

KARRATHA BIKE PARK

CONCEPT DESIGN PACKAGE
JULY 2025 | RevD



PREPARED BY



FOR



PROJECT INFORMATION

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INTRODUCTION AND VISION

INTRODUCTION

The City of Karratha, in partnership with design specialists Common Ground Trails, are working toward delivering a purpose-built Bike Park—a vibrant and inclusive space designed to meet the growing demand for safe, dedicated cycling facilities. The project will promote active lifestyles, strengthen community connections, and provide a lasting recreational asset for current and future generations.

VISION

Create a welcoming, family-oriented, regional scale Bike Park for the City of Karratha that encourages skill development, social connection, inclusivity, and active outdoor lifestyles. Thoughtfully designed, the park will set a high standard for quality through its durable construction, low-maintenance design, and commitment to safety, accessibility, and material excellence.

The Bike Park will become an iconic feature of the city and a highly valued community asset for years to come.



PROJECT BACKGROUND

Cycling—particularly BMX and mountain biking—will remain a popular activity among Karratha residents, especially young people. Despite this enthusiasm, there is currently no dedicated facility in the city that offers key features such as flow trails, pump tracks, or jump lines.

To address this gap, the City will explore the development of a Bike Park that supports skill development, safety, inclusivity, and year-round outdoor recreation. The project will align with the Council Plan 2025 – 2035 and will contribute to tourism, regional liveability, and the enhancement of community infrastructure.

Inspired by successful examples like the Dyoondalup Bike Park in the City of Melville, this future facility will cater to riders of all ages and abilities. The project will also form part of the City’s broader Community Infrastructure Plan, which will guide investment over the next decade.

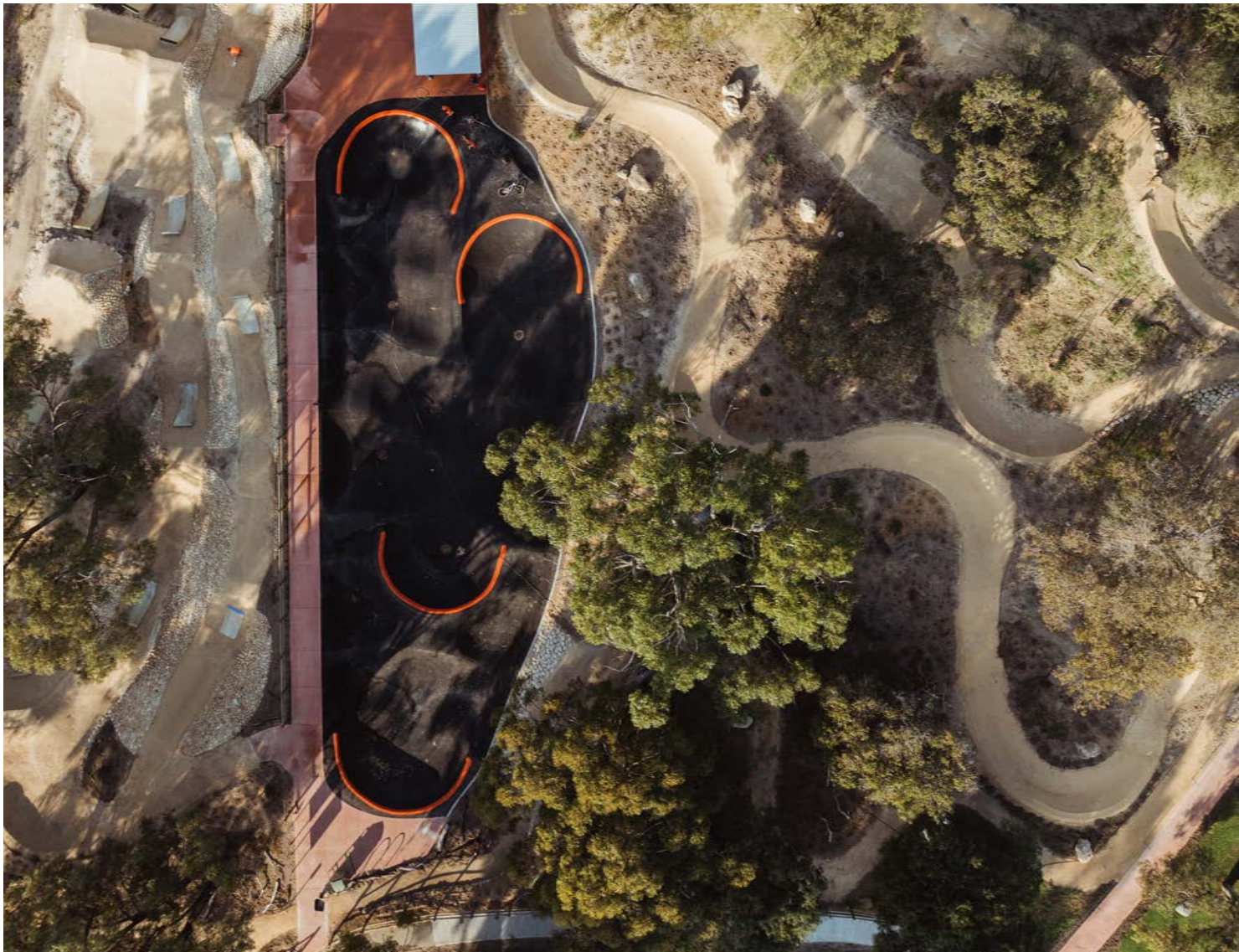
To bring this project to life, Common Ground Trails will be engaged to collaborate with City staff, stakeholders, and the community. Three possible sites will be identified, and preliminary concept designs will be developed for each location.

These early designs will be shared with stakeholders and community groups for review and input. Based on this feedback, the designs will be refined and presented to the wider community through the City’s 'What We Make It'

platform. The community will have the opportunity to vote on their preferred option.

The selected concept and cost estimates will then be presented to the City of Karratha Council for endorsement. If approved, the project will move into the final phase of concept development, resulting in a highly detailed design ready to seek funding and begin the journey from concept to construction.

The Karratha Bike Park will not only fill a current gap in infrastructure—it will become a landmark recreational destination and a proud reflection of the City’s commitment to healthy, inclusive, and connected communities.



SITE SELECTION

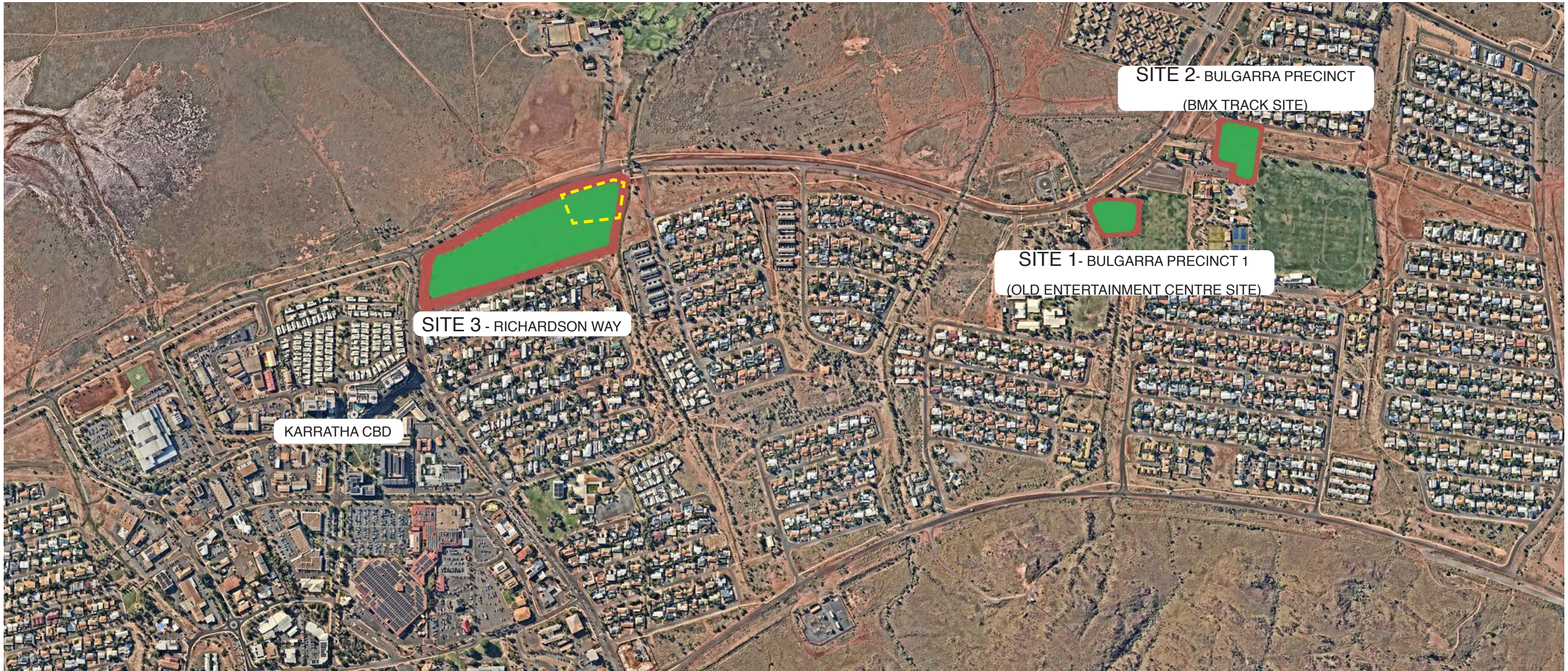
The City of Karratha conducted a thorough review of six potential sites for a new bike park, using criteria such as proximity to participants, visibility from nearby roads, long-term access, land suitability for public use, and availability of supporting infrastructure.

Based on this evaluation, the top three ranked sites were Bulgarra Sporting Precinct Old Entertainment Centre Site, Bulgarra Sporting Precinct Existing BMX track site and Richardson Way Park.

Although the Old Karratha Hospital Site scored highly, it was excluded due to uncertainty around short-term availability and long-term tenure. While the Bulgarra sites are smaller, there may be opportunities to expand into adjacent areas.

The Richardson Way Park is larger than required but presents a significant opportunity for development of a community precinct with multiple facilities co-locating and sharing services and infrastructure.

For full details of all sites, see map below.



SITE ANALYSIS

SITE LOCATIONS

All 3 sites are suitable to the development of a bike park, with each also having its own benefits and drawbacks.

The flat nature of the Karratha town site landscape and the extremes in seasonal weather are the primary constraints/ issues that need careful consideration. This is relevant for all sites.

Blke parks preferably have some elevation to give interest and speed to trails.



BULGARRA - OLD ENTERTAINMENT CENTRE SITE

Bulgarra Sporting Precinct (Lot 489 on Plan 175003) is located on Searipple Road, Bulgarra, within a Crown Reserve managed by the City of Karratha for recreation and playing fields. A 0.598-hectare portion of the wider precinct—formerly the Karratha Entertainment Centre—is being considered for development.

The site has access to existing electrical and water services, though new connection points may be needed. It offers direct access to a large car park and nearby toilet amenities, and sits within a well-used and visible community precinct.

Environmentally, the site has a moderate bush fire risk, is prone to storm water flooding, and lies within a 500-year storm surge area. While not listed as an Aboriginal Heritage Area, there is potential contamination (asbestos), which may increase development costs.

The available space is relatively small, which did not allow for flow trails and additional jump lines as per the project brief. Despite this, the site's location, existing services, and surrounding facilities offer strong advantages for a compact asphalt pump and trail park with good potential for skill development.



