### **BEFORE THE INDEPENDENT HEARINGS PANEL**

UNDERthe Resource Management Act 1991 (RMA)IN THE MATTERof the Far North Proposed District Plan - Hearing 15D:<br/>Rezoning Kerikeri-Waipapa

### STATEMENT OF EVIDENCE OF JEREMY HUNT ON BEHALF OF KIWI FRESH ORANGE COMPANY LIMITED

### **RURAL PRODUCTIVITY**

16 June 2025

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# WYNN WILLIAMS

### INTRODUCTION

- 1 My full name is Jeremy Bryce Hunt.
- 2 I have been asked by Kiwi Fresh Orange Company Limited (**KFO**) to provide independent expert advice on the Proposed Far North District Plan (**FNPDP**).
- 3 This evidence relates to KFO's submission on Hearing 15D: Rezoning Kerikeri-Waipapa. KFO owns 199.0 ha of land between Kerikeri and Waipapa (**Site**), which is proposed to be zoned for Rural Production. KFO's submission seeks a live urban zoning of the Site, comprising a mix of general residential, mixed urban and natural open space (**Proposal**).
- 4 AgFirst consultants visited the Site on 30 May 2025 for a productive capacity assessment.

### **QUALIFICATIONS AND EXPERIENCE**

- 5 I am an Agribusiness Consultant at AgFirst Waikato (2016) Limited (AgFirst Waikato) in Hamilton, a role I have had for approximately 7 years. I have been a Director of AgFirst Waikato since 2020. My key focus area is land resource management and highly productive land and rural productivity assessments.
- 6 I hold a Bachelor's degree in Environmental Science obtained in 2004 from the University of Canterbury. I have completed the intermediate and advanced sustainable nutrient management and advanced soil conservation papers at Massy University. I also have a Land Use Capability Mapping Workshop Certificate. I am a member of the New Zealand Institute of Primary Industry Management (**NZIPIM**), an independent industry body for the farm advisory and rural profession.
- 7 I have been involved in District Council and Environment Court hearings as well as Mediation and Expert Witness Conferencing for assessments against the National Policy Statement – Highly Productive Land (NPS-HPL), particularly relating to clause 3.6 and 3.10.
- 8 I have been involved in many due diligence assessments for land use change and was an author of the Our Land and Water – Barriers to Diversification Report.

- 9 The core focus of my experience relates to land and resource management. The nature of my work leads me to work across a wide range of issues in the primary sector and land use assessments.
- 10 In respect of the Proposal, I was engaged by KFO to undertake the rural productivity assessment for the Site to inform assessment under clause 3.6 of the NPS-HPL.

### CODE OF CONDUCT

- Although this is not a hearing before the Environment Court, I record that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023 and agree to comply with it.
- 12 I confirm that the issues addressed in this brief of evidence are within my area of expertise, except where I state that I have relied on the evidence of other persons. I have not omitted to consider material facts known to me that might alter or detract from the opinions I have expressed.

# ASSESSMENT OF SITE'S PRODUCTIVE CAPACITY AND SCOPE OF THIS REPORT

- 13 To assist my preparation of this evidence, AgFirst Waikato carried out an assessment of the Site's productive capacity (the NPS-HPL Report)<sup>1</sup>. The NPS-HPL report, which is attached as Appendix A, should be read in conjunction with my evidence.
- 14 This evidence:
  - (a) explains the Site's productive capacity for land-based primary production (which means production, from agricultural, pastoral, horticultural, or forestry activities, that is reliant on the soil resource of the land); and
  - (b) assesses the economic viability of use of the Site for land-based primary production to assist in understanding the potential economic costs associated with the loss of KFO's land for land-based primary production.
  - (c) assesses alternative options for the expansion of urban land to meet the growth requirements.

<sup>&</sup>lt;sup>1</sup> Kiwifresh Orange Company NPS-HPL Report – AgFirst June 2025

- 15 This evidence is structured as follows:
  - (a) summary of evidence;
  - (b) land use capability and the site-specific assessment;
  - (c) current use;
  - (d) property summary and existing land use assessment;
  - (e) the regulatory framework for the NPS-HPL;
  - (f) land and soil assessment for the Site;
  - (g) land use potential for the Site; and
  - (h) a comparison of the Site against other reasonably practicable and feasible options for urban expansion in around Kerikeri-Waipapa.

### SUMMARY OF EVIDENCE

- 16 Drystock farming is the highest and best use of the Site. Alternatives, including arable, horticulture, commercial vegetable production (**CVP**), and dairy, are not reasonably practicable.
- 17 While the properties within the Site could be amalgamated (and currently are operated as a single enterprise), there is limited opportunity beyond the Site to adjoin with productive units. Therefore, the Site is constrained by non-reversable land fragmentation, and the inability to amalgamate with surrounding land uses beyond the Site to improve versatility and scale.
- 18 Given the constraints identified and a comparison against alternative options, it is evident that the Site has lower relative productive capacity compared with alternative options for urban development.
- 19 An economic baseline analysis shows that the highest and best use of the land is not economically viable.
- I consider that the re-zoning of the Site meets the requirements of Clause 3.6(4)(b) and (c) insofar as it relates to the productive capacity of the land and the economic costs and benefits associated with the loss of highly productive land for land-based primary production. In relation to clause 3.6(4)(b), there are no other reasonably practicable and feasible options which are better suited in terms of impacts on productive land for providing additional urban development capacity in Kerikeri and Waipapa.

### LAND USE CAPABILITY

- 21 The soils mapped at the Site are classified under the New Zealand Land Resource Inventory (**NZLRI**) as Land Use Classification (**LUC**) 3w2, 3s2, and 4e2. Land that is zoned rural and LUC 1-3 qualifies as Highly Productive Land (**HPL**) and is subject to the NPS-HPL.<sup>2</sup> For the Site, there is 163.1 ha of land that meets the transitional definition of HPL.
- 22 The NZLRI maps are designed for use at a 1:63,000 scale and are suitable for guidance but are not specially designed to be interpreted at a farm or paddock scale. This limits the maps' value when trying to ascertain the productive capacity of land for land-based primary production.
- 23 The Site has had a site-specific soil survey undertaken by a soil expert, Ian Hanmore – Hanmore Land Management (**HLM**).<sup>3</sup>
- 24 The findings from the HLM report are:
  - (a) A total of 130.2 ha of land was LUC class 3. LUC unit 3s2 comprises 89.7 ha and is considered versatile. LUC units 3e1, 3w2, and 3w4, comprising 40.5 ha, are not considered versatile, posing moderate limitations to use.
  - (b) 34.7 ha was classified as LUC 4, with 33.9 ha being LUC 6, including a wetland.
  - (c) Wetness is the major limiting factor for production on the soils within the Site. Poor drainage characteristics lead to prolonged periods of soil saturation, limiting crop selection and the timing of sowing. These soils are also prone to drought with limited moisture-holding capacity.
  - (d) LUC unit 4s2 land has significant physical limitations to arable use that substantially reduce the range of crops that can be grown and make intensive soil conservation and management necessary, with only occasional cropping possible.
- I agree with the findings from the HLM soil and LUC assessment.

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<sup>&</sup>lt;sup>2</sup> NPS-HPL, clause 4.5(7).

Attachment 4(c) – Soil Information Memorandum to KFO's Form 5 Submission dated 21 October 2022.

### **CURRENT USE**

- 26 The Site consists of rural production-zoned properties, with a combined title area of 199.0 ha. The effective productive area for pastoral grazing is approximately 146.2 ha, with the farm titles amalgamated to form a single productive unit.
- 27 The Site is currently operated as a mixed farming unit primarily used for dairy grazing and beef finishing, with a rotational maize cropping regime over summer for silage. Pasture species include ryegrass, clover, and areas dominated by kikuyu. There is good quality fencing, farm races and stock water reticulation.
- 28 The site boundaries include the Waipekakoura River to the north and east, State Highway 10 to the west, the Bay of Islands golf course to the southeast and dairy farmland to the southwest.
- 29 Historical land use for the Site was dairy farming. It is uncertain when dairy farming stopped, but the dairy sheds and infrastructure are now in poor condition and unsuitable for supply. There is no effluent consent, and the effluent system was not compliant. Therefore, significant infrastructure upgrades would be required to convert this back into dairy.

### LAND USE POTENTIAL – THE SITE'S PRODUCTIVE CAPACITY

- 30 I have assessed the Site's productive capacity to understand its highest and best use for land-based primary production. I believe that the best use of the Site is its current use, which is a moderately sized drystock operation.
- 31 In terms of the findings of this assessment, I consider:
  - (a) The investment required into alternative options will be unrealistic with uncertainty and risk of poor performance given the physical resource constraints.
  - (b) The soil and land resource constraints limit the versatility of the Site. The wet and heavy soils also provide moderate to low pasture production which are challenging to manage.
  - (c) The flood risk for the Site also prevents investment into capital or permanent cropping.

- (d) I do not believe emerging ag-tech will enable this Site to become more versatile. GPS collars on stock could assist with the flood risk and on-off grazing, where stock can be moved and geo fenced away from high-risk areas. Off-paddock infrastructure and lighter stock classes could assist during winter and wet periods to prevent pasture, soil damage and animal welfare. I do not consider that these would improve the performance enough to become economically viable.
- 32 Due to the above constraints, I believe that the highest and best productive use for the Site for land-based primary production (or the Sites productive capacity) is drystock grazing.
- 33 When assessing the highest and best use of land-based primary production (or optimised land use) of a property, I take into account a range of considerations, including but not limited to, site physical analysis; economic viability; market analysis; environmental and sustainability; labour and skillset considerations and legal and regulatory compliance.
- 34 In my opinion, while a drystock operation is a form of land-based primary production, it is not considered a land class that is reliant or primarily associated with what is defined as HPL. This operation is better suited to rolling and hill country land, which is both much more affordable and offers significantly larger scale.
- 35 As outlined in the AgFirst NPS-HPL report (Section 6.1) drystock farms are typically valued at \$15,000 - \$30,000 per ha for good contour and a high performing farm.

### ANALYSIS OF ECONOMIC COSTS

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- 36 I have undertaken an economic analysis for the Site, based on the productive capacity, to inform the farm profitability and the economic cost and benefit for rezoning into urban use.
- 37 I have referenced a paper published in the NZIPIM journal that describes economic viability.<sup>4</sup> To be economically viable, the farm business needs to be sufficient to cover:

Journeaux – Definition of Farm Economic Viability <https://www.nzares.org.nz/doc/2024/Contributed/Journeaux%20-%20Definition%20of%20Farm%20Economic%20Viability.pdf>

- (a) Operating costs, e.g., wages, animal health, fertiliser, repairs and maintenance, etc.
- (b) Fixed costs such as rates, insurance, and administration.
- (c) Depreciation cost.
- (d) A surplus that is sufficient for:
  - (i) Debt servicing and debt repayment or an appropriate return on the capital investment if there is little or no debt, or the lease cost if the property is not owned by the operator.
  - (ii) Ongoing maintenance and development of the farm and the business.
- 38 I agree that the farming business needs to produce a return on investment and/or adequate debt servicing, or the cost of leasing the property. At least one of these will be an essential requirement of any economically viable enterprise. A viable farming operation in the real world must be one that an objectively reasonable person would choose to undertake.
- 39 The key findings of the economic analysis for the Site are:
  - (a) I have used the Beef and Lamb New Zealand (B+LNZ) data for a Northern North Island Class 5 finishing farm.<sup>5</sup> The forecasted economic farm surplus (EFS) is estimated as being \$818 per ha. In other words, this means the farm may have an operational profit, but there are fixed costs associated with owning and operating a farming business that need to be considered.
  - (b) The EFS is a standardised methodology of determining the profitability of a farming operation. However, as Journeaux explains, this is not the same as economic viability.<sup>6</sup>
  - (c) Under the optimal land use as a livestock operation with the total effective area, this provides a combined EFS of \$119,036.

<sup>&</sup>lt;sup>5</sup> Beef+LambNZ release an economic farm survey every year. I have selected the Northen North Island Class 5 Finishing as a baseline. This is the highest performing farm system with easy contour and the highest stocking rate. Other survey results are for Hard Hill Country, Hill Country and All Classes.

