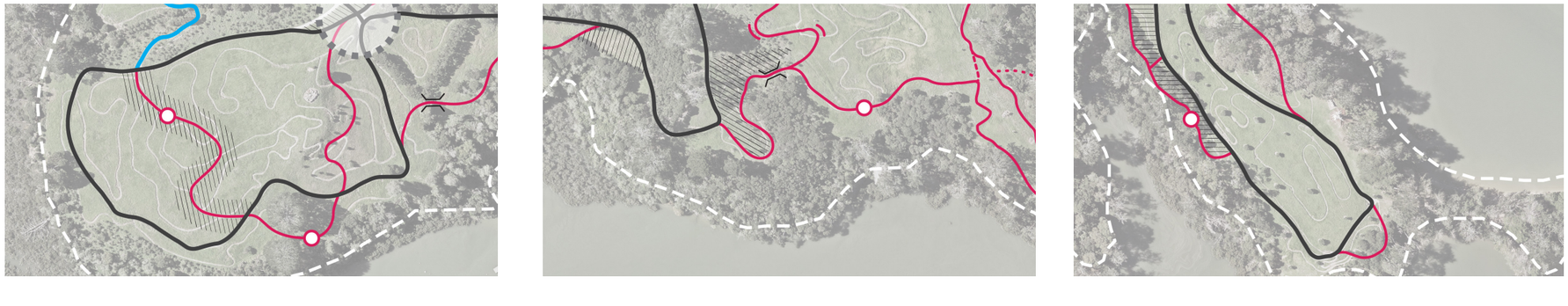
SANDERS RESERVE

PAREMOREMO, AUCKLAND



BIKE FACILITY ANALYSIS AND DEVELOPMENT STRATEGY

May 2022

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LANDSCAPE ARCHITECTS

Auckland Council
Te Kaunihera o Tāmaki Makaurau

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INTRODUCTION

The following is an assessment of existing track facilities at Sanders Reserve to enable the preparation of a development strategy for the site in association with key stakeholders.

We acknowledge that analysis and any proposal shall build on the existing 2007 Development Plan with a view to rationalising the track network and improving use and user experience.

It is also acknowledged that information is articulated at a strategic level and contains sufficient material to inform discussion, future investigation and design by Auckland Council and partner custodian groups.

The following reporting does not seek to re litigate the existing 2007 plan and should be viewed together with the approved Sanders Reserve Planting Plan (2020).

SITE INVESTIGATION AND ANALYSIS SUMMARY

Refer to Appendix A - Analysis Plan and Annotations in association with the following commentary.

Site Observation

In order to ascertain a high level understanding of user group patterns and areas of use, the site was observed during the week over a period of two mornings (10am -12pm) and two afternoons (1-3pm) during fine weather. The site was also visited on the weekend from 9am - 2pm.

Key observations are as follows:

- During the times visited, most patrons were using the loop connection to the south of the visitor section that connects the dog exercise and beach access areas. A noticeable reduction in the number of individuals using the wider recreational routes was noted.
- On average there were more individuals walking, rather than riding the tracks. Most individuals riding wider recreational routes were adults.
- Those walking dogs generally kept to the dedicated off leash area, though were observed on several occasions on the wide formed track to the south and east of the visitor centre. Most dog walkers were observed in the morning.
- Although not explicitly observed, there is clear evidence that equestrian users are using wider recreational routes outside of the designated equestrian area.
- In the weekend the most intensive activity was between 10.30am and 1pm with the predominant user groups parents with children using the track and playground facilities associated with the entrance hub.

Apart from the weekend, it is acknowledged that the site was visited within typical working hours. Further observation is required to evaluate the nature and extent of those using the park for recreational activities after hours, particularly during daylight savings where Sanders Reserve has the potential to provide a legitimate alternative for a quick ride after work for riders of all levels.

Existing well used / legible tracks

Overall, the all abilities Recreational Loop affectionately termed 'The Road' appears generally well used by all user groups. Clearly visible tracks in immediate proximity to the 'visitor centre' and carparking are well patronized and maintained including the Kids Loop.

Disused tracks with low patronage

Based on the assessment of previous development intent, it is clear that an extensive track network with multiple 'scissor' loops is superfluous to requirement and would not improve user experience. Extensive scissor loops on steep slopes that don't provide for interest and development of skills will also result in less patronage.

In part the illegibility (or awareness of track sections) precludes patronage. Key entrances and exits off primary routes are not effectively signposted in many instances, and the (original) extensive nature of tracks also appears to impact on the ability to maintain facilities.

Improving accessibility and use will require the consolidation of network pathways and development of logical network connections to the primary Recreational Loop. Refer to the attached Analysis Plan for discussion.

