

REPORT

# Kerikeri Dog Park – Reserve Selection Assessment

Prepared for Far North District Council

15/03/2023

VISION REF: 14975

# **Report Information Summary**

Job no.	14975
Report Author	Ben Perry
Version No.	1
Status	FINAL
Date	15/03/2023

Version No.	Date	Description		
1	15/03/2023	Final issued to client for review.		

#### **Document Acceptance**

Action	Name	Signed	Date
Author	Ben Perry	FMEngNZ, IntPE(NZ), CPEng	15/03/2023

#### Limitations

This report has been prepared by Vision Consulting Engineers Limited (VISION) based on the scope of our engagement. It is solely for our Client's use for the purpose for which it is intended in accordance with the agreed scope of work. VISION does not accept any liability or responsibility in relation to the use of this report contrary to the above, or to any person other than the Client. Any use or reliance by a third party is at that party's own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate, without independent verification, unless otherwise indicated. No liability or responsibility is accepted by VISION for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.

The nature and continuity of the subsurface materials are inferred and it must be appreciated that actual conditions could vary from that described herein.



Vision Consulting Engineers Ltd Level 1, 62 Kerikeri Road Kerikeri 0230

## Contents

Section

#### Page

1	Introdu	iction		1
	1.1	Objecti	ves	. 1
	1.2	The Sco	pe of this report 1	
		1.2.1	Stage 1 – Preliminary Research (First Sprint)	. 1
2	Industr	y Guida	nce	2
	2.1	Literatu	re Review of Criteria for Dog Park Size	. 2
		2.1.1	City of Clovis Dog Park Master Plan(★★★★)	. 2
		2.1.2	City of Ann Arbor – Parks & Recreation ( $\star \star \star \star \star$ )	. 4
		2.1.3	Design, Planning and Management of Off-leash Dog Parks (**)	. 4
		2.1.4	American Kennel Club (* * *)	. 5
		2.1.5	The Dog Park Catalog (★)	. 5
		2.1.6	People Parks, & Dogs – Implementation Guide Vancouver, Canada $(\star \star \star \star)$	
		2.1.7	Pet Safe (*)	
		2.1.8	Bloomberg CityLab ( $\star \star \star \star$ )	
		2.1.9	"Dog Park Design, Development, and Operation" by Marilynn R. Glasser	• •
		2.1.5	$(\star \star \star)$	. 7
	2.2	Literatu	re Review Summary	
	2.3	Future	Research Opportunities	. 8
3	Availab	le Reser	ves Assessment	9
	3.1	GIS Ana	ılysis	. 9
	3.2	Useable	e Area Assessment	10
4	Initial F	Project R	eview	13
5	Council	Review		15
6	Summa	ıry		16

#### Figure(s)

Figure 1. S	Survey of	<b>Municipal</b>	Dog I	Park Sizes	USA
-------------	-----------	------------------	-------	------------	-----

Figure 2. San Jose Dog Park Sizes

Figure 3. Overview of Types of Parks and Attributes

Figure 4. Reserves Within 3km Search Area

Figure 5. Example Topographic Assessment

Figure 6. Example of Useable Area Measurement

Figure 7. Reserves Meeting the Topographic Assessment Criteria

Figure 8. Reserves Meeting the Topographic Assessment Criteria Within 3-10 km of Kerikeri

Figure 9. The Reserves Meeting All Assessment Criteria



#### 1 Introduction

Vision Consulting Engineers Limited (VISION) was requested by Jeanette England on behalf of Far North District Council to assist with the identification of suitable sites for a dog park in Kerikeri, provide a feasibility study to identify the need for the park and provide a concept design.

The details of the FNDC request for price are outlined in the document titled Statement of Works – Feasibility, Parks & Reserves, Kerikeri – Dog Park, Project DFP0039 Objective ref: A3236757, dated 21/06/2021.



#### 1.1 Objectives

The project objectives are to:

- Project Management to complete the feasibility assessment and concept design
- Investigate suitable sites, including but not limited to Samaree Place, in and around the Kerikeri area for a dog park.
- Provide a feasibility study to identify the need for a dog park in the Kerikeri area.
- Provide a concept design to support a Resource Consent application.

