GRENADA PARK NORTH

INVESTIGATIVE AND CONCEPT DESIGN PLAN

SEPTEMBER 2024

wsp

Absolutely Positively
Wellington City Council
Me Heke Ki Pōneke

*Creating what matters for **future generations***

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1. INTRODUCTION

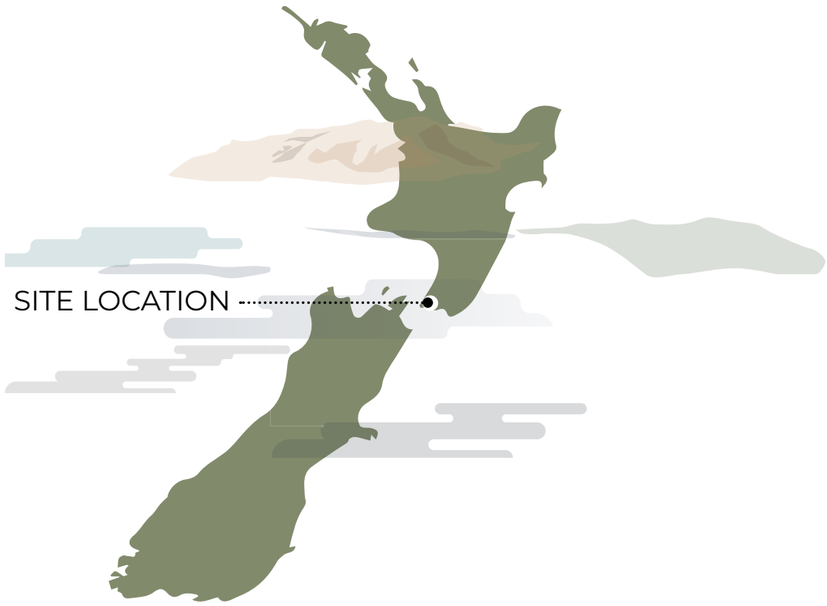
1.1 EXECUTIVE SUMMARY

Grenada North Park is envisioned to be a central green space for a growing community that knits together and highlights recreational, cultural, and ecological values, for current and future generations. The park will encapsulate the concept of Te Whai Oranga – possessing healthy living and wellbeing for all people. It connects into the wider landscape, including recreation tracks, natural waterways and the underlying landform that support this place and communities.

Wellington City Council (Council) identified Grenada North Park as a key project in the Long-term Plan 2021-31 because of the size and potential for it to become a multi-function sport and active recreation hub. With residential development on the horizon, this effort would improve access to high-quality sports and recreation facilities in the northern suburbs. The goal of the park project is to create an attractive, functional and well-utilised sports and recreation park which caters for growth in the northern suburbs and provides a multi-use park for the wider Wellington region.

Boffa Miskell completed a Master Plan in 2011. Although much of the future development context remains similar with new residential development coming, the anticipated intensity and density has increased. Additionally, the global pandemic and its impacts on communities, recreation trends, increased focus on health equity, and evolving understanding of climate change provoked the need to "take the pulse" of context and needs. In 2023, WSP were appointed to complete technical site investigations, including hydrological and geotechnical analysis, community engagement and concept design for informing the business case.

This investigative study and the resulting Concept Design Plan (the Plan) assesses what has changed in the urban and environmental context, and what remains important and integral to people (Council and community) and place. It recognizes that change is inevitable.



The resulting Plan creates a solid "skeleton" such that a variety of future sports field configurations can be met. Core spaces are planned for flexible use. Dispersed access and play spaces allow for individuals, groups and families to co-recreate and spend time. All spaces are flexible to future change in need. It is responsive to dynamic environmental futures and understands that seismic and climate change impacts have both day-to-day and season-to-season impacts. It recognizes that potential catastrophic impacts may require attention for safety and cost to maintain and repair. The Plan uses a diversity of mitigation techniques, and lighter/less armoured engineering solutions to reduce vulnerability to major impacts.

Ultimately, the Plan creates a park that reconnects, repairs, recognizes, and emphasizes its place and part the wider landscape, community and cultural matrix of the region.

REGIONAL CONTEXT

LOCAL AREA

SITE

1.2 INTRODUCTION

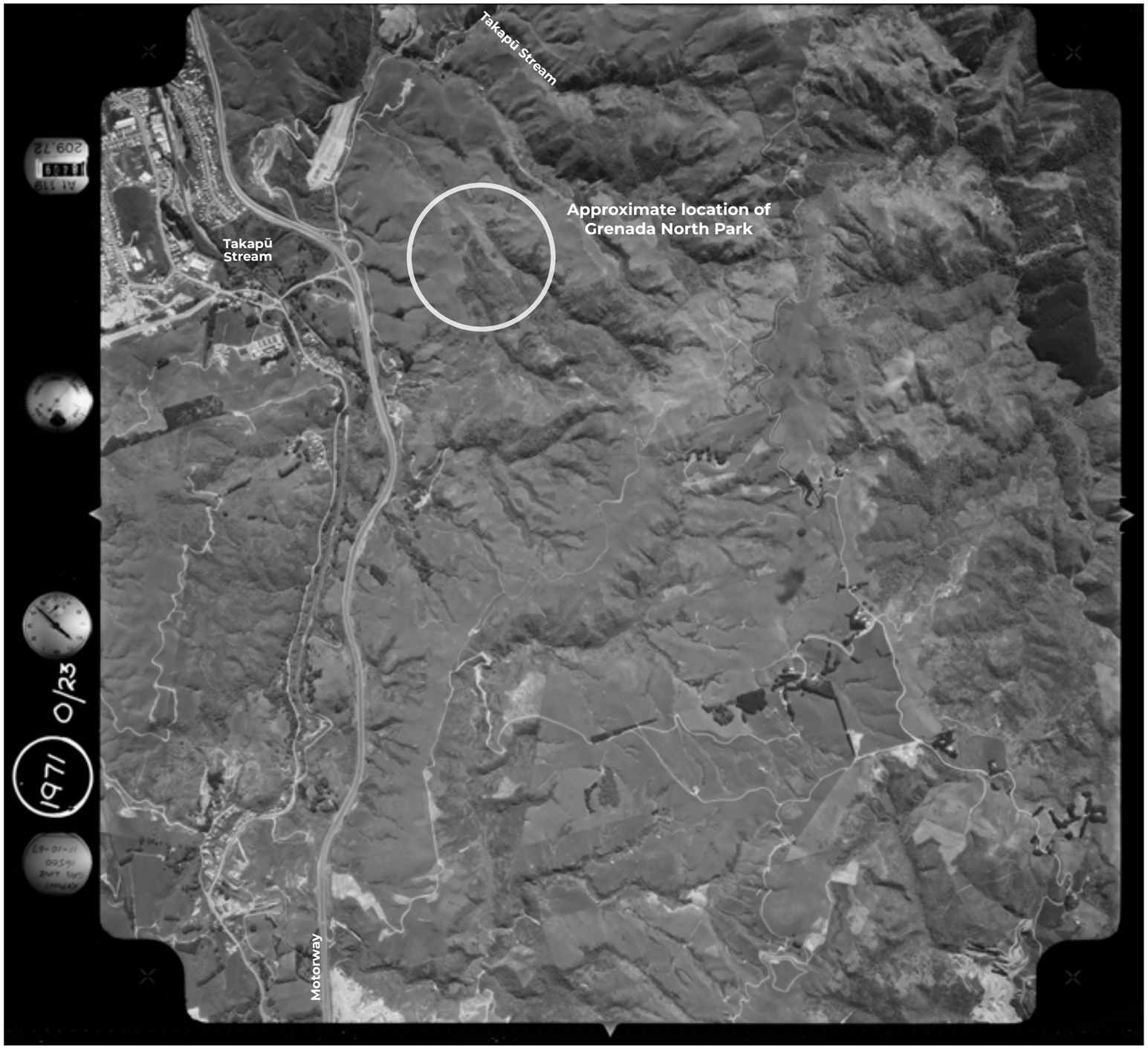
Background

Grenada North Park, located in the North Island, was originally covered by a temperate forest terrestrial ecosystem, characterized by podocarp and beech forests with water courses flowing off of the steep terrain. This ecosystem has been replaced by grazed grasslands over time.

The Takapū area is connected to Te Patukawenga, the son of Kaiwhakakura. The name comes from the the phrase “Ko taku Takapū tēnei” which means “this is my belly”, an area of abundance and food. Ngāti Toa resisted the occupying and settling of Takapū lands by the NZ Company in the 1840s. Regardless of the opposition, the settlers continued to survey and divide the land and build roads. Maps removed recognition of mana whenua lands, mahinga kai, or ancestral pathways. The Wellington-Manawatu Railway, clearing of land for farming, and then the construction of State Highway 1 continued to alienate indigenous connection to places, routes and mahinga kai.

The area became part of farming settlements near Tawa. In the 1880s the Wellington-Manawatu Railway Line was installed which brought in more settlers and the land continued to be cleared. Housing developments began in the 1940s along with the motorway which brought more development.

Residential buildings were planned, however they have been slower to materialize. Industrial buildings and warehousing were built in the 1980s. Today, urban development grows towards Grenada North Park from the south and north.

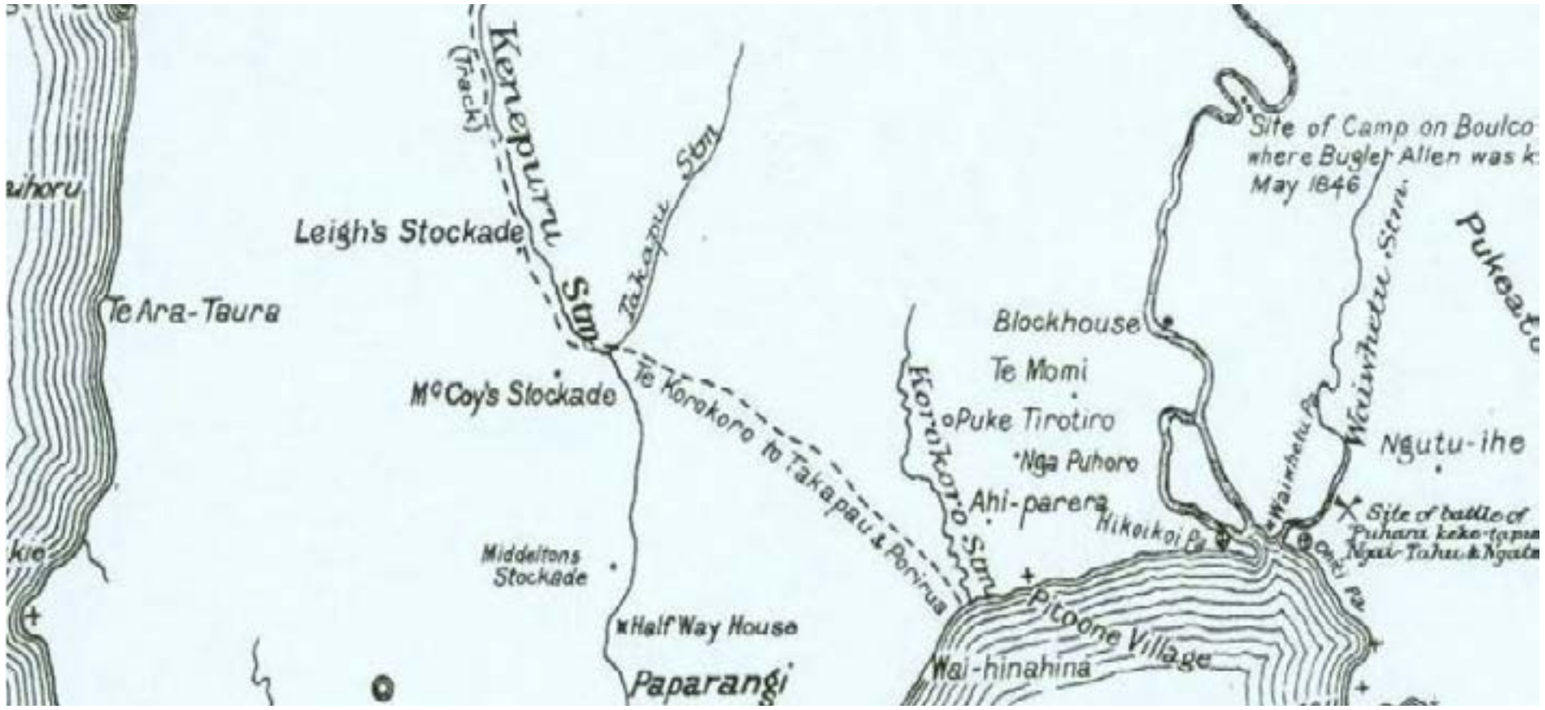


1971 aerial photo of the region.

