Attachment A: Lismore Park Finalised Development Plan







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### DOCUMENT QUALITY ASSURANCE

**BIBLIOGRAPHIC REFERENCE FOR CITATION:** 

Boffa Miskell, 2023. Lismore Park Development Plan. Report by Boffa Miskell Limited for Queenstown Lakes District Council.

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STATUS: DRAFT	Revision / version: C	Issue date: 12 January 2024

File ref: BM221198\_03\_Development Plan Package\_Lismore Park2

Cover photograph: Lismore Park, © Boffa Miskell Ltd, 2023

# CONTENTS

# **CHAPTER 1 - OVERVIEW**

# **CHAPTER 2 - ENGAGEMENT**

ENGAGEMENT FEEDBACK	
KĀI TAHU VALUES	

# **CHAPTER 3 - DEVELOPMENT PLANS**

DESIGN OPPORTUNITIES AND CONSIDERATIONS
LISMORE PARK DEVELOPMENT PLAN
PRECEDENT IMAGES
CIRCULATION PLAN
TREE SURVEY AND MANAGEMENT PLAN
INDICATIVE PLANTING STRATEGY
INDICATIVE SPECIES LIST
INDICATIVE PHOTO MONTAGE



IMAGE SOURCE: TEND TREES LTD.

# OVERVIEW



# BACKGROUND

### PURPOSE OF A DEVELOPMENT PLAN

The purpose of a development plan is to provide a strategic spatial framework for the management, enhancement, and utilisation of parks and reserves within the Queenstown Lakes District Council (QLDC) area.

The development plan will outline the vision, goals, and objectives for the development, maintenance, and use of Lismore Park. It considers factors such as community needs, environmental conservation, recreational opportunities, and cultural heritage to ensure that the park meets the needs of the community and visitors while preserving the natural and cultural values.

The development plan guides decisions regarding infrastructure development, facilities, landscaping, access, and programming to create inclusive and sustainable parks that contribute to the overall quality of life in the district.

### **OBJECTIVES**

- Assess existing conditions, including natural features, topography, vegetation, and built environment.
- Define project objectives for landscape development, which may include increasing functionality and promoting sustainability.
- Identify opportunities and constraints, such as areas for development or preservation, as well as any regulatory, environmental, or social factors that may impact the project.
- Develop design concepts and strategies that address the project objectives while respecting the site's unique characteristics and constraints.
- Integrate sustainable practices, such as native planting and habitat preservation, to promote sustainability and reduce long-term maintenance costs.



IMAGE SOURCE: TEND TREES LTD.

# LOCATION

# WĀNAKA

Lake Wānaka is located at the heart of the Central Lakes District, in the lower South Island of New Zealand. The township of Wānaka sits in a glacier-carved basin on the shores. Lake Wānaka is fed by the Mātukituki and Makarora Rivers, and is the source of the Clutha River / Mata-Au.

### **LISMORE PARK**

Lismore Park is located in the north-eastern side of Roys Bay, overlooking the bay towards Roys Peak. It is approximately 18.5ha in size, and is located just a few hundred metres from Wānaka town centre.

The park is mostly grassed, with a large stand of mature pines in the south-eastern corner. The topography of Lismore Park is varied, characterised by low rolling hills and generally climbs from Lismore St in the south west (i.e. closest to Lake Wānaka) towards Plantation Rd on the north east.

The park is popular as a thoroughfare between Wānaka town centre and the surrounding schools and residential area, as well as for dog walkers and disc golfers.

Te Kura o Tititea Mount Aspiring College is located adjacent to Lismore Park on Plantation Road. The park is located a short walk from Ardmore Street and the Wānaka town centre.

The park contains a stand of conifers, in addition to other exotic tree species scattered throughout the reserve.

The eastern section of the reserve is the highest point, with the land falling away gently toward the lake. The glacial processes are obvious in the undulating landform, and such unmodified examples of glacial deposition are rare in an urban setting and provide a unique landscape character.

The site is frequently used for casual recreation. A portion of the reserve is leased to Bike Wānaka for the establishment of bike jumps, trails and pump tracks which are actively managed by the biking community. An 18 hole disc golf course has been established on the lower half of the site and is well used by the community.

Formal and informal tracks run through the park providing access associated with school travel and people walking from the urban areas to the town centre, and for recreational use.

Lismore Park also forms an important component of the Wānaka green belt, encompassing Roy's Bay and providing a connection between Eely Point Reserve and Pembroke Park. With the growing pressures of urban development and residential growth, protection of public green spaces and reserves is very important as they become a vital asset for the community, providing usable open space for active and passive recreation activities.



# SITE ANALYSIS

### SITE CHARACTER

Lismore Park is a large, open space characterised by significant stands of mature exotic trees at either end (the eastern of which is home to the Lismore Jump Bike Park) with open rolling hills through the centre.

The park is popular with a range of recreational users including dog walkers, cyclists, and disc golfers. Several paths through the site also connect Wanaka town centre with nearby public facilities and schools.

The park's amenities are fairly basic and facilities and signage are lacking. Connections to other areas outside the park are also unclear.