## 1.2 The Scope of this report

#### 1.2.1 Stage 1—Preliminary Research (First Sprint)

- Liaise with FNDC GIS team to obtain GIS data for the existing open spaces in the Kerikeri area that will be used as the basis of this assessment.
- Preliminary research and planning to identify open spaces in the Kerikeri area that might be suitable for a future dog parks. These would be selected based on best practice regarding the recommended size of dog parks for maximum recreation value. The criteria is to include parks with at least 0.5 hectares of vacant land.
- These suitable parks will then be included in a public survey to rank them. The survey will also cover a number of other items related to dog parks with the intention of the survey to identify what the public considers as high priority items for dog parks.
- Compile dog park best practice criteria from industry guidance



# 2 Industry Guidance

While there are several resources available on designing and operating dog parks, there is no single standard or guideline for selecting the size of a dog park or determining the number of dogs that can safely use it at any given time. This is because the needs and preferences of dogs and their owners can vary widely depending on factors such as the size and breed of the dogs, the availability of other off-leash areas in the community, and the social and cultural norms of the area. As a result, relying solely on industry guidance or recommendations may not be sufficient for creating an effective and safe dog park. Instead, conducting research on the literature and consulting with experts and stakeholders can provide valuable insight into creating a dog park that meets the needs of the community and its canine residents.

## 2.1 Literature Review of Criteria for Dog Park Size

#### 2.1.1 City of Clovis Dog Park Master Plan( $\star \star \star$ )

The City of Clovis Dog Park Master Plan is a document that outlines the planning and development of a dog park in the city of Clovis, California. The plan provides a detailed analysis of the city's dog population, the benefits of dog parks, and the design considerations for creating a successful dog park.

The document highlights the importance of creating a safe, secure, and clean environment for dogs and their owners. It recommends the use of fencing, separate areas for small and large dogs, water stations, and waste disposal facilities to meet these goals. The plan also emphasizes the need for community involvement in the planning process, including public input and fundraising efforts.

The document outlines several possible locations for the dog park, along with the pros and cons of each site. It also includes a detailed cost estimate and funding strategy for the park's development, as well as a maintenance plan for ongoing upkeep and improvements.

Overall, the City of Clovis Dog Park Master Plan serves as a comprehensive guide for creating a successful and sustainable dog park in the community. Excerpts from the document follow:

As shown in the Salt Lake County example, the relationship between dog park distribution and dog park size is an important concept. While small, simple dog parks located centrally within densely populated areas will provide a resource for local residents as part of their daily dog walks and recreation routine, large, elaborate, or special-purpose dog parks may draw users from across the City and greater region. Along the same lines, residents who do not wish to drive 15 minutes to a standard dog park might be enthusiastic about such a short trip to a regionally recognized dog park with diverse programming.

Size standards for off-leash dog parks vary throughout planning literature (Figure 1). Some municipalities allow for dog parks of less than one acre for infill lots or on public lots for which there is no other use. These "pocket" dog parks are typically too small to be divided into separate areas for large and small dogs. Less than one acre in size also makes the wear and tear on natural turf surfacing difficult to maintain, so smaller parks often have alternative surfacing such as wood mulch, crushed stone, or artificial turf.







**Figure 1. Survey of Municipal Dog Park Sizes USA** *Three municipalities with their suggested sizing standards.* 

The City of San Jose, for example, has a population of over one million residents and a majority high-density/urban style development. San Jose recommends dog parks cover a very tight ¾ acre radius, but allows dog parks to be very small (Figure 2). This practice is geared toward ensuring quantity of dog parks across the City, but places certain limitations upon the programming and amenities available. This approach may not suit the City of Clovis, where population density and overall population are significantly lower than San Jose and where the availability of City park acreage supports larger dog parks.