- PROPOSED SITE AREA
- 1:100 YEAR FLOOD BOUNDARY 0.2 TO 0.5M
- 1:100 YEAR FLOOD BOUNDARY 0.5 TO 1.0M
- EXISTING PATH ALIGNMENT



BULGARRA OLD ENTERTAINMENT CENTRE SITE PHOTO SURVEY



BULGARRA - EXISTING BMX SITE

Bulgarra Sporting Precinct (Lots 489 and 3001) is located on Searipple Road and comprises two Crown Reserves managed by the City of Karratha. Lot 489 is designated for recreation and playing fields, while Lot 3001 supports parklands, drainage, and public infrastructure. The combined site includes an underutilised and unsealed pump track.

Offering around 0.56 hectares of usable land, the site is part of a well-used, highly visible precinct. It benefits from nearby car parking, toilet amenities, and access to water and power, making it centrally located and well connected.

The area has no known heritage or contamination issues but is subject to moderate bush fire risk and lies within a 500-year storm surge zone. While the available space is modest and crosses two land parcels, the site's integration with existing facilities adds value. Key considerations include proximity to a Recreation Club and Early Learning Centre, and the need to upgrade the eroded surface of the dirt pump track.

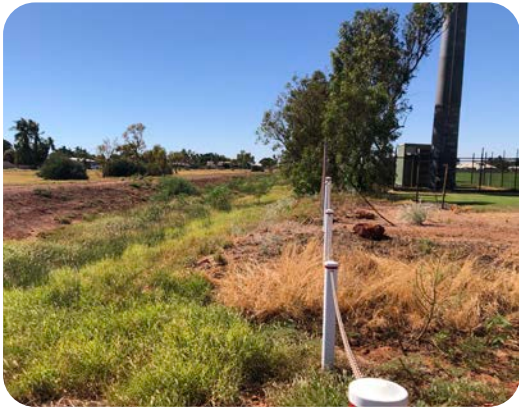
The size and layout of the space is suitable for a fully featured bike park. The connection to surrounding land uses and central drainage channel will however would make it difficult to build any significant elevation into the trail features so descending trails have not been included in the concept design for this location.



- PROPOSED SITE AREA
- 1:100 YEAR FLOOD BOUNDARY 0.2 TO 0.5M
- 1:100 YEAR FLOOD BOUNDARY 0.5 TO 1.0M
- EXISTING PATH ALIGNMENT



BULGARRA EXISTING BMX SITE PHOTO SURVEY



RICHARDSON WAY SITE

Richardson Way Park (Reserve 32335, Lot 365 on Deposited Plan No. 71342) is a 5.87-hectare site located at 21 Richardson Way, Bulgarra. It is Crown land under a management order with the City of Karratha, designated for parklands, recreation, drainage, and public infrastructure. The site is currently vacant and not listed as an Aboriginal Heritage Area, nor has it been identified as contaminated.

However, the site lacks formal car parking and has limited service connections—only a smaller excised portion is currently serviced. It is also considered a bushfire-prone area, with a moderate hazard level in the northwest corner and low hazard levels elsewhere. Additionally, being a low-lying area, it is subject to storm surge. As a greenfield site, all infrastructure such as toilets, water fountains, and car parking would need to be included in construction costs.

The site is highly visible from Bayview Road and is in close proximity to the Karratha CBD, offering good potential for a bike park with long trail lengths and varying levels of difficulty. Its relatively large area provides flexibility for layout and future expansion. A Masterplan for the site is considered another opportunity to fully realise the variety of benefits this park has for a diversity of recreational users. Furthermore, consideration must be given to how the Bike Park can be beneficially integrated with adjacent zones in the Masterplan.

The larger size of the Richardson Way site makes it the most suitable of the 3. The additional scale allows for the inclusion of surfaced descending trails through imported elevation. Adding descending trails along with the other features would make a bike park at this location a real standout amongst its peers.



- PROPOSED SITE AREA
- 1:100 YEAR FLOOD BOUNDARY 0.2 TO 0.5M
- 1:100 YEAR FLOOD BOUNDARY 0.5 TO 1.0M
- EXISTING PATH ALIGNMENT

RICHARDSON WAY - PHOTO SURVEY



FACILITY SCALE

Facility scale classifications describe the typical features or inclusions for Community, Local, Regional and State level facilities. The varying classifications typically provide facilities of differing scale, with varying complexity and with varying amounts of supporting infrastructure. This table is indicative only, however it provides an initial list of key requirements for consideration in the design.

Karratha is the only city in the Pilbara and a major regional centre for commerce and recreation. With its growing and diverse community it is well deserving of the Regional scale facility requested in the project brief and outlined in this Concept Design document.

KEY REQUIREMENTS	COMMUNITY	LOCAL	REGIONAL	STATE
Toilets			✓	✓
Changing facilities & showers				✓
Drinking water	✓	✓	✓	✓
Designated emergency access			✓	✓
Designated spectator viewing & seating			✓	✓
Food and beverage outlets				✓
Lighting				✓
Parking & drop-off			✓	✓
Proximity to major community centre		✓	✓	
Public transport access			✓	✓
Rubbish bins	✓	✓	✓	✓
Shelter/ shade			✓	✓



Dyoondalup Bike Park - Regional Facility



COMMUNITY FACILITY

Community level facilities are designed to service the community in the immediate vicinity or are supplementary to existing experiences offered at a location. They are small scale, minimal budget projects that typically create opportunity for introductory experiences and skills development for beginners, although this is a trend rather than a prerequisite.



LOCAL FACILITY

A local level facility is intended to service the residents of a particular town. Users may travel within the City to access the facility. Facilities incorporate basic design, simple detail and are value for money. They should be an engaging facility for all level of users with progression promotion for both beginner and intermediate users. Local facilities are ideally constructed within recreation spaces adjacent to existing infrastructure. They provide the capability of holding small local events, competitions and workshops.



REGIONAL FACILITY

A regional level facility will be attractive to a wider market and will attract users from outside the immediate area. Regional facilities provide a greater level of satisfaction and a desire for residents to return to the same location. These facilities incorporate more technical design elements, increased detail and will be of higher cost depending on technical features and supporting infrastructure. Development around existing infrastructure greatly reduces the cost of regional facilities. There will be an opportunity to host larger events, competitions and workshops.



STATE FACILITY

State level facilities capture a much broader market, with individuals traveling great distances to participate. These facilities will attract all user groups from beginners and new participants through to elite riders. Significant capital expenditure is required to develop a State level facility, but there are major opportunities for return on investment. Competitions will draw spectator crowds, opportunities for facility and equipment hire. There is also opportunities for private enterprise in areas such as hospitality, coaching and private sporting clubs within the facility.



PILBARA COMPARISON PROJECTS

TOM PRICE BIKE PARK

Project Location: Tom Price, Western Australia

Project Date: 2022

Project Cost: \$1.5m (Ex GST)

Project Type: Design and construction

Project Inclusions: Pump track, learn to ride track, dog park, sport lighting, park shelter and furniture, drainage infrastructure, hard and soft landscaping

The Tom Price Bike Park was a upgrade to central park within Tom Price. The development placed a pump track in an area previously unused and extended the dog park including fencing. The learn to ride track was positioned in between the existing playground and the pump track for ease of cross use. The existing playground and open grass area with furniture, shelter and BBQ areas were incorporated into the design of the project, but not upgraded or altered.

In addition to the facilities there was infrastructure upgrades including sports lighting and underground drainage to the pump track.

The project was put out for competitive tender and completed in 2022. The project cost is reflective of design rates and construction costs for the Pilbarra in 2022. Comparison to this project will need to consider construction cost escalation of the Pilbarra region since 2022.

PARABURDOO BIKE PARK

Project Location: Paraburdoo, Western Australia

Project Date: 2024

Project Cost: \$1.8m (Ex GST)

Project Type: Design and construction

Project Inclusions: Pump track, learn to ride track, sport lighting, park shelter and furniture, drainage infrastructure, hard and soft landscaping

The Paraburdoo Bike Park was an addition to the existing skate park. This provided more opportunity for all-wheeled sports and users of varying abilities. The pump track extended from the skate park providing a social space that was usable for both pump track users and skate park users. The learn to ride track extends from the path network in close proximity to both the skate park and pump track for ease of cross use and supervision. Shade sails, a shelter and furniture was included to promote comfortable social and viewing spaces.

In addition to the facilities there was infrastructure upgrades including sports lighting and overland drainage to the pump track.

ONSHOW BIKE PARK

Project Location: Onslow, Western Australia

Project Date: 2025

Project Cost: \$2.6m (Ex GST)

Project Type: Design and construction

Project Inclusions: Pump track, learn to ride track, upgraded parking, sport lighting, park shelter, shade sail and furniture, drainage infrastructure, hard and soft landscaping, significant earthworks, connections for and upgrades to services.

The Onslow Bike Park utilised an unused parcel of land that was close to existing infrastructure. The development included a pump track and learn to ride track adjacent one another for ease of cross use and supervision. The two facilities shared an entry path that was in close proximity to the upgraded carparking for ease of access.

The bike facilities surrounds were finished with grass and the learn to ride track was fenced. Both facilities were captured by the sports lighting and the pump track included underground drainage infrastructure.



PRECEDENT REGIONAL SCALE PROJECTS

DYOONDALUP BIKE PARK (POINT WALTER)

Project Location: Point Walter, Western Australia

Project Date: 2024

Project Cost: \$2m

Project Type: Design and construction

Project Inclusions: Pump track, jump park, flow trails underground drainage (pump track only), minor hard and soft landscaping park shelter and furniture

The project at Point Walter, showcases a comprehensive approach to developing a major urban mountain bike facility. This large-scale initiative included a site assessment, public consultation, high-level masterplan, detailed masterplan, and construction. The expansive facility features a pump track, jumps park, and flow mountain bike trails, all seamlessly integrated to provide diverse riding experiences.



PROS OF THE BIKE PARK

- Easily accessible bike park within the urban fabric, with supporting infrastructure like carparking, public toilets, playground, park furniture and shelter
- Provides broad range of biking experiences, each with a progressive series of trails/lines (i.e. Easy/Intermediate/Difficult/Extreme)
- Gathering area provided centrally for best viewing and supervising
- Sensitively utilises a portion of inner city bushland providing connection to nature

CONS OF THE BIKE PARK

- Unsealed trails in a high use and compact area has been problematic with erosion and excessive wear evident since opening
- Drainage strategy would have benefited from a underground system servicing a larger portion of the site to assist with quick removal of surface water

SCALE STUDY OF DYOONDALUP BIKE PARK ON RICHARDSON WAY SITE



ALBANY YOUTH CHALLENGE PARK

Project Location: Albany, Western Australia

Project Date: 2020

Project Cost: \$700k

Project Type: Design and construction

Project Inclusions: Pump track, jump park, dirt jumps underground drainage (pump track only), minor hard and soft landscaping park shelter and furniture

Project Budget: \$700K (*Bike elements only, project was under priced and CGT did not make a profit for this work)

The City of Albany's Youth Challenge Park project includes a range of activities and facilities including a pump track, mountain bike jumps, BMX jumps, a skate park, and a social area. It provides a large range of options for all wheeled sports.

The City of Albany have developed a maintenance program which involves both the local mountain bike club and a volunteer community group whose primary focus is maintenance of the dirt jumps.

The facility provides a place for events to be held and gatherings to occur. These are likely to be club focused and competition based. The facility will accommodate both comfortably.



PROS OF THE BIKE PARK

- Caters to a broad range of wheeled sports
- Features and lines caters and promotes progression of all level of users
- Dirt jump area allows for community involvement and expression for the users
- Involvement of the mountain bike club and community groups has created an ownership of the facility by the local community
- Caters to events and workshops

CONS OF THE BIKE PARK*

- Unsealed and high use jump trails has been subject to excessive wear

SCALE STUDY OF ALBANY YOUTH CHALLENGE PARK ON RICHARDSON WAY SITE



THE RAILYARD (USA)

The Railyard Bike Park is a 6-acre, full-scale bike park located in downtown Rogers, Arkansas, USA. Originally opened in 2015 with unsealed trails, the park faced frequent closures due to stormwater damage and maintenance issues. In 2020, it was upgraded with paved trails and improved drainage infrastructure.