### LANDFORM

Lismore Park's landform follows a generally south-west slope down towards Roys Bay and Lake Wānaka. Spectacular views across the bay towards Roys Peak are offered from a number of locations across the park.

The park's gentle rolling hills were likely formed as a moraine from retreating glacier ice in the Ōtiran glaciation period.

Several shallow valleys run across the park, draining stormwater towards the lake. While the catchment is insufficient to create even ephemeral water flow, the grass is noticeably greener in these lower areas, particularly in the dry summer months.

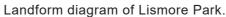
### **ECOLOGY**

The majority of Lismore Park is grassed, with the notable exceptions of the eastern end, which has a large stand of mature pine trees, and the north western end, which has several large eucalyptus trees. A number of other established exotic trees are scattered throughout the site, offering a spectrum of bright colour in the autumn months.

The Welcome Forest has been planted on the site's eastern edge, close to the existing reservoir tanks.

While most trees on the site are in a healthy condition, succession planning will be required as they reach maturity.







Strava, Lismore Park, Cycling Heat-map



Elevation diagram of Lismore Park.



Strava, Lismore Park, Walking/Running Heat-map

# SITE PHOTOS

# SITE PHOTOS

# SURROUNDING VIEWS









EXISTING PLANTATION BLOCK (IMAGE SOURCE: TEND TREES LTD.)



UNDULATING LANDFORM ACROSS THE PARK (IMAGE SOURCE: TEND TREES LTD





VIEWS TOWARDS ROYS PEA

# **OVERARCHING STRATEGIES**

### PARKS AND OPEN SPACES STRATEGY

The Parks and Open Spaces Strategy (2021) provides guidelines which will ensure the protections and enhancement of the existing QLDC reserve network and future expansion of the network to continue to meet the districts population growth and increased visitor numbers.

The Strategy encourages consideration of both quality and quantity to provide an open space environment that continues to meet the communities' current needs as well as consider those of future generations. Quality is particularly important in new and high growth areas to ensure residents have access to a range of park types that can accommodate wide variety of activities.

The key objectivities of the Parks and Open Space Strategy is the:

- Development and use of existing reserves;
- Understand the priorities for mana whenua in existing and future parks and reserves;
- Guidance on active travel, recreational trail and pedestrian connections
- Protection of values in wahi tupuna where these overlap with parks and reserves
- Ecological and biodiversity enhancement

Lismore Park is classified a Local Park under the Parks and Open Space Strategy 2021:

A Local Park is an area of open space that is easily accessible for the immediate community, within easy walking distance to residents in the area. It provides a basic informal recreation experience for nearby residents, including:

- Play opportunities
- Flat, kick-around space
- Areas for respite and relaxation



### WĀNAKA CENTRAL RESERVE MANAGEMENT PLAN 2019

The Reserve Management Plan provides a vision for Recreation Reserves including Lismore Park.

### Vision :

The Reserves are for the enjoyment and benefit of the community and visitors, to facilitate recreation, sport, community well-being and green belt amenity

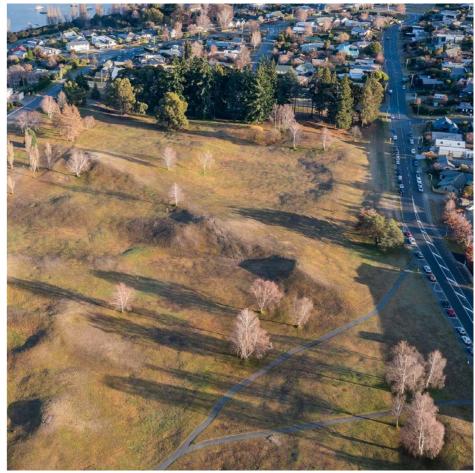
### **Objectivities :**

- · The reserves accommodate appropriate activities in defined areas that enhance the communities use, access and enjoyment of the Reserves.
- The reserves are maintained and developed in a planned manner to achieve quality open space that provides enhanced opportunities for the use and enjoyment of the community and visitors.
- The reserves positively contribute to the character and ecology of the green belt and include specimens to enhance the distinctive autumn colours of the Wānaka area.
- Any buildings shall support the uses of the reserve and community use of the reserve, and positively contribute to the amenity of the area.
- The reserves are Smoke Free areas.

### Lismore Park Specific Policies

- Retain the open space and landscape character of Lismore Park, • whilst enhancing the reserves ecological values.
- Provide for the continued use and development of the bike park in the eastern area of the reserve. Input from Council's arborist will be necessary where potential effects on trees are likely.
- Support the development of the bike park in a manner that seeks to enhance the experience of users.
- Consider a family friendly bike loop around the perimeter of the park, and ensure that cycle use areas are located and designed so that landscaping, pathways and furniture can mitigate potential conflicts with pedestrians and other park users. This can be considered under the Development Plan.
- Provide for the use and enhancement of the Disc Golf course. This can include the upgrade and development of associated furniture, including signage, facilities, seating and landscaping.
- Consider improvements to the reserve that encourage recreational and sporting use by local schools, provided that the open space and character of the reserve is retained.

- recreational use.
- character of the site.
- pathways.
- Development Plan.