<sup>&</sup>lt;sup>6</sup> Journeaux – Definition of Farm Economic Viability <https://www.nzares.org.nz/doc/2024/Contributed/Journeaux%20-%20Definition%20of%20Farm%20Economic%20Viability.pdf>

- (d) Property information for rates and land value have been used as total annual liabilities for the Site.
- (e) When accounting for the total properties liabilities (rates and serviceability of the capital value of the land), the Site and individual properties are not economically viable. The net return is an annualised loss of \$119,873. At an individual property level, these losses are \$63,139, \$42,806 and \$13,929.
- (f) A long-term (30 year) average interest rate of 7% has been used and a nominal 30% debt loading has been assumed (70% equity), which is a conservative level for drystock farms. This is detailed further in Section 6.3 of the AgFirst NPS-HPL Report.
- 40 Given the above conclusions regarding productive capacity and economic viability, I do not consider that the removal of the Subject Site will have an impact on the district in terms of:
  - (a) Loss of productive capacity; and
  - (b) Revenue from land-based primary production.

# COMPARATIVE ANALYSIS OF OTHER REASONABLY PRACTICABLE AND FEASIBLE OPTIONS

- 41 As part of my assessment, I have looked at other Rural zoned land for residential rezoning in the Kerikeri and Waipapa vicinity. These options have been provided by planners, economists and those seeking rezoning as being potential options to provide development capacity for the expected growth demands of Kerikeri and Waipapa and achieve a wellfunctioning environment.
- 42 These alternative areas include the expansion of the adjoining land to the south of the Site (**Southern Site**), the expansion of the Waipapa township to the west of the Site (**Western Site**), and a site on the Sotheastern fringe of Kerikeri (**Southeastern Site**). These alternative Sites are shown in Figure 12 of the AgFirst NPS-HPL Report.
- 43 For this comparative assessment I have considered a range of characteristics, which are relevant to the relative productive capacity, including:
  - (a) size of growth and expansion opportunity;

- (b) current land use and highest and best use;
- (c) surrounding land use;
- (d) NZLRI LUC classification, soil characteristics, and drainage;
- (e) constraints with regard to productive capacity; and
- (f) potential economic baseline.
- 44 The soils and land for the Southern Site are similar to those of the Site, sharing the same LUC units and soils, with similar topography. Given that the current land use is dairy farming, the potential profitability for the Southern Site on a per-hectare basis is higher than the Site.
- 45 Continued operation of dairy farming for the Southern Site is likely the highest and best use of the land, as the presence of dairy infrastructure are already in place.
- 46 The soils and land LUC for the Western Site are similar to the Site. However, the Western Site is located beside what appears from aerial imagery to be a concentrated area of horticulture to the south of the boundary, and a large-scale dairy farm with upgraded infrastructure on the western boundary. The Western Site could facilitate growth for both of these industries.
- 47 I believe that the highest and best use for the Western Site would be drystock and dairy support land, with some land available for arable cropping.
- 48 The soils for the Southeastern Site have moderate limitations to productive uses. The value of the property exceeds its ability to maintain viability from its current use as a drystock operation. However, given the proximity to high value horticulture, the low lying areas to the west could elevate the land use capability.
- 49 Given the constraints identified in this evidence and within the AgFirst NPS-HPL Report, and a comparison against alternative options, it is evident that the Site has a lower relative productive capacity. Therefore, I believe that the re-zoning of the Site meets the requirements of Clause 3.6(4)(b) relevant to my expertise of the NPS-HPL insofar as there are no other reasonably practicable and feasible options which are better suited in terms of impacts on productive land for providing additional urban development capacity in Kerikeri and Waipapa.

### CONCLUSION

- 50 I have assessed the Site against the provisions of clause 3.6(4) of the NPS-HPL for rezoning rural land into urban use. This includes 163.1 ha of land that meets the transitional definition of HPL.
- 51 To provide a robust assessment, I have identified the highest and best productive use for the Site, which I consider to be drystock grazing. This is due to the physical and economical constraints outlined in this evidence and within the NPS-HPL Report.
- 52 The operation shows a loss of annualised profitability when accounting for the fixed land costs. This will help inform other experts as to the economic costs and benefits associated with zoning the land for urban purposes. From a HPL and economic perspective, the loss of the Site for land-based primary production will have minimal effects.
- 53 I have undertaken an assessment which has compared the Site with other options for providing sufficient development capacity. In my opinion, there are no other reasonably practical / feasible options for providing the required development capacity in Kerikeri-Waipapa. Rezoning the Site for urban use is the most appropriate option for meeting the required development capacity.
- 54 My opinion is that the proposal satisfies the requirements within my expertise of the NPS-HPL (clause 3.6(4)(b) and in part (c)).

Jeremy Hunt 13 June 2025 Kiwi Fresh Orange Company Limited (Sub #554) Evidence in Chief – Jeremy Hunt (Rural Productivity) Topic 15D

APPENDIX A – Kiwifresh Orange Company NPS-HPL Productivity Assessment – AgFirst 2025



Leading a smarter, sustainable, high performing primary sector

# Kerikeri-Waipapa Development NPS-HPL Assessment

Prepared for Kiwi Fresh Orange Company Limited

> Branden Darlow and Jeremy Hunt June 2025

# **Document Quality Assurance**

| Prepared by:          | Branden Darlow MNZIPIM<br>Agribusiness Consultant             | - AF   |
|-----------------------|---|--------|
| Reviewed by:          | Jeremy Hunt<br>B.Sc (Env), MNZIPIM<br>Agribusiness Consultant | (FFTQ) |
| Approved for release: | Jeremy Hunt<br>B.Sc (Env), MNZIPIM<br>AgFirst Director        | (FFTQ) |
| Status:               | Final   |        |
| Date:                 | 10 June 2025  |        |

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# 1.0 Executive Summary

Kiwi Fresh Orange Company Limited (**the Applicant**) has lodged a comprehensive submission to the Proposed Far North District Plan review seeking urban zoning (**Submission**) for an area of land to the northwest of the Kerikeri township, the property is located along State Highway 10. The Submission area encompasses approximately 199.0 hectares with multiple landowners (**Subject Site**). The Subject Site is zoned Rural Production under the Proposed Far North District Council District Plan review (**FNDC**)<sup>1</sup>.

AgFirst Waikato (2016) Ltd has assessed the Subject Site against the National Policy Statement – Highly Productive Land (**NPS-HPL**). This relates to an assessment of the Subject Site against the circumstances in which the rezoning may be undertaken as set out in the NPS-HPL.

The Subject Site is a 199.0 ha rural production-zoned property near the Kerikeri River, used for dairy grazing, beef finishing, and rotational maize cropping. The land is generally flat and low-lying, with poorly drained soils, a high-water table, steep areas, and a high flood hazard overlay. These physical constraints limit its suitability for intensive land uses such as arable farming or dairy without significant infrastructure upgrades.

Under the New Zealand Land Resource Inventory (**NZLRI**), the majority of the Subject Site is classified as Land Use Capability (**LUC**) 3, which under the transitional definition of the NPS-HPL is defined as Highly Productive Land (**HPL**). A detailed site visit and farm-scale LUC mapping have confirmed that the extent of HPL on the Subject Site is significantly less than indicated by NZLRI maps, much of which has moderate to significant limitations, including wetness, slope, erosion risk, and poor drainage.

The majority of the Subject Site has reduced productive potential, and 53 ha is classified as non-productive, with the presence of a large wetland and bush area. AgFirst concludes that while maize is currently grown, the soils are unsuitable for continuous cropping or intensive land uses due to high water tables, poor drainage, and structural vulnerability.

Flood hazard mapping further restricts viable development, and while the site was historically used for dairying, it lacks the infrastructure and environmental consents for reconversion. Given the combined soil, slope, and flood risk constraints, the most suitable and sustainable land use for the Subject Site is dry stock grazing, rather than horticulture, arable, or dairy farming.

The key limitations for land-based primary production and versatility on the Subject Site are:

- Lack of contiguous areas of HPL soils
- Flood hazard risk
- Poor draining soils across the majority of the Subject Site (particularly on the flat areas)
- Economic viability

In order to meet the requirements of the NPS-HPL, AgFirst has assessed alternative options for the expansion of urban land in Kerikeri and Waipapa to meet growth requirements. These areas have been identified by economists and planners as required by Clause 3.6 to

<sup>&</sup>lt;sup>1</sup> Proposed District Plan

achieve sufficient development capacity. This includes consideration of whether the alternative options would result in the loss of soils and HPL, which has a relatively lower productive capacity than the Subject Site. Given the constraints identified, AgFirst believes that the re-zoning of the Subject Site, from a land-based primary production perspective, would result in the lowest loss of productive capacity of all the reasonably practicable and feasible options. There are no other reasonably practicable and feasible options for locations that would provide for the urban growth of Kerikeri and Waipapa that would result in greater protection of HPL for land-based primary production.

AgFirst has also assessed the costs of allowing the proposed urban rezoning from Rural to urban in terms of the loss of HPL for land-based primary production to inform the assessment that is required under Clause 3.6(4)(c) of the NPS-HPL. The productive nature of the Subject Site is constrained by the soils, land use options and economic viability. AgFirst considers that the loss of the well below average productivity from the Subject Site will not impact the district's production, and the rezoning of the land into urban would not cause any fragmentation or further disruption of additional HPL.

# 2.0 Background and Property Description

Kiwi Fresh Orange Company Limited (**the Applicant**) is seeking rezoning of rural land to urban via a comprehensive submission to the Proposed District Plan review (**Submission**) for an area of land to the northwest of the Kerikeri township, the property is located along State Highway 10. The Submission area encompasses approximately 199.0 hectares with the landownership being held primarily in two entities – Kiwi Fresh Orange Company Limited (Part Lot 2 DP41113, Part Lot 6 DP 6704 and Lot 2 DP 76850), Brownlie Brothers Limited (Part Lot 2 DP 89875) and Cole James Investments Limited (Lot 1 DP 333643) (**Subject Site**). The Subject Site is located within the Rural Production Zone under the Proposed Far North District Council (**FNDC**)<sup>2</sup>. The Subject Site in relation to other land use zones in the Kerikeri and Waipapa townships are presented in Figure 1.

The Submission request seeks to re-zone 199.0 hectares (approx.) of rural production zoned land within the Kerikeri and Waipapa townships. The proposal intends to re-zone the Subject Site to the following:

- (i) General Residential zone
- (ii) Mixed Use zone
- (iii) Natural Open Space

The purpose of the Submission is to:

- Provide additional urban zoned land as a natural extension of the Kerikeri and Waipapa townships, for residential and supporting business activities.
- Support the growth of the Kerikeri and Waipapa townships and ensure that there is sufficient land supply to provide choices and maintain affordability.
- Provide a centralised expansion of the Kerikeri and Waipapa townships.

The proposed plan of the Submission area is presented in Figure 2.

The Subject Site is currently utilised for pastoral grazing and some rotational maize cropping.

The soils mapped at the Subject Site are classified under the New Zealand Land Resource Inventory (**NZLRI**) as Land Use Classification (**LUC**) 3w2, 3s2, and 4e2. Land that is zoned rural production and LUC 1-3 qualifies as Highly Productive Land (**HPL**) and is subject to the National Policy Statement for Highly Productive Land (**NPS-HPL**).

AgFirst Waikato (2016) Ltd (**AgFirst**) has been engaged by the Applicant to provide an assessment of the Subject Site against the NPS-HPL. This relates to an assessment on whether it is considered it meets the exemptions relating to productive capacity, land-based primary production and highly productive land as set out in Section 3.6 of the NPS-HPL.

AgFirst is a suitably qualified agribusiness consultancy that has a wealth of experience in assessments relating to productive capacity, primary production, and soil versatility.

<sup>&</sup>lt;sup>2</sup> Proposed District Plan

AgFirst visited the property on the 30th of May 2025.

AgFirst has assessed alternative options for the expansion of urban land around Kerikeri and Waipapa townships to understand their productive capacity. This report should be read in conjunction with other expert reports on this matter, including the planning and economic analyses. AgFirst has also assessed the costs of allowing the proposed rezoning from rural production to urban in terms of the loss of HPL for land-based primary production. These assessments are relevant considerations under Clause 3.6(4)(b) and (c) of the NPS-HPL.

The Subject Site and title boundaries are identified in Figure 3. The FNDC Zoning and the Structure Plan of the Subject Site are shown in Figures 1 and 2, respectively.