NTS N

Kokopu - native riparian fauna

North Island temperate ecosystem



1919 - Takapū – Pareraho Track (Best, Elsdon, The Land of Tara, and they who settled it, the Story of the Occupation of Te Whanga-nui-ā-Tara

Mana whenua

Both Ngāti Toa Rangatira (Ngāti Toa) and Taranaki Whānui ki Te Upoko o Te Ika (Taranaki Whānui) have an interest in the Grenada North Park project. Ngāti Toa are mana whenua of Te Takapū. This right and responsibility is shared with Taranaki Whānui in the southern Takapū-Korokoro area. Kaitiakitanga is exercised by mana whenua to protect land, culture, traditions and all taonga. Aspects of kaitiakitanga includes maintenance of tikanga, kawa and preservation of taonga. Kaitiakitanga flows from mana whenua and the authority to act as guardians. Kaitiaki is an inheritance related to whakapapa.

Both mana whenua have principal ara tawhito (traditional travel route) through the area. Takapū Stream is also a site of significance to Ngāti Toa Rangatira, and Grenada North Park is within this catchment which leads to Te Awarua o Porirua.

Ara tawhito

A significant ancestral pathway for mana whenua climbs into the Paparārangi hills from Takapū, near modern day Takapū Station. It drops into the Korokoro Stream to Pito-one Pā at Te Whanganui-ā-Tara. For Ngāti Toa this is named Pare-raho Track, and for Taranaki Whānui this is named Korokoro - Takapū Ara.

An opportunity for the project is to provide and encourage safe connections for walking or cycling for local communities establishes routes and re-establishes the ability to connect people through the landscape and recognising the cultural values of ancestral pathways.

Taiao

Te Takapū, is the puna (spring) of Te Awarua o Porirua. Te Takapū flows into Kenepuru Stream (Porirua Stream) which is the main southern catchment of Te Awarua o Porirua.

It is a critical and significant place to Ngāti Toa. Te Takapū is a mahinga kai for the iwi and provides habitat for indigenous flora and fauna included banded kokopu, common bully, smelt and long-fin eel. Disregard for indigenous land use, subdivision, colonial manipulation of land cover and flow by piping streams, and disrupting flow and drainage have damaged creeks and streams. This is akin to disrespecting an ancestor. Stormwater is run-off, often contaminating natural waterways.

An opportunity for the project is to include water sensitive design systems within the park to collect and treat stormwater before this enters natural waterways and support restoration of ngahere by increasing the amount of native planting.

Information from Cultural Impact Statement - 128-198 Jamaica Drive, 2 Here-turi-kōkā 2022

Planning Timeline

Over the past two decades, Council has been planning for improvements at Grenada North Park, as part of the wider matrix of parks and open spaces. This documentation is reviewed below.

2008 – Northern Reserves Management Plan

Council's reserves are managed through Reserve Management Plans in accordance with the Reserves Act 1977. Grenada North Park sits within the Northern Reserves Management Plan, August 2008. When the Northern Reserves Management Plan was last reviewed in 2008 it was determined that an upgrade to the sports fields would be required in 10+ years, to deliver an acceptable level of service across the network, in response to growth and demand. At the time, a top priority in the short-to-medium term was to create a major hub at Alex Moore Park to service the northern suburbs. This project was completed in March 2021. The Reserve Management Plan identified Grenada North Park as a location for potentially another recreation hub as residential development and transport links develop over the next 10 to 20 years.

2009 – Outdoor Sports Facilities Asset Management Plan

The Asset Management Plan 2009 for sports fields outlined the need for Council to seek funding to develop artificial turfs on selected sites as an option to increase and maximise sports field capacity in Wellington, in conjunction with improving the existing natural turf assets. Artificial turf has grown in popularity as a preferred recreational surface and is increasingly used for sports fields providing a consistent year-round, all-weather playing surface built to withstand extended use without downtime for recovery. The provision of artificial turfs results in greater sports field capacity, which in turn leads to longer playing hours, higher use of sports fields and increased participation in sport activities.

2011 – Grenada North Park Master Plan

Informed by Northern Reserves Management Plan 2008, and the Sportsfield Asset Management Plan 2009, a Master Plan for Grenada North Park was prepared by Boffa Miskell in 2011. This included a cost estimated concept design to enable officers to seek funding through the Long-term Plan process to enable implementation within the next 10 to 20 years, following the Alex Moore Park upgrade.

The Master Plan outlined the need for upgrade to the sports fields as a top priority for the park. The lack of flat land available for sportsfield development means Council needs to intensify use of current sports field areas. Overall, Wellington City sports fields were assessed to have capacity to meet about 75% of current demand. The poor quality of the current sports fields at Grenada North Park (primarily because of poor drainage) results in the park delivering less capacity than other parks with a similar number of sports fields.

On-going asset management planning

Asset management planning for sports fields in subsequent years continued to identify Grenada North Park as a key project for increasing the capacity of the city's sportsfield network. The Asset Management Plan 2018 outlined:

"Significant development of greenfield sites in the north of the city will result in additional pressure on existing assets and associated infrastructure such as Grenada North Park. Further planning and investment is required for Grenada North Park as a community sports hub to meet the growth and demand in the north of the city. The future development of this is unfunded."

Council officers recommended:

"Feasibility planning for Grenada North community sports hub, undertaken in 2022/23 at a cost of $200k with estimated capex investment of $9 million in years 2023-2026, subject to an agreed outcome from the feasibility plan. Future investigation into the changing patterns of recreational demand may have an impact on level of service and provision of some assets. Council will need to consider its role in supporting the sustainability of non-Council assets that play a critical role in the delivering sport and recreation outcomes for our community."

2021 – Long-term Plan 2021-31

On the back of the successful Alex Moore Park upgrade, and informed by asset management planning, funding for Grenada North Park upgrade was approved in the 2021-31 Long-term Plan, balancing Council priorities with financial constraints. $13.2 million was allocated between years 3 to 6 (2023/24 to 2026/27), with $213k budgeted in 2023/24 for feasibility planning.

2023 – Te Awe Māpara | Community Facilities Plan

In 2023, the strategic direction for Council's Community Facilities was updated for the network. An action for Grenada North facility provision included:

"Following completion of the Grenada North Park sportsfield upgrades, undertake a needs assessment and feasibility study to consider the scope of community facilities required to serve the park and wider community. Considerations include:

- Grenada North currently has a very small resident population.
- Potential development of a link road to Grenada Village and urban development in Lincolnshire Farm could increase population."

This set a clear direction for new clubrooms to be excluded from the scope of this funding in the short-term, with the priority on getting the open space assets right first. However, consideration to future staging will be critical to the open space design to future-proof the site for future built facilities as required. Consideration also needs to be given to other aspects of Te Awe Māpara such as inclusive accessible public toilets and changing facilities.

2023 – Te Whai Oranga Pōneke | Open Space and Recreation Strategy

Te Whai Oranga Pōneke sets the key focus areas for developing our open space and recreation network, and has informed the key priorities for Grenada North Park:

- Integrated – multi-functional park that may positively contribute to the everyday lives of locals.
- Inclusive – accessible spaces that make everyone feel safe and welcome.
- Regenerating & Resilient – supports a flourishing natural environment and increases the resilience of sports fields for year-round use in all types of weather.
- Re-indigenising – embed Māori knowledge
- Diverse – deliver variety by creating quality spaces for informal recreation, alongside traditional sports fields.

2023/24 – Feasibility planning

Initial project scoping began in 2023 in preparation for construction between 2025-2027, as indicated in the 2021-31 Long-term Plan. At the end of 2023, WSP were appointed to complete technical site investigations, including hydrological and geotechnical analysis, community engagement and concept design for informing the business case.

2024 – Long-term Plan 2024-34

Through the 2024-34 Long-term Plan process, Councillors received oral and written submissions advocating for the Grenada North Park Upgrade to remain a priority. Following deliberations, funding has been retained in the budget for years 1 to 3 (2024/25 to 2026/27), with developed design, consenting, detailed design and procurement for construction scheduled in the next 12 months (2024/25) and construction in years 2 to 3 (2025/26 to 2026/27).

This Plan also takes into account the following plans:

- Wellington Region Sportsfield Strategy 2013 - updated 2023
- Living Well: Wellington Region Sport and Active Recreation Strategy 2019 updated 2021
- Wellington Region Spaces and Places Framework 2019
- Guidance Document for Sports Field Development 2019

Stakeholder Workshop - April 2024

1.3 PROJECT PROCESS

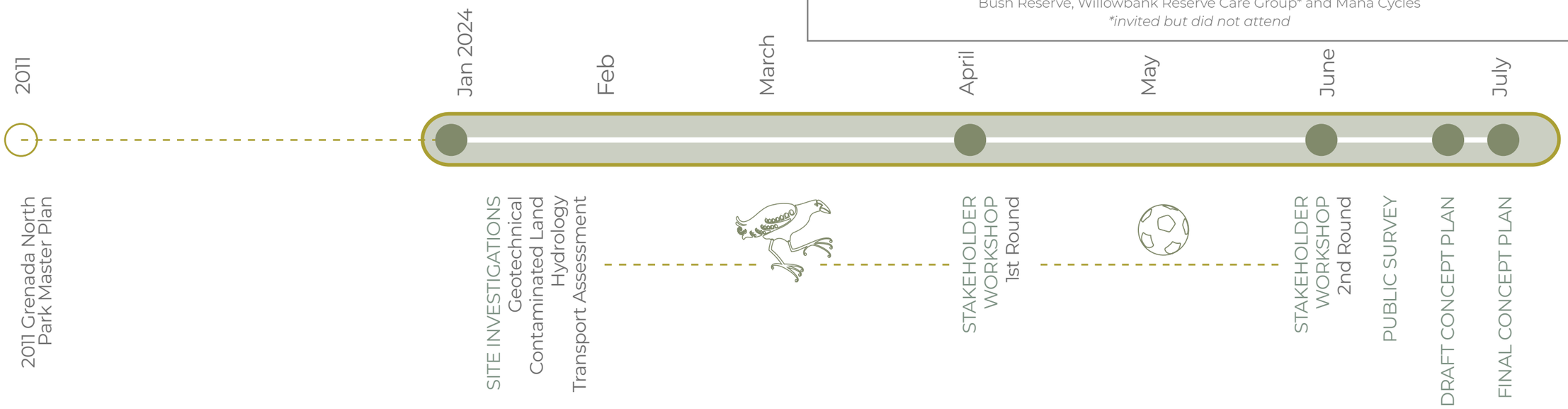
STAKEHOLDER WORKING GROUP

Regional sports organisations: Capital Football, Cricket Wellington, Athletics Wellington*, Wellington Softball, Wellington Rugby, Primary Sport Wellington and College Sport

Local sports clubs: Tawa Football AFC, Tawa Rugby, and Olympic Harriers Athletics Club

Other groups: Nuku Ora, Tawa Community Board, Grenada Village Residents Association*, Friends of Tawa Bush Reserve, Willowbank Reserve Care Group* and Mana Cycles

**invited but did not attend*



Engagement

Stakeholder engagement involved two rounds of meetings with a stakeholder working group, mana whenua partnership, and wider community engagement via a variety of channels and outreach methods. More information is found in Appendix E - Engagement Report.