Retain the largely passive nature of the park with the exception of biking activities, disc golf, and its use by local schools for low impact

Consider new recreational opportunities, permits and licenses where they don't conflict with existing uses and are consistent with the

Support the development of parking areas in road reserve areas and their connection with reserve areas i.e. fencing and accessible

Support the presence and establishment of buildings and related leases, associated with community youth groups, recreational and sporting uses, if a community need is demonstrated to the satisfaction of the QLDC. The location and scale of any proposed built form and associated parking, landscaping or infrastructure shall require the endorsement of the Wanaka Community Board.

Enable the ecological values of the reserve to be enhanced through native revegetation in areas to be considered by the

MAGE SOURCE: TEND TREES I

# ENGAGEMENT



# ENGAGEMENT FEEDBACK

### WHO WE ENGAGED WITH

- Bike Wānaka
- CCS Disability
- Disc Golf Wānaka
- Heart of Wānaka
- MINT Charitable Trust

### **GENERAL THEMES**



# **IMPROVEMENT AND ACCESSIBILITY**

- There is a need for better facilities such as toilets and rubbish bins, • formalised car parking, and the addition of an accessible beginner/ practice area to the disc golf course.
- Ensure good accessibility around and through the park is achieved including pathways and locations of parking



# **SUCCESSION**

- Increase planting biodiversity in the park, and connect the park to the ٠ lake.
- Consider the overall succession strategy of the pine plantation and opportunities for replacement planting with something more suitable



- Consider safety concerns at night and provide shelter from north-• westerly winds
- Provide a space for the community to gather, stay and interact with each including getting young people involved with the park.

## **RESPONSE TO WHAT WE HEARD**

### **Bike Park**

Key discussion points regarding the Bike Park included:

- Safeguard and enhance Lismore Bike Park ٠
- Want to be part of creating a sense of community in the park ٠
- Recently replaced pines with 80 native trees within the Bike Park area ٠
- Bike Park includes a progression jump park and learn to ride area
- ٠ Lack of supporting facilities such as toilets, rubbish bins etc.

The reserve management plan provides for "the continued use and development of the bike park in the eastern area of the reserve with input from Council's arborist will be necessary where potential effects on trees are likely". The bike park is a popular community facility and with future plans to include a pump track it would provide an area for all ages and abilities. Consideration will need to be given with the intended growth of the bike park area, particularity around existing trees and vegetation and locating facilities to ensure they aren't exclusively for the bike park.

### Disc Golf

Key discussion points regarding Disc Golf included:

- Disc golf currently hold tournaments at Lismore Park
- Key design consideration is ensuring that disc golf is integrated into • whatever is proposed
- Disc golf would love to see more trees and planting across the site and integrated into their course
- · Add an accessible beginner/practice area to the disc golf course

Disc Golf is a popular activity and currently the only 18 hole course in Wānaka. The reserve management plan "provides for the use and enhancement of the Disc Golf course" however it is also important to consider that any proposed "improvements to the reserve that encourage recreational and sporting use by local schools, that the open space and character of the reserve is retained".

### Heart of Wanaka Proposal for Lismore Park

Key points from our discussion with Heart of Wanaka included:

- · An arts and cultural centre in the southern area of the park, adjacent to Lismore Street / Hedditch Street
- Increased biodiversity
- Community garden for food and production
- Retain openness
- Parking provided within the park in the southern area of the park adjacent to Lismore Street / Hedditch Street
- Perimeter pathway •
- Nature Play Area / Playground

Under the reserve management plan the specific polices for Lismore Park looks to "Retain the open space and landscape character of Lismore Park" and "Support the presence and establishment of buildings and related leases, associated with community youth groups, recreational and sporting uses, if a community need is demonstrated to the satisfaction of the QLDC". Due to residential growth in Wānaka it is more important than ever to protect and retain public parks for the continuing use of the community. An Arts and Cultural Centre is not supported in this space at this time. Likewise, parking within the park does not align with protecting the open space character of Lismore Park.

Although we are constantly looking for opportunities to include community gardens for food production, due to soil quality and conditions at Lismore Park, it does not seem like the right environment to support this activity.

Increased biodiversity and a perimeter pathway is something that has been raised by a number of groups and would provide opportunities to improve accessibility and native fauna and flora across the site.

Due to the close proximity of Lismore Park to Domini Park (which includes a playground) it was decided that a play area was not needed at Lismore Park. The Park provides a number of recreation actives with the likes of the Bike Park (including the future pump track for younger kids / beginners) and the Disc Golf Course. Due to the proximity of the high school and primary school there could however be an opportunity for some sort of outdoor learning space that could also be utilised by the community as a gathering space.

### Parking

Providing parking opportunities associated with Lismore Park has been a common discussion point across all groups.

Although formalised parking within the park is not appropriate due to loss of open space, there is opportunity within the road reserve to create formalised on street parking associated with key activity areas which would improve accessibility across the site.

There has also been concern that people are informally parking over the southern portion of the park (adjacent to Lismore Park / Hedditch St) due to the lack of barriers and cars being able to drive directly onto the park. Perimeter treatments will be considered during the design process to respond to this issue and provide a solution.

### Planting

the pine plantation is.

A tree survey and management plan has been undertaken in parallel to this piece of work and observations and recommendations will be incorporated into the development plan.