Dog Park Type	Park Size	Design Capacity	Details
Small	Up to 1/4 Acre	Up to 10 Dogs	One Area, All Size Dogs
Medium	1/4 to 3/4 Acre	10-20 Dogs	Small Dog Area: Min. 4,000 sf Large Dog Area: Min. 2/3 of Overall Park
Large	3/4 to 2 Acres	20+ Dogs	Small Dog Area: Min. 4,000 sf Large Dog Area: Min. 2/3 of Overall Park

Figure 2. San Jose Dog Park Sizes

Extracted Table from the source showing size standards and suggested capacity for the city of San Jose, USA

While small dog parks fill a valuable role in many urban and densely-populated areas, industry experts agree that a preferred size for dog parks is one to three acres if possible. Dog parks in this size range have the added benefit of being divisible into two or more separate fenced areas. Dog parks are most often divided into two areas, one smaller area designated "small dogs" and a larger area for "large dogs." Large dog areas are typically larger than the small dog areas due to large dogs' larger strides. Large/heavy dogs can also cause greater damage to a small area due to the greater wear and tear inflicted on the grass or other surfacing while running and playing.

Square footage permitting, the ability to incorporate a third area is a strategy utilized in many existing dog parks. A third fenced area becomes a safe place to keep an unclaimed or aggressive dog, an area that can hold specialty dog training classes, or an area that can be utilized alternately with other areas for the purpose of giving the turf surfacing a chance to rest and re-grow during different times of the year. Dog parks such as Woodward Park and Dr. James W. Thornton Dog Park in Fresno each utilize a strategy incorporating more than two fenced areas within the larger dog park.

An example one-acre site might be therefore be broken down into the following areas:



- Small Dog Park: 1/4 Acre
- Large Dog Park: 1/2 Acre
- Third Fenced Area (optional): 1/4 Acre

#### 2.1.2 City of Ann Arbor – Parks & Recreation ( $\star \star \star \star \star$ )

In 2014 the Parks and Recreation department of the City of Ann Arbor, Michigan published the 'Recommendations and Guidelines for Dog Park Site Selection, Design, Operations and Maintenance'. The document provides formal guidelines regarding the placement and management of new dog parks and the improvement of existing dog parks in Ann Arbor.

Their Staff and Park Advisory Commission subcommittee members researched development and management practices from numerous cities, and obtained information via phone conversations, email, websites, master plans, and policy documents. Cities contacted include: Baltimore, MD; Boulder, CO; Chicago, IL; Kalamazoo, MI; Madison, WI; Norfolk, VA; Alexandria, VA; Portland, OR; San Francisco, CA; and Meridian Township, MI. Existing master plans referenced include Denver, CO; Salt Lake County, UT; and Oakland, CA. This resulted finding that the minimum size for dog parks varies considerably among cities, but is generally between ½ acre and one acre.

The Guidelines state that the size of dog parks will be dependent upon the particular park in which it is proposed, other park activities, facilities, proximity to residences, etc. Larger is better (at least ½ acre), but if a smaller dog park area is all that can be accommodated in a particular park, and if there is community support, then a smaller size will be considered.

#### 2.1.3 Design, Planning and Management of Off-leash Dog Parks (\*\*)

Bob Holderness-Roddam published in 2017 a brief guide for local councils in Australia, dog owner/carer groups and others who may be involved with providing dog park facilities.

In this he states the following regarding park size:

"Ideally a dog park should be large enough to permit dogs to run freely and play. If it becomes over-crowded with dogs there is more likelihood of fights. However, size may be limited by available space, construction (e.g. fences, ground cover and shelters) and maintenance costs. Those in America vary from a quarter acre to 40 acres. One study suggests a minimum of one acre and preferably four acres."

Bob also self published an article on line 'Dog Park Design, Planning and Management', which states:

"Brown (2012) found that dog parks range in size from ¼ acre to 40 acres, but Allen's (2007) assessment found parks varied from ¼ acre to 2½ acres; typically one acre. Other figures cited were from Matisoff and Noonan (2012), less than one acre to over 80 acres, whilst the Stanton Foundation (n.d.) wanted off-leash parks to be 'as large as possible'.

Allen (2007) recommended larger areas, to give dogs and owners more space and room to move with less stress on dogs."

Allen, L. 2007. Dog Parks: Benefits and Liabilities, unpublished Masters thesis, Department of Earth and Environmental Science, University of Pennsylvania.