Figure 1: Submission area and District Planning Zones

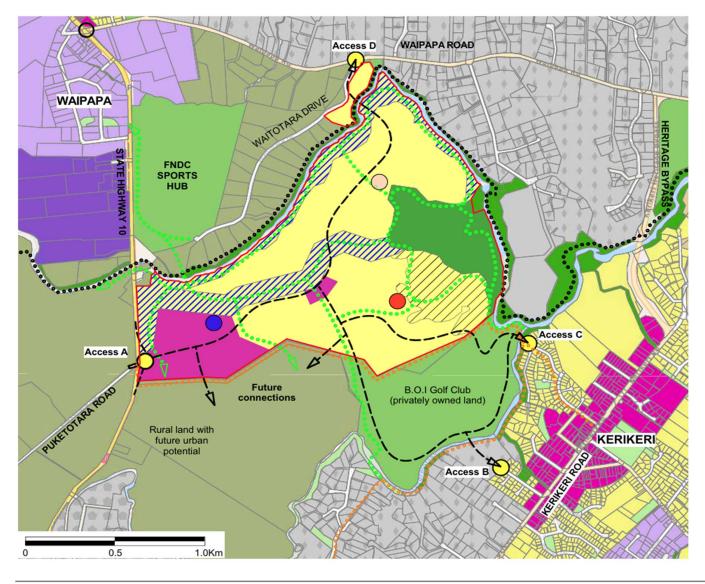




Figure 2: Structure Plan of the Submission area

# 2.1 Site Description

The Subject Site consists of rural production-zoned properties as detailed above, with a combined title area of 199.0 ha. The site and its surrounding land, bordered by the Kerikeri River and the Puketotara Stream, is a low-lying, mostly flat terrace landform elevated approximately 70 m above sea level. This landform extends across State Highway 10 in the western direction. The soils are generally alluvial soils with some volcanic clays. Most of this land is identified by the Northland Regional Council as being in the flood zone, given its low-lying flat nature and watercourse spill areas.

The land use currently consists of grazing and rotational maize cropping. The site boundaries include the Kerikeri River to the north and east, State Highway 10 to the west, and the Kerikeri golf course to the southeast. The southern boundary property is currently a dairy farm, with drystock farming to the west across State Highway 10. Kerikeri township is beyond the golf course and river to the southeast. Waipapa is beyond the river to the west/northwest.

The land surrounding the subject site comprises many land uses, with mixed rural residential and residential housing areas following the Kerikeri River to the south, east and north and denser urban mixed use to the southeast and northwest of the subject site, being Kerikeri township, and Waipapa townships. There is also a prevalence of established horticultural blocks in the wider area, surrounding Waipapa and Kerikeri.

The location of these individual titles relating to the Subject Site is shown in Figure 3 and summarised in Table 1 below.

| Zone             | Property Description Area (ha) |        |  |
|------------------|--------------------------------|--------|--|
|                  | Pt Lot 6 DP 6704               | 0.34   |  |
| Rural Production | Lot 1 DP 333643                | 3.38   |  |
|                  | Pt Lot 2 DP 89875              | 92.79  |  |
|                  | Lot 2 DP 76850                 | 102.51 |  |
|                  | Total Area                     | 199.02 |  |

Table 1: Description of Parcels within the Subject Site<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> Property and Boundaries



Figure 3: Current titles of Subject Site

# 2.2 Current Land Use

The Subject Site is currently operated as an amalgamated unit with mixed farm systems primarily used for dairy grazing and beef finishing, with a rotational maize cropping regime over summer for silage. Pasture species include ryegrass, clover, and areas dominated by kikuyu. The total productive area of the combined farm to the south of the Kerikeri River is estimated as being 142.4 ha. There is approximately 3.2 ha of land available for productive use on the property to the north of the Kerikeri River. This provides a total farmable area of approximately 145.6 ha within the Subject Site.

Crop yield data is not available, but indicative industry benchmarks suggest potential yields of 18–22 tDM/ha for maize silage, under 10 tDM/ha for kikuyu, and up to 11 tDM/ha for ryegrass-based pasture, dependent on management inputs. The Subject Site is not irrigated and is reliant solely on rainfall, which in the Kerikeri region is typically 1,134 mm annually.

From an agronomic perspective, the highest and best use of the Subject Site for land-based primary production is continued pastoral use, which is beef finishing and dairy grazing. The soils are unsuitable for intensive dairy without investment in off-paddock infrastructure or arable use due to their heavy clay composition and poor drainage characteristics. Converting the land to dairy production would require significant capital expenditure, which is unlikely to be economically viable (as detailed in Section 6), as well as consents for effluent and the intensification of land use. Soil auger observations show consistent layers of heavy clay from 25 cm to beyond 80 cm depth, with the water table observed at around 80 cm in some locations, reinforcing drainage and wetness limitations and a high-water table.

Grazing productivity within the Subject Site is considered moderate, while arable potential is limited due to soil wetness. There are no anticipated issues for fragmentation expected from the removal of this site from productive use, as the only adjoining property that is in land-based primary production is the dairy farm to the south. This dairy farm is operated independently, and it is unlikely given the size of the dairy shed and infrastructure that the Subject Site could be amalgamated (without significant infrastructure upgrades) to form a single productive unit. All other boundaries have physical separation, as described in Section 2.1.

Site limitations include wetness, poorly drained soils, slope constraints, particularly on the vegetated eastern slopes, low-lying gullies with high weed burdens and limited productivity and a flood overlay. Waterways are present and are fenced as required by the National Environmental Standards for Freshwater (**NES-FW**). Some of the surrounding areas have been subjected to fragmentation for residential and lifestyle development.

The farm infrastructure includes two derelict dairy sheds and five ancillary sheds, along with two stock yards. The dairy sheds are not fit for active dairy use due to their small size, age, and lack of effluent systems, though the ancillary sheds are serviceable for equipment and silage and hay storage. Races are in adequate condition, and fencing is generally functional. Water is likely sourced from a bore supplying three storage tanks near the southern dairy shed. There is no effluent infrastructure present on site, nor an effluent consent. While this not a requirement for drystock, it would be a constraint for returning to dairy farming.

# 3.0 Regulatory Framework

### 3.1 National Policy Statement for Highly Productive Land

In September 2022, the Ministry for the Environment (**MfE**) and the Ministry for Primary Industries (**MPI**) released the NPS-HPL. The objective of the NPS-HPL is "*Highly productive land is protected for use in land-based primary production, both now and for future generations.*"

Land-based primary production means "production, from agricultural, pastoral, horticultural, or forestry activities, that is reliant on the soil resource of the land".

Productive capacity, in relation to land, means "the ability of the land to support land-based primary production over the long term, based on an assessment of:

- a. physical characteristics (such as soil type, properties, and versatility); and
- b. legal constraints (such as consent notices, local authority covenants, and easements); and
- c. the size and shape of existing and proposed land parcels".

Land which is zoned rural and which is LUC 1, 2 and 3 must be treated as HPL under Clause 3.5(7) of the NPS-HPL prior to regional mapping of HPL being undertaken, unless the land was identified for future urban development or was subject to a Council initiated or adopted plan change at the commencement date of the NPS-HPL. Those exclusions do not apply for the Subject Site.

LUC, 1, 2, or 3 land means "land identified as Land Use Capability Class 1, 2, or 3, as mapped by the New Zealand Land Resource Inventory (NZLRI) or by any more detailed mapping that uses the Land Use Capability classification".

Policy 5 of the NPS-HPL has relevance and reads: "*The urban rezoning of highly productive land is avoided, except as provided in this National Policy Statement*". Clause 3.6(4) is the relevant clause as it provides that territorial authorities that are not Tier 1 or 2 (FNDC is not Tier 1 or 2) may allow urban rezoning of highly productive land only in accordance with the matters contained within it. Clause 3.6(5) is also relevant. Those clauses are detailed below:

- d. Territorial authorities that are not Tier 1 or 2 may allow urban rezoning of highly productive land only if:
  - a) the urban zoning is required to provide sufficient development capacity to meet expected demand for housing or business land in the district; and
  - b) there are no other reasonably practicable and feasible options for providing the required development capacity; and
  - c) the environmental, social, cultural and economic benefits of rezoning outweigh the environmental, social, cultural and economic costs associated with the loss of highly productive land for land-based primary production, taking into account both tangible and intangible values.
- e. Territorial authorities must take measures to ensure that the spatial extent of any urban zone covering highly productive land is the minimum necessary to provide the

required development capacity while achieving a well-functioning urban environment.

AgFirst will address (in part) Clause 3.6(4)(b) in this report by assessing the productive capacity of the Subject Site and comparing this with additional localities surrounding Kerikeri and Waipapa that could be deemed to be 'other reasonably practicable and feasible options' for providing the required development capacity. AgFirst will also address (in part) Clause 3.6(4)(c) in relation to the costs of allowing the proposed urban rezoning of the Subject Site from Rural to urban in terms of the loss of HPL for land-based primary production.

### 3.2 Highly Productive Land

The NPS-HPL sets out a prescriptive approach for councils to identify and protect highly productive land. Until councils have given effect to the NPS-HPL, the interim is provided under Clause 3.5(7):

(7) Until a regional policy statement containing maps of highly productive land in the region is operative, each relevant territorial authority and consent authority must apply this National Policy Statement as if references to highly productive land were references to land that, at the commencement date:

(a) Is:

- (i) Zoned general rural or rural production; and
- (ii) LUC 1, 2, or 3 land; but
- (b) Is not:
  - (i) Identified for future urban development; or
  - (ii) Subject to a Council initiated, or adopted, notified plan change to rezone it from general rural production to urban or Country Living Zone.

LUC 1, 2, or 3 land is defined as LUC Classification 1, 2, or 3, as mapped by the NZLRI or by any more detailed mapping that uses the LUC classification.

# 4.0 Land and Soil Assessment

Determining and assessing the presence of high-quality soils, as defined under the LUC classification, requires consideration of a range of characteristics, in accordance with the methods described in the third edition of the LUC Survey Handbook to assess the suitability of the land for primary production. These include such characteristics as erosion, susceptibility to flooding, wetness, land aspect, and topography. Therefore, this assessment has taken the following steps to identify soils present within the Subject Site:

- Desktop assessment of LUC from the NZLRI portal
- The S-Maps are not available for this region therefore soil information has been sourced from the Northland Regional Council, which includes various soil surveys that were compiled in 1980 by J.E Fox.
- Contours derived from the LINZ, LIDAR database
- Site-specific soil survey
- Rural productivity site visit

AgFirst has assessed the productive use of the Subject Site, taking into account a range of characteristics. These were determined by the site visit and soil expert Ian Hanmore's soil resource report, which is relevant to the productive potential, including:

- Soil characteristics
- Drainage
- Flood risk mapping
- Economic limitations

This Section presents the results and outcomes from the desktop information and site-specific soil and LUC assessment.

### 4.1 Soils

The soils on the Subject Site consist of a combination of old basalt volcanic soils and terrace soils, each with distinct characteristics and management requirements. The basalt-derived soils such as those from the Okaihau, Otaha, Pungaere, and Taraire series are formed from iron- and aluminium-rich basalt lava and are typically gravelly, friable clays. These soils are highly leached, nutrient-poor, and strongly acidic, with a tendency to fix phosphate and contain subsoil layers that can be toxic to plant roots. Despite being generally free-draining, they are drought-prone and structurally fragile, making them susceptible to compaction, erosion, and degradation if overworked or grazed when dry<sup>4</sup>.

In contrast, the terrace soils such as Albany, Kamo, Kohumaru, Pakotai, Waipu, and related variants have formed on historic alluvial terraces and fans above flood levels. They range from well- to poorly drained and often contain compact subsoil pans that restrict drainage, leading to seasonal waterlogging, cracking in dry conditions, and a high risk of pugging<sup>5</sup>.

<sup>&</sup>lt;sup>4</sup> <u>soilfactsheet12finalweb.pdf</u>

<sup>&</sup>lt;sup>5</sup> soilfactsheet813finalweb.pdf

While these soils are generally more fertile than the basalt types, both groups require careful management to maintain productivity and environmental stability. Recommended strategies include subsurface drainage improvements, lime and fertiliser inputs, rotation planning, effluent management, and erosion control measures such as contour planting and vegetative stabilisation<sup>3,4</sup>.