Designed and built in partnership with the City of Rogers, the park now features four slopestyle trails, a dirt jump course, pump track, youth skills area, sports lighting, irrigation, free entry, and a covered visitor pavilion with restrooms. It also links directly to the 10-mile Lake Atalanta trail network.

The park is designed to cater to all skill levels, with repeated trail features that scale in difficulty to support rider progression. Access and circulation are simple and safe for both riders and non-riders, with a dual-use path looping the facility and connecting the carpark, pavilion, and all trailheads. An internal return trail also brings riders back to the start of each course—except the easiest slopestyle trail, which connects via the main loop path.

Four distinct trailheads provide separation between beginner and advanced users, ensuring a welcoming, safe, and unimposing experience for all.



PROS OF THE BIKE PARK

- Ease of movement around the site for riders and non-riders due to clear dual use path network and return trail
- Separation of junior area from more advanced areas.
- Four trailhead zones encourages inclusion and promotes safety for all users
- Sealed trails and subsequent low maintenance requirement
- Integration of rail cart for identity
- Four levels of progression for both the jump park and slopestyle trails

CONS OF THE BIKE PARK

- Lack of formal vantage viewing points for viewing of slopestyle trails
- Erosion and maintenance issue prior to surfacing upgrade of slopestyle trails*

* This is not a negative aspect of the park today, this issue has been overcome however at additional expense to the project. Surfacing and subsequent maintenance of the trails will require careful consideration.

SCALE STUDY OF THE RAILYARD ON RICHARDSON WAY SITE



STAKEHOLDER CONSULTATION 1

Initial stakeholder consultation was carried out at the City of Karratha offices with 3 key stakeholder groups. The Karratha BMX Club, Karratha Mountain Bike Club and the Rock Steady Riders group.

Common Ground in conjunction with the City projects team met with each group individually to run through their aspirations and suggestions for a bike park in Karratha and Wickham.

A range of precedent projects were presented and discussed. The level of enthusiasm for the project from the stakeholder groups was very high. A number of valuable requirements and considerations were raised incorporated into all concept designs.

General commentary from all user groups and the City of Karratha was focused around the critical nature of the durability of surface finishes to deal with the harsh climate/ conditions and minimise damage/ ongoing maintenance costs.

Overall Feedback from the groups was as follows;

- interested in a facility suitable for holding events including timed races
- Highlighted the need for shade and amenities
- Interested in what other facilities could be co-located with the bike park
- Wanted to see a facility particularly focused on promoting

progression and building skills for new riders

- Discussed capturing regional character in the facility
- Suggested the possibility of ex Rio Tinto ore rail cars, and railway sleepers being potentially available for use in the facility
- Liked the idea of timber and other man made features being included in trail sections, making a point or difference from existing trails in the hills around Karratha
- Reiterated the importance of shade and amenities for both users and spectators to the facility
- All very keen on a facility that caters for all user groups and skill levels
- Jumps with multiple lines
- Wanted to see the ability for events to be held, including temporary amenities, stage, food trucks, etc
- Highlighted the issues with e-vehicles and trail bikes in the area. Wanted consideration on how this could be managed.



PRELIMINARY CONCEPT DESIGNS



BULGARRA OLD ENTERTAINMENT CENTRE SITE

DESIGN NOTES

The Bulgarra Precinct 1 site is proposed as a more urban approach to the Karratha Bike Park Concept. The site is essentially flat with good access to parking and adjacent amenities.

The centrally located pump track is a large scale fully asphalt surfaced ‘pump park’ with multiple looping, jump and transfer options.

Around the pump track is a longer asphalt surface dedicated jump line with beginner, intermediate and advanced jumps built into a single ‘progressive’ line.

Polymer surfaced adventure / skills trail is the final outer element to the park. These will be heavily featured with optional elements to test and build skills.

For the youngest users a concrete learn to ride / bike playground is proposed.

All elements start and finish in a raised central area that will include shade, barbecues, tables, seating, water fountain and lawn.

As for all options, users of all age groups and skill levels will be catered for. Universal access will also be provided to all areas as will strong passive surveillance.

LEGEND

- 01 ENTRY POINT
- 02 JUMP LINE AND TRAIL START MOUND
- 03 ADVENTURE SKILLS TRAIL
- 04 PUMP TRACK PLATFORM
- 05 PUMP TRACK / "PUMP PARK"
- 06 ASPHALT SURFACE PROGRESSIVE JUMP LINE, INTERMEDIATE AND ADVANCED
- 07 LAWN AREA
- 08 CENTRAL HANGOUT ZONE (SHADED)



BULGARRA OLD ENTERTAINMENT CENTRE SITE - PRECEDENT IMAGERY



BULGARRA - EXISTING BMX TRACK

DESIGN NOTES

The Bulgarra Precinct 2 site is larger, yet more constrained than the first, with the large drainage channel splitting the site in half. A more linear approach has been taken to deal with the split site.

A medium sized asphalt pump track with an optional jump line has the ability to be used for both general recreation and for timed racing on its main loop when required.

A polymer surfaced jump park is on the northern half. This mountain bike style jump park provides a combination of concrete and timber kickers and features. Dedicated lines for beginners, intermediate and advanced users will share a return to start line.

A learn to MTB track for the youngest users will get them into simple but fun small scale features as they prepare to move to the next level.

Providing circulation / access to the park elements is a skills loop trail, where natural elements will be used to create optional challenges.

LEGEND

- 01 ENTRY POINT
- 02 CENTRAL HANGOUT AREA (SHADED)
- 03 ACCESS TO OVAL FOR EVENTS
- 04 CONNECTION TO SKATEPARK
- 05 LEARN TO MTB, NATURE PLAY
- 06 PUMP TRACK PLATFORM (SHADED)
- 07 PUMP TRACK - TECH/RACE
- 08 DRAINAGE CHANNEL
- 09 DRAINAGE CROSSING
- 10 MTB STYLE JUMP PARK
- 11 JUMP LINE START MOUND
- 12 BEGINNER JUMP LINE
- 13 INTERMEDIATE JUMP LINE
- 14 ADVANCED JUMP LINE
- 15 SKILLS LOOP TRAIL



BULGARRA EXISTING BMX TRACK SITE - PRECEDENT IMAGERY



RICHARDSON WAY

DESIGN NOTES

The Richardson Way site allows for a slightly more continuous layout, as there are less constraints.

A raised start area / upper trail head is proposed to provide some elevation for a series of asphalt surfaced descending 'feature-flow' trails.

Concrete and timber features on 3 separate lines will bring advanced, intermediate and beginner users down to the lower trail head where they can rest or head back up to the start.

A medium scale asphalt pump track is connected to the lower trail head.

The jumps element proposed is a multi line / multi skill level dirt jump style. This starts for all users at the upper trail head and has a shared return to start line.

To get to the upper trail head there is an accessible grade path as well as a steep challenge climb.

Shade and seating are provided at the upper and lower trail heads.

LEGEND

- 01 PUMP TRACK
- 02 LOWER TRAIL HEAD, HANG OUT ZONE (SHADED)
- 03 LAWN AREA
- 04 FENCING TO DETER MOTORBIKES
- 05 UPPER TRAIL HEAD, START HILL WITH SHADE/SHELTER
- 06 CHALLENGE CLIMB
- 07 OUTER FITNESS TRAIL LOOP
- 08 DIRT JUMP PARK
- 09 BEGINNER LINE
- 10 INTERMEDIATE LINE
- 11 ADVANCED LINE
- 12 RETURN TRAIL
- 13 DESCENDING FEATURE 'FLOW TRAILS'
- 14 BEGINNER TRAIL
- 15 INTERMEDIATE TRAIL
- 16 ADVANCED TRAIL



RICHARDSON WAY - PRECEDENT IMAGERY



COMMUNITY AND STAKEHOLDER CONSULTATION 2

Following the preparation of the preliminary concept designs follow up consultation was done with the same 3 stakeholder groups, Karratha BMX Club, Karratha Mountain Bike Club, and Rock Steady Riding to get their feedback and any further suggestions.

The preliminary concept designs were also made public for comment through the City's 'What We Make It' online platform.

A public engagement session was undertaken at the Karratha Leisureplex to discuss the designs, receive feedback and allow people to vote on their preferred design/ location. The same process was also carried out in Wickham at 'The Base'

The public engagement session was particularly successful with over a hundred visitors attending to discuss the project. 98 votes were received. A nominal 75% of people preferred the Richardson Way design and location, 25% of votes went to the Bulgarra BMX track site and only a single vote was received for the Bulgarra Old Entertainment Centre Site. The Old Entertainment Centre Site was subsequently removed from consideration.

Public commentary was all very positive with all participants being enthusiastic about the designs. The overarching theme of the feedback was a reiteration of that received in the initial consultation with the stakeholder groups. Durability of materials and shade/ supporting amenities being the most important as well as design for inclusivity and multiple user/ skill levels.

Overall feedback as follows;

- Preferred the Richardson Way location and design
- Requested a jump line for use with an air bag for trick learning

- Requested a larger pump track for Richardson Way
- Suggested the descending trails and jump park for Richardson Way be reorientated to run west to east to avoid afternoon sun at peak usage times (sunset)
- Suggested the skills trail for Richardson Way run all the way around the outer edge of the site
- Suggested food truck/ 'Hawkers Centre' area be provided for events.
- Discussed drainage design and the general low and spreading approach within Karratha for dealing with storm water (refer Karratha Drainage Guidelines)
- Suggested no trail bridge crossings over the drainage swale for the Bulgarra BMX site
- Possible acquisition of ex Rio Tinto rail car, etc.
- Very enthusiastic about the Richardson Way design
- More shade and asked about potentially covering the whole pump track at some point
- Further discussed the use of 'Karratha' character elements being included in the design. Railway sleeper berms, other features made from both natural and man made materials sourced locally.