Stakeholder Working Group

A working group was formed with representatives from groups with an interest in the project. Two rounds of workshops occurred during progressive planning phases.

Engagement Workshop - Round 1

The first round of engagement presented the 2011 Master Plan, and described what has changed in the 13 years since it was completed. Participatory activities sought input to understand current values, concerns and needs, and imagine future scenarios. Feedback helped clarify what aspects of the 2011 Master Plan are still relevant, and what needs to be modified.

Engagement Workshop - Round 2

The second round of engagement presented a zonal plan option that responded to what was expressed at the first round of meetings. It asked participants to become advocates in making the park a future reality.

A public survey and wider community drop in session were also run by Council to support the developed of the plan.

Wider Engagement

A multi-channel approach maximized reach and engagement with the wider community. It promoted a survey and drop-in session. Key themes:

Sportsfields - Increase playability

Tracks - Improve safety and variety of track network

Play - Develop safe, multi-age play opportunities

Access - Provide sufficient car parking; and multi-modal connections and amenities. Improve level of accessibility.

Mana Whenua Partnership

Council reached out to mana whenua partners at the beginning of this project. Ngāti Toa Rangatira expressed a particular interest, and we're working with the Principal Advisor appointed by Te Rūnanga o Toa Rangatira. Opportunities identified include:

- Mahi toi and signage relating to Pare-raho Track / Korokoro - Takapū Ara (significant ancestral pathway between Paparārangi and Takapū).
- Support restoration of ngahere, and water sensitive urban design strategies proposed such as swales, raingardens and stormwater wetland.
- In support of a more diverse recreational and community space (beyond football, cricket and athletics).
- Promoting mauri ora via sports is an important kaupapa for Ngāti Toa.

1.4 PLAN OVERVIEW

Core area of sport and recreation focus

Park areas for future consideration or to be developed as additional sportfields in the future

An examination of the 2011 Master Plan in the context of today's needs revealed what remains valid, and what must change to fit the needs and context of 2024. The resulting concept design provides direction for next steps of park design and development.

What remains the same: A lot has changed locally and globally in 13 years, however, the development potential surrounding the park, surprisingly, has not materialized as rapidly as anticipated. Thus, this driving motivation has not hugely impacted the population numbers, traffic, or local pressure on the park. However, development plans remain poised to occur, with some degree in intensity of development in area and density. This pressure still holds true for the future of Grenada North Park.

What has changed: Council is approaching the park with new motivation and vigour to assure that Grenada North Park becomes a park that is fit-for-purpose. This means that it accomodates a variety of sports with appropriate fields sizes and conditions, and offers high-quality informal recreation. Council expressed the desire to "get the skeleton right" such that flexible configuration of sports fields could be accomplished more easily.

Throughout the Wellington region it was understood that there exists sufficient *area* to play; but not sufficient *high-quality terrain* for play. This changed how Council is approaching the solution for Grenada North Park.

WHAT THIS MEANS FOR THE PLAN

Consolidate sport related resources on the core fields and community spaces.

The upper and lower meadows have strong natural connections into the hills and have habitat value. There is opportunity to connect via these spaces along the ancestral Pareraho Track, and restore native bush.

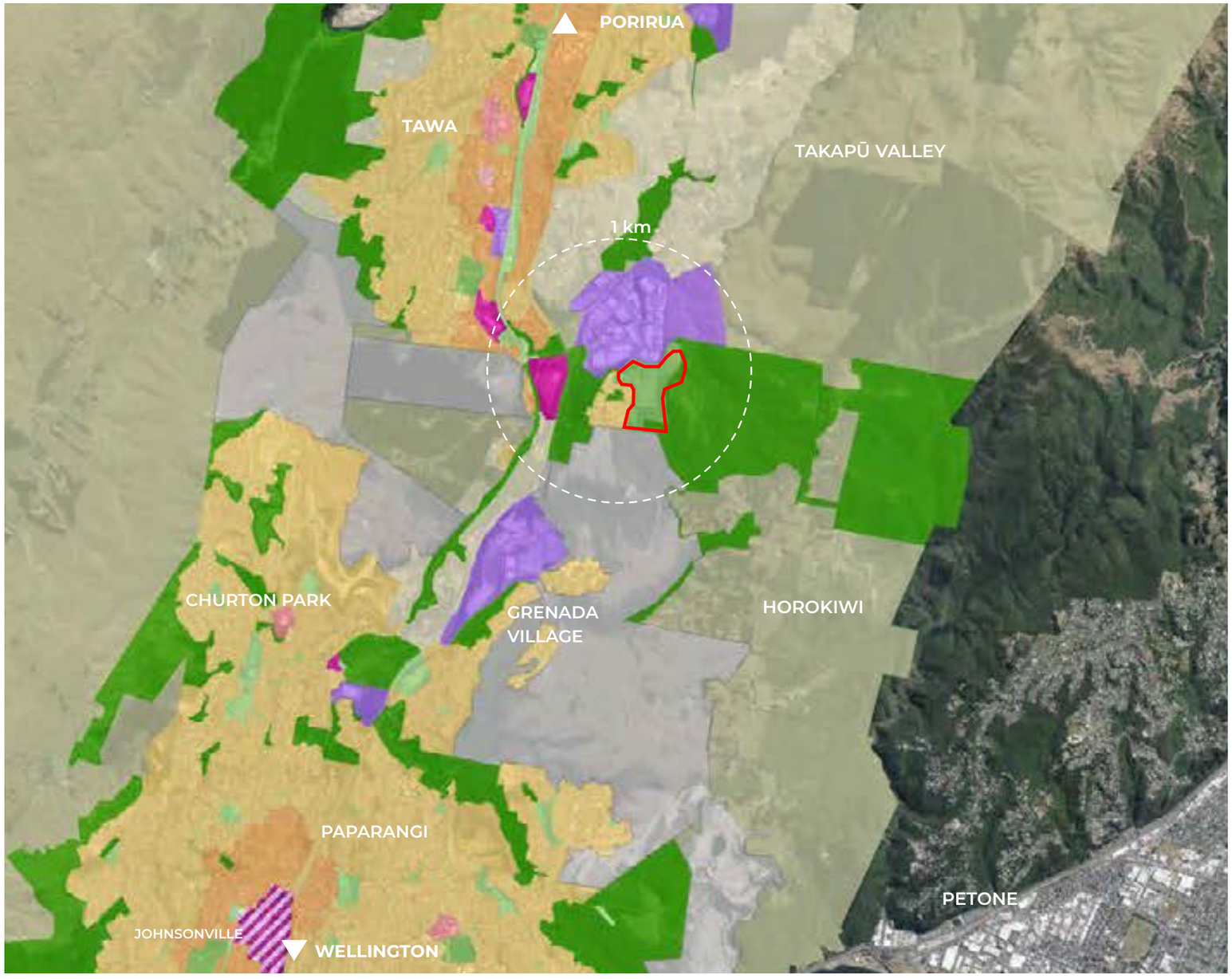
These meadows give future potential development flexibility, and can be used currently for storage.

2. INFORMATION REVIEW AND SITE ANALYSIS

Site assessments were undertaken to understand current conditions in and surrounding the park. These assessments included Geotechnical, Contaminated Land, Stormwater and Hydrology, Transport, and Consenting. Full reports are found in the Appendices.

2.1 CONTEXT AND DEVELOPMENT

2024 DISTRICT PLAN



NTS N

Grenada North Park is approximately 17 km from the centre of Wellington, and 8 km from Porirua, sitting in a dynamically growing area between the two population centres.

A one-kilometer radius from the park entrance shows the diverse land use zones that surround park. This includes a currently small area of residential to the west, an industrial area along the north, and a significant natural open space zone to the east. The southern edge borders a proposed development area. This zone presents opportunities in improving road connectivity to the park, and the potential to add many local residents in walking distance to the park.

LEGEND

ZONES

- General Industrial
- High Density Residential
- Medium Density Residential
- Mixed Use
- Natural Open Space
- Sport and Active Recreation Zone
- Open Space
- Special Purpose Zone (see Development Areas on next page)
- Grenada North Park

FUTURE DEVELOPMENT - DISTRICT PLAN 2024 (APPEALS VERSION)

The **Upper Stebbings** and **Glenside West** development area has been marked for development since the 1970s. It will contribute to the final stages of development of the Northern Suburbs of Wellington City.

The development area will provide medium density residential housing intermingled with unbuilt areas (open space, earth worked cut and fill batters).

A final concept plan is yet to be developed with feedback from the community, landowners and stakeholders still being considered.

Lincolnshire Farm has been marked for potential development since the 1970s, with an initial Structure Plan developed in 2006 and adopted by the District Plan in 2013. The Lincolnshire Farm Development area replaces the existing Structure Plan and formalises its potential for future development in the WCC Proposed District Plan.

The development area will consist of medium density residential housing and connection to natural open space. The area will also include a general industrial area and a neighbourhood centre.

The road network will augment connection to Grenada North Park from the south.

The final development layout will be informed by earthworks modelling, as they are required to implement the Development Plan. The final form cannot be commented on as investigations have yet to be done.

The **Petone to Grenada Link Road** has been identified in the draft Government Policy Statement on Land Transport (GPS 2024) as a Road of National Significance.

No formal information on next steps has been provided by the Government at this time.

A preferred route for the Petone to Grenada Link Road was selected in 2015, before it was placed on hold.

It is unclear whether the 2024 Road of National Significance will follow the same concept as the 2015 iteration as no concept designs have been publicly released.