Track Legibility

The physical identification of routes is not clear though this is exacerbated due to the illegibility of many routes as identified on current site maps.

Track terminology and references to tree species provides no information on route classification in relation to complexity / ability required to navigate. A simple 'Beginner' and 'Intermediate' identification system would remove any apprehension with regard to route selection.

It is noted that the extent and effectiveness of wayfinding / interpretive signage is critical to site navigation and should be considered as part of track rationalization and development strategy moving forward to improve user experience.

Alignment and Intersections

There are several intersections associated with loop crossroads that further exacerbate the lack of legibility due to their spatial arrangement, and in some instances close proximity of parallel pathways. This includes giving consideration to equestrian and off leash dog area entrances

In some instances, re alignment of pathways supported by appropriate signage will be required to provide logical, easy to navigate transitions between areas and cycle loop types. Refer to the attached Analysis Plan for discussion.

Perceived user group conflicts

When on site it was apparent that all user groups 'share' the Recreational Loop with limited conflict, though in discussion with Gail Stent and AC representative equestrian use is not supported.

Upon review of existing facilities, there is opportunity to consolidate dedicated cycle and pedestrian routes. These are identified on the attached Analysis Plan for discussion.

Condition and Maintenance

Following robust discussion and review on site, the nature, frequency and associated effectiveness of maintenance needs to be addressed to improve legibility of tracks and user experience.

In this regard the establishment of cycle routes within vegetated areas generally reduces the amount of frequent maintenance required (like mowing) and should be considered where practical for intermediate routes. We understand that potential improvements could form part of existing planting initiatives.

Tracks in open grassed areas require more frequent maintenance to ensure areas either side of tracks provide appropriate visibility free of obstruction is necessary to improve user experience.

Existing tracks are a combination of lime chip, loose chip aggregate and exposed earth. In this regard:

- Lime, if installed with hardener (or concrete additives) is the best riding surface for beginners and intermediates as it provides an even compacted surface. It is however comparatively expensive and does require regular maintenance (dressing at least once a year with interim patching if required) to retain surface quality.
- Aggregate chip is the most cost-effective solution and offers good drainage. Loose 'armouring' chip however is susceptible to movement under breaking. This in combination with the abrasive nature of loose chip is not an ideal surface for beginners (or for the occasional person walking their dog). At minimum a compacted smaller GAP topping should be considered to improve surfacing and user safety.
- Exposed earth surfaces are the least durable as they are exposed to the elements and potential erosion. They do however offer an essential MTB experience for intermediate riders developing their skills and with monitoring and localised interventions to address overland flow issues, can be managed more effectively.

Discussion and development of a surface and maintenance strategy between volunteers and Auckland Council will be required including the installation of localised structures (interception swales, box channels, culverts, boardwalk sections et cetera) to improve level of service and associated all weather use.

Opportunities for functional and experiential improvement

Ultimately addressing the items above in tandem will improve user experience and functionality of the existing track network.

In terms of track experiences, the following complementary features should also be considered in strategic locations:

- Features such as low boardwalk bridges, berms or 'rollers' (utilising existing landform).
- Providing a selection of routes that navigate, or hug the periphery of vegetation providing shade and varied contrast between open grassed and vegetated areas.Installing wider berms on corners for routes that traverse steeper slopes to aid in controlling downhill speed, and to enable easier transition uphill.
- Rationalising the extent of beginner and intermediate routes to provide dual, connecting loops through the site in lieu of multiple 'area based' alternatives.

DEVELOPMENT STRATEGY

The above summary provides a holistic view of the existing track network and opportunities for consolidation and refinement.

Refer to Appendix B - Schematic Development Map and Diagrams in association with the following commentary that tables a series of potential strategies to address track network improvements. The should be

Rationalisation of Track Network

Objective:

- Reduce extent of track network with a focus on quality rather than quantity.

Strategy:

- Retain existing beginner Recreational Loop ('The Road'), shared use / walking and cycling as primary routes through the reserve and decommission tracks that are superfluous to requirement (including extensive 'scissor' loops and 'area' based provision as identified on Analysis Plan).
- Develop secondary connecting links off primary recreational route that in combination offer several alternative intermediate route options and reserve wide experience. This shall include utilising existing intermediate links / track sections where appropriate.
- Consolidate pedestrian and other user group types on beginner loop track and encourage 'share with care' facility arrangement where practical.

Note:

- The location and extent of tracks and features on the Schematic Development Plan indicates intent only. Content requires discussion with key stakeholders to refine and confirm approach. In this regard, we acknowledge that the exact location of the track network, associated plantings and any track features would be confirmed on site at the time of construction. This would also include addressing intersections and crossing points to improve user exposure and legibility whilst ensuring user safety.