# 4.2 Land Use Capability Classification

The LUC classification system has been used in New Zealand to help achieve sustainable land development and management of farms. The purpose of the LUC classification is to assess the suitability of the land for primary production. Determining the presence of HPL as defined under the LUC classification requires consideration of a range of characteristics. The LUC classification categorises land areas or polygons into classes, subclasses, and units according to the land's capability to sustain productive use. The LUC is based on an assessment of the physical factors (rock type, soil, slope, present type and severity of erosion, and vegetation), climate, the effects of past land use, and the potential for erosion. This is summarised in Figure 4 below.

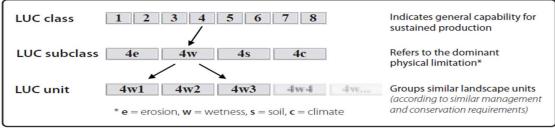


Figure 4: Components of the land use capability classification6

AgFirst has reviewed the NZLRI national database of physical land resource information for the Subject Site. This database is based on a regional-scale LUC rating of the ability of each polygon to sustain agricultural production.

The NZLRI maps are designed for use at a 1:63,000 scale and are suitable for guidance, but are not specially designed to be interpreted at a farm or paddock scale. This means 1 cm<sup>2</sup> of published map covers 36.69 ha. Following the observation guidelines, this equates to, at most, one observation per 36.69 ha and at least one observation per 146.76 ha. Therefore, the NZLRI maps should only be treated as an indicator for LUC at the Subject Site to understand the productive capacity and presence of soil constraints.

The observation guidelines are in reference to one observation site per 1 cm<sup>2</sup> of published map, with a minimum acceptable limit of one site per 4 cm<sup>2</sup> of published map according to New Zealand soil mapping protocols and guidelines (Grealish 2019).

The soils mapped at the property are classified under the NZLRI as LUC 3s2, 3w2, and LUC 4e2. Therefore, based on the NZLRI, the majority of the Subject Site is HPL (LUC 1, 2,

<sup>&</sup>lt;sup>6</sup> Lynn, I.H, Manderson, A.K, Page, M.J, Harmsworth, G.R, Eyles, G.O, Douglas, G.B, Mackay, A.D, Newsome, P.J.F. (2009). Land Use Capability Survey Handbook – a New Zealand handbook for the classification of land 3rd ed. Hamilton, AgResearch; Lincoln, Landcare Research; Lower Hutt, New Zealand. GNS Science.

or 3). The NZLRI LUC classifications for this area are presented in Figure 5 and described in Table 2 below.

| Luc Unit                       | Luc<br>Suite   | Description   | Slope  | Landform   | Management   |
|--------------------------------|--|---|--|--|--|
| 3s2<br>(87.0 ha)               | Young<br>volcanic<br>basalt<br>terrain                         | Flat to undulating slopes<br>on deeply weathered<br>basalt rocks and<br>occasional ash. Soils are<br>moderately to strongly<br>leached brown loams of<br>lower fertility, with<br>poorer drainage and<br>seasonal moisture<br>deficiencies—moderate<br>limitations for arable<br>use. | Flat to<br>undulati<br>ng (A, B),<br>0–7°                      | Basalt lava<br>terraces, low<br>domes, plains,<br>and low-angle<br>slopes near<br>scoria cones | Use contour cultivation<br>and minimum tillage.<br>Avoid structural<br>degradation,<br>overstocking, and<br>repeated stock<br>movement. Irrigation<br>may be necessary. Use<br>shelterbelts for erosion<br>and moisture control.<br>Fertility is often low to<br>moderate; high<br>phosphate retention is<br>common. |
| 3w2<br>(76.1 ha)               | Alluvial<br>and<br>estuarin<br>e plains<br>and low<br>terraces | Poorly drained flat areas<br>within floodplains, valley<br>plains, and on low<br>terraces with gley fertile<br>soils developed on<br>sedimentary and<br>volcanic alluvium.<br>Moderate wetness<br>limitation for arable use,<br>but can be effectively<br>drained.                    | Flat (A),<br>0–3°  | Floodplains,<br>plains   | Drainage and flood<br>protection required;<br>maintain drain condition<br>and streambank<br>protection; consider<br>catchment-wide<br>management; stopbanks<br>and vegetation clearance<br>in channels<br>recommended.   |
| 4e2 –<br>Non-<br>HPL<br>(36.1) | Young<br>basalt<br>volcanic<br>terrain                         | Rolling to strongly rolling<br>slopes on young basaltic<br>rock and ash. Soils are<br>strongly leached brown<br>and red loams, subject to<br>moisture deficiency in<br>summer. Moderate to<br>severe erosion risks<br>when cultivated.  | Rolling<br>to<br>strongly<br>rolling<br>(C,<br>C+D), 8–<br>20° | Rolling sides of<br>lava plains,<br>terraces, and<br>domes                                     | Use contour and<br>minimum-tillage<br>cultivation. Manage<br>erosion and runoff with<br>grassed waterways and<br>shelterbelts. Avoid bare<br>ground and overgrazing.<br>Fertiliser application<br>must be carefully timed<br>and placed due to high<br>phosphate retention.  |

Table 2: NZLRI LUC unit descriptions<sup>7</sup>

<sup>&</sup>lt;sup>7</sup>https://www.nrc.govt.nz/media/5jtn2mw4/landusecapabilityclassificationofthenorthlandregiongharmswor th.pdf



Figure 5: NZLRI Land Use Capability Classification Map for the Subject Site

# 4.3 Site Specific Mapping and LUC Assessment

The NZLRI LUC maps are not intended for farm-scale interpretation. Therefore, soil expert Ian Hanmore, of Hanmore Land Management (HLM), has been engaged by the applicant to undertake an assessment and review the LUC and soils of the Subject Site. This section presents the results and outcomes from this report. Key observations from these reports identify the following:

- The LUC assessment has been undertaken in accordance with accepted guidelines (Milne et al., 1995, and Lynn et al., 2009).
- The areas of LUC class 3 land across the Subject Site are less than those mapped by the NZLRI.
- The HLM report found that a total of 130.2 ha of land was LUC class 3, with the balance comprised of LUC units 4s 2, 6e 4, including a wetland. However, not all of the 130.5 ha of class 3 soils are considered highly versatile. LUC units 3e 1, 3w 2, and 3w 4, comprising 40.5 ha, are not considered versatile, posing moderate limitations to use. There is 14.4 ha if LUC unit 2w 2/3w 2 is present as a split unit (containing a mix of LUC 2w 2 and LUC 3w 2). HLM states that this is a mix of highly versatile and non-highly versatile soils and needs more detailed mapping at a finer scale to delineate these areas and define an exact area of these units. LUC unit 3s 2 comprises 89.7 ha and is considered versatile.
- LUC unit 3w 2 and 3w 4 land has moderate limitations to arable use, which restrict the choice of crops that can be grown and the intensity and frequency of cultivation.
- Wetness is the major limiting factor for production on the soils within the Subject Site. Poor drainage characteristics lead to prolonged periods of soil saturation, limiting crop selection and the timing of sowing. These soils are also prone to drought with limited moisture-holding capacity.
- LUC unit 4s 2 land has significant physical limitations to arable use that substantially reduce the range of crops that can be grown and make intensive soil conservation and management necessary, with only occasional cropping possible.

The revised HPL areas and LUC classification are shown in Figure 6.

The observations made by AgFirst during the site visit are consistent with the observations made by Ian Hanmore.

In addition to the soil maps, the slope map generated by the LINZ database of 1m LiDAR<sup>8</sup> portrays the slope within the Subject Site. This is presented in Figure 7, with the majority of the slopes being flat to gently undulating, with steep slopes towards the west of the Subject Site.

An overlay of the unproductive areas is presented in Figures 8 and 9 for the Subject Site. This includes dwellings, impervious surfaces, wetlands, waterways, mature vegetation, sheds, driveways, and curtilage. AgFirst have generated this map to assist with the productive capacity assessment

<sup>&</sup>lt;sup>8</sup> New Zealand LiDAR 1m DEM | LINZ Data Service

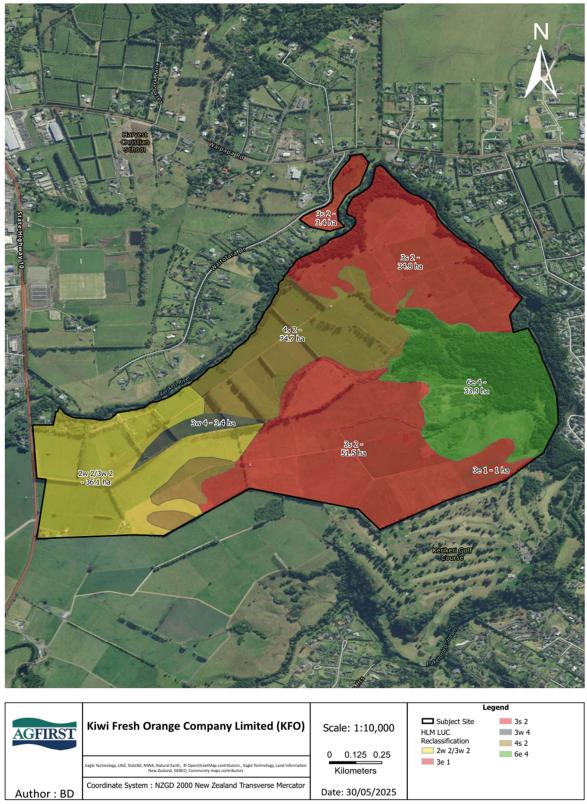


Figure 6: Farm Scale LUC assessment by HLM

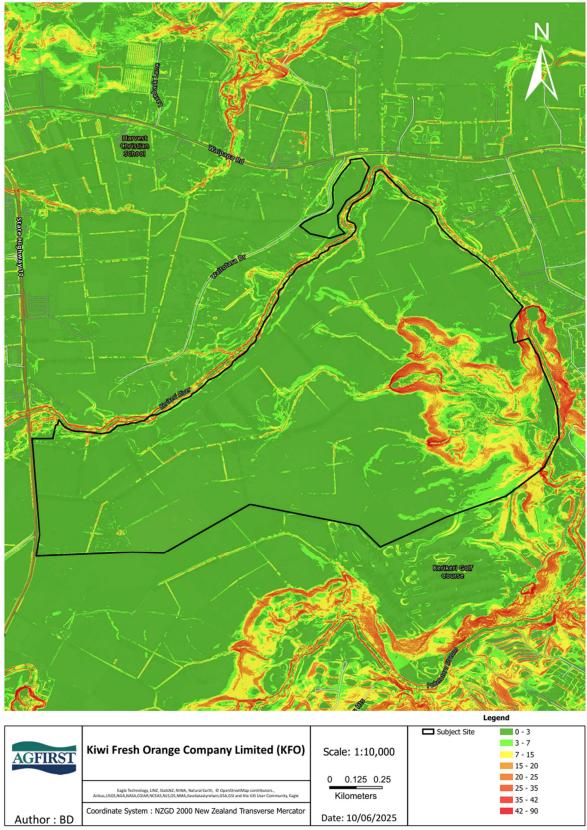


Figure 7: 1m Lidar Imagery of the Subject Site



Figure 8: Non-productive Area and Title Area on the Subject Site

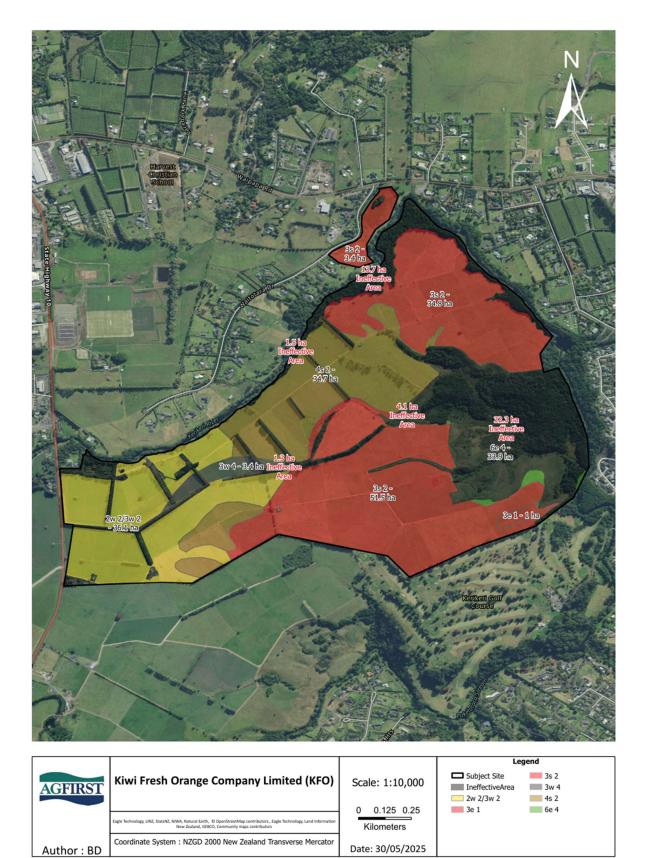


Figure 9: Total and non-productive area on revised LUC units (Map taken from the HLM soil mapping with a non-productive overlay to assist with the productive capacity assessment)

# 4.4 Land Use Capability - Summary

The site-specific soil mapping undertaken has helped determine the presence of the various soils on the Subject Site. Based on this assessment it is considered that the area of HPL is less than what is represented by the NZLRI maps.

