Mid-North (Northland) Multiple Māori Land Blocks

LAND DEVELOPMENT OPPORTUNITIES FOR A SUSTAINABLE AND PROSPEROUS FUTURE

Ministry for Primary Industries
Manatū Ahu Matua

NGĀPUHI
Te Rūnanga-Ā-Iwi O Ngāpuhi

Far North District Council
Te Kaunihera o Tai Tokerau Ki Te Raki

KPMG

CONTENTS

FOREWORD

Ministry for Primary Industries
Manatū Ahu Matua

Growth in Northland will be driven by our communities, businesses and agencies working together to strengthen connections across the region and primary sectors.

The Ministry for Primary Industries (MPI) is pleased to have partnered with Te Rūnanga-ā-Iwi-O-Ngāpuhi, the Far North District Council and KPMG in the development of this report.

The report provides a starting point to guide and inform decision makers (Trustees/ landowners) on potential opportunities and considerations for bringing land into production.

The key guiding principles for developing this report include: the need for Maori to retain ownership of land, allowing for different levels of development and evolution, and recognising the socio-cultural aspirations of land owners and the communities they are a part of.

Those aspirations include a future where the potential for new jobs (including highly skilled jobs) due to innovation and development provides an economic platform to sustain future generations and attracts more people to the region for full-time work, in addition to existing seasonal opportunities.

The case studies highlighted in this report focus on a range of land use scenarios that show the potential for step-change within Northland for developing collaborative business models for the primary sector. They also demonstrate the importance of being able make land-based decisions that not only take into account financial indicators of success, but social, environmental and cultural indicators as well.

The building blocks for improved land productivity and increased employment include investment in infrastructure, water access, skills and training and governance capability. Attracting investment and linking enterprises with the knowledge, people and funds needed to promote economic growth is critical to land productivity. Our collective efforts are needed to produce the growth in our communities that all of us are seeking.

At the same time, we are seeking to work with Maori asset owners/land trusts within the region who are keen to partner and are ready to take the next step towards achieving scale and leverage across possible land based opportunities. MPI partner's with the willing and supports by providing expert information and advice, acting as enablers and assisting asset owners to access grant funds.

This report aims to initiate a conversation that will lead to mobilising action from the fields to the boardroom and drive regional growth through sustainable transformation of our people, place and rich natural resources.

The right to decide remains with the Maori asset owners/ land trusts.

Ben Dalton
Deputy Director General

Kelly Dunn
Director

Stacey Whitiora
Manager

Natasha Nathan
Senior Adviser

Kia ora,

Mid-North (Northland) Multiple Māori Land Blocks

He honore, he kororia ki te Atua, he maungarongo ki te whenua, he whakaaro pai ki ngā tangata katoa. Tēnei te mihi atu ki a koutou te whanau o te Manatū Ahu Matua.

We are pleased to present our analysis and findings of Māori freehold land in the mid-North of Northland, New Zealand. Our analysis and findings include over 3,900 land blocks, representing 84,000ha of land within a 50km radium of Kaikohe.

The breadth and scope of land available in the mid-North provides diverse options and compelling evidence for improvement and/or bringing land blocks into production.

In particular the opportunity to bring land close to Kaikohe into horticultural or pastoral production, as outlined in the case studies. We see this as an example of how resources can be utilised to enhance the health, wealth and wellbeing of whenua and local communities.

We thank you for the opportunity and look forward to the next phase of this work.

Ngā mihi

Simon Hunter

Roger Wilson

Joe Hanita

Riria Te Kanawa

Disclaimers

INHERENT LIMITATIONS

This report has been prepared in accordance with KPMG's Engagement Letter dated 28 May 2015.

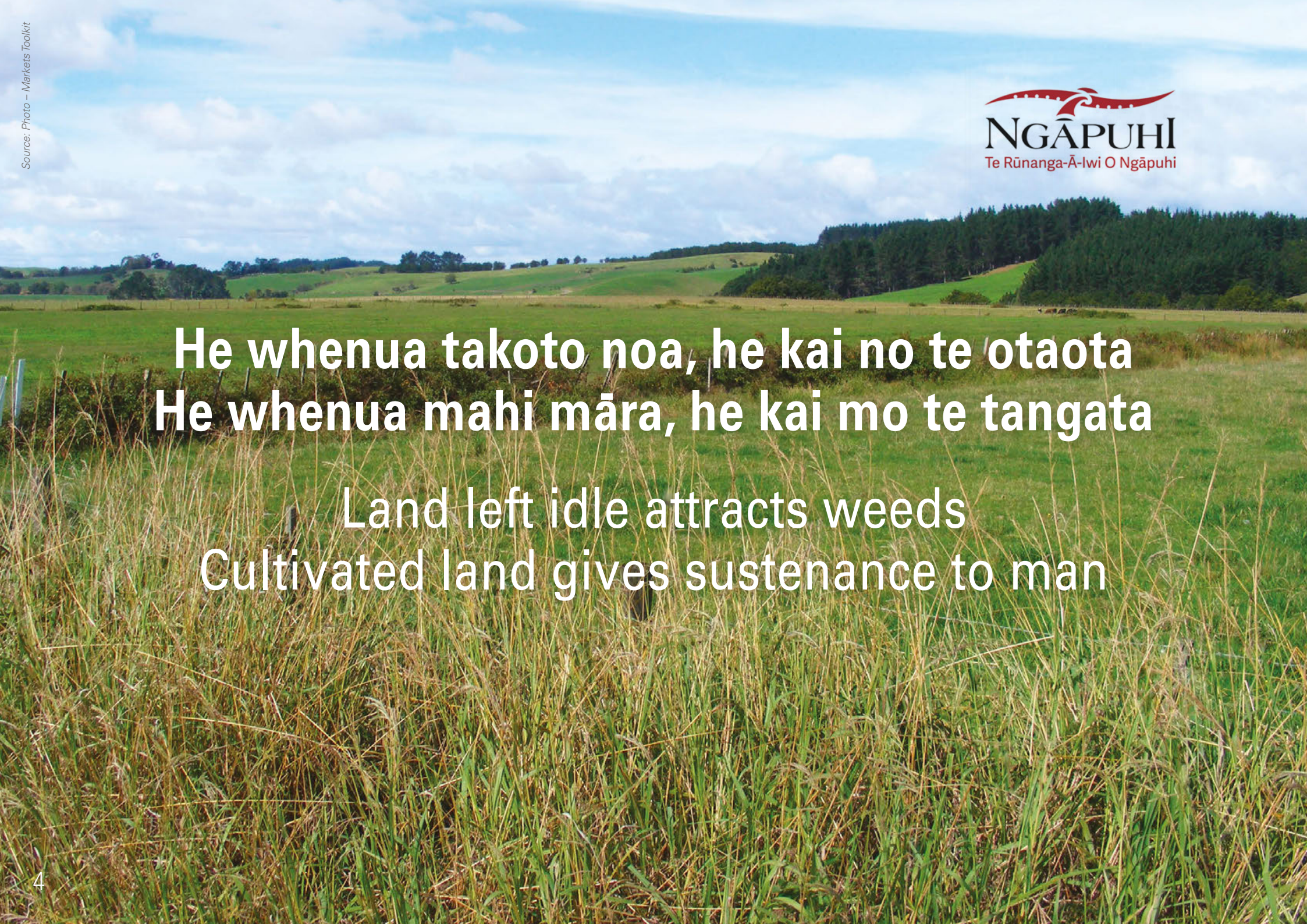
The information presented in the report is based on that made available to us in the course of our work, information provided by the Ministry for Primary Industries (MPI) and publically available information. We have indicated within this report the sources of the information provided. Unless otherwise stated, we have relied upon the truth, accuracy and completeness of any information provided or made available to us without independently verifying it. The statements and opinions expressed have been made in good faith on that basis.

The findings in the report are generic and should not be used as a substitute for professional advice tailored to individual circumstances. KPMG is under no obligation in any circumstance to update this report for events occurring after the report has been issued in final form.

THIRD PARTY RELIANCE

Our report is solely for the purpose set out in our contract with MPI and is not to be used for any other purpose.

Other than our responsibility to our client, MPI, to the fullest extent permitted by law KPMG (including its partners and employees) accepts no duty of care, nor any liability whatsoever, to any third party in connection with the provision of the report. Accordingly, any third party relies upon the report at its own risk.


Source: Photo – Markets Toolkit
NGĀPUHI
Te Rūnanga-Ā-Iwi O Ngāpuhi
He whenua takoto noa, he kai no te otaota
He whenua mahi māra, he kai mo te tangata
Land left idle attracts weeds
Cultivated land gives sustenance to man

Source: Photo – Markets Toolkit

EXECUTIVE SUMMARY

SCOPE

Our work has been to identify fragmented Māori freehold land blocks in the Mid-North of Northland, New Zealand and look at potential land use options available to bring these unproductive/underutilised land into production.

We believe that providing opportunities for the future development of Māori freehold land in the Mid-North is the initial step required to create an environment that will enhance the health, wealth and wellbeing of the whenua and the local community.

Our analysis and subsequent findings is the starting point to initiate further discussion.

Our analysis is based on both a 30km and 50km radius from Kaikohe.

This report is based on a desk top analysis to identify, at a high level, land use opportunites. Physical examination of specific land blocks and their charateristics, along with engagement with owners has not occured to date.

ANALYSIS INSIGHTS

3,986
NO. PARCELS

84,003ha
TOTAL LAND AREA

63
AVERAGE NUMBER OF OWNERS PER BLOCK

26%
WITH A MANAGEMENT STRUCTURE

6% or 4,831ha
LAND USE CLASSIFICATION (LUC) – CLASS 1-3

25% or 20,720ha
TOTAL LAND COVER – EXOTIC GRASSLAND

21ha
AVERAGE BLOCK SIZE

FINDINGS

Based on our analysis and noting that verification of actual land production activity has not yet occurred, we believe that the blocks are not producing the best possible outcomes for owners. We consider that maintaining the status quo is not a desirable or sustainable option.

We have outlined potential options to be explored further, that could provide the starting point to develop the land and a more sustainable and prosperous future.

DAIRY OR SHEEP AND BEEF POTENTIAL LUC CLASS 1-3

1,469

NO. PARCELS

4,831ha

TOTAL LAND AREA

MAIN LAND USE OPTIONS AVAILABLE FOR CONSIDERATION

A number of economic options have been identified as a basis for commencing individual block analysis, these include:

- Developing to dairy
- Developing to sheep and beef
- Developing to horticulture
- Utilising Manuka/Kanuka for apiculture
- Maintaining current land-use.

The majority of land having a Land Use Classification of 4-6 (48,017ha) will provide scale for sheep and beef and apiculture type production.

However, the smaller proportion of land with a Land Use Classification of 1-3 (4,831ha) will require strategic evaluation to determine the appropriateness and economic viability of developing into dairy and/or horticultural production

SHEEP AND BEEF POTENTIAL LUC CLASS 4-6

3,215

NO. PARCELS

48,017ha

TOTAL LAND AREA

EXECUTIVE SUMMARY

The economic and social implications of transitioning from fragmented/unproductive to connected/productive land use is significant and stakeholders will be well aware of this fact. The impacts may include:

CURRENT	FUTURE
>3,000 LAND PARCELS @ AVG 21ha	**Collective farming operation** MULTIPLE UNITS TOTALLING 500 FOR PASTORAL OR 100HA FOR HORTICULTURAL
3.3m kg OF MEAT (best estimate)	**100% increase** IN MEAT PRODUCTION PLUS MULTIPLE 100HA HORTICULTURAL DEVELOPMENTS
$13m REVENUE (best estimate)	**$48m** REVENUE (best estimate)
<100 JOBS (best estimate)	**>250** JOBS (best estimate)

The above impacts need to be validated. In reviewing the alternative states the real challenge is not the physical transition (the ability to achieve physical change has already been proven by other organisations) but the organisational change required to make this happen. Our initial assessment of viable operating scenarios are outlined in the 500ha pastoral and 100ha horticultural case studies.

COLLECTIVISING

Geographically, these blocks are dispersed widely across a 50km radius from Kaikohe. However, collectivising is still a viable opportunity and is likely to be well suited to blocks/groups with similar production potential.

To obtain the maximum benefit from the land blocks, the use of a collective farm system that incorporates all the different strengths of the properties needs to be explored and developed. Farming units can individually and collectively perform better, operating under a wider system that maximises scale.