Brown, L. 2012. Landscape Barkitecture: Guidelines for behaviourally, mentally, and physically responsive dog parks. Unpublished Masters thesis, Ball State University, Muncie, Indiana. Accessed 28 March 2019.

Matisoff and Noonan (2012) - https://www.thecommonsjournal.org/articles/10.18352/ijc.299/



#### 2.1.4 American Kennel Club ( $\star \star \star$ )

The American Kennel Club (AKC) has published a guide called "Establishing a Dog Park in Your Community" which provides a step-by-step process for creating a safe and enjoyable dog park. The guide covers topics such as selecting a location, identifying funding sources, creating rules and regulations, and promoting responsible dog ownership. It also provides tips for designing the park, including suggestions for amenities such as water stations and agility equipment. The AKC emphasizes the importance of working with local officials and community members to ensure the success of the project, and provides examples of successful dog park initiatives from around the country. Additionally, the guide includes information on liability concerns and insurance coverage, as well as resources for ongoing maintenance and management of the dog park.

States that one acre or more of land surrounded by a four- to six-foot high chain-link fence. Preferably, the fence should be equipped with a double-gated entry to keep dogs from escaping and to facilitate wheelchair access.

#### 2.1.5 The Dog Park Catalog $(\bigstar)$

The Dog Park Catalog is a website that offers a wide range of products and resources for creating and maintaining dog parks. The catalog includes various types of dog park equipment such as agility courses, dog waste stations, benches, water fountains, and more. The website also provides helpful resources for designing and building a dog park, as well as tips for maintaining it. The Dog Park Catalog offers products that are designed to be durable and easy to install, and they offer customized solutions for dog parks of all sizes and budgets. Additionally, the website features a blog with articles on various topics related to dog parks, such as safety, socialization, and community engagement. Overall, The Dog Park Catalog aims to provide everything needed to create a safe and enjoyable environment for dogs and their owners.

States:

"Small dog parks are fine if you build more than one. Most communities find their small dog park won't handle all of their visitors and they have to build another one very quickly. Small dog parks are like potato chips – you can't have just one. The minimum size for a dog park, a small dog park, is one-half of an acre. Ideally, a dog park should be one acre or more in size. You want the ability to put in adequate parking and have access to infrastructure, such as electricity and running water."

#### 2.1.6 People Parks, & Dogs-Implementation Guide Vancouver, Canada ( $\star \star \star \star \star$ )

This document provides guidance for the management of off-leash dog areas in Vancouver's parks. The guide emphasizes the importance of creating a safe and enjoyable experience for all park users, including dogs and their owners, while also protecting the natural environment.

The guide includes information on park design and planning, off-leash area management, signage, communication and education strategies, and enforcement of rules and regulations. It also highlights the benefits of off-leash areas, such as providing socialization opportunities for dogs and their owners and promoting responsible pet ownership.

Overall, the implementation guide provides a comprehensive approach to managing off-leash dog areas in Vancouver's parks, with a focus on balancing the needs and interests of all park users while ensuring the safety and protection of the environment. Figure 3 provides a summary of the matrix used in the document for dog park recommendations.