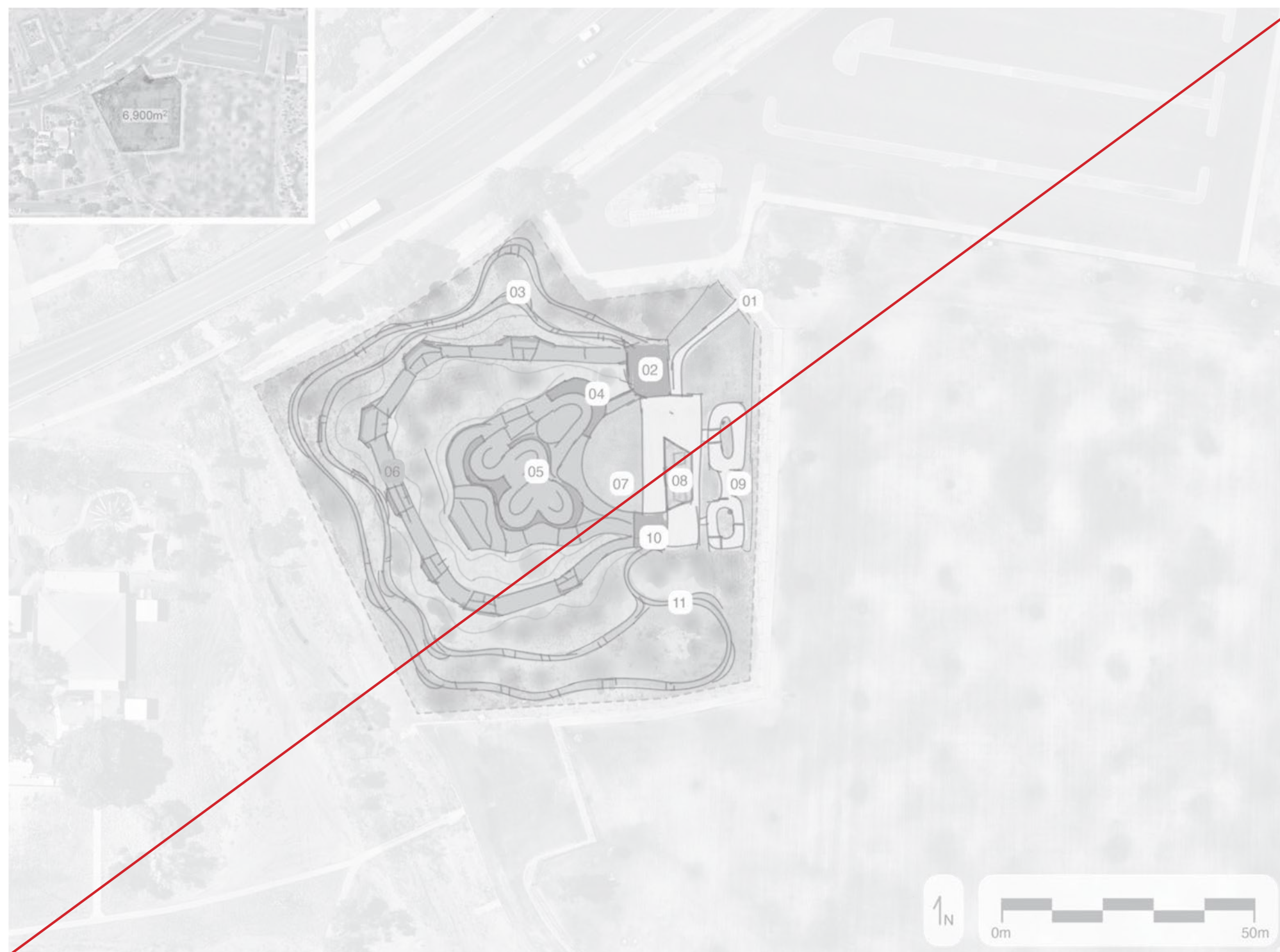
REFINED CONCEPT DESIGNS



BULGARRA - OLD ENTERTAINMENT CENTRE SITE

SITE NO LONGER UNDER CONSIDERATION

This site and preliminary concept option received minimal support during community consultation activities and has therefore been removed from further planning.



BULGARRA -EXISTING BMX SITE

FEATURES AND INCLUSIONS

01 MAIN ENTRY POINT

Location for signage and access to all areas of the Bike Park.

02 SECONDARY ACCESS

Concrete footpath connection to adjacent street, footpath network.

03 CENTRAL HANGOUT AREA

Large hardstand area with shade, seating, tables, water fountain, barbecues, power connection.

04 CENTRAL TURF AREA

Passive play space .

05 ACCESS TO OVAL FOR EVENTS/ FESTIVAL

Able to be opened for both vehicle and pedestrian access to the oval space. Removable bollards at car park end to restrict access as required. Also to be used for maintenance and emergency access.

06 CONNECTION TO EXISTING SKATEPARK

Trail connection between bike park and existing skate park.

07 LEARN TO MOUNTAIN BIKE (MTB), NATURE PLAY

Polymer surfaced trail with small junior level features suitable for the youngest users, nature play elements included for when a change of activity is required.

08 PUMP TRACK PLATFORM

Raised start point and viewing for the pump track, shade and seating provided. Accessible grade path access.

09 PUMP TRACK

A fast technical style asphalt pump track suitable for timed race events. Track also to include an asphalt jump line with progressive shaped features

and a dedicated junior loop.

10 DRAINAGE CHANNEL

Existing drainage channel to remain, all site drainage to be directed to here.

11 DRAINAGE CROSSING BRIDGE

Concrete bridge in path to ensure all sides of park are accessible when drainage channel has water in it.

12 MOUNTAIN BIKE (MTB) STYLE JUMP PARK

Polymer surfaced trail with a combination of timber and concrete features. Includes a variety of jump styles.

13 JUMP LINE START MOUND

Raised area, nominally 2m high, Includes seating and permanent shade structure, accessible grade path access.

14 BEGINNER JUMP LINE

Smaller size entry level jumps.

15 INTERMEDIATE JUMP LINE

Larger more challenging jumps intended for building skill and confidence.

16 ADVANCED JUMP LINE

Largest features for skilled users, multiple jump options and offshoots.

17 JUMP LINE AIR BAG

Provisional space for removable 'air bag' landing jump. For use in events. Will require management as to when in action

18 SKILLS LOOP TRAIL

Polymer surfaced trail with a variety of skill building features using timber, steel and 'repurposed objects' (eg. railway sleepers, etc).



BULGARRA EXISTING BMX TRACK SITE
-PRECEDENT IMAGERY
-ADDITIONAL DESIGN COMMENTARY

REFINEMENTS

- Design maintains original vision, with updates based on stakeholder and community feedback
- Airbag “trick jump” location added to Jump Park,
 - Provisional space for event use
 - Low-risk feature for skill development
 - Dedicated return trail for repeated use
 - Requires inflation and supervision; usage to be managed
- Skills loop trail now runs through the drainage swale instead of bridging it
 - Adds interest and reduces construction cost
 - Trail crossings will be reinforced with concrete and stone pitching
- Pedestrian bridge added to maintain continuous access across the swale
- Festival/oval access widened and adjusted to respect lot boundaries
- Pump track repositioned slightly for better flow and access clearance
- Drainage design developed to work with Karratha, water to flow into existing drain dissecting the site
- Drainage Strategy Developed
 - Based on the City of Karratha’s approach: keep water flow low and spread out to reduce velocity during peak storm events
 - All surface water runoff will be directed into the large existing drainage swale running through the site

MATERIAL SELECTIONS

- Focus on durable, low-maintenance, and engaging materials
- Recommended surface materials:
 - Asphalt
 - Polymer-sealed natural ground
 - Concrete
 - Compacted earth
- Design includes natural and repurposed materials for local character and identity:
 - Boulders, timber logs, railway sleepers, rail cars, etc
- Final Concept Design will include detailed analysis of:
 - Surface types
 - Placement of repurposed materials for function and visual appeal

If advanced to Final Concept Design, this concept will deliver a fun, inclusive, and engaging bike park that caters to a wide range of disciplines, ages, and skill levels.



Progressive Jumps



Asphalt Pump Track



Alternative Features



Optional Lines



Albany Rollers and Berms



Balance Feature Example



Community Pumped for Challenge Park



Skills Trail Features



Multiple Skill Levels

CONCEPT DESIGN

>>

KARRATHA BIKE PARK

>>

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RICHARDSON WAY

FEATURES AND INCLUSIONS

01 MAIN ENTRY POINT

Location for signage and access to all areas of the Bike Park.

02 SECONDARY ACCESS

Concrete footpath connection to adjacent street, footpath network.

03 LOWER TRAIL HEAD - HANGOUT AREA

Small hardstand area with shade and seating.

04 UPPER TRAIL HEAD, JUMP LINE START PLATFORM

Raised platform, height dependent on budget. Suggest 3-4m height. Includes shade and seating/ spectator space, power connection. Accessible grade path.

05 TOILET BLOCK FACILITIES

Shared facilities as part of greater park development.

06 CENTRAL TURF AREA

Potential passive play space of greater park development.

07 VEHICLE ACCESS

Emergency and maintenance access for both the bike park and surrounding greater park features.

08 TEMPORARY PARKING LOCATION

Potential location for parking if bike park is constructed prior to greater park development.

09 PERMANENT PARKING

As part of greater park development.

10 PUMP TRACK

A fast technical style asphalt pump track suitable for timed race events as well as general recreational riding for all skill levels.

11 PUMP TRACK PLATFORM

1m high raised start point and viewing for the pump track, includes shade and seating, spectator space, water fountain, power connection. Accessible grade path access.

12 DRAINAGE SWALES

New swales constructed to connect to adjacent drainage channel. All internal drainage directed into swales.

13 DRAINAGE CROSSING BRIDGE

Concrete bridge in path at swale crossings.

14 MOUNTAIN BIKE (MTB) / DIRT JUMP STYLE JUMP PARK

Polymer surfaced trail with a combination of timber and concrete features. Includes a variety of jump styles.

15 JUMP LINE START MOUND

Raised area, nominally 3-4m high, includes seating and permanent shade structure. Accessible grade path access.

16 BEGINNER JUMP LINE

Smaller size entry level jumps.

17 INTERMEDIATE JUMP LINE

Larger more challenging jumps intended for building skill and confidence.

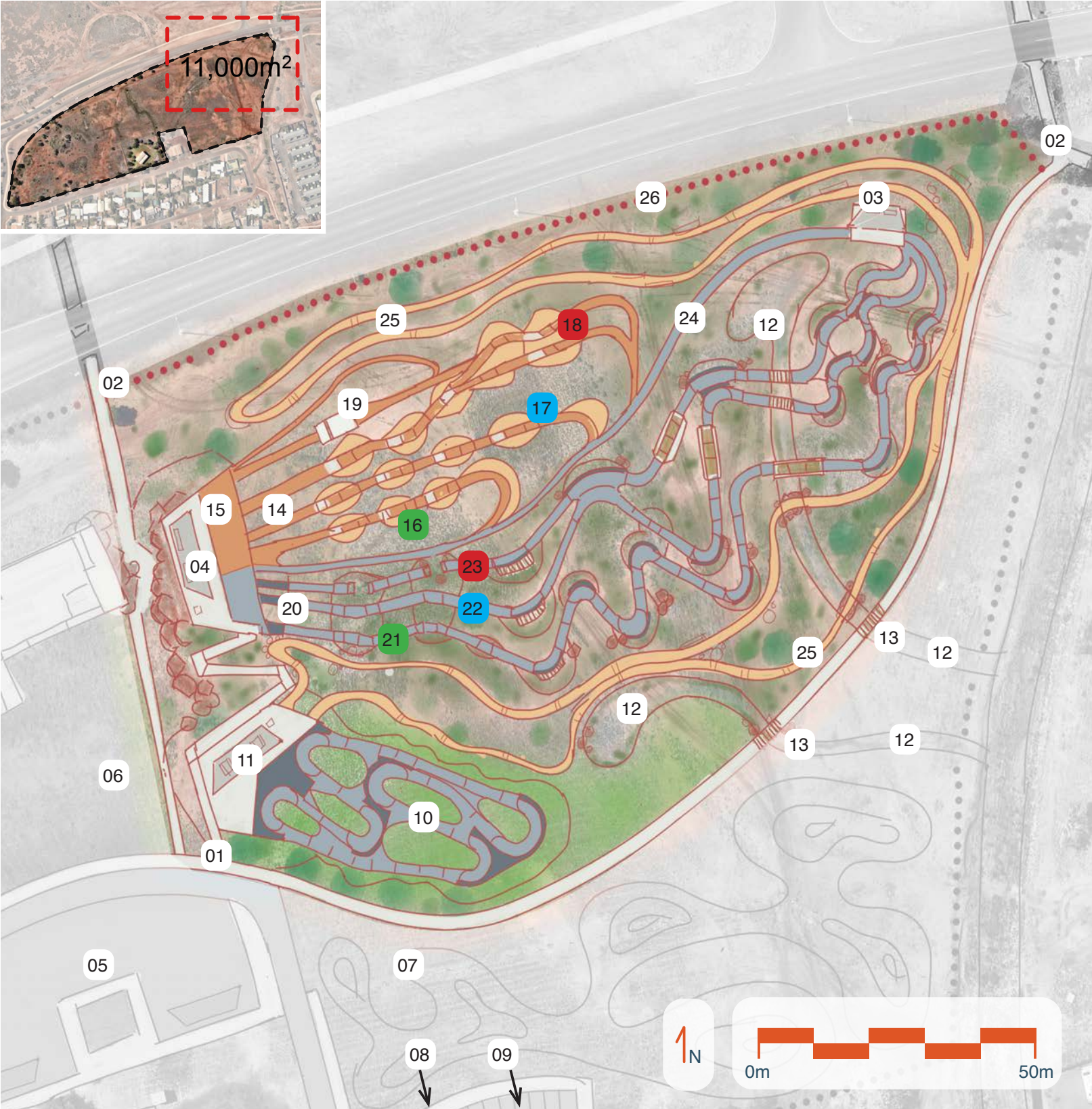
18 ADVANCED JUMP LINE

Largest features for skilled users, multiple jump options and offshoots.

