

ATTACHMENT 1

FINAL CONCEPT DESIGN - KARRATHA BIKE PARK



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.

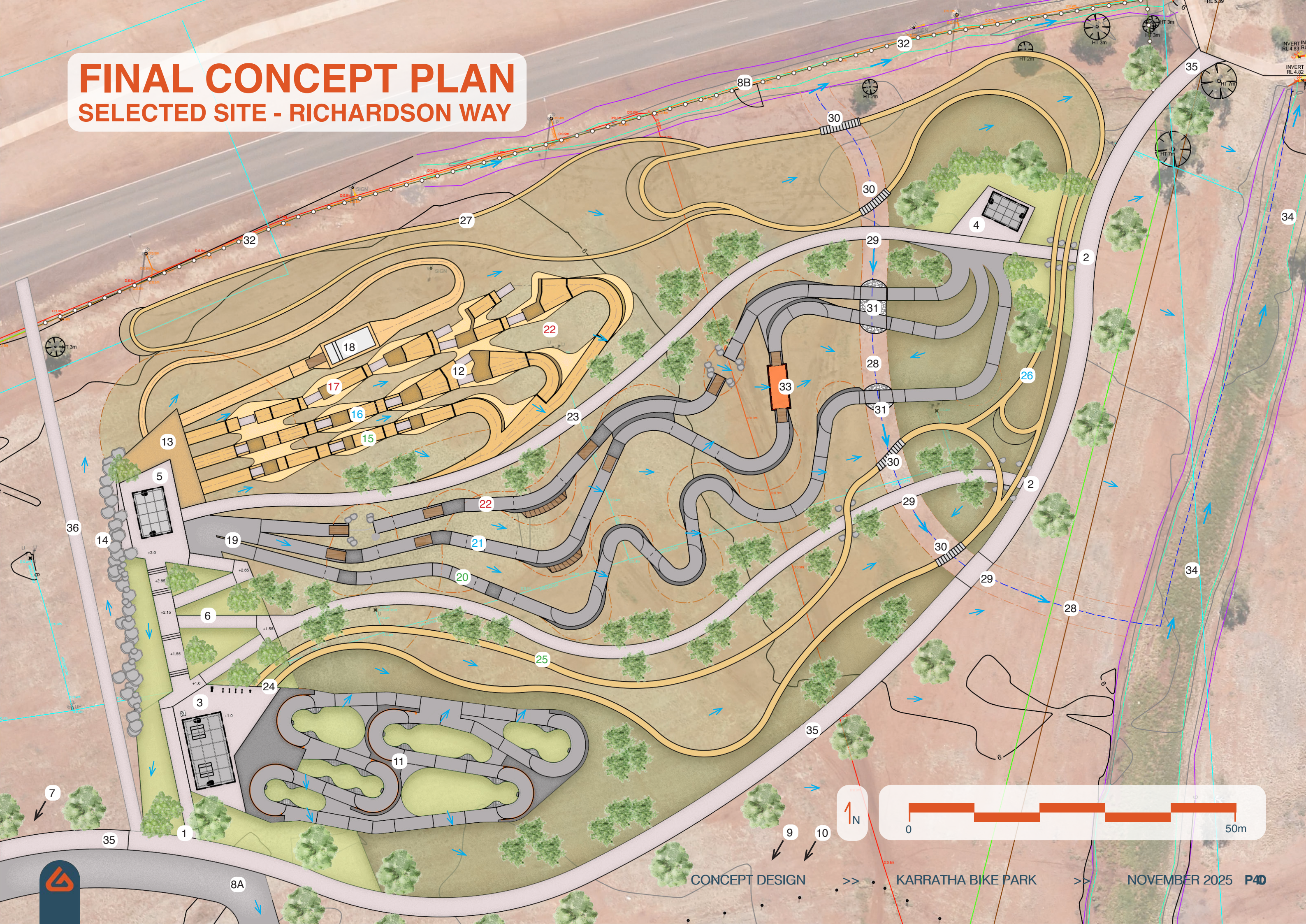
The return line for the descending trails and jump park is now a concrete path that also connects to the central path through the greater park.