Track Wayfinding and Interpretation

Objective:

- Develop an appropriate signage hierarchy with improved legibility to improve site navigation, confidence levels and associated route selection.

Strategy:

- Simplify the signage network to provide clear definition of user groups and identify level of track complexity.
- Rationalise and / or remove esoteric information and replace with stand-alone route references not reliant on maps to articulate information.
- Update site maps and panels containing interpretive information to articulate areas of interest, site history and aid in the protection of flora and fauna which is consistent with values identified in memorandum of understanding.
- Auckland Council to manage the establishment of a simplified signage suite and hierarchy, with potential for implementation of suitable components by AK prison (as per 2015 arrangement). This would include capturing the agreed intent for track rationalisation.

User Experience and Character

Objective:

- Provide varied routes, user experiences and complementary features.

Strategy:

- Ensure track provision and location provides a balance of open (grassland) and enclosed (native vegetation) spaces.
- Provide wider track provision for beginners and narrower tracks for intermediate level riders in line with existing approach.
- For intermediate level riders, include features that vary experience and offer opportunity to improve skill level such as berms and rollers on select routes. This will also provide improved experiences for more skilled riders.
- Consider the implementation of an appropriate level pump track to support existing Kids Loop and enable logical progression of skills for all in a controlled manner.
- Provide additional pause points and seating at strategic locations associated with key views and open space transitions. Through design, pause points also offer opportunity to control movement and speed if required.

Functional and Maintenance Considerations

Objective:

- Establish appropriate functional improvements to improve use and maintenance requirements.

Strategy:

- Consider a tiered approach to grassed open space management. This should include an increased level of mowing and maintenance immediately adjacent to tracks (potentially monthly), with wider grassed open space maintained at a reduced level (potentially quarterly). This would potentially reduce overall frequency of required maintenance with a focus on ensuring tracks receive an improved level of care.
- Whilst maintaining a balance of open grassed and planted areas, install native planting in strategic locations associated with intermediate routes to reduce the frequency of required maintenance.
- For the protection of all routes, provide riprap rock swales, low boardwalk crossings or similar devices to bridge or intercept and direct overland flow away from tracks. This will reduce required surface maintenance and ongoing remediation of track blowouts if not addressed.
- Surface treatment for Primary Recreational Loop (beginner) should be a compacted sub base with a surface topping comprised of GAP 10 or similar sized aggregate to improve functionality and safety. If cost allows this should be a lime surface with burnt oxide hardening mix.

DEVELOPMENT ACTIONS AND PHASING

Further consultation and detailed investigations are required to test proposed objectives and strategies, and establish the feasibility of proposed interventions. from an implementation and physical works perspective.

The following tables a series of phases and associated actions to guide track network implementation of the proposed Development Strategy;

Phase 1: Consultation

- Consult on the proposed development strategy and seek feedback from key stakeholders on proposed:

+ Track consolidation
+ Wayfinding
+ User experience
+ Functional improvements

- It is recommended that key stakeholders are consulted to affirm or define the operational model, roles and responsibilities of volunteers / user groups prior to further design development and physical works implementation. This will impact on costs, the selection of materials and process to ensure appropriate design and maintenance requirements are addressed.
- Consolidate feedback and refine track network approach and development strategy prior to further investigations.

Phase 2: Investigation and Analysis

- On site review and confirmation of location and extent of functional improvements required including:

+ Track alignment and intersection modifications
+ Surface and drainage adjustments
+ Location and extent of new tracks
+ Approach to decommission of superfluous tracks
+ Immediate, and long term way finding adjustments associated with track adjustment
+ Extent of existing and planned ecological / revegetation initiatives
+ Planning review and assessment of consenting requirements

- Review of existing funding options and maintenance budget for the reserve to establish how this may be harnessed to support desired outcomes.

Phase 3 - Wayfinding Strategy

- Engage appropriate design professionals to work with Auckland Council and key stakeholders to develop an improved wayfinding strategy addressing:

+ Location and extent of signage
+ Signage hierarchy and materiality
+ The nature and content of information panels
+ Procurement and implementation strategy

- It is assumed that signage / track marker suite would be implemented in tandem with functional and experiential improvements.

Phase 4 - Functional Improvements

- Engage appropriate design professionals to guide and document (where applicable) improvements at a detailed level to enable implementation of functional improvements including:

+ Track surface composition and build up
+ Typical overland flow interception and conveyance details
+ Alignment and intersection adjustments
+ Wayfinding requirements

- Implementation should focus on improvements to existing beginner level tracks followed by intermediate level facilities.