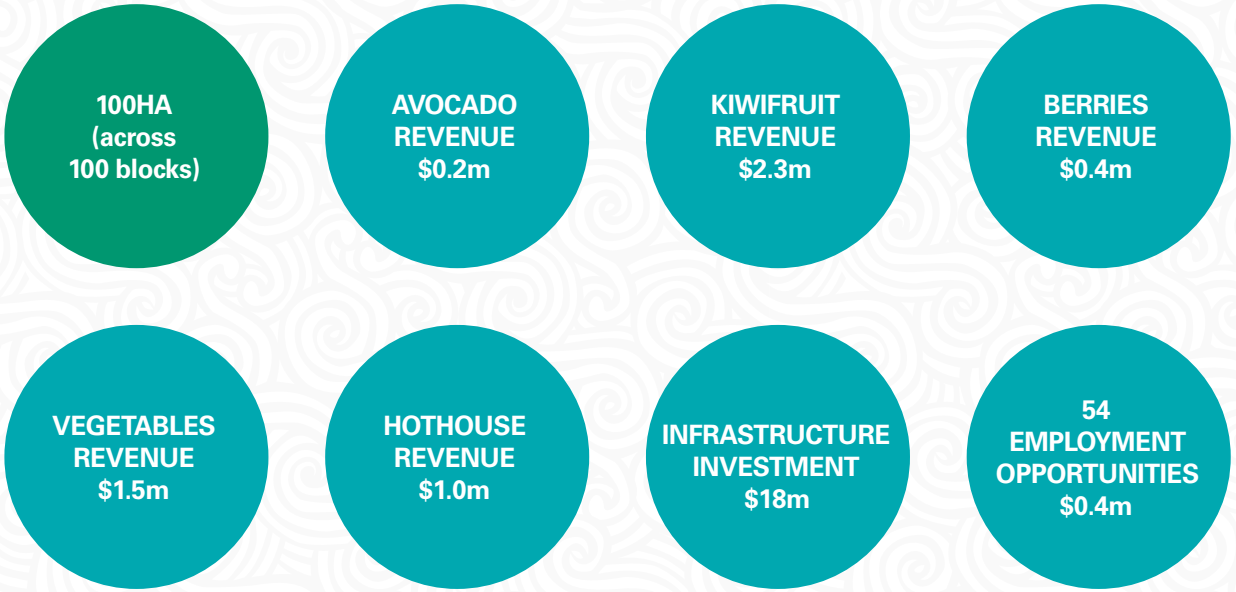
HORTICULTURAL CASE STUDY

Collectivisation should be considered to provide the land, scale, distribution of infrastructure cost and the essential highly skilled staffing (such as a scientist) to make a multi cropped operation effective.

Multi cropping will provide multiple benefits:

- Ensuring that risk is balanced in regard to crop fluctuations.
- Allow for core products to support the investigation into other varieties and experiment with growth capability on different land parcels.
- Ability to potentially diversify (once established) into traditional Māori produce, including herbs.
- Cross use of human resources during different seasons, across different produce and properties to:
  - Meet peak demand
  - Smooth the effects of seasonal employment.

HORTICULTURAL CASE STUDY SNAPSHOT



EXECUTIVE SUMMARY

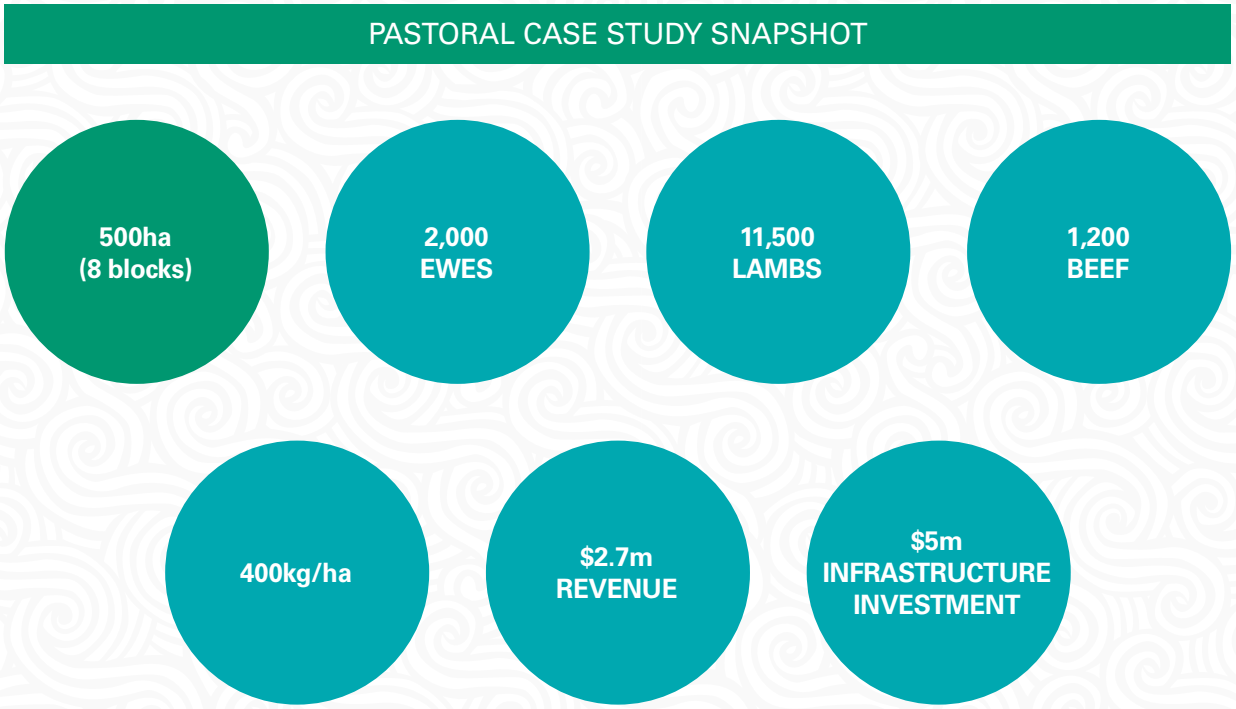
PASTORAL CASE STUDY

As with the horticultural case study, it is critical that strong capability at both governance and operational levels is present.

Of equal importance is a shared vision, shared values and a commitment to the long term collective objectives from the constituent blocks. Again, the northern climate provides a market advantage with earlier lambing than the rest of the country and thus provides various options in relation to the finishing and trading of stock in order to take advantage of new season pricing. Further pricing advantages are available for supplying within premium specifications as determined by processors. The case study reflects a farming operation performing in the top quartile.

The benefits of precision farming:

- Collection and utilisation of data for timely and informed decision making
- Timely decision making facilitates ability to take advantage of premium pricing for supplying to specification
- Use of information to provide oversight of the operation and assist in planning
- Ability to plan for and manage changes in climatic conditions
- Identification of optimal crop and pasture mix and stock mix.



The nature of the current land holdings, ownership structures, different levels of development and potential, precludes a single solution organisational model. The potential operating model presented below is but one example available. It is important to note that in determining and implementing the best operating model, individual entities will be required to change and this change can occur over time.

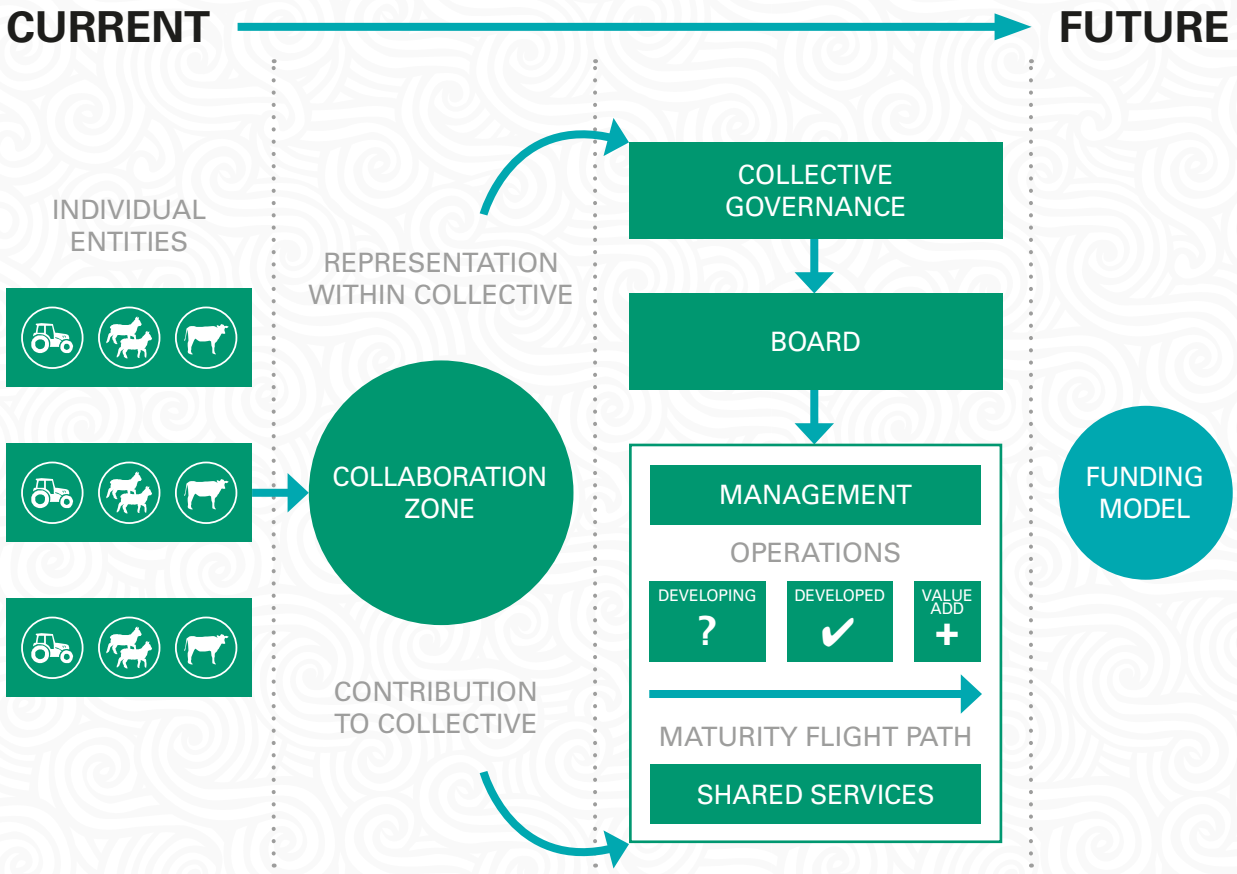
The potential operating model proposed is based on developing a series of 'collectivised or modular units' that reflect the stage of maturity along the development pathway. This is intended to provide a level of flexibility and allow for the modular units to adapt over time.

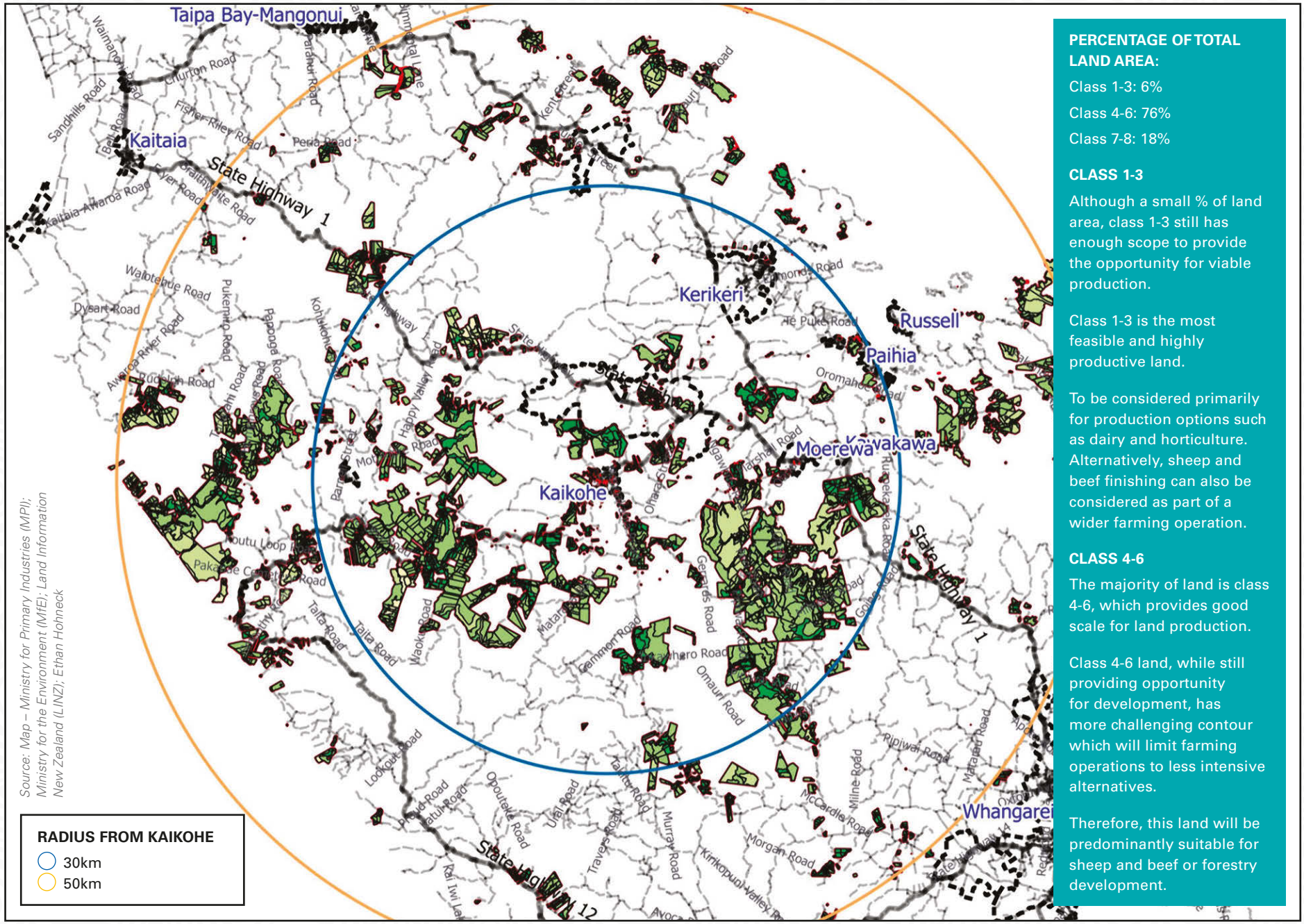
It is expected that the units could:

- Retain ownership of land
- Achieve reasonable scale
- Allow for evolution (i.e. new partners)
- Allow for different levels of development
- Allow for different levels of required capital

Next steps:

- Engagement strategy with owners to identify level of interest in being involved
- Determine what blocks will be considered for further development investigation
- Further develop the potential operating model





PERCENTAGE OF TOTAL LAND AREA:

Class 1-3: 6%

Class 4-6: 76%

Class 7-8: 18%

CLASS 1-3

Although a small % of land area, class 1-3 still has enough scope to provide the opportunity for viable production.

Class 1-3 is the most feasible and highly productive land.

To be considered primarily for production options such as dairy and horticulture. Alternatively, sheep and beef finishing can also be considered as part of a wider farming operation.

CLASS 4-6

The majority of land is class 4-6, which provides good scale for land production.

Class 4-6 land, while still providing opportunity for development, has more challenging contour which will limit farming operations to less intensive alternatives.

Therefore, this land will be predominantly suitable for sheep and beef or forestry development.

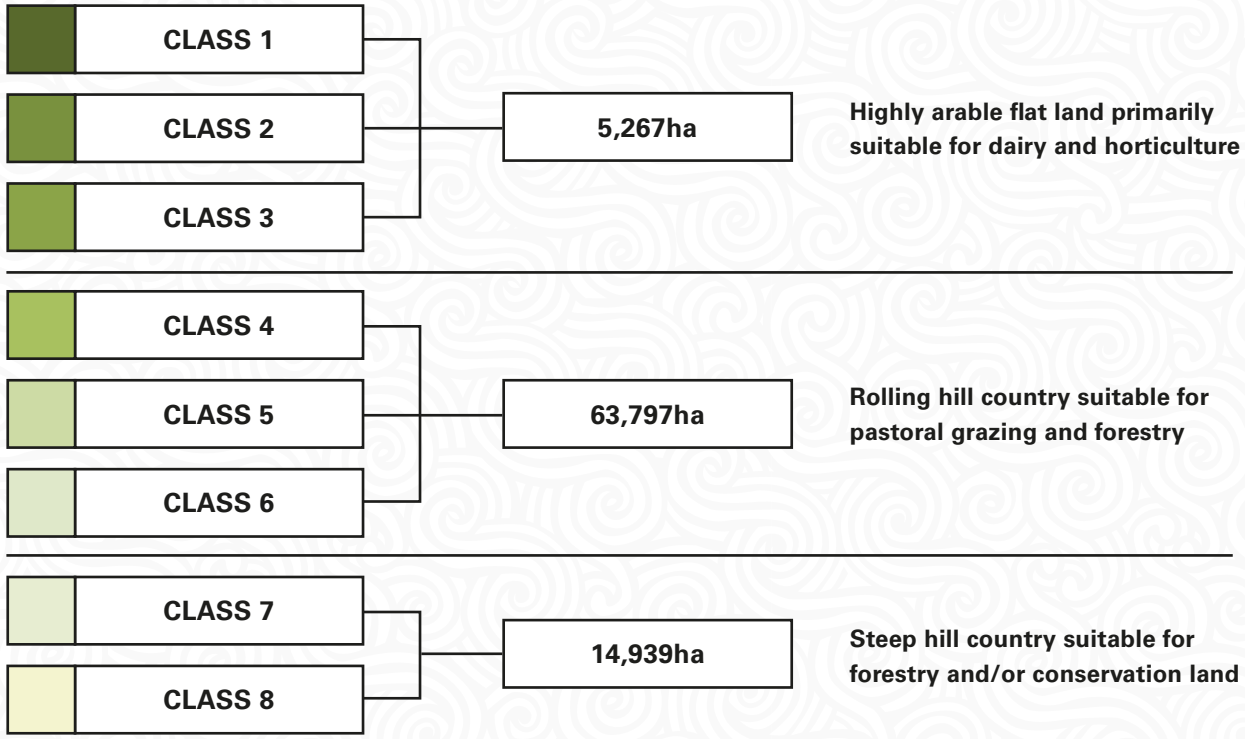
LAND USE CLASSIFICATION

3,986
NO. PARCELS

84,003ha
TOTAL LAND AREA

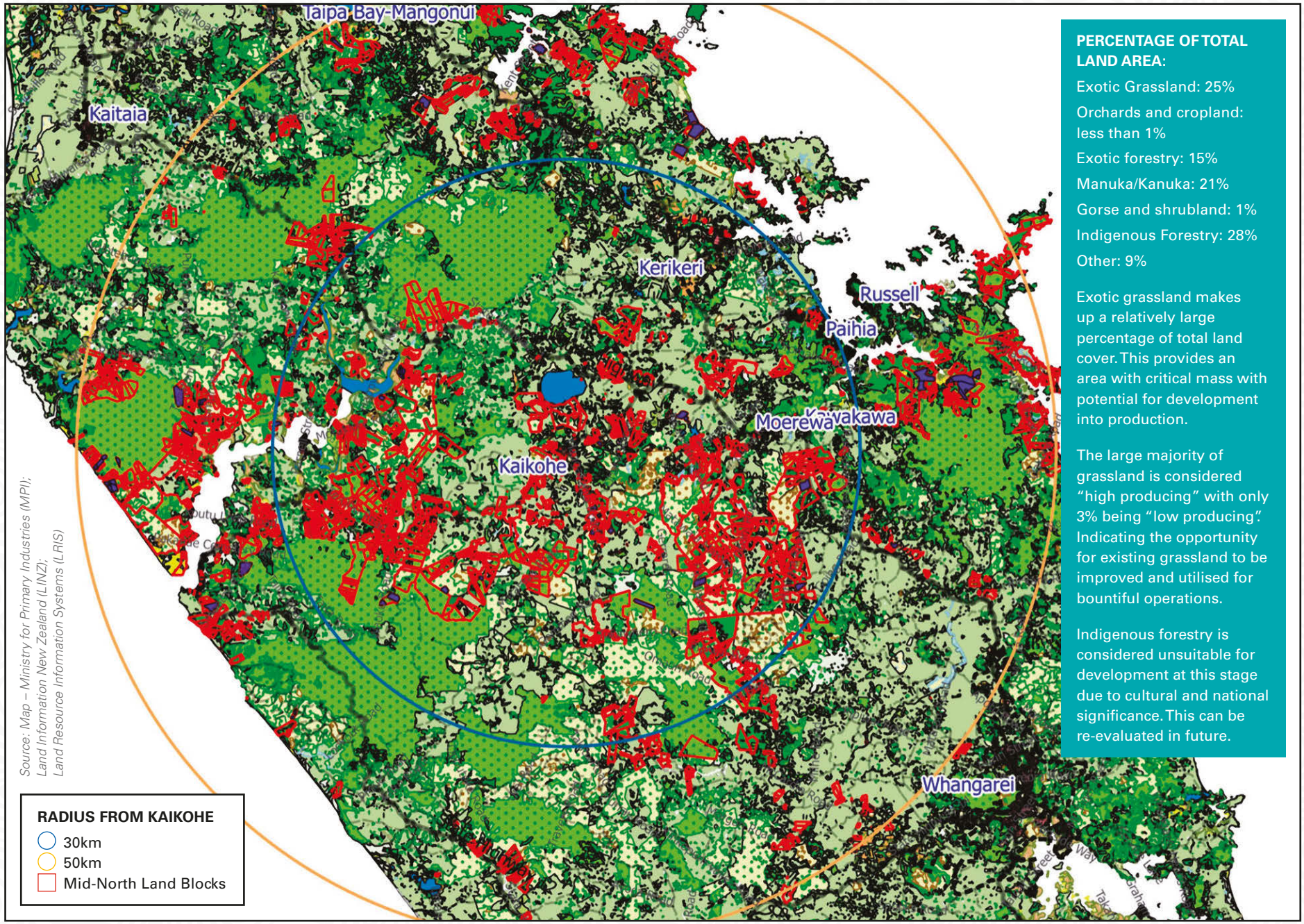
63
AVERAGE NUMBER OF OWNERS PER BLOCK

LAND USE CLASSIFICATION BREAKDOWN



Please note: the above figures may vary to other figures quoted throughtout the doucment due to land either in indigenous forestry, built up areas, open water, water vegetation, sand/gravel or urban parkland. This has been deemed unsuitable for development or productive use.

Source: Ministry for Primary Industries (MPI); Landcare Research; Land Information New Zealand (LINZ); Ethan Hohneck



Source: Map – Ministry for Primary Industries (MPI); Land Information New Zealand (LINZ); Land Resource Information Systems (LRIS)

PERCENTAGE OF TOTAL LAND AREA:

Exotic Grassland: 25%

Orchards and cropland: less than 1%

Exotic forestry: 15%

Manuka/Kanuka: 21%

Gorse and shrubland: 1%

Indigenous Forestry: 28%

Other: 9%

Exotic grassland makes up a relatively large percentage of total land cover. This provides an area with critical mass with potential for development into production.

The large majority of grassland is considered "high producing" with only 3% being "low producing". Indicating the opportunity for existing grassland to be improved and utilised for bountiful operations.

Indigenous forestry is considered unsuitable for development at this stage due to cultural and national significance. This can be re-evaluated in future.

