 2019, Rockhampton Regional Council announced its plans for the region to become home to a permanent Motorsports Precinct, and 14 months later in December 2020, those plans have resulted in the Masterplan presented herein. The Masterplan provides a conceptual design for the development, supported by preliminary desktop technical and strategic assessments.

ROAD RACING

Road Course

3.1 km, designed to international guidelines and capable of hosting regional, national and international motorsport events for competitive and non-competitive use.

Rallycross + Drifting

Rallycross is a mixed surface track combining paved and gravel tracks, integrated into the West road course layout. The long bends on the East course layout lends itself to drifting.

Drag Strip

A 1/8 mile strip will continue and expand upon Rockhampton's rich history of drag racing.

OFF-ROAD RACING

Speedway

450m dirt oval surrounded by viewing banks and grandstands.

Supercross + PeeWee

A series of tracks designed as a ride park for young and novice dirt bike riders.

4x4 + Mudsports

Specialist tracks designed for a variety of off-road driver training and mudsport competitions.

DRIVER EXPERIENCES

Road Safety + Driver Training

Training young or advanced drivers, with features including a dynamics area, skid pad and kick plate.

Karting

1.2km international level karting circuit for training the future stars of motorsport, and providing a day-to-day kart facility for the community.

Welcome + Service Centre

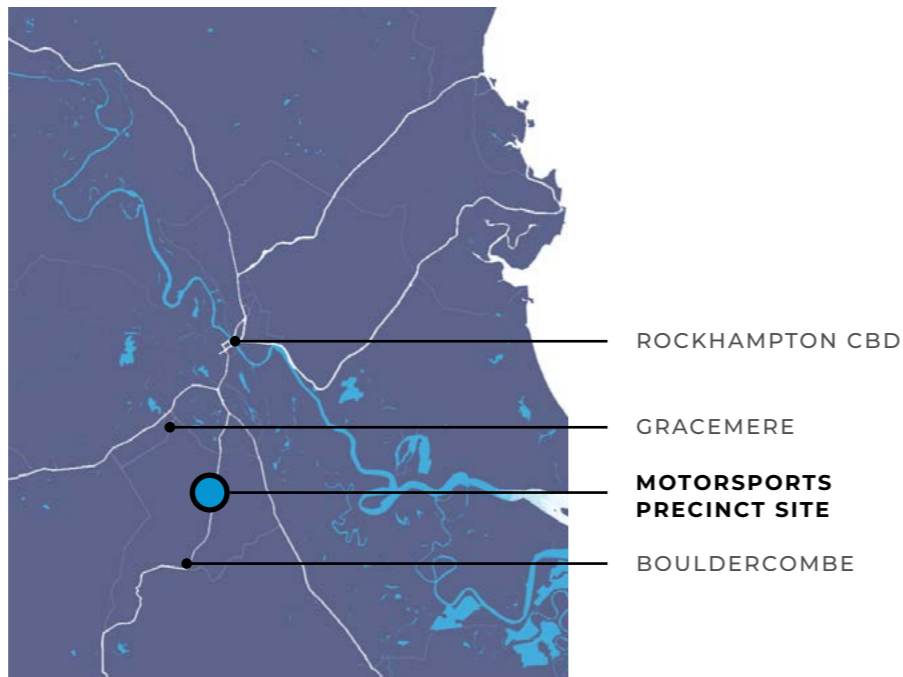
Ancillary services to support the site, designed as the central visitor hub to the development.

Introduction by Rockhampton Regional Council

MEETING THE NEEDS OF OUR MOTORSPORT COMMUNITY

Currently, within the Rockhampton region, there is a growing demand for additional facilities to accommodate motorsports activities.

Local motorsports bodies and individuals have been advocating for a suitable site for many years, with several attempts having been made to identify and establish a motorsports facility in the Rockhampton Region.



A NEW CHAPTER FOR MOTORING IN ROCKHAMPTON

After an evaluating available sites, the preferred site was announced as a circa 100 hectare site located at 53199 Burnett Highway, Bouldercombe.

It was selected due to the large area of usable land that it is not constrained by flooding and offers generally flat open stable land. Furthermore the location offers good accessibility directly off the Burnett Highway, within proximity to Gracemere and Rockhampton.

In July 2020, Council appointed a team consisting of motorsport venue designers and business consultants to evaluate the project brief and need.

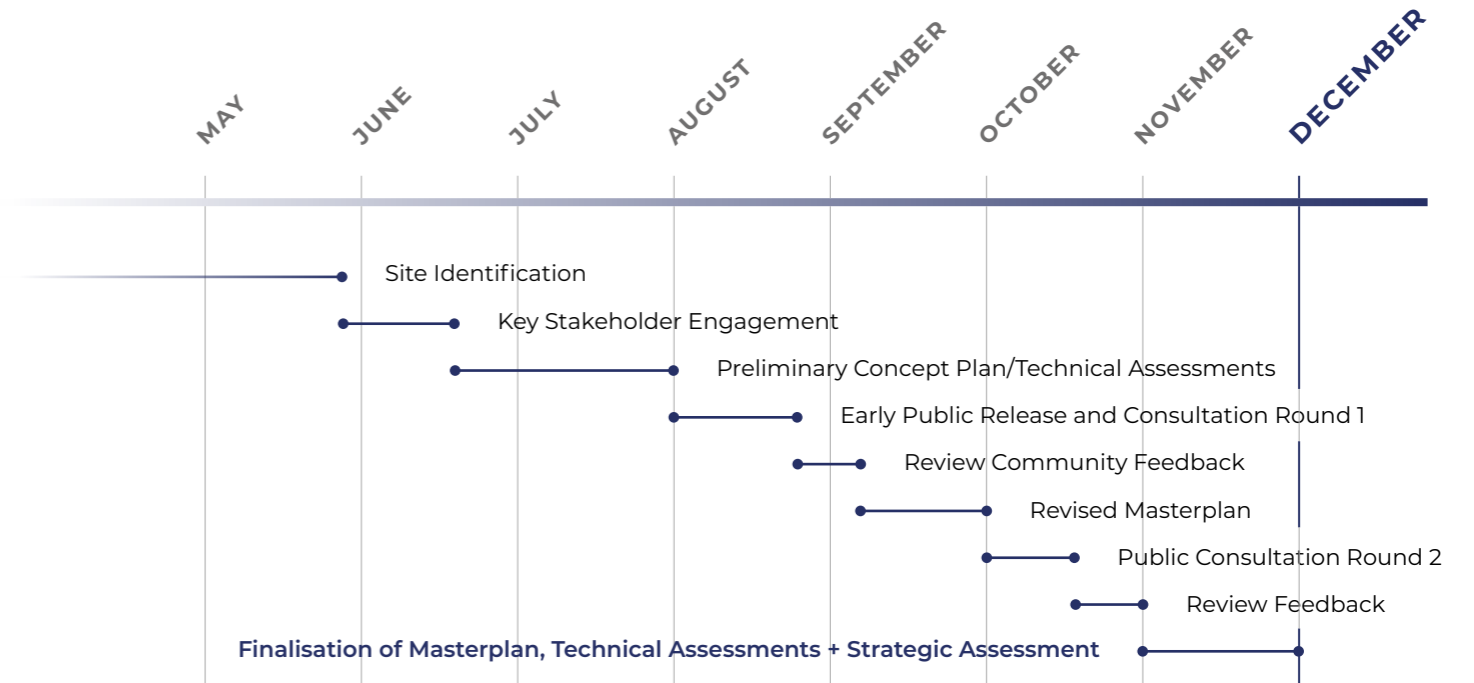
This team has worked collaboratively with Rockhampton Regional Council and engaged with various stakeholders to refine the brief, explore land use options, undertake technical studies and conceptualise the vision into a coherent masterplan that meets the needs of the market place and responds to the opportunities of the site.

SCOPE AND MASTERPLANNING PROCESS

The scope of this study requested a team to provide conceptual designs for the Motorsports Precinct to accommodate various disciplines of motorsport from road racing to 4x4 driving on the site identified. The concept is supported by visual renders, desktop technical assessments (transport, water management, utilities, environmental and bushfire, cultural, noise and air quality) and a strategic assessment of the project business need.

Master planning and studies for the Rockhampton Motorsports Precinct began in July 2020, starting with exploration of preliminary concept plans, now resulting in the final Master plan presented and explained further herein.

This document aims to outline the process undertaken to arrive at the proposed concept.



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ABOUT ROCKHAMPTON

2 a Welcome to Rockhampton

2 b Regional motorsport significance



Welcome to Rockhampton

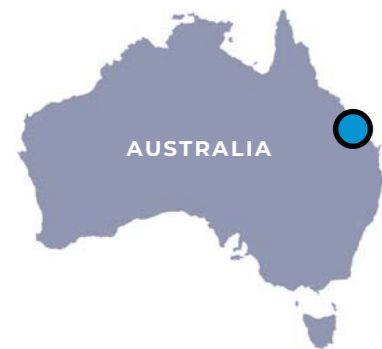
OVERVIEW

Rockhampton is one of the oldest cities in Queensland and Northern Australia.

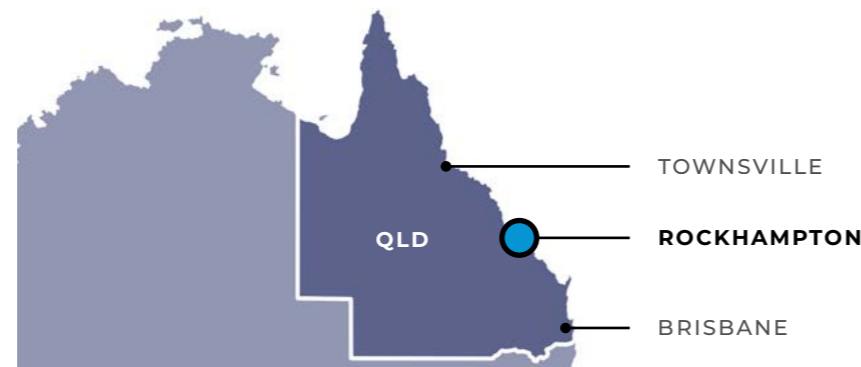
The city is located circa 600km north of Brisbane, lying just inland from the Eastern coast line of Australia. Two main roads (A1 and A3) provide good access directly into the city from the south.

In 2019 the population was 81,500 making it the 4th largest city in the state outside of the cities of South East Queensland, and the 22nd largest city in Australia.

Australia



Queensland



ROCKHAMPTON REGION STATISTICS (2016)

81,500	112,700	\$5,120,000,000
POPULATION (2019)	2036 FORECAST POPULATION	GROSS REGIONAL PRODUCT
\$65,000	63%	78%
MEDIAN SALARY	WORKFORCE AGED BETWEEN 25 - 44	WORKFORCE TRAVEL TO WORK BY CAR
91,750	268,000	
REGISTERED VEHICLES	MEDIAN HOUSE PRICE	

Regional motorsport significance

BACKGROUND

There is already evidence of a unique passion and enthusiasm for motorsports and automotive culture in the Rockhampton region.

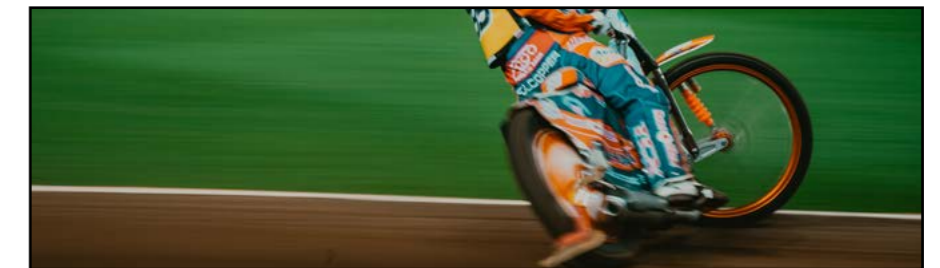
Active clubs and events attract interest across the wider community such as the downtown Speedway stadium events, and annual Gold Rush Sprint and RockyNats event.

Consequently, there is a growing demand within the Rockhampton region for additional facilities to accommodate motorsport activities, and local motorsport bodies and individuals have been advocating for a suitable site for many years.

A selection of motoring clubs operating in or near Rockhampton cover the following disciplines:

Solos

- 95 years of racing in Rockhampton
- Races held at Showgrounds
- High maintenance venue
- 3,000 - 4,000 spectators per race



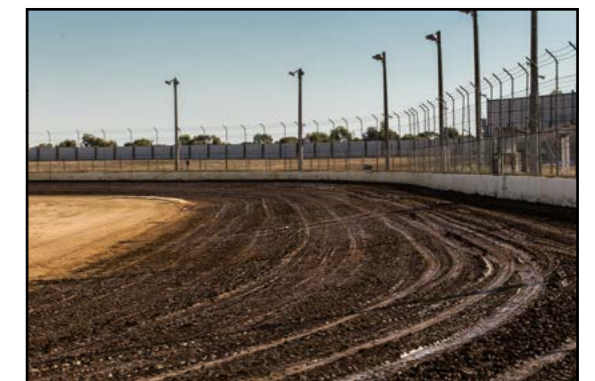
Speedway

- Shares Showgrounds with Solos
- 200 members incl. 50 juniors
- High maintenance venue
- 500 - 1000 spectators per race



Rockhampton Showgrounds

Motorcycles have raced in Rockhampton since November 1925, being one of the first venues to race under floodlights.



CQ Motorsports

- Established in 1959, 100+ members
- Operates Queensland Motorkhana and Queensland Rally
- Offers drifting driver training
- Approx. 15 events per year with 30+ competitors and 200 spectators



2b

Regional motorsport significance

Karting

- 22 year old track, 865m length
- 26 km from Rockhampton
- Longer track (1,200m) sought after
- 30 - 110 competitors per event



Motocross

- Club founded in 1935
- Existing 1,700m track
- 200 members
- Circa 8 events per year



Mudsportz

- 35 year old club, 1 of 2 in QLD
- Figure of 8 track, 2 cars per race
- Limited existing facilities
- Circa 4 events per year



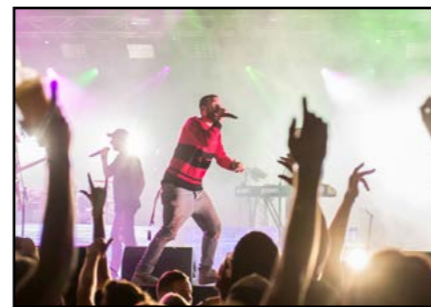
Radio Controlled Cars

- Volunteer operated club
- Targeting a new 400m track
- 110 competitors per event
- 150 - 200 spectators per event



RockyNats

- Inaugural event scheduled April '21
- Est. 35,000 attendees over 3 days
- 500 entrants secured
- Experience car parades, street drag, drifting competitions, music festivals and street food



Gold Rush Hill Sprint

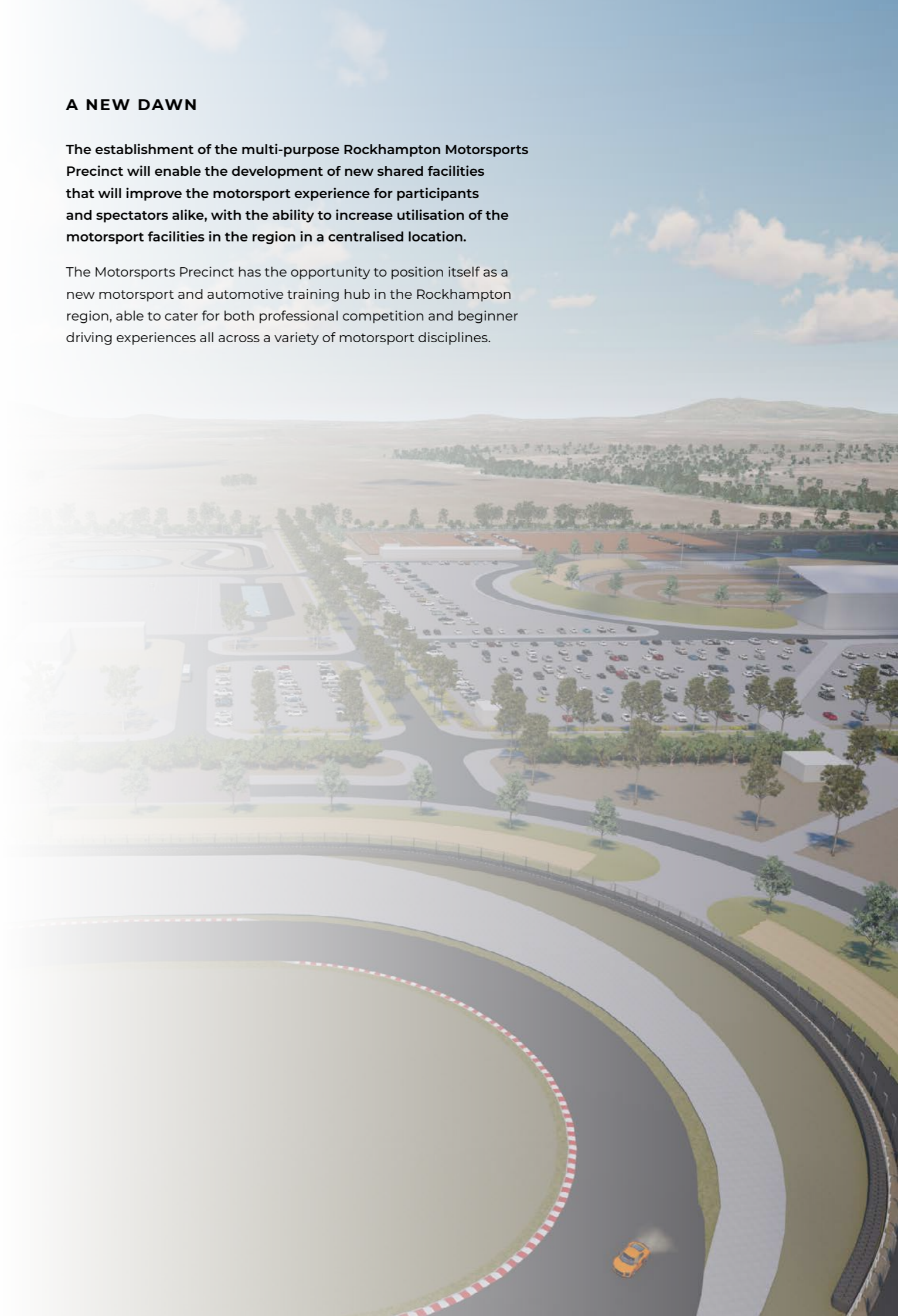
- Australia's longest hill climb race
- Features 24 corners, and a 2,160m elevation change across 2.5km
- 100 teams participate
- \$1,000,000 regional economic direct and indirect benefit



A NEW DAWN

The establishment of the multi-purpose Rockhampton Motorsports Precinct will enable the development of new shared facilities that will improve the motorsport experience for participants and spectators alike, with the ability to increase utilisation of the motorsport facilities in the region in a centralised location.

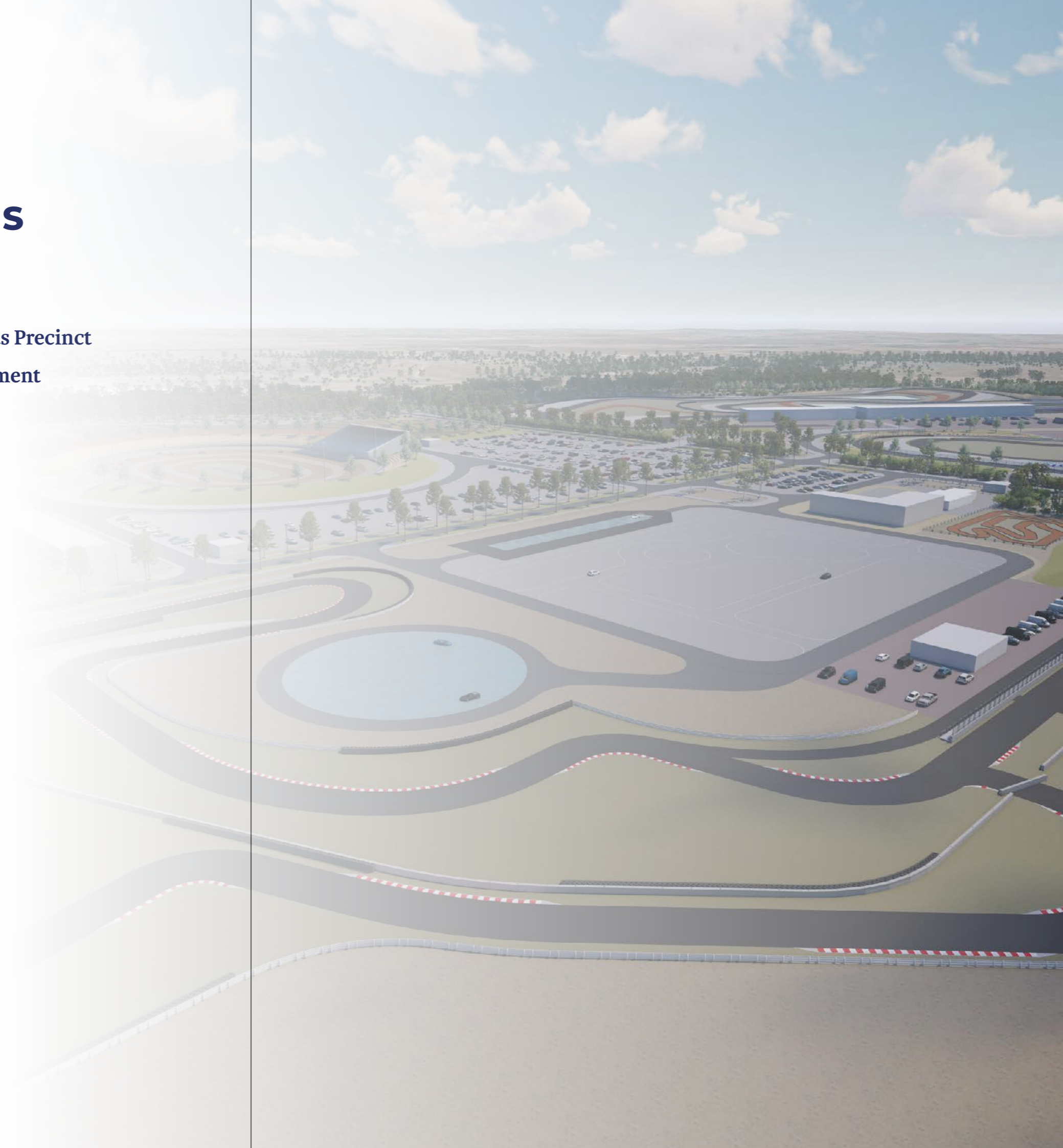
The Motorsports Precinct has the opportunity to position itself as a new motorsport and automotive training hub in the Rockhampton region, able to cater for both professional competition and beginner driving experiences all across a variety of motorsport disciplines.



3

VISION AND ASPIRATIONS

- 3 a The drivers for a Motorsports Precinct
- 3 b Strategic economic development
- 3 c Overall vision



The drivers for a Motorsports Precinct

OVERVIEW

As a by-product of the rich automotive culture in Rockhampton, there are a variety of active motorsport users in the region, each offering specific tracks, facilities, and motorsport disciplines to the community.

These range from car and motorcycle users, kart racing and drag racing, motocross and 4x4 mud driving.

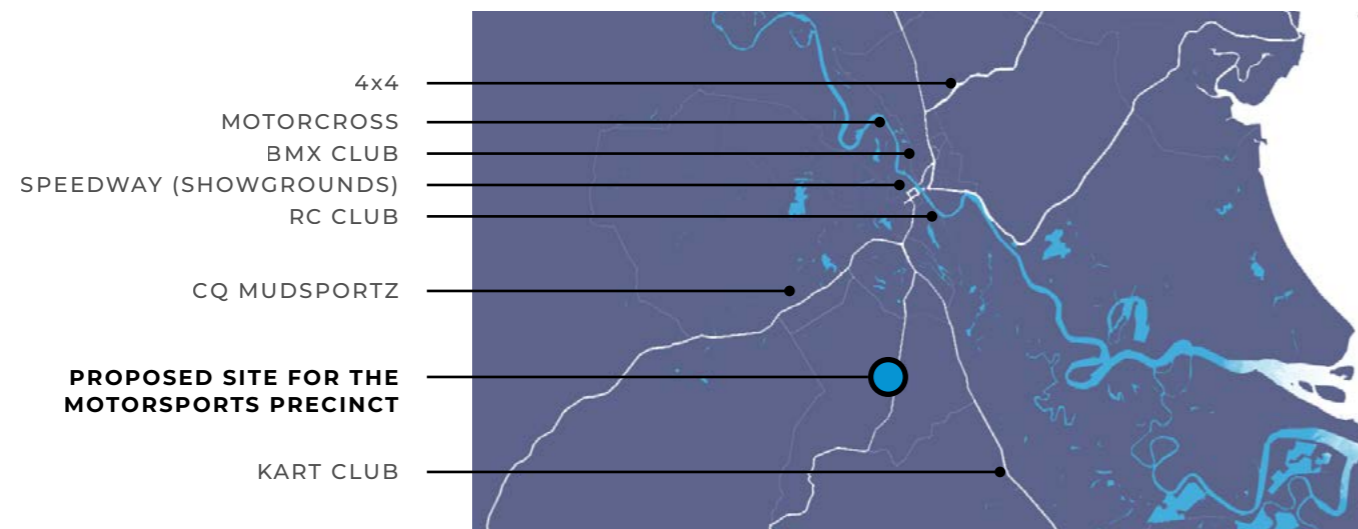
There is a growing demand for additional or improved facilities to accommodate motorsport activities in the Rockhampton region.

Many existing facilities are either inappropriately located due to flood risks or have close proximity to sensitive land use activities, as well as being cumbersome to access for the majority of participants. The possibility to expand or improve the current facilities is limited due to lack of land expansion space or on-site infrastructure.

Local motorsports bodies and individuals have been advocating for a Motorsports Precinct for many years and several attempts have been made to identify and establish a facility in the Rockhampton Region.

The various motor sporting clubs within the Rockhampton region are currently hosting events at multiple individual precincts. Not all of the current facilities are able to successfully accommodate potential capacity due to various precinct restraints including a lack of power, water, amenities and safety requirements.

EXISTING LOCATION OF KEY MOTORSPORT CLUBS



Road safety and driver training



Automotive testing, driving experiences and motorsport events



KEY OPPORTUNITIES AND BENEFITS TO A CENTRALISED PRECINCT

Opportunities for shared infrastructure costs by various clubs, providing improved viability for clubs to grow and continue serving their membership base.

Consolidated activities in one location to minimise long term resources required to support on-going motorsport activities in the region.

Opportunity to encourage new interest and participants across multiple disciplines of motorsport, outdoor sports and driver education at a single location.

A venue capable of hosting new events, developing economic benefits to the region.

Filling a gap in the motorsport market by creating a place for competitive and non-competitive activities.

Unlock redevelopment opportunities that respond to a wider range of community economic needs and priorities.

Developing an internationally recognised destination, strategically identifying Rockhampton as a leader in motorsports, driver training and sporting excellence.

The opportunity to create new complimentary facilities such as a road education centre, aimed at increasing road safety awareness and reducing highway accidents.

Providing a suitable, permanent and full-time facility for motorsport to become a sustainable sport and industry in Rockhampton.

Providing a safe environment for recreational, social and non-competitive users.

Enhancement and recognition of Rockhampton's historical connection and reputation as a regional motorsports hub.

3b

Strategic economic development

USING MOTORSPORT TO CREATE OPPORTUNITIES

The implementation of a new Motorsports Precinct in Rockhampton could uniquely position the City as a regional, national and international destination for motorsport, providing an opportunity to strategically develop Rockhampton's economy using motorsport as a unique catalyst.

AUSTRALIAN MOTORSPORT SECTOR | DIRECTLY GENERATED

\$2,700,000,000	\$1,200,000,000	16,300.	150,000
DIRECT INDUSTRY OUTPUT	DIRECT VALUE ADDED	DIRECT JOBS	PARTICIPANTS

QUEENSLAND MOTORSPORT SECTOR | ECONOMIC HIGHLIGHTS

Measure	Direct \$	% of Australia	Measure	Queensland	% of Australia
Industry Output	\$541 million		Tracks	61	18.3 %
Value Added	\$235 million	20.3 %	Clubs	273	19.6 %
Jobs	\$3,296		Events	1,112	17.8 %

Source: 'Economic Contribution of the Australian Motorsport Industry', Ernst & Young Report, 2014.

CENTRAL QUEENSLAND MOTORSPORT SECTOR | HIGHLIGHTS

95	\$12,000-\$15,000	\$60,000	6
YEARS OF RICH MOTORSPORTS HISTORY	AVERAGE SPEND PER PARTICIPANT ON MOTORSPORT ACTIVITIES	AVERAGE SPEND PER PARTICIPANT ON MOTORSPORT VEHICLES AND MODIFICATIONS	AVERAGE ANNUAL EVENT PARTICIPATION

3c

Overall vision

Rockhampton Motorsports Precinct will be a multi-purposed area for all motorsport enthusiasts, from club members and recreational track users to beginner and advanced drivers.

Day-to-day use arrangement

The Motorsports Precinct could enable the development of local, national and international motorsports, at a mixed-use facility that will provide a platform for competitive and non-competitive users to grow and succeed across multiple disciplines of motorsport.

Its establishment will allow the sharing of infrastructure between motorsport disciplines, becoming a community for like-minded motorsport enthusiasts and professionals, and a place to innovate and entertain.

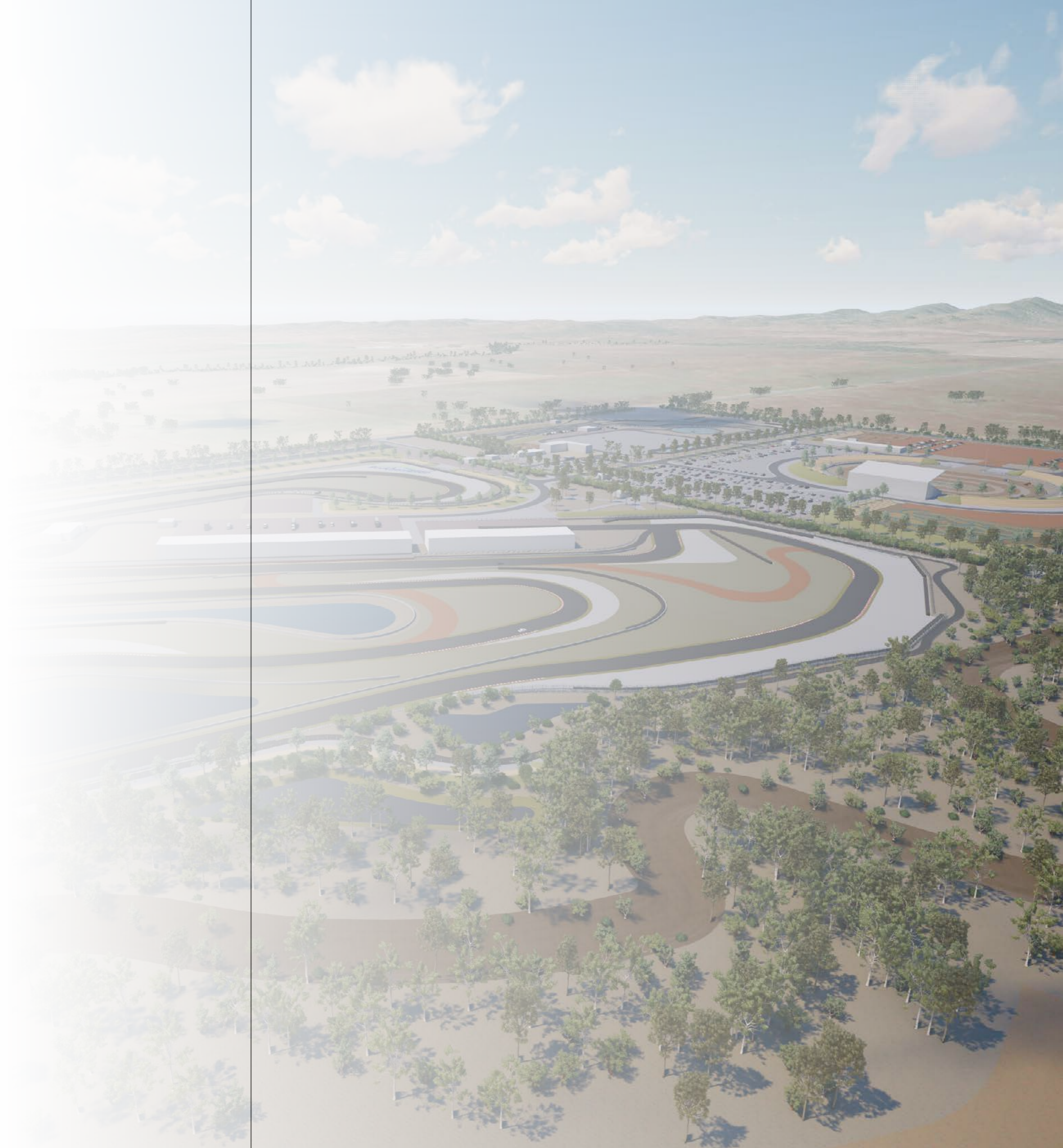
The facility will become a recognised hub for motorsports and driver training facilitating day to day practice, enthusiast participation, automotive testing, research, competitions and driver training across a variety of disciplines. Overtime it will attract and facilitate motorsports from grass roots training through to international competitions.



4

CONTEXT

- 4 a Site location
- 4 b Site conditions
- 4 c Site constraints



4a

Site location

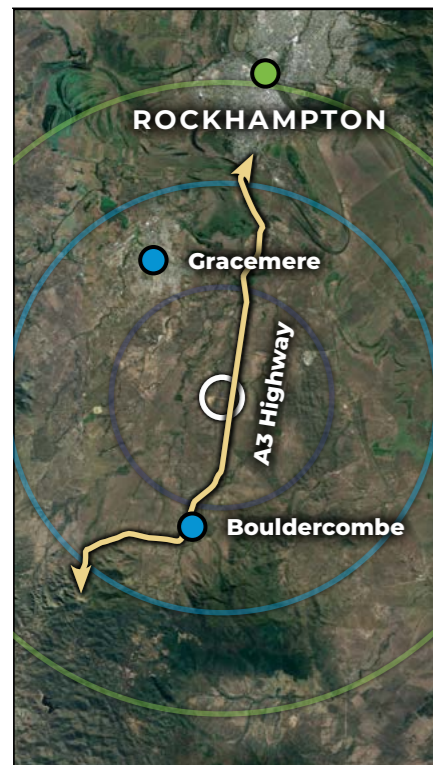
MOTORSPORTS PRECINCT LOCATION

After searches and a call for expressions of interest in 2019, the area between Bouldercombe and Gracemere along the Burnett Highway was identified as a potential area for motor sporting facilities, accommodating various motorsports at a single destination.

Upon further investigation into land available, the proposed site at 53199 Burnett Highway was identified as being suitable for progressing a masterplanning exercise for various reasons including:

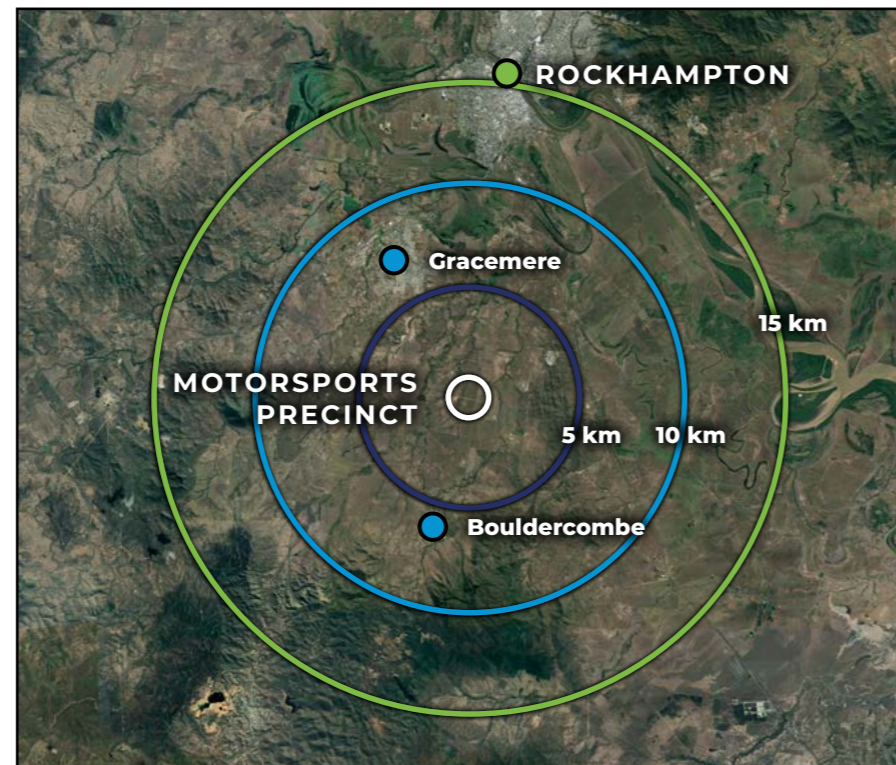
- A large land parcel capable of accommodating the usable area required to accommodate the scale of motorsport facilities proposed.
- Open and level site with limited natural constraints within property lines.
- Existing highway frontage and direct road access available.
- Convenient distance to / from the Rockhampton Central Business District
- Relatively remote location reducing impact on residential neighbourhoods.

In 2020, Council announced the location at 53199 Burnett Highway, Bouldercombe with preliminary concepts released to the public.



Road access

Proposed location of Rockhampton Motorsports Precinct located west of the Burnett Highway (A3).



Site radius

Proposed location of Rockhampton Motorsports Precinct is approximately 16 km south of Rockhampton CBD.

4b

Site conditions

IN SUMMARY

Following on from Council's preliminary site identification and assessment which lead to the selection of the preferred site, a site visit from Council and an industry specialist was undertaken on 16 January 2020.

The chosen site is relatively flat with low stand, low density vegetation across the site. The site falls gradually from east to west. With the exception to the water course on the western boundary of the proposed Precinct, that is flanked by riparian vegetation consisting of mature trees and shrubs.

The site lies between Gracemere and Bouldercombe. Access to the site is from the Burnett Highway onto an unsealed road that continues through the site to a working Quarry. In addition to this access there is an easement on the Southern boundary of the proposed precinct, which could serve as an alternate access.



Aerial Imagery

Proposed 100 hectare site of the Rockhampton Motorsports Precinct, adjacent to Burnett Highway

4b

Site conditions



4c

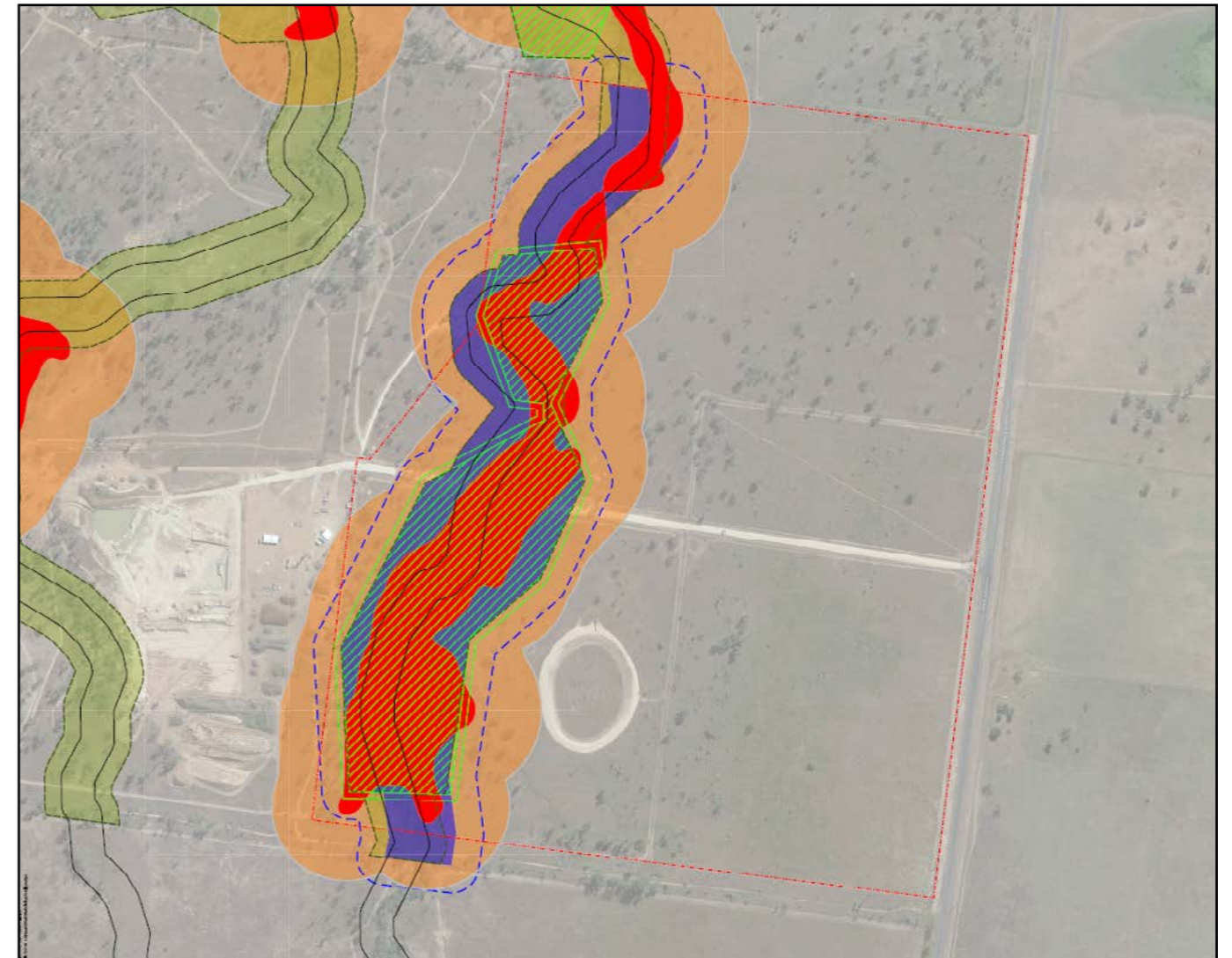
Site constraints

The site is generally open and flat ground, with minimal constraints with the exception of a creek running from north-south along the western edge of the property.

The location of the creek provides some ecological and bushfire constraints within the property, that have been respected within the Masterplan design.

The overlay below provides an indication of Bushfire Zone (+ 100m buffer), Ecological Zone Category R (+ 45m buffer), Ecological Zone Category C (+10m buffer), Biodiversity Corridors, and Water Creek Buffer.

20m access easement to be maintained to quarry.



Site Constraints

Overlay of various site constraints that must be considered during masterplan design development.

- Bushfire Zone
- Bushfire Zone Buffer
- Ecological Zone R
- Ecological Zone C (+10m buffer)
- Biodiversity Corridors
- Water creek Buffer
- Ecological Zone R 45m buffer

5

LAND USE OPTIONS ASSESSMENT

- 5 a Land use concepts
- 5 b Options assessment and appraisals
- 5 c Benchmarking



Land use concepts

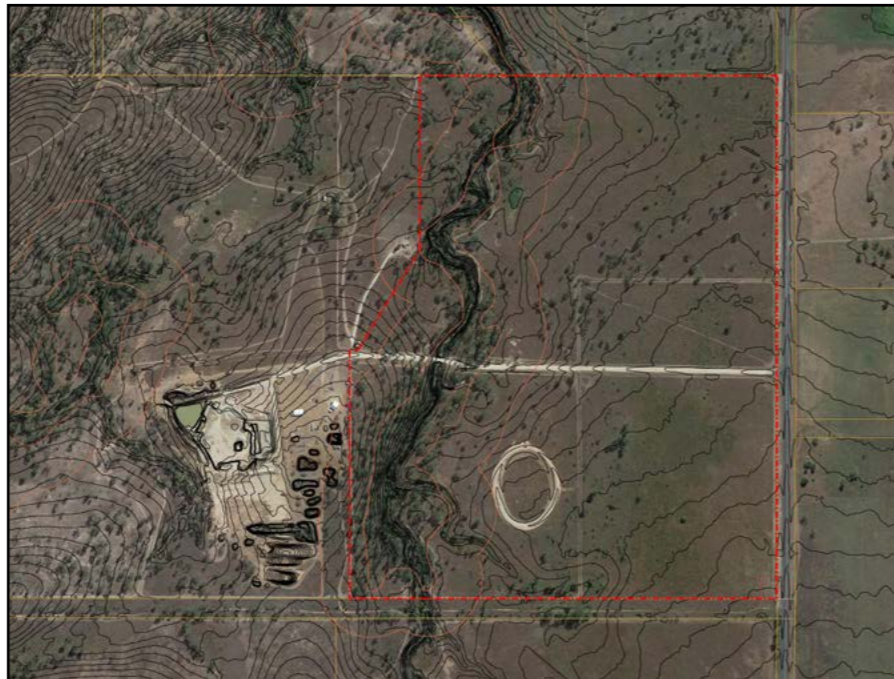
SITE CONSTRAINTS

The Motorsports Precinct was identified by analysing site constraints and a series of land use options.

Prior to any design sketches or options being developed, design experts analysed the site conditions and constraints, overlaying topographic surveys and environmental zones as well as understanding access requirements.

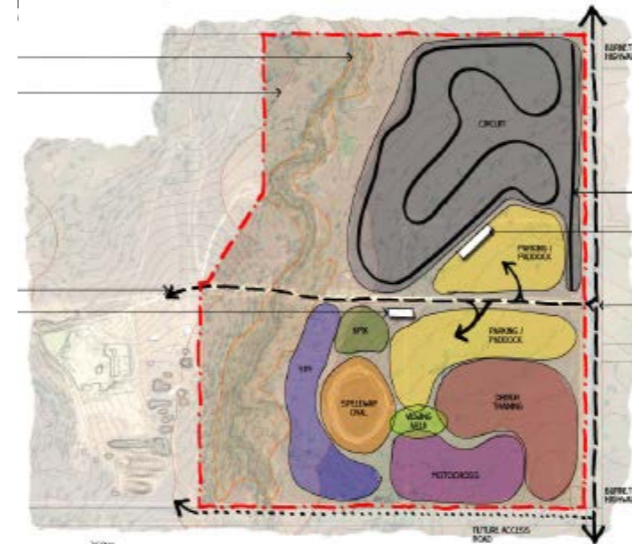
Some of the key constraints included:

- Approx 100 hectare site, not all of which is able to be developed.
- Creek running north-south through the site.
- Ecological + bushfire buffer zones, offset from the creek.
- Requirement to maintain existing access to the quarry from highway.
- Requirement to mitigate dust from highway and residential properties to North.



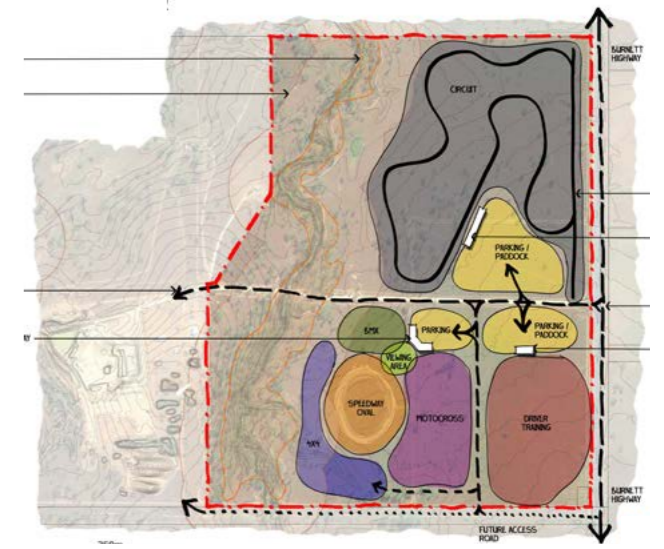
LAND USE OPTIONS

Upon review of the site constraints, the design experts began to develop a range of land use options to analyse overlay the spatial and programming requirements of the Motorsports Precinct onto the property and to review potential land use arrangements for discussion with Council and community.



Land Use Diagram | Option 1

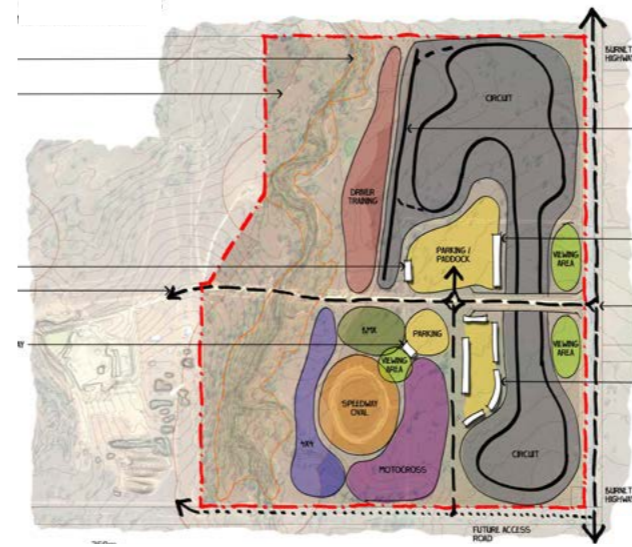
Provides road course and separated 1/8 mile drag strip to the north portion of the property. Drag strip is located to minimise impact on land take. Southern portion of the site dedicated to a mix of driver training, parking and off road sports



Land Use Diagram | Option 2

An evolution of option 1, now incorporating the drag strip into the road course design allowing for a longer straight on the circuit.

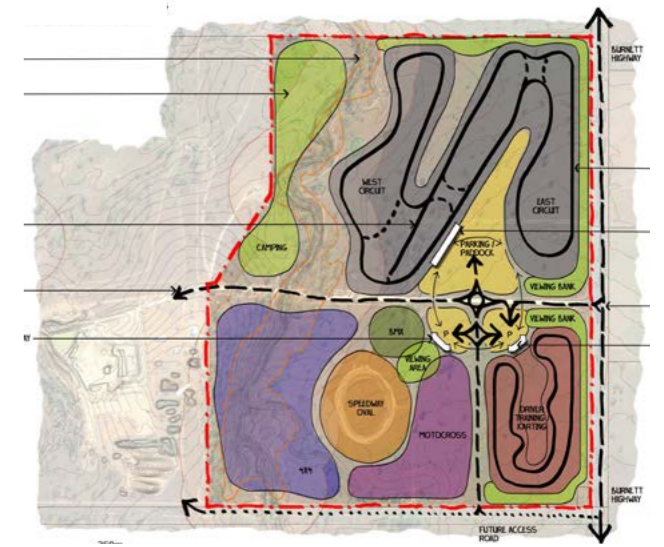
A secondary north / south entrance road provided to segment the driver training from the off road zone. Improved centralised plaza for parking and ease of access to all motorsports facilities.



Land Use Diagram | Option 3

Focuses on optimising length of the road racing course, shifting the drag strip and driver training to the North West of the property. Would require a bridge or tunnel to retain existing site access.

Off-road activities remain situated in south west of site.



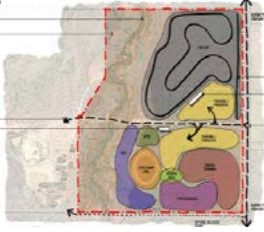
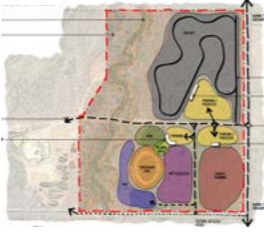
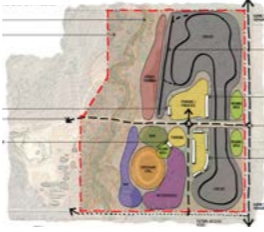

Land Use Diagram | Option 4

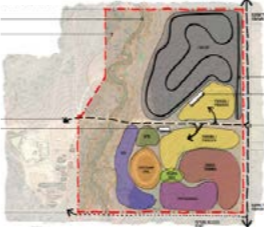
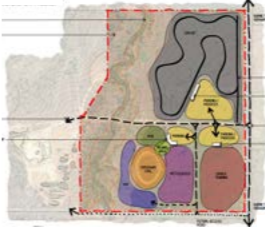


Focuses on achieving a minimum of 3km length for the road course, but with a more compressed track layout and integrated drag strip.

Driver training and karting integrated into one zone in south east with off-road activities remaining in south west.

5b

Options assessment and appraisals

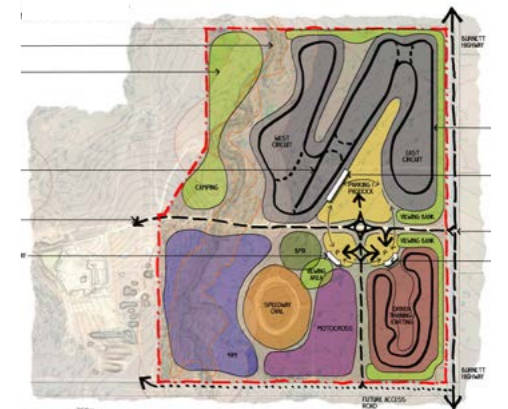
	OPTION 1	OPTION 2	OPTION 3	OPTION 4
				
General Pros	Site access retained. Separated drag strip with fast flowing track. Off-road away from highway + residential	Site access retained, plus second access. Long straights on track. Off-road away from highway + residential.	Longer road racing track. Unique entrance design. Off-road away from highway + residential.	Site access retained, plus second access. Long straights on track. Off-road away from highway + residential.
General Cons	Inefficient use of space, large land take for main road course and driver training.	Drag strip integrated into main road course design.	Requires bridge / tunnel. Integrated drag strip into road course. Limited space for other tracks / activities.	Drag strip integrated into main road course design. 4x4 encroaching into environmental zones.
Access	Primary access retained. Limited options for secondary access.	Primary access retained. Allowance for secondary access, creating three distinct zones.	Primary access retained but via bridge / tunnel. Allowance for secondary access, creating distinct zones.	Primary access retained. Allowance for secondary access, creating three distinct zones.
Environ. impact	Off-road to south, mitigating dust impact on highway/residential. No encroachment into sensitive zones.	Offroad tracks to south, mitigating dust impact on highway/residential. No encroachment into sensitive zones.	Offroad tracks to south, mitigating dust impact on highway/residential. Drag / driver training close to environ. zones.	Offroad tracks south, mitigating dust impact on highway/residential however 4x4 encroaching into environ. zones.
Noise	Drag strip near highway, reducing noise impact.	Drag strip near highway, reducing noise impact.	Drag strip and driver training closer to residential properties, potentially tougher to mitigate noise.	Drag strip integrated into centre of road course. No possibility to operate full track + drag strip together, limiting noise.
Operation (major events)	Large parking areas provided but improvements required to provide paddocks for each track.	Improved access, but improvements required to provide paddocks for each track within the off road zones.	As per Option 2, but concerns that bridge / tunnel close to highway may cause stacking or visibility distractions.	Improved access, but improvements required to provide paddocks for each track within the off road zones.

	OPTION 1	OPTION 2	OPTION 3	OPTION 4
				
Phasing	Possible to develop either North or Southern development in separate phases.	Possible to develop three zones of the site (Northern Road Racing / South-West Off-Road Racing / South East Driver Experiences) as separate phases. Allows 2nd entrance to be built at a later date.	Phase 1 would likely be off-road zone but future tunnel / bridge access to be considered on day 1. Would require larger phase 2 commitment to road course phase.	Possible to develop three zones of the site (Northern Road Racing / South-West Off-Road Racing / South East Driver Experiences) as separate phases. Allows second entrance to be built at a later date.

SUMMARY FINDINGS

It was agreed between Council and the design team to proceed with initial design sketches and a first concept based on land use option 4. The following reasons were outlined, subject to further design due diligence and development and consultation feedback.

- Allowance for grass viewing banks around tracks, helping to create a stadium effect and minimising noise impact to north of the site.
- Location of off-road tracks to the south-west helps to mitigate dust control to highway and residential properties to the north of the site.
- Good separation of motorsport disciplines into 3 distinct zones, allowing a phased approach to development and separate operational activities to apply.
- Centralised plaza and parking zone, with easy access to all three development zones.
- Achieves target minimum length of 3.0km for the road course, with minimal footprint.
- Retains access to quarry, with potential to expand with secondary entrance.
- Design development subject to consultee feedback.



Benchmarking

Benchmarking was a crucial exercise in the development of the plans. It is important to understand what other established venues have for people to experience, as well as knowing what other proposed facilities will offer.



Credit: TripAdvisor



Credit: IcePortal

THE BEND MOTORSPORT PARK

The Bend Motorsport Park is conveniently located 1 hour drive from Adelaide.

Opening in 2017, The Bend is one of Australia's newest facilities and complies with FIA Grade 2 and FIM Category A standards. It boasts a 7.77 km track which can be split into 8 circuit configurations.

Recent additions since construction include the Rydges Pit Lane Hotel, which opened in 2019. This **725+ hectare** precinct is significantly larger than the proposed Rockhampton Motorsports Precinct which occupies 100 hectares.

Key facilities

- 7.77 km FIA Grade 2 track
- 8 circuit configurations
- 2.2 km drifting, 1 km karting track
- 3 km rally stage + rallycross circuit
- ANDRA 1/4 mile drag strip
- 4WD adventure trails
- Welcome centre + 300m pit building. Pitlane Hotel, holiday + RV park, and Business Park



Credit: ASBK



SYDNEY MOTORSPORT PARK

Known as Eastern Creek until 2012, this motorsport park was first opened in 1990, and is over approximately 109 hectares.

In early 2011, the circuit received funding for a \$9 million upgrade, with the NSW Government providing \$7 million. The upgrade reconfigured the circuit into 4 layouts, with two able to be operated at the same time, with a total length of 4.5km.

The circuit hosts a variety of events ranging from car and motorcycle track day, sanctioned racing competitions, cycling events and driver training activities.

Key facilities

- 4.5 km FIA Grade 2 track
- 4 circuit configurations
- 9,000 sqm skid pad
- 321m figure 8 skid circuit
- Off-road course
- Integrated drag strip
- Main pit building
- Southern pit building + paddock
- Neighbouring drag + karting tracks



Credit: Queensland Raceway



QUEENSLAND RACEWAY

Opened in 1999 and nicknamed 'The Paperclip', this Motorsport Australia and Motorcycle Australia sanctioned venue is located at Willowbank, Ipswich, QLD.

The 3.1km circuit has hosted rounds of the V8 Supercars and Australian Superbike Championship. It runs its own events under the RACERS sanctioning body including club racing, drifting and ride days.

Spectator viewing is provided by surrounding spectator mounds. The entire site, including the neighbouring Willowbank drag strip occupies approx. **137 hectares**.

Key facilities

- 3.1 km circuit
- 4 configurations
- Pit garages + paddock
- Neighbouring facilities include Willowbank drag strip, dirt oval, karting track and off-road courses.



Credit: Speedcafe



TOOWOOMBA MOTORSPORTS PRECINCT (PROPOSED)

The proposed Toowoomba precinct, located west of Brisbane in Queensland, includes the establishment of a Motorsport and Driver Training Excellence centre as part of the Wellcampe Entertainment Precinct, to be developed by the Wagner family.

It is set to be a \$175 million project that includes a range of facilities for motorsport, driver training, and a 40,000 person performing arts venue. Premier Annastacia Palaszczuk said the plan has the potential to revolutionise the economy of Toowoomba and the Darling Downs. Eugene Arocca, CEO of Motorsport Australia, added 'Motorsport desperately needs more permanent venues in this country'.

The project is estimated to create 130 jobs during construction and 25,000 when hosting major events.

Key facilities

- Road course with east/west layouts
- Road safety driver training facilities
- Pit complex
- Motorcross and supercross tracks
- International karting track
- Articulated vehicle training ground
- 4WD courses
- Amphitheatre for events
- 5,000 person camping ground

Benchmarking



Credit: Snaplap



BAHRAIN INTERNATIONAL CIRCUIT | BAHRAIN

The Bahrain International Circuit opened in 2004, reportedly initially constructed for \$150m US dollars.

The circuit has a FIA Grade 1 license and is home to the Formula 1 Bahrain Grand Prix, as well as hosting other international race series such as Australian V8's, F2 and the FIA World Endurance Championship (WEC).

In addition, the facility is home to a 1/4 mile drag strip, 4x4 course and in 2012 the venue hosted the FIA-CKI World Karting Championship on a new purpose built karting circuit. Day to day events include track experiences, 4x4 and junior dragsters.

Key facilities

- 5.4 km FIA Grade 1 Circuit
- Formula 1 pit + paddock facilities
- 1.4 km International Karting track
- 1/4 mile drag strip
- VIP tower, canteen and offices
- Extensive parking facilities
- Permanent grandstands
- Off-road course

CASTLE COMBE | UNITED KINGDOM

Castle Combe is one of the oldest motor racing circuits in the whole of the United Kingdom, since 1950.

The 3.0 km circuit is undoubtedly the key attraction, and one of the fastest in the country. The track is capable of hosting competitive events, but these are generally limited in its calendar due to its close proximity to a nearby village.

However, the circuit is operational 365 days a year thanks to leisure track days, with their own fleet of cars available for paying customers to experience. In addition to the circuit, Castle Combe more recently introduced a skid pad, bambino (juniors') kart circuit and a 4x4 course to expand its offering of driving disciplines.

Key facilities

- 3.0 km circuit
- Pit building + viewing
- Flexible paddock space
- Long, open pit lane for race teams to operate from temporarily.
- Track days and experiences
- Bambino kart circuit
- Skid pad
- 4x4 course
- Canteen, food and drink



NATIONAL CORVETTE MUSEUM | UNITED STATES

The Motorsports Park is the driving playground of the National Corvette Museum (NCM) which opened 2014.

Corvette offered High Performance Driving Events at other venues but wanted their own track to call home.

The Motorsports Park therefore was designed with experiences in mind, a place where drivers of all ages, interests and skill levels could become more proficient behind the wheel, and the track has multiple configurations to offer different layouts for different occasions. The track has its own building, and its own on-site fuelling station.

Key facilities

- 5.6 km main circuit
- Multiple track configurations
- Used solely for driving experiences
- Open to hire by manufacturers for private experience days
- Driver education and race school
- Open to cars and motorcycles

DRIVEIT, TOWNSVILLE (PROPOSED)

Situated 40 km from the Townsville CBD, DriveIT is a driver education centre and motorsport precinct.

In a similar way to the proposed Rockhampton Motorsports Precinct, DriveIT also aims to incorporate local organisations, clubs and individuals into one central Precinct.

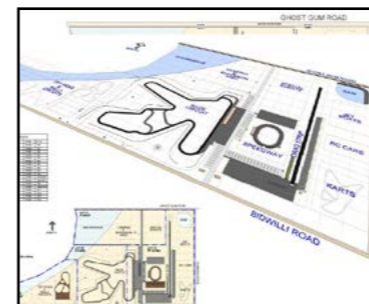
Its key features will be a race circuit, an off-road circuit, a speedway, drag strip and karting circuit, with a primary focus on driver training and education. The complex will also be used for competitive events and recreational activities. Plans also cater for a potential jet boats course.

Key facilities

- Race Circuit + Building + Paddock
- Off-Road Circuit
- Speedway
- Drag Strip
- Karting
- Jet boats course
- Driver Education



Credit: GVD Building Design

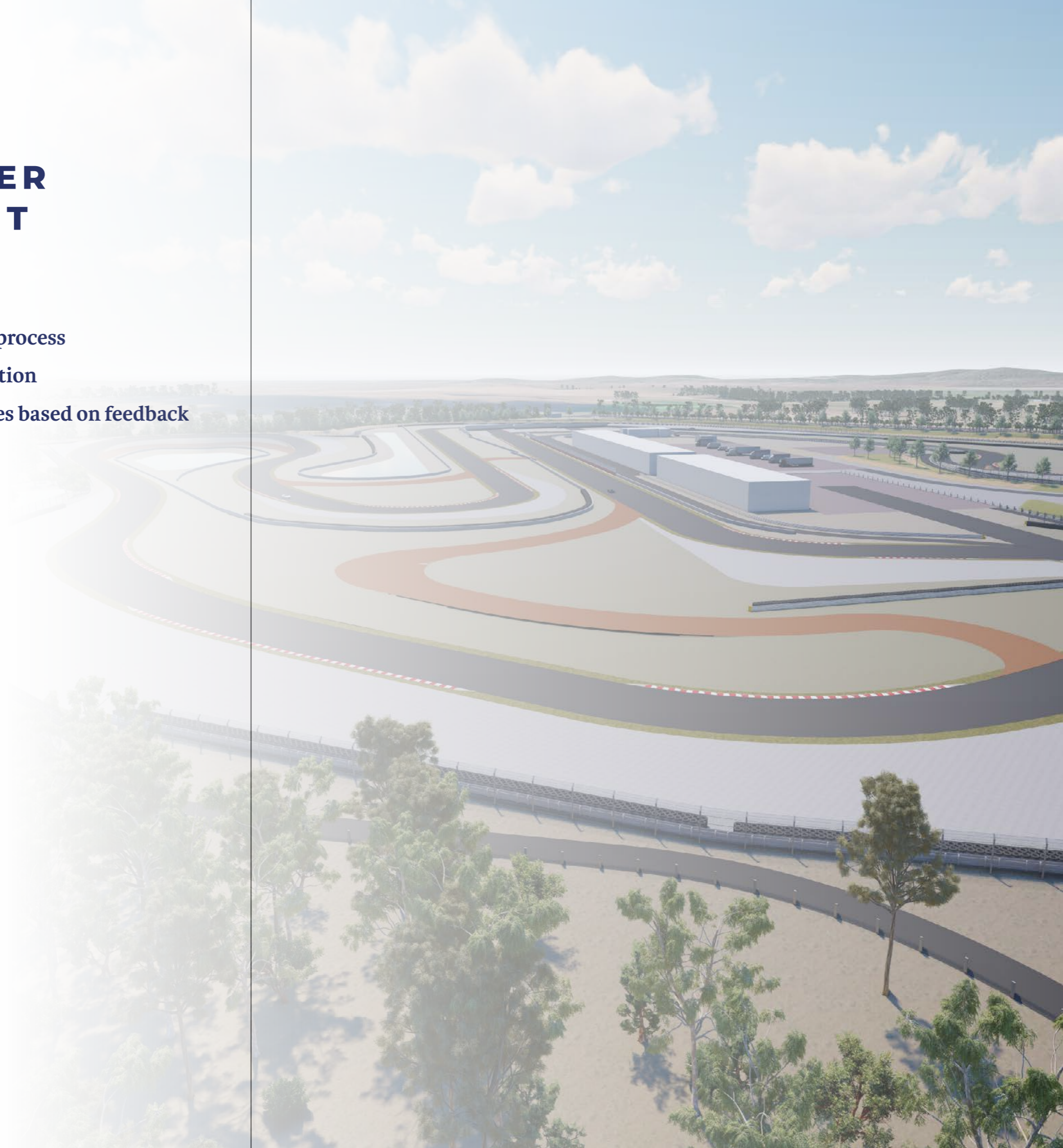


Credit: DriveIT

6

STAKEHOLDER ENGAGEMENT

- 6 a Engagement methodology / process
- 6 b Summary of public consultation
- 6 c Proposed masterplan changes based on feedback



Engagement methodology / process

Rockhampton Regional Council engaged with a variety of groups during the masterplan development.

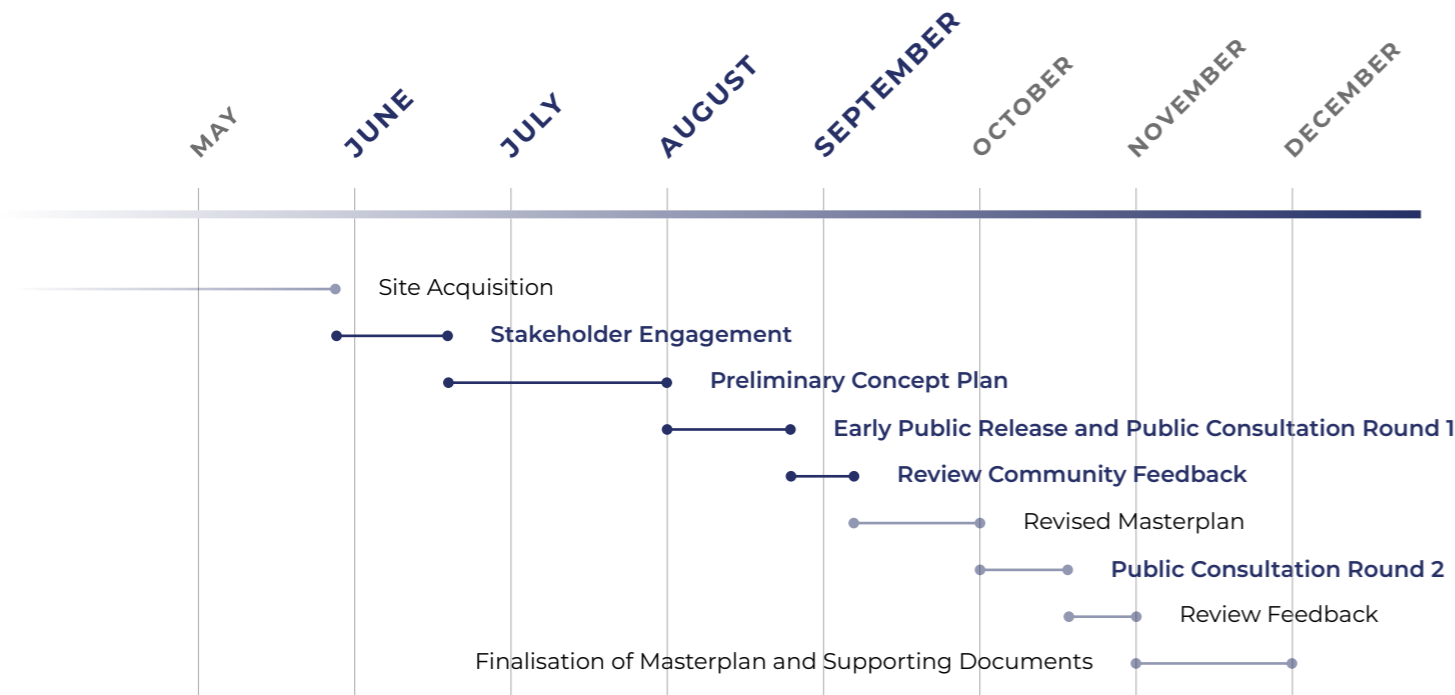
Stakeholder engagement formed a significant part of the master planning process, with several collaborative sessions taking place between June and September 2020. The feedback from the various engagement sessions had an influence on the masterplan design.

Council began the master planning by firstly meeting within motorsports clubs in the Rockhampton Region, prior to concept plans being developed. The purpose was to engage early in the process to formulate a brief for the motorsport designs, and incorporate comments into the master planning exercise.

Council also engaged with several Queensland State Government agencies for their input and feedback on the initial design plans, prior to releasing the first Concept Plan for public consultation, which invited residents to review the plans and feed back with comments and suggestions.

The designs were amended throughout 2020, with a second round of public consultation held in October 2020, allowing the key feedback from across a variety of stakeholders to be incorporated, where practical, into the final Masterplan.

STAKEHOLDER ENGAGEMENT TIMELINE



STEP 1 MOTORSPORT CLUBS

While relocation into this precinct is completely voluntary, it is important that the precinct addresses design requirements of motor sporting clubs to allow for a potential future transition into the precinct. This process allowed Council and their designers to understand the club's vision, current issues, aspirations for the future, and to understand how the motorsport precinct could accommodate their needs, where practical. The club owners were asked to feedback as much information as possible on:

Land area and spatial requirements of current facility	Broad list of permanent existing facilities on offer	Temporary facilities currently needed to bring on site to operate
Other permanent utilities on site (i.e. water, gas, fibre)	Amount of incoming power at current facility	Size of events held at the facility (i.e. number of people, car parking)
Wish list of ideal facilities (to help grow participant numbers or interest in the sport, to improve overall visitor experience)	Any particular sensitivities or operational issues around sharing, access, parking or utilities on a day to day basis with other clubs	Potential improvements to tracks (Size, length, reduction in maintenance expenses, improved sustainability)

STEP 2 STATE AGENCIES

Council held a meeting with several Queensland State Government agencies for their input and feedback on the plans to discuss items such as those listed below. In general no major concerns were raised during these early consultations, subject to further design at development application.

Utility Requirements (i.e. drainage, water, power gas, fibre)	Highways Intersection improvements, capacity, secondary access routes	Environmental + Zoning Land use strategies, environmental constraints, approach to mitigation. Address encroachment into areas of natural significance. Assessment is to be made against the Agricultural Land Classification (ALC).
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STEP 3 PUBLIC CONSULTATION

Once initial plans were available, a wider public consultation began in August 2020, releasing the first concept plans for feedback.

It was really important for Council to receive the community feedback at master planning stage so any comments could be considered for the next stages of design.

Summary of public consultation

ROUND 1 | FIRST RELEASE CONCEPT PLAN

Rockhampton Regional Council unveiled the first Concept Plan in August 2020 and invited the community to provide feedback to Council.

A summary of the submission feedback from the consultation demonstrated that 266 of 369 formal submissions were in favour of the new Motorsports Precinct, with some constructive comments being provided on the plans.



CONCEPT PLAN

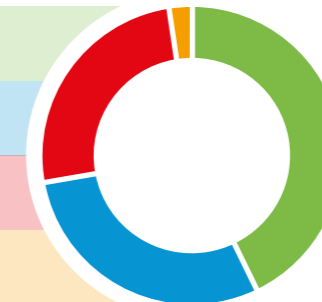
It was important to receive that community feedback at an early stage so that comments could be taken through to the next stage, resulting in a more refined Masterplan.

SUBMISSION METHOD AND BY CATEGORY

Over 2,600 people viewed the detailed information about the Motorsports Precinct on the Engagement HQ website.

	Overall Precinct	Drag Strip	Dirt Bikes Motocross	Motorcycles Circuit	Circuit	Speedway	Karting	Driver Training	Environmental	Traffic	Zoning	Other	
Total Submissions	369	214	50	7	28	27	10	10	6	69	42	23	99
Engagement HQ	306	205	48	6	27	25	10	9	6	23	11	2	45
Written Submissions	63	9	2	1	1	2	0	1	0	46	31	21	54

Total Submissions	369
For	159
For, with specific suggestion / feedback	108
Against	94
Mixed	8

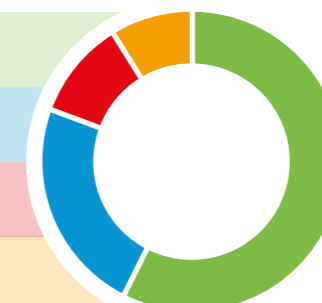


WRITTEN SUBMISSIONS

Council received a total of 369 submissions through the community consultation period. All submissions received were reviewed and analysed by Council and their design experts.

The Concept Plan was published on Council's Facebook Page, Engagement HQ page and shared on multiple online platforms including Speedcafe and Auto Action.

Total Comments	243
For	140
For, with specific suggestion / feedback	56
Against	26
Mixed	21



FACEBOOK COMMENTS

Council made a record of comments about the Motorsports Precinct that users posted in response to a post made by Council.

A total of 243 comments were recorded as of 12:00 on 4 August 2020. Repetitive comments from the same person have been excluded.

Summary of public consultation

SUBMISSION BREAKDOWN

All 369 submissions were reviewed in order to take on board community feedback and refine the plans.

Key consideration
Updated on final Masterplan

A summary of the key points against each category are provided herein, with responses from council.

	SUBMISSION COMMENT	RESPONSE
Overall Precinct	<p>The submitter is in support of the proposed Motorsports Precinct.</p> <p>The submitter is against the proposed Motorsports Precinct.</p>	<p>Council acknowledges the passion and enthusiasm for motorsports within our region.</p> <p>Council acknowledges the concerns raised over the proposed Motorsports Precinct. Every effort will be made to ensure the concerns are addressed and any impacts are mitigated.</p>
Drag Strip	<p>Multiple submissions suggesting a 1/4 mile track would be more beneficial over the 1/8 mile track. The longer track would be able to host bigger events.</p> <p>Suggestions also made to separate the drag strip from the main circuit as opposed to integrating them together.</p> <p>The submitter has suggested the drag strip be constructed with the correct materials from the beginning to ensure future upgrades / repairs are not required. Suggests laying concrete from start to finish line with concrete walls to an international standard.</p>	<p>Site constraints exist whereby accommodating a 1/4 mile track, and still providing all other amenities, would be un-viable due to the width of the site, noting the need to maintain access to the existing Quarry. Option studies were undertaken on this topic.</p> <p>Council have since changed the design to accommodate a standalone 1/8 mile strip. The drag strip has been repositioned to avoid conflicts within the circuit (impact upon circuit track surface) and has positioned the strip so it could be potentially extended in the future too.</p> <p>The drag strip will be bordered by concrete walls along both sides for the protection of participants and spectators. The drag strip will be compliant with ANDRA standards for track design and materials.</p>
Motorcycles	<p>The submitter has suggested Council consider the circuit track for motorcycles / sports bikes.</p> <p>The submitter has suggested Council consider a flat track for dirt motorcycles for children and vintage bikes.</p>	<p>The proposed circuit will be able to accommodate motorcycles / sports bikes for track days but not international competition.</p> <p>Council has considered these comments and as such have incorporated flat dirt track into the design (speedway bowl). The main circuit & rallycross track could also be used for SuperMoto.</p>

	SUBMISSION COMMENT	RESPONSE
Circuit	<p>The submitter has suggested viewing mounds to be fairly high as the pit buildings are in the middle of the track.</p> <p>The submitter has suggested the ability to park and view all around the track.</p> <p>The submitter has suggested Council consider run offs and air fences for motorcycles.</p>	<p>Viewing banks will be 3-4 metres in height allowing viewing for multiple sections of track. Pit buildings are proposed to be two storeys in height, and will also include viewing facilities from the first floor of the building.</p> <p>The design accommodates for viewing banks around motor sporting activities., with parking areas close by to the banks.</p> <p>The project does not seek to accommodate the requirements of competitive motorcycle racing however the design is compatible with measures such as air fencing and run off distances and materials that would be suitable for non-competitive motorcycle activities on the Circuit.</p>
Speedway	<p>The submitter suggests Council consider a junior speedway bike track.</p> <p>The submitter has raised concerns with the potential dust and dirt from the speedway events, wafting and spreading onto the bitumen track. Dirt on bitumen track may make the circuit slippery.</p> <p>The submitter has stated to attract major national categories (sprint cars), the speedway track needs to be more oval in shape and at least 450 metres on the pole line, with banked corners (oval track will provide better spectator viewing for faster cars)</p>	<p>The proposed speedway track incorporates a junior track in the centre of the larger track.</p> <p>Current layout shows speedway and the circuit located approximately 150 metres away, and motocross tracks around 50 metres from circuit track. It is envisaged that an Event Management Plan would be prepared to ensure there is no conflict between track usage, along with regular track inspections, maintenance and cleaning.</p> <p>The design of the speedway track has been changed into an oval shape to accommodate for longer straights and more passing. The length of the straights has been changed to 40 metres. The overall length is 450m.</p>
Karting	<p>The submitter has suggested Council consider more corners.</p>	<p>The longer straight was suggested by the club so the track can accommodate faster karts (gearbox karts). There are a number of 'cut throughs' which enables the track to be shortened and add more bends for operating different classes of karts.</p>

6b

Summary of public consultation

	SUBMISSION COMMENT	RESPONSE
BMX	The submitter would like to see detailed plans of the BMX track.	Council are still in the early planning stages and detailed plans have not been completed. It is envisaged this area will include a sealed or stabilised track (using bitumen / dirt glue or polymer aggregate coating) for smooth weatherproof hard wearing surface. Track is formed of a raised start ramp, with jumps and obstacle throughout the course. There will be a spectator viewing bank next to the track.
Driver Training	The submitter suggests a circular skid pan has very limited application. The submitter suggests the kick plate is a feature that has limited benefit and enormous cost. Need to consider sand traps and watering systems to assist with driving training activities. Will there be the provision for a classroom in the 'welcome building' for driver training?	Council understands the costs associated with these types of features. It is anticipated that the driver training area will include a multi-use asphalt area that can be set up with cones when required and can be used for overflow parking. It also allows for the future upgrade to include a skid pan or kick plate if the need arises. The proposed driver training area will be equipped with the required training equipment. At detailed design stage activities associated with and required for driver training will be investigated. It is planned that the welcome centre will provide for rooms available for driver training courses. The design of welcome centre will be addressed at detailed design stage.
Environmental	Multiple concerns the precinct will cause a noise nuisance.	Council recognises noise as a high priority and sensitive issue at other motorsport venues. The specifics of other venues cannot be compared to the site due to the difference in circuit orientation, weather and location of receptors. Council have undertaken noise monitoring at neighbouring receptors which will inform the Noise Impact Assessment. A full Noise Impact Assessment will form part of the Development Application and determine level of noise generated by the Precinct and the mitigation measures to address noise. Landscaping bunds around the Precinct will provide obstructions that help to reduce the noise impact. An on-site noise management plan will be required and implemented, which will include, variation of track session times and days to reduce noise impact.

	SUBMISSION COMMENT	RESPONSE
	Submissions received requesting information on how Council will address dust pollution and mitigation measures.	The dirt tracks have been positioned on the southern side of the Precinct close to detention basins. It is envisaged the dirt tracks will be regularly graded and wetted for dust suppression. Dust will also be mitigated through vegetation buffers, bunding and fencing. In addition, this Precinct will have an on-site dust management plan for construction and operational phases to address dust generated by the project such as: regular watering of exposed surfaces, use of dust suppressants, controls on stockpiled materials, wheel washing, regular maintenance and cleaning of tracks landscaping, and restricting of unauthorised dust generating activities.
	Concerns were raised with the impacts the proposal would have on the existing wildlife habitat in the area and along the creek line.	The proposal has been designed to ensure the development is sited outside of the Biodiversity area, including Category C Vegetation area. The creek area including existing vegetation will be maintained for a wild life corridor, connecting adjoining land to the north and south.
	Submissions received with the concerns pollution from petrol, diesel, oil and rubber will end up in the local creeks and streams during periods of rainfall resulting in pollution.	Managing water on site will focus on the removal of silt, hydrocarbons and other pollutants to prevent them being released into the environment outside the site. Dedicated drainage systems will allow for the treatment of water before discharge into the wider site network. This will also allow for the additional containment controls (e.g. blocking of chambers or closing all valves) to prevent a spill from reaching outside of a controlled area.
Traffic	Submissions were received with traffic concerns, in particular, accessibility to the site, traffic queuing on the Burnett Highway and the significant strain on the Burnett Highway (and other roads in the area) from additional traffic generated by the Precinct.	A full Traffic Impact Assessment will be prepared and submitted with a Development Application. This assessment will address the number of vehicle movements, the impacts on the Burnett Highway and surrounding road networks and any necessary upgrades that may be required as result of the proposal. Furthermore, the Development Application is required to be referred to the Department of Transport and Main Roads with respect to State Transport infrastructure.

6b

Summary of public consultation

SUBMISSION COMMENT

RESPONSE

Other

The submitter has suggested Council consider a 4WD training track.

The proposal incorporates a dirt track in the south-west corner which can be used for 4WD training.

The submitter has suggested Council future proof the site for emerging EV motorsport scene.

The growth in Electronic Vehicle is being considered for the precinct and will be addressed at the detailed design stage including charging stations and the like.

The submitter has suggested Council consider local community groups and schools for fundraising.

Council would like to support community groups and schools where possible.

The submitter has concerns with the operating hours.

The operating hours will be in accordance with the management plan of the Precinct, which will consider hours of operation in respect to noise, dust, light and other impacts. The management plan will need to comply with the requirements under the Environmental Protection Act and conditions as part of a development application.

Submissions received suggesting Council consider a large green space or amphitheatre for concerts, static car displays, swap meets and markets.

Council is very supportive of multi purposing the Precinct for concerts, car shows, markets, just to name a few. **The proposal includes a large area near the circuit that can be utilised for these types of events.**

Submissions received asking if Council have consulted with all motor sporting clubs.

Council have met with the clubs and will continue to during this master planning process. Feedback received from clubs has been positive.

The submitter would like Council to consider a burnout pad.

A burnout pad has been included on the latest concept plan.

Submissions were received asking if there will be power and amenities to the camping area.

The infrastructure requirements for Precinct including buildings, amenities and camping **will be addressed at detailed design stage of the project.** No decision has been made at this early stage in relation to whether the camping areas will be powered or not.

Submissions were received outlining the non-compliance with the Rockhampton Region Planning Scheme and the rural zone code

Site is zone rural under the planning scheme. Non-rural activities can occur in the rural zone, when they can address the requirements under the rural zone code. These are further addressed by the Technical Assessments and a further planning report will be produced if the project progresses to the lodgement of a development application.

6c

Proposed masterplan changes based on feedback

ROUND 2 - SECOND RELEASE CONCEPT PLAN

Rockhampton Regional Council unveiled the following Concept Plan in October 2020 as a result of the first round of consultation, including revisions to the Master Plan as a result of community feedback.

The design evolved significantly from the first Concept Plan, and formed the basis of the final Masterplan. A full list of updates follows on the next page.



6c

Proposed masterplan changes based on feedback

OVERVIEW

Following an assessment of the feedback from the motorsport clubs, State Agencies and public consultation, the following changes have been proposed to the masterplan.

Drag Strip

Now a standalone 1/8 mile drag strip, repositioned to avoid conflicts within the circuit. Also positioned closer to highway with grass banks either side to minimise noise impact.

Off-Road Racing

Intertwined PeeWee / flat track with Supercross track. Flat dirt tracks incorporated into the design.

Driver Training

4WD driver training on south-west side of creek (emphasis on driver training, not off-road tracks).

Driver Training changed to multi-use asphalt area that can be set up with cones when required, but can be used for overflow parking.

Circuit

Revised T1 for new overtaking spot, and pit exit amended to suit. Rallycross track amended to cross main start / finish line.

Karting

Additional bends added. Selection of 'cut-throughs' enable the track to be shortened and add further bends.

Environmental / Traffic

Vegetative buffer / noise barrier added along northern boundary.

Additional parking at north of the site, with access via the drag strip return road.

Speedway

Orientation and design changed to accommodate for longer straights and more passing. Length of the straights now 40m. Total length 450m.

Separate competitor access to Speedway tracks and pits, and additional officials tower. Communal entry, pit area, pit amenities, storage sheds, canteen / bar for Speedway and mud racing. Pits visible from viewing banks.

Other

Dedicated burnout pad included, visible from circuit and drag strip viewing banks. Motorkhana moved to asphalt driver training area.

Radio controlled car track moved to Driver Experience area, viewable from the site welcome centre.

Some suggestions were unable to be implemented in the revisions to the Masterplan for the following reasons.

BMX to move to north-western side of the creek.

Unable to do so due to environmental restrictions.

Additional pedestrian entry gate to circuit, to allow for easier access.

A third road (off the highway) triggers potential operational and Quarry access issues.

Flip circuit around to separate competitor entry from main entry point, and to have backs facing the Sun on pit lane. Re-configure layout to suit, and include additional links for drifting and other track operation.

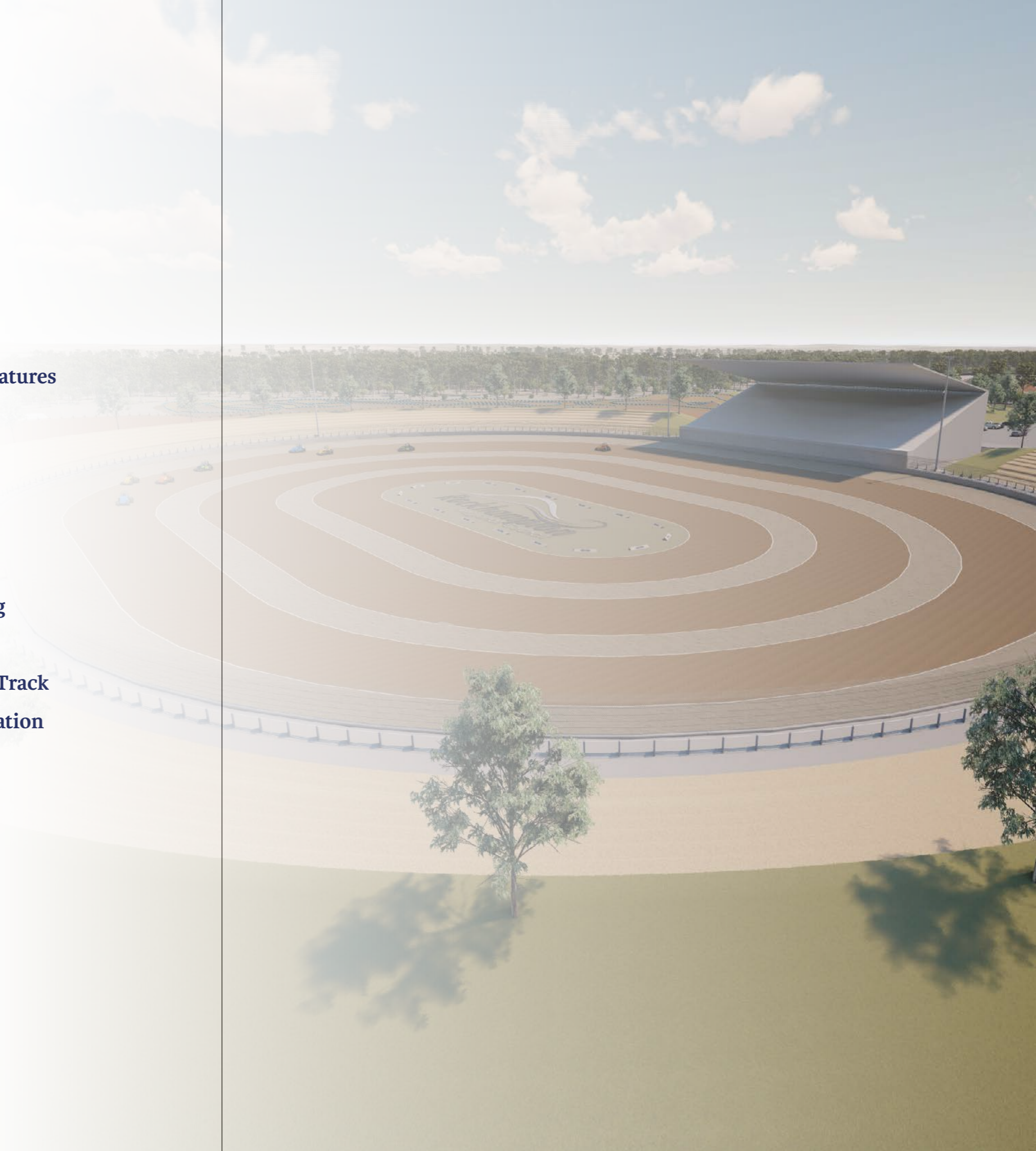
Doing so would limit the possibility to contain noise outbreak to the north (due to bunding placement), and also result in the loss of the

'Central Plaza' which enables access to other zones on the Precinct. This in turn means it will become more difficult to share facilities, resulting in added cost. This was studied as an exercise by Council and our designers to review this comment.

7

MASTERPLAN DESIGN

- 7 a Overall Masterplan
- 7 b Design language and concept features
- 7 c Road Course
- 7 d Drag, Drift and Rallycross
- 7 e Speedway and Solos Dirt Oval
- 7 f Supercross and PeeWee tracks
- 7 g 4x4 and Mudsports
- 7 h Road Safety and Driver Training
- 7 i Karting
- 7 j BMX and Radio Controlled Car Track
- 7 k Welcome Centre and Service Station





The Rockhampton Motorsport Precinct masterplan combines feedback from motorsport clubs, the public, and state agencies to create a new multi-purpose Motorsports Precinct for the region.

ROAD RACING

Road Course

3.1km circuit, designed to FIA grade 3 guidelines, capable of hosting regional, national and international events.

Drag Strip

1/8 mile, to operate independently from the Road Course, with a grass viewing bank along its entire length.

Rallycross

Utilising parts of the western side of the Road Course, for short format, mixed surface racing.

Motokhana

Specialist burnout pad, for various types of precision driving.

Drifting

Utilising the eastern side of the Road Course, with long sweeping corners for drifting.

Pit Building

Garages on the ground floor and hospitality / viewing from above. Overlooks 2 parallel straights.

OFF-ROAD RACING

Speedway

450m dirt oval including 3 loops for varying categories of events. Surrounded by grass banking.

Supercross

classic outdoor Supercross dirt track, with challenging turns, berms and jumps. Can connect to PeeWee.

BMX

Gravel or sealed cycling track for youngsters and adults consisting of start ramps, jumps, table tops, whoops and berms.

Grandstand

South facing with uninterrupted views across the Speedway oval tracks. Integrated hospitality and clubhouse lounge.

PeeWee

Smaller format dirt bike track, with option to connect to Supercross track. Targeted at young or novice riders.

Storage Units

To be shared by clubs, as one pit, paddock and storage area. Easy access to all off-road modules.

DRIVER EXPERIENCE

Road Safety + Driver Training

Training beginner or advanced drivers in an open flexible space that can be laid out in various configurations.

Skid Pad

Low friction surface to teach car control and drifting. Could be used by public or to train emergency services drivers.

Radio Controlled Car Circuit

Small off road or sealed track, located conveniently next to the welcome centre.

Kart Circuit

CIK compliant 1.2km track, suitable for both direct drive and gearbox karts. Can split into smaller loops.

Kick Plate

Similar to the Skid Pad, used to teach car control. Specialist surfaces to replicate icy or wet conditions.

Welcome + Service Centre

Hub of the site and meeting point. A place to stop and relax, with food and drink facilities.

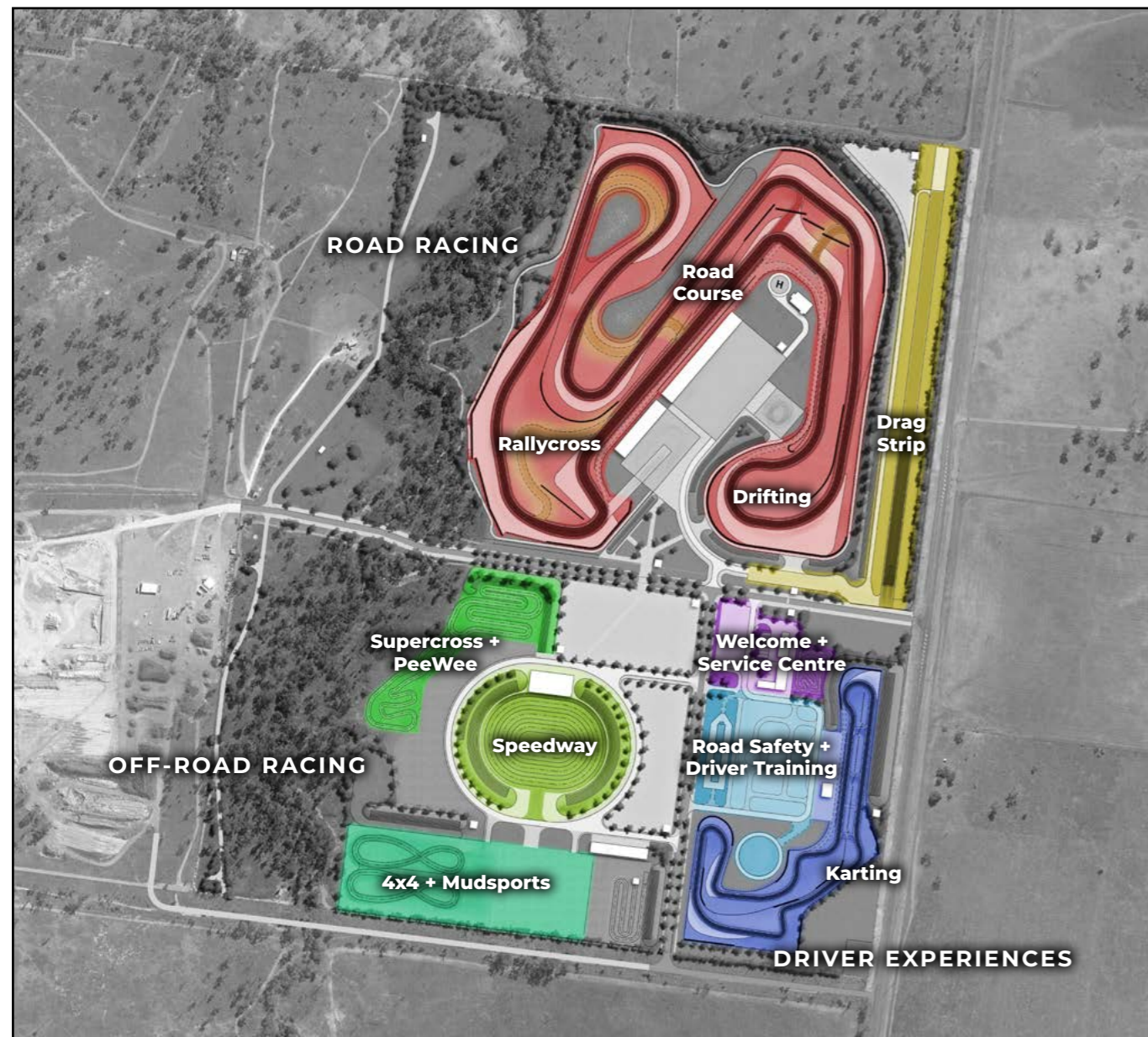
Design language and concept features

OVERVIEW

The Rockhampton Motorsports Precinct has been master planned to make best use of the existing site features to create three distinct zones catering for various motorsport disciplines.

A Motorsports Precinct designed for both participant and visitor experience.

The three zones are tied together through a common approach to landscape design across the site. Each facility is easily accessible from a centralised parking and welcome centre area, for day-to-day operation at the Precinct.



Grass banks and landscaping

Each track on the masterplan is either surrounded by or overlooked by grass banks, which will form a common design language across the site. These will help to visually break up the openness of the relatively flat property, providing a more intimate visitor experience to each zone, while also enabling back of house zones or buildings to be nestled into the site with limited visual impact.

As well as improving the visual appeal of the overall development, the 3-4m high grass banks will contribute to containing noise outbreak from motorsport activities, and will also act as useful grass viewing terraces for each of the tracks as opposed to developing dedicated grandstands that are only utilised on occasional event days. Two central tree lined boulevards will provide a sense of arrival to visitors, with clear access routes to the shared and centralised parking zones which lie adjacent to each motorsport zone. From these parking areas, the masterplan provides designated pedestrian routes, which will be identifiable through use of alternate surfacing.



Day to day operation vs Event operation

The use of each facility, in day-day mode vs event mode, has been a key consideration in the design process. The site has been arranged to allow for multi-purpose use of certain areas, for instance the road safety driver training area can become parking during an event at the Speedway. This means with a carefully planned events calendar, each motorsport club will have the ability to host events that can potentially make use of infrastructure across the whole site.

This flexible use of space will be key to the success of the Precinct.

Shared facilities

Combining so many different types of motorsport activities into one Precinct has its challenges, but these are easily outweighed by the benefits.

Centralising facilities shared by multiple motorsport clubs allows them to be more than the sum of their parts, with smaller clubs that previously only had basic track facilities now having access to a clubhouse, storage, parking, changing facilities, toilets and café areas. When holding events, clubs can make use of centralised grandstand and viewing areas, ticket booths and site infrastructure for arriving spectators - these permanent facilities are not always viable for each small club to establish and maintain, but is made possible by the collaborative nature of this Precinct.

Wildlife and bushfire considerations

Within the site boundary to the West runs a creek, along which there is an established wildlife corridor and area of bushfire risk. The masterplan is sensitive to these areas, ensuring that the wildlife route remains continuous and that only low impact activities take place within them.

A quarry is also located on the land neighbouring to the west, and access to this must be maintained.

For a shared love of motorsport

The proposed masterplan provides a new and obvious opportunity for crossover of motorsport enthusiasms amongst new visitors and regular club participants; spaces that encourage people to walk around the site and experience the wide variety of motorsports on offer have been carefully planned.

The design includes grass viewing banks around each track, offering vantage points of multiple motorsport activities simultaneously, as well as providing noise mitigation and visual screening to neighbouring areas.

Simply put, the masterplan design of this Precinct aims to build upon the visitors' love of motorsport by encouraging them to see and try something new.

ROAD RACING



Road Course

A brand new 3.1km road course.

The North sector of the Motorsports Precinct is home to a 3.1km road course, designed to accommodate FIA grade 3 guidelines in order to host major international events.

OVERVIEW

The 14 turn track will be capable of hosting an array of events including private track days, competitive racing, club events, corporate driving and drifting.

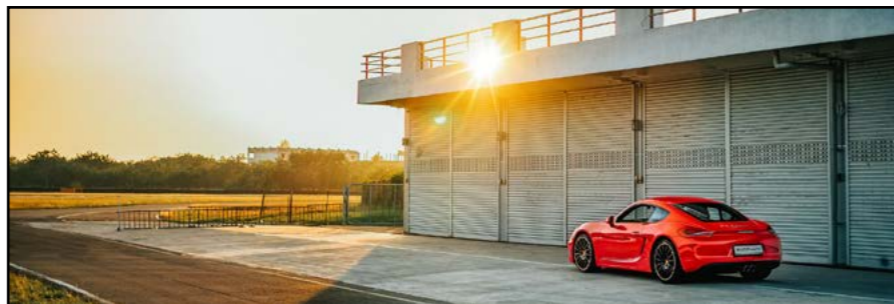
The track is 12m wide, with specific corners widened to promote overtaking opportunities. Localised areas of the circuit will include undulation to challenge more experienced drivers, while also providing a perfect training track for novice racers.

The full length circuit can be split into East and West permutations, perfect for lower capacity events on a day to day basis such as driver training, race schools, and corporate events. Furthermore, the West Circuit has an integrated Rallycross track and the East Circuit contains a drifting loop, meaning these two disciplines can also occur at the same time at one venue.

Asphalt and grass runoff areas are included, designed to FIA grade 3 guidelines, with an integrated drainage collection system. The run off zones will be bordered by FIA compliant safety barriers and debris fencing for the protection of participants and spectators.

An unsealed service road is, where possible, provided as a continuous access route around the outer perimeter of the track, connecting with the paddock and pit lane.

At the heart of the track is a multi-functional pit building offering unique views across the track, with two straights running parallel for enhanced spectator viewing experiences across a single lap.



The track will be designed to FIA grade 3 guidelines, with an asphalt track, grass, run-off areas, kerbs and safety barriers. Suitable for hosting international car racing events, but also non-competition motorcycle track days.



3.1km Road Course

Road Racing



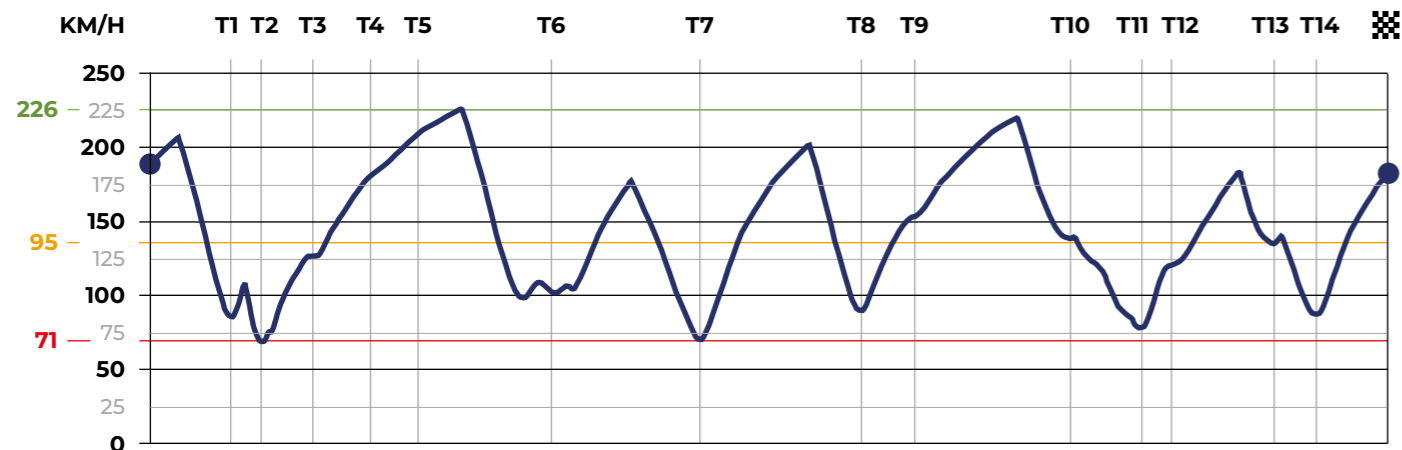
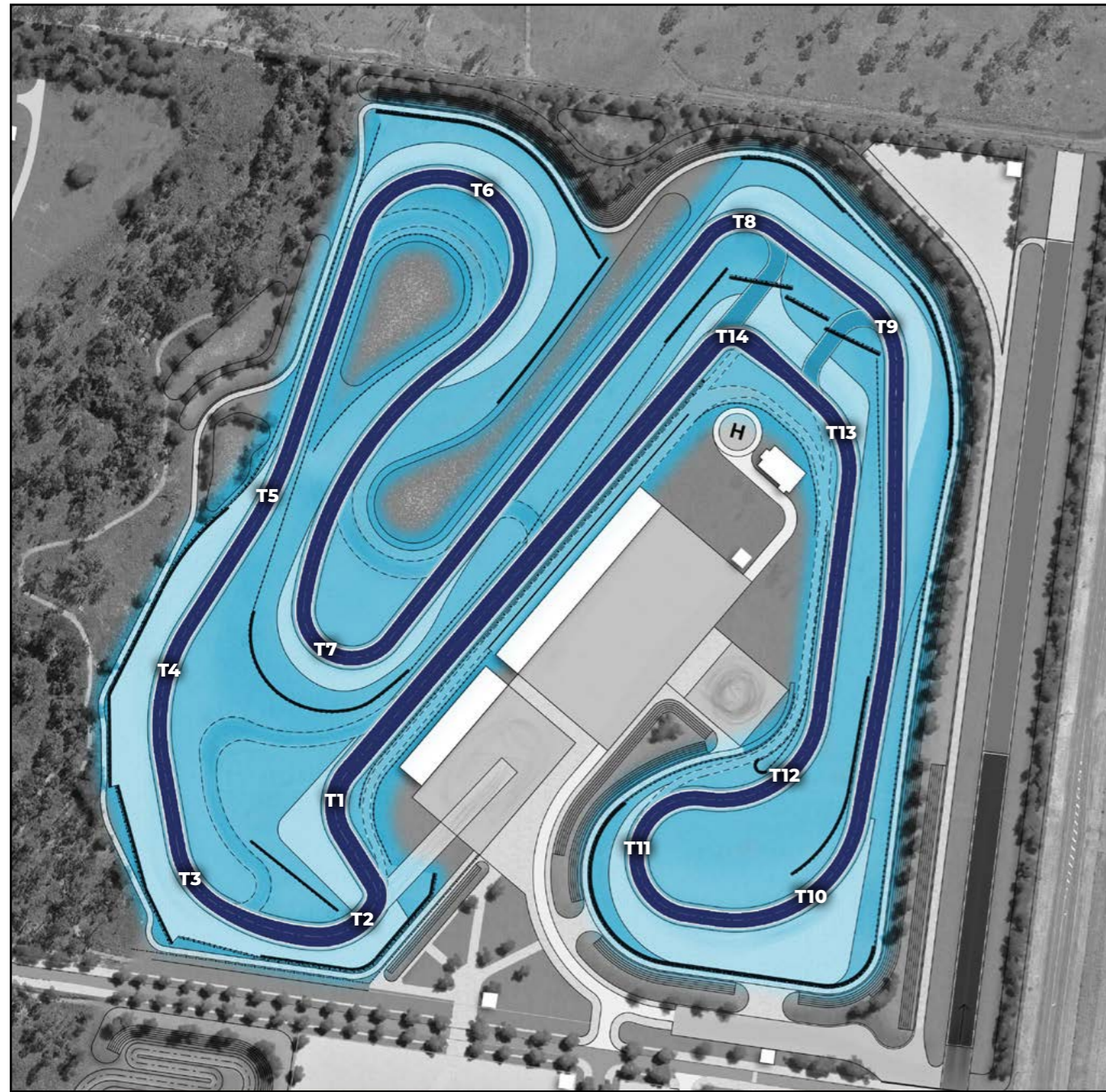
Strategically located grass banks will provide opportunities for excellent spectator views.



As well as the full 3.1 km layout, the track can be split into shorter configurations due to additional link sections of track.

The layout also features sections of dirt track for Rallycross racing to take place.





A DRIVERS' LAP OF THE TRACK

Driven International have undertaken simulations to generate a multitude of data about the circuit, and these have been used to optimise the layout.

Various car models were simulated to gather speed, gear, throttle and braking data, from a Formula 3 car (to determine the required run-off areas) to a Jaguar F-Type sports car. The lap description below is based on a V8 Supercar, as used in the popular Australian Supercars Championship.

Drivers begin the lap reaching a top speed of 207 km/h at the end of the start straight before braking for the 15m wide, Turn 1 left hander, which is followed immediately by a tighter right of T2. Expect to see overtaking take place at these first two corners, whether it be a pass under braking on the inside of T1, or a brave attempt to drive around the outside of T1 to get the inside line into T2.

A good exit out of T2 is crucial, as any speed gained here will benefit drivers through the 128 km/h T3 and flat out T4 and T5. This is the fastest and one of the most thrilling sections on the whole circuit, constantly gaining speed from the slowest corner on the circuit (T2) at 71 km/h through to the fastest corner on the circuit (T5) taken at just under 200 km/h, with subtle undulations and a crest at the apex of T5 adding to the thrill of this section of track.

Top speed on the lap is achieved on the entry to T6, reaching just over 226 km/h before braking in a straight line for the long T6 right hander, a long 55m radius 180 degree corner which offers multiple lines. Drivers then make their way towards the left hand hairpin of T7 which has a curved entry requiring some skilful trail braking on entry to hit the apex of the turn. This will be an entertaining corner to spectate from the adjacent pit building terrace.

A good exit from T7 is crucial as drivers enter a 350m straight leading to the 90 degree right handed T8, which is a potential overtaking spot under braking. From here, drivers make their way through an almost flat out right hand kink at T9 (155 km/h) and accelerate for 430m towards the tricky T10. The entry is taken at 140 km/h and tightens into T11 which will be a spectacular drifting corner and again offers multiple lines for drivers in a race situation. This whole section is overlooked by grass viewing banks for spectators to watch the track action.

As drivers accelerate out of T12 and onto the support pit straight, the left hand kink of T13 quickly follows, taken at 137 km/h with a dab of brakes required. The final corner is now approaching, requiring hard braking. While T14 is a tight corner, the track widens to 15m on entry to encourage a last gasp overtake before the end of the lap. Accelerate out of the final corner and it's back onto the pit straight to start another lap of the circuit.

Road Course

TRACK PERMUTATIONS

The Road Course has been designed to be efficient and versatile, capable of hosting different events and groups by being able to split into shorter configurations.

Primarily for use on a day-to-day basis, the shorter West and East configurations allow multiple groups to use different parts of the track at once, and a short section of temporary barriers can be easily re-configured to define these layouts.



FULL CIRCUIT

This 3.1km configuration will be capable of hosting international racing events, having been planned in accordance with FIA grade 3 guidelines.

The full circuit has four key overtaking opportunities, into T1, T7, T8 and the final widened T14. In between these turns, there is a mix of flowing sequences and high speed corners, meaning smooth cornering is crucial to maintain momentum and achieving a good lap time.

WEST CIRCUIT

The 2.1km West Circuit features the same first 7 turns from the full circuit, but then loops through a hairpin at T8 to rejoin the pits straight to start another lap.

This configuration makes turn 8 a more defined overtaking zone, with drivers having to brake harder to make the hairpin turn.

Any time lost here will be carried down the long main straight back into T1. Temporary barriers will be arranged to maintain a separation between the West Circuit and East Circuit when those configurations are required.

EAST CIRCUIT

The 1.1km East Circuit is designed with driver training and drifting in mind, operated from a support pit lane on the opposite side of the paddock.

This configuration makes turn 8 a more defined overtaking zone, with drivers having to brake harder to make the hairpin.

6 corners, 2 to the left and 4 to the right, this short loop includes the long T10-T12 sequence, which is approached at high speed and should make for some great side by side drifting, wrapped with grass viewing terraces.

SUPPORTING FACILITIES



FIA PIT BUILDING

The operational hub of the track, with equipment and facilities capable of hosting FIA championships and events and a facility for day-day entertainment.

Comprising control rooms, offices, and garages, the pit building is typically constructed over 2 storeys (up to 10m approx.) providing multiple enclosed garage bays for vehicle preparation, track control offices, race administration facilities, catering and track viewing facilities for visitors.



PADDOCK AND PARKING

A sealed paved area with an integrated drainage system and regular power and water connection points for competitor parking and event staging.

Potential uses of the Paddock include team parking (HGVs, vans, RVs, trailers), vehicle preparation, public circulation, concessions / stalls / temporary facilities for major events. Outside of major events, the Paddock can serve as parking for other day-to-day activities such as an extension of the Motorkhana and burn out activities.



FIA MEDICAL CENTRE AND HELIPAD

These facilities are mandatory for FIA track licensing and also provides a medical hub for the entire site.

Single storey medical facility providing basic first aid, emergency medical evacuation support, with dedicated ambulance bay and helipad.



MOTORKHANA ARENA

Open sealed pavement area available for Motorkhana events, doubling up as additional parking during major events in the Road Course or Speedway sectors.

Drag, Drift and Rallycross

The Road Racing zone can uniquely host rallycross, drifting, and a 1/8 mile drag strip event at once.



DRAG STRIP

Rockhampton has a rich history of drag racing with a passionate and knowledgeable fan base, and the new 1/8 mile Drag Strip offers a new facility for this popular discipline.

A range of drag racing will be able to take place at the Motorsports Precinct, from sanctioned 1/8 mile competitions to street cars. The Drag Strip can operate independently from the track and other facilities, and it has a grass bank along its entire length for spectator viewing and noise attenuation.



DRIFTING

Drifting can take place on the East Circuit, with its corners designed with the popular discipline in mind.

The long approach to T10 is perfect for drift cars to gain speed and then throw the car into the corner, which tightens as it blends into T11. The long T12 brings you back to start another lap, of which the first two corners of the configuration can be merged into one long right back onto the back straight.



RALLYCROSS

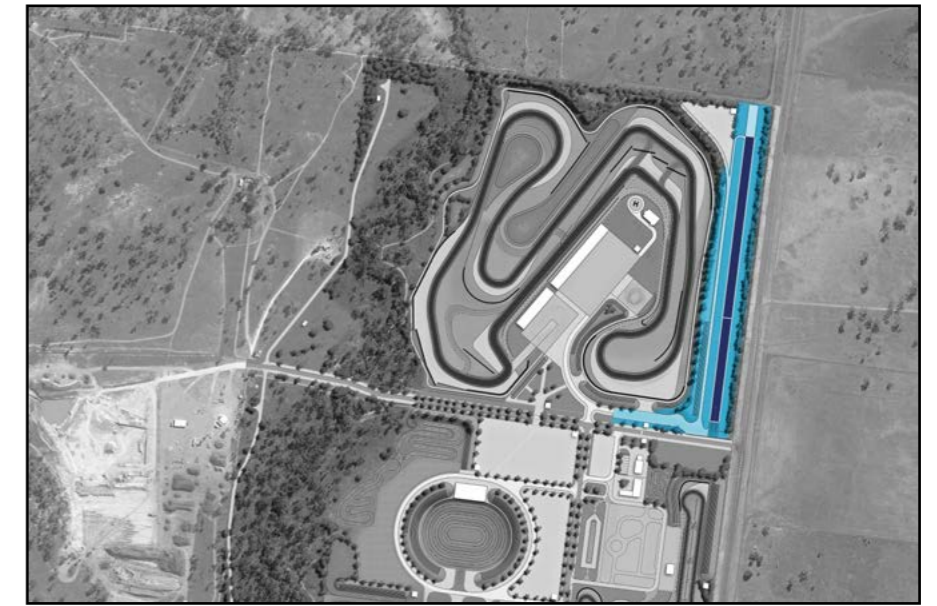
Integrated into the West Circuit is an international level Rallycross circuit, with a dedicated starting grid feeding into T2.

Rallycross is a popular discipline of motorsport, involving a grid of 6 cars competing side by side in a short (3-5 lap) race that combines off road rally surfaces with sealed asphalt sections of a race track.

The off-road sections of the rallycross circuit have been integrated into the main circuit, providing an FIA conforming rallycross circuit, suitable of hosting a range of events from corporate entertainment to international competitions.

A unique feature of rallycross is the inclusion of a "Joker Loop" which involves the drivers diverting onto a longer length lap on at least one lap of the race. 2 options for a joker loop, have been included, for use at either T6 or T7 of the main circuit.

1/8 Mile Drag Strip
Road Racing



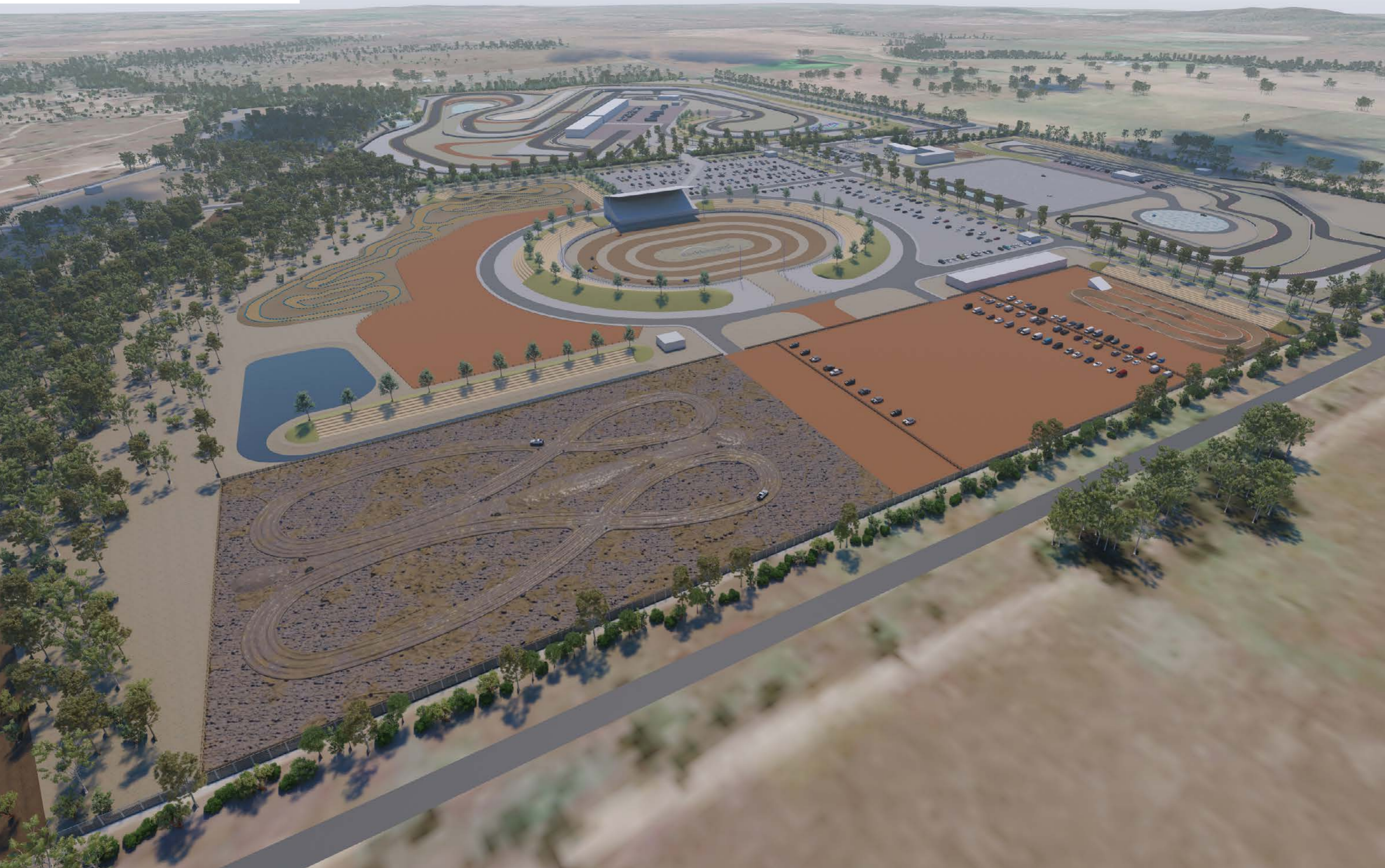
Drifting Loop
Road Racing



Rallycross
Road Racing



OFF-ROAD RACING



Speedway and Solos Dirt Oval

Rockhampton has developed a rich history of Speedway competition since 1925. The new precinct provides a new dirt oval, offering a state of the art facility for the Speedway and Solo clubs to utilise.

A new dirt oval to write a new chapter of Speedway history in Rockhampton.

The Speedway Oval is the core attraction within the Off-Road Racing area of the Motorsports Precinct, and it contains three tracks catering for Speedway, Solos and Juniors, complete with dedicated paddock space, operations facilities, grandstand and clubhouse.

The largest outer circuit is a 450m dirt oval, offering like for like racing with the current downtown speedway oval. The additional inner tracks mean that other events can be hosted without the need for different users to incur time and costs modifying a single track set up for each event.

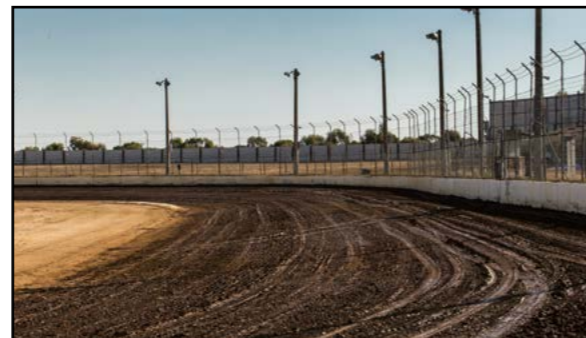
When the Speedway Oval and its supporting facilities are not being used for competitive events, it can be used day-to-day for practice and training days to help develop new Speedway and Solo competitors on the international stage.

Grass banking will be built around the entire track, providing 360 degrees of spectator terracing to view the speedway track, with overhangs to provide shading or protection in inclement weather. The banks surrounding the track are only broken with an entrance road from the competitor pit area, and the main grandstand structure.

The Outer Circuit is 450m, offering like for like racing with the current downtown Showgrounds oval.



Motorcycles have raced in Rockhampton since November 1925, and one of the first venues to race under floodlights. The Motorsports Precinct will continue and expand upon its history.



Speedway and Solos Dirt Oval Off-Road Racing



The location of the speedway allows land around to be utilised for visitor parking and competitor paddock space that is over and above the cities existing Speedway facilities.



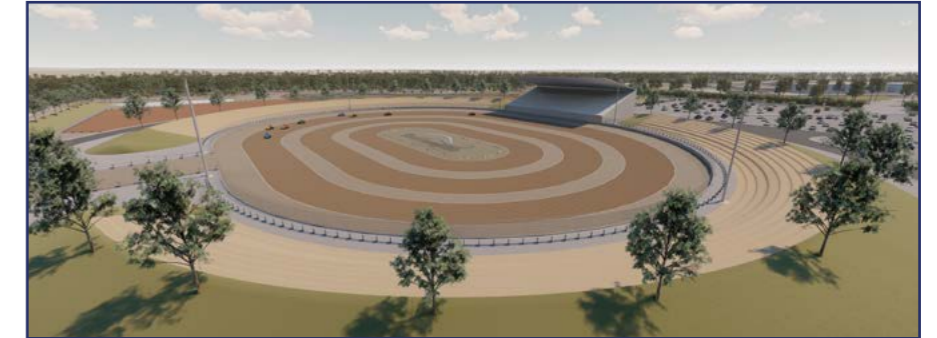
Speedway and Solos Dirt Oval

DIRT OVAL TRACK

The new 450m dirt oval is aimed to replace and provide an enhanced version of the existing oval at Rockhampton Showground.

The dirt ovals provide tracks ready to use for Speedway, Solos and Juniors with minimal operational set up and maintenance. Surrounded by 360 degrees of grass banking, and a new grandstand/clubhouse complex, competitors will be enclosed in a true stadium facility.

Three tracks within the oval, for Speedway, Solos and Juniors (outer > inner).



SPEEDWAY PIT AND PADDOCK AREAS

The paddock areas will be used for competitors to carry out vehicle preparations (refuelling, servicing, repairs) before and during events.

This area is primarily laid to a mix of grass and hard standing, and is intentionally located to provide paddock space to the adjacent Mudsports and Supercross track too.

The Speedway paddocks lie adjacent to the Supercross + PeeWee tracks for shared usage.



CLUB HOUSE AND STORAGE FOR CLUBS

The club house provides a two storey building providing a shared social environment for the motorsport club members and officials. On the opposite side of the track, a single storey storage building is located next to the paddocks.

The clubhouse is expected to include changing facilities, lockers, bathrooms, event space, a briefing room, café and bar area. The storage building is for use by motorsport clubs to keep related support vehicles, maintenance plant, fire-fighting equipment, and track operational equipment.

In close proximity to the Speedway, for use by all off-road racing clubs.



360 DEGREE VIEWING

Inspired by ancient Greek amphitheatres, the Speedway provides a unique form of landscaping, offering 360 degrees of viewing formed by terraced grass banks wrapped around the tracks.

The grass banks are expected to be 3 to 4m in height and will be tiered, providing great downward views into the track for spectators. Shading will be provided and a flat surface on top of the banks shall be available for food and beverage stands and merchandising vendors during events.

South facing to avoid direct sunlight for spectators.



Supercross and PeeWee tracks

OVERVIEW

The proposals for Rockhampton Motorsports Precinct include two dirt bike tracks including a Supercross layout and a kids PeeWee motocross track.

Off-road motorcycling for amateurs and professionals.

Following consultation with the motorsport clubs, it was agreed that having a 'ride park' for dirt bikes would be advantageous compared to building a new Motocross race track.

The concept of the ride park is one that encourages new dirt bike riders to come and try 2 wheeled dirt biking in a non-pressured experiential environment amongst other beginner riders.

The PeeWee track will provide a general flat motocross track, built up of banked corners and some low lying table top jumps to teach kids and novice adult riders the basic skills of dirt bike riding, where as the Supercross track contains more jumps and obstacles for slightly more experienced riders and offers a different type of riding compared to that of the existing Motocross track located in Rockhampton.



SUPERCROSS

Supercross is a discipline of dirt motorcycle racing that originally derived from Motocross, and will be a new addition to Rockhampton.

A 620m track containing jumps, whoops, berms and table tops will be on offer at the Ride Park for adult riders to enjoy. The track itself is designed in a compact traditional Supercross layout, with tight turns designed with bermed corners on the outer edges. The layout resembles a stadium layout, allowing spectators to enjoy all the action from a single vantage point, across the full lap.



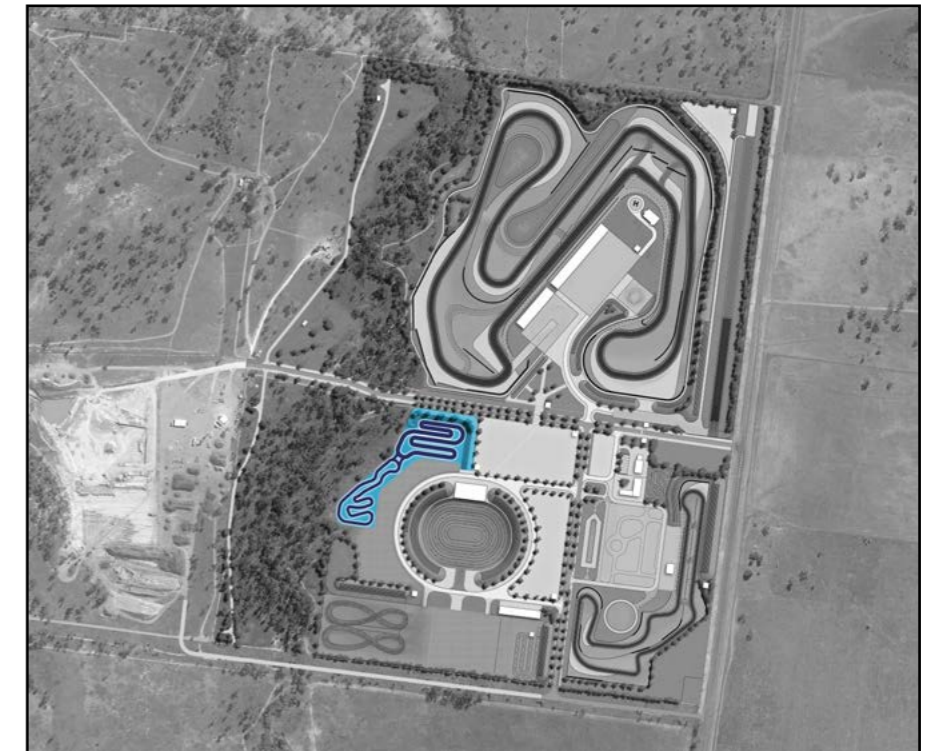
PEEWEE

A 600m dirt bike course designed for young and novice riders.

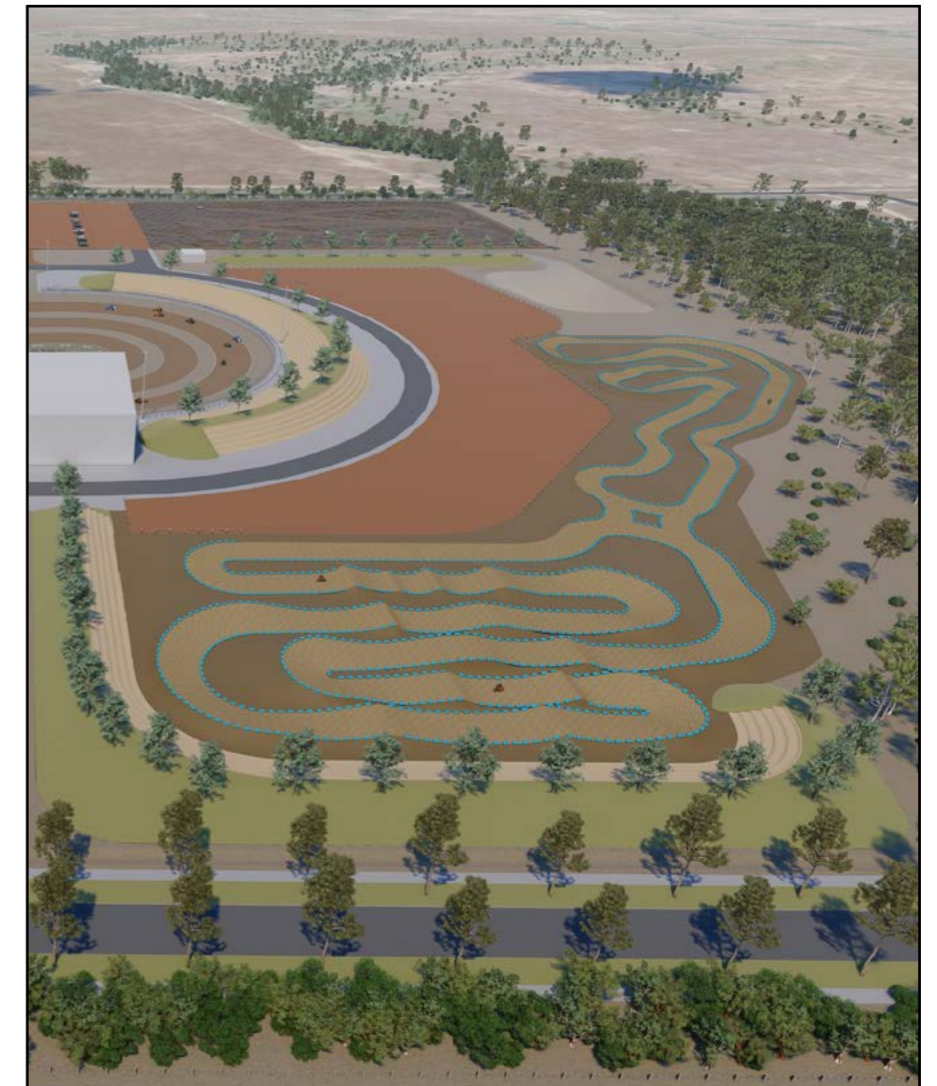
The pee wee track is designed as a novice Motocross track. This means the track is generally shorter and easier to navigate for youngsters on smaller motorcycles and novice adult riders.

The track will feature berms and table top jumps, suitable for novices, allowing them to build up skill and confidence before tackling the Supercross track or the nearby Rockhampton Motocross club races.

Supercross and PeeWee Off-Road Racing



The Supercross and PeeWee tracks will primarily operate independently (Supercross in foreground, PeeWee in background), but they can combine into a full 1,200m layout.



4x4 and Mudsports

OVERVIEW

4x4 driving covers a wide variety of driving disciplines and the Rockhampton Motorsports Precinct aims to cater for these.

Mudsports competitions and 4x4 driver training trails.

4x4 driving courses can be built using the natural terrain and features of the site with minimal impact on the surrounding environment.

The design and build of off road courses is far less engineered than some of the other tracks proposed at the Precinct. Activities such as 4x4 trails, obstacles, rock crawling and Mudsports competitions will be on offer, providing a place for kids, first time off road drivers and experienced 4x4 competitors to enjoy.

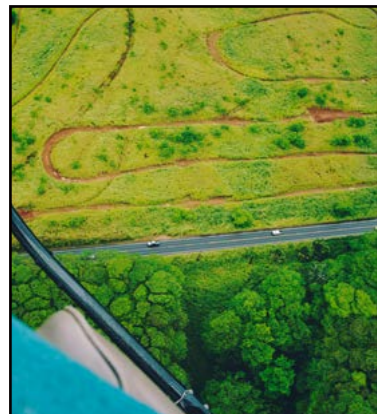


4x4

A mix of trails, obstacles and surfaces.

The 4x4 trails will be integrated into the Off-Road Racing area of the site to offer a mix of trails and obstacles that can be tackled in various off road vehicles ranging from SUV's, Quadbikes and even Segways.

The concept is to offer trails that are suited to novice drivers as an experience activity, but also some tougher routes with obstacles, ruts and inclines and declines for the professional 4x4 drivers. The course will be constructed of natural materials as opposed to creating man made manufactured obstacles.

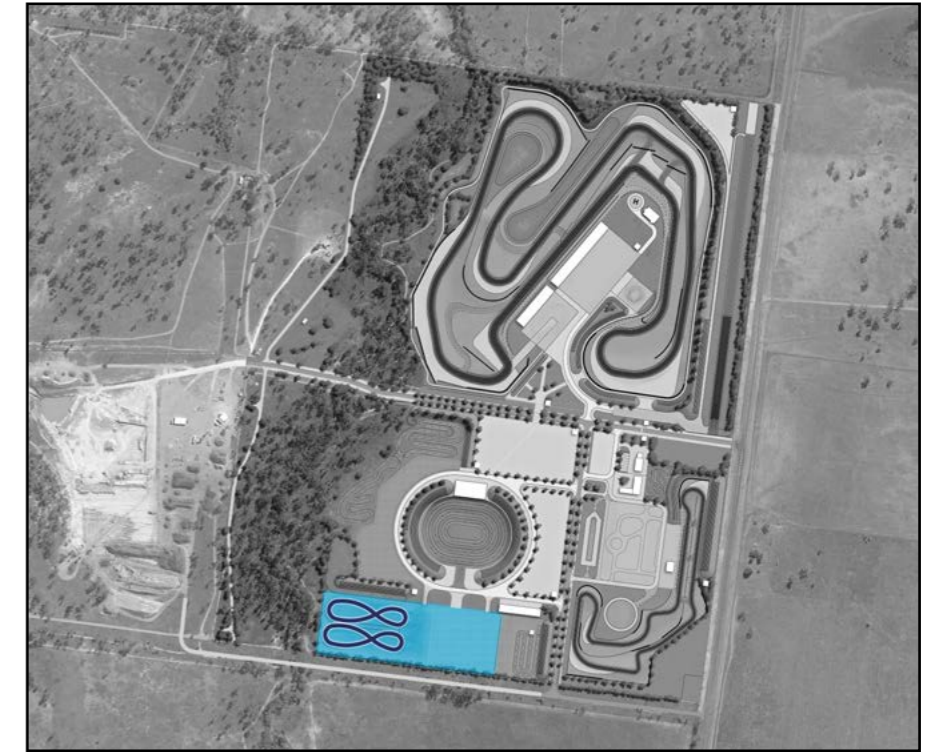


MUDSPORTS

A home for the CQ Mudsportz Club to grow and promote competition off-road driving.

The Mudsports Club currently hosts 4 events per year, on their twin figure 8 track. Club members compete in one of four classes (Juniors, Standard, Buggy or Top Gun). A similar track to the existing CQ layout is provided within the Motorsports Precinct, but with improvements to their existing offering thanks to the shared pit areas, parking, storage and club house facilities available in the Off-Road Racing of the site. The course is also overlooked by a grass bank, providing a spectator platform for visitors to watch the action.

4x4 and Mudsports Off-Road Racing



The 4x4 and Mudsports area is split into two sections. The first is a side-by-side figure 8 track, and the other is an open mud space to be used for freestyle off-road driving, or as additional pit / paddock space for the Speedway.



DRIVER EXPERIENCES



Road Safety and Driver Training

OVERVIEW

Providing a tangible link between road safety and motorsports.

Positioned in the Driver Experiences area, next to the kart track, a large paved space is offered to allow a variety of driving scenarios to be practised in a controlled environment.

As well as providing the required car parking capacity during major events, this open flexible space could be used for learner driver and motorcycle coaching. In addition, temporary hazards can also be placed for drivers to navigate their vehicles around in a controlled environment.

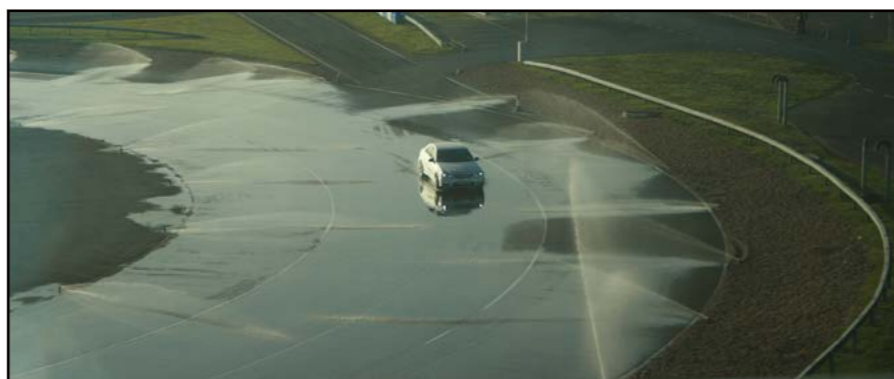
To support this facility, two low friction driving facilities (Kick Plate and Skid Pad) offer the ability to replicate emergency driving situations that cannot be safely taught on the public road.



Kick Plate is a mechanical obstacle which throws a car into a slide, before the vehicle enters a low friction lane. This exercise allows drivers to practice controlling their vehicle in the event of a high speed skid or being hit side on.



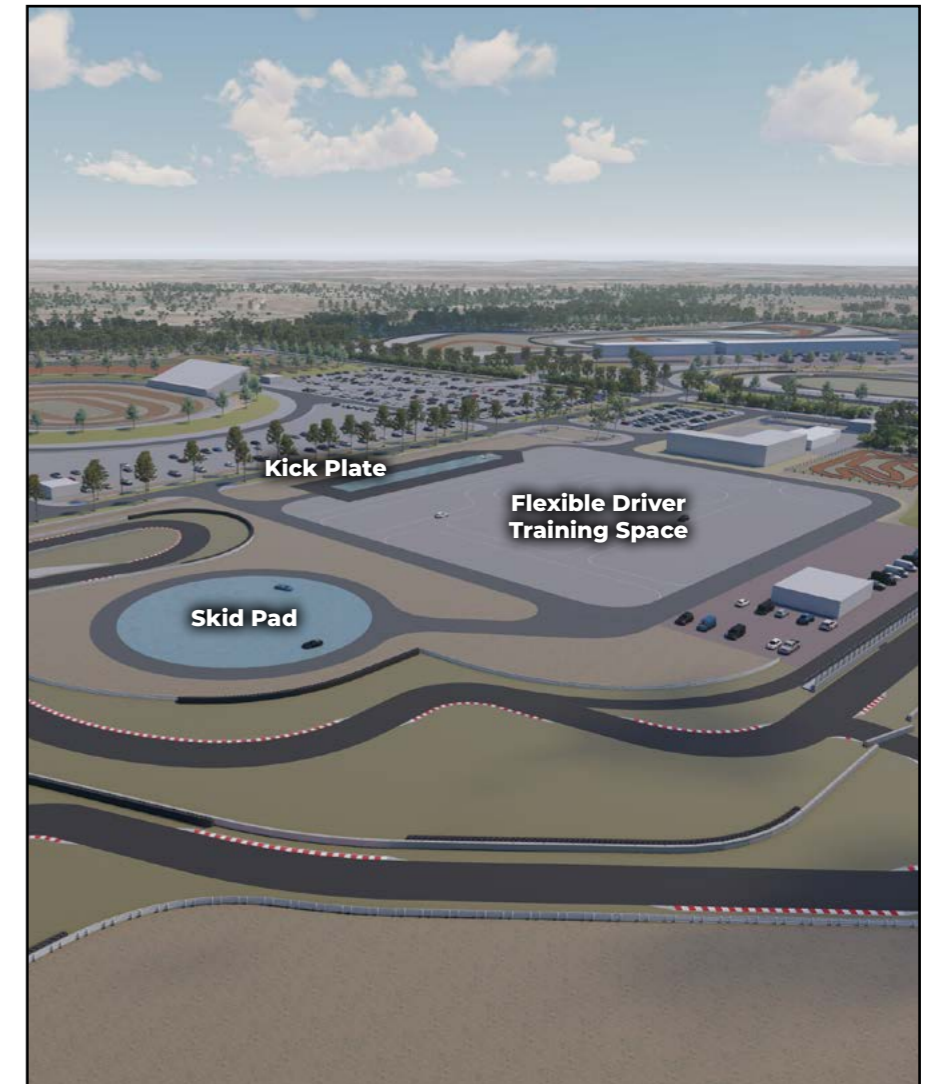
Skid Pad is used for teaching vehicle control. Typically operated at low speeds, this facility allows users to better understand the dynamics of a vehicle on multi-grip surfaces by experiencing under-steer and over-steer scenarios which can help to reduce accidents on the road.



Road Safety and Driver Training Driver Experience



The Road Safety and Driver Training area is central to the wider Driver Experience area. The Welcome Centre building looks out onto its various modules, so viewers can spectate from the comfort of the building.



Karting

OVERVIEW

Karting is the foundation of road course based motorsport, and Rockhampton Motorsports Precinct will feature a new 1.2km Kart Circuit.

The grass roots of premier motorsports.

The kart circuit layout will provide a 1.2km layout built to international standards. Crucially, the layout provides longer straights making it suitable for racing a wider range of karts (direct drive and gearbox karts).

In addition, the track has the ability to be split into multiple configurations enabling it to be used by different users at once. For example, a childrens' karting party and an adult karting practice at the same time.

The track is located adjacent to the site welcome centre, enabling this building to be used to encourage all visitors to the site to engage with karting in some way, whether a spectator, novice driver or motorsport enthusiast.

With these facilities, the circuit has the potential to act as a national hub for training young Australian racing talent, providing a home for a karting academy that offers driver training, data analytics, engineering and human performance training.

Example of an international competition level racing kart.

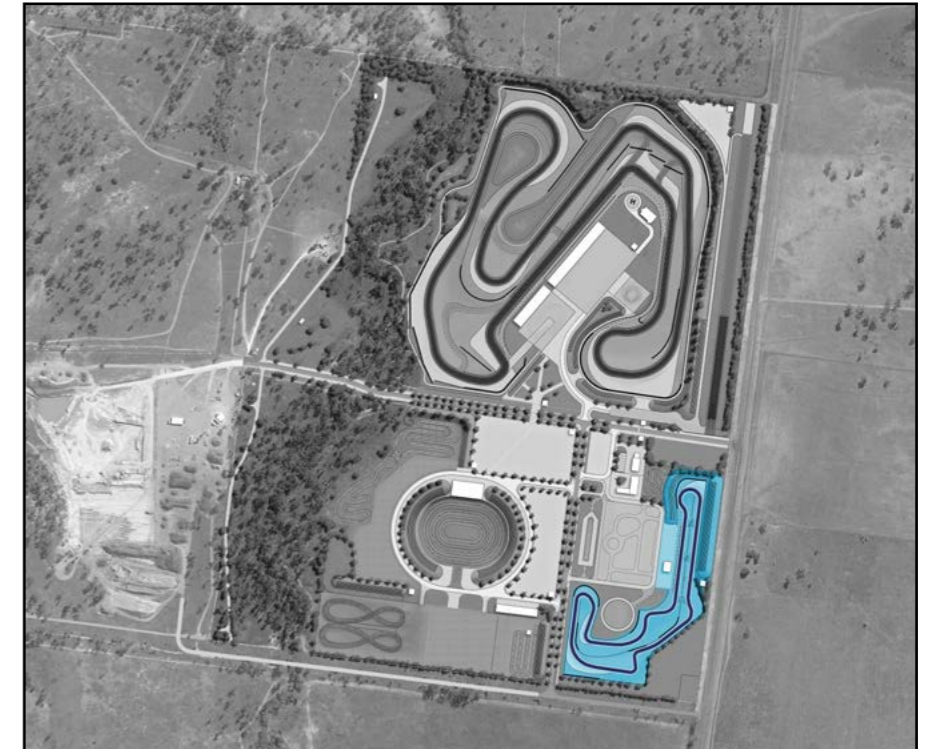


Karting is the natural starting point for budding race drivers, and the place where racecraft and overtaking skills are learned for drivers to take to the full race track when they progress.



International Kart Circuit

Driver Experience



The Kart Circuit receives its own dedicated viewing bank, and is located next to the Road Safety and Driver Training area, which can also double up as paddock and parking space on karting event days.



7j

BMX and Radio controlled car track

BMX

Off-Road Racing (south highlight)

Remote Control Car Track

Driver Experiences (north highlight)

Both tracks will encourage day to day visitors to use them as leisure facilities, but will be capable of hosting regional club competitions.



The BMX and Remote control tracks are both offered as additional community facilities, with an obvious and natural link to the competitive world of motorsports.



BMX

BMX is the bicycle form of Motocross and has a home at the new Precinct.

A 350m BMX track is proposed, providing a link to the dirt sports community. This allows visitors to the Off-Road Racing zone to casually enjoy the BMX track while other family members watch or participate at the other tracks.

The track will be a sealed surface with a steep start ramp and will be designed to host regional competitions for the local BMX clubs, in addition to being a day to day leisure activity for visitors.



RADIO CONTROL (RC) CAR TRACK

RC racing is the true grass roots of motorsports and has been the starting place for drivers such as Lewis Hamilton, even before they began karting.

The proposed RC track is located adjacent to the venue's Welcome Centre, encouraging people of all ages to try out this high precision sport, which requires high concentration levels and quick reactions to navigate the high speed RC cars around a short track. Depending on the final design brief, the track itself can be designed as a mini replica of the asphalt race track, or be a dirt buggy track.

7k

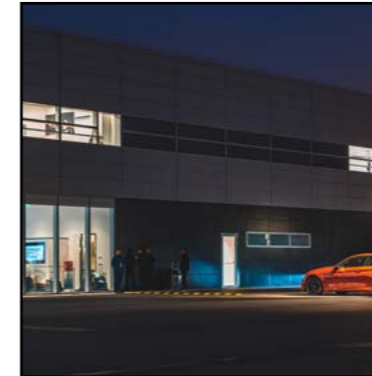
Welcome Centre and Service Station

Welcome Centre + Service Station

Driver Experiences



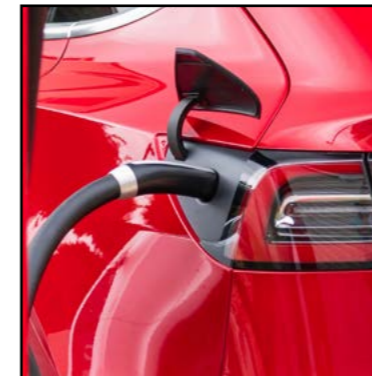
Upon arrival at the Motorsports Precinct, visitors will be greeted with a Welcome Centre building with close access to all areas of the Site, as well as a Service Station for passing motorists to refuel and stop for a break.



WELCOME CENTRE

The operational hub of the Motorsports Precinct, and a place for visitors guests to relax away from the action elsewhere on the Site.

The Welcome Centre will act as the main arrival point for visitors to the Precinct, with a check in area for leisure driving events and spaces for safety briefings to take place. There will be refreshments available here, and guests are welcome to enjoy the hospitality whilst watching their friends and family from spectator areas within the building, with views covering the Road Safety and Driver Training school, the RC car track and the Kart Circuit.



SERVICE STATION

Positioned north of the Welcome Centre building will be a Service Station, acting as a refuelling and charging point for Precinct activities, as well as serving the general public who are free to use the station even if passing by.

The station is located just off of the Burnett Highway, resulting in minimal detour time for motorists. Its position next to the building is also a conscious choice, with the aim of encouraging passers by to go inside, have some refreshments and watch some driving activities just outside, to promote participation and expand the love of motorsports across the region.

8

TECHNICAL INVESTIGATIONS

- 8 a Overview
- 8 b Flooding and stormwater management
- 8 c Transport and access
- 8 d Infrastructure
- 8 e Environmental
- 8 f Bushfire
- 8 g Cultural heritage
- 8 h Noise
- 8 i Air quality
- 8 j Geotechnical

As part of the masterplan, a series of desktop technical studies were undertaken

INTRODUCTION TO TECHNICAL ASSESSMENTS

The technical assessments contained herein provide a summary, comprising a strategic level assessment or statements, derived from desktop studies of the baseline site conditions and the masterplan design.

The intent of the assessments is to raise any technical compliance issues relating to the site, in order that these can be identified and/or mitigated early on in the project process.

The studies have been undertaken by combining expertise varying from international motorsport design experts, civil engineers, masterplanners, local environmental consultants, motorsport noise consultants and traffic engineers.

The technical assessments were undertaken in two rounds, with a first study initially completed based on the initial concept sketches. The results of these initial studies allowed positive and informative design updates to be made during the masterplan processes.

The outcome from the technical assessments and key recommendations are contained herein and could be used as the foundation for the continuing design development through to a full development application.

The full Technical Assessments document should be referred to for detail.



SCOPE OF TECHNICAL ASSESSMENTS

Flooding and stormwater

- Review and establish the baseline conditions and flood risk
- Determination of outline drainage strategy
- Development of essential flooding and stormwater design considerations for the masterplan
- Definition of further investigations and next steps

Transport and access

- Review and establish the baseline access conditions
- Determination of potential transport impacts
- Development of essential transport and access design strategy for the masterplan
- Definition of further investigations and next steps

Infrastructure

- Review and establish the baseline utilities condition
- Determination of project requirements with regard to utilities
- Establishment of strategic utilities phasing
- Definition of further investigations and next steps

Environmental

- Desktop assessment and searches of Commonwealth, State and Local Government environmental planning considerations
- Identification of potential impacts of the proposed development
- Determination of design mitigation and additional assessments required in response to the constraints identified.

Bushfire

- Desktop assessment and searches for mapped bushfire zones
- Identification of potential impacts of the proposed development
- Determination of design mitigations and additional assessments recommended to address the specific requirements of the development

Cultural heritage

- Desktop assessment and searches for sensitive cultural or heritage features on the site
- Identification of potential impacts of the proposed development
- Determination of design mitigations and additional assessments recommended to address the specific

Noise

- Overview of noise survey and modelling methodology
- References to best practices and guidelines
- Determination of potential noise impacts via scenario simulations
- Suggested noise control and mitigation measures
- Definition of further investigations required

Air quality

- Desktop assessment of air quality planning regulations or restrictions
- Identification of potential development impacts
- Determination of design and operational mitigation measures that should be considered later in response to the impacts and constraints identified.

Geotechnical

- Desktop review of preliminary interpretative borehole assessment
- Preparation of indicative road cross sections
- Recommendations for next steps and assessments

Flooding and stormwater management

BASELINE CONDITION

- Creek runs through the site, located near the western boundary, and running in a north / south direction.
- The entire site drains naturally overland towards the creek.
- Current road level over the culvert is lower than the surrounding land which would allow large flows of water to overtop the road, prior to flooding the adjacent land, if the pipe capacity is exceeded.
- Typical gradients on the site generally vary between 0.5% and 2%

FLOOD RISKS

- Site not highlighted as being at flood risk by RRC Planning Scheme maps.
- QLD State mapping is very high level however it does state there are no triggers under the planning scheme related to flooding, however it is important that this is address through the design and a suitable buffer is provided from the creek.
- Recommended the design of the Precinct takes into account stormwater flows exceeding the creek, as well as overland flow originating off site.
- Precautionary measures could consider include designing buildings and storage facilities in the lower side of the site to be flood resilient and ensuring that paved tracks can tolerate a degree of heavy rainfall and flooding **

DRAINAGE STRATEGY

- Proposed to fit use rain water harvesting to catch, filter and re-use within the buildings (overflowing to stormwater network when needed).
- Each of the paved tracks (Road Course, Drag Strip, Karting, Road Safety + Driving Academy and Burnout Pad) will each have their own integrated drainage system, with interceptors (filters) where required.
- For the unpaved tracks (Off-Road Racing area) it is proposed that open swales are positioned around the perimeter of each zone in order to promote a low velocity towards the natural storage basins and bio retention areas.

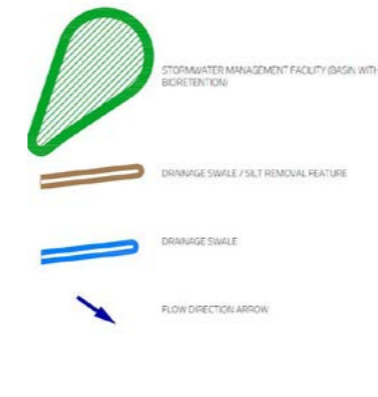
SITE SPECIFIC CONSIDERATIONS

- Waterway barrier works.
- Spill management in pit and paddock racing areas.
- Silt and erosion control.
- Wheel washing facilities.
- Pollution interception.
- Attenuation basins.
- Rooftop rainwater re-use, and car park drainage.

* Annual Exceedance Probability

** Paved tracks can tolerate a degree of flooding, but that level of tolerance should reflect operational risk appetite for closures due to major storm events.

ROCKHAMPTON MOTORSPORTS PRECINCT



General Site drainage strategy >>



SUMMARY AND RECOMMENDATIONS

- The entire site drains naturally overland towards the creek.
- The site is in an area not highlighted as being at flood risk by the Rockhampton Region Planning Scheme mapping, therefore does not trigger the relevant overlay.
- However the Queensland Government mapping flood check information does indicate that the 1% AEP* event does have some chance of occurring so design should mitigate for these occurrences.
- Consider levelling of the site with regards to existing vs future flood storage (buildings to be raised by maximum 1m).
- Track operator input should be sought during detailed design to determine the level of risk willing to be taken with regards to track flooding and a target level for the final track design can then be determined. This risk is generally deemed low.
- Maximise area of stormwater basins - target 5% of site area, supplemented by open swales being designed around the site.
- Wheel washing in the off road zones is encouraged to prevent silts entering the drainage system unnecessary. Interceptors are to be located in specific locations such as pit lane and paddock zones where vehicle maintenance is more likely to occur.
- Sustainable methods of collecting and storage / re-use of rain water is encouraged to complement the basin strategy, namely roof-top water harvesting. This should be implemented within the detailed design programme.
- A detailed assessment will be required for full development approval based on the final masterplan and a further stage of schematic design for the stormwater systems.

Transport and access

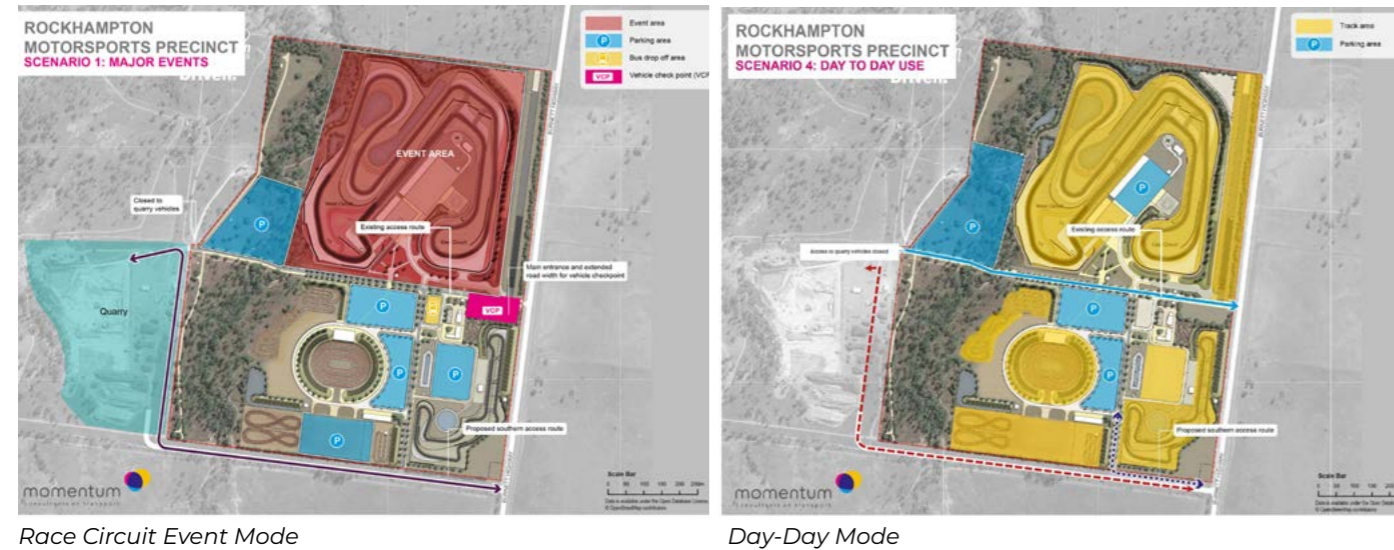
BASELINE CONDITION

- There is an existing access junction intersection into the site, serving the quarry which is located West of the Development Area. South of the existing site access there is a road reserve corridor, which could become a secondary access to the site.



DESIGN STRATEGY

- The masterplan proposals aim to make use of the existing access as the main access into the site, with a potential secondary access in the future.



SITE SPECIFIC CONSIDERATIONS

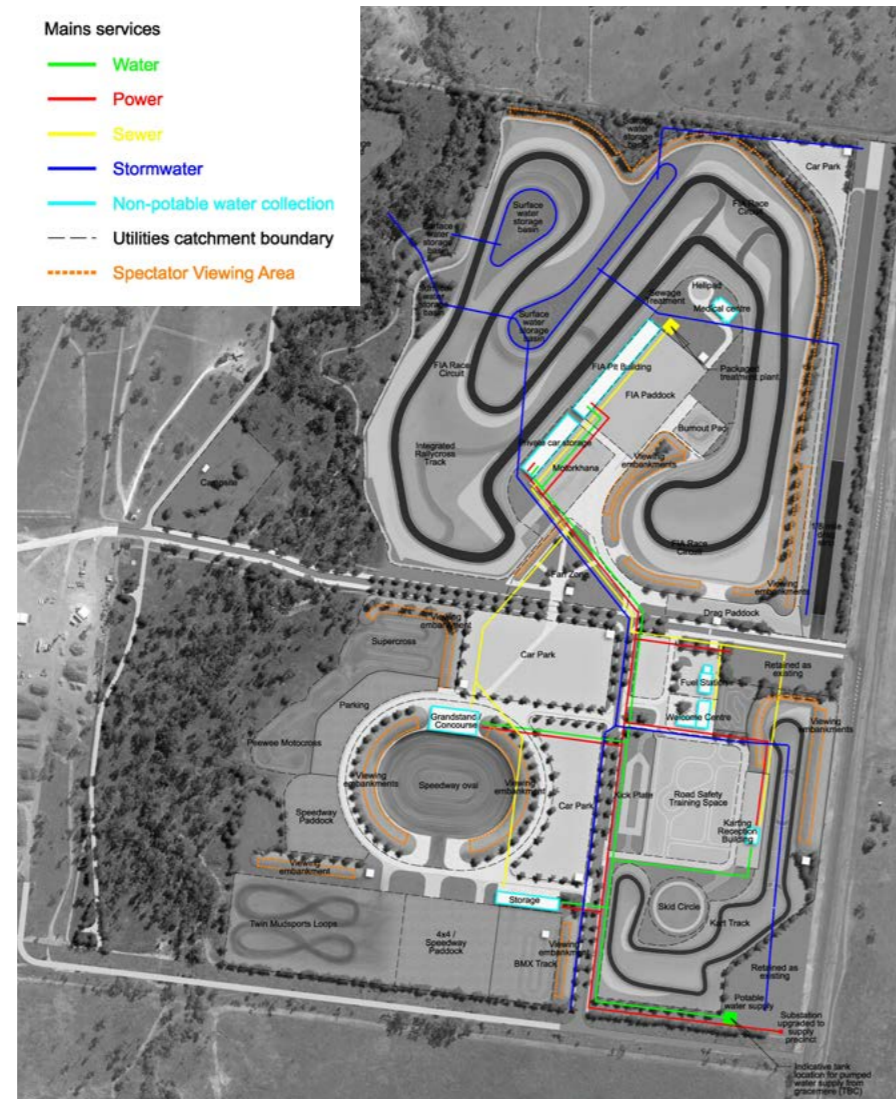
- Retaining access to the quarry
- Highways access improvements
- Day to day traffic management vs event traffic management
- Parking Capacities
- Pedestrian and cycling movements within the site
- Site security

SUMMARY AND RECOMMENDATIONS

- The site is located off of the Burnett highway, a single carriage way state controlled road. The speed limit on the highway is 100 kilometres per hour and the road is predominantly straight.
- There is an existing access junction into the site, serving the quarry which is located west of the Development Area. A turn right lane allows entry to this junction, with a 180m turn right splay already in existence, which following a preliminary simulation offers a significant intersection capacity for right turning vehicles without impacting on through traffic. This is unlikely to be exceeded by day-to-day traffic generated by all precincts throughout the life of the project, which would expect to see circa 800 visitors per day assuming a fully utilised day-day operational mode.
- For major events in the Off Road Racing and Driver Experiences Precincts, it is likely that incoming traffic to the events could be comfortably accommodated with the existing access arrangements, but consideration should be given to quarry traffic movements in the management of event traffic and security. Installation of the secondary entrance would be helpful but not essential.
- For major events in the Road Racing Precinct, it is recommended that Park 'n' Ride or other sustainable transport solutions are incorporated into a major event strategy, and a secondary entrance from the Burnett Highway be delivered to minimise the impact on through traffic. This is for major events only, and are expected to be infrequent.
- South of the existing site access there is a road reserve corridor, which could become a secondary access to the site and an alternative access route to the quarry. This is located approximately 500 metres South of the existing access along the southern boundary of the project. Based on initial consultation with public bodies, and assessment of potential traffic impacts subject to further detailed design, no major concerns were raised with regards to highways or access to / from the Site.
- Based on anticipated event attendances, it is recommended that the secondary access to the Motorsports Precinct and alternative access to the quarry is installed at the latest prior to the completion of the FIA Main Circuit. Off Road Racing and Driving Experiences Precinct events should be manageable with the existing access arrangements.
- Sustainable transport is encouraged, with the venue operator offering shuttle services and even using the circuit for cycling events.
- Under the Planning Regulations the development will require referral to SARA which will require the development to demonstrate compliance with the following:
 - protect state transport infrastructure, public passenger transport infrastructure and public passenger services from the adverse impacts of development
 - maintain the operational performance of the transport network
 - ensure development enables safe and convenient access to public passenger transport.
- For a full development application, the following assessments are recommended:
 - Trigger point assessment – assess upgrades to access
 - Analysis and approval of proposed secondary access
 - Detailed parking needs assessment with major event plan
 - Detailed transport impact assessment
 - Detailed paving assessment

UTILITIES DESIGN OVERLAY

A schematic design for the site wide utilities has been developed, incorporating initial strategies for water, power and utilities.



SITE SPECIFIC DESIGN CONSIDERATIONS

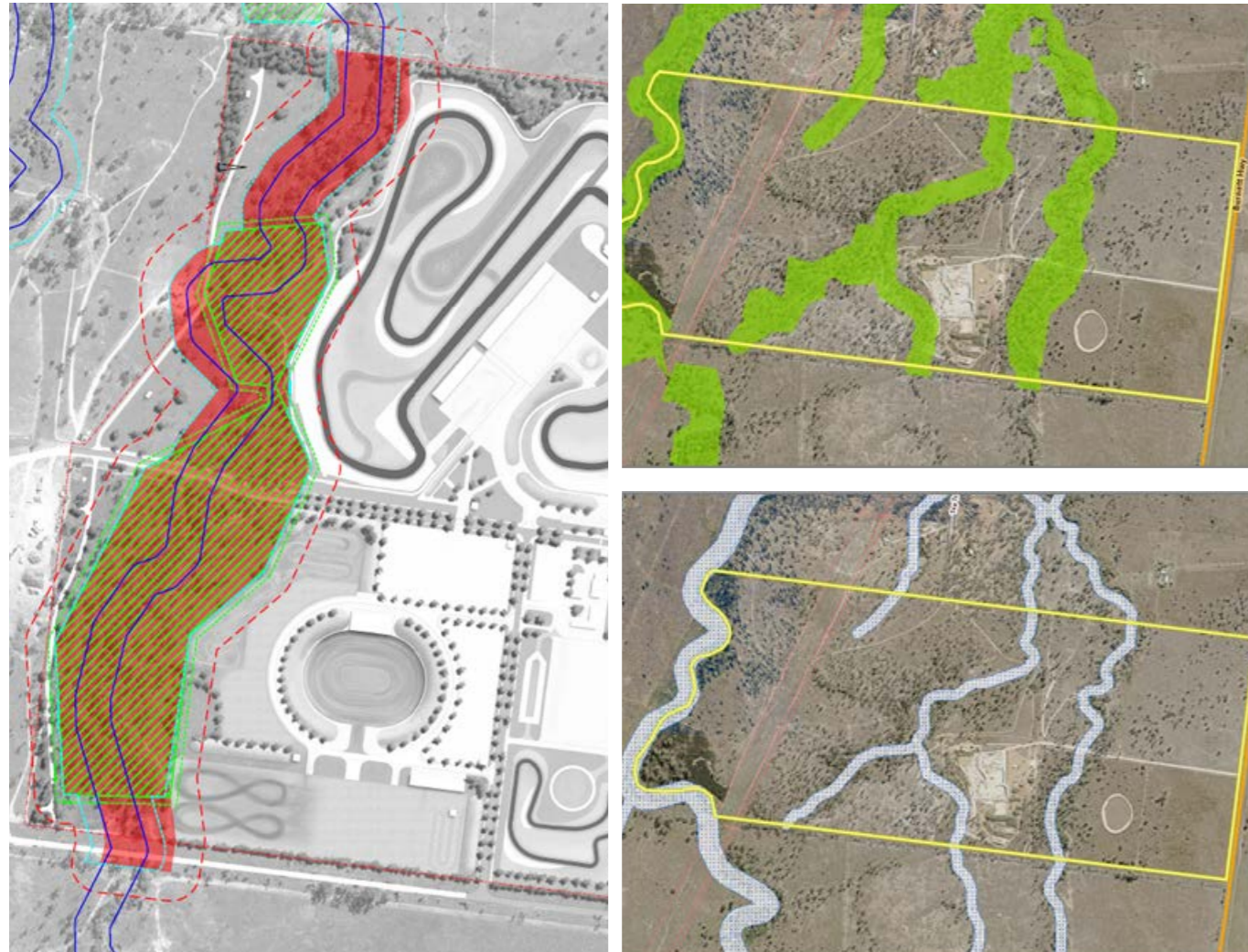
- Power demands required for day to day and event modes
- Substation location and upgrade requirements
- Locating utility corridors
- Potable and Non-Potable Water supply
- Floodlighting (tracks and general areas)
- Storm-water drainage routings
- Network and communications strategy

SUMMARY AND RECOMMENDATIONS

- The site will require the provision of electrical connections for:
 - o Building servicing
 - o Track servicing
 - o Vehicle charging
- The site has the opportunity to be supplied with electricity through the existing electrical connection to the site, which may require upgrade to the on-site substation. Alternatively, solar generation is possible on the building roofs.
- The anticipated aggregate electrical power load for the Motor Precinct could be in the region of 600-900kW subject to detailed design, operational factors and staging requirements.
- The South East corner of the site contains a small substation installed previously, assumed, for the provision of power to the quarry. There are extensive high voltage networks in the area. It is therefore assumed that getting a power supply for electricity to the site will not limit the development of the site. Assuming the location of the substation stays in the South East corner of the site then the key routes for electricity supply on site could be below ground routes running along the future southern road corridor and the central spine road through the development.
- Natural gas is not expected to be required for the Motorsports Precinct.
- A review of the preliminary potable water supply to the motorsport precinct has identified the potential issue of maintaining water quality. This issue has been discussed and confirmed with Council's water quality officer.
- Due to lack of existing infrastructure, the site will deal with sewage through the provision of an onsite package treatment plant or septic system sized accordingly for predicted day to day demand. Manufacturers of treatment plants should be contacted early in the development design process.
- The precinct design considers lighting the tracks with amateur level sports lighting / low light use for occasional evening operations, subject to operational management plans being developed.
- For areas of the site that are only used for large events the provision of strategic feeder pillars should be considered for ease of installation of temporary lighting to reduce the use of portable generators.
- The nearest wired communication is likely to be in Gracemere, therefore requiring a 5km extension to the network if wired communications were required. Provisions for temporary additional bandwidth could be considered for major events, which could be delivered via temporary masts (no higher than 10m tall to comply with height limits).
- A preliminary utilities strategy showing the potential routes of mains utilities has been prepared.

BASELINE CONDITION

A review of relevant State Government environmental planning considerations identified three key matters and their constituent overlays being: Regulated Vegetation, Wildlife Habitat (Endangered, Vulnerable and Special Least Concern) and Queensland Waterways for Waterway Barrier Works.



Environmental Overlay Key

- CREEK
- CATEGORY R REEF GROWTH
- CATEGORY R 45M BUFFER
- CATEGORY C VEGETATION
- CATEGORY C 10M BUFFER

Mapped RRC Planning Scheme Biodiversity Overlay (Source: RRC Interactive mapping: 2020)

DESIGN CONSIDERATIONS

To complete the Relevant Purpose determination, the Proposed Development will be required to demonstrate how the "Impact Hierarchy" has been considered, which requires:

- Avoidance of any impact to MSES habitat values (generally aligned to the mapped Regulated Vegetation overlays);
- Management of Impacts where clearing of MSES habitat values is unavoidable;
- Offset any impacts under the provisions of the Environmental Offsets Act 2014.

SUMMARY AND RECOMMENDATIONS

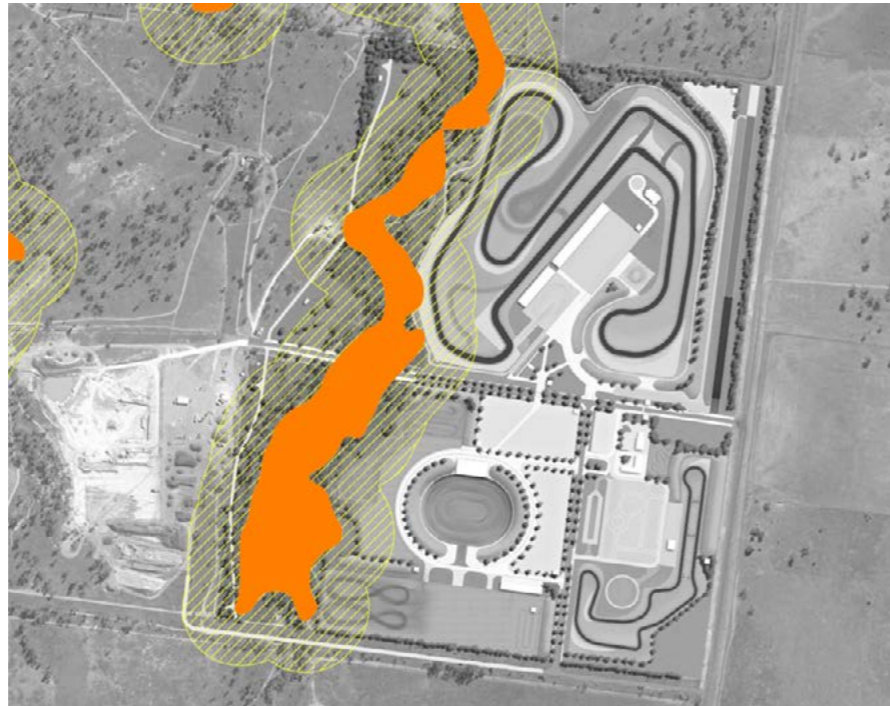
- Desktop Analysis has detailed that the Proposed Development is relatively unencumbered from an environmental planning perspective. While it is acknowledged that the scheme assessed has generally avoided encroachment into mapped environmental values, detailed Site investigations will further refine the siting and design.
- It is strongly recommended that onsite investigations by ecologists are undertaken to assess the extent of the mapped values. Additional assessment of the proposed development against the applicable ecological and provisions of the RRC Planning Scheme and the State Codes will be required as part of the approvals phase. Early consideration will allow design to be sympathetic of on-ground constraints while also maximising footprint where opportunities are identified.
- In summary, the Motorsports Precinct in its current form, is largely compliant with relevant environmental planning constraints. To improve compliance and reduce the risk of information request items, it is recommended that the following considerations and actions be undertaken as follows:
 - o Avoidance of Category R Regulated Vegetation
 - o Avoidance or minimisation of encroachment into Category C Regulated Vegetation;
 - o Avoidance of built infrastructure within the overlay and the 1.5 times the height of the tallest tree (Attachment B1 illustrates conservative buffer) will result in the avoidance of the Proposed Development's requirement to seek a Section 22A 'Relevant Purpose' Determination
 - o Avoiding encroachment of the camping area from within the mapped Regulated Vegetation.
 - o Undertake onsite investigation to identify ecological values:
 - o Inclusive of a tree survey to identify tree locations, habitat features and each individual trees Tree Protection Zone (this is the area surrounding the tree which must be avoided by civil works in order to retain it on a construction site and in perpetuity).
 - o Undertake a Section 22A "Relevant Purpose" determination prior to submission of the Development Application (if design cannot avoid the Regulated Vegetation overlays).
 - o Develop an Ecological Assessment Report which responds to the onsite values and all applicable RRC and SARA code requirements and consolidates the outcomes of the onsite investigations and any design requirement to incorporate the bushfire design recommendations.

Bushfire

BASELINE CONDITIONS

- The Proposed Development area has mapped “Medium Potential Bushfire Intensity” and the subsequent “Potential Impact Buffer” generally aligning with the vegetated creek by both the Development Assessment Mapping System (DAMS) and the RRC Planning Scheme.

DESIGN APPROACH & CONSIDERATIONS



Mapped RRC Bushfire overlay & buffer zone, vs proposed Masterplan

- Generally the masterplan design respects the bushfire zone, with a small encroachment with a track run off zone. However this area shall not be occupied with personnel or spectators.
- The following design factors will require future consideration:
 - Provision of direct access to a constructed, all weather road for emergency service vehicles;
 - separation from hazardous vegetation by a public road or fire trail with a minimum width of four (4) metres and at least six (6) metres clear of vegetation, with a minimum of 4.8 metres vertical clearance and a maximum gradient of 12.5 per cent.
- Design considerations, specifically with regard to the interface between the proposed camping area west of the north-south waterway, should be considered to remove the possibility of a congregation of people located within the bushfire zone;
- We note that this assessment has the ability, and potential likelihood to reduce the level of bushfire hazard, enabling design to progress into further detail at development application stage.

SUMMARY AND RECOMMENDATIONS

- Desktop Analysis has detailed that the Proposed Development is relatively unencumbered from a bushfire perspective. While it is acknowledged that there is some encroachment on the mapped bushfire buffer areas, detailed site investigations will further refine the siting and design of the Proposed Development to:
 - a. seek out opportunities to maximise development footprint available for the Proposed Development, minimising encroachment;
 - b. identified on-ground constraints that should be avoided; and
 - c. assist with maximising compliance with regulatory frameworks and codes.
- It is strongly recommended that onsite investigations by qualified and experienced bushfire consultants to determine the current and proposed Bushfire Attack Level (BAL). Additional assessment of the proposed development against the bushfire hazard codes and provisions of the RRC Planning Scheme and the State Codes will be required as part of the approvals phase. Early consideration will allow design to be sympathetic of on-ground constraints while also maximising footprint where opportunities are identified.
- Consideration of preliminary design alterations to the spectator viewing bund and proposed camping area may be deemed necessary to achieve compliance with the provisions of State Regulated Vegetation matters and the RRC Planning Scheme. Further design advice from a qualified bushfire consultant after an onsite inspection should be integrated into the Proposed Development prior to submission of a development application to RRC. This will ensure design can comply with Australian Standards for bushfire prone areas .
- Due to the current development's minor encroachment on the mapped Bushfire Buffer area, the approvals phase of the development will require additional assessment against the provisions of the RRC Planning Scheme Bushfire Hazard Overlay Code and the preparation of a Bushfire Management Plan which identifies hazardous areas, necessary setbacks to achieve compliance with the Australian Standards (achieving relevant separation distances for infrastructures or area of congregation),
- In Summary, the Proposed Development in its current form, is largely compliant with relevant bushfire considerations. To improve compliance and reduce the risk of information request items, it is recommended that minor redesign considerations and further actions be undertaken as follows:
 - Avoid encroachment of the camping area from within the mapped Regulated Vegetation and the inclusion of a separation buffer (e.g. car parking) between vegetation and camp sites to reduce bushfire hazard matters.
 - Undertake onsite investigation to identify ground truth bushfire constraints.
 - Seek bushfire advice on the necessary design requirements to protect the infrastructure and community. A Bushfire Hazard Assessment and Management Plan should be development to respond to the applicable RRC Planning Scheme Codes.

Cultural heritage

OVERVIEW

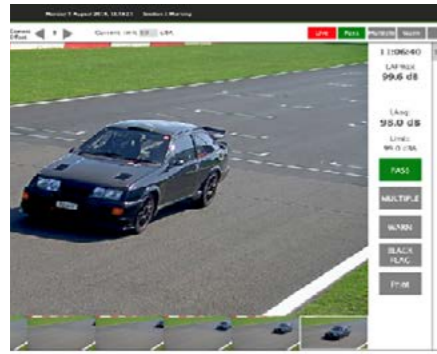
- Searches of applicable and publicly available databases and registers, including the Native Title Register, the Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP) and the Cultural Heritage Database, and a search of the RRCs Local register were undertaken.
- The search was undertaken on the 24/08/2020 for the Site and a 1km buffer around the Site. Results of the search are as follows:
 - o The World Heritage List Australia as maintained by DAWE: contains no places close to the Site.
 - o Commonwealth Heritage List as maintained by DAWE: contains no places close to the Site.
 - o The National Heritage List as maintained by DAWE: contains no places close to the Site.
 - o Register of the National Estate as maintained by DAWE : contains no places close to the Site.
 - o Cultural Heritage Database and Register as maintained by DATSIP: Contains no Aboriginal or Torres Strait Islander cultural heritage site points or Aboriginal or Torres Strait Islander cultural heritage site polygons recorded.
 - o The State Heritage Register (QLD Heritage Office): contains no places close to the Site.
 - o RRC Heritage Places Interactive Mapping: Contains no places close to the Site.
- While it is noted that there are no mapped or identified areas of Aboriginal or Torres Strait Islander or European Cultural Heritage, **early consultation with the listed Aboriginal Corporation, the Darumbal People, is strongly recommended** to offer the Darumbal People an understanding of the Site and the Proposed Development and to determine any unmapped sites of cultural heritage.
- Additionally, under Section 23 of The Aboriginal Cultural Heritage Act 2003 (QLD), it should be noted that the Site and any future development will be subjected to The Aboriginal Cultural Heritage Duty of Care Guidelines, which requires that all reasonable and practicable measures are undertaken to ensure the proposed activity does not harm Aboriginal Cultural Heritage.
- To this end, it is also recommended that a “Historic Object Find Procedure” and “Aboriginal Objects Find Procedure”, with a “Stop Work” procedure is incorporated in a Construction Environmental Management Plan and Operational Environmental Management Plan as applicable.

SUMMARY AND RECOMMENDATIONS

- Desktop Analysis has detailed that the Proposed Development is relatively unencumbered from a cultural heritage perspective.
- It is noted that neither the Site or any areas within proximity to the boundaries of the Site have been identified or mapped with any Commonwealth, State or Local Heritage databases or registers. Section 23 of The Aboriginal Cultural Heritage Act 2003 (QLD), notes that the Site and any future development will be subjected to The Aboriginal Cultural Heritage Duty of Care Guidelines, which requires that all reasonable and practicable measures are undertaken to ensure the proposed activity does not harm Aboriginal Cultural Heritage.
- To reduce the risk of information request items, it is recommended that further actions be undertaken as follows:
 - o Concurrent consultation with the Darumbal People, is **strongly recommended** to offer the Darumbal People an understanding of the site and the proposed development and to determine any unmapped sites of cultural heritage.

Noise

SUMMARY AND RECOMMENDATIONS



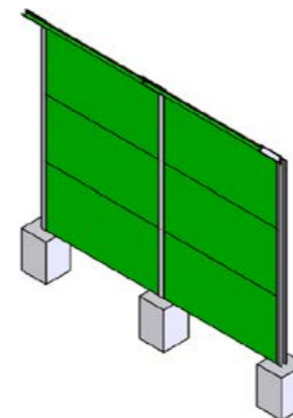
- It is advised that a permanently installed drive-by noise monitoring system is an essential modern tool for circuit noise management and should form part of every day track operations. It is the only effective method of ensuring that all participating vehicles remain noise compliant throughout the period of operation as other test methods can prove inaccurate.
- The *Environmental Protection (Noise) Policy 2019* quotes an LAeq of 50dB for outdoor noise measurements taken at sensitive residential receptor locations. This applies to daytime and evening measurements. It quotes 70dB for outdoor open air events, which could be deemed as infrequent events for the purposes of a motorsports precinct.
- It is recommended that a noise management plan, outlining circuit operating hours, number of operating days and noise limit targets is agreed during the full development application process.
- It is recommended that a variation of track session times including periods of respite (i.e. lunch break down-time) are documented in the noise management plan to help reduce noise impact and the number of days of use could be restricted for high noise sessions (competition events) to offer further mitigation.
- Based on club engagement, it is noted that the vehicles tend to operate within a drive-by noise range of 92dB to 96dB (usually taken 20m from track edge) for the majority of activity, with 105dB for competitive events. This compares with other global operating venues and has been used as input assumptions to the modelling.
- There are a range of circuits at the Motorsports Precinct. However, for the purpose of this assessment, four configurations were modelled.
 - Scenario 1; Full Capacity, Day-Day configurations - 92dB LAFmax** drive-by, 20 cars on the road circuit (recorded 20m from track centreline), with other tracks operating in day-day mode (practice, training, corporate).
 - Scenario 2; All tracks except road course & drag - 100dB LAFmax** drive-by limit, operating track days or testing (non-competition). No operation of main road course.
 - Scenario 3; Road Course Event - 105dB LAFmax** drive-by (20 cars, track day or road course competition event) on the road circuit. All drive-by measurements recorded 20m from track centreline. No other tracks in operation.
 - Scenario 4; Speedway Bowl Event - 105dB LAFmax** drive-by, 10 cars or bikes on the dirt oval (recorded 20m from track centreline). No other tracks in operation.
- Three key receptors have been selected for modelling purposes. The three locations that have been identified by the Council and local consultants as sensitive and are referred to AECOM 1-3



- Based on the masterplan design, the following dB LAeq is expected at the 3 closest receptor locations. These highlight that Receptor 1, the closest to the proposed development, will experience the highest noise levels during both day to day and event operations. However Receptors 2 and 3 are generally within acceptable noise limits (below 70dB on events or 50dB during day to day operations).
- It is noted that the operation of all tracks at once should be avoided to minimise noise impact, and this strategy should form part of the operational calendar for the motorsport precinct.

Receptor	Existing Baseline	Scenario 1: Full Capacity, Day-Day	Scenario 2: All tracks except road & drag, Day-Day	Scenario 3: Road Course Event	Scenario 4: Speedway Bowl Event
Source	LA90 range	92dB LAFmax	100dB LAFmax	105dB LAFmax	105dB LAFmax
1	36-45 dB(A)	58 dB LAeq	51dB LAeq	71dB LAeq	43dB LAeq
2	33-42 dB(A)	50 dB LAeq	50dB LAeq	59dB LAeq	42dB LAeq
3	34-42 dB(A)	37 dB LAeq	35 dB LAeq	48 dB LAeq	27 dB LAeq

- These noise limits could be further mitigated by the installation of a 4m acoustic barrier on the ridge of the embankment along the northern edge of the site. The noise level reduction due to the barrier would be circa 3dB, providing the following results:



Receptor	Existing Baseline	Scenario 1: Full Capacity, Day-Day	Scenario 2: All tracks except road & drag, Day-Day	Scenario 3: Road Course Event	Scenario 4: Speedway Bowl Event
Source	LA90 range	92dB LAFmax	100dB LAFmax	105dB LAFmax	105dB LAFmax
1	36-45 dB(A)	55 dB LAeq	48dB LAeq	68dB LAeq	40dB LAeq
2	33-42 dB(A)	47 dB LAeq	47dB LAeq	56dB LAeq	39dB LAeq
3	34-42 dB(A)	34 dB LAeq	32 dB LAeq	45 dB LAeq	24 dB LAeq

- It is strongly recommended that a Full Noise Impact Assessment, including additional monitoring and analysis is undertaken as part of the Full Development Applications phase of this development. The development application should combine the experience of a motorsport acoustics professional and a local noise consultant who can prepare the development application in line with local standards.

Air quality

OVERVIEW

A desktop review of the Commonwealth, State and Local Government environmental planning considerations relevant to (and within proximity of) the Site has been undertaken.

GENERAL METROLOGICAL FACTORS

- Must be considered when considering air quality and thresholds, and the following factors must be further considered to understand the specific chemical composition from the emission source into the environment:
 - o Wind speed + direction, temperature, humidity, rainfall, solar radiation
- According to the Queensland Department of Transport and Main Roads, average pollutants caused by vehicle exhausts include:
 - o Carbon dioxide (av 182g/km/vehicle), carbon monoxide (av 182g/km vehicle), nitrogen oxides (av 21mg/km/vehicle), particles (not determined as part of this assessment), volatile organic compounds (not determined as part of this assessment) and sulfur dioxide (av 50mg/km/vehicle).

ROCKHAMPTON REGIONAL PLANNING SCHEME 2015

- The Rockhampton Region Planning Scheme (RRPS) Part 3, Section 3.4, sub-category 3.4.7 relates to Air, Noise and Hazardous Materials. The specific outcomes are as follows:
 1. The health, well-being, amenity and safety of communities and individuals are protected from the impacts of air, noise and odour emissions, and hazardous materials.
 2. The interface between land zoned for industry and zones that contain or planned to contain future sensitive land use(s) is planned to protect the amenity and well-being of residents and to support and protect industrial uses in areas identified in the settlement pattern for industrial development. In particular, the planning of the Gracemere industrial area provides for the long-term separation of higher order industries from the future development of sensitive land use(s).
 3. Development is avoided on land which is already contaminated unless rehabilitated.
 4. Development involving the storage and handling of hazardous materials is appropriately located, designed and constructed to minimise health and safety risks to communities and adverse impacts on the environment.
- There are no specific Planning scheme codes that trigger assessment as a result of the Project, however, it is strongly recommended that consultation with Rockhampton Regional Council and relevant community groups is undertaken as a matter of priority to determine impacts to sensitive land uses and preferred management/ mitigation measure.

SUMMARY AND RECOMMENDATIONS

- The operational phase of the development will be required to meet the provisions for air quality with respect to the concentration of vehicles. It is recommended to undertake an air quality assessment to determine whether the Project can adequately satisfy the air quality thresholds. The volume of emissions from the vehicles may require management of some description to reduce the emissions.
- It is **strongly recommended that an Air Quality Assessment with recommended control measures** detailed is undertaken once finalisation of masterplan design is complete and prior to Development Application. Modelling is recommended to verify the effectiveness of controls. Consideration of the NPI should be undertaken as part of this assessment.
- **Further Assessment and identification of requirements under the provisions of the EP Regulation for ERA's** are strongly recommended as part of the planning approvals phase of the development.
- **Consultation is undertaken with Council and applicable local community groups** to determine unidentified points of impact and to understand desired management / mitigation measures.

Geotechnical

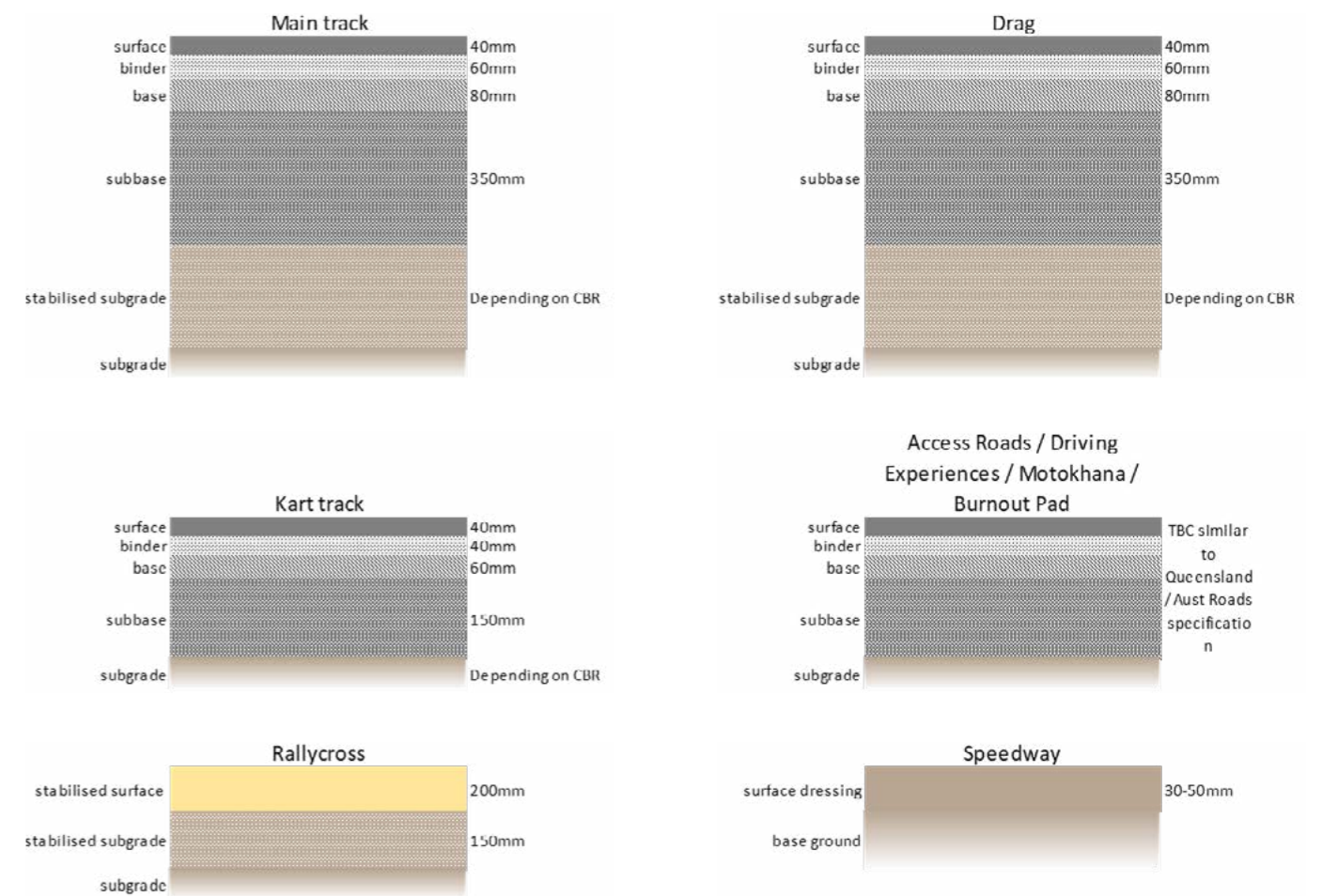
OVERVIEW

- A geotechnical investigation was undertaken at the Site on 21 July 2020 by Cardno (Qld) Pty Ltd.
- The purpose of this section is to establish if any technical constraints identified within the preliminary geotechnical investigations have any bearing on the feasibility of plans being developed for the Motorsports Precinct, and to provide options and outline recommendations for surface build up and materials and structures to be used in the Precinct.

FINDINGS

- The investigation examined the following aspects and, when considering the proposed development of the Motorsports Precinct, offers a number of tentative conclusions that on the whole do not present any major cause for concern regarding the feasibility of development on the site.
- **Current surface condition** - generally ground cover consisted of grasses with sporadic low density tree growth. There is some evidence of cobble sized material within the creek bed and over the levee banks, indicating a flood has occurred recently.
- **Regional geology** - indicate the site is likely comprised of Quaternary alluvial gravel, sand, silt and clay.
- **Groundwater** - not encountered in the boreholes during the investigation, however it is noted in the report there is likely to be seasonal variations in the water table depth.
- **Laboratory test results** - have not yet been released by the laboratory at the time of publishing the report. Recommended that these results be obtained in due course in order to address, in particular, the potential for expansive soils in the design, which may introduce additional but manageable factors into the design.
- **Site reactivity and classification** - the report notes that on the basis of the results from the field investigation, the site in its current state would likely to be classed **Class S** with expected movement in the region of 0-20mm. This low level of reactivity suggests a manageable amount of ground movement that can be accommodated in the foundation designs for the tracks and buildings.
- **Foundation design** - indicates both shallow or deep footings could be considered for the project, and consideration should also be given to settlement, which can result from the self-weight of the soil, or loading on top of the soil from additional fills or structures. In particular for the race circuit, drag strip and other paved tracks of the masterplan, it is recommended that, during the design development phase, further consideration is given to the combination of ground improvement and pavement structure and material specification chosen for the tracks in order to minimise excessive settlement and risk of cracking and surface failure on the high specification racing surfaces, whose smoothness, texture and condition will be crucial to their viability.

- **Earthworks** - suggests that the gravelly sand located on site to be suitable for re-use, which should enable volumes of imported and exported material to be reduced, subject to adequate quality controls.
- **Proposed surface build up** - for the primary track surfaces, a range of different pavement designs and surfaces will be needed that will reflect the design surface characteristics and CBR of the soils. The design of each of the surface build ups should be undertaken at the detailed design stage, but the following provides an indication of the typical depths for each of the main features on the site:



SUMMARY AND RECOMMENDATIONS

- Obtain outstanding laboratory test results and establish risk of expansive soils and determine appropriate mitigation during the detailed design stage.
- During the detailed design stage undertake further ground investigation in targeted locations associated with the designs to inform the design of building and track foundations.

9

IMPLEMENTATION

- 9 a Development strategy and cost summary
- 9 b Governance and funding overview
- 9 c Strategic assessment overview

9a

Development strategy and cost summary

PRECINCT ACTIVATION

Complete activation of the Motorsports Precinct is anticipated to occur over several years.

The nature of the motorsport activities provides a unique value proposition to stage the delivery and activation of areas in any particular priority order. Potential stages for development are indicated in the diagram below.

Area	Probable cost range (\$) AUD
Drag Strip	\$7,200,000 - \$8,000,000
Road Course (incl. RX + drifting)	\$72,000,000 - \$81,000,000
Speedway	\$13,100,000 - \$14,500,000
4x4 + Mudspartz, Supercross	\$17,500,000 - \$19,400,000
Road Safety + Driver Training	\$9,500,000 - \$10,500,000
Welcome Centre	\$2,400,000 - \$2,700,000
Karting	\$7,200,000 - \$7,900,000
Commercial Nodes	\$0 (private led development)
Camping + Recreational Area	\$621,000 - \$686,000
+ Enabling infrastructure	\$12,600,000 - \$13,900,000
Total	\$142,200,000 - \$158,500,000 Total Cost Range

Based on 2020 \$ AUD.

PROBABLE COSTS

An opinion of probable costs has been developed to provide an indicative cost range for the construction of each activation area (see left).

These probable cost ranges exclude all building infrastructure (e.g. pit building, grandstand, storage facilities). Alternative avenues could be investigated for providing building infrastructure.

PRIORITY AREAS

Community feedback on what motorsport activities should be operational within the short term include a mixture of club / competitive and commercial / non-competitive use.

- Drag Strip
- Road Course
- Speedway
- Driver Training
- Karting

With that in mind, the following provides a potential timeline for construction.

Components (Priority Areas)	1	2	3	4	5	6	7	8
Enabling Infrastructure	Speedway							
Enabling Infrastructure	Speedway	Drag Strip						
Enabling Infrastructure	Speedway	Drag Strip	Driver Training					
Enabling Infrastructure	Speedway	Driver Training	Karting					
Enabling Infrastructure	Speedway	Drag Strip	Driver Training	Karting				
Enabling Infrastructure	Speedway	Road Course						
Enabling Infrastructure	Speedway	Road Course	Drag Strip					
Enabling Infrastructure	Speedway	Road Course	Karting					

Governance and funding overview

RECOMMENDED APPROACH TO DEVELOPING THE PRECINCT

Setting up the governance for the development and operation of the Precinct will require further investigation, however this report aims to set out considerations and options available.

Soft market testing - expression of interest for operators

Council should undertake market engagement (for interested parties / operators) and negotiations with clubs to secure pre-commitments. Early investment by Council could be used to indicate a commitment to the Precinct, but should be undertaken with the confidence of an end user (i.e. critical infrastructure and Speedway).

OWNERSHIP AND GOVERNANCE POTENTIAL OPTIONS

The below options are based on the structure of other motorsport venues and could be applicable to this project subject to the results of soft market testing.

ROCKHAMPTON MOTORSPORTS PRECINCT		
OWN FUND DEVELOP OPERATE	OWN CO-FUND DEVELOP LEASE	CO-OWN CO-FUND CO-DEVELOP CO-OPERATE
HIGH RISK DIRECT REVENUE OPERATIONALLY INTENSIVE	MEDIUM RISK CONSISTENT REVENUE OPERATIONS AS PER EXISTING COUNCIL MANAGEMENT OF FACILITIES	LOW RISK CONSISTENT RETURN OPERATIONALLY EFFICIENT COMMERCIAL BEST PRACTICE
<p>Development and Operations funded from Council resources (including borrowings) and grants (no requirement for private sector investment).</p> <p>Council retains all ownership and development rights and full responsibility for operations.</p> <p>Revenue can be from rentals, short term leases, events, venue hire, etc.</p>	<p>Development and Operations funded from Council resources (including borrowings) and grants.</p> <p>Council retains all ownership and development rights and lease out management and operations to either:</p> <ul style="list-style-type: none"> · A single operator / club for the management and operation of the whole Precinct, or · Several operators / clubs for the management and operation of a specific area (clubs may contribute in-kind to maintenance) 	<p>Council is a shareholder and provides services to a Development Company and Holding Company in partnership with an specialist motorsports operator who holds the commercial rights to the Precinct (for a fee paid to Council).</p> <p>Joint development, profit sharing and community benefits locked in to the commercial agreements.</p>

Governance and funding overview

EXAMPLE GOVERNANCE FRAMEWORK

As an example, it could be recommended that two primary Special Purpose Vehicle (SPV) companies are set up. One to act as the Master Developer of the Precinct, and the other to retain the commercial rights for all activities, events and undertakings associated with the Precinct.

At operational level, it is also recommended considering the set up of a company to specifically oversee and undertake the management of the Precinct, which will include setting up and holding the leases with the venue operators, and providing services including marketing, facilities management and maintenance of all facilities.

Finally, to separate ownership and to allow a phased development of the facilities, it is recommended combining the race circuit and kart track operations and developing a combined academy and experience company, as well as setting up a separate sub-development company to include the speedway development and operational costs.



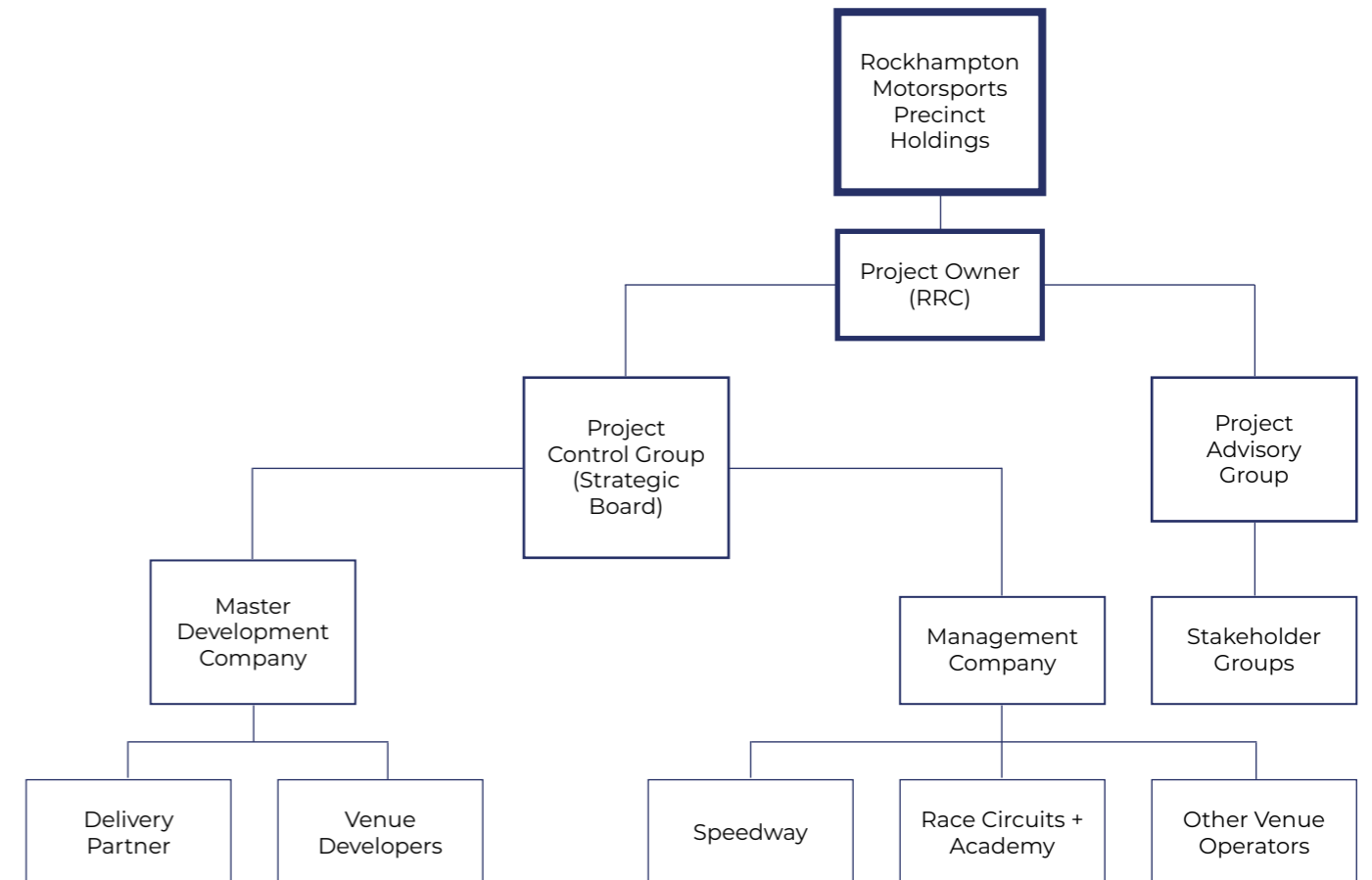
EXAMPLE ORGANISATION GOVERNANCE

The model shown is an example of how the set up and delivery of the Precinct might work.

Initially an overall holdings company can be set up to retain the land assets and commercial rights to the Precinct - this being held by the overall project owner.

A project controls group may then be set up to act as the governing body for the future direction, leadership and strategic development of the Precinct. This would be classified as a strategic board and its members maybe drawn from senior members of the Council, State Government, Principal Funders and Motorsports Governing Bodies. In addition, an advisory board or group could be set up to provide additional advice and support to the project. This group would be drawn from a range of specialists, stakeholders and interested parties that could provide benefit and value to the project.

The Master Development Company (MDC) would act as the primary Developer and could be assisted by a Delivery Partner to take accountability for the design and construction of the works. Sub-development agreements may also be set up with venue Owners and Operators depending on risk allocation. The Management Company would take responsibility for the management of the assets, the head lease agreements, marketing and management of operations.



Strategic assessment overview

BACKGROUND

The Strategic Assessment is needed to support the outcome of this stage of project development; to determine if Council can proceed with settlement of a contract to buy 53199 Burnett Highway, Bouldercombe.

This site was selected from a number of locations in the region, based on it not constrained by flooding and offers generally flat open stable land and proximity to Gracemere and Rockhampton.

STRATEGIC ASSESSMENT APPROACH

The Strategic Assessment is an initial step towards understanding the needs, considerations, opportunities and value of a project in early stage development.

It is not intended to recommend solutions; a strategic assessment considered completing and contrasting factors to inform the next stage of project development. Under the Queensland Government Business Case Development Framework, the Strategic Assessments provides a definition of Service Need and Investment Logic only. This report reflects the current status of development and offers content determined to be of most value to the client.

The Strategic Assessment is not considered to be conclusive document and is on used only to consider the project need and what possible actions can be taken to further develop the proposed response.

THE PRECINCT OPPORTUNITY

A Queensland Parliamentary Committee inquiry in to Motor Recreational Activities agrees that, while not citing Rockhampton directly, there is a need to develop new facilities and to protect existing facilities to meet the demand for motor sport events and preserve and grow the cultural, economic and tourism benefits of the industry

The Motorsports Precinct can be considered across three key opportunities to be explored and developed by council over time.

Permanent facilities for Speedway and clubs at a new purpose built facility

- Provides a long term, all year facility as Rockhampton's home of Speedway the facilities to support the development of juniors, with dedicated beginner, intermediate and full size circuits.
- Embraces a new future for Speedway to recapture attendance, deliver an enhanced calendar unencumbered by the limitation of the Showground site.
- Unlocks the opportunity for master planning of the showground to accommodate larger and more events such as Beef Week without the impacts of major safety facilities installed to support Speedway activities.
- Provides a flood resilient venue at the Showgrounds for different sporting clubs, such as AFL and Cricket, as well as the opportunity to develop the site to support the attraction of professional games and matches across a number of sports.

Growing motorsport events and culture in Rockhampton

- Cements Rockhampton's commitment to motorsports, regardless of whether the clubs agree to relocate.
- Provides opportunity to fill a gap in the market between Brisbane and Townsville, for a number of motorsport
- Allows Council to develop and execute strategies to attract new events and activities centred around motorsport.

Supporting Regional Development Tourism and driving the economy

- Meeting a gap in the market with provisions of a dedicated heavy vehicle regulation and driver training facility
- Offering experience centre, for the growing interest in autonomous and high performance motor vehicles (including sales event, enthusiast days and similar events).
- The addition of a new event venue increases economic opportunities in the region, as well as additional revenue from commercial licensing of the circuit, go kart and driver training facilities.

Strategic assessment overview

PROBLEM STATEMENTS

Stakeholder consultation with internal, user groups, motorsport clubs and external motorsport affiliates has confirmed that a dedicated motorsport precinct will address a number of existing planning and economic constraints in the region.

The Rockhampton Speedway has been operating at the Rockhampton Showgrounds since 1925. In recent history, speedway events, while regionally successful have been constrained by the demand for the Showgrounds as a multi-purpose venue that needs to accommodate major annual and biannual events.

Many Rockhampton sporting fields and facilities are impacted by flooding and therefore limited in the both their use and development opportunity. The RRC is actively seeking long term sustainable planning outcomes that support growth of local sport as well as attraction of larger events across all codes.

BENEFITS STATEMENTS

Stakeholder consultation with internal members, user groups, motorsport clubs and external motorsport affiliates has confirmed that a dedicated motorsport precinct will address a number of existing planning and economic constraints in the region.

The stakeholder consultations identified a number of benefits that can be realised if the Motorsports Precinct is fully developed. These preliminary benefits can be considered in terms of:

Meeting immediate needs / priorities for Council

Relocation of the Speedway means that a Showgrounds Master Plan can be developed based on a true multi-purpose facility. Constraining impacts from a lack of permanent motorsports facilities and flood resilient sporting facilities (AFL, Cricket) in Rockhampton can be resolved.

Providing opportunities to grow / attract events

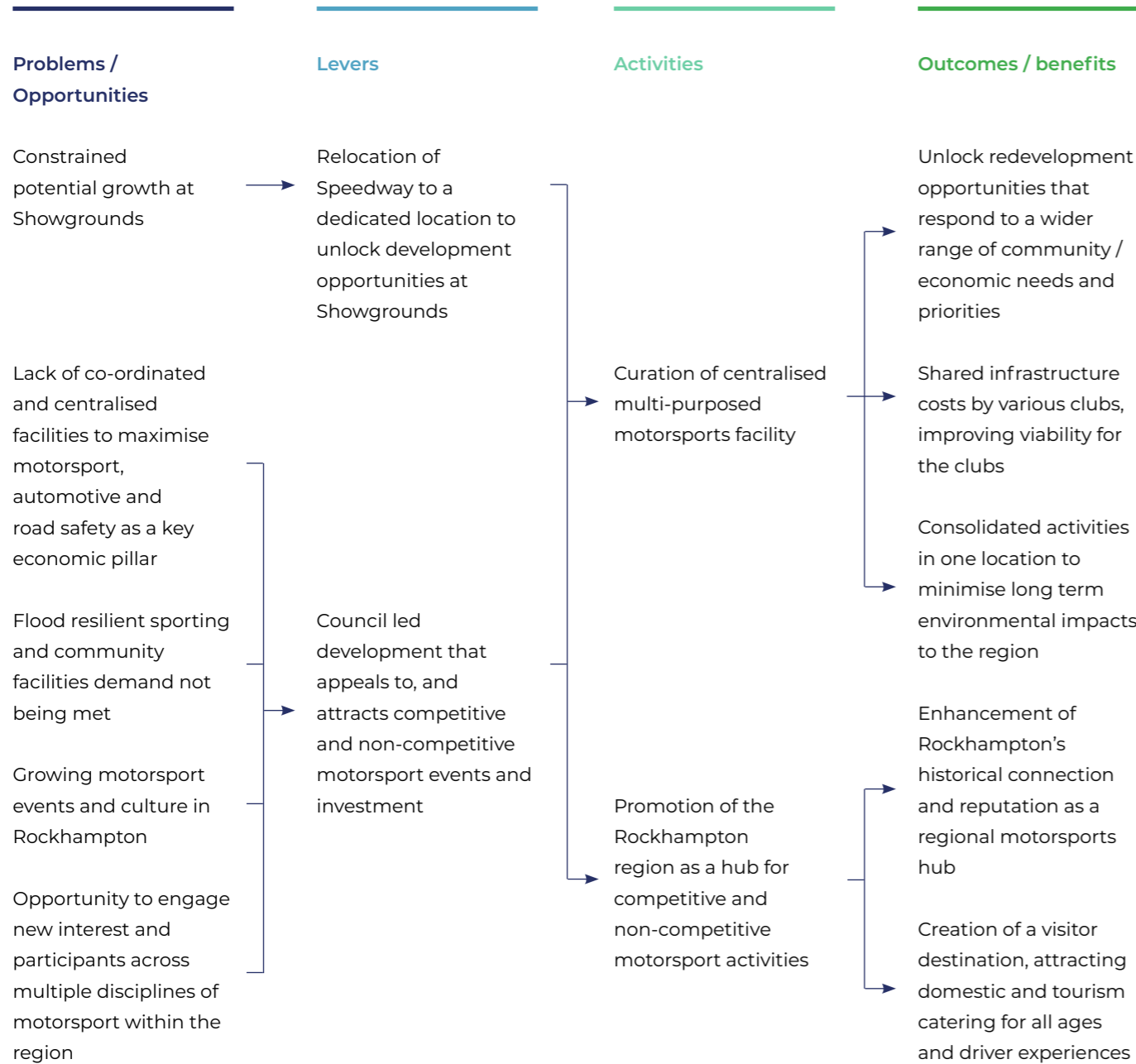
New community / club facilities, competition karting track and new circuit meet a gap in the national / regional market for motorsports. Showgrounds redevelopment attracts sporting and other events.

Problem 1	Problem 2	Problem 3	Benefit 1	Benefit 2	Benefit 3
<p>Showgrounds are under pressure</p> <ul style="list-style-type: none"> • Competition for space and event calendar is congested. • Council support for Beef Week and other community events is impacted by the existing arrangements with Speedway. • Speedway's safety requirements are impeding multi-purpose requirements for the facility. • Council master planning for the Showgrounds impacted by primary license to Speedway. 	<p>Lack of co-ordinated resources to realise motorsport as an economic pillar</p> <ul style="list-style-type: none"> • Motorsport clubs want to sustain and grow memberships, particularly junior / development facilities are lacking. • No full-time venue for Speedway and other clubs reduces number of events that can be held. • The Region needs a focal point to strengthen its position has a motorsport destination. 	<p>Flood resilient sporting and community facilities demand is not being met</p> <ul style="list-style-type: none"> • AFL and Cricket need to relocate to attract higher grade games for both sports. • Event Attraction limited as a result of a lack of reliable resilient facilities. 	<p>Speedway relocation allows Showground Masterplan to respond to a wider range of community and economic needs and priorities</p> <ul style="list-style-type: none"> • By relocating speedway the facility requirements for motorsports events are not required and the Showground can undergo development with as a more multi-sport, agile event precinct. • The growth of Beef Week and other major events secures Rockhampton's image as Australia's Beef Capital. • Council's objective to provide flood resilient facilities for AFL and Cricket are met and provide opportunities to attract professional sporting fixtures to the region. 	<p>Rockhampton's historical connection and reputation as a key regional motorsports hub is enhanced</p> <ul style="list-style-type: none"> • Motorsports in the region can leverage a growing investment and volume of events to attract membership. • Council making a greater contribution to annual sporting calendars that concentrate efforts and marketing for all motorsport activities, reducing competition for resources, spectators, and investment in facilities. • The new precinct develops and attracts new events and economic activity, including new commercial and community ventures. 	<p>Council leads development that appeals to, and attracts clubs, events and investment in the Motorsports Precinct</p> <ul style="list-style-type: none"> • From providing a consistent commitment to completing the precinct (in stages) and developing the right models of operation, the precinct supports growth without diminishing the identity and culture of each club. • Major events are developed that provide economic benefits to the region. • New commercial ventures (circuit, karting, driver training) are developed in a sustainable and appropriate way to support growth of motorsport across the region.

Strategic assessment overview

LOGIC FOR COUNCIL INVESTING IN THE PRECINCT

Taking into consideration of the problems, benefits and drivers for the project, the following diagram confirms the investment logic for Council's efforts to develop the Rockhampton Motorsports Precinct.



REGIONALLY SIGNIFICANT OPPORTUNITIES

Growing Speedway

Speedway is traditionally a summer sport, but four North Queensland tracks run during the winter months / dry season. They are far more likely to attract speedway tourists during the colder months in southern states and from New Zealand, so this is a definite opportunity.

Archerfield Speedway - on average, the operator hosts 35 speedway events at Archerfield per season plus practice sessions. We average crowds from around 1,500 on minor nights to 7,500 people at a major event, with competitor numbers averaging between 90 and 150 people on any given night.

Brisbane is home to over 400 competitors (a third more than Sydney) and the venue also runs 40 times a year. The operator and clubs associated claim the speedway has an economic impact of \$300 million in the city alone and is a half a billion-dollar industry in Queensland each year.

Centre for Karting

Requirement for the provision of a high quality permanent venue in Queensland that will attract competitors, businesses and visitors alike. I believe that the development of a motor racing precinct covering a range of motorsports has advantages economically such as the one at Willowbank which, with expansion and improvement, could well be a starting point to achieving the outcome.

Kingston park raceway financial impact - in the Logan region we contribute about \$3.3 million a year to the local economy, so we are a big part of our local economy through wages and spending. (Kart Tracks only).

COMMERCIAL OPPORTUNITIES

The Precinct provides opportunity for community amenities to be supported by commercial arrangements with private operators.

Three concepts for consideration are:

Driver Training providers

Supporting regulatory compliance as well as private users (eg. 4WD training). Queensland Government support would be an enabler.

Service Centre

Key early enabler to the Precinct would be the inclusion of a service centre providing access to fuel and an immediate 7 day per week going concern and revenue stream to Council.

Circuit Operator

Almost all motorsport circuits are managed by a single operator who develops events, manages club use and facilities. Licensed or leased by Council, this could include all clean track facilities, experience centre, visitor attractions and karting.

Strategic assessment overview

SUGGESTED NEXT STEPS

Action	Requirements
Development Application for Precinct	Enact a material change of use for the selected site.
Update Program Management Plan and establish governance	Following endorsement of the next stage, update Program Management Plan (including Assurance Plan and funding requirements) and establish initial governance (Project Steering Committee).
Early Market Sounding and user attraction	Using the masterplan as reference develop a non-binding early market engagement approach and interactive workshops to fully detail.
Preparation of the Development Scheme	On the outcomes of Early Market Sounding and user attraction (clubs engagement) prepare the precinct Development Scheme.
Significant Procurement Plan for Precinct transactions (based on endorsed development scheme)	Develop a full program management plan and significant procurement plan, consistent with State and Federal Government requirements to support grants attraction and progress commercial transactions with potential market partners.



Rockhampton Motorsports Precinct
MASTERPLAN REPORT

NOVEMBER 2020

Driven.



 Turner & Townsend

Prepared by **Driven International Ltd**
with support from **Turner & Townsend**