The existing work that QLDC have undertaken for the welcome forest provides an opportunity to expand this across the site based on success rates that they have had with certain native plants. The reserve management plan requires that the "ecological values of the reserve to be enhanced through native revegetation in areas to be considered by the Development Plan"

- Te Kākano · Upper Clutha Tracks Trust
- Wai Wānaka
- Wao Wānaka
- · Wanaka Upper Clutha Community Board

There has been a desire from a range of groups to look at opportunities to increase native planting across the site and understand what the future of

# **KĀI TAHU VALUES**

# EMBRACING KĀI TAHU - OUR TREATY PARTNERS UARA KĀI TAHU / KĀI TAHU VALUES

Wānaka is one of the iconic lakes of cultural significance to Kāi Tahu. Seven Kāi Tahu Rūnaka are mana whenua in Wānaka and have kaitiaki responsibilities for the lake. Historically, a number of pā, kaika and nohoaka were located around Lake Wānaka. The biggest settlement in the area was a Kāi Tahu pā known as Take Kārara located in present day Roys Bay. The tupuna (ancestors) had considerable knowledge of whakapapa, traditional trails and tauraka waka, places for gathering kai and other taoka. They had a traditional and spiritual relationship with the lake, and had tikaka for the proper and sustainable utilisation of its resources.

These values remain important to Kāi Tahu today. As kaitiaki and mana whenua, Kāi Tahu's contemporary presence in Wānaka centres on wise use, restoration and protection of its natural and physical environment. The mauri of Lake Wanaka represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. QLDC has recently reinvigorated and recommitted to its Treaty partnership with Kāi Tahu. Kāi Tahu and QLDC are working on a variety of projects throughout the district to reinstate Kāi Tahu's footprints in the landscape - ensuring that Kāi Tahu's stories and values are fully represented and visible in places of importance to them, including Wānaka's lakefront.

Extract from Lake Wanaka Lakefront Development Plan | Summary Document | July 2019



The following is summary of the significant values that have been identified by mana whenua through the Warren Park Development Plan and Te Kararo Queenstown Gardens Development Plan.

### 1. ARA TAWHITO | TRADITIONAL TRAILS AND **NETWORKS**

- · Consider not only visual and physical connections out from the site, but also views and connections
- Providing 'gateway' entrances into the park and enhancing existing • entry points
- Improving the existing interface between adjacent roads and private properties
- Connectivity in, out and throughout the site and consideration of all weather paths and access
- . The site should be well-connected to existing and planned routes, with an emphasis on the restorative, restful and sheltered nature of the site
- Design should respond to both land and water-based routes
- Connections to traditional routes should be made through structural/ spatial design. This may be through visual links or physical connections.

### 2. WHAKAPAPA | GENEALOGY OR LINEAGE

- Whakapapa 'can reference human genealogical connections as well as the interrelatedness between humans and ecosystems.
- Acknowledgement and respectful celebration of surrounding wāhi tupuna and their importance as part of whakapapa and oral history
- Spatial design connecting people to the water and surrounding landmarks, design of new elements and/or interpretation installations
- Opportunities to uncover, reference and share the whakapapa of place, to enhance a collective sense of place and community identify'
- Creating a strong cultural and community identity
- Reflecting Kāi Tahu values in the natural environment and educate other community members about Kāi Tahu values and associations within the landscape.
- Provide a sense of place and identity.

### **3. MANAAKITAKA | ACKNOWLEDGING OTHERS RAISING UP THE MANA OF VISITORS**

gender or ability

## 4. WHANAUKATAKA | COMMUNITY AND WHĀNAU CONNECTIONS AND RELATIONSHIPS

- identify'.
- ages and abilities.



At a high level, the welcoming of all people into the spaces could take a number of forms, from creation of obvious and logical entry points, to accessible and safe routes, to providing all with a sense of comfort, familiarity and peace in this place regardless of background, age,

'Provide spaces and opportunities to build and emphasise community

Outdoor amenity and gathering space, which are accessible to all

Creating a sense of place and connectedness for the community.

Consideration of all users to the park including, nearby residents, workers on lunch break, wider community etc.