LAND COVER

CHANGE LAND COVER MAP

3,986
NO. PARCELS

84,003ha
TOTAL LAND AREA

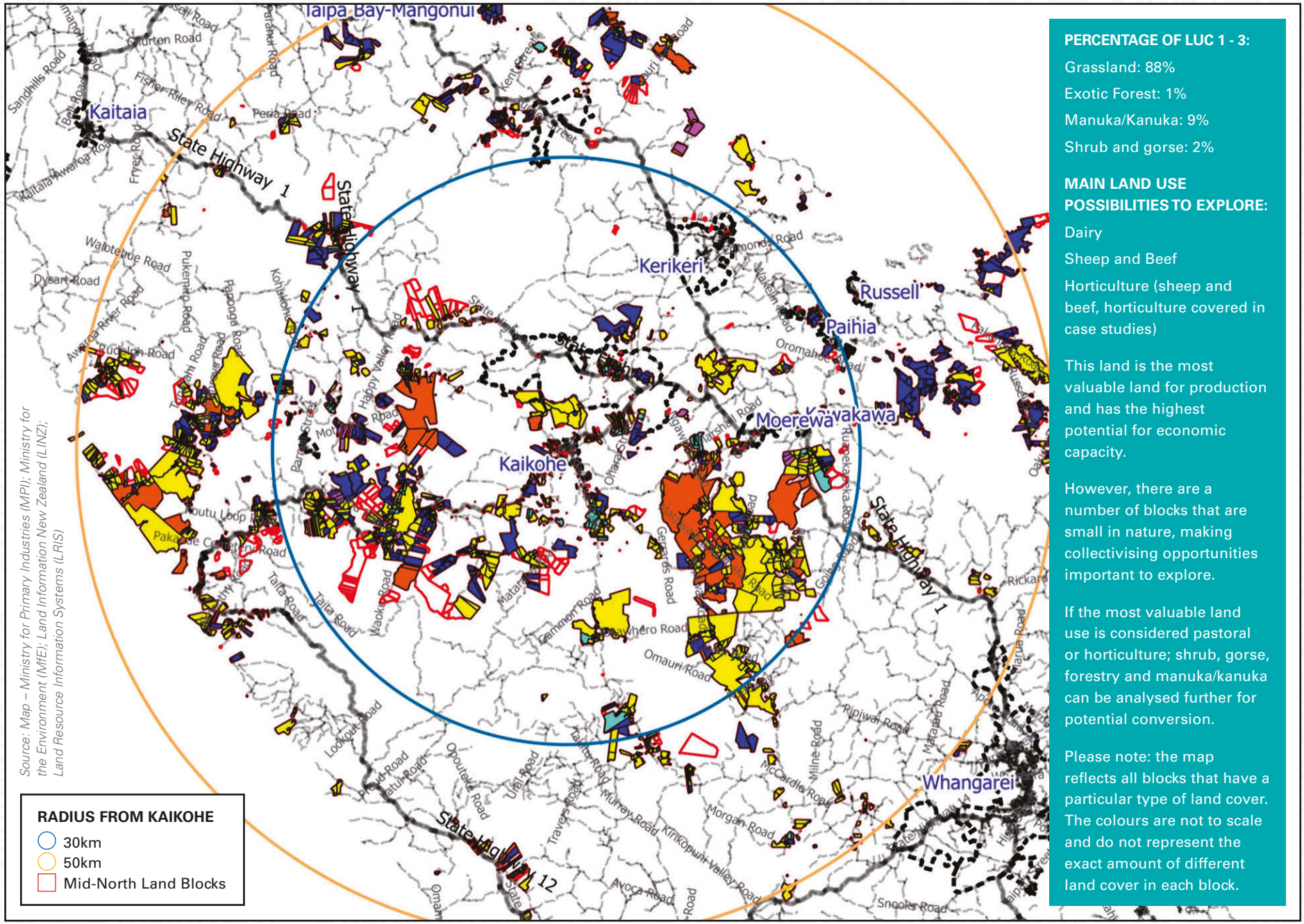
63
AVERAGE NUMBER OF OWNERS PER BLOCK

Note: Waterways includes associated vegetation

LAND COVER BREAKDOWN

EXOTIC GRASSLAND	20,720ha	Land suitable for production
ORCHARDS	33ha	
CROP LAND	9ha	
EXOTIC FORESTRY	12,988ha	Land with possibility of development into production
MANUKA/KANUKA	17,420ha	
GORSE	629ha	
SHRUBLAND	383ha	
INDIGENOUS FORESTRY	23,751ha	Land unsuitable for production. Land proposed as reserve, not analysed as part of 84,003ha
WATERWAYS	473ha	
OTHER	7,597ha	
LAND PROPOSED AS RESERVE	2,370ha	

Source: Ministry for Primary Industries (MPI); Land Information New Zealand (LINZ); Land Resource Information Systems (LRIS)



PERCENTAGE OF LUC 1 - 3:

Grassland: 88%

Exotic Forest: 1%

Manuka/Kanuka: 9%

Shrub and gorse: 2%

MAIN LAND USE POSSIBILITIES TO EXPLORE:

Dairy

Sheep and Beef

Horticulture (sheep and beef, horticulture covered in case studies)

This land is the most valuable land for production and has the highest potential for economic capacity.

However, there are a number of blocks that are small in nature, making collectivising opportunities important to explore.

If the most valuable land use is considered pastoral or horticulture; shrub, gorse, forestry and manuka/kanuka can be analysed further for potential conversion.

Please note: the map reflects all blocks that have a particular type of land cover. The colours are not to scale and do not represent the exact amount of different land cover in each block.

PRODUCTIVE LAND COVER

GRASSLAND, EXOTIC FOREST, MANUKA/KANUKA, SHRUB AND GORSE

CLASS 1 TO 3 – APPROXIMATE

	TOTAL LAND AREA	NO. PARCELS
GRASS-LAND	4,217ha	1,299
EXOTIC FOREST	66ha	14
MANUKA/ KANUKA	428ha	145
SHRUB	58ha	5
GORSE	62ha	6

Source: Ministry for Primary Industries (MPI); Ministry for the Environment (MfE); Landcare Research; Land Information New Zealand (LINZ); Land Resource Information Systems (LRIS)

DAIRY POTENTIAL

CLASS 1 TO 3 – TO FARM GATE

1,469

NO. PARCELS

4,831ha

TOTAL LAND AREA

Source: Photo – Ministry for Primary Industries (MPI)

DAIRY METRICS - OPERATIONAL	
cows/ha:	2.5 cows
Days in milk:	262
MS/ha:	877kg
Average MS/cow:	345kg
Total stock:	12,078
Average size farm:	133ha

Please note: Dairy Farming requires a very large allocation of water. A typical dairy farm requires **70L per cow, per day.** The water requirements exclude irrigation.

DAIRY METRICS - FINANCIAL	
Revenue:	$28,633,337
Expenses:	$19,652,508
EBIT:	$8,980,829
Required Investment approximations: Grassland, gorse and scrub (4,337ha):	
Total:	$36,864,500
Per ha:	$8,500
Forest and Manuka/Kanuka (494ha):	
Total:	$11,362,000
Per ha:	$23,000

** Data is based on industry benchmarks for Northland

*** All calculations have been conceptually completed assuming all land is brought into production

SHEEP AND BEEF POTENTIAL

CLASS 1 TO 3 – TO FARM GATE

1,469

NO. PARCELS

4,831ha

TOTAL LAND AREA

Source: Photo – Shutterstock.com

SHEEP AND BEEF METRICS - OPERATIONAL	
SU/ha:	9.8/ha
Ewe lambing %:	126%
Hogget lambs: (% of total lambs)	5.3%
Calving %:	86.9%
Fawning %:	77.4%
Average size farm:	345ha

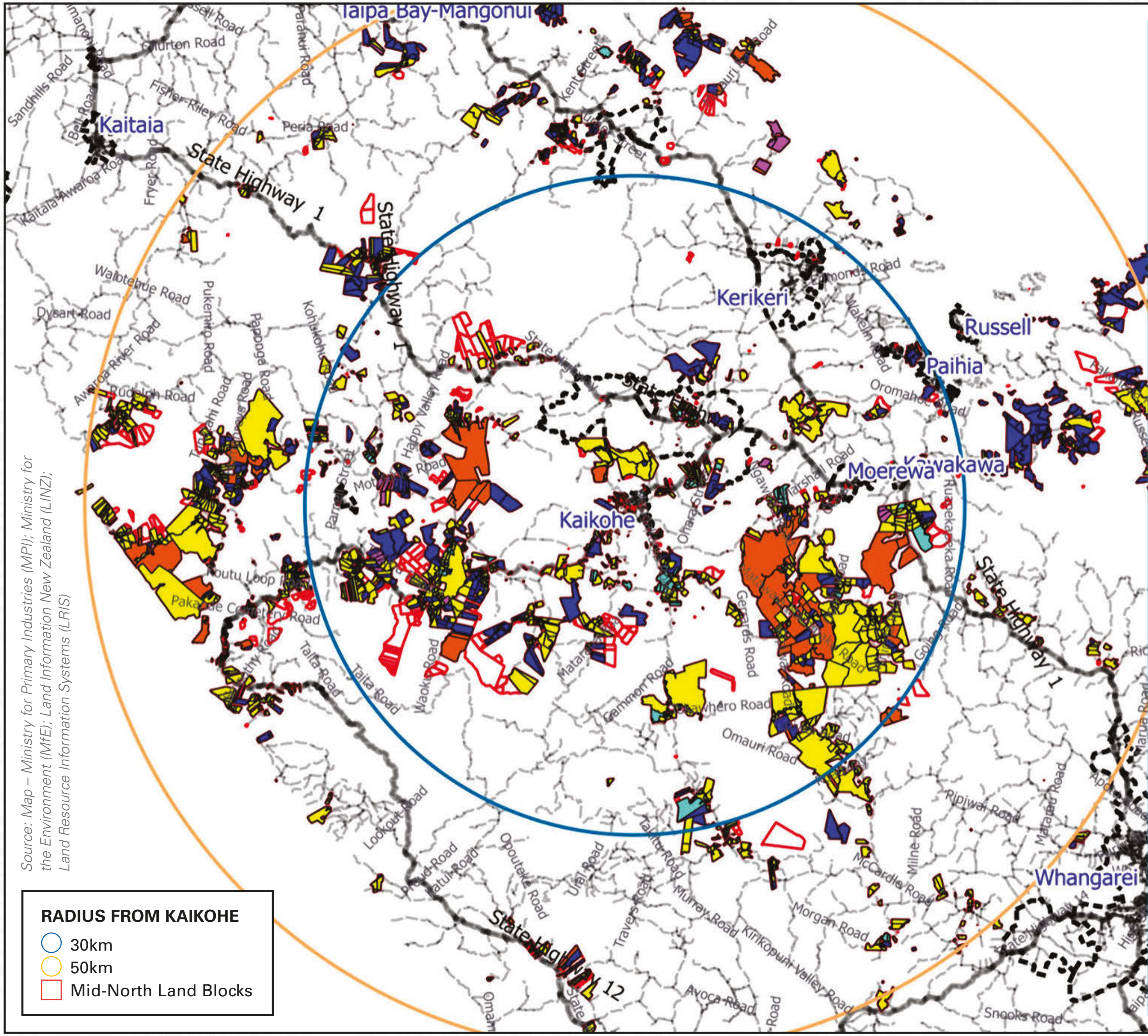
Please note: Sheep and Beef stations require relatively low volumes of water of **4,031 cubic metres per hectare annually,** which equates **to 11 cubic metres per hectare per day.** This is a very small amount of water needed, and therefore the water allocation should be easier to secure.

Please refer to appendix A for further explanation of agricultural references.

SHEEP AND BEEF METRICS - FINANCIAL	
Total stock:	47,344
Revenue:	$4,599,547
Expenses:	$3,640,497
EBIT:	$959,050
Required Investment approximations: Grassland, gorse and scrub (4,337ha):	
Total:	$18,649,100
Per ha:	$4,300
Forest and Manuka/Kanuka (494ha):	
Total:	$5,750,160
Per ha:	$11,640

** Data is based on industry benchmarks for Northland

*** All calculations have been conceptually completed assuming all land is brought into production



Source: Map – Ministry for Primary Industries (MPI); Ministry for the Environment (MfE); Land Information New Zealand (LINZ); Land Resource Information Systems (LRIS)

PERCENTAGE OF LUC 4 - 6:

Grassland: 59%

Exotic Forest: 16%

Manuka/Kanuka: 25%

Shrub and gorse: 2%

MAIN LAND USE POSSIBILITIES TO EXPLORE:

Sheep and Beef

Forestry

Apiculture

The large proportion of grassland provides good scope to bring economic units into production, and/or improve production and efficiency.

Accessibility should be considered when determining the appropriate land use option. This is especially for sheep and beef and apiculture.

If the most valuable land use is considered pastoral grassland; shrub, gorse, forestry and manuka/kanuka can be analysed for potential conversion.

Priority for conversion should be unproductive land that can effectively contribute to a larger unit.

Please note: the map reflects all blocks that have a particular type of land cover. The colours are not to scale and do not represent the exact amount of different land cover in each block.

PRODUCTIVE LAND COVER

GRASSLAND, EXOTIC FOREST, MANUKA/KANUKA, SHRUB AND GORSE

CLASS 4TO 6 – APPROXIMATE

	TOTAL LAND AREA	NO. PARCELS
GRASS-LAND	27,615ha	1,480
EXOTIC FOREST	7,464ha	148
MANUKA/ KANUKA	12,158ha	810
SHRUB	475ha	29
GORSE	305ha	37

Source: Ministry for Primary Industries (MPI); Ministry for the Environment (MfE); Landcare Research; Land Information New Zealand (LINZ); Land Resource Information Systems (LRIS)

SHEEP AND BEEF POTENTIAL

CLASS 4 TO 6 – TO FARM GATE

3,215
NO. PARCELS

48,017ha
TOTAL LAND AREA


Source: MPI

SHEEP AND BEEF METRICS - OPERATIONAL	
SU/ha:	7.8/ha
Ewe lambing %:	121.6%
Hogget lambs: (% of total lambs)	2.6%
Calving %:	85.5%
Average size farm:	586ha

Please note: Sheep and Beef stations require relatively low volumes of water of **4,031 cubic metres per hectare annually,** which equates **to 11 cubic metres per hectare per day.** This is a very small amount of water needed, and therefore the water allocation should be easier to secure.