The predominance of the Subject Site is defined as LUC 3. However, 54% of the site is subject to moderate limitations to its productive use, being slope, drainage limitations, and erosion risks. Further, the more versatile soils found including LUC unit 3s 2 and the 2w 2, are structurally vulnerable to continuous cropping and have a low tolerance to drought conditions.

Presented in Table 3 is a summary of the site-specific mapping as discussed in Section 4.3, which shows the HPL areas based on the revised classification and compares this with the NZLRI mapping.

| Land use   | NZLRI Classification area (ha) | Revised Classification area (ha) |  |  |
|------------|--------------------------------|----------------------------------|--|--|
| HPL Area   |                                |                                  |  |  |
| LUC 2 / 3  |                                | 36.1                             |  |  |
| LUC 3      | 163.1                          | 94.1                             |  |  |
|            | Non-HPL Area                   |                                  |  |  |
| LUC 4      | 36.1                           | 34.7                             |  |  |
| LUC 6      |                                | 33.9                             |  |  |
| Total area | 199.2                          | 198.8                            |  |  |

Table 3: HPL and Non-HPL areas within the Site

\* Note that the areas vary slightly from the survey areas due to measurement methods

The NZLRI unit descriptions in Table 3 describe the LUC units within the Subject Site as having moderate limitations to their use. As discussed, the regional scale NZLRI mapping is not suited for farm scale analysis. Therefore, there are other soil classifications that the HLM soil assessment has found. These include a small section of LUC 2 soils and some LUC 6 soils. The LUC 2 soils have a higher versatility, however, the boundary is not clearly defined (it has been grouped with the LUC 3). The other soils identified pose greater limitations to the potential uses of the land within the Subject Site. This information has been used to inform the highest and best use of the property for productive capacity.

# 5.0 Land Use Potential

The Subject Site consists of a combined area of 199.0 ha, including four properties, ranging from 0.34 ha to 102.5 ha. While the small isolated 3.4 ha property is separated by the Kerikeri River, the other properties could be amalgamated to form a larger productive unit, as is the current practice for production. These properties share similar traits of soils and contour, with both having constraints and soil limitations that restrict their versatility.

The Subject Site has been LUC mapped at farm scale by HLM, refining the soils defined by the broad scale of the NZLRI. The Subject Site contains approximately 130.2 ha that is LUC 3 (HPL), and 68.6 ha of additional area of less versatile land (LUC 4-6). Within these classifications is approximately 53.0 ha that is identified as being non-productive. The revised soil map has been used to determine the best use of the Subject Site with the soil limitations and productive capacity, and the productive areas available for farming. The individual property information is detailed in Table 4 below.

|            |       | New Decidentia | <b>Productive areas</b> |         |  |  |
|------------|-------|----------------|-------------------------|---------|--|--|
| LUC Unit   | Area  | Non-Productive | HPL                     | Non-HPL |  |  |
| 3s2        | 89.7  | 13.7           | 76                      | -       |  |  |
| 3w2 & 3e 1 | 40.8  | 1.3            | 39.5                    | -       |  |  |
| 4s2 & 6e 4 | 68.6  | 37.9           | -                       | 30.7    |  |  |
| Total      | 199.2 | 53.0           | 115.5                   | 30.7    |  |  |

Table 4: Areas available for productive use across the Subject Site (ha)

\* Note the areas vary slightly from the survey areas due to measurement methods

As discussed in Section 2.2, the Subject Site is currently used for two production types, maize cropping and dairy and beef grazing. AgFirst does not consider that this area is suitable for a long-term and continuous cropping regime, due to the soil limitations and long-term sustainability regarding cultivation.

The key limitations for land-based primary production and versatility on the Subject Site are:

- Wetness limitations
- Drought-prone soils
- Flood zone
- Lack of irrigation sources and infrastructure
- Strong slopes toward the Kerikeri River Reserve
- Lack of infrastructure for the likes of Dairy farming

## 5.1 Soil Limitations

While maize was identified as growing on the subject site, it is in AgFirst's opinion that this would not be sustainable as a long-term option due to the wetness limitations of the soils and high-water table. The photo below was taken of the recently sown pasture following maize harvest. Note that there had been extensive rainfall before the Site visit.



Photo 1: New grass post maize crop inundated with surface water

Land Development and Engineering (**LDE**) conducted a site analysis and determined that the soils on the Subject Site exhibited mottling and moisture from 0.5 m in depth, with saturation occurring from 1.2 m. Maize is a deep-rooted crop capable of reaching depths of 1.8m<sup>9</sup>. However, rooting barriers such as pans and high-water tables reduce the plant's ability to reach these depths. Other factors for consideration include sowing timings, as saturated soils have limitations on when cultivation and sowing practices can occur and can reduce yields<sup>10</sup>. Therefore, arable use would be best used as a rotational crop for pasture renewal purposes. Typically, arable cropping is better suited to freedraining soils, as continuous cultivation can cause structural damage to the soils, reduce the soil organic matter, which further exacerbates the soil density and reduces porosity.

The Subject Site does not lend itself to dairy, arable, horticultural, or commercial vegetable production (CVP) land uses. The wetness limitation with poorly draining soils

<sup>&</sup>lt;sup>9</sup> Kovacs et al., 1995; FAR, 2006; Grignani et al., 2007

<sup>&</sup>lt;sup>10</sup> Maize crop - DairyNZ | DairyNZ

will have an impact on some crops not surviving, while others will have reduced yields.<sup>11</sup> While the majority of the Subject Site is defined as HPL, which identifies it as being versatile for a range of productive uses, there are moderate to significant limitations to the potential uses of the site.

## 5.2 Flood Zone

Flood mapping has been undertaken for the Site by e2Environmental Ltd. The purpose of the investigation is to:

- Better understand flood risk across the Subject Site, nearby transport links, and the surrounding areas;
- Identify areas that will need to be excluded from development due to flood hazard;
- Conceptualise design opportunities to reduce the area of land subject to flood hazard, and can therefore be freed up for development.

Summarised below are the existing flood risk for the Site.

"Floodwaters overtop SH10 and sheet flow across the first 300-500 m before converging in a wide overland flow path. Flood depths and flow velocities are notably higher in this overland flow path than across the wider on-site floodplain."

Presented in Figure 10 is flood modelling for the Subject Site, which shows the extent of the flooded areas that spill out from the Kerikeri River and flow across the Site. This becomes an important consideration when undertaking due diligence on land use types, and investment in costly infrastructure becomes a risk, particularly when additional constraints further limit the versatility and productivity. The existing flood hazard on the site, therefore, limits the land available for investment in infrastructure and rural productivity in its current state. This further emphasised the highest and best land use being dry stock farming.

<sup>&</sup>lt;sup>11</sup> Lynn, I.H, Manderson, A.K, Page, M.J, Harmsworth, G.R, Eyles, G.O, Douglas, G.B, Mackay, A.D, Newsome, P.J.F. (2009). Land Use Capability Survey Handbook – a New Zealand handbook for the classification of land 3rd ed. Hamilton, AgResearch; Lincoln, Landcare Research; Lower Hutt, New Zealand. GNS Science.

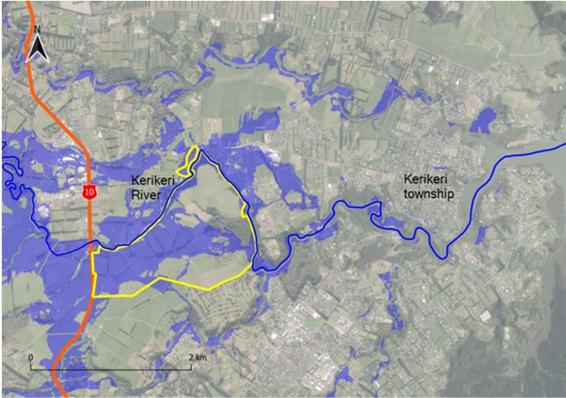


Figure 10: Location of the applicant's land (highlighted in yellow), and extent of inundation in 1% AEP +CC flood event (NRC modelling)

#### 5.3 Potential for Dairy

Two properties within the Subject Site were once used as dairy farms, with both having redundant cowsheds. However, there is no effluent infrastructure on either of the properties, and the cowsheds are old and likely not at the current industry standards to supply milk. Although the National Environmental Standards for Freshwater (NES - FW) regulations regarding land use intensification have lapsed, the Northland Regional Council will still require a consent to convert the current system into a dairy farm<sup>12</sup>. It is unknown the reason why the farms were converted out of dairy farming. However, the soils are evidently wet, which for farms lacking off-paddock infrastructure would pose challenges over winter and when flooding occurs. While the requirement to obtain resource consents to convert the land to dairy would only be a partial barrier to entry, AgFirst considers that the capital investment outlays required would create a significant barrier to this being a reasonably practicable consideration. Required capital infrastructure could include: new cowshed and yards, off-paddock facilities (herd home/feedpad), in-shed meal feeding for better feed utilisation, effluent system (lined storage pond, pumps, irrigator, reticulation) and artificial drainage. The return on investment would not justify the capital outlay.

#### 5.4 Suitable Land Use

Essentially, more intensive and higher land uses (such as arable, horticulture, and commercial vegetable operations) require free-draining soils (or soils without rooting

<sup>&</sup>lt;sup>12</sup> https://file-au.clickdimensions.com/dairynzconz-agbsb/files/northlandefwsummaryfinal.pdf?utm

barriers) and relatively flat land with freshwater irrigation for some operations. The greater the wetness limitation, the greater the impact on yield and crop survival, and cultivation timing. Free-draining and flat soils are not present across the Subject Site, therefore, the versatility is vastly reduced. AgFirst does not consider that dairy, arable, horticulture, or CVP is a reasonably practicable option for the Site.

Due to the above constraints, AgFirst believes that the highest and best productive use for the Subject Site for land-based primary production is drystock grazing. When assessing the highest and best use of land-based primary production (or optimised land use) of a property, we take into account a range of considerations, these include but are not limited to: site physical analysis; economic viability; market analysis; environmental and sustainability; labour and skillset considerations and legal and regulatory compliance.

# 6.0 Production and Financial

The following evaluation has been based on industry information for drystock operations to demonstrate the performance (production and economic) of the Subject Site. An economic analysis has been undertaken for others to consider the economic costs associated with the loss of the land for land-based primary production. This can form the basis for the comparison of the economic costs and benefits of the rezoning.

#### 6.1 Productivity Assessment

It has been established that the highest and best use for the Subject Site, given the constraints identified, would be drystock farming. This assessment is inclusive of all productive areas, non-HPL areas, as class 4 land is still considered versatile for drystock farming. The only area that has been removed or deemed unproductive for the economic assessment is the non-productive non-pastured areas. Operators will need to consider the pugging vulnerability for heavier stock classes, as well as planning for prolonged dry periods.

The average class 5 finishing farm within the Northern North Island is approximately 275 ha. With the amalgamated productive areas (inclusive of non-HPL) within the Subject Site being 145.6 ha, it would be considered a moderate to small-scale drystock operation. The two adjoining properties have larger productive areas, thus reducing the debt servicing on a per-hectare basis. However, the 3.3 ha property north of the Waipekakoura River is small and has a high land-only value of \$193,750 per productive ha, increasing the required EFS/ha exponentially.

A comparison with a typical drystock farm with easy contour would be valued at \$15,000 - \$30,000 per ha, whereas Lot 2 Deposited Plan 76850, and Lot 2 Deposited Plan 89875 are valued at \$56,191 and \$70,133 per productive ha, respectively. The land has been valued not on the land-based primary production or quality of the soil and land, but on the location of the property and its proximity to Kerikeri and Waipapa townships. With rapidly rising input costs, the returns for marginal farming operations will be further reduced.