Phase 5 - Experiential Improvements

- Engage appropriate design professionals to guide and document (where applicable) improvements at a detailed level to enable implementation of experiential improvements including:

+ The extent of new track links
+ Proposed features and structures
+ Gradient analysis of new track links
+ Overland flow interception and conveyance details
+ Wayfinding requirements

All of the above should be developed in liaison with key stakeholders and user groups, particularly if agreements require the services of volunteer organizations or individuals to implement.

DEVELOPMENT STAGING

Depending upon available funding, key stakeholders could also consider implementing the above phases in the following staged roll out of track improvements to aid in the management and feasible delivery of areas over several years.

Refer to Appendix C - Development Stages for approximate extent of potential stages as outlined below:

Stage 1 - Area A

High use loop tracks located to the south of the visitor centre associated with carpark, dog exercise and beach access areas.

Stage 2 - Area B

Tracks located to the west of the visitor centre primarily associated with improving intermediate level rider experiences

Stage 3 - Area C

Tracks located to the north and northwest of the existing visitor centre and equestrian areas associated with providing wider park connectivity and experience.

Please note. All planning and design processes relating to the development of these facilities must be considered in view of the Sanders Reserve Planting Plan (2022) which was approved by the Upper Harbour Local Board. The planting plan may be subject to review and change ,so the latest version of these should be considered and reviewed as any planning processes develop over time.

APPENDIX A

ANALYSIS PLAN AND ANNOTATIONS

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ANALYSIS PLAN
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Paremoremo, Auckland

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04

01 Entrance hierarchy and access not clear in this location. Steel tube Gated access alludes to vehicular maintenance entrance and secondary user access is not clearly articulated with signage. Suggest improving legibility by providing clear signage and improved, dedicated cycle / pedestrian access in association with existing gated access.

02 Existing wide pathway provides key connection for beginner riders to lower areas and should be retained. Given good sight lines and width of track and intended use by beginners, it is suggested that this route be identified to users as shared use. Users are already operating in this manner and this shift would allow for consolidation of tracks and improved legibility between beginner and intermediate facilities.

03 Existing secondary pathways should be considered for retention and development as intermediate routes to complement adjacent beginner level track. Refer Schematic Development Plan.

04 Review of track hierarchy at transition to off leash dog area is required to improve legibility and function of tracks. Suggest removal of short section of pedestrian track and redirection of secondary pathways to provide singular clear entrance to off leash dog area. Refer Schematic Development Plan.

05 Redirect secondary path to primary route to enable legible connection to potential intermediate route.

06 Potential intermediate level connection to existing crossing utilising natural slope for improved experience. Potential to install track with berm corners to further enhance skill development and experience.

07 Suggest removal of secondary track in this location in lieu of consolidating beginner level riders and pedestrians on shared use track.

08 Existing secondary route provides an alternative track for intermediate level riders through trees and over associated tree roots and should be retained.

09 Existing secondary route provides an alternative track for intermediate level riders through trees and over associated tree roots and should be retained. Route requires provision of clear signage to identify entrance and exit.

10 Existing lookout area and seating to be retained.

11 Existing secondary route provides an alternative track for intermediate level riders through trees and should be retained. Route requires provision of clear signage to identify entrances and exits. Suggest alignment receives minor modifications to avoid issues associated with steeper slopes and periodic wet areas / and or the provision of small-scale bridging structures to accommodate. Infill planting to beginner level track would also improve experience.

12 Existing and potential route connections require provision of clear signage to identify entrances and exits. Intermediate cross track connections should also align to improve legibility and transition.

13 Legacy tracks in this area are not easily discernible and extensive back loops require considerable investment / maintenance without corresponding improvements in experience. Suggest permanent decommission in lieu of establishing short links that provide for a range of experiences at an intermediate rider level. This will also aid in providing opportunities for beginners to improve skill level.

14 Potential intermediate level connection to existing crossing utilising natural slope for improved experience. Potential to redefine / link sections of legacy track and install berm corners to further enhance skill development and experience.

15 Retain existing intermediate level track in this location. Potential to enhance with additional alternative intermediate route, potentially with skill building features like rollers or small rumble rock sections through adjacent trees. Refer Schematic Development Plan for indicative route.

16 Potential pump track extension and opportunity to link with intermediate level facilities.

17 Legacy tracks in this area are not discernible. Potential intermediate level connection utilising natural slope for improved experience. Potential to redefine and link legacy track sections and install berm corners to further enhance skill development and experience.

18 Existing intermediate level connection in this location not well defined. Consider minor realignment to improve functionality. There is also potential to install additional planting to remove shortcut tendencies to beginner route in this location.