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

NOVEMBER 2025 P40

FINAL CONCEPT PLAN

SELECTED SITE - RICHARDSON WAY

LEGEND

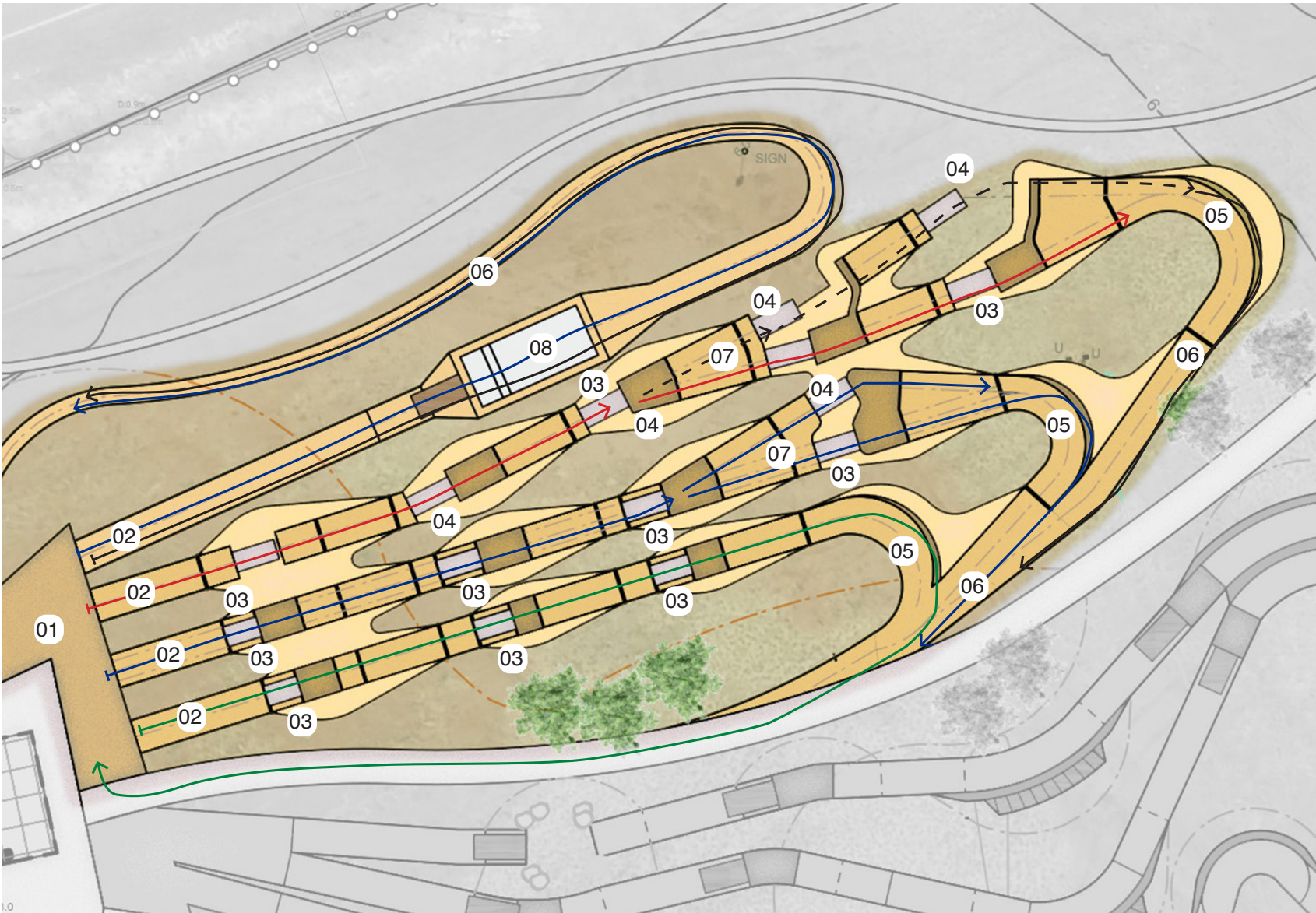
- JUMP PARK HIGH POINTS
- JUMP PARK RIDING SURFACE
- JUMP PARK PLATFORM
- TIMBER FEATURE - JUMP LIPS AND WALLRIDES
- ASPHALT FLAT SURFACES
- ASPHALT CURVED RIDING SURFACE
- CONCRETE PATHS AND PLATFORMS
- TUBE STOCK PLANTING AREAS
- IRRIGATED TURF AREAS
- SEEDED RE-VEGETATION AREA
- CONCRETE SLEEPER SWALE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