	Destination Park dog off-leash area	Destination Trail dog off-leash area	Neighbourhood Park dog off-leash area	Neighbourhood Urban dog off-leash area	Neighbourhood Dog Run dog off-leash area
Intent	Large off-leash area. Used by residents and visitors on a daily or weekly basis.	Linear and trail- oriented off- leash area. Used by residents and visitors on a daily or weekly basis.	Medium sized off-leash area. Used by local residents on a daily basis.	Smaller off-leash area in high density setting. Used by local residents on a daily basis. Higher quality amenities to attract and support higher intensity of use.	Smaller off-leash area, in medium to high density settings. Used by local residents on a daily basis.
Service level	Accessible to the majority of residents within a ~15 minute walk (3 km radius) or short drive				ithin a ~15 minute
Hours of use	Typical hours 6am to 10pm				
Target size	Greater than 1.2 ha (3 acres)	Determined on site-by-site basis	From 0.04 to 0.4 h	From 0.04 to 0.4 ha (0.1 to 1 acre)	
Boundary		bermeable), bollards cent park uses, land (	Entirely enclosed with high quality secure fencing (e.g. decorative steel)	Entirely enclosed with standard secure fencing (e.g. chain link)	
Surfacing	Mix of surfaces, including fine crushed gravel and grass	Gravel or wood chip trail surfacing. Consider options for increasing accessibility.	Mix of surfaces, including fine crushed gravel and grass	Mix of durable surfacing types, with specialty surfacing (e.g. synthetic turf)	Standard durable surfacing type (e.g. fine crushed gravel)
Amenities <sup>(1)</sup>	nities <sup>(1)</sup> Standard and special amenities considered on a site-by-site basis such as washrooms, drinking water for people and dogs, parking, and separated small / shy dog areas.		Standard amenities. Special amenities to be considered on a site-by-site basis.	Standard and special amenities, such as drinking water for people and dogs, agility features, and climbing elements. 'Pooch Patch' to help manage dog waste.	Standard amenities. Special amenities to be considered on site-by-site basis.

#### Figure 3. Overview of Types of Parks and Attributes

## 2.1.7 Pet Safe (★)

VISION REF: 14975

The article titled "How to Design a Dog Park" by PetSafe provides a comprehensive guide for designing a dog park. The article emphasizes the importance of understanding the needs of both dogs and their owners, such as having adequate space for dogs to run and play, providing shaded areas and access to water, and ensuring easy entry and exit points for dogs and their owners.

The article also discusses the importance of choosing the right materials for the park, including durable fencing, safe surfaces, and appropriate seating. Additionally, the article provides tips for incorporating agility equipment, such as tunnels and jumps, into the park to encourage exercise and stimulate dogs mentally.





Overall, the article emphasizes the importance of thoughtful planning and design to create a safe and enjoyable space for both dogs and their owners to enjoy.

States:

"The size of your park may depend solely on the availability of land. But we recommend at least 1 acre for a park but they can be as big as your community can manage and maintain. If space isn't an issue, consider an area large enough that it's possible to rotate high traffic areas annually or seasonally. Talk to your community leaders and Parks and Recreation Department about available land."

#### 2.1.8 Bloomberg CityLab ( $\star \star \star \star$ )

The Bloomberg CityLab article features Leslie Lowe, a landscape architect who was involved in designing the Hugh Rogers Wag Park in Whitefish, Montana, which was named one of the top 10 dog parks in the United States by USA Today in 2015. Lowe emphasizes the importance of designing dog parks with enough space and adequate entryways to prevent overcrowding and potential conflicts among dogs. She suggests using a separated bullpen area where dogs can be off-leash before entering the main park area to reduce stress and tension. By providing a more open and spacious environment, dogs are less likely to feel overwhelmed and reactive, which can reduce the risk of negative interactions between dogs.

States:

"If you have a tiny, 1-acre dog park with narrow entries, then everybody congregates at the gate," Lowe says. "So a shy dog or a dog that comes in and is not comfortable, all of a sudden I've got a dog dynamic I can't really control, and that's when the trigger reactions happen. A dog that can't deal with all of the stimulus of other dogs, other dogs sniffing them, might turn around and its reaction then is to bite or cause a problem."

But when they're allowed to enter a broader terrain—ideally after first being taken off leash in a separated bullpen, because having leashed and unleashed dogs together can breed conflict—things will be more copacetic. "If I have a wide-open space and can get people and dogs into the park, it takes the pressure off the entry," Lowe says."

## 2.1.9 "Dog Park Design, Development, and Operation" by Marilynn R. Glasser (\*\*\*\*)

This comprehensive guide covers all aspects of creating and managing a dog park, from selecting a suitable site to designing the layout and amenities, and from establishing rules and regulations to ensuring safety and maintenance. The book provides detailed information on topics such as dog behavior, park management strategies, fundraising, and community outreach. It also includes case studies and examples of successful dog parks to serve as models for readers. The book is aimed at professionals involved in the planning, design, and operation of dog parks, as well as dog owners and community groups interested in creating and maintaining these facilities.