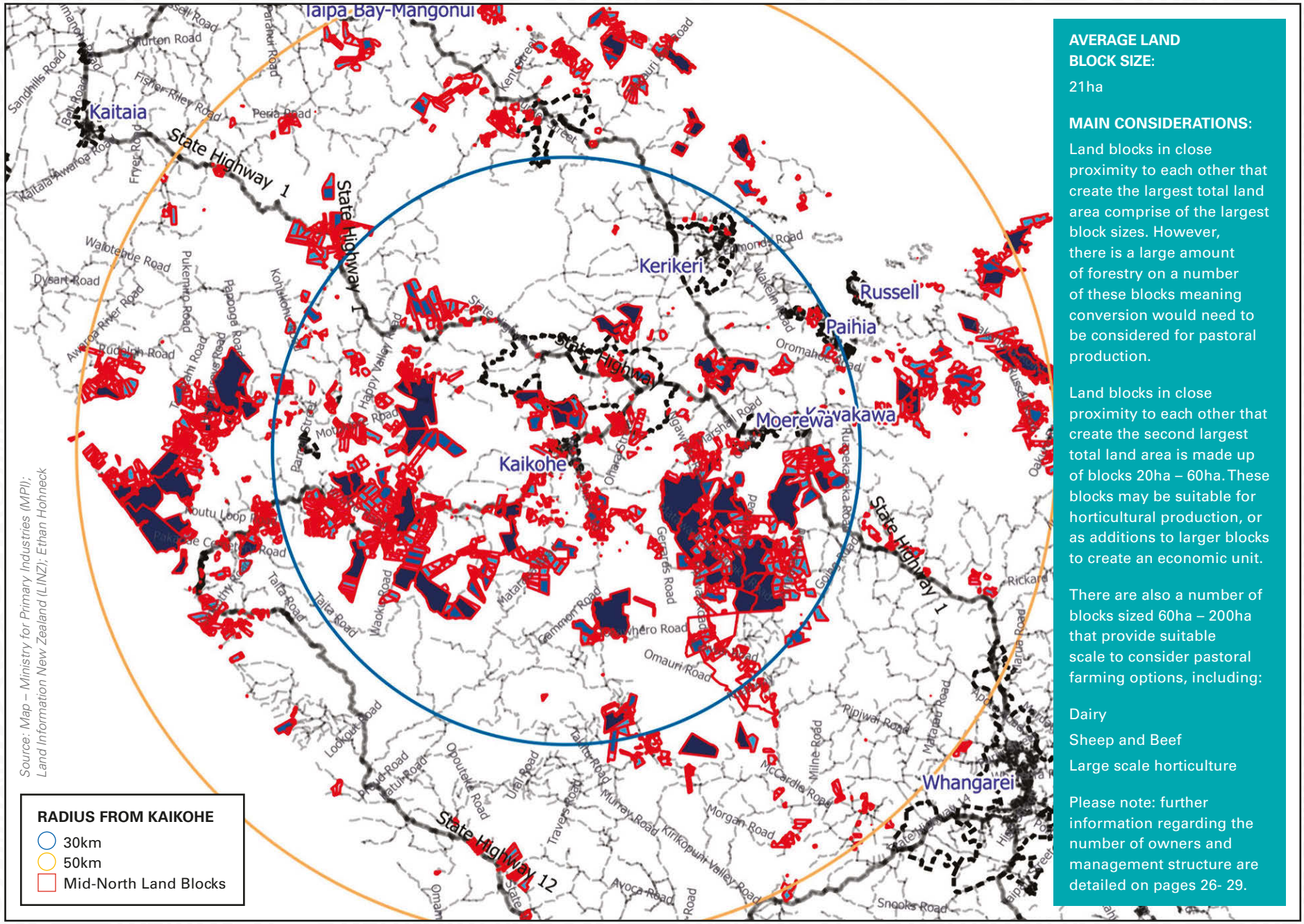
Please refer to appendix A for further explanation of agricultural references.

SHEEP AND BEEF METRICS - FINANCIAL	
Total stock:	374,533
Revenue:	$33,366,053
Expenses:	$25,049,028
EBIT:	$8,317,025
Required Investment approximations: Grassland, gorse and scrub (28,395ha):	
Total:	$122,098,500
Per ha:	$4,300
Forest and Manuka/Kanuka (19,622ha):	
Total:	$228,400,080
Per ha:	$11,640

** Data is based on industry benchmarks for Northland

*** All calculations have been conceptually completed assuming all land is brought into production

Source: Photo – Markets Toolkit



AVERAGE LAND BLOCK SIZE:

21ha

MAIN CONSIDERATIONS:

Land blocks in close proximity to each other that create the largest total land area comprise of the largest block sizes. However, there is a large amount of forestry on a number of these blocks meaning conversion would need to be considered for pastoral production.

Land blocks in close proximity to each other that create the second largest total land area is made up of blocks 20ha – 60ha. These blocks may be suitable for horticultural production, or as additions to larger blocks to create an economic unit.

There are also a number of blocks sized 60ha – 200ha that provide suitable scale to consider pastoral farming options, including:

Dairy

Sheep and Beef

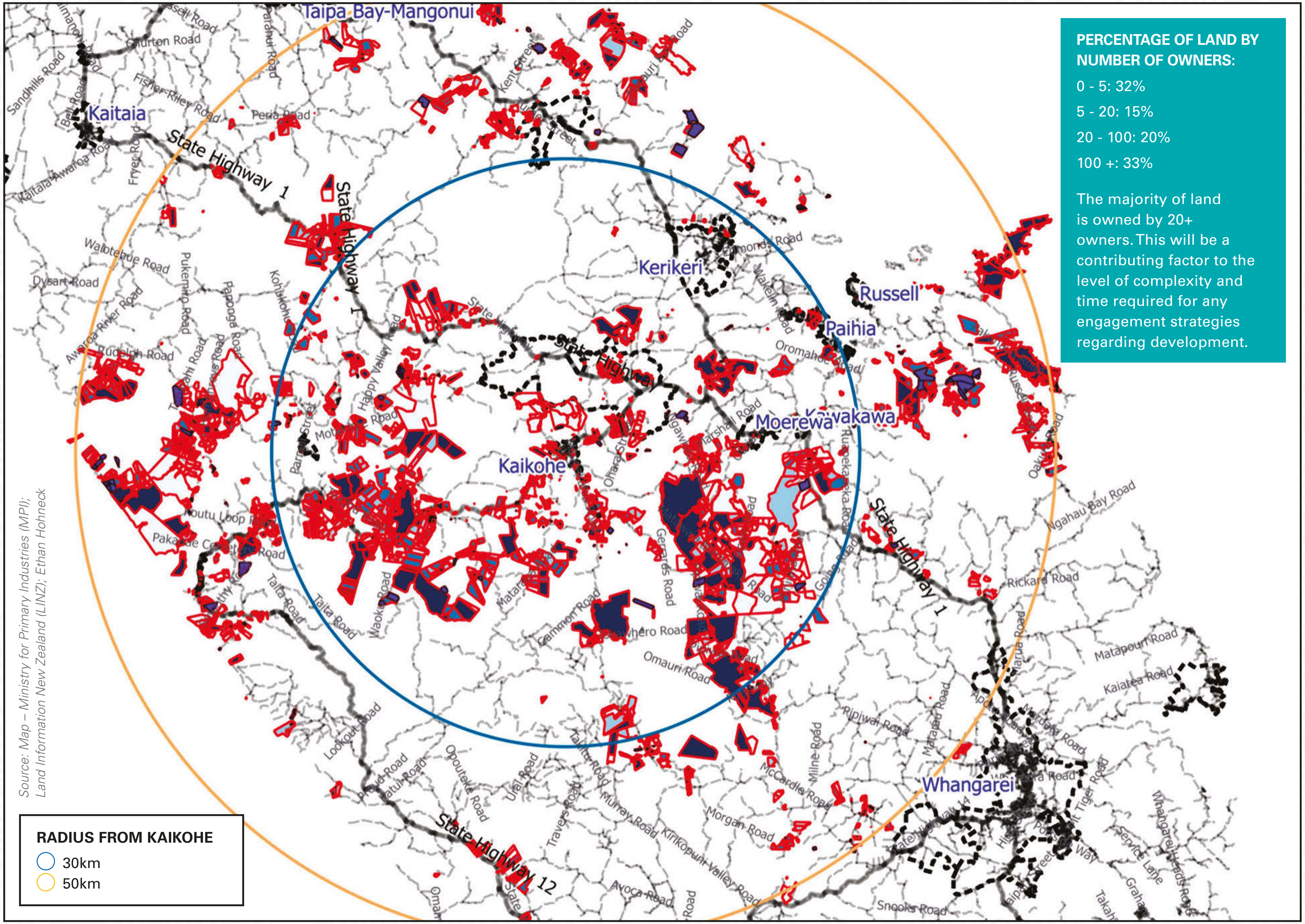
Large scale horticulture

Please note: further information regarding the number of owners and management structure are detailed on pages 26- 29.

LAND BLOCKS BY SIZE

MID-NORTH MĀORI BLOCKS						
	TOTAL LAND AREA	NO. PARCELS	AVERAGE BLOCK SIZE	AVERAGE NUMBER OF OWNERS	BLOCKS WITH MANAGEMENT STRUCTURE	
					YES	NO/UNKNOWN
0ha - 20ha	12,431ha	3,125	4ha	38	766	2359
20ha - 60ha	20,642ha	605	35ha	77	163	442
60ha - 120ha	12,529ha	155	81ha	124	47	108
120ha - 200ha	7,383ha	51	145ha	320	23	28
200ha - 2980ha	31,019ha	50	620ha	1074	33	17

Source: Ministry for Primary Industries (MPI); Land Information New Zealand (LINZ); Ethan Hohneck



PERCENTAGE OF LAND BY NUMBER OF OWNERS:

0 - 5: 32%

5 - 20: 15%

20 - 100: 20%

100 +: 33%

The majority of land is owned by 20+ owners. This will be a contributing factor to the level of complexity and time required for any engagement strategies regarding development.

Source: Map – Ministry for Primary Industries (MPI); Land Information New Zealand (LINZ); Ethan Hohneck

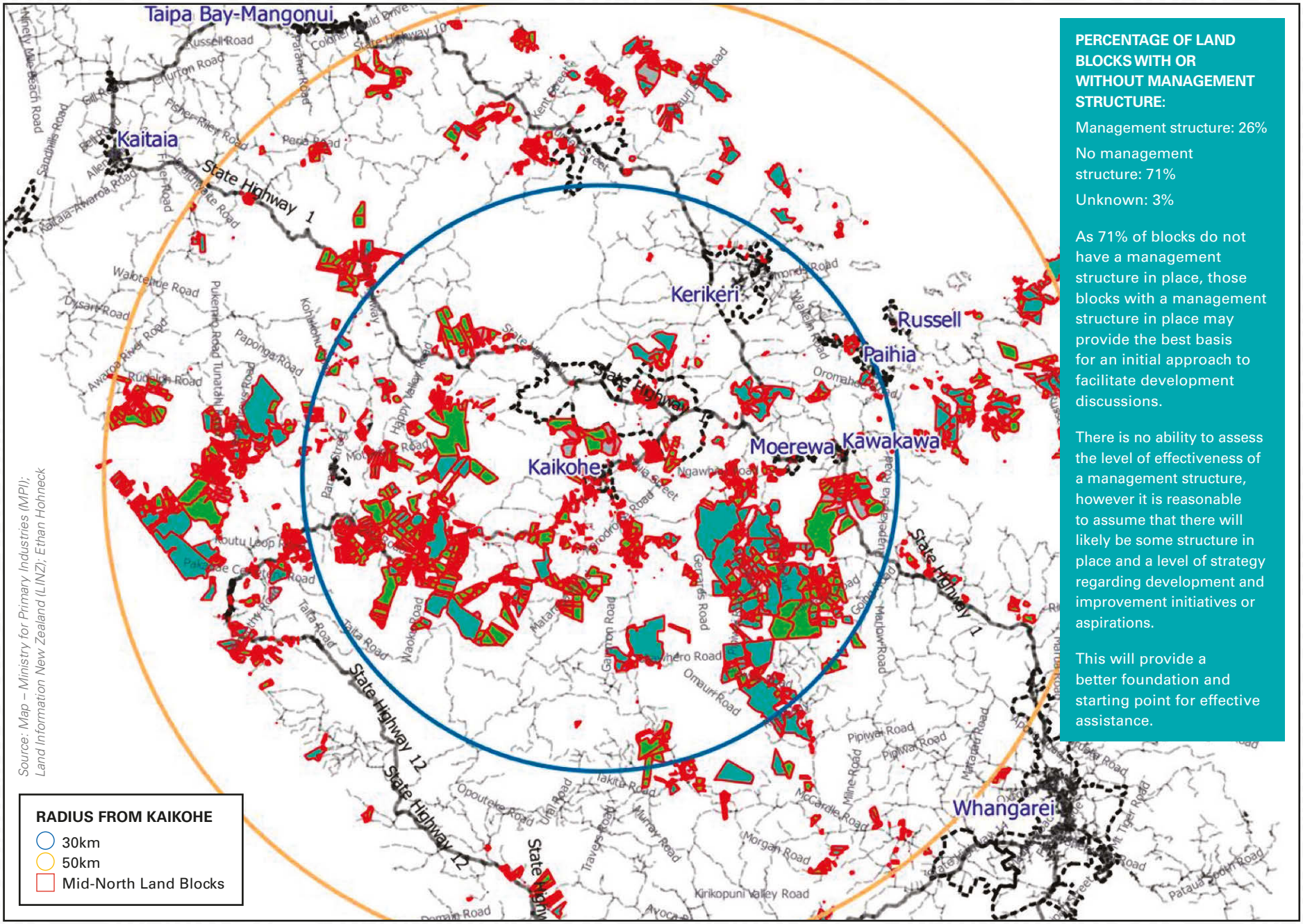
NUMBER OF OWNERS

MID-NORTH MĀORI BLOCKS

	TOTAL LAND AREA	NO. PARCELS
0 - 5	26,262ha	1,809
5 - 20	12,783ha	949
20 - 100	16,159ha	949
100 +	27,588ha	278

The number of owners are based on separately identifiable individuals including all beneficiaries of a single trust.

Source: Ministry for Primary Industries (MPI); Land Information New Zealand (LINZ); Ethan Hohneck



PERCENTAGE OF LAND BLOCKS WITH OR WITHOUT MANAGEMENT STRUCTURE:

Management structure: 26%

No management structure: 71%

Unknown: 3%

As 71% of blocks do not have a management structure in place, those blocks with a management structure in place may provide the best basis for an initial approach to facilitate development discussions.

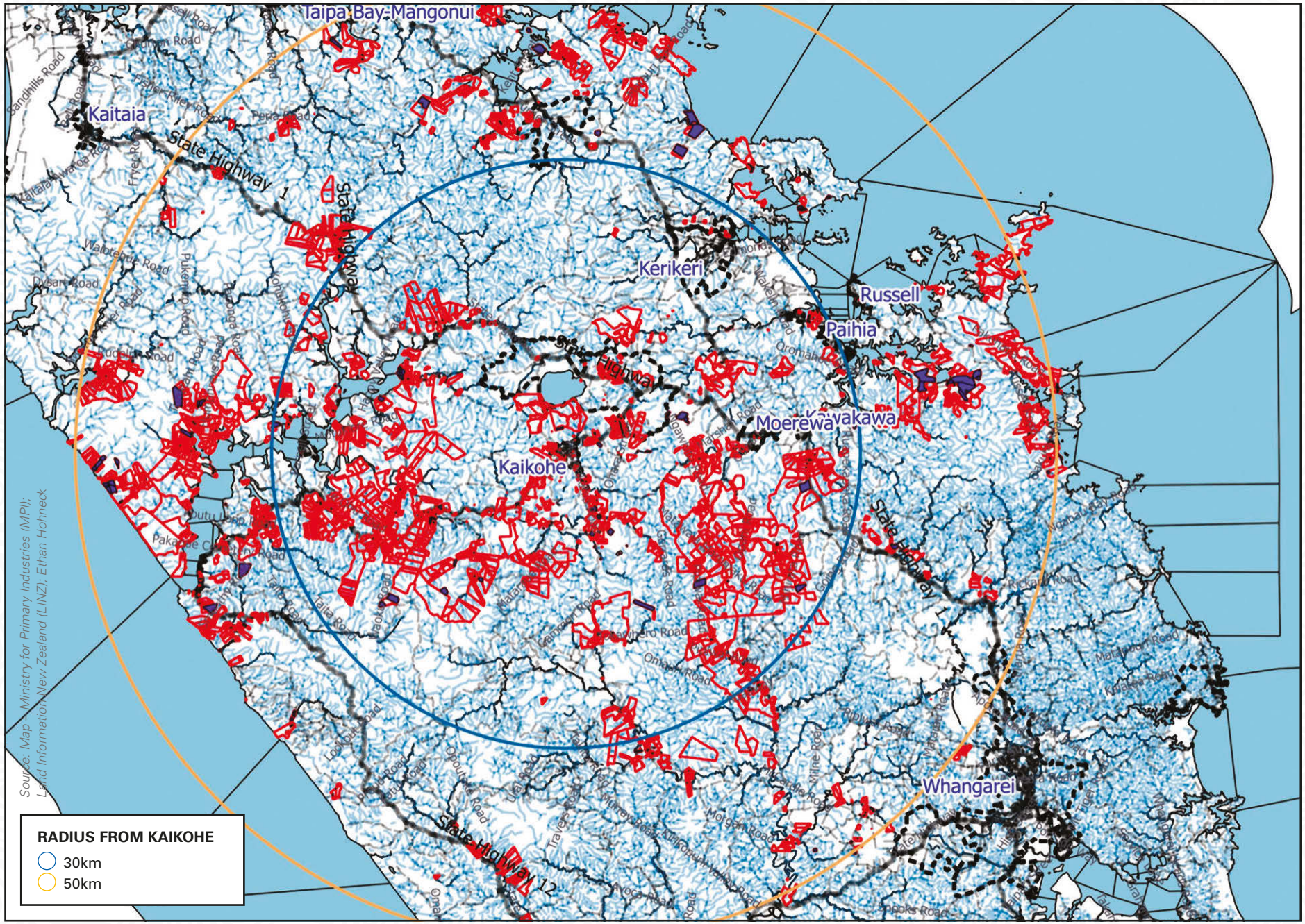
There is no ability to assess the level of effectiveness of a management structure, however it is reasonable to assume that there will likely be some structure in place and a level of strategy regarding development and improvement initiatives or aspirations.

This will provide a better foundation and starting point for effective assistance.

BLOCKS WITH MANAGEMENT STRUCTURE

MID-NORTH MĀORI BLOCKS		
	TOTAL LAND AREA	NO. PARCELS
BLOCKS WITH MANAGEMENT STRUCTURE	37,438ha	1,032
NO MANAGEMENT STRUCTURE	43,826ha	2,825
UNKNOWN	2,739ha	129

Source: Ministry for Primary Industries (MPI); Land Information New Zealand (LINZ); Ethan Hohneck


Taipa Bay-Mangonui
Kaitaia
State Highway 1
Kerikeri
Russell
Paihia
Moerewa
Kawakawa
Kaikohe
Whangarei
RADIUS FROM KAIKOHE
30km
50km
Source: Map – Ministry for Primary Industries (MPI); Land Information New Zealand (LINZ); Ethan Hohneck

WATER BODIES – INCLUDING STREAMS

A number of economic options have been identified as a basis for commencing individual block analysis, these include:

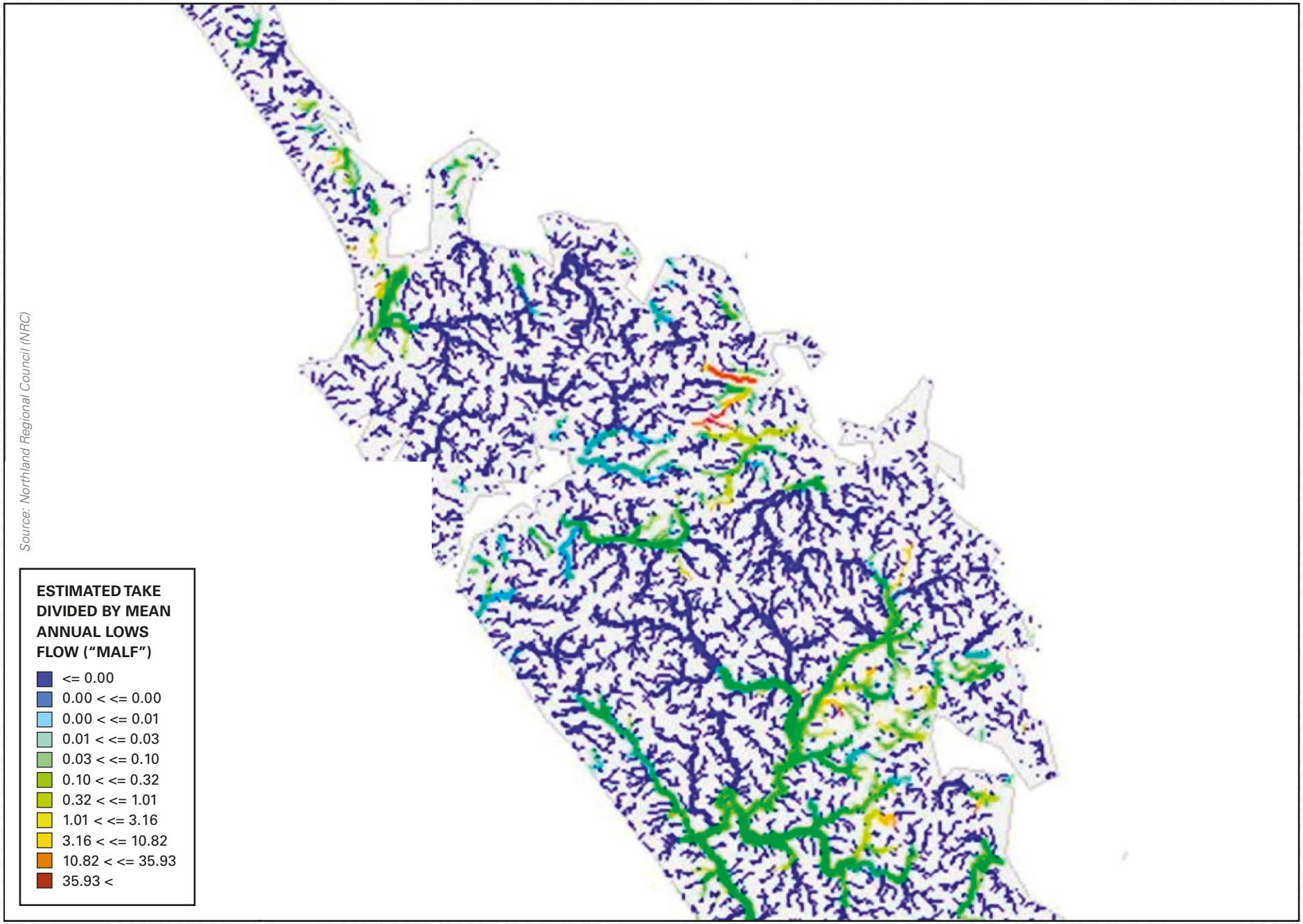
- Northland has a dense network of rivers and streams.
- None are considered "major"
- Most rivers are relatively short with small catchments

Main water bodies:

- Lake Omapere
- Kawakawa River
- Waitangi River
- Wairau River
- Mangakahia River
- Waihou River
- Mangamuka River
- Kaeo River

- The high presence of fresh water provides the opportunity to have water available at a number of different sites.
- However, it should be noted that the Northland Regional Council may have restrictions on nutrient levels and application rates.

Source: Ministry for Primary Industries (MPI); Northland Regional Council (NRC); Land Information New Zealand (LINZ);



Source: Northland Regional Council (NRC)

WATER ALLOCATION

NORTHLAND REGIONAL COUNCIL

- Land classes have good water bodies around them, however usability will be determined by the Northland Regional Council.
- Currently, water allocation is based on the Northland Regional Council report dated 3 September 2013.
- Northland Regional Council are currently in the process of reviewing their water allocation strategy and limits.
- The basalt aquifer in Kaikohe itself (Monument Hill) and the upper Wairoro Stream would be considered fully allocated due to Far North District Council public water supply takes.
- Final determination of water allocation limits will need to be ascertained directly from the Northland Regional Council through consent applications at this stage.

Main areas of high water allocation:

- Kerikeri
- Kaikohe
- Umawera
- Omania.

Source: Northland Regional Council (NRC); Whangarei District Council (WDC)

FUTURE STATE OPPORTUNITY

Source: Photo – Markets Toolkit

BENEFITS OF ENTERING INTO PRODUCTION

"Mahia te wahi mo takurua, mahia he kai mo tau" looking ahead and preparing for future needs

Increasing individual land productivity and financial returns to provide for on-going whenua development, employment and skill pathway opportunities

Establishing economically viable operations that can access capital, skills and knowledge

Protecting the land to ensure that the health, wealth and wellbeing of whenua and people is sustainable

Source: KPMG

LAND UTILISATION OPTIONS AVAILABLE

Develop land into production: production options include sheep and beef, apiculture, dairy, horticulture and forestry.

- Develop strategic relationships and arrangements with other corporate and/or Māori operators/organisations (e.g. MyFarm, FarmRight). These relationships provide options to develop and operate the properties for the benefit of the collective. Ability to consider a management agreement rather than a standard lease and greater access to capital and expertise.
- Join other government initiatives like FarmIQ to assist with staff performance, management and upskilling.
- Utilise existing farmer buyer groups to leverage relationships and secure preferential access to killing space etc.
- With improved property use greater input from staff, being more skilled staff and more full time equivalents ('FTE'), across the farms as a whole will be required – this could be achieved through training programmes such as AgITO and\or collective wide discussion groups.

Possible alternative land-use options to investigate:

- Large scale horticulture options (kiwifruit/ avocados) with an aim to directly export overseas.
- Forestry for all but the best land areas.
- Manuka/Kanuka honey extraction and harvesting.
- Partner with offshore investors to supply meat (or other) products direct to consumers overseas – i.e. beef direct to Asian supermarkets.

Source: KPMG

COLLECTIVISING
A CONCEPTUAL PERSPECTIVE

Collectivisation can provide the opportunity to access resources, achieve efficiencies and realise cost-savings. However, there are a number of aspects that must be considered when determining whether to implement a collective structure.

Advantages to collectivising

- Necessary skills are more easily available and transferable, leading to improved productivity or less downtime.
- Achieves scale which can lead to preferential agreements with local processors, decreased costs through increased buying power and the ability to explore other distribution ownership opportunities.
- Scale provides confidence in the 'collective's' abilities to perform and is more likely to attract capital.
- Greater ability for sustainable employment as a result of scale and a greater level of certainty to fulfil demand.
- Subject to the operating model implemented, ability to introduce new business partners with required capital, resources or skills.
- Key themes that contribute to effective collectivisation and operations

Governance

- Suitable and effective governance can better enable the achievement of owner aspirations and objectives (including realising productive capacity), by a consistent one farm approach across various land blocks.

Skills, development and training

- In order to have effective operations that are conducive to collectivisation, extensive investment in training should be considered a priority. As staff skills are improved and developed, operational productivity should increase. In addition knowledge can be transferred between staff, further increasing efficiency.

Social construct and multiple objectives

- The performance of Māori organisations is not purely assessed on their financial or economic indicators. The impact on social, environmental and cultural outcomes will need to be considered along with economic indicators.

Challenges of moving towards collectivising

- Aligning individual interests, objectives and values.
- Addressing historical views and opinions.
- Determining the expectations and basis of the collective arrangement in particular an appropriate minimum time horizon to allow the full benefit of land development to be realised.

Challenges after collectivisation

- Balancing re-investment with distribution.
- Allowing the collective to operate freely from influence of individual interests.
- Withdrawal of individual partners or properties from the collective.

Source: KPMG

REQUIREMENTS TO UNLOCK OPPORTUNITIES

- Development of comprehensive plans to deliver optimised land use, including consideration of both current and future water requirements and allocation, infrastructure (e.g. access, roading) and land use implications (e.g. rates, regional plans).
- Building an effective collaboration environment between owners to progress towards delivery of optimised land use.
- Identification and engagement with potential investors and partnering to access required capital for development and improvements.
- Exploring access to relevant co-funding (e.g. subsidies and grants), to support capability development, research and development initiatives.
- Ultimately collectivise to achieve economies of scale, supply and value chain relationships.
- Building and attracting the required skills, knowledge and networks at both governance and operational levels.

Source: KPMG

Source: Photo – Markets Toolkit

HORTICULTURAL CASE STUDY

NĀKU TE ROUROU – MY FOOD BASKET

Think ahead to 2025 and imagine driving through the countryside that surrounds Kaikohe, seeing the whanau-owned avocado and kiwifruit orchards, the market gardens growing seasonal vegetables and the fields of berries. There is buzz of excitement and activity that now happens all year round.

Our whānau have remained home to care for and nurture the land because the jobs were available – 54 of them in fact. The potential for even more jobs (including highly skilled jobs) into the future due to innovation and development, provides an economic platform to sustain future generations and means more of our whānau can remain at home and/or return home. The economic benefits flowing from employment uplift and empower the homes of our whanau.

Kaikohe berries and vegetables are sought after by the finest restaurants throughout New Zealand. Our berries and vegetables take pride of place within supermarket displays and our consumers encourage their own friends to buy them. There is great pride within our region not just for the quality of our berries and vegetables but for the rich heritage and connection to the land they are grown on. They demand a premium price which contributes to economic success and sustainability.

Partnerships with businesses such as Turners and Growers and Zespri provide strong and consistent export values for our avocado and kiwifruit produced.

The jobs are now for a full year instead of the seasonal mahi of the old days. They deliberately designed the mix of crops to provide us with this security and this gives us the capacity to investigate other crops of indigenous herbs and vegetables without putting at risk the regular income of $5.4m per annum from our collective crop.

The smaller blocks used to be viewed as "uneconomic" although that wasn't our own view. They were perfect for hothouses so we now have a few on some of the smaller blocks which helps us with the timing of our production. Both our location and our hothouses mean our produce is ready earlier in the season, when supply elsewhere is low, and we can get stronger prices in the first part of the season.

The region looks and feels prosperous, the success of the 100ha horticulture development and the value it has brought to the region, economically and socially, has started a chain reaction – others now want to look at what they might do with their blocks. Improved land productivity and employment creates the need for infrastructure investment. The region is focused on sustainable transformation of people, place and builds pride.

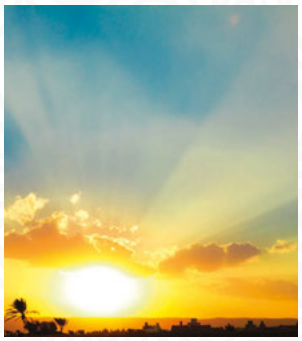
Source: KPMG

KEY INSIGHTS

A mixed cropped approach, that consists of a variety of produce:

Provides the ability to balance the risk of price and production fluctuations

Provides full utilisation of equipment and human resources across different crops and properties throughout the year



Provides the ability to take advantage of the different growing conditions, therefore produce will come on line before other regions and provide early supply and potential price advantages

Based on a mixed cropped approach and at optimal production:

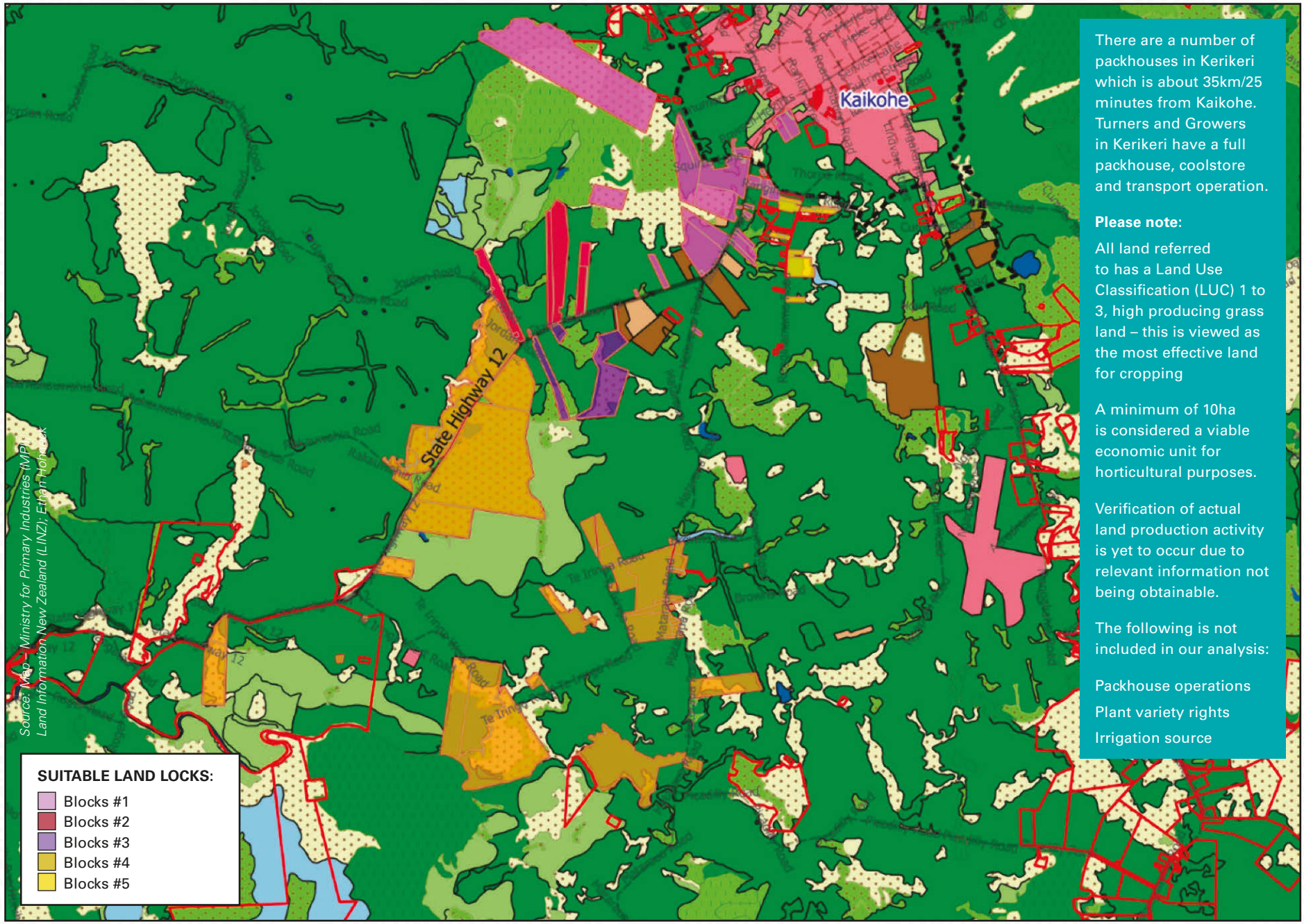
	Estimated annual revenue ($5.4m)	Investment required ($18m)
KIWIFRUIT	$2.3m	30ha $5m
AVOCADO	$0.2m	15ha $1m
BERRIES	$0.4m	15ha $1m
VEGETABLES	$1.5m	39ha $2m
HOTHOUSE	$1.0m	1ha $9m

Land area: 100ha

Potential employment opportunities with no current production

A domestic brand based on quality, a rich heritage and connection to the land will demand a price premium

Source: Ministry for Primary Industries (MPI), Photos – Shutterstock.com



There are a number of packhouses in Kerikeri which is about 35km/25 minutes from Kaikohe. Turners and Growers in Kerikeri have a full packhouse, coolstore and transport operation.

Please note:

All land referred to has a Land Use Classification (LUC) 1 to 3, high producing grass land – this is viewed as the most effective land for cropping

A minimum of 10ha is considered a viable economic unit for horticultural purposes.

Verification of actual land production activity is yet to occur due to relevant information not being obtainable.

The following is not included in our analysis:

Packhouse operations

Plant variety rights

Irrigation source

HORTICULTURAL CASE STUDY

KEY INSIGHTS

MID-NORTH MĀORI BLOCKS			
	# BLOCKS	AVERAGE SIZE (ha)	TOTAL LAND AREA (ha)
BLOCKS #1	32	1.2ha	67.39ha
BLOCKS #2	6	5.8ha	35.17ha
BLOCKS #3	2	3.7ha	7.4ha
BLOCKS #4	28	5.9ha	166ha
BLOCKS #5	32	1.62ha	52ha
TOTAL	100	18.22ha	327.96ha

Source: Ministry for Primary Industries (MPI); Land Information New Zealand (LINZ); Ethan Hohneck

HORTICULTURAL CASE STUDY

FLIGHT PATH – GOVERNANCE CONSIDERATIONS

	MILESTONE 1: AGREE	MILESTONE 2: BUILD & ANALYSE	MILESTONE 3: DEVELOP	MILESTONE 4: CULTIVATE

GOVERNANCE	• Collective purpose
	• Collective values
	• Key strategic objectives
	• Governance and operating model
	
	Until this milestone is completed no further progress is possible.
		• Strategic plan	• People capability – governance recruitment and appointment
			• People capability – key management recruitment and appointment
				• Monitoring and review:
				  • Strategic plan progress
				  • Operational results
				  • Board performance
				  • Key management performance

Source: KPMG

FLIGHT PATH – OPERATIONAL CONSIDERATIONS

	MILESTONE 1: AGREE	MILESTONE 2: BUILD & ANALYSE	MILESTONE 3: DEVELOP	MILESTONE 4: CULTIVATE

OPERATIONAL	• Engage consultants who specialise in cropping to complete:
	  • Soil tests (to identify mineral requirements)
	  • Mineral application recomendations
	  • Infrastructure design (kiwifruit and berries)
	  • Plant postioning
	  • Cropping maps
	  • Annual rotation plan
	  • Water requirements
	  • Development requirements
	• This would form the initial basis of a business plan and provide relevant recommendations to governance
	• Develop partnerships with Zespri, Turners and Growers (or the like) for access to variety licences and markets
		• Business plan activities to achieve strategy and consultants recommendations
		• Financial modelling
		• Staff planning
		• Capital raising
		• Project management plan
		• Project manager – recruitment and appointment
		• Document cropping cycles
			• Land preparation
			• Infrastructure purchase
			• Infrastructure development
			  • Fencing
			  • Water irrigation
			  • Equipment
			  • Contour
			• Plant varieties purchased
			• People capability – recruitment and appointment
			• R & D of farm systems, knowledge and science
			• Marketing and distribution plans established
				• Plant and grow as per plan
				• People capability – retention and progression
				• Prepare for first harvest ensuring the appropriate people, infrastructure and equipment are ready as each variety comes on stream to harvest annually
				• Prepare for first pruning (equipment, people, capability)
				• Establishing strong growth for Avocado and Kiwifruit, they will not require harvest for a number of years but will require nurturing to ensure maximise potential for cropping

Source: KPMG

HORTICULTURAL CASE STUDY

FLIGHT PATH – KIWIFRUIT

		PRODUCTION
YEAR 1	Infrastructure establishment Soil testing; vine support; planting; mineral application	
YEAR 2	Non commercial production – pruning and establishing vine health for the following production year	
YEAR 3	First commercial harvest – minimal production	
YEAR 4	Commercial harvesting – productive output increases	
YEAR 5	Commercial harvesting – productive output moves into optimal levels	
YEAR 6	Commercial harvesting – productive output moves into optimal levels	
YEAR 7	Commercial harvesting – productive output moves into optimal levels	
YEAR 8	Commercial harvesting – productive output optimised	
YEAR 9	Commercial harvesting – productive output optimised	
YEAR 10	Commercial harvesting – productive output optimised	

Pruning and vine management is required each season to allow for optimal production .

Note: operational processes ideally begin when governance is firmly established.

Source: Graph – KPMG

FLIGHT PATH – AVOCADO

		PRODUCTION
YEAR 1	Infrastructure establishment Soil testing; tree placement/planting plan; mineral application	
YEAR 2	Avocado tree requires good maintenance including precision pruning over this period to prepare for future fruit production. Tree will not produce fruit over this time	
YEAR 3	Avocado tree requires good maintenance including precision pruning over this period to prepare for future fruit production. Tree will not produce fruit over this time	
YEAR 4	Avocado tree requires good maintenance including precision pruning over this period to prepare for future fruit production. Tree will produce fruit that will need to be removed but will have no commercial value	
YEAR 5	Commercial harvesting – productive output is low but of a quality for sale	
YEAR 6	Commercial harvesting – production will be incrementally increasing	
YEAR 7	Commercial harvesting – productive output increasing	
YEAR 8	Commercial harvesting – productive output optimised	
YEAR 9	Commercial harvesting – productive output optimised	
YEAR 10	Commercial harvesting – productive output optimised	

Pruning and tree management is required each season to allow for optimal production.

Optimised level of production:
Assumed maximum level of production capability for the area, plants and soil.

Note: operational processes ideally begin when governance is firmly established.

Source: Graph – KPMG

HORTICULTURAL CASE STUDY

FLIGHT PATH – VEGETABLES

		PRODUCTION
YEAR 1	Infrastructure establishment Soil testing; crop rotation planning; mineral application	
YEAR 2	Commercial harvest – given the nature of an annual immediate optimal production will be met in year of planting. This year assumes not all the land is planted	
YEAR 3	Commercial harvest – given the nature of an annual immediate optimal production will be met in year of planting. This year assumes not all the land is planted	
YEAR 4	Commercial harvesting – productive output at optimal levels due to annual planting characteristics	
YEAR 5	Commercial harvesting – productive output at optimal levels due to annual planting characteristics	
YEAR 6	Commercial harvesting – productive output at optimal levels due to annual planting characteristics	
YEAR 7	Commercial harvesting – productive output at optimal levels due to annual planting characteristics	
YEAR 8	Commercial harvesting – productive output at optimal levels due to annual planting characteristics	
YEAR 9	Commercial harvesting – productive output at optimal levels due to annual planting characteristics	
YEAR 10	Commercial harvesting – productive output at optimal levels due to annual planting characteristics	

Vegetables are annual plants, they will be grown, harvested and replanted within a year. To ensure soils are not exhausted new varieties need to be planted in rotation, depending on the varieties this could range from every 1 year to 3 years. The same varieties can be planted each year just in different parts of the land. Certain crops however do drain the nutrients over time, therefore some plots will need to be 'unplanted' for the odd season.

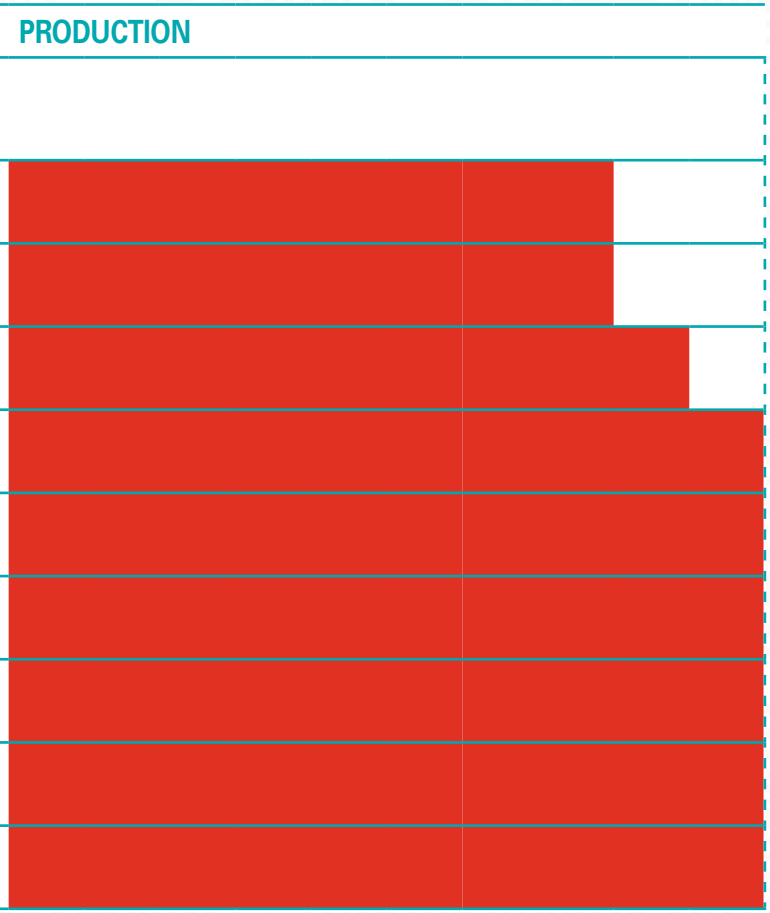
All of the above assumes no major weather events that could destroy an entire crop or significantly reduce production .

Note: operational processes ideally begin when governance is firmly established.

Source: Graph – KPMG

FLIGHT PATH – BERRIES

YEAR 1	Fruit production from berries is very quick, for some varieties like strawberries export quality flavours can take up to 3 years as the plant matures. The fruit is still commercial but may be more suitable for domestic or Jam production. Berries will require regular pruning, thinning of the fruit and can require rotation after 5+ years.	Infrastructure establishment Soil testing; mound creation for berries to be planted on; mineral application
YEAR 2		Commercial harvest close to optimal output
YEAR 3		Commercial harvest close to optimal output
YEAR 4		Commercial harvest close to optimal output
YEAR 5		Commercial harvest at optimal output
YEAR 6		Commercial harvest at optimal output
YEAR 7		Commercial harvest at optimal output
YEAR 8		Commercial harvest at optimal output
YEAR 9		Commercial harvest at optimal output
YEAR 10		Commercial harvest at optimal output



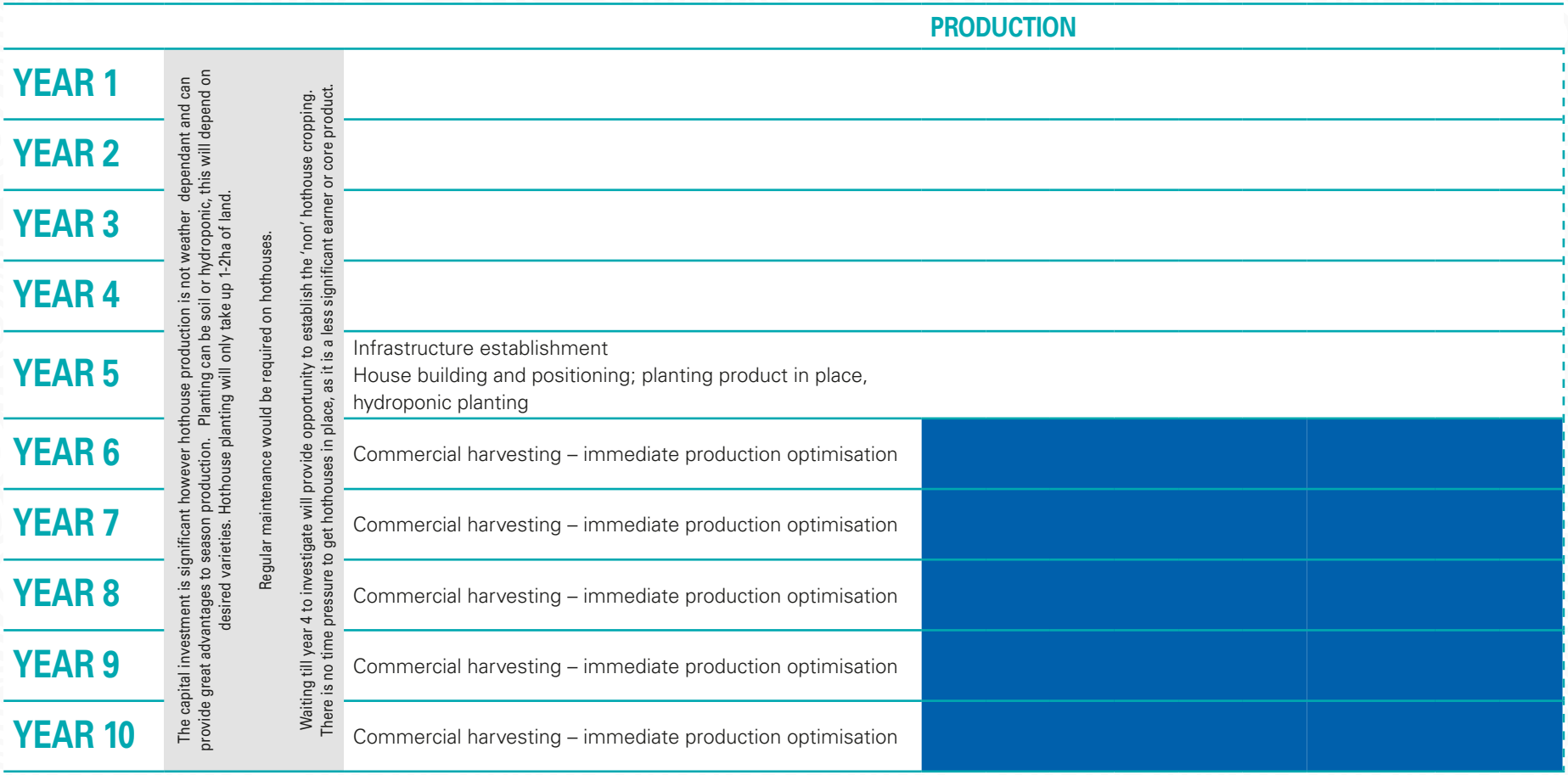
Please note: a variety of strawberries, blueberries, blackberries, raspberries and boysenberries could be utilised.

Note: operational processes ideally begin when governance is firmly established.

Source: Graph – KPMG

HORTICULTURAL CASE STUDY

FLIGHT PATH – HOTHOUSE