NTS N

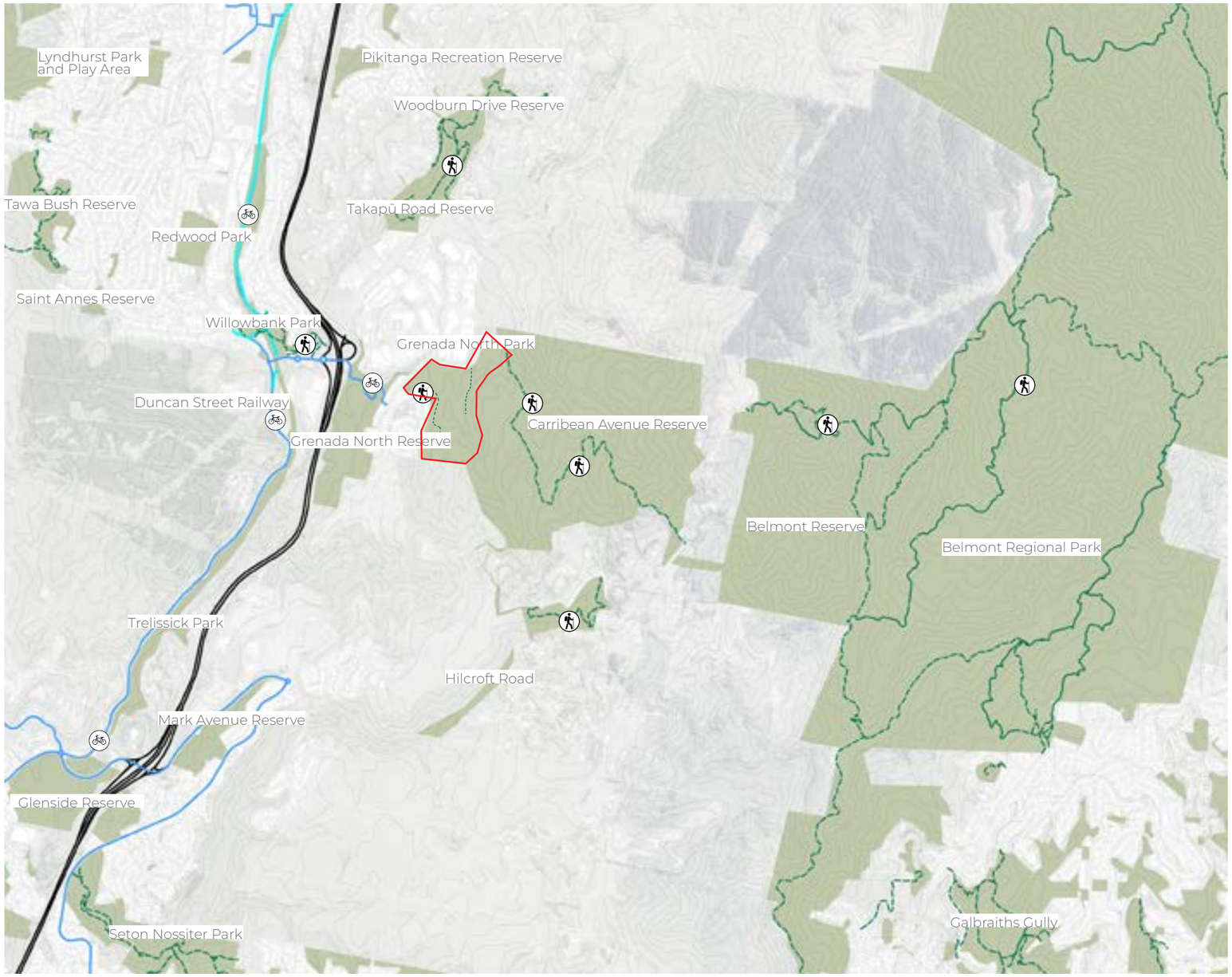
View of the park, looking north towards the industrial edge and Tawa.

The park abuts the Caribbean Reserve, connecting it into a protected network of open space to the east.

LEGEND

- Grenada North Park
- Development Proposal Areas
- Proposed Roads in Development Proposal Areas
- State Highway

2.2 GREEN SPACE NETWORK



Wellington's open space network is a system of parks and reserves, and green space (operated by WCC) embedded within the city structure. This network reaches out through the suburbs to the Outer Green Belt. Redwood Bush, in the northern Outer Green Belt is one km from the Park, to the east.

Grenada North Park is part of the network of parks and reserves, and bush remnants that Council considers having high ecological value. It sits directly between the Caribbean Avenue Reserve and the Grenada North Reserve. The Caribbean Avenue Reserve is made up of hills of regenerating bush classified as kohekohe and Tawa forests. Only 16% of these forests remain and are listed as endangered due mostly to pests.

The ancestral tracks traversed these hills from approximately where Takapū Station now sits, to Korokoro, via Paparāngi. A trailhead at the top of Caribbean Avenue connects through to Horokiwi Road, further connecting to multi-use trails in Belmont Regional Park. and down to Wellington Harbour.

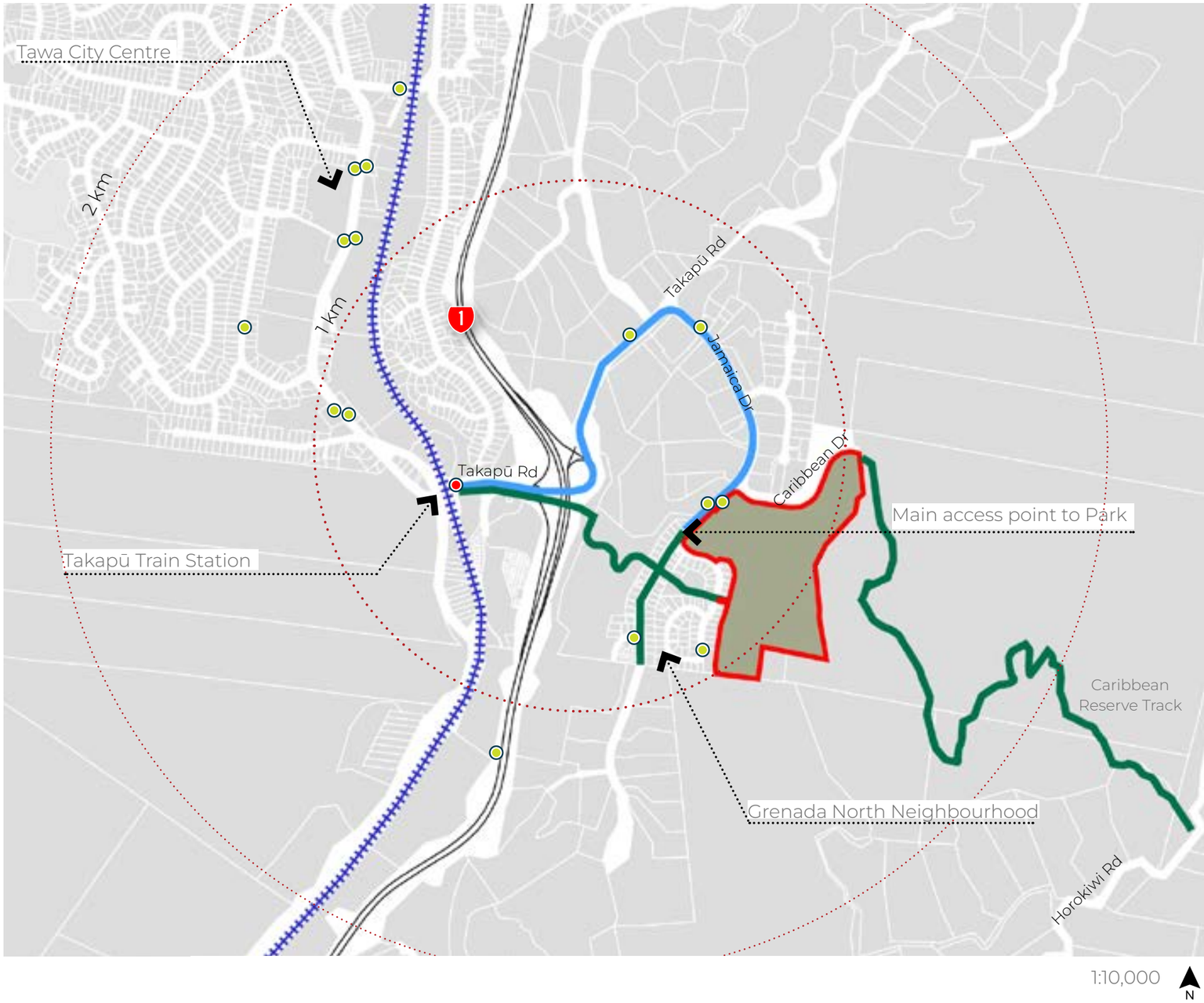
Forest Ecosystems of the Wellington Region, November 2018
Greater Wellington Regional Council - Te Pane Matua Taiao

LEGEND

- Parks and Reserves
- WCC managed open green space
- Grenada North Park site boundary
- Walking tracks
- WCC Cycle ways
- Strategic Bike network
- State Highway

2.3 TRANSPORTATION AND ACCESS

TRANSPORTATION CONNECTIONS TO THE PARK



The Park currently sits in a "cul-de-sac" situation (having no road outlet) and is primarily accessed via vehicle. This may change as development connects from the south and west. The majority of access occurs off of State Highway 1, and from the communities along it.

Takapū Road Train Station offers a transit connection, approximately 1 km from the park. A pedestrian track connects more directly from the station and main highway interchange, which help pedestrians avoid walking a circuitous route through the industrial neighbourhood to the north. Locals connect on bike and foot from the neighbourhood bordering the park to the south.

LEGEND

- Grenada North Park
- Cycle Route to the Park - 1.8 km from Takapū Station
- Pedestrian access to the Park - 1 km from Takapū Station
- Train Route
- State Highway
- Bus Station
- Train Station

2.4 SEISMIC

MOONSHINE FAULT

1:3,500 N

The Park is nestled within the surrounding topography, creating a sense of enclosure in the natural setting. However, the topography is both an asset and a risk for the Park.

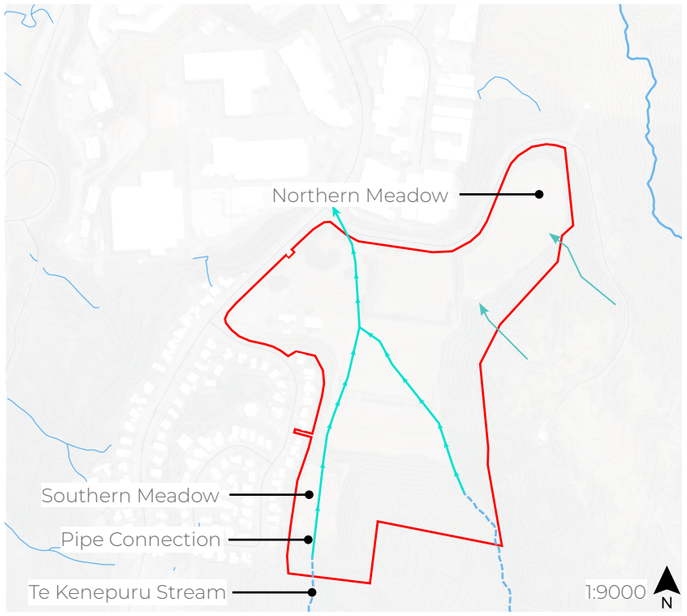
The site has an important seismic factor to consider. The Moonshine Fault runs through the park. It is an active fault with a Recurrence Interval Class IV (>5000 to <= 10,000 years). This impacts where structures can be built on the site.

- The fault's southern mapped active extent starts near Grenada North Park and extends north-eastward along Takapū Road. It has been estimated to rupture in earthquakes of approximately 7.0-7.2 magnitude.
- For greenfield sites, the fault complexity allows Buildings Importance Categories 1-2 to be permitted (but could be controlled or discretionary given that the fault location is well-defined), some discretionary allowance in Building Importance Category 3.
- A fault avoidance area of 20 metres is a buffer zone on either side of the fault trace that aims to minimize the deformation and surface rupture of near-surface weak materials and buildings. Twenty metres also represents a precautionary approach to ensure a level of life safety.