19 Potential intermediate level connection to improve experience utilising existing open space and gently undulating landform. A short bridge crossing will be required across an existing ephemeral stream to establish a connection to the primary beginner level track. Refer Schematic Development Plan for indicative route.

20 Review pathway alignment in this location. Hierarchy of precedence is given to equestrian access when this should be secondary to the primary beginner / shared path route. Routes require provision of clear signage to identify hierarchy and route type / user groups.

21 Legacy tracks in this area are not discernible. Landform does provide potential for ridge / mid slope track for intermediate level riders that utilises down slope to generate speed. Refer Schematic Development Plan for indicative route.

22 Legacy tracks in this area are not easily discernible and extensive back loops require considerable investment / maintenance without corresponding improvements in experience. Suggest permanent decommission in lieu of establishing a singular intermediate track linking upper and lower level of existing beginner / shared use route. Potential to redefine / link sections of legacy track and install berm corners to further enhance skill development and experience. Specimen tree planting would also aid in defining this route in tandem with appropriate signage.

23 Retain existing intermediate level track in this location.

24 Review pathway alignment and signage provision in this location. Hierarchy of precedence is not clear between equestrian and cycle track routes and clear signage is required to identify hierarchy and route type / user groups.

25 Potential to enhance existing intermediate level track with potentially more challenging alternative route in this location, potentially with skill building features like berms or rollers to aid in speed management. Refer Schematic Development Plan for indicative route location.

26 Good section for intermediate level riders to be retained. Location requires provision of clear signage to identify route in relation to private property entrance.

27 Legacy tracks in this area are not discernible. Suggest a single intermediate level connection be established with skill building features like berms or rollers to aid in speed management. Refer Schematic Development Plan for indicative route location.

28 Retain existing track link to steep escarpment.

29 Potential to install low rollers or undulating sections in this location to improve skill and experience.

30 Review pathway alignment in this location. At minimum routes require provision of clear signage to identify hierarchy and route type / user groups.

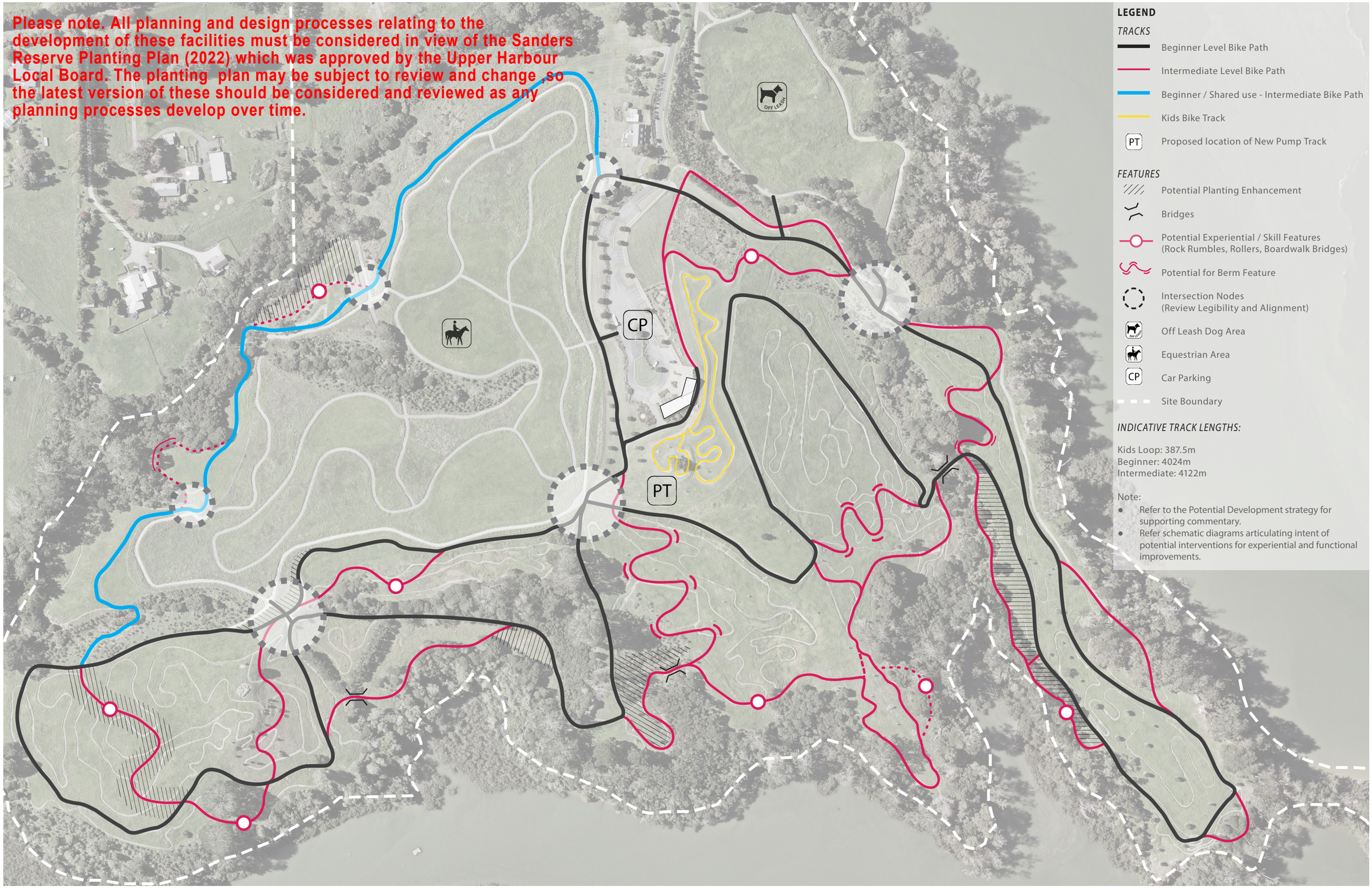
31 Legacy tracks in this area are not discernible. Landform does provide potential for ridge / mid slope track for intermediate level riders that utilises down slope to generate speed. Suggest establishing single intermediate connection to provide alternative route for intermediate level riders. Refer Schematic Development Plan for indicative route location.