19 JUMP LINE AIR BAG

Provisional space for removable 'air bag' landing jump. Will require management as to when in action in events for trick learning.

20 DESCENDING TRAILS



RICHARDSON WAY
-PRECEDENT IMAGERY
-ADDITIONAL DESIGN COMMENTARY

REFINEMENTS

- Design refined based on stakeholder and community feedback
- Jump lines and descending trails reoriented west to east
 - Reduces sun glare during peak afternoon and evening use
 - Circulation paths updated to support new orientation
- Airbag "trick jump" added to Jump Park
 - Provisional space for event use
 - Offers a low-risk way for advanced riders to learn tricks
 - Includes separate return trail for repeated use
 - Requires powered inflation and supervision; scheduled use will be managed
- Skills loop realigned to run around park perimeter
 - Includes more features to enhance user experience
- More detail added to jump park, descending trails, and pump track
- Pump scale track slightly expanded
- Drainage Strategy Developed
 - Based on the City of Karratha’s approach: keep water flow low and spread out to reduce velocity during peak storm events
 - All surface water runoff will be directed into the large existing drainage swale running through the site

MATERIAL SELECTIONS

- Aim: low-maintenance, durable, and enjoyable user experience
- Recommended material mix:
 - Asphalt
 - Polymer-sealed natural surfaces
 - Concrete
 - Compacted earth
- Use of natural and repurposed materials to reflect local identity:
 - Rocks, logs, railway sleepers, railcars, etc
- Final Concept stage will include detailed material planning and placement strategy

If advanced to the Final Concept stage, this design will offer a standout facility for Karratha—memorable, iconic, and inclusive of all disciplines, ages, and skill levels. The outcome will be a highly rewarding community asset.

The Richarson Way Site is Common Grounds recomendation for the bike park location.



Jump Park



Concrete Jump Lips



Asphalt Descending Trails



Utilising Feature Props Adds Interest



Multiple Skill Levels



Typical Descending Berm



Multiple skill levels



Asphalt Pump Track



RICHARDSON WAY - INDICATIVE MASTERPLAN

The Masterplan for Richardson Way is an indicative option of what functions and layout could be used in conjunction with the Bike Park to create an iconic recreation destination for the City of Karratha.

The suggested design offers an active/ loud side on the outer Bayview Road Edge and a more passive/ quieter side adjacent to the existing residential area. The two sides combined could cater for the entire community and be an amazing community asset if fully realised.

The development of the Masterplan is outside of the scope of this project but was required to some level of detail to establish the functionality of the bike park within a greater park space. This exercise was required to best locate the bike park given the scale of the land parcel.

Note - Only the Bike Park elements of the Masterplan are included in the OPC

FEATURES AND INCLUSIONS

ACTIVE SIDE

- 01 BIKE PARK - See previous plan for detailed descriptions.
- 02 SKATE PARK - Potentially under cover, footprint shown is similar to the new South Headland covered park.
- 03 SPLASH PARK/ WATER PLAY - publicly accessible water play.
- 04 MULTI SPORTS HALF COURTS
- 05 MULTI SPORT TURF KICK ABOUT AREA
- 06 ROCK CLIMBING/ NATURE PLAY
- 07 CENTRAL TURF AREA - General play and family space, central gathering.
- 08 FRISBEE GOLF (or similar larger format game).

PASSIVE SIDE

- 09 DOG PARK/ Fenced dog exercise area.
- 10 EXPANDED NATURE PLAY - Existing area potentially upgraded/ expanded.
- 11 ART CENTRE REDEVELOPMENT - Opportunity to redevelop existing buildings into community art precinct with expanded exhibition space.
- 12 SCULPTURE GARDEN - Adjacent to art centre. Permanent and temporary exhibitions 'Sculpture In the Park Karratha.' Potential to hold overflow caravan parking.
- 13 EVENT SPACE -FOOD TRUCK/ HAWKERS COURT - Versatile space for multiple activities, food trucks etc.
- 14 TOILET BLOCK FACILITIES - Shared facilities as part of greater park development
- 15 ASPHALT SEALED PARKING AREAS
- 16 MAIN ENTRY FEATURE
- 17 VEHICLE ACCESS - Emergency and maintenance access for both the bike park and adjacent greater park features.
- 18 OVERFLOW CAMPING AREA - Peak season use only.



COST ANALYSIS

PRICING BACKGROUND

Preliminary concept plans for each site were developed to be in keeping with the scope and performance requirements in the Karratha Bike Park Request For Quotation (RFQ) and the feedback received during the stakeholder consultation sessions

Concept plans were also intended to be aligned with a nominated nominal two million dollar construction budget as advised at the onset of the project

The two million dollar budget was based on advice from Common Ground Trails to the City of Karratha referencing the Point Walter Bike Park construction budget. The advice provided was that for a similar facility in Karratha a budget of two million, plus regional loading would be required. Regional loading for Karratha is currently listed by the Rawlinsons Cost Guide as being a factor of 1.55x metropolitan rates

The project RFQ document requested the following;

RFQ Preliminary Concept Options

Create preliminary high-level designs for the top three identified locations, presenting pros and cons of each site for review. The concept designs are to include the dimensions and key design elements, including a mix of flow trails, pump track and jump line infrastructure to facilitate biking skills and recreation.

RFQ Design Performance Requirements

- The design will be suitable for all bikes, skateboards, inline skates, scooters, balance bikes and adaptive bikes where deemed to be possible.
- Include different levels of use catering for varying age groups and experience levels, from beginners to experienced riders.

- Include vantage points around the track that users can watch others or rest.
- Universal design consideration to allow for all-ability access.
- Consider minimisation of user conflict in the design.
- Consider site constraints and conditions
- Any additional amenities required or recommended on the site that would enhance the user experience (E.g. seating, lighting, toilets, bike repair station, water fountains), if not already available at the site.

Stakeholder and Community Feedback

In person meetings were held with 3 key local stakeholder/ user groups. Rock Steady Riding, Karratha Mountain Bike Club and Karratha BMX Club. Preliminary concept designs were also shared for public comment.

Refer to report sections Stakeholder Consultation Session 1 and 2 above, for details on requested inclusions.

COSTING OUTCOMES

Common Ground's initial assessment of costs relating to each concept design was that they were close to the requested budget. Although adding the regional loading to our original advice significantly escalated the budget.

The project team identified that the Richardson Way site was going to be a more expensive project and that the design for this location was more 'aspirational' and may require multiple stages, depending on where the final costings land.

Once detailed concept costings were carried out (refer to Opinion of Probable Costs above) it has become apparent that the designs for both Richardson Way and the Bulgarra BMX sites were initially under valued.

Recently constructed pump track projects in the Pilbara reveal that costs to deliver projects in the region are quite a bit higher than we expected. Refer to Pilbara Comparison Projects section in this document.

Common Ground should have highlighted earlier in the process that the nominated two million dollar budget would not be enough to achieve the required scope of the Karratha Bike Park.

Upon further analysis of the costs involved in the Point Walter example project there are a number of other items that should have been picked up on;

- Soft landscaping was carried out by the client,
- None of the trail elements were hardened,
- There were no service connection requirements,
- Ancillary elements (particularly the provision of shade)

were minimal in scope, and

- Point Walter was a sloping site so did not need significant imported fill.

Karratha as a major regional city deserves a bike park that matches the RFQ, and that requires a facility of the scale that we have designed. This would be a significant and iconic community asset for decades to come.

With the costing situation now clarified the next stage of development of Final Concept Designs has a number of options;

- The selected site can have the concept design scaled back. Smaller in size but still providing a useful and fun community asset. Reducing the facility scale will however, prevent the delivery of an 'iconic' regional bike park.
- A staged approach could also be applied. The design of each site has taken potential staging into consideration in its development. Staging options are shown in the next section.
- Or, a combination of the above could be developed. A staged approach with a slightly scaled back design could see the Richardson Way design delivered in 2 stages rather than 3.



STAGING OPTIONS



Bulgarra Existing BMX Site

Stage 1 - Nominal Budget Two Million Dollars

Pump Track, Learn To Ride, Portion of Skills trail, (loop to be connected along swale) Central Hang Out Area, Festival Access, Ancillaries, Landscaping

Stage 2 - Nominal Budget Two Million Dollars

Jump Park, Portion of Skills trail, Connecting Footpath, Ancillaries, Landscaping



Richardson Way Site

Stage 1 - Nominal Budget Two Million Dollars

Jump Park, Jump Park Platform (including access path) Descending Trails Start Platform, Descending Trails Bulk Earthworks, Ancillaries, Landscaping

Stage 2 - Nominal Budget Two Million Dollars

Descending Trails, Ancillaries, Drainage Infrastructure, Landscaping

Stage 3 - Nominal Budget Two Million Dollars

Pump Track, Skills Trail, Connecting Paths, Ancillaries, Landscaping



FINAL CONCEPT DESIGN



FINAL CONCEPT PLAN

SELECTED SITE - RICHARDSON WAY

SITE SELECTION

Following review of the preliminary concept work the selected site was Richardson Way. This is the largest of the options and the closest to the Karratha city centre. Primarily due to its larger size this site was the strong favourite with the public and stakeholder groups.

The intention with development of the Richardson Way reserve is that the city will undertake a master planning exercise for the whole site of which the final design for the bike park will form a key component. The masterplan will investigate other colocation activities as well as services and infrastructure requirements.

The completion of the master planning process will allow the bike park to progress into detailed design and construction as part of a future contract.



DESIGN REFINEMENTS

The Final Concept design has been carried out following receipt of the site feature survey and the geotechnical report and takes these details and requirements into account.

No major changes have been made from the previous design developed in consultation with stakeholder and user groups however there have been several key refinements.

All elements have been drawn now in CAD and measured accurately.

The various bike components now show full functionality, features and inclusions at correct spacings.

Internal circulation has been improved to allow better pedestrian and emergency access into the central areas of the park.