The following financial review has been based on industry information for drystock farms to demonstrate the economic situation for the likely production types suited to the Subject Site.

### 6.2 Economic Baseline

The following production and financial analysis are for the productive area of the Subject Site to be used as a drystock operation. This land use is considered by AgFirst as being the highest and best use of the productive area, taking into consideration all the productive land. To understand the profit that an average efficient operator could generate, AgFirst has used the Beef and Lamb New Zealand (B+LNZ) data for a Northern North Island Class 5 finishing farm<sup>13</sup>. This data is presented in Table 5, which includes a five-year average. The Economic Farm Surplus (EFS) is estimated as being \$817.55 per

<sup>&</sup>lt;sup>13</sup> Sheep & beef farm survey | Beef + Lamb New Zealand

ha for2019-2024. While the Subject Site is smaller (145.6 ha productive) than the B+LNZ survey farm (5-year average 275 ha), it is a conservative comparison.

Note that this EFS excludes the individual property rates, managerial salaries, interest on the property and assets, and any rental return. Considering the high rates across the Subject Site, the profit from the farming business would not be viable.

|      | Sheep and Beef Farm Su         | -             |          | lysis           |             |             |             |
|------|--------------------------------|---------------|----------|-----------------|-------------|-------------|-------------|
|      | Class 5 N.I. Finishing - North | land-Waikato- | BoP      |                 |             |             |             |
|      |                                |               |          |                 |             | Provisional |             |
|      |                                | 2019-20       | 2020-21  | 2021-22         | 2022-23     | 2023-24     | 5 yr averag |
|      | Revenue Per Hectare            |               |          |                 |             |             |             |
| 1    | Wool                           | 12.3          | 9.22     | 18.24           | 15.62       | 24.84       | 16.0        |
| 2    | Sheep                          | 258.35        | 213.49   | 364.17          | 421.2       | 404.4       | 332.3       |
| 3    | Cattle                         | 1346.73       | 1164.28  | 1326.02         | 1133.2      | 952.52      |             |
| 4    | Dairy Grazing                  | 84.62         | 116.41   | 118.13          | 117.52      | 150.63      | 117.4       |
| 5    | Deer + Velvet                  | -0.82         | -0.18    | 0.12            | -0.05       |             | -0.2        |
| 6    | Goat + Fibre                   |               |          |                 |             |             |             |
| 7    | Cash Crop                      | 420.11        | 419.45   | 395.12          | 260.59      | 346.54      | 368.3       |
|      | Other                          | 58.63         | 101.61   | 53.46           | 95.92       | 71.07       | 76.1        |
|      | Total Gross Revenue            | 2179.93       | 2024.29  | 2275.26         | 2044        | 1950        | 2094.7      |
|      |                                |               |          |                 |             |             |             |
| 10   | Expenditure Per Hectare        | 100.00        | 164.26   | 162.01          | 174.04      | 100.00      | 100.0       |
|      | Wages                          | 129.33        | 154.35   | 163.91          | 174.04      | 182.39      |             |
|      | Animal Health                  | 53.41         | 59.95    | 71.38           | 61.68       | 68.03       | 02.0        |
|      | Weed & Pest Control            | 18.67         | 16.7     | 29.71           | 26.26       | 24.21       | 23.1        |
|      | Shearing Expenses              | 14.48         | 16.85    | 17.93           | 28.03       | 34.55       |             |
|      | Fertiliser                     | 255.35        | 238.41   | 296.08          | 316.67      | 354.4       | 292.1       |
|      | Lime                           | 19            | 21.91    | 20.77           | 12.72       | 23.9        | 19.6        |
|      | Seeds                          | 56.24         | 88.42    | 63.66           | 50.36       | 50.94       | 61.9        |
|      | Vehicle Expenses               | 52.72         | 51.66    | 58.79           | 53.52       | 54.4        | 0=          |
|      | Fuel                           | 39.32         | 43.27    | 55.43           | 58.65       | 59.12       | 51.1        |
|      | Electricity                    | 11.7          | 13.91    | 13.83           | 11.61       | 11.95       | 12.6        |
|      | Feed & Grazing                 | 110.46        | 106.8    | 118.67          | 72.84       | 62.89       | 94.3        |
| 21   | Dog expenses                   | 9.36          | 12.45    | 11.01           | 9.25        |             | 10.5        |
| 22   | Irrigation Charges             |               |          |                 |             |             |             |
| 23   | Cultivation & Sowing           | 33.57         | 34.54    | 28.78           | 23.94       | 24.53       | 29.0        |
| 24   | Cash Crop Expenses             | 35.93         | 50.38    | 30.96           | 15.55       | 16.35       | 29.8        |
| 25   | Repairs & Maintenance          | 109.4         | 146.91   | 145.02          | 119.46      | 119.5       | 128.0       |
| 26   | Cartage                        | 31.19         | 41.18    | 42.66           | 46.34       | 47.17       | 41.7        |
| 27   | Administration Expenses        | 36.65         | 46.61    | 51.06           | 45.56       | 45.6        | 45.1        |
| 28   | Total Working Expenses         | 1016.8        | 1144.3   | 1219.65         | 1126.47     | 1179.94     | 1137.4      |
| 29   | Insurance                      | 23.49         | 25.18    | 27.46           | 27.01       | 28.62       | 26.3        |
|      | ACC Levies                     | 5.78          | 15.98    | 10.62           | 8.84        | 9.43        | 20.0        |
|      | Rates                          | 0.1.0         |          | at a property e |             |             | 10.1        |
|      | Managerial Salaries            |               | included |                 |             | ilyolo      |             |
|      | Interest                       |               | Included | at a property e | conomic and | lycie       |             |
|      | Rent                           |               | included | at a property c |             | ilyoio      |             |
|      | Total Standing Charges         | 29.27         | 41.16    | 38.08           | 35.85       | 38.05       | 26.4        |
|      | Total Cash Expenditure         | 1046.07       | 1185.46  | 1257.73         | 1162.32     | 1217.99     |             |
|      | Depreciation                   | 103.18        | 119.46   | 98.59           | 100.57      | 94.34       |             |
|      | Total Farm Expenditure         | 1149.25       | 1304.92  | 1356.32         | 1262.89     | 1312.33     |             |
| - 38 |                                |               |          |                 |             |             |             |

#### Table 55: Drystock indicative budget<sup>14</sup>

14 https://beeflambnz.com/data-tools/sheep-beef-farm-survey

## 6.3 Economic Viability

The productive income for each property has been assessed at a property level and the total Subject Site. This can form the basis for the comparison of the economic costs and benefits of the rezoning. This is based on an assessment of the quality of soils and land, productive area available within each parcel, and suitability for reasonably practicable land uses. The highest and best productive system has been identified for each property (drystock) along with the productive area available for each land use. The areas suited for productive use have been multiplied by the EFS to provide an estimated income for each property.

The property information was obtained from the FNDC<sup>15</sup>, which is presented in Table 6. The property rates have been included in the property liabilities and then subtracted from the total EFS for each property.

The definition and methodology to determine economic viability were presented at the NZ Agricultural and Resource Economics Society Conference in 2024<sup>16</sup> and published in the New Zealand Institute of Primary Industry Management (NZIPIM) journal. The term "economically viable" is used to describe a project that provides an overall positive net economic contribution to society after all costs and benefits have been accounted for. When researching commercial viability, the Cambridge dictionary defines it as "the ability of a business, product, or service to compete effectively and to make a profit." Compete effectively and make a profit and identifies that we need to cover real-world and genuine costs. Only then can we determine if an operation is economically viable. This is different from having a positive gross margin, EFS, or EBITR.

To be economically viable, the farm business needs to be sufficient to cover:

- (i) Operating costs, e.g., wages, animal health, fertiliser, repairs and maintenance, etc
- (ii) Fixed costs such as rates, insurance, and administration.
- (iii) Depreciation cost
- (iv) A surplus then available that is sufficient for:
  - (a) Debt servicing and debt repayment or an appropriate return on the capital investment if there is little or no debt, or the lease cost if the property is not owned by the operator;
  - (b) Ongoing maintenance and development of the farm and the business.

Essentially, the farming business needs to produce a return on investment and/or adequate debt servicing, or the cost of leasing the property. At least one of these will be an essential requirement of any economically viable enterprise. A viable farming operation in the real world must be one that an objectively reasonable person would choose to undertake.

To remove subjectiveness, for this assessment, (i) to (iv) (a) above have been used, adopting a debt servicing allowance, to understand the economic return and viability

<sup>&</sup>lt;sup>15</sup> Rating information database | Far North District Council

<sup>&</sup>lt;sup>16</sup> Journeaux - Definition of Farm Economic Viability.pdf

from the land-based primary production for the various properties and the overall viability for the Subject Site.

In assessing the debt servicing required, the land value has been used rather than the improvement and capital value to understand the profitability required for an agricultural business to service the relevant level of debt.

Presented in Table 6 are the property/operations liabilities, which include the FNDC rates and interest for the land asset.

- Property information for rates and land valuation has been used as total annual liabilities for the properties within the Subject Site.
- Total revenue using industry values.
- A long-term (30-year) average interest rate of 7% has been used<sup>17</sup>.
- A nominal 30% debt loading has been assumed (70% equity), which is a conservative level for drystock farms.
- Note that principal repayments have not been included in the liabilities.
- The Total Subject Site economic baseline is a loss of -\$119,873 per year.
- The two larger properties will make enough profit to pay the rates, however, fail other economic tests, which includes servicing the capital of the land.
- The EFS presented in Table 6 does not include the property rates. This has been included in total property liabilities.

|                    |    |        | Optimised Land Use Areas (ha) |        |                   | _               |    | Economic Viability Test (\$) |    |                       |    |                               |     |                       |
|--------------------|----|--------|-------------------------------|--------|-------------------|-----------------|----|------------------------------|----|-----------------------|----|-------------------------------|-----|-----------------------|
| Property Ref Rates |    | Rates  | Effective                     | Arable | Non-<br>Effective | Total<br>Parcel |    | EFS for<br>Property          |    | Ratable Land<br>Value |    | Total Property<br>Liabilities |     | Economic<br>Viability |
| Lot 2 DP 76850+Pt  | \$ | 19,040 | 67.3                          |        | 35.5              | 102.8           | \$ | 55,021                       | \$ | 4,720,000             | \$ | 118,160                       | -\$ | 63,139                |
| Pt Lot 2 DP 89875  | \$ | 15,584 | 75.1                          |        | 17.7              | 92.8            | \$ | 61,398                       | \$ | 4,220,000             | \$ | 104,204                       | -\$ | 42,806                |
| Lot 1 DP 333643    | \$ | 3,525  | 3.2                           |        | 0.2               | 3.4             | \$ | 2,616                        | \$ | 620,000               | \$ | 16,545                        | -\$ | 13,929                |
| TOTAL              | \$ | 38,149 | 145.6                         | 0.0    | 53.4              | 199.0           | \$ | 119,036                      | \$ | 9,560,000             | \$ | 238,909                       | -\$ | 119,873               |

Table 66: Economic viability of the Subject Site for land-based primary production

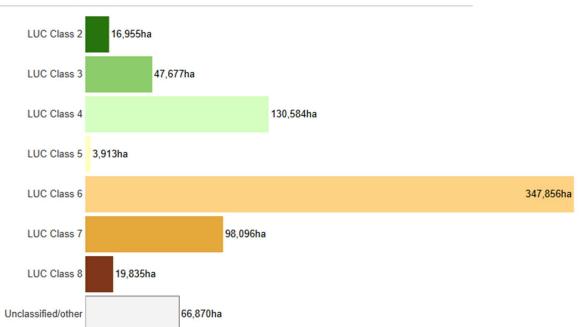
<sup>&</sup>lt;sup>17</sup> Exchange rates and Wholesale interest rates - Reserve Bank of New Zealand - Te Pūtea Matua (rbnz.govt.nz) 1993-2023 years with a 2.2% bank margin applied to the 90 bank bill monthly average yield

## 7.0 Assessment of Alternative Urban Development Options

This section provides an analysis of the potential expansion of alternative residential and mixed-use areas within Kerikeri and Waipapa townships. This is in response to Clause 3.6(4)(b) of the NPS-HPL, which requires consideration of other practicable and feasible options for providing the required development capacity.