Please note. All planning and design processes relating to the development of these facilities must be considered in view of the Sanders Reserve Planting Plan (2022) which was approved by the Upper Harbour Local Board. The planting plan may be subject to review and change ,so the latest version of these should be considered and reviewed as any planning processes develop over time.

APPENDIX B

SCHEMATIC DEVELOPMENT PLAN AND DIAGRAMS

Please note. All planning and design processes relating to the development of these facilities must be considered in view of the Sanders Reserve Planting Plan (2022) which was approved by the Upper Harbour Local Board. The planting plan may be subject to review and change , so the latest version of these should be considered and reviewed as any planning processes develop over time.



LEGEND

TRACKS

- Beginner Level Bike Path
- Intermediate Level Bike Path
- Beginner / Shared use - Intermediate Bike Path
- Kids Bike Track
- PT — Proposed location of New Pump Track

FEATURES

- Potential Planting Enhancement
- Bridges
- Potential Experiential / Skill Features (Rock Rumbles, Rollers, Boardwalk Bridges)
- Potential for Berm Feature
- Intersection Nodes (Review Legibility and Alignment)
- Off Leash Dog Area
- Equestrian Area
- CP — Car Parking
- Site Boundary

INDICATIVE TRACK LENGTHS:

Kids Loop: 387.5m
Beginner: 4024m
Intermediate: 4122m

Note:

- Refer to the Potential Development strategy for supporting commentary.
- Refer schematic diagrams articulating intent of potential interventions for experiential and functional improvements.

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SCHEMATIC DEVELOPMENT PLAN
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Paremoremo, Auckland

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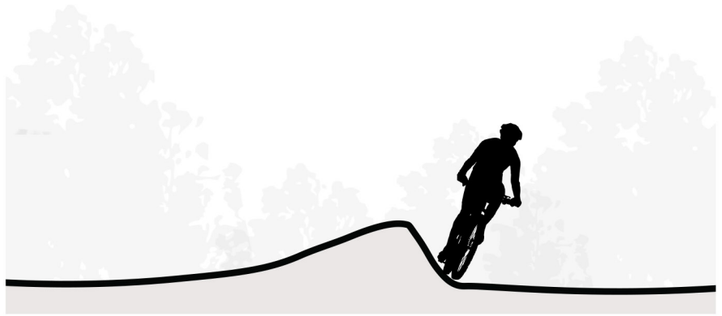
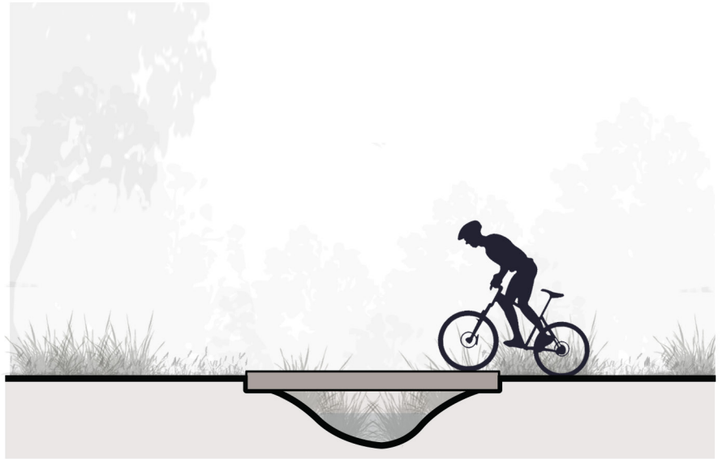