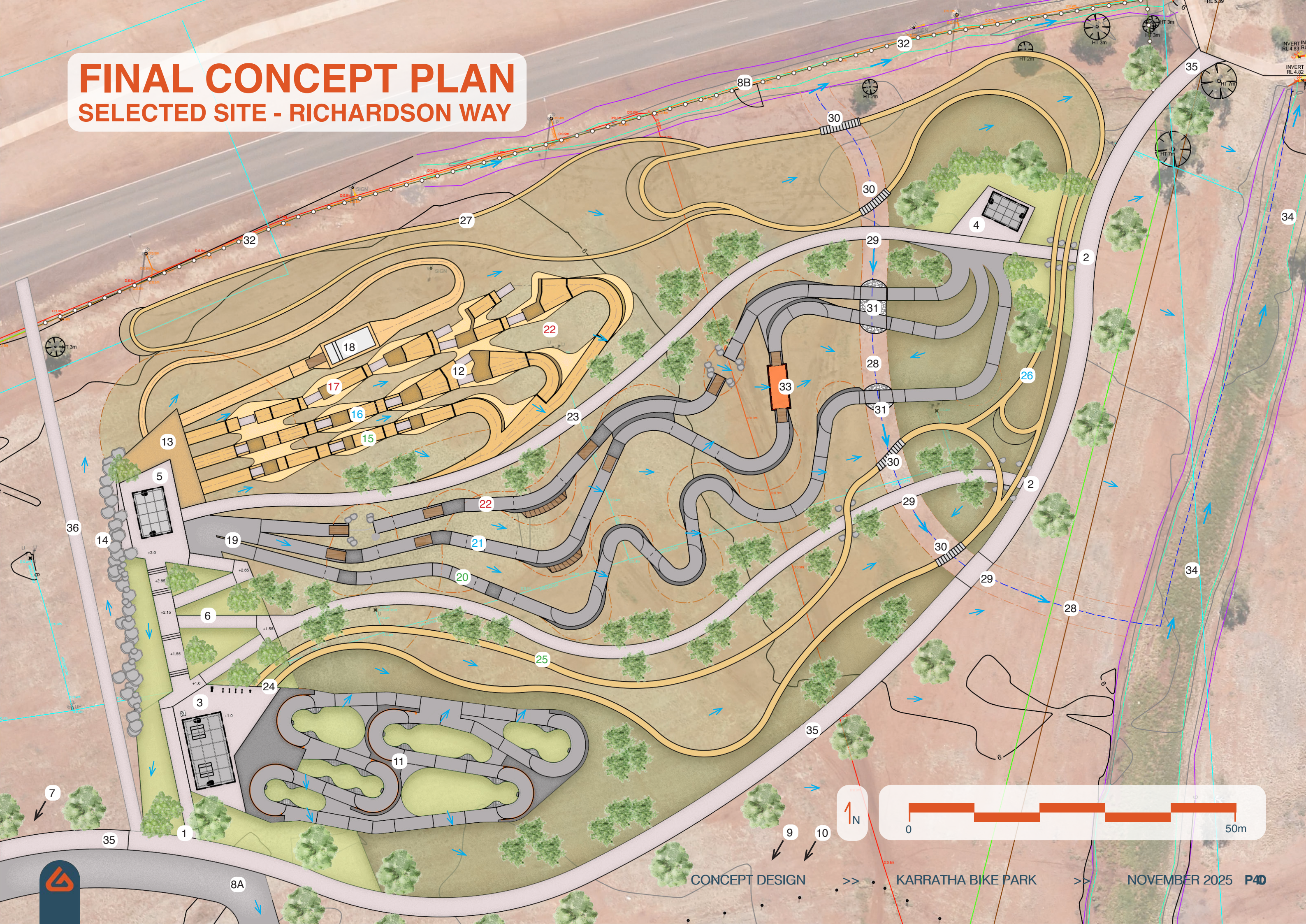
The return line for the descending trails and jump park is now a concrete path that also connects to the central path through the greater park.

A second concrete path has also been added for further connection between the pump track and descending trails.

An additional viewing area and social space area has been added between the two eastern shade structures.

FINAL CONCEPT PLAN

SELECTED SITE - RICHARDSON WAY



CONCEPT DESIGN

KARRATHA BIKE PARK

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FINAL CONCEPT PLAN

SELECTED SITE - RICHARDSON WAY

LEGEND

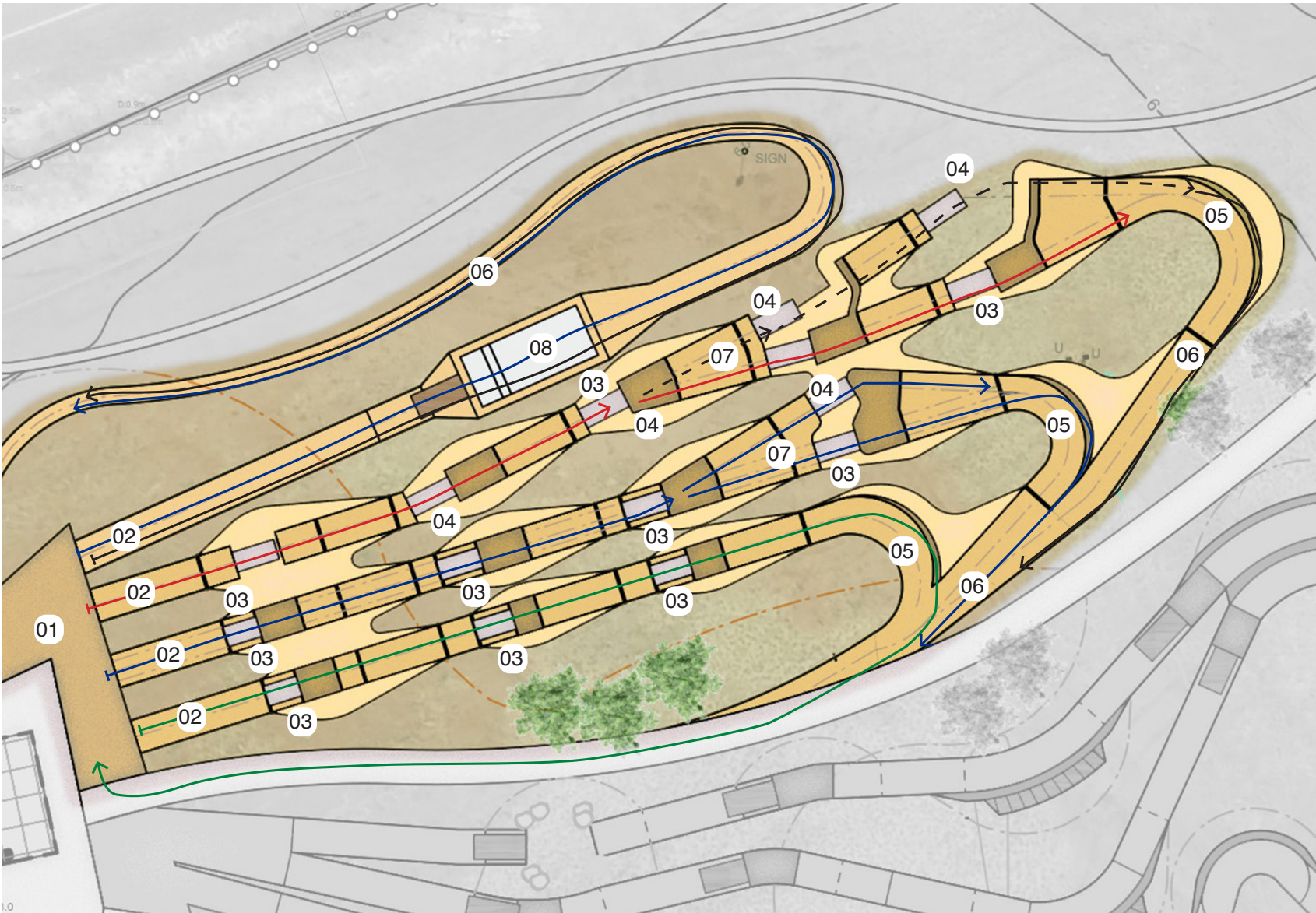
- JUMP PARK HIGH POINTS
- JUMP PARK RIDING SURFACE
- JUMP PARK PLATFORM
- TIMBER FEATURE - JUMP LIPS AND WALLRIDES
- ASPHALT FLAT SURFACES
- ASPHALT CURVED RIDING SURFACE
- CONCRETE PATHS AND PLATFORMS
- TUBE STOCK PLANTING AREAS
- IRRIGATED TURF AREAS
- SEEDED RE-VEGETATION AREA
- CONCRETE SLEEPER SWALE CROSSING
- ROCK PITCHING
- DIRECTION OF SURFACE DRAINAGE FLOW

FEATURES AND INCLUSIONS (REFER PLAN ON PREVIOUS PAGE)

01 MAIN ENTRY POINT	10 PERMANENT PARKING	23 RETURN TRAIL
Location for signage and access to all areas of the Bike Park.	As part of greater park development.	Shared concrete path for both bike return to start ramp and pedestrian circulation
02 SECONDARY ACCESS	11 PUMP TRACK	24 ADVENTURE LOOP- SKILLS TRAIL START
Concrete footpath connection to adjacent street, footpath network and main park central path.	A fast technical style asphalt pump track suitable for timed race events as well as general recreational riding for all skill levels.	Natural surfaced trail with a variety of skill building features. Set out in a stacked loop configuration with beginner, intermediate and advanced loops.
03 PUMP TRACK PLATFORM AND ENTRY AREA	12 MOUNTAIN BIKE (MTB) / DIRT JUMP STYLE JUMP PARK	25 BEGINNER TRAIL LOOP
1m high raised start point and viewing for the pump track, includes shade and seating, spectator space, water fountain, power connection. Accessible grade path access.	Polymer surfaced trail with a combination of timber and concrete features. Includes a variety of jump styles.	26 INTERMEDIATE TRAIL LOOP
04 LOWER TRAIL HEAD - HANGOUT AREA	13 JUMP LINE START PLATFORM	27 ADVANCED TRAIL LOOP
Small hardstand area with shade and seating. Lawn area with shade trees adjacent	Raised area, nominally 3m high, includes seating and permanent shade structure. Accessible grade path access.	28 DRAINAGE SWALE
05 UPPER TRAIL HEAD, JUMP LINE START PLATFORM	14 POSSIBLE ROCK CLIMBING FEATURES BUILT INTO ROCK RETAINING FOR START PLATFORM	New shallow swale constructed to connect to adjacent drainage channel. All internal drainage directed into swale.
Raised platform, height dependent on budget. Suggest 3m height. Includes shade and seating/ spectator space, power connection. Accessible grade path.	15 BEGINNER JUMP LINE	29 DRAINAGE CROSSING
06 RAISED HANG OUT/ VIEWING AREA	Smaller size entry level jumps.	Concrete path over swale with pipework beneath to allow water
Space created by ramp to upper trail head, turf, stairs and low seating walls creates space that looks over the pump track and trails. Viewing also to the west into the greater park area	16 INTERMEDIATE JUMP LINE	30 TRAIL SWALE CROSSING
07 TOILET BLOCK FACILITIES	Larger more challenging jumps intended for building skill and confidence.	Concrete sleepers through swale. Rock pitched reinforcement.
Proposed shared facilities as part of greater park development.	17 ADVANCED JUMP LINE	31 DESCENDING TRAIL SWALE CROSSING
08 VEHICLE ACCESS	Largest features for skilled users, multiple jump options and offshoots.	Asphalt through swale with stone pitched reinforcing
08A Internal road network for emergency and maintenance vehicles	18 JUMP LINE AIR BAG	32 PERIMETER FENCING
08B Access gate for emergency and maintenance vehicles	Provisional space for removable 'air bag' landing jump. Will require management as to when in action in events for trick learning. 15amp power provided	1.2m high chain link fencing
09 TEMPORARY PARKING LOCATION	19 DESCENDING TRAILS	33 ICONIC FEATURE
Potential location for parking if bike park is constructed prior to greater park development.	Asphalt surface descending trail with 'found object features' railway sleepers, rail cars, boulders etc.	Ride through ex iron ore rail car feature
	20 BEGINNER DESCENDING TRAIL	34 EXISTING DRAINAGE SWALE
	21 INTERMEDIATE DESCENDING TRAIL	Overland flow drainage from bike park all directed to here
	22 ADVANCED DESCENDING TRAIL	35 MAIN PATH THROUGH GREATER PARK AREA
		36 FUTURE ACCESS PATH
		Access to rock climbing area and through to other side of Searipple Rd. Part of Masterplan development, not



JUMP PARK DETAIL



LEGEND

- | | | |
|-----------------------------------|--|----------------------------------|
| 1. START PLATFORM | | TRAIL RIDING SURFACE |
| 2. ROLL-IN TRAIL TO SET SPEED | | FEATURE HIGH POINTS |
| 3. STRAIGHT JUMP | | PRECAST CONCRETE KICKER |
| 4. HIPPED JUMP | | BATTERS |
| 5. CATCH/RETURN BERM | | BEGINNER (GREEN) JUMP LINE |
| 6. RETURN TRAIL | | INTERMEDIATE (BLUE) JUMP LINE |
| 7. TRAIL SPLIT OPTIONAL ALIGNMENT | | ADVANCED (BLACK) JUMP LINE |
| 8. AIRBAG JUMP | | EXTREME (DOUBLE BLACK) JUMP LINE |

DESIGN COMMENTARY

The jump park consists of 3 jump lines with a total length of 310m and varying degrees of difficulty. Each line has a minimum of 3 jump features.