## 7.1 Assessment of District HPL

With regards to LUC classes within the Far North District, there is an estimated 64,632 ha of HPL<sup>18</sup>, which is 8.8 % of the total area. The LUC breakdown for the district is presented in Figure 10. The total combined area of HPL within a property, according to the NZLRI, is 163.1ha, which is 0.34 % of the available HPL within the district. This area is not considered a significant proportion of lost HPL within the district, particularly as it does not meet the economic viability test for rural production. It is important to balance out the demand and need for urban rezoning and selection of appropriate areas that will have less impact and preferably consist of areas with lower productive capacity or constraints for future land-based primary production.



#### Land Use Capability

Figure 11: Summary of Land Use Classification within the Far North District

AgFirst has assessed rural land surrounding the Kerikeri and Waipapa townships with regards to productive capacity to determine whether there are any other reasonably practicable and feasible options for providing additional development capacity (i.e. are there already areas surrounding Kerikeri and Waipapa that is situated not on highly productive land or with a lower productive capacity than the Subject Site).

<sup>&</sup>lt;sup>18</sup> Manaaki Whenua – Landcare Research. Our Environment, Territorial Authorities, Far North District LUC map.

Alternative options for urban rezoning to meet the demand for Kerikeri and Waipapa have been provided by Urban Economics (UE), The Planning Collective (TPC), and input from AgFirst. These areas have been assessed against a criterion developed for reasonably practicable and feasible options within the NPS-HPL.

"The Urban Economics assessment has shown, infill housing alone is not sufficient in terms of meeting the required capacity; or appropriate for providing affordable housing at scale, or for more specialist residential development such as retirement village living. Greenfield development can better, and more efficiently, achieve the delivery of a greater variety of housing types and affordable housing options at scale. In any event the land is strategically located adjacent to the main urban area in the Far North. This land is the most practicable and feasible for providing for the short, medium and long term growth projections for the Kerikeri – Waipapa area and for this reason alone the land should be secured to provide for and enable urban growth as provided for in the NPS-HPL."

The alternative areas that have been assessed include the expansion of the Waipapa township to the west of the Subject Site (the Western Area), the adjoining land to the south of the Subject Site (the Southern Site), and a site on the Southeastern fringe of Kerikeri (the Southeastern Site). These areas are shown in Figure 12.

This comparative assessment is a desktop only analysis and has considered a range of characteristics, which are relevant to the relative productive capacity, including:

- Size of growth and expansion opportunity
- Current land use and highest and best use
- Surrounding land use
- NZLRI LUC classification, soil characteristics, and drainage
- Constraints with regard to productive capacity
- Potential economic baseline

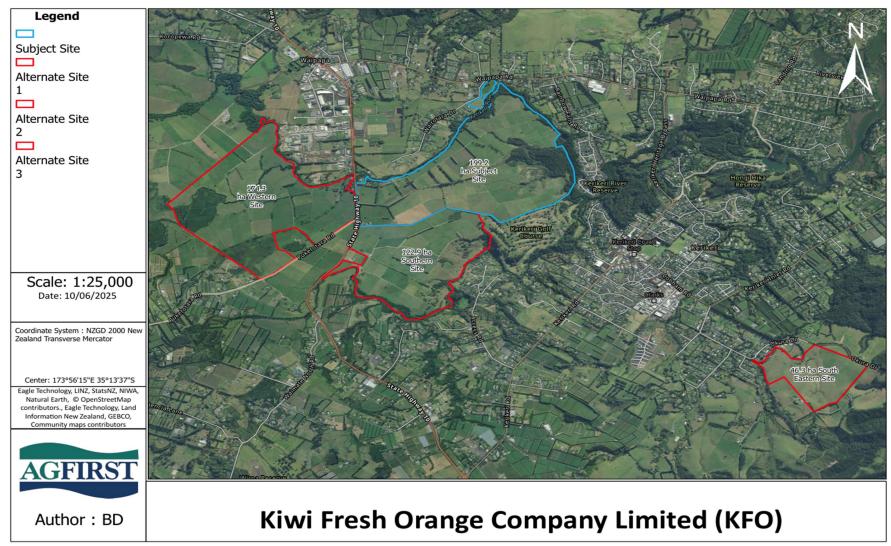


Figure 12: Kerikeri and Waipapa alternative urban development options

## 7.2 Southern Site 7.2.1 Current Land Use

The Southern Site is zoned rural production under the Far North District plan, and has the potential to develop approximately 122.9 ha of land. It appears to currently be utilised as a dairy farm. With approximately 112 ha being in productive pasture area. The land value of this site is \$5,770,000<sup>19</sup>. The DairyNZ economic survey in Northland showed an average profitability of \$2,401 per ha based on a \$9.19 per kilogram of Milk solids (kgms), based on a national average of 187 productive hectares, inclusive of dairy support land<sup>20</sup>. While the property is smaller than the average sample property, the productive value and versatility on a per-hectare basis is higher than that of the Subject Site.

#### 7.2.2 Land Use Capability

AgFirst has reviewed the NZLRI, NRC Soil maps, and Lidar information of the Southern Site. In summary, the LUC classification (Figure 13) shows LUC 3w 2 and 3s 2 across the majority of the Site, with4e 2 on the strongly sloping land towards Puketotara Stream on the eastern boundary. The Lidar imagery (Figure 14) aligns somewhat with the boundaries of the LUC units defined by the NZLRI.

Using desktop resources to consider surrounding land uses, AgFirst believes that the highest and best use for the Southern Site would be to continue as a dairy farm. While the physical characteristics are similar to the Subject Site, the infrastructure is already in place, therefore no additional capital outlay is required. If dairy farming were to cease, the likely highest land use would be a drystock operation. A summary of the comparison is provided in Table 7.

<sup>&</sup>lt;sup>19</sup> <u>https://www.fndc.govt.nz/Our-Services/Rates/Rating-information-database</u>

<sup>&</sup>lt;sup>20</sup> economic-survey-2021-22-a4-booklet-web.pdf

| Expansion opportunity                         | Approximately 90+ ha  |
|---|---|
| Constraints for land-based primary production | Wetness limitations across most of the Site, with slopes towards the east   |
| Current land use                              | Dairy Farming   |
| Surrounding land use                          | Rural Production Zone, Rural Residential, Sport and Recreation.   |
| NZLRI LUC classification                      | LUC 3 & 4   |
| Soil characteristics                          | A mix of Basaltic Volcanic soils and Alluvial soils above floodplains.  |
| Environmental constraints                     | The soils have a high tendency for pugging vulnerability, nutrient runoff and sediment losses are other issues associated with poor drainage characteristics.   |
| Economic limitations                          | If we apply a dairy farm profitability, it is likely that the property is economically viable.  |
| Land use potential                            | Continued operation of dairy is likely the highest and<br>best use of the land. Although with strict<br>management practices for long term sustainable<br>use.  |
| Comparison to Site                            | The soils and land in this area are similar to those of<br>the subject site, sharing the same LUC units and<br>soils, with similar topography. Given that the current<br>land use is dairy farming, the economic value of this<br>land on a per-hectare basis is higher than the<br>Subject Site. |

Table 77: Summary of Southern Site



Figure 13: LUC of Alternate Site to the South of the Subject Site

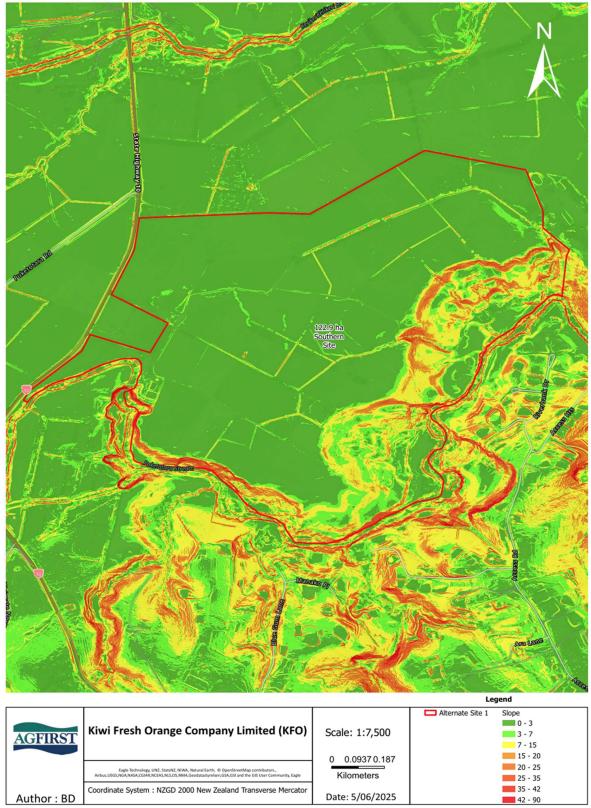


Figure 14: Slope map of land for the Southern Site

#### 7.3 Western Site 7.3.1 Site Description

The Western Site is zoned rural production under the Far North District Plan and has the ability to develop approximately 155 ha of land. It appears to currently be utilised as a drystock grazing and dairy support block with some annual maize crops grown. There is an expired consent for a groundwater take on this site, AUT.007362.02.01<sup>21</sup>. There is a large dairy farm on the western boundary of this site that appears to have modern infrastructure. The land value of this site is \$3,140,000<sup>22</sup>, around \$20,000 per productive hectare, making it more likely to be economically viable as a drystock or dairy support block compared to the Southern Site and Subject Site.

#### 7.3.2 Land Use Capability

AgFirst has reviewed the NZLRI, NRC Soil maps, and Lidar information of the Western Site. In summary, the LUC classification (Figure 15) shows LUC 3w 2 and LUC 4s 4 on the site. The site is generally flat in contour as shown in the Lidar imagery (Figure 16). The soil types here, such as Kamo, Pakotai, Kohumaru, Waipu, and Whareora clays, are formed on older alluvial terraces and fans above flood levels. These soils are typically clay-rich, with variable drainage ranging from well to very poorly drained, and are often seasonally wet. Common issues include subsoil pans, poor spring drying, and a high risk of pugging and nutrient leaching due to soil cracking in dry periods. While generally fertile, they require careful management to maintain structure and productivity. Site-specific strategies such as subsurface drainage, controlled grazing, and "little and often" fertiliser application are essential for sustainable use<sup>23</sup>. This supports the wetness limitation identified by the LUC units on this site; however, this soil can vary in its drainage characteristics. The Western Site is relatively flat, as shown on the Lidar imagery (Figure 16).

Using desktop resources and considering surrounding land uses, AgFirst believes that the highest and best use for the western site would be drystock and dairy support land, with some land available for arable cropping. A summary of the comparison is provided in Table 8.