IMAGE SOURCE: MINIST

# DEVELOPMENT PLAN



# DESIGN OPPORTUNITIES AND CONSIDERATIONS



### LEGEND

	EXISTING PATHWAYS
	PROPOSED PERIMETER PATHWAY
	SCHOOLS TO POOLS ROUTE
-	DISC GOLF COURSE
•	GOLF HOLES REQUIRING RELOCATION / REALIGNMENT
	FORMALISED PARKING
	LOW BOLLARD AND CHAIN FENCE
	PROPOSED ACTIVITY NODE (REFER TO
	NOTES BELOW FOR MORE DETAIL)
	MAJOR CONNECTIONS
~ ~	EXISTING WELCOME FOREST (NATIVES)
	POTENTIAL FUTURE WELCOME FOREST
	EXTENSION
	UPGRADED ENTRANCE
$\mathbf{U}$	PROPOSED NATIVE PLANTING
	PROPOSED NATIVE PEAKING
1	OUTDOOR WĀNANGA LEARNING SPACE INCLUDING SEATING, PLANTING, BINS ETC. POSSIBILITY TO INCLUDE PARKOUR SPACE
2	'HAVE A GO' DISC GOLF PRACTICE AND BEGINNER AREA WITH INSTRUCTIONS
3	STRENGTHENED LAKEFRONT AND TOWN CENTRE CONNECTION
4	REFLECTIVE SPACE, WITH VIEWS OVER THE LAKE
5	ENTRANCE/WELCOME SPACE WITH INTERPRETIVE PANELS AND INFORMATION, PLUS NEW TOILET BLOCK
6	EXPANDED THE WELCOME FOREST AND OPPORTUNITY TO PAINT RESERVOIRS WITH SCHOOL ART CLASS/LOCAL ARTISTS
7	PROVIDE A GOOD AND SAFE CONNECTION TO THE NEW MULTI-PURPOSE CENTRE
8	BIKE HUB WITH SEATING, TOILETS, DRINKING FOUNTAIN & POSSIBLE PUMP TRACK
	Approximate New Parking Spaces
	Parallel Off-Street Acc

	Parallel	Off-Street	Accessible
Plantation Rd	62	4	-
Beaumont St	-	38	4
Lismore St	30		2
		52	532722

Total: 134

# LISMORE PARK DEVELOPMENT PLAN



### LEGEND

- EXISTING 18-HOLE DISC GOLF COURSE
- --. GOLF HOLES REQUIRING REALIGNMENT
- AJOR CONNECTIONS
- EXISTING VEGETATION
- PROPOSED NATIVE PLANTING
- PROPOSED PLANTING
- ENTRY/WELCOME SIGNAGE
- WĀNANGA OUTDOOR LEARNING SPACE
- (A) TOILETS
- BARBEQUE FACILITIES
- (36) BIKE HUB
- ECOLOGY-FOCUSED PLANTING
- ( VIEWING POINT
- (A) LOCATION OPTIONS FOR 'BIKE HUB' TO BE
- B CONFIRMED ONCE PUMP TRACK LOCATION IS CONFIRMED.
- $(\widehat{\mathbf{C}})$  location options for pump track to be
- D DEVELOPED FURTHER IN CONJUNCTION WITH THE WĀNAKA BIKE CLUB, QLDC AND ARBORIST
- INPUTS. PATHWAYS ADJUSTED TO SUIT

The Draft Development Plan for Lismore Park focuses on enhancing park amenities to support its existing uses, including the Lismore Bike Jump Park, the Lismore Disc Golf Course, and its function as a local recreation space.

A perimeter loop track is proposed to provide connection with existing and proposed amenities, including an informal outdoor learning space opposite Te Kura o Tititea / Mt Aspiring College, and the facilities supporting the Jump Park such as a bike repair station and drinking fountains.

Accessible parking is provided at the western end of the park, close to a new disc golf learners space suitable for children and people with limited mobility. On street parking is located around the perimeter of the park in key locations, the majority of which is within road reserve although some may fall within the park boundaries (particularly along the southern end of Lismore St).

Planting proposed supports what is currently on site. Medium-height shrubs provide structure and block wind, while fruit trees and colourful deciduous trees create connections to the changing seasons.

A reflective space is proposed overlooking Lake Wānaka, celebrating the stunning views and providing relief from the busier part of the park.

A second toilet at the Hedditch St/Lismore St entrance could be considered in the future.

# **PRECEDENT IMAGES**

### ACTIVITY NODE: WĀNANGA LEARNING AREA

A series of simple, cost-effective activity nodes are proposed to provide anchor points across Lismore Park.

It is proposed to create an outdoor wānanga learning area adjacent to Plantation Road and across from Te Kura o Tititea Mt Aspiring College. The wānanga learning area is about providing a space where people can connect to the wider landscape, share stories, and provide a space where the school and community could gather for outdoor learning opportunities etc.

The area could also include welcoming and informative signage, native planting and opportunities for informal play.