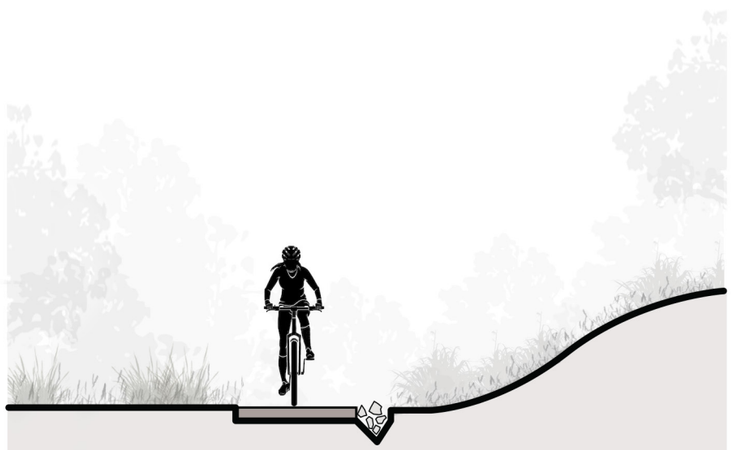
Berm Features

Rock Rumbles

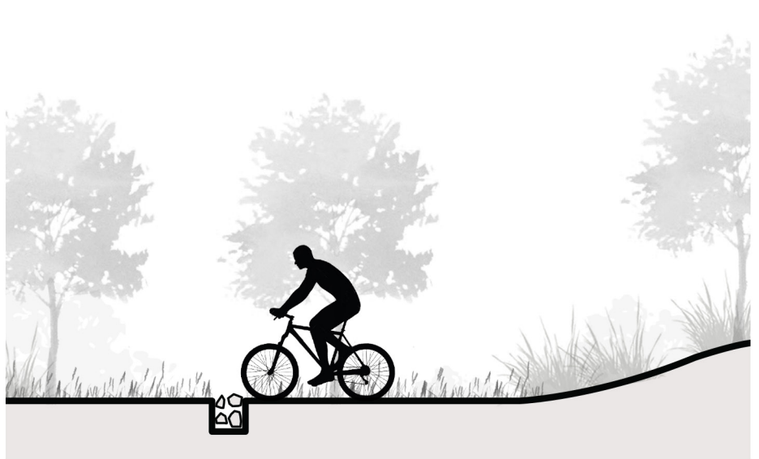
Rollers / Undulating Landform



Low Bridge Crossings / Boardwalk

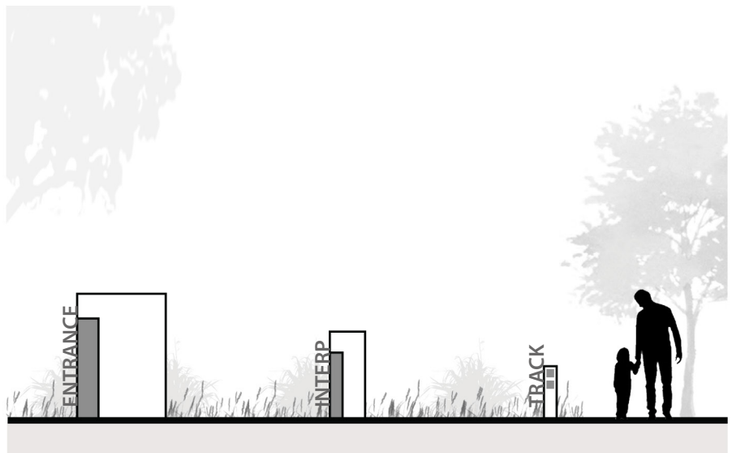


Riprap Drainage Interception Channels (.5m)

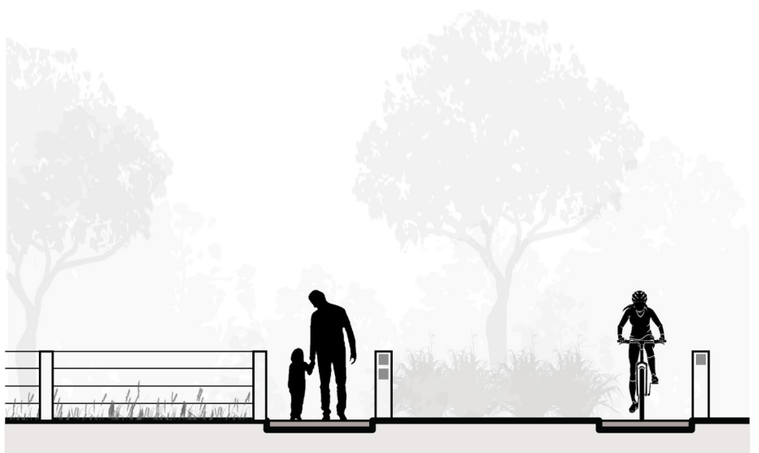


Riprap or Box Channel Drainage Crossings (.5m)