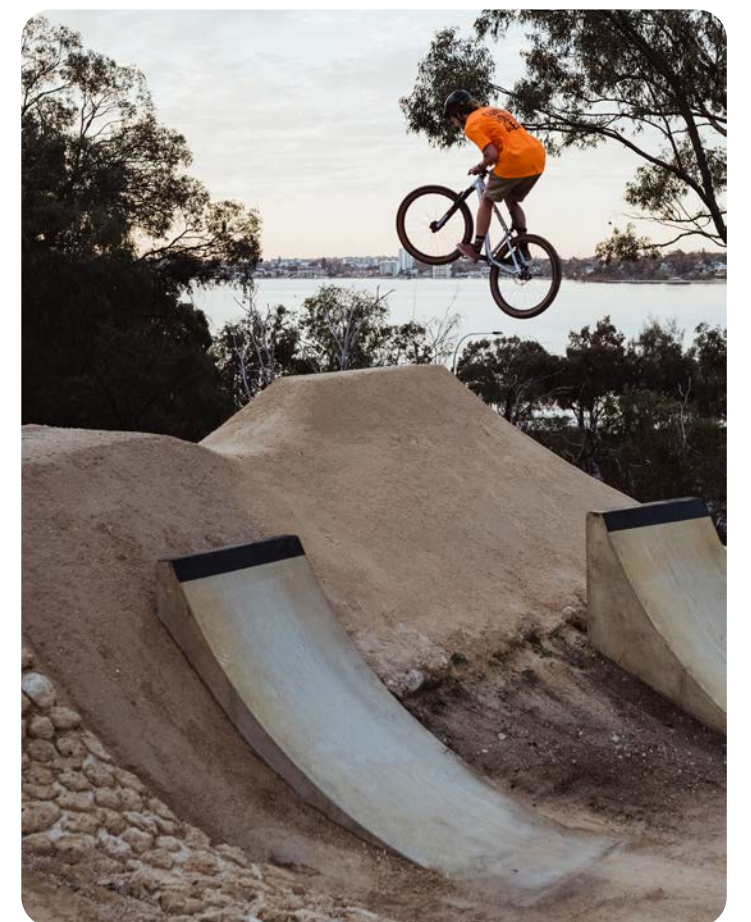
Easy rated features to allow for progression for beginners through to advanced users