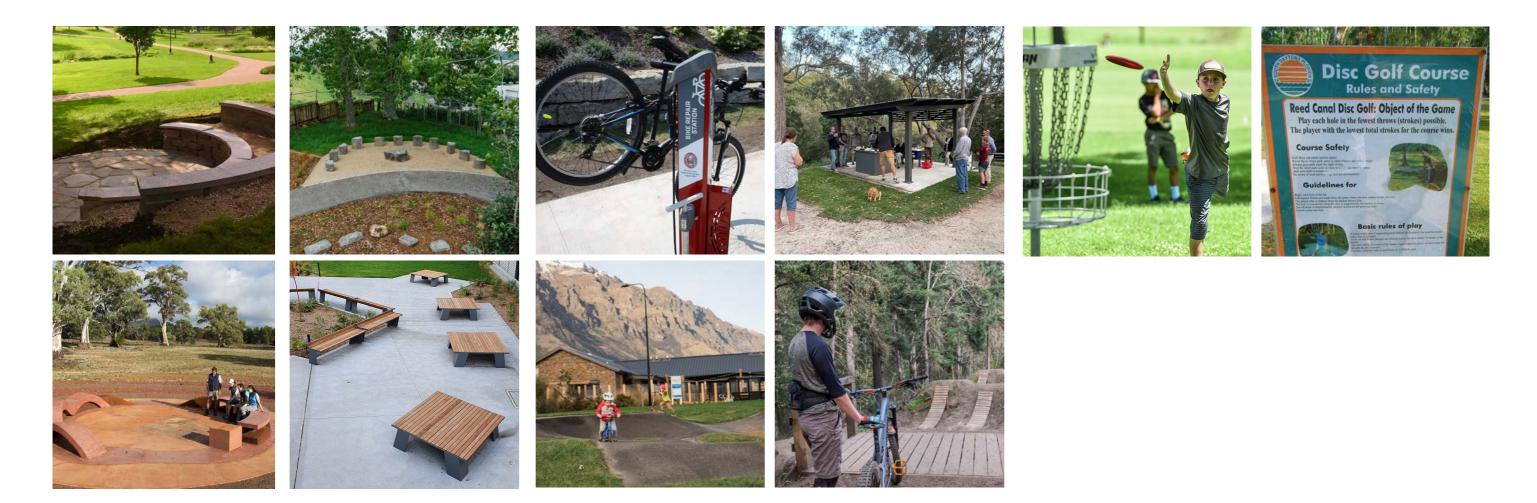
### ACTIVITY NODE: BIKE HUB

Lismore Park is a popular destination for mountain bikers due to the recent upgrade and development of the Lismore Jump Park. The popularity will only continue to grow as the club looks to grow the activity node with a pump track and future tracks. A hub would be well located within the vicinity of the bike park which would include facilities such as public toilets, BBQ and shelter, trail maps, tool stations, and drinking fountains. The facilities would be positioned so they aren't exclusively for the bike club but instead could be enjoyed by the whole community as a gathering space.

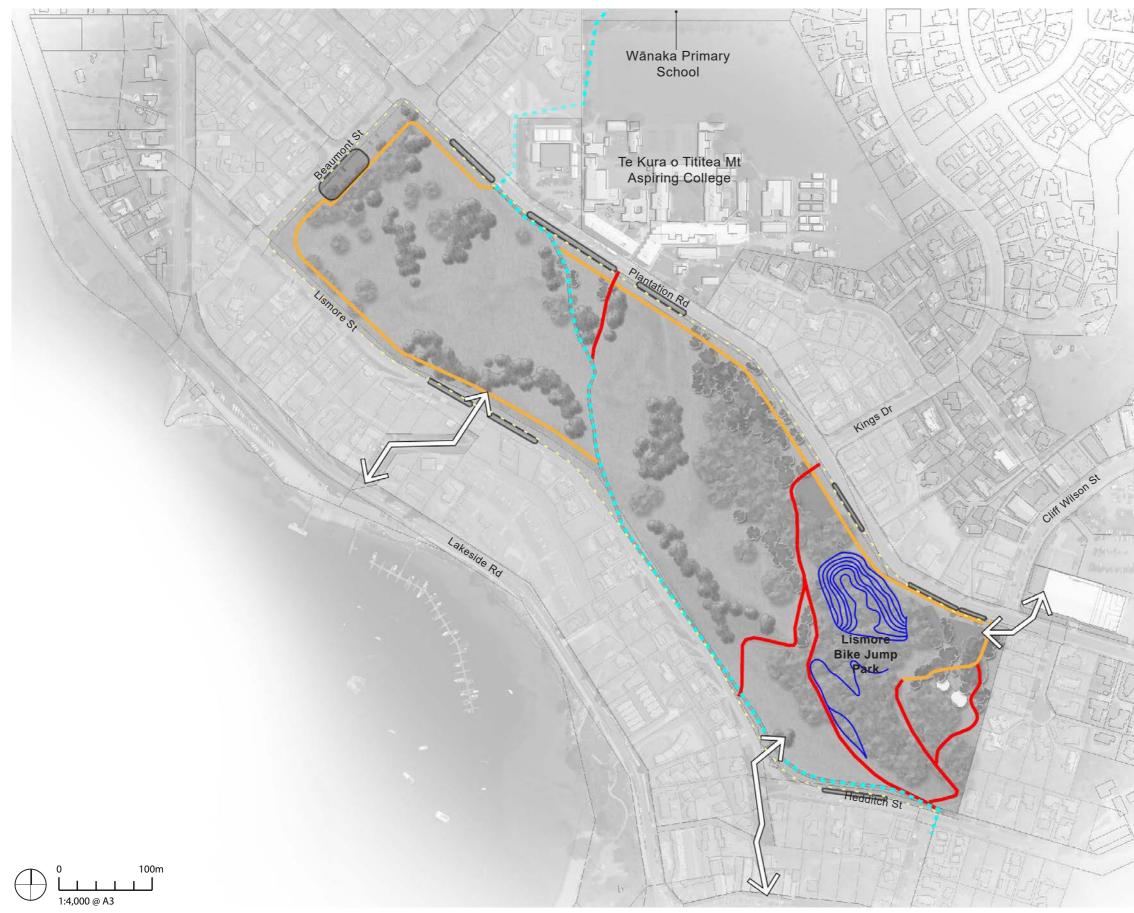
# ENHANCEMENT OF DISC GOLF FACILITIES

The majority of the lismore disc golf course will remain unchanged. However, we have proposed the inclusion of a flat, accessible beginners practice area to encourage learners or people with limited mobility to give the game a go in a novice-friendly environment.