LEGEND

- Moonshine Fault
- Offset required for development (20m)
- Site Boundary

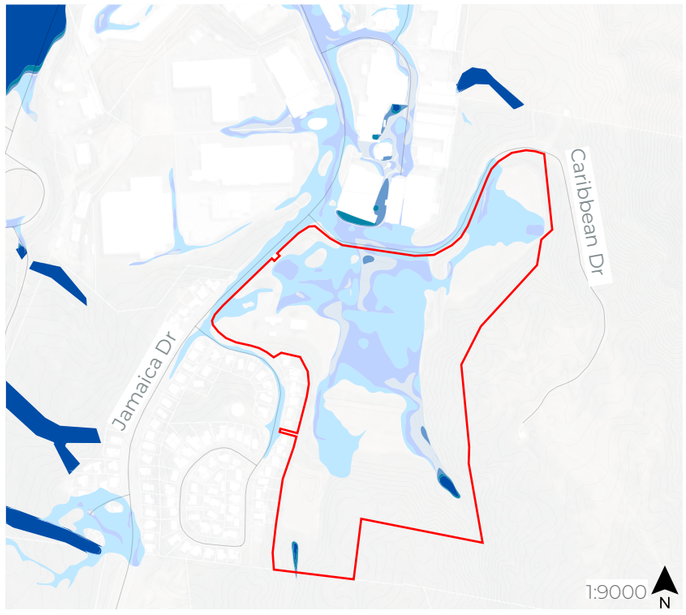
2.5 HYDROLOGY AND STORMWATER



Natural Flow Paths

Historically, streams and creeks in this area flowed into Te Kenepuru Stream and down to Te Awarua o Porirua. The Park sits in a "catchers mit" of topography, created by the levelling for fields of the lower catchment area of many natural streams flowing from the southern and eastern hillsides. In most cases, the water courses simply flow into the field areas, creating soggy field conditions. The southern-most stream, Te Kenepuru which flows towards the southern meadow is interrupted and piped.

- Grenada North Park Boundary
- Historic Natural Flow Paths

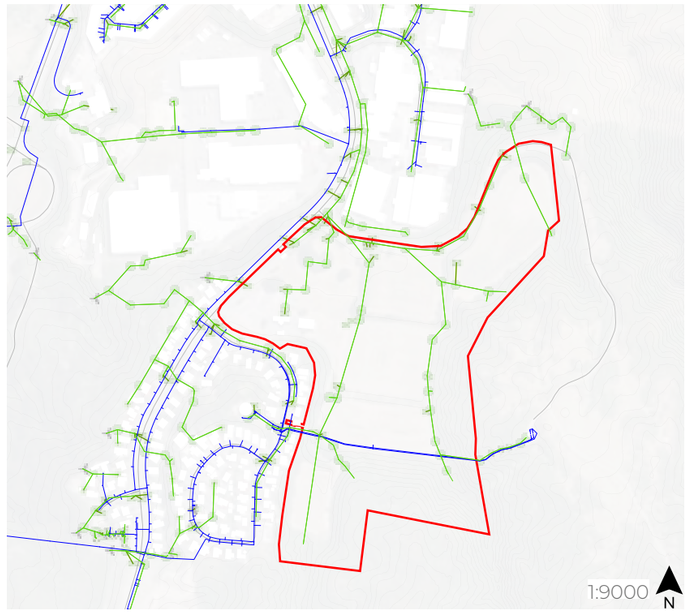


Flood Zones

The majority of the park sits in Council flood zones which indicate areas that are impacted by rainfall and sea level rise. Taking into account topography, modelling suggests flood risk during severe storms. Green spaces, like Grenada North Park, are often valuable locations for accepting flood waters, acting as a valuable defence for communities during flood events. This model also helps guide where and how to build infrastructure in the Park.

Flood Levels / Depth Bands

- 0.25 - 0.50M
- 0.50 - 1.00M
- >1.00M
- Grenada North Park Boundary



City Water Network

The city water network highlights where stormwater connections and potable water connections exist. Designs must blend "grey" and "green" stormwater solutions to responsibly and sustainably work with natural systems, and suit the needs of the park and its users.

Water Network

- Potable Water Pipes
- Stormwater Pipes
- Grenada North Park Boundary

2.6 EXISTING CONDITIONS

GRENADA NORTH PARK SITE PHOTOS

03 | SPORT AND RECREATION NEEDS ASSESSMENT

3.1 TRENDS AND NEEDS

Grenada North Park sits in a suburban region with a dynamic development future. Population increases and intensifying land pressure for other types of land use will increase pressure for sport, recreation and open space needs on the park.

The park functions as a **local, community** park that serves a **regional** sports catchment.

A needs-assessment considered a literature review of relevant plans and strategies, as well as an engagement process that included meetings with stakeholders, and a survey. Consultation with Ngāti Toa also informed use and needs. The park plan takes both a regional and local perspective.

The Regional Sports Field Report, completed by Nuka Ora (2023) indicates future demand trends within the region. Some of these that are relevant for the park include a demand for sports fields for winter codes that is anticipated to increase. A percentage of this growth will come as a result of increasing numbers of female players. A growing retired population desires different types of sport including “walking football” as well as use during different times of day. There is increased popularity for unstructured activities such as “run arounds”, social games and self driven activities, as well as sports and recreational facilities that are places where people can socialize, gather and connect.

REGIONAL IDENTIFIED NEEDS

- The greatest shortfall in winter field needs (rugby and football) is football.
- Poor field quality impacts ability to play, particularly of training.
- There is an absence and poor quality of associated infrastructure like lighting, changing rooms and toilets.
- While the modelling suggests that there are sufficient wickets to meet demand, the quality of a number of these is poor, with pitches in poor condition and not considered safe for play.
- As with other codes, cricket can often be displaced from their fields for other uses, such as summer events, which disrupts competition and puts pressure on scheduling.

LOCAL IDENTIFIED NEEDS

- Higher quality fields allow for more training and competition throughout the year.
- Flexible, multi-purpose spaces.
- Facilities support teams, and visitors, and need to be in close proximity to fields.
- A park made for both the sporting community and local community. Inclusive and affordable informal recreation provided.
- A variety of car park and access options.
- Lights and shelters will expand how players and spectators can use the park in different conditions.
- Safety and security (especially along Caribbean Drive).
- A usable park, for as many people as possible, as soon as possible.
- Financial sustainability and responsibility.
- Climate change considered.

3.2 CURRENT RECREATIONAL USE

Organized Sport

Grenada North Park is currently used in the summer by junior and senior cricket (Cricket Wellington), football training (Tawa AFC) and athletics training (Olympic Harrier and Athletic Club). Winter use is for junior football and football training (Tawa AFC and Capital Football), cross-country (Olympic Harrier and Athletic Club, and Primary Sport Wellington). Current teams expressed that primary difficulties had to do with the poor drainage and thus quality of fields, especially in the winter. Although there is sufficient space, the usable space is limited during wet months. Fields are not fit-for-purpose forcing teams to modify how they configure fields. Rugby and softball are not currently play at the Park however are interested in finding space to play. Athletics training occurs around the field space, however groups expressed interest in expanding tracks through the hillside bush surrounding the fields.

Informal Recreation and Play

Informal recreation is key to the success of Grenada North Park, as it serves a community function and is used by families and people of a variety of ages and abilities, desiring ways to play and be healthy. The Wellington Play Spaces Policy shows that the area around Grenada North is projected to have a high growth in the number of children under 15 by 2036. The playground is listed as a "neighbourhood" category playground and frequented by locals and family members of those who come to the park for sport. People walk dogs around all fields, utilising the upper and lower meadows. Mountain biking enthusiasts are interested in soft surface tracks in the hills around the park.

Sport and Recreation Implications for Grenada North Park

Increasing the capacity of play on sports field is key. This is done by creating fields that can be used by a variety of sports, on high quality fields over longer periods of the day, week and season. Solutions include improving drainage; creating areas that can accommodate fit-for-purpose field sizes and variety; investing in an artificial field surface; and investing in lighting for longer use during the day and safety. Fields need to be multi-use.

Increasing informal recreation opportunities throughout the park creates opportunities for families with children playing sport, and playing. Improving the ability and variety of walking and running paths encourages a form of exercise key for equitable health of people of all ages. The park sits against the Caribbean Reserve, an expanse of protected open space. The park offers opportunities for becoming a “trailhead” that expands tramping and biking opportunities into the wider open space network.

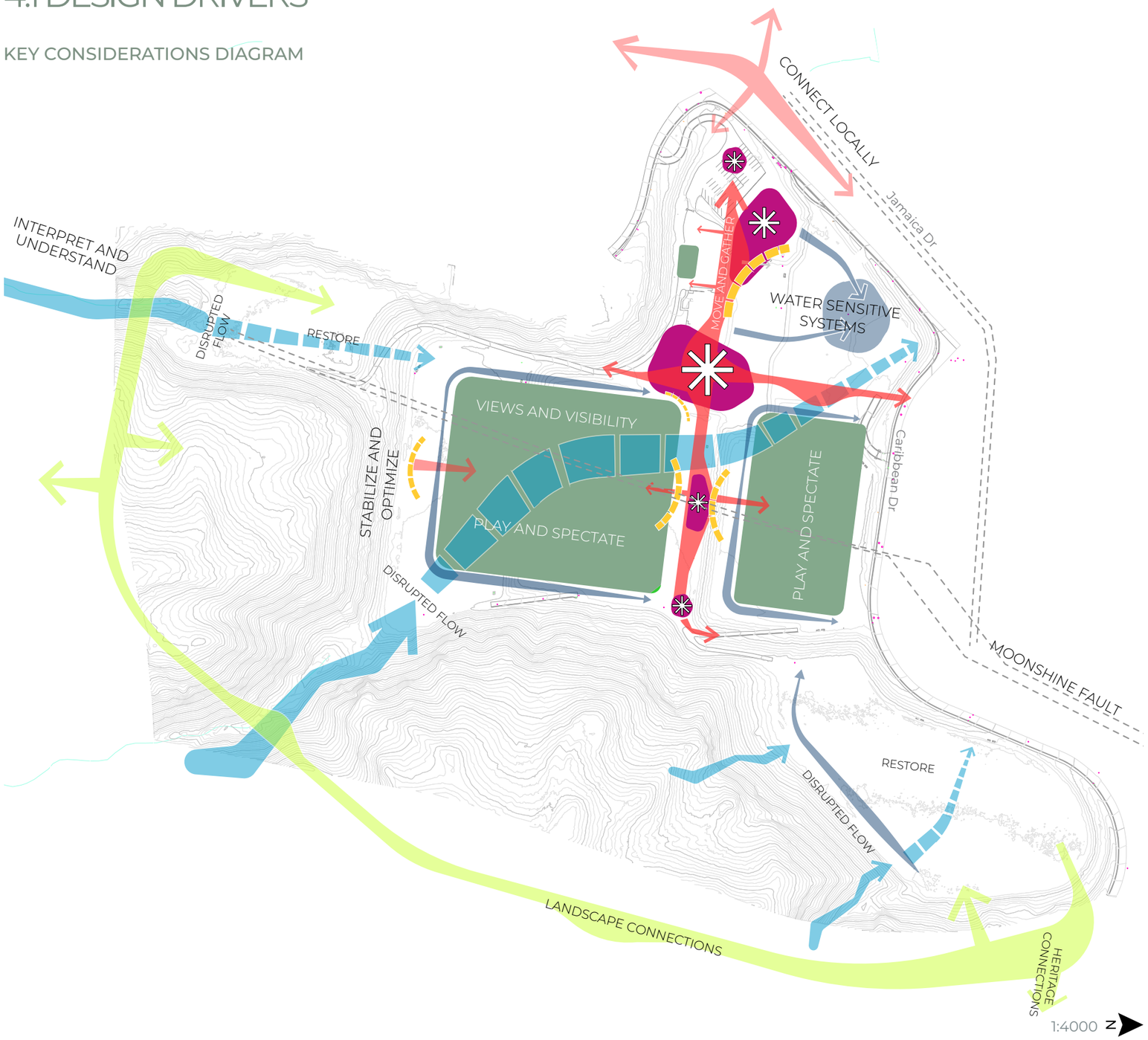
Current park facilities include:

1. four (4) natural turf fields which services one premier pitch in winter and six cricket pitches on four fields in the summer
2. one (1) athletic track around one field + a long jump facility
3. one (1) local play space
4. one (1) informal hard-court/multi-use games area
5. three (3) buildings, one with changing rooms and toilets, one used for group activities and a green room, one for storage of maintenance equipment
6. parking area for approximately 50 vehicles

04 | CONCEPT PLAN

4.1 DESIGN DRIVERS

KEY CONSIDERATIONS DIAGRAM



DESIGN DRIVERS

Get Sport Configurations Right

The fields are to be future proofed for sports field configurations. This will optimize the number of teams and codes able to play in the park over the period of a day; a week/ weekend; and seasonally.