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

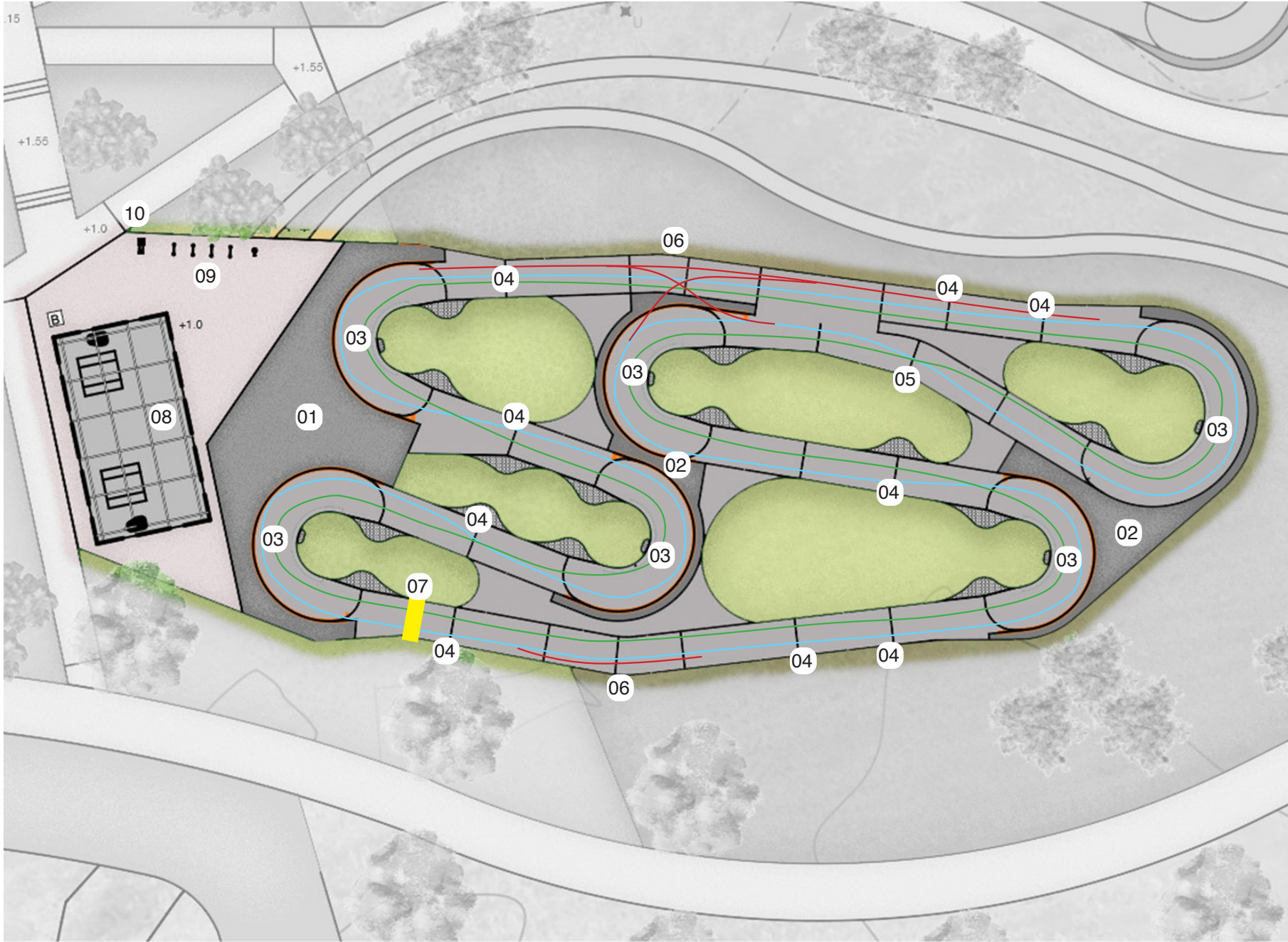


Accomodating Very Easy, Easy & Intermediate Graded Features



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.

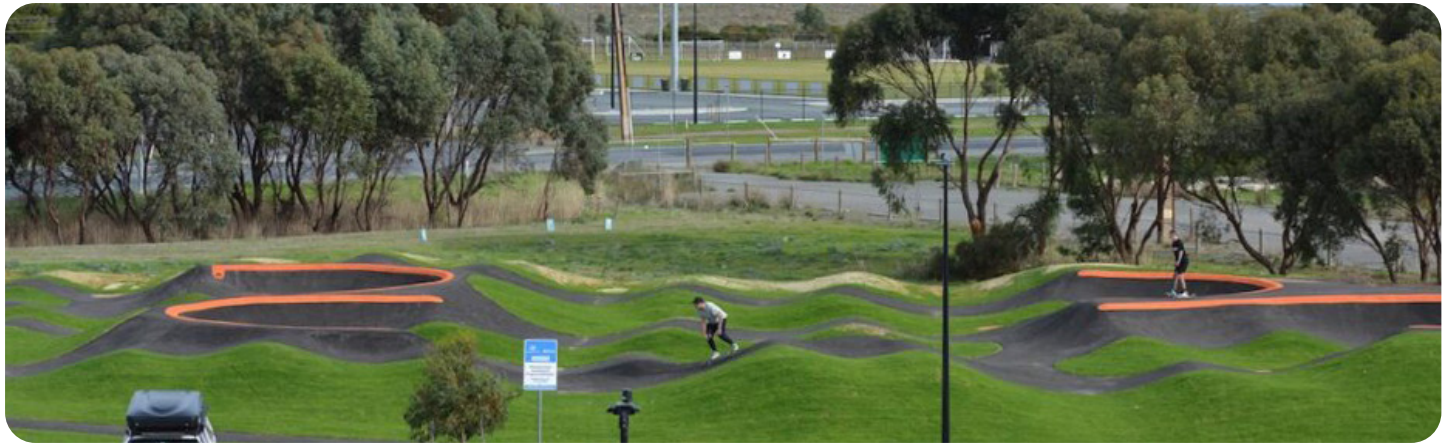
PUMP TRACK PRECEDENT IMAGES



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



Accommodation 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

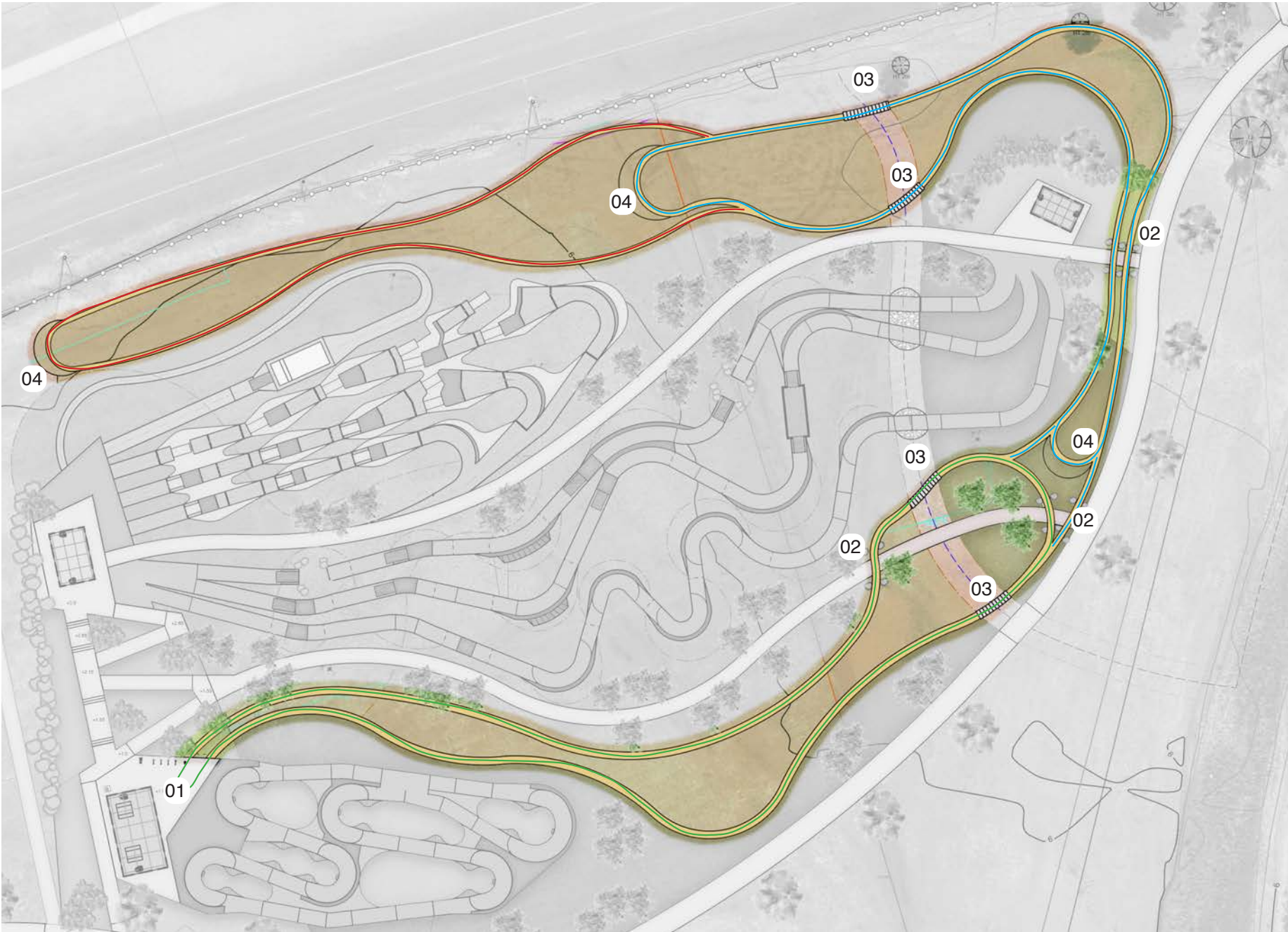
Similarly to all the bike park elements, the adventure loop trails are designed for repeat appeal and skills progression.

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



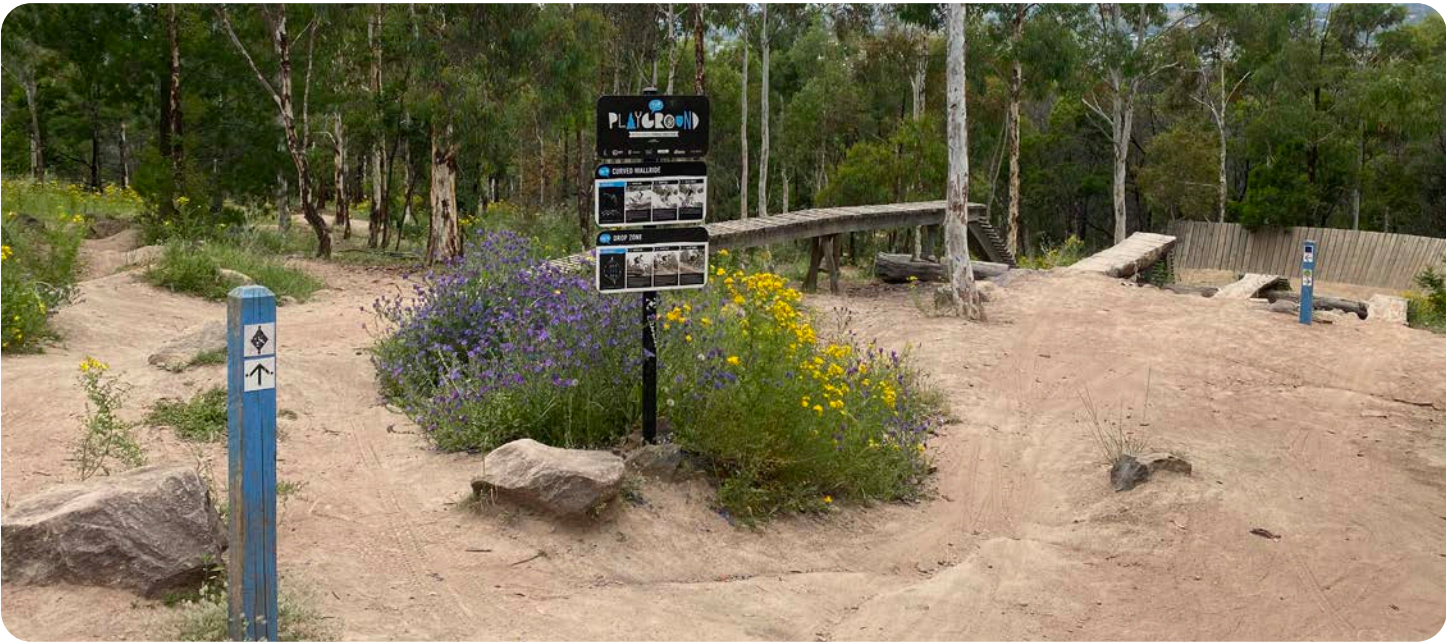
Inclusion of safe trail for beginner users



"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.



WESTERN AUSTRALIA OFFICE
69 Bussell Hwy, Margaret River WA 6285