Improvements to parking and pedestrian movement would further enhance the disc golf beginners' space.

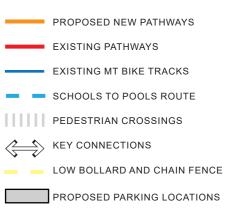


# **CIRCULATION PLAN**





### LEGEND



Existing walking trails and mountain bike trails are retained and supported by the new schools to pool and perimeter pathway.

The perimeter track is proposed to strengthen and formalise the edge of the park, connect entry and crossing points, and improve access between the park's facilities.

Pedestrian safety will be improved at key crossing points between wānaka town centre, local schools, and along the schools to pools route.

A low bollard and chain fence will extend around the perimeter of the park to deter cars from parking and entering the park.

Accessible parking is provided at the western end of the park, close to a new disc golf learners space suitable for children and people with limited mobility. On street parking is located around the perimeter of the park in key locations.

# TREE SURVEY AND MANAGEMENT PLAN

### **OVERVIEW**

A prominent feature of the Lismore Park is the large plantation block, primarily consisting of Douglas fir (Pseudotsuga menziesii). The Lismore Park conifer plantation poses a risk of uncontrolled growth if left unmanaged.

In August 2023 a tree survey and management plan was undertaken by the Tree Consultancy LTD and the following information has been extracted from that report.

The intent of tree report was to :

- · Assess the condition of the trees and carry out a tree risk assessment.
- Investigate and review the Conifer plantation to establish a long-term management plan of staged removals and native succession planting.
- Review the Bike Park area and its impact on tree condition and longterm management

### **DISC GOLF**

Damage from Disc Golf is evident within the reserve. Over time, this damage can have a detrimental effect on the health of trees by harming the tree's vascular tissue. This reduces the tree's ability to transport water, nutrients, and carbohydrates, potentially weakening the tree's overall health.

When establishing new plantings, consideration must be given to disc golf activity to ensure that the recreational use of the space does not negatively impact the newly planted trees and vice versa.

### **BIKE PARK**

The Bike Park situated within the Conifer plantation has been present for a number of decades, and is a popular community asset. The park recently underwent a major upgrade to enhance bike trails and jumps for riders of all abilities. As part of the project, approximately 100 established Conifer trees were removed to assist the new trail builds; these removals primarily consisted of trees in poor health and condition.

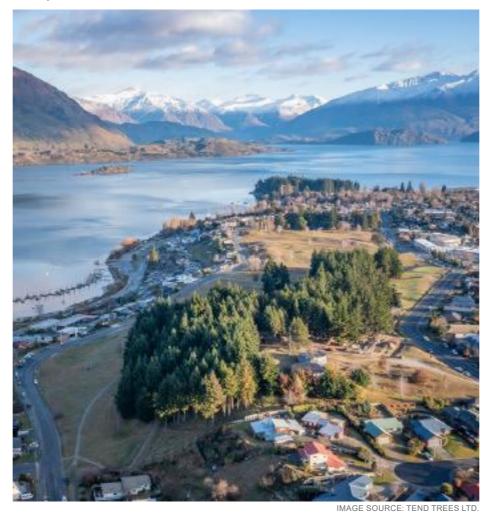
This large-scale removal of trees has made the remaining stand more susceptible to wind stresses, increasing the risk of failure. While trees naturally adapt their structure to withstand wind over time, through a process called thigmomorphogenesis, sudden exposure to increased wind can result in branch or even complete tree failure. Lismore Bike Park will require regular monitoring, especially over the next few years, as the trees adapt to the changes brought by the recent earthworks and increased site exposure.

Trail building and excavation occurred within the existing root zones of many trees, leading to root exposure and soil heaving at the base of the trees, this disturbance has potentially affected tree stability and health throughout the bike park area. Many of these roots are still exposed on the surface.

Undertaking a project of this scale in a forested setting presents a complex balance between safeguarding trees and fulfilling community aspirations for a Bike Park. Consequently, due to the damage to the trees, a gradual deterioration in tree health and condition is anticipated over time. The priority now should be to extend the health and lifespan of the remaining trees for as long as feasible, complemented by succession planting in available areas to offset the inevitable loss of existing tree stock

### SOIL QUALITY

While the reserve provides abundant open space suitable for additional tree and vegetation plantings, the current soil conditions are suboptimal for successful establishment. Targeted improvements in soil quality through aeration, nutrient management, and moisture control are essential for ensuring the vitality of new plantings and fostering a robust ecosystem.



### RECOMMENDATIONS

- to adapt to new wind dynamics.
- successful establishment of new trees.
- Kākano Aotearoa Trust
- boundary versus the Northern aspect
- and volunteer support
- upgrades and site exposure

- zone compaction

Implement a long-term management plan for the conifer plantation block, involving phased removal and replacement with native species to promote biodiversity and a healthy ecosystem.