There is an aim to create higher quality play surfaces. This means:

- Solve drainage issues
- Improve natural turf field quality
- Develop an artificial turf field
- Focus on quality of the terrain over increasing area of play. Focus resources on improving and creating high-quality playable space that can be used over more times of the day, and more times of year.

Focus on informal recreation and play as an important aspect of the park

This makes the park important to the habitual and local user, as well as families and inter-generational groups of people who come to park to participate in sport, support athletes, and spectate.

Make the Community Core

As a greenspace seed for the developing community, reinforce and focus on local, multi-modal connectivity.

Create a space where all whānau feel welcome, represented and safe.

Value, Restore and Respect Natural Systems

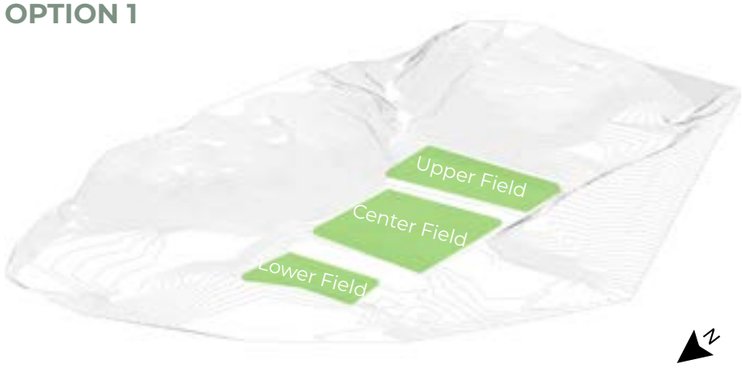
Develop geotechnical resiliency and responsibility. Plan for resiliency and responsibility in how the park considers human safety, impact and minimization of repair during a disruption (seismic or storm).

Connect to wider ecologies and landscape through repairing of waterways, using water sensitive stormwater techniques, and native vegetation enhancement.

4.2 CONSIDERED DESIGN OPTIONS

To meet the Council and public's needs, three options were considered for this Plan.

OPTION 1



CONFIGURE AS IS

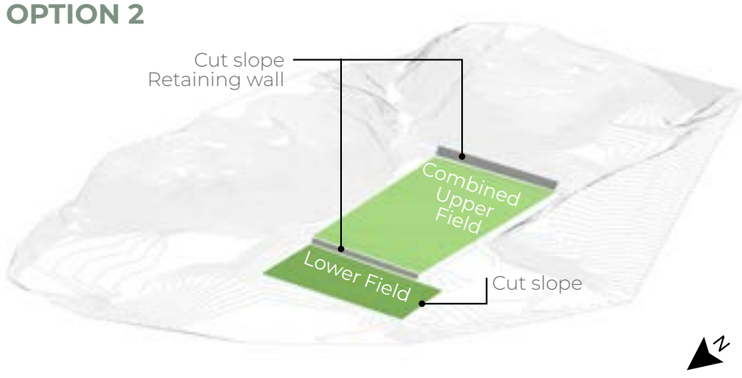
- The fields are configured with earth-forms remaining as is.
- Field sizes conform to available space.
- The central terrace (largest field) becomes artificial turf.

\+ Less expensive to construct.

\- Not a future-proofed solution that provides flexibility for the needs of a changing local population.

Will likely need future development to accommodate needs.

OPTION 2



COMBINE AND RETAIN

- Upper field is cut and combined with the central field
- Retaining walls are used to hold back the slopes.
- The NE slope of the lower field is cut to increase the field size to fit rugby and football.
- The lower field becomes artificial turf.

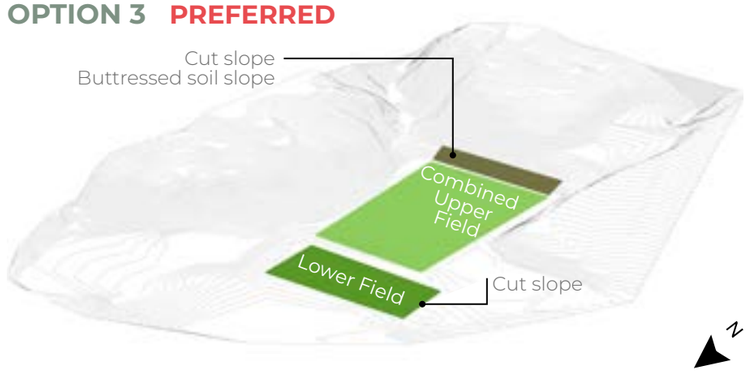
\+ Retaining walls maximize horizontal space for fields.

\- Circulation occurs on edges of retaining walls, forcing people to move longer distances to connect fields.

Retaining walls are costly to design and construct.

Retaining walls are more apt to fail in the event of a disruption (seismic or storm); and more costly to repair.

OPTION 3 PREFERRED



COMBINE AND BUTTRESS

- Upper field is cut and combined with the central field.
- Soil buttress slopes are used to hold back the southern cut slope. The middle slope (below central field) remains.
- The NE slope of the lower field is cut to increase the lowest field size to fit rugby and football.
- The lower field becomes artificial turf.

\+ Buttress slopes create areas for spectating.

The cut slope can be made to continue/mimic the natural slope, creating a more visually blended result.

Stablised soil slopes are a less expensive solution.

In the event of a disruption, a buttressed soil slope will likely resist failure more effectively than a retaining wall, and be less costly to repair.

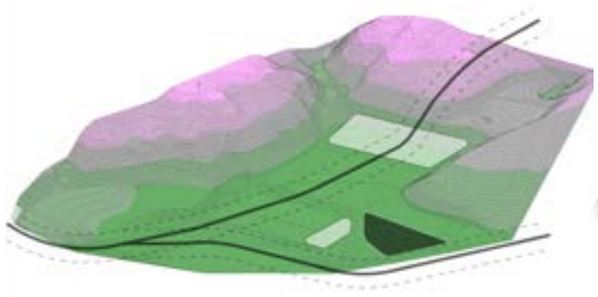
\- Fields are slightly smaller, overall.

ALL OPTIONS

- Field soils and drainage are analysed and improved.
- Low-impact development strategies are implemented to improve drainage from surrounding slopes and around the perimeter of the fields.

4.3 PROPOSED SITE DIAGRAMS

GEOTECHNICAL AND SEISMIC



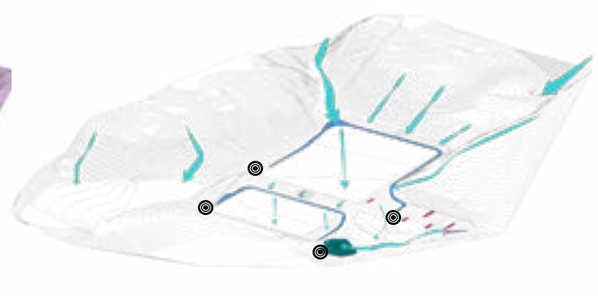
The Moonshine Fault runs directly under the park. This requires a fault avoidance area of 20 m on either side of the fault where near-surface weak materials or buildings can not be placed.

The proposed design recommends a significant cut slope on the southern boundary, levelling a combined field approximately 8 metres below the existing surface.

The recommended solution has a 60% slope (45% min) that continues the natural slope, with a stabilizing soil buttress and a 3m minimum width terrace.

- Moonshine Fault
- 20 m fault avoidance area
- Cut slope
- Fill slope

HYDROLOGY



Stormwater design works with natural drainage patterns. This includes overland, water-sensitive drainage strategies that allow water to move down slope, supporting native vegetation and infiltrating water on-site. Water is collected in planted swales at the bottom of slopes, conveyed around fields, and used to support vegetated areas of shape and beauty. In peak periods, overflow connection points connect to the city network.

- Conveyance swale
- Stormwater wetland
- Rain garden
- Drainage flow
- Connection points into city stormwater network

CIRCULATION

The park is organized around two axis of circulation. The primary promenade connects the existing car park with an even grade that cuts across the centre of the site. This creates the main spine. The fields are organized along a north/south access that traverses the topography with a central set of steps. Circuit loops connect in a variety of distances. Vehicle access is dispersed around the north edge of the park.

- PEDESTRIAN
- VEHICULAR
- ACTIVE TRANSPORTATION
- T Bus/Transit Stop
- TH Trailhead
- P Parking
- B Bike hub

VEGETATION

Vegetation at Grenada North Park knits the ecology of the surrounding hills into the park. All planting is native, and chosen to meet functional and aesthetic needs on site.

- Native regenerating bush (existing)
- Native bush (proposed)
- Wet meadow (established and remaining on high fields)
- Native shade trees
- Native water sensitive planting
- Native ornamental
- Turf (xeric, low maintenance variety)

4.4 CONCEPT PLAN

LEGEND

LOCATIONS

CENTRAL ZONE

1. Main entrance
2. Courts
3. Formal play zone
4. Central plaza and gathering
5. Informal recreation area
6. Stormwater wetland

CORE FIELD ZONE

7. Upper natural turf fields
8. Play node
9. Central promenade
10. Lower artificial turf fields
11. Practice area
12. Spectating seat walls and steps

13. Bush circuit trail
14. Trailhead
15. Caribbean Dr closure
16. Potential nbhd trail

P Parking

Site Boundary

Natural waterways

FORMAL SPORT ZONES

- Natural Turf Field
- Artificial Field
- Courts
- Indicative facilities and toilets location

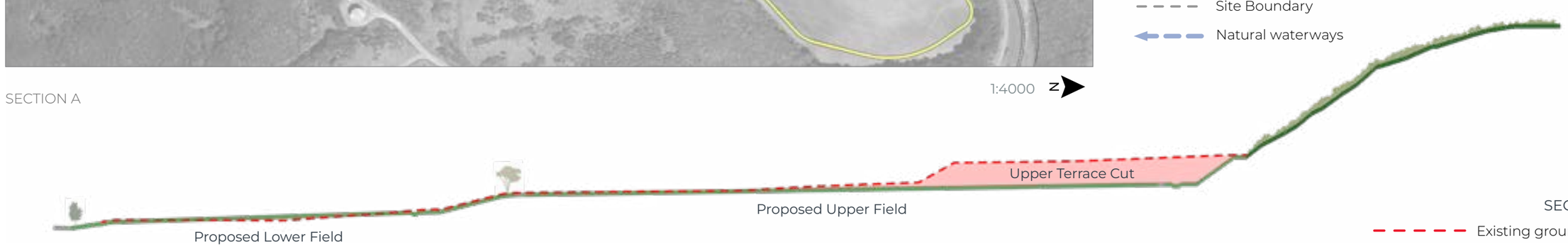
INFORMAL RECREATION ZONES

- Playground & Nature Play
- Informal Recreation Area
- Play nodes
- Stabilized / Soft surface — Circuit paths

COMMUNITY ZONES

- Central Promenade
- Plaza / Gathering
- Spectating space

SECTION A



SECTION B

Existing ground level

4.5 FORMAL SPORTS FIELDS

FORMAL SPORT ZONES

Natural Turf Field

Artificial Field

NATURAL TURF FIELD

(140 X 120 m - not including run-off space)

The following sport configurations fit the natural turf.surface.