The book does not provide a specific recommendation for a minimum park size. However, it does emphasize the importance of providing adequate space for dogs to run and play, as well as separate areas for different dog sizes and temperaments. The book suggests that the size of the dog park should be based on the size of the surrounding community, and that park planners should take into account factors such as the number of dogs in the area, the expected usage of the park, and the availability of other dog parks in the vicinity. Overall, the book emphasizes the need for careful planning and consideration of all factors when designing and operating a successful dog park.



#### 2.2 Literature Review Summary

Based on our research, there is no fixed standard for dog park size, and the ideal size will depend on various factors, such as the location, the population density, and the available space.

The recommended dog park size can vary based on factors such as the local community's needs, available space, and budget. Generally it was found that a minimum of one acre is allowed for a small dog parks and two to five acres for a large dog parks.

The size should also be based on the expected number of users and dogs, as well as the intended activities and amenities. It is important to note that the size of a dog park is just one factor to consider when designing and operating a successful dog park.

However, industry experts generally recommend a mimimum size range of three to six acres for mixed-use off-lead dog parks, as this size range allows for the creation of separate fenced areas for small and large dogs and other purposes, such as holding unclaimed or aggressive dogs and offering specialty dog training classes.

Additionally, if space permits, incorporating a third fenced area is an effective strategy that allows the turf surfacing to rest and re-grow during different times of the year.

#### 2.3 Future Research Opportunities

In review of the available information there appears to be some information gaps that could be filled in with additional research which could explore and determine what makes a successful dog park:

- Dog Behavior: One aspect of a successful dog park is that it allows dogs to socialize and play together. Studying dog behavior and socialization patterns could help to identify the types of activities and play structures that would be most beneficial in a dog park. This could include research on how dogs interact with each other and what types of play are most common.
- Safety and Maintenance: Another important aspect of a successful dog park is safety and maintenance. Research on best practices for maintaining dog parks, such as cleaning and disinfecting equipment and areas, could help to ensure the park is safe and healthy for both dogs and people.
- User Experience: Understanding the perspective of dog park users is essential to creating a successful dog park. Research on user experience could include surveys and interviews with dog owners to gather feedback on what they like and don't like about current dog parks, as well as what they would like to see in a new park.
- Design and Layout: The design and layout of a dog park can also impact its success. Research on how to design a dog park that meets the needs of dogs and their owners could include examining the types of play equipment and structures that are most effective, as well as how to create spaces for different types of dogs (e.g., small dogs vs. large dogs).
- Economic Impact: Finally, understanding the economic impact of dog parks could be valuable for city planners and policymakers. Research could explore the economic benefits of dog parks, such as increased property values, as well as the costs associated with maintaining and operating a park.





#### 3 Available Reserves Assessment

The FNDC supplied VISION with a data set of the council owned reserves near the Kerikeri area. The process of selecting suitable dog parks started with a GIS Analysis of reserve land parcel sizes, then excluded those that were narrow strips of land along the coastal and river margins. Roland's Wood was also excluded from the assessment because the brief was to identify potential new reserves for conversion to a dog park. The remaining sites were then reviewed in terms of their topography to identify areas within each reserve that were flat to gently sloping so that the dog park would be accessible to a variety of users. The resulting parks were then reviewed with the FNDC Parks and Facilities team for suitability. Finally the remaining reserves were reviewed considering factors such as accessibility, proximity to Roland's Wood, and existing use of the reserve.

#### 3.1 GISAnalysis

The process of selecting a suitable reserve for a dog exercise park in Kerikeri involved the use of a dataset that included 244 reserves owned by the Far North District Council within a 10-kilometer radius of the CBD. The initial selection was based on distances from the CBD, and eight reserves beyond 10 km were excluded, leaving 236 council-owned reserves for consideration. The GIS investigation filtered out properties of less than 5000 m<sup>2</sup> in total area and included all reserves within a three-kilometer radius that were considered potentially suitable subject to further assessment. Stream esplanade reserves, Roland's Wood, and coastal reserves were manually removed, leaving behind a final set of reserves for consideration.