<sup>&</sup>lt;sup>21</sup> Water Resources

<sup>&</sup>lt;sup>22</sup> <u>https://www.fndc.govt.nz/Our-Services/Rates/Rating-information-database</u>

<sup>&</sup>lt;sup>23</sup> soilfactsheet12finalweb.pdf

| Table 88: Summary of Western Site             |   |
|---|---|
| Expansion opportunity                         | Approximately 150+ ha   |
| Constraints for land-based primary production | Wetness limitations across most of the Site.  |
| Current land use                              | Drystock farming, Dairy Support   |
| Surrounding land use                          | Rural Production Zone, Horticulture, Light Industrial, Heavy Industrial   |
| NZLRI LUC classification                      | LUC 3 & 4   |
| Soil characteristics                          | Alluvial clays formed above flood levels  |
| Environmental constraints                     | Nutrient leaching, surface runoff, and structural damage to soils   |
| <b>Economic limitations</b>                   | Fewer economic limitations compared to other sites  |
| Land use potential                            | Drystock ,dairy support and arable cropping   |
| Comparison to Site                            | The soils and land LUC in the area are similar to the<br>Subject Site, with similar limitations to their<br>productive use. However, this site is more<br>appropriately valued for its potential uses, and it is<br>located beside what appears from aerial imagery to<br>be a concentrated area of horticulture to the south<br>of the boundary, and a large-scale dairy farm with<br>upgraded infrastructure to the western boundary.<br>This site is in a prime location to facilitate the growth<br>of either of these enterprises. As discussed in the<br>report above, the soils mapped here could be<br>erroneous due to the scale of the NZLRI. With the<br>presence of LUC unit 3s 2 in the wider area and the<br>horticulture and dairy land uses, it is possible that<br>this site could be more valuable from a soil's point<br>of view, particularly the sandy Kamo and volcanic<br>Waipu soils. |

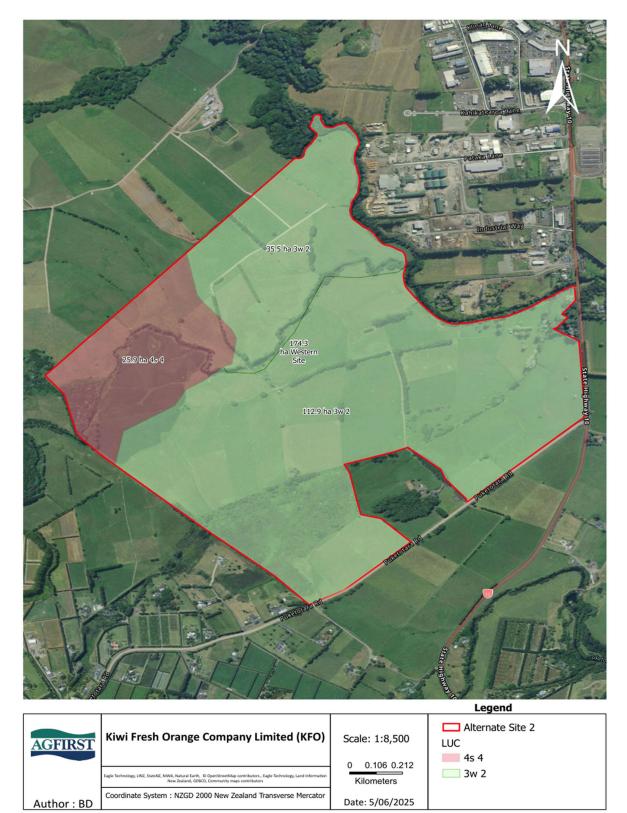
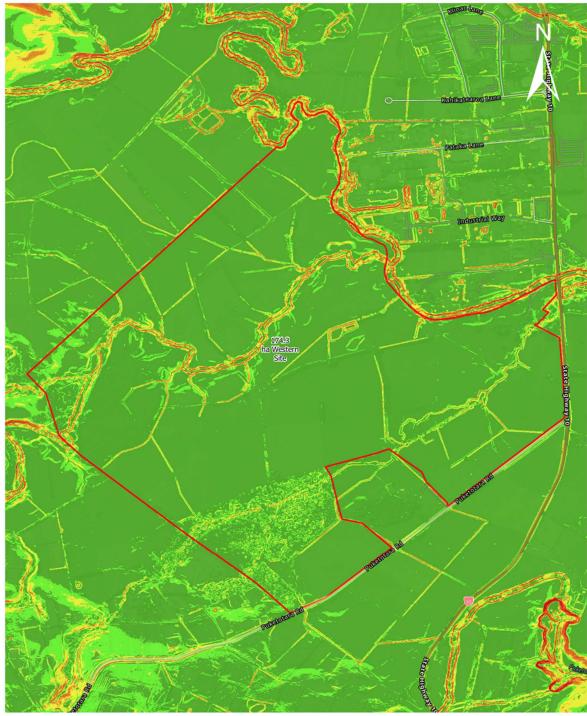


Figure 15: Comparative Western Site LUC



| ~           |   |                 | Legend           |         |  |  |
|-------------|---|-----------------|------------------|---------|--|--|
|             |   |                 | Alternate Site 1 | Slope   |  |  |
|             | Kiwi Fresh Orange Company Limited (KFO) | C 1 4 0 500     |                  | 0 - 3   |  |  |
| AGFIRST     |   | Scale: 1:8,500  |                  | 3 - 7   |  |  |
|             |   |                 |                  | 7 - 15  |  |  |
|             |   | 0 0.106 0.212   |                  | 15 - 20 |  |  |
|             |   |                 |                  | 20 - 25 |  |  |
|             |   | Kilometers      |                  | 25 - 35 |  |  |
|             |   | 5 . 5/06/0005   |                  | 35 - 42 |  |  |
| Author : BD | 28.                                     | Date: 5/06/2025 |                  | 42 - 90 |  |  |

Figure 16: Lidar slope classification for the western site

## 7.4 Southeastern Site 7.4.1 Site Description

The Southeastern Site is zoned rural production under the Northland District plan and has the ability to develop approximately 43 ha of land. It appears to currently be utilised as a drystock grazing block. This property is predominantly class 4 land and is not subject to the NPS-HPL, however, its proximity to the Kerikeri township lends itself to urban development. Although there is a belt of horticulture and lifestyle blocks between Kerikeri and the Southeastern Site. The property's land value is \$1,930,000, or \$45,000 per productive hectare.

#### 7.4.2 Land Use Capability

AgFirst has reviewed the NZLRI, NRC Soil maps, and Lidar information of the Southeastern Site. In summary, the LUC classification (Figure 17) shows the LUC as predominantly LUC 4e 7 with a very small area of LUC 2s 1 on the western boundary and LUC 6e9 to the east. The lidar imagery (Figure 18) shows some larger areas of flat land towards Kerikeri township, which could potentially extend the area of LUC unit 2s 1. The soils on the site are Hukerenui silt loams from the Marua soil suite, typically found in Northland's eastern hill country over greywacke rock. These soils are moderately to strongly podzolised, with poor structure, low fertility, and are prone to winter wetness, erosion, and summer drought. While a hill variant exists on slopes over 20°, most of the site has gentler slopes. The acidic topsoil has low fertility but reasonable nutrient availability, and the compact subsoils are vulnerable to pugging and sealing. Erosion risks include sheet erosion, shallow slips, and gullies<sup>24</sup>.

Using desktop resources for the consideration of surrounding land uses, AgFirst believes that the highest and best use for the Southeastern Site would be drystock farming. However, the western extent, dependent on what soils are present could offer an opportunity for intensive horticulture, given the close proximity to this land use. A summary of the comparison is provided in Table 9.

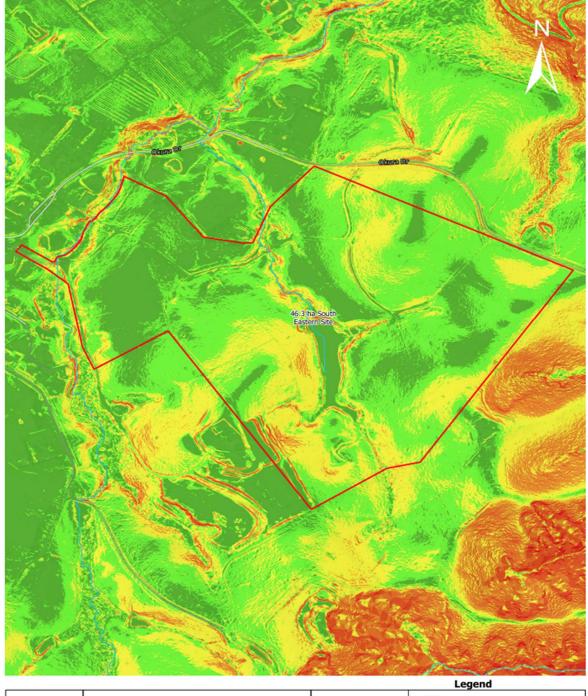
<sup>&</sup>lt;sup>24</sup> soilfactsheet343finalweb.pdf

| Table 99: Summary of Southeastern Site        |   |
|---|---|
| Expansion opportunity                         | Approximately 40+ ha  |
| Constraints for land-based primary production | Wetness limitations and prone to droughts and erosion events.   |
| Current land use                              | Drystock farming, with potential for horticulture on the flat western areas   |
| Surrounding land use                          | Rural Production Zone, Rural Residential, Horticulture  |
| NZLRI LUC classification                      | LUC 2, 4 & 6 (predominantly class 4)  |
| Soil characteristics                          | Silt loams developed on greywacke   |
| Environmental constraints                     | A large wetland dissects the property from north<br>to south. Rolling contour can exacerbate erosion<br>and limit the range and intensity of uses on this<br>site.  |
| Economic limitations                          | The property has a high per-hectare value.<br>However, if it is proven to be suitable for<br>horticulture, it would likely be viable for larger<br>plots.   |
| Land use potential                            | Pastoral grazing with soil conservation practices.  |
| Comparison to Site                            | The soils on this site have moderate limitations to<br>productive uses. The value of the property<br>exceeds its ability to maintain viability from its<br>best use as a drystock operation. However, given<br>the proximity to high value horticulture, the low<br>lying areas to the west could elevate the land use<br>capability for this Site. |



| AGFIRST     | Kiwi Fresh Orange Company Limited (KFO)  | Scale: 1:5,000  | Alternate Site 3<br>LUC<br>6e 9 |  |  |
|-------------|--|-----------------|---------------------------------|--|--|
|             | Eagle Technology, URC, StatuR2, MRM, Natural Earth, B. OpenStreetMag coet/Luters, Eagle Technology, Lind Information<br>Area Zealand, GEBCO, Community maps contributors | Kilometers      | 2s 1 & 4e 7                     |  |  |
| Author : BD | Coordinate System : NZGD 2000 New Zealand Transverse Mercator  | Date: 5/06/2025 |                                 |  |  |

Figure 17: Comparative Southeastern site LUC



| AGFIRST          | Kiwi Fresh Orange Company Limited (KFO)  | Scale: 1:5,000  | Alternate Site 3 Alternate Site 1 Slope 0 - 3 3 - 7 |                    |  |  |
|------------------|--|-----------------|---|--------------------|--|--|
|                  | Engle Technology, LPU2, StanN2, NVIM, Natural Earth, & OpenEinsenHap contributors,<br>Arthur, LSEGE/HEA/MEA/CEXAE/HCEAS/NEL/OS/NVM/Geadstratyrelaer/JEA/GE and the GES Var Constanting Engle | Kilometers      |   | 7 - 15             |  |  |
| Author : BD      | Coordinate System : NZGD 2000 New Zealand Transverse Mercator  | Date: 5/06/2025 |   | 20 - 25            |  |  |
| Figure 18: Lidar | slope classes of Southeastern site   |                 |   | 35 - 42<br>42 - 90 |  |  |

# 8.0 Summary

AgFirst has been engaged to assess the Subject Site against the provisions of Clause 3.6 of the NPS-HPL relating to land-based primary production and productive capacity. This allows territorial authorities to rezone rural land for urban use when it has been identified that there are no other reasonably practicable and feasible options for providing the required development capacity. To provide a robust assessment, AgFirst has identified:

- The constraints that limit and restrict land-based primary production;
- The versatility of the Subject Site and alternative production opportunities (highest and best use);
- The economic return from this operation to inform the cost-benefit analysis; and
- A comparison of the Subject Site against other potential expansion sites for urban rezoning.

While the majority of the Subject Site is defined as HPL by the transitional definition under the NPS-HPL, the soil limitations restrict the productive capacity of the Subject Site. In summary, this assessment has found that:

- The highest and best use has been limited to drystock farming. Alternatives, including arable, horticulture, CVP, and dairy, are not reasonably practicable.
- While the properties within the Subject Site could be amalgamated (and currently are operated as a single enterprise), there is limited opportunity beyond the Subject Site to adjoin with productive units. Therefore, the Subject Site is constrained by non-reversable land fragmentation, and the inability to amalgamate with surrounding land uses beyond the Subject Site to improve versatility because of the following:
  - » Conversion of the Subject Site into a dairy farm would require significant infrastructure investment.
  - » The Kerikeri River, Puketotara Stream, and State Highway 10 physically isolate additional cohesive land areas.
  - » The Kerikeri Golf course is non-productive and not considered a productive land use. This reduces the ability for the property to expand within the natural boundaries.
  - » The Subject Sites' land value has grown to a point where the productive value per hectare is unable to sustain itself.

Given the constraints identified above, and a comparison against alternative options, it is evident that the Subject Site has a lower relative productive capacity. AgFirst considers that the re-zoning of the Site meets the requirements of Clause 3.6(4)(b) and (c) (relevant to our expertise) insofar as it relates to the productive capacity of the land and the economic costs and benefits associated with the loss of highly productive land for land-based primary production. In relation to clause 3.6(4)(b), there are no other reasonably practicable and feasible options which are better suited in terms of impacts on productive land for providing additional urban development capacity in Kerikeri and Waipapa.



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#### Disclaimer:

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