SPORT	SIZE	NUMBER
SUMMER		
Cricket (nets not included)	50 m radius / 18 yard pitch	1
Athletics Track	flexible	1
High Jump	20 m radius	1
Long Jump	40 m run	1
Softball		1
WINTER		
Rugby	68 x 120 m	2
Premier Football	68 x 100 m	2
Junior Football	60 x 40 m	4
Junior Football	50 x 30 m	6
Junior Football	30 x 20 m	8

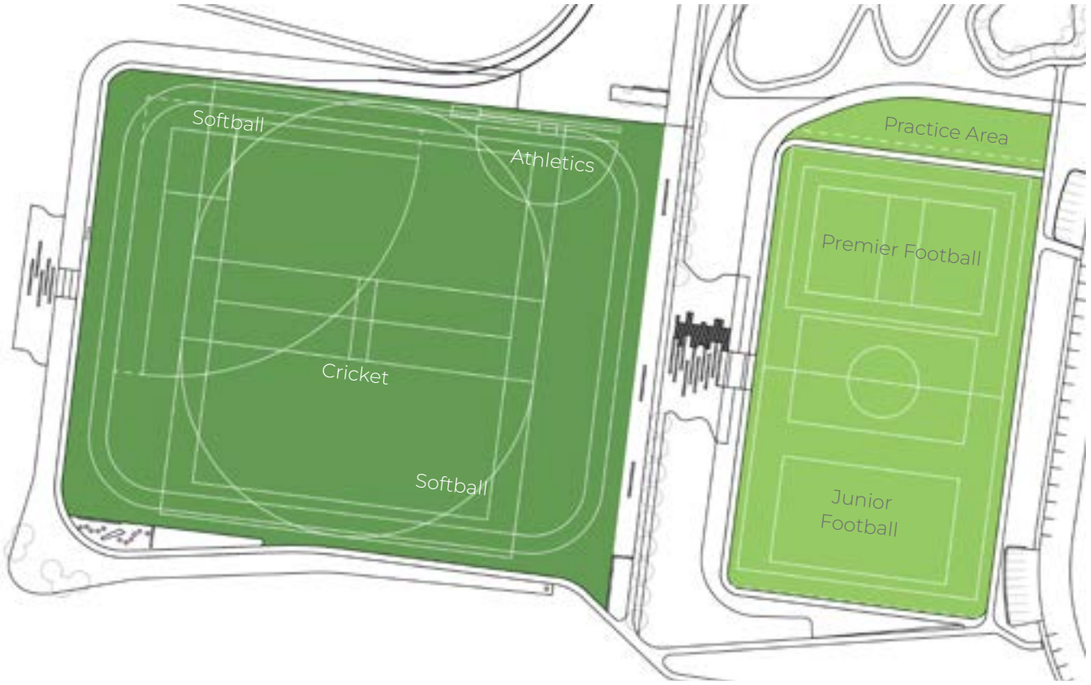
ARTIFICIAL TURF FIELD

(120 X 68 m - not including run-off space or practice space)

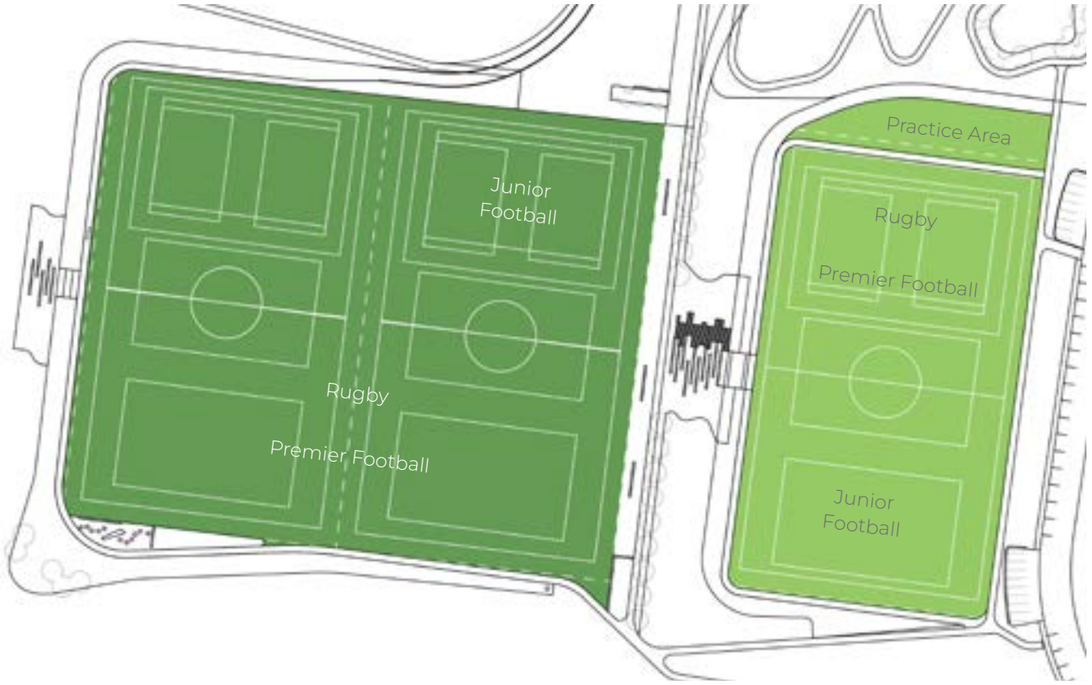
The following sport configurations fit the artificial turf surface.

SPORT	SIZE	NUMBER
SUMMER		
Premier Football	68 x 100 m	1
Junior Football	60 x 40 m	2
Junior Football	50 x 30 m	3
Junior Football	30 x 20 m	4
WINTER		
Rugby	68 x 120 m	1
Premier Football	68 x 100 m	1
Junior Football	60 x 40 m	2
Junior Football	50 x 30 m	3
Junior Football	30 x 20 m	4

SUMMER FIELD CONFIGURATIONS



WINTER FIELD CONFIGURATIONS



Possible # of Fields	NATURAL TURF FIELD
1	Cricket
1	Softball
1	High Jump
1	Long Jump
1	Perimeter Field Athletics Track

Possible # of Fields	ARTIFICIAL TURF FIELD
1	Premier Football
2	Junior Football (60 x 40m)
3	Junior Football (50 x 30m)
6	Junior Football (30 x 20m)
1	Rugby

Possible # of Fields	NATURAL TURF FIELD
2	Premier Football
4	Junior Football (60 x 40m)
6	Junior Football (50 x 30m)
12	Junior Football (30 x 20m)
2	Rugby

Possible # of Fields	ARTIFICIAL TURF FIELD
1	Premier Football
2	Junior Football (60 x 40m)
3	Junior Football (50 x 30m)
6	Junior Football (30 x 20m)
1	Rugby

*Illustrative field configurations show options for patterning of field lines. So as not to confuse, repeated field lines of Junior Football are not shown. The field markings illustrate potential configurations, however these markings are not guaranteed to be implemented. The actual allocation and placement of field markings will follow an allocation process. Managers have flexibility to mix field configurations as needed.

Natural Turf Field

Artificial Field

4.6 INFORMAL RECREATION AND PLAY

Informal recreation and play contribute to physical health, social connections, mental well-being, and community vitality. These activities are important for public health and community cohesion.

Paths form a variety of circuits around the Park. Walking, running and "wheeling" are low-barrier, equitable and habitual forms of exercise. Trailheads orient people to paths within the Park, and track connection in the bush around the Park, and to Caribbean Reserve tracks.

Play areas of different sizes and types, give families with children of different ages the ability to play while others are playing sport. Care-givers have lines of vision to different nodes of recreation, despite the terraces and topography that make full-park visibility challenging. Flexible spaces can be used for group exercise and gathering.

RECREATION AND PLAY ZONES

- Community Play Space
- Informal Recreation Area
- Play Nodes and Natural Play
- Courts
- Spectating
- Stabilized / Soft surface — Circuit paths
- (TH) Trailhead

4.7 SECTIONS

SECTION B - UPPER FIELD TO SOUTHERN CUT ZONE
NTS

SECTION C - LOWER FIELD TO MIDDLE TERRACE AND UPPER FIELD
NTS

TERRACE SECTIONS

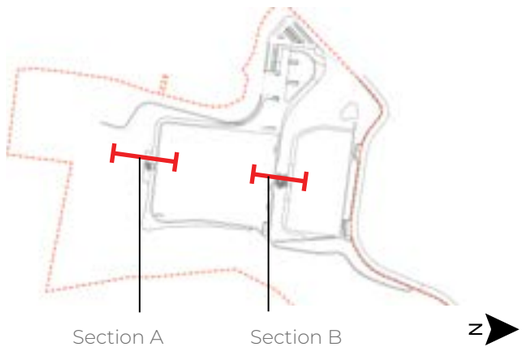
Cutting and combining the upper and central fields creates play and spectating opportunities. It requires the following geotechnical and stormwater interventions.

GEOTECHNICAL

- stabilise the southern cut slope
- use a slope buttress (minimum 4m high) with a 3m terrace and a maximum cut slope of 45 degrees. The 66% slope shown continues natural slope to minimize visual impact.
- revegetate with native plants

STORMWATER

- integrate water-sensitive stormwater techniques to mitigate stormwater impacts that integrate into the city stormwater system. This includes:
  - stormwater swales to capture and infiltrate run-off at the bottom of major slopes
  - swales that connect into a stormwater wetland in the north-west portion of the park
- during periods of peak flow, the swales and wetland overflow into the city stormwater network



KEY MAP

4.8 WATER SENSITIVE SOLUTIONS

Grenada North Park is defined by the topography that surrounds it, including the natural streams and creeks that form the valley that the park now sits in. These waterways are part of the story of the park.

When the park initially was built, many of these natural flows were disrupted, piped or filled in. As a result the park experiences significant issues with drainage. Fields remain soggy, and impact play conditions. We must also plan for climate changes, as winters become wetter, and summers become drier.

The park design uses water sensitive facilities to direct and move water away from the fields, while maintaining natural flow as much as possible. These facilities collect, cleanse, attenuate and infiltrate flow which helps mitigate pulses of water that saturate fields. Native plants are planted within the facilities, creating natural areas that frame fields, adding habitat. The water paths connect into the stormwater system ultimately.

Rain Gardens

Small scale facilities that collect and infiltrate rainwater. Planted with native plants, they are aesthetic features of the plaza.

Conveyance Swales

Linear 6m wide swales situated at the bottom of hillsides and around the fields. They collect and move water away from fields, infiltrating along the path. They also sit in parking areas. Filled with native grasses and plants, they naturalize the edge of paths and fields.

Stormwater Wetland

A constructed shallow depression that is often perennially wet and filled with native vegetation. It sits at the bottom of the system of water sensitive facilities. The wetland cleanses and infiltrates the stormwater. It connects into the city stormwater system during periods of high precipitation and overflow.

4.9 NATIVE PLANTING PALETTE

ENVIRONMENTAL FACTORS

Though windy, year round rainfall enables unihibited plant growth. The clay-rich soils are generally fertile and moisture retentive. Frosts in the valley floors and basins.
All vegetation proposed for the park is native to the area.