The remaining reserves within 3 km of the Kerikeri CBD were shown as yellow areas in Figure 4, with those without a black outline considered suitable for further assessment. The FNDC GIS assigned each reserve a number, and only those that were deemed suitable for further assessment were shown. There were a total of 109 council-owned reserves within three kilometers of Kerikeri's CBD, and of these, 43 had a total property area greater than 5000 m<sup>2</sup>. After removing stream esplanade reserves, Roland's Wood, and coastal reserves, there were 17 reserves that were considered suitable for further assessment.

The selection process demonstrates a systematic and data-driven approach to identifying suitable reserves for a dog exercise park. The use of GIS technology allowed for the filtering out of unsuitable properties and the manual removal of reserves that did not meet the criteria, resulting in a final set of reserves that were suitable for further assessment. This approach can be used as a model for other communities seeking to establish dog exercise parks in their area. It emphasizes the importance of careful consideration of reserve characteristics, including distance from the CBD, reserve area, and location relative to other reserves and amenities, to ensure the success of the project.







**Figure 4. Reserves Within 3km Search Area** All reserves within a three kilometer search radius are shown as yellow parcels, those without a black outlines and assessment numbers were considered potentially suitable subject to further assessment. North is up the page. Background images courtesy of LINZ.

#### 3.2 Useable Area Assessment

In order to determine which areas within the identified reserves were suitable for conversion to a dog exercise park, the topography of each site was carefully reviewed to identify flat to gently sloping areas. The topographic assessment considered the shape, elevation, and relief of the land to ensure the safety and comfort of dogs and their owners.

To aid in this assessment, contour lines were displayed on the maps used by the investigators. Contour lines are lines that connect points of equal elevation and represent the shape of the land surface, providing a way to visualize the changes in elevation across the reserve area. Closely bunched contours represent steeper land while contours spaced further apart represent flatter slopes.

For instance, one of the reserves that was assessed was accessed off Sammaree Place, Kerikeri, and consisted of four parcels of land with a total area of 8,514 m2. The site's topography was found to be flat near Sammaree Place, with a pan-handle access leading to the main reserve area behind the industrial properties and a tree-covered area to the west of the Wairoa Stream. The pan-handle access was 40 metres long and 3 metres wide, which is not ideal for providing ample space for dogs and their owners to enter and exit the park safely once fenced.

Figure 5 shows the reserve at Sammaree Place, Kerikeri and the topographc information used to assess the useable area within the reserve.



#### Figure 5. Example Topographic Assessment

The reserve at Sammaree Place, Kerikeri is shown in the three images above with a yellow outline around the 4 parcels of land that make up the total reserve area. Far left is an aerial image overlain with property and parcel boundaries. The middle image shows a 3D rendering of the topographic relief (hillshade) with higher elevations shaded green and lower elevations shaded blue and contour lines at 1 m intervals. The far right image shows the slope angle of the land. North is up the page. Background images courtesy of LINZ.

After conducting a thorough topographic assessment, it was found that the main reserve area was largely dominated by a stream embankment that sloped moderately to very-steeply towards the Wairoa Stream. However, an area of approximately 3,100 m<sup>2</sup> was identified as flat to gently sloping and deemed useable for a dog exercise park, refer to Figure 6. Unfortunately, this area did not meet the minimum park size of 5,000 m<sup>2</sup>, as outlined in the design criteria.







**Figure 6. Example of Useable Area Measurement** In the Sammaree Place, Kerikeri example the useable area assessed is highlighted purple and measured.

By carefully assessing the topography of each reserve and identifying the most suitable areas for conversion to a dog exercise park, the investigators were able to ensure the safety and comfort of both dogs and their owners. The use of contour lines to visualize the topography of each site was a crucial step in this process, as it allowed the investigators to identify areas that were both flat and safe for use as a dog park.

Overall, the careful consideration of topography is an essential part of designing any dog exercise park. It ensures that the park is both safe and comfortable for dogs and their owners, and helps to prevent accidents and other problems that can arise in poorly designed parks. By taking the time to carefully assess the topography of each site, communities can create safe, enjoyable spaces for dogs and their owners to play and socialize.

The results of this assessment found that there were 4 reserves within a 3 kilmometre distance of the Kerikeri CBD that satisfied the useable land area citeria. These were reserves at Kerikeri Domain, a reserve to the south of Rarere Terrace, the Te Puāwaitanga – Bay of Islands Sports Hub, and a reserve to the south of Te Puāwaitanga – Bay of Islands Sports Hub; these are Shown in Figure 7.





**Figure 7. Reserves Meeting the Topographic Assessment Criteria** Top-left is the Kerikeri Domain, top-right a reserve to the south of Rarere Terrace, bottom-left the Te Puāwaitanga – Bay of Islands Sports Hub, and bottom-right a reserve to the south of Te Puāwaitanga – Bay of Islands Sports Hub

## 4 Initial Project Review

Following the assessment described above, it became evident that the final number of available sites would be restricted. The scope of the project was then extended to a 10 kilometre search radius from the Kerikeri CBD. This found that there were 83 reserves that have a total reserve area of more than 5000 m<sup>2</sup>. Once these were vetted for reserves that are not coastal and river esplanades, being long skinny strips of land unsuitable for a dog park there were 34 remaining reserves. Once these were topographically vetted for useable area, five additional reserves were identified for further analysis. These are shown in Figure 8.







Figure 8. Reserves Meeting the Topographic Assessment Criteria Within 3-10 km of Kerikeri



# 5 Council Review

After applying the filtering criteria of "useable area > 0.5ha" to identify suitable reserves for conversion into a dog exercise park in Kerikeri, the remaining parks were submitted for review by the Far North District Council (FNDC). Out of these reserves, five were identified as unsuitable for various reasons. Three of the parks had existing or future plans, meaning that it was not available for conversion into a dog park. The two parks were not suitable due to their location within kiwi protection areas. The kiwi is a bird species that is native to New Zealand and is considered to be an endangered species. The protection of these birds is a priority for the FNDC, and as such, the reserves within the kiwi protection areas were not considered for the conversion to a dog exercise park.

Following the FNDC review, the remaining four reserves were subjected to final vetting. During this process, factors such as accessibility, proximity to Roland's Wood, and existing use of the reserve were considered. Roland's Wood is a dog park in Kerikeri. The park is located within the larger Roland's Wood reserve and features several fenced areas for dogs to play and exercise, as well as a dog swimming pond and agility equipment. The final vetting process led to the removal of three additional reserves, leaving only one park that was deemed suitable for conversion into a dog exercise park; being a reserve to the south of Te Puāwaitanga – Bay of Islands Sports Hub shown in Figure 9.

The vetting process was was crucial in ensuring that reserves selected for conversion into a dog exercise park weres appropriate in terms of accessibility, proximity to other reserves, and compatibility with existing land use. By eliminating unsuitable reserves and carefully considering factors such as the protection of endangered species and other environmental concerns, the FNDC was able to identify a reserve that was not only suitable for the conversion into a dog exercise park but also did not compromise the broader goals of conservation and environmental protection in the region.



Figure 9. The Reserves Meeting All Assessment Criteria



# 6 Summary

This Dog Park Reserve Selection Assessment on behalf of the Far North District Council involved the identification and selection of suitable reserves for conversion to a dog exercise park. A dataset of 244 reserves owned by the Far North District Council within ten kilometers of the Central Business District of Kerikeri was used, and the reserves were filtered based on their location and total area. The topography of each remaining reserve was then assessed to identify flat and gently sloping areas suitable for a dog park.

The investigation resulted in 17 reserves that were considered suitable for further assessment, and after the assessment of the useable areas, only nine parks remained. Three of the nine remaining parks were deemed unsuitable due to factors such as existing or future plans, kiwi protection, and accessibility. The remaining four parks were then reviewed for factors such as proximity to Roland's Wood, existing use of the reserve, and accessibility, resulting in the selection of one park for conversion to a dog exercise park.

Overall, the selection of an appropriately sized reserve for dog exercise park has unexpectedly resulted in a single reserve being identified as the best site meeting the design criteria for a best practices based on a review of available literature. Selection involved a thorough assessment of various factors such as the location, topography, and existing use of the reserve, as well as the needs of dogs and their owners.