Mown Run Off Strips (1.5m) in Grassed Areas



Hierarchical Signage Suite



Clear Signage at Gates and Intersections

APPENDIX C

DEVELOPMENT STAGING

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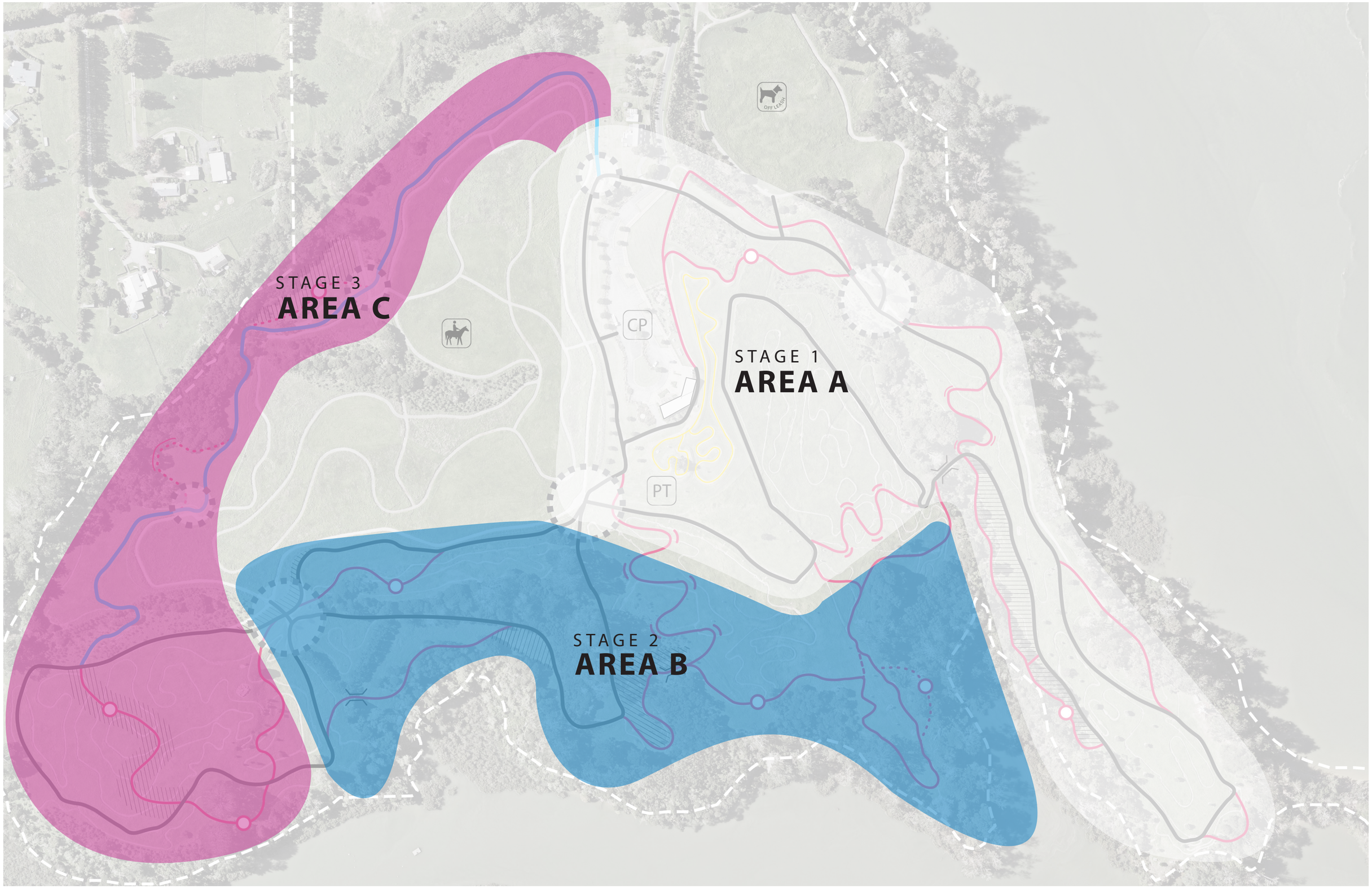

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