Utilise natural canopy gaps, to guide tree removals and staging. Staging should take place over several years to allow the trees time

In the later removal stages, it may be beneficial to initiate thinning and the creation of light wells earlier than planned. This would alter airflow and light, thereby fostering tree adaptability and facilitating the

Follow each stage of removal with planting, sourcing new planting from the region when possible. Further ecological input should be engaged prior to and throughout the revegetation, particularly from Te

Consider the success of trial planting on the sheltered Southern

QLDC should work with local community groups like Bike Wānaka and Disc Golf Wanaka to inform about the importance of tree management and protection, as well as opportunities for replanting

Carry out an arboriculture assessment regularly within the bike park. It is recommended that this is undertaken annually for the next 3 years, to monitor tree health and adaptability from the recent

Any further disturbance within the root zones of the bike park should not take place without consultation with an Arborist and until the trees have adapted to the newly exposed environment.

Place layers of wood mulch within non-biking areas between trails to improve soil and moisture levels. Succession tree planting should begin at the earliest to replace lost conifers within the bike park area. Considerations should be given to either retaining a conifer pine environment or transitioning to NZ native planting.

Structures within the Bike Park, such as irrigation housing and signs screwed to trees, should be removed and exposed roots cleanly cut and covered with a thin layer of soil or mulch.

Investigate options to alter the disc golf course to reduce tree damage, particularly localised soil compaction. Consider soil remediation, platforms, or mulched tree rings.

Restrict or create designated parking areas to prevent soil and root

Improve soil condition, moisture levels and growing environment in open spaces areas ahead of any potential plantings.

# **INDICATIVE PLANTING STRATEGY**



### **LEGEND - EXISTING PLANTING MANAGEMENT**

Timeframes	Operations
Year 1 - 5	Complete removals
Year 5 - 15	Thinning and removals
Year 15 - 30	Thinning and removals
Year 1 – 5	Removal of all trees less than <400mm throughout the plantation. Plus ongoing management.

### **LEGEND - FUTURE PLANTING**

### LARGE NATIVE SHRUBS/TREES

Proposed additional planting to improve biodiversity across the site and provide some additional shelter for succession planting

### LOW NATIVE SHRUBS

Suitable for planting around car parks, activity nodes and other facilities.

### MEDIUM/HIGH NATIVE STRUCTURAL PLANTING

Diverse species to provide wind screening throughout the park.

### SEASONAL COLOUR & FRUIT TREES\*

Connecting planting to the changing seasons, and providing opportunities for food gathering. Potential for unmowed meadow like areas under fruit trees

### **CONIFER PLANTATION MANAGEMENT**

Lismore Park's conifer plantation, covering approximately 3.2Ha or 17.3% of the park's total area, provides shelter and protection from winds, enhancing recreational activities such as biking, walking, and disc golf. The trees also contribute to carbon sequestration. However, the plantation consists of entirely wilding tree pest species.

There is a desire to gradually replace the plantation with native planting. This gradual replacement will require a longterm management plan spreading several decades; therefore succession planting and select removals should begin as soon as possible, and take place in a strategic manner.

When removing trees, consideration must be given to the likelihood of failure of the remaining trees. In some cases, removing trees up to an existing opening in the forest canopy or an exposed edge is best to lessen wind load changes.

Locations with natural canopy gaps have been identified for staged removal in Figures 7, 8 & 9 with the goal of removing most conifers within 30 years as indicated in the table below. These time frames could be adjusted based on objectives and

# **INDICATIVE SPECIES LISTS**



MEDIUM/HIGH SHRUBS PLANTING **SEASONAL COLOUR & FRUIT TREES** - STRUCTURAL PLANTING Malus 'Belle De Boskoop' Malus 'Monty's Surprise' Pittosporum tenuifolium Pittosporum eugenioides Belle de Boskoop Apple Monty's Surprise Apple Tarata Kohuhu Pseudowintera colorata Coprosma crassifolia Pyrus 'Beurre Bosc' Pyrus 'Conference' Mountain horopito Beurre Bosc Pear Minaiminai Conference Pear Olea europaea 'Leccino' Coprosma lucida Coprosma propinqua Quince 'Van Deman' Leccino Olive Shining karamū Minaimina Van Deman Quince Griselinia littoralis Hebe salicifolia Acer x fremanii Amelanchier canadensis Canadian Serviceberry Freeman's Maple Kapuka Koromiko Olearia avicenniaefolia Olearia paniculata Carpinus betulus 'Fastigiata' Liquidambar styraciflua Mountain akeake Akiraho European hornbeam Sweetgum

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Quercus palustris Spanish Swamp Oak

49 Plant species are indicative only, to be confirmed in conjunction with QLDC, Te Kākano and QLDC arborist when required

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# **INDICATIVE PHOTO MONTAGE**

ACTIVITY NODE - OUTDOOR WĀNANGA LEARNING SPACE



LOCATION PLAN



Boffa Miskell is a leading New Zealand professional services consultancy with offices in Auckland, Hamilton, Tauranga, Wellington, Christchurch, Dunedin and Queenstown. We work with a wide range of local and international private and public sector clients in the areas of planning, urban design, landscape architecture, landscape planning, ecology, biosecurity, cultural heritage, graphics and mapping. Over the past four decades we have built a reputation for professionalism, innovation and excellence. During this time we have been associated with a significant number of projects that have shaped New Zealand's environment.

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