The jump park also has an additional ‘trick learning’ airbag jump line of 110m in length. The air bag jump would only be in use when the portable airbag is in place and under supervision.

The jump park is designed to provide Easy, Intermediate, Difficult and Extreme, in accordance with the Trail Difficulty Rating System. This accommodates a broad cross section of the bike park user group and accommodates progression of the users. The jumps progressively get bigger and the lines more complex as the user progresses from the Easy line towards the more difficult lines.

All jump lines will be constructed from a ‘hardened’ polymer sealed natural earth material with concrete jump lips. The hardened earth material is low maintenance while still providing a natural trail feel. The critical concrete jump lips are extremely robust and provide for a long lasting facility.

The beginner (Green) jump line consists of a straight jump line with easy features to provide low levels of intimidation and risk for beginner riders.

The Intermediate (Blue) jump line consists of three larger straight jumps with an optional hip jump to finish. These will allow intermediate riders to start to be expressive in their jumps and prepare for the more aggressive hips of the Difficult (Black) jump line.

The Advanced (Black) jump line contains a combination of hipped and straight jumps with a higher degree of difficulty. There is an optional line from the third kicker to attempt two Extreme (Double Black) jump features, one straight and one hipped.

All trails have a catch berm to finish that merge and join the concrete path to return users to the start platform ready to go again...

JUMP PARK PRECEDENT IMAGES



Split alignments to include Extreme option on the Difficult line



Return berms and merging of return trails



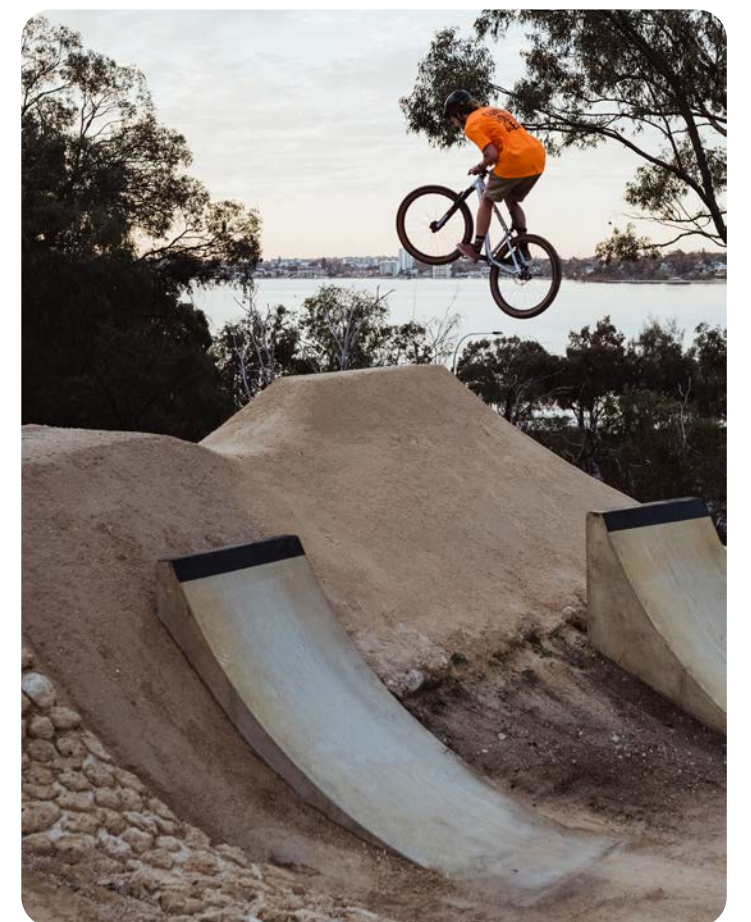
Easy rated features to allow for progression for beginners through to advanced users



Full length three line jump park



Signage & safety



Difficult and Extreme rated features



Beginner jump line - straight jump features



Concrete kicker



Backside landing ramp of jump feature

DESCENDING TRAILS DETAIL



LEGEND

- 01. START PLATFORM
- 02. ROLL-IN TO SET SPEED
- 03. TYPICAL BERM
- 04. CATCH BERM
- 05. ICONIC FEATURE, REPURPOSED RAIL CARRIAGE- TBC
- 06. CONNECTION TO RETURN TRAIL
- 07. RETURN TRAIL - SHARED PATH
- TIMBER FEATURES
- CURVED ASPHALT SURFACE
- FLAT ASPHALT SURFACE
- BATTERS
- JUMP TOPS/ FEATURE HIGH POINTS
- BEGINNER (GREEN) TRAIL
- INTERMEDIATE (BLUE) TRAIL
- ADVANCED (BLACK) TRAIL

DESIGN COMMENTARY

While the site is fairly flat the start mound for the descending trails is built up to 3m in height which will give users a start with good speed. Features throughout the trails will then allow for more speed generation as riders progress down the trail. The higher the difficulty rating for the trail the straighter and faster it is.

There are three distinct trails from beginner through to advanced each with progressively more challenging features. Total combined trail length is 495m

The intent with these trails is that they are feature rich with multiple varied challenges and strong return appeal.

The primary trail surface is to be hard wearing asphalt with features made from timber and steel as well as repurposed objects such as concrete railway sleepers and potentially an iconic ride through feature using a modified ex iron ore rail carriage.

All three trails finish at the lower trail head where users can stop and chill for a bit or head back up to the start platform on the shared path return trail.



DESCENDING TRAILS PRECEDENT IMAGES



Berm to berm Feature

Feature section between berms



Alignment to accomodate site topography to provide correct grade and subsequent speed of user



Berm to berm flow section



Typcal berm

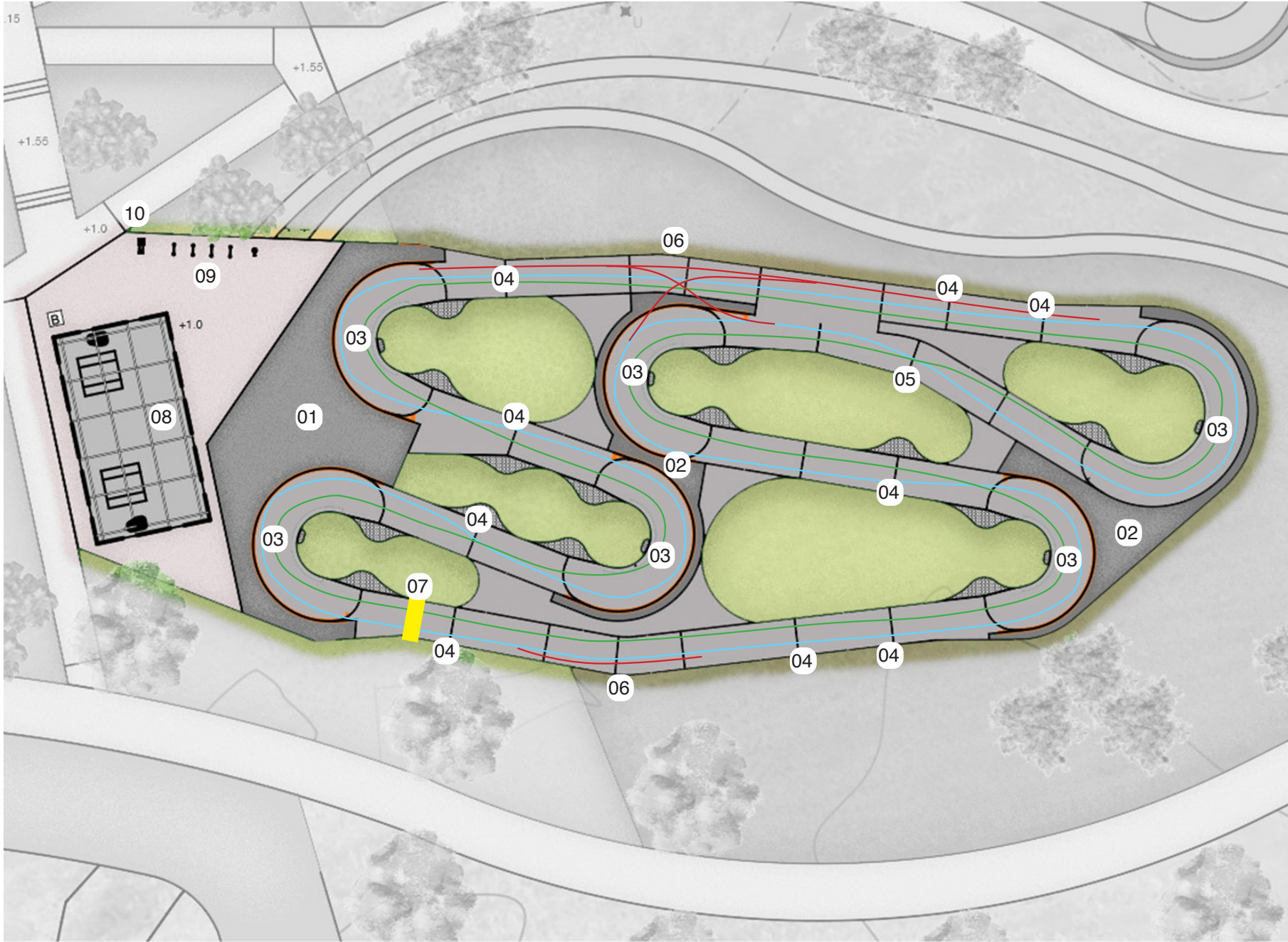


Accomodating Very Easy, Easy & Intermediate Graded Features



Accomodation for all wheeled sports

PUMP TRACK DETAIL



LEGEND

- 01. PRIMARY PLATFORM
- 02. SECONDARY PLATFORM
- 03. TYPICAL BERM
- 04. TYPICAL ROLLER
- 05. HIP ROLLER
- 06. JUMP FEATURE
- 07. RACE EVENT START POINT, TIMING LOCATION
- 08. SHELTER WITH SEATING
- 09. BIKE RACKS AND TOOL STAND
- 10. CHILLED WATER FOUNTAIN
- CURVED ASPHALT SURFACE
- FLAT ASPHALT SURFACE
- CONCRETE PAVING
- IRRIGATED TURF
- BEGINNER (GREEN) LINE
- INTERMEDIATE (BLUE) LINE
- ADVANCED (BLACK) LINE

DESIGN COMMENTARY

The pump track is located at the main entry to the bike park, its primary platform has the largest of the three shelters as well as seating, bike racks, bin and drink fountain.

Constructed from hard wearing asphalt the track is 660m² in area and 210m in length

The track layout is continuous loop designed to be technical and fast with the intention that the track is ridden in a clockwise direction

Features are designed to be ridden by all skill levels and user groups can be either rolled over or jumped. Berms are 1-1.3m and at 4-5m radius, Feature heights range from 500mm to 1200mm

The majority of the track comprises of long straights which will allow riders to generate speed and rhythm between the various single, double and triple rollers. Each straight contains slight direction changes to allow for the hipped features to enrich the riding experience and flow

The south east corner of the track is compressed into a berm to berm, this will allow for riders to lean into some switchbacks, and also provides a good location for the timing gate during race events

There is the opportunity for advanced riders to hit some transfer options through the central complex when it is safe to do so.

The track is designed to be used for general recreational use but can also be used for timed race events.