SUITABLE CONDITIONS

- Frosty
- T Tough
- Partial shade
- Full sun
- Mostly wet

HABITAT

- Flowers/fruit
- Attractive to birds

GRASSES, FERNS, SEDGES

Juncus pallidus
Wiwi
H X W : 1.5M X 1.2M

Carex Virgata
Swamp sedge
H x w : 1M X 0.5M
T

Blechnum minus
Swamp kiokio
H x w : 0.5M X 1M

Carex clissita
Forest sedge
Height : 0.5M X 1M
T

Blechnum discolour
Crown fern
H X W : 1M X 1M
T

Schoenoplectus validus
L ake clubrush
H X W : 0.5M X 0.5M

Carex secta
Pūkio
H X W : 4M X 3M
T

Isolepis prolifer
Three-square sedge
H X W : 0.5M X 0.5M

Phormium tenax
Swamp flax/harakeke
H X W : 4M X 3M

Juncus maritimus
Sea rush
H X W : 1.2M X 1.2M

SHRUBS + LOW AMENITY PLANTING

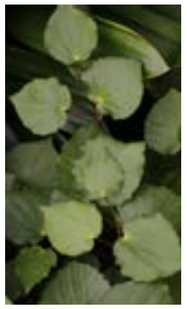
Raukaua anomalus
Raukawa
H X W : 1.5M X 1.2M
T

Olearia arborescens
Glossy tree daisy
H X W : 4M X 2M

Veronica salicifolia
Koromiko
H X W : 2M X 2M
T

Comprosma
Propinqua/mingimingi
H X W : 5M X 2.5M

Comprosma areolata
Thin-leaved coprosma
H X W : 5M X 2.5M



Macropiper excelsum
Kawakawa
H X W : 4M X 4M

TREES

Leptospermum
Scoparium/Manuka
H X W : 4M X 3M
T

Pennantia corymbosa
Kaikomāko
Height : 8M
T

Carpodetus serratus
Putaputaweta
H X W : 8M X 4M
T

Alectryon excelsus
Titoki
H X W : 8M X 4M

Dysoxylum spectabile
Kohekohe
H X W : 15M X 4M

Wellington Regional Native Plant Guide https://www.gw.govt.nz/assets/Documents/2021/10/Wellington-Regional-Native-Plant-Guide-Revised-Edition-2010-Web.pdf

4.10 CULTURAL DESIGN STRATEGIES

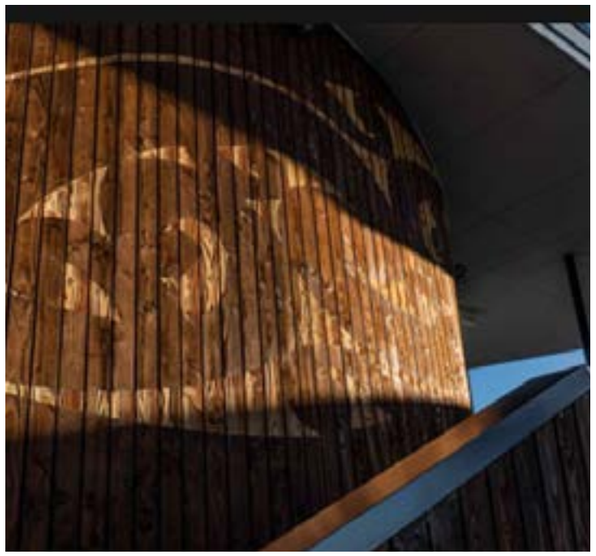
Mana whenua heritage - past, present and future - is both a backbone of the park's history, and a contemporary and living element of its vitality.

Park planning and design rests upon this heritage. The design reflects this heritage, its spiritual perspective and connection to place. The design must respond to how people move through it, gather within in, feel safe and welcome, and express themselves.

The park, as a reflection of these values and traditions reinforces a sense of appreciation for the place we live in. It may inspire creativity and pride, encourage curiosity and restoration.

INTEGRATED CULTURAL CONNECTIONS

- Trailheads that interpret the ancestral pathways.
- Multi-modal safety and wayfinding interventions that encourage people to move through their landscape, just as once was done via the Pare-raho Track / Korokoro - Takapū Ara.
- Signage in Te Reo - interpretive, and standard.
- Use of native vegetation to support restoration of ngahere. Restoring degraded landscapes and constructing new with cultural sensitivity.
- Encouraging and making space for Māori games and play such as Kī O Rahi and Te Rākau.
- Using patterns and imagery in artful ways. Integrating them into surfaces and materials for expressing cultural narratives and landscapes and acknowledging waterways.
- Integrating natural materials - wood, rock and vegetation that reinforce a connection to the environment.
- Making space for all whānau with culturally informed gathering spaces, play areas, and locations for celebration.

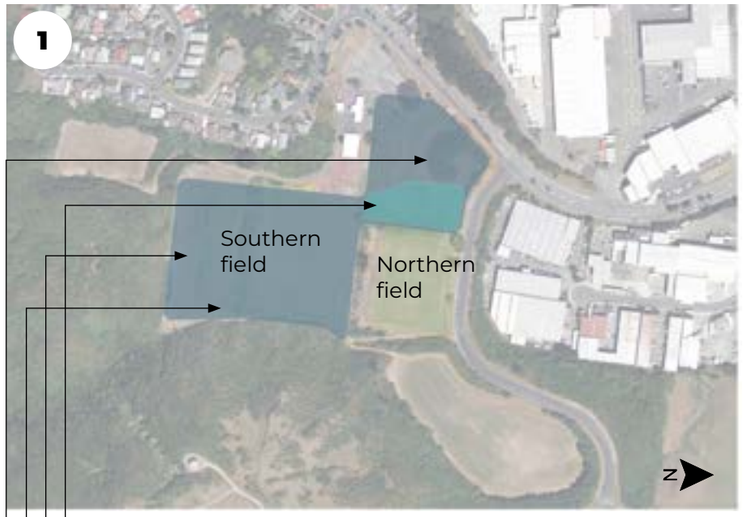


Te Kukuwai o Toa wetland

4.11 PHASING STRATEGY

This phasing strategy provides a guideline to construct the park in a timely manner, whilst keeping parts of the park open for use during construction periods. This will help to balance cost and maximize construction efficiencies. Further discussions with operation managers, architects and contractors will help further define the strategy.

PHASE 1 - EARTHWORKS



- Begin with the cut and fill earthworks in the area west of the northern field (artificial field). While the earthworks on the southern fields occur, the artificial turf field development can be underway.
- Complete the cut and fill work to bring the southern terrace to the elevation of the current middle terrace, creating a single playing field.
- Grade stormwater swales.
- Construct stormwater wetland.

PHASE 2 - FIELD DEVELOPMENT

- Prioritize development of the artificial turf field.
- Once the earthworks are complete on the southern field, this area can be developed.

PHASE 3 - BUILDING & PARK SPINE

- Existing buildings, shown in white, can potentially be maintained and used while earthworks are being carried out.
- Dashed black lines show where new buildings may be sited.
- During this phase, facility use may require temporary structures during development of this area. For example, constructing the toilet block on the lower field as both a temporary and permanent structure. Or using temporary portable toilets.
- Play area construction.

Internal tracks and pathways constructed.

4.12 NEXT STEPS

ANALYSIS > DESIGN > COORDINATION

Future stages will continue to refine and define park development. Based on discussions with Council and stakeholders, the following analyses, design and coordination considerations will set the project up for success. These are not exhaustive:

ANALYSIS

Parking Analysis

The park currently is accessed primarily by vehicle, with a small number of locals walking/biking from the neighborhood to the west. This need will change over time as more development fills in, most notably Lincolnshire Farms which plans for roads to connect towards the park from the south. The park will continue to be used by regional users, necessitating parking. Technology and trends continue to change as well. As ride-sharing becomes more popular, and autonomous vehicles technology improves, an analysis of pick-up/drop-off spaces.

A parking analysis will help determine quantity of parking needed for a facility of this size and scope, with a lens towards future growth. This analysis may include an inventory of existing parking and evaluation of current conditions and use; a projection of future demand based around growth; seasonal use, regular and event parking needs; bus and coach parking needs, proximity to different areas of the park; infrastructure or techniques that help manage parking such as time restricted drop-off spots and lanes.

Soil Analysis

A soil analysis for fields will help diagnose issues with soil composition and compaction that impact drainage, aeration and plant growth. Recommendations may help determine how to improve soil composition to achieve a primary goal of a higher quality field with a durable field surface, that is playable for longer periods of time during the year. A soil analysis can also determine irrigation needs, nutrient application, and soil amendments. Fine tuning the field soils will help achieve sustainability goals.

Further Geotechnical and Civil Analysis

Further geotechnical and civil analysis is required to assure the safety and sustainability of the proposed grading design. A goal of sustainable park design is to balance the quantities of cut and fill such that no or limited cut soils are removed from the site. Further studies are required to shape the landforms within the park and minimize removal of cut soils from site.

Facility Needs Analysis

Stakeholder feedback has identified that code facilities (i.e. changing rooms), general community facilities (i.e. toilets) and maintenance facilities (i.e. storage and equipment sheds) are needed. Further investigation is required to define these needs, how facilities can be shared and/or optimized, and their spatial arrangement.

DESIGN

Future phases will continue to define the park design. This will continue the work done in civil engineering (transportation and grading), geotechnical, water systems design (water sensitive water management including stormwater wetlands, swales and rain gardens), and landscape architecture (CPTED integration, surface materials, vegetation, furnishings).

Architecture

The design of buildings must consider seismic build/no-build zones and the feasibility of building on, or within slopes. Building options discussed have been to construct a single building within the slope between the two field terraces; or to construct a building at the main terrace; and a toilet block on the lower terrace. Programming facilities for codes and the general public must also be considered.

Wayfinding

Equitable wayfinding will ensure that the park is accessible and legible to all visitors, now and into the future. It creates a space where people feel welcome, and represented.

Key principles to consider:

- Use clear signage and visual cues.
- Employ universal design that accommodates diverse needs including mobility considerations, non-language specific graphics and signs, multi-lingual signs to cater to different languages when text is needed)
- Engage with the community to understand preferences and needs.

Interpretation

There are a variety of opportunities for cultural and ecological interpretation of the landscape and whenua of this area. Examples include using Te Reo in signage, working with local artists to develop integrated site art that focuses on unique aspects of the site, including words or stories to explain waterways and the ancestral Pareraho Track, and doing weed control and revegetating with native plants. These efforts will promote and preserve Ngāti Toa heritage, highlight a place-based understanding and appreciation, encourage stewardship, and ensure that all feel welcome.

Lighting

Lighting is key to safety, experience, and use of the fields and amenities. Consider how lighting can enhance safety and experience:

- Safety lighting - illuminate important zones and edges to discourage unwanted behaviour.
- Sportsfield lighting - invest in sportsfield lighting to extend the time of the day when the fields can be used. Strategically use lighting to minimize shadows and ensure even coverage for play.
- Pedestrian scale lighting - lower to the ground lighting creates human-scale spaces, and help people feel secure and confident in their surroundings.
- Wayfinding - illuminate signage, as well as provide "nodes of light" that help move people through the park, and identify places where people spend time.

Technology

With an eye towards future trends and new technology, respond to and leverage technology as it becomes available. Examples include:

- Curb management design creates drop-off and pick-up spaces for ride-share and driverless cars.
- Utilitze sports field and lighting technology to efficiently light fields and paths when needed, to the level needed.
- Install charging stations for phones, e-bicycles, and electric charging vehicles.
- Engage with "smart mobility" groups that employ bike/scooter share and mobility hub technologies.
- Engage technology (i.e., rainfall and temperature sensors) to monitor climate change effects on the park, to more nimbly be responsive as conditions change.

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