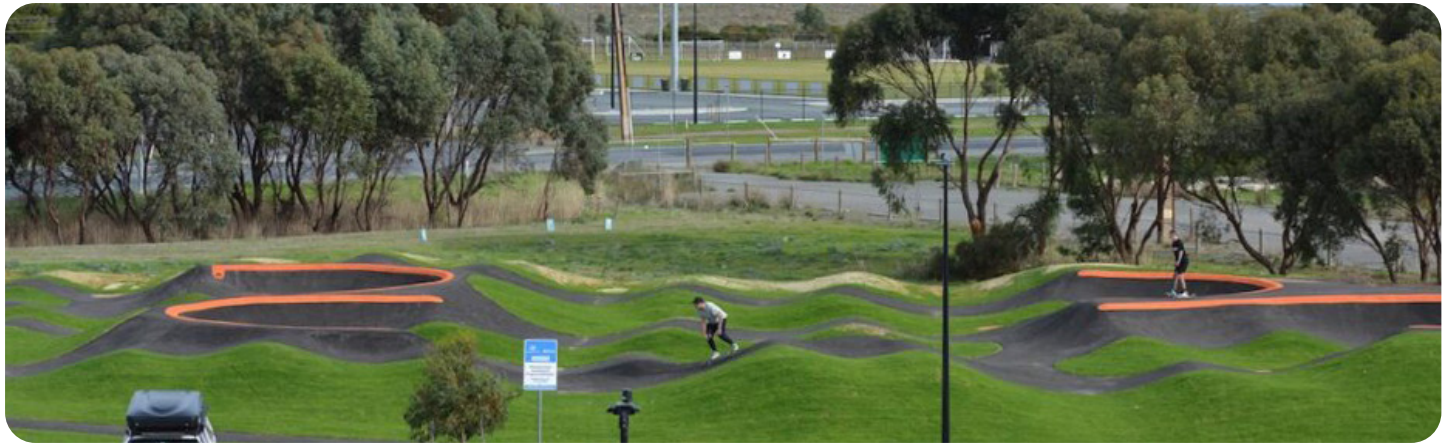
PUMP TRACK PRECEDENT IMAGES



Berm to berm Feature



Alignment to accomodate site topography to provide correct grade and subsequent speed of user



Berm to berm flow section



Typcal berm



Accomodating Very Easy, Easy & Intermediate Graded Features







Accomodation for all wheeled sports



ADVENTURE LOOP- SKILLS TRAIL DETAIL

LEGEND

- 01. START PLATFORM
- 02. PATH CROSSING CHICANE
- 03. SWALE CROSSING
- 04. TYPICAL BERM
-  TRAIL SURFACE
-  BEGINNER (GREEN) LINE
-  INTERMEDIATE (BLUE) LINE
-  ADVANCED (BLACK) LINE



DESIGN COMMENTARY

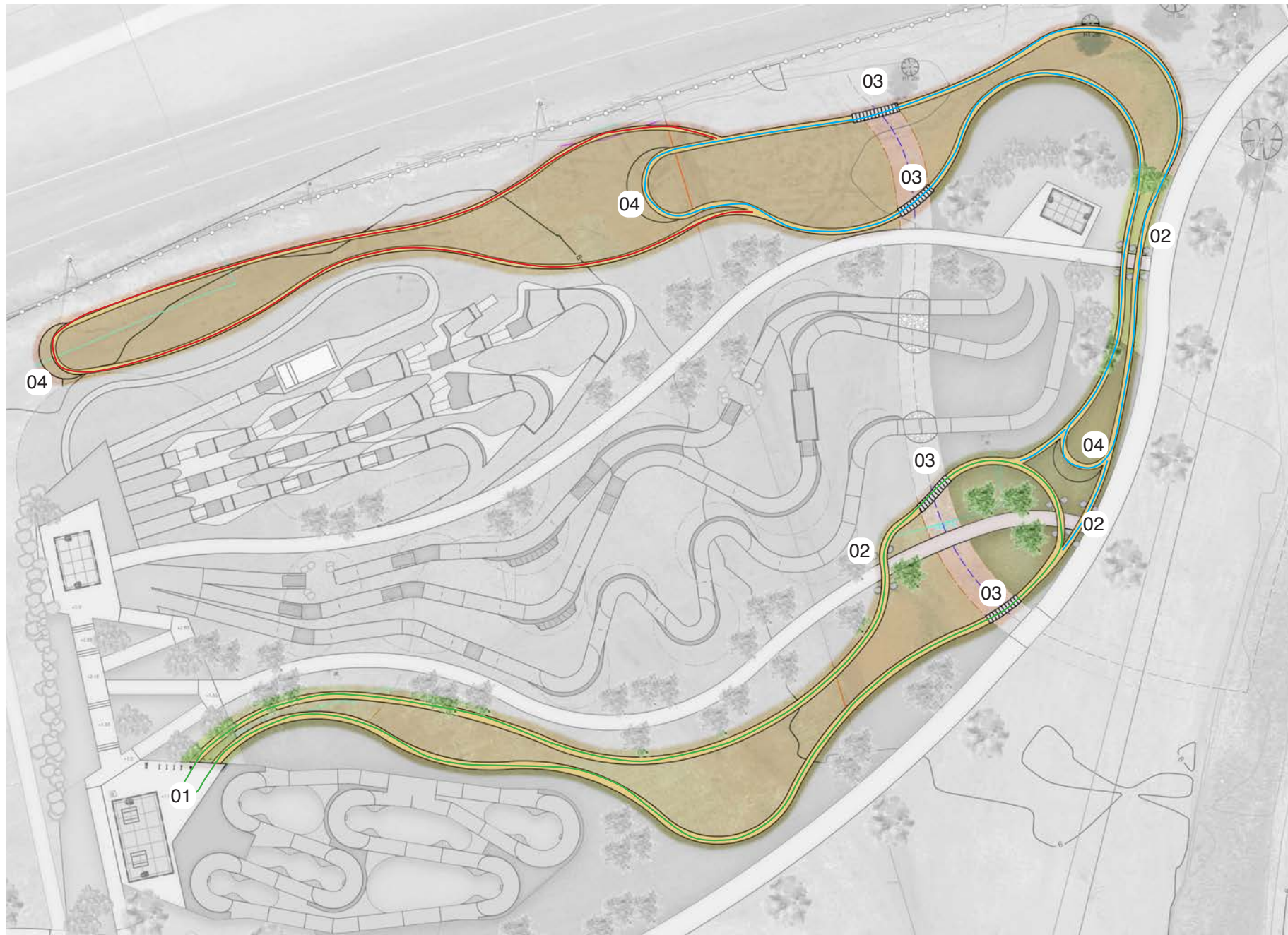
Similarly to all the bike park elements, the adventure loop trails are designed for repeat appeal and skills progression.

A stacked loop configuration has the beginner loop at the start that can be ridden as a single element or ridden through to the intermediate loop and then similarly to the advanced loop beyond. Trails get progressively narrower and more challenging

The loop trails are primarily flat with interest and challenges being provided through natural material features, logs, rocks etc as well as some land forming in the trail surface with rollers and berms.

The loop trails are the only bike element that crosses the main concrete circulation paths, at these points there will be rock chicanes to slow riders down with the concrete path users having the right of way.

The loop trails also cross through the main drainage swale, at these points the trail surface will be constructed from repurposed concrete railway sleepers.



LOOP TRAIL PRECEDENT IMAGES



Berms of separate trails back to back



Ballance features



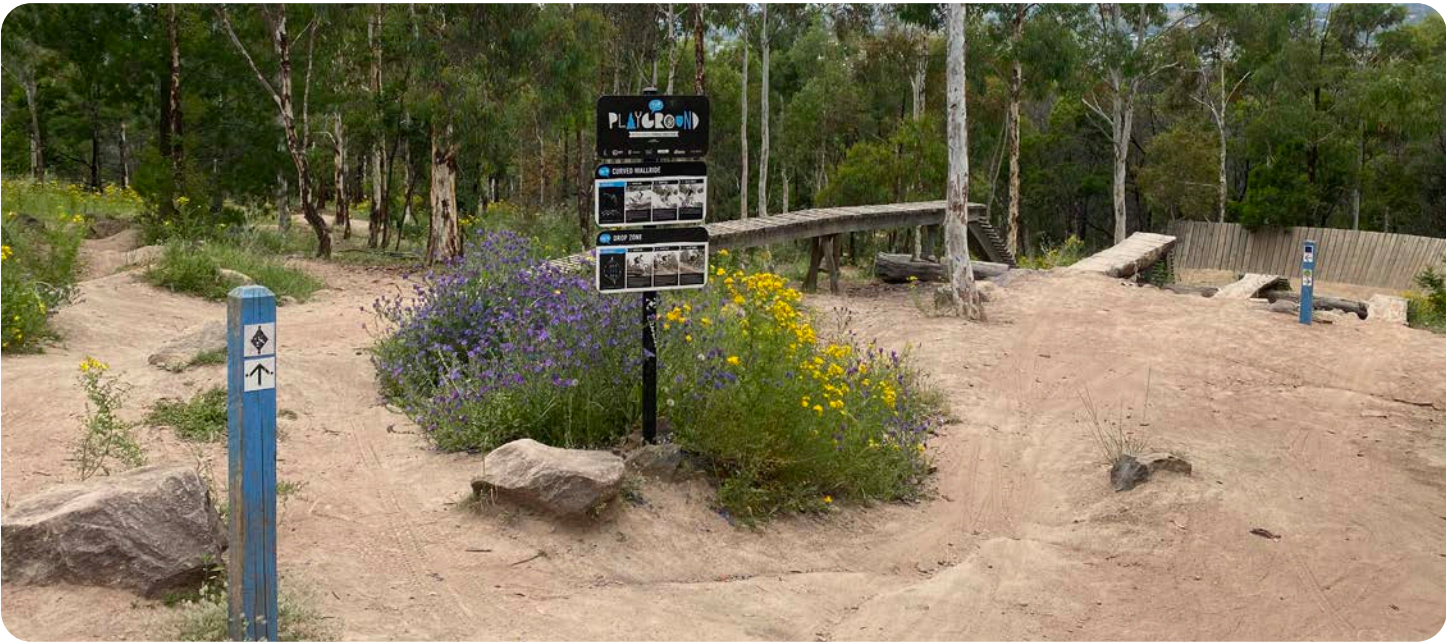
Inclusion of safe trail for beginner users



"Talladega" ramp to drop feature



Timber feature



Signage for trail classifications and wayfinding

DESIGN DIAGRAMS



DRAINAGE STRATEGY

The bike park drainage design has been developed in accordance with the City's principal of keeping water movement in a low and spreading pattern.

All drainage is via an overland flow system that works with the existing site contours and the adjacent existing drainage swale.

The natural grade of the site is gently sloping from west to east. New high points on the western edge of the site enhance the water movement in its natural direction.

A single new shallow swale connected to the existing drain intersects the site to capture runoff and direct it into the larger existing drainage swale.



VIEWING - SURVEILLANCE

Three shaded viewing areas provide surveillance over the majority of the bike elements within the park.

The upper trail head/ raised start platform/or jump park and descending trails offers the best views of the whole facility as well as shade for users and spectators.

The largest shade structure on the pump track platform offers views as well as space for multiple groups, the large platform can cater for event requirements.

The smaller lower trail head area offers shade and a place to rest or just hang out.

The internal path network also offers surveillance over the various bike elements.

There are also viewing opportunities from the hangout space between the pump track platform and upper trail head.



DESIGN DIAGRAMS



CONNECTIVITY

Connectivity within the bike park is via a series of internal concrete paths that join in multiple locations to the main path that cuts through the whole reserve.

Internal paths serve both as pedestrian access throughout as well as bike users

There are multiple entry points from the external path which connects to residential areas to the west and east, another connection across Searipple road is also proposed.

Emergency and maintenance access is from two points, one at the main entry from the proposed internal access road and a secondary point off Searipple Road

All access paths are Australian Standard for accessibility/ DDA compliant (Disability Discrimination Act), including the ramp up to the upper trail head.



VEGETATION - EXISTING

Existing vegetation is primarily grasses and weeds with a number of small trees.

All existing trees will be retained. New plantings are proposed including for shade trees, mulched native tube stock planting and re-vegetation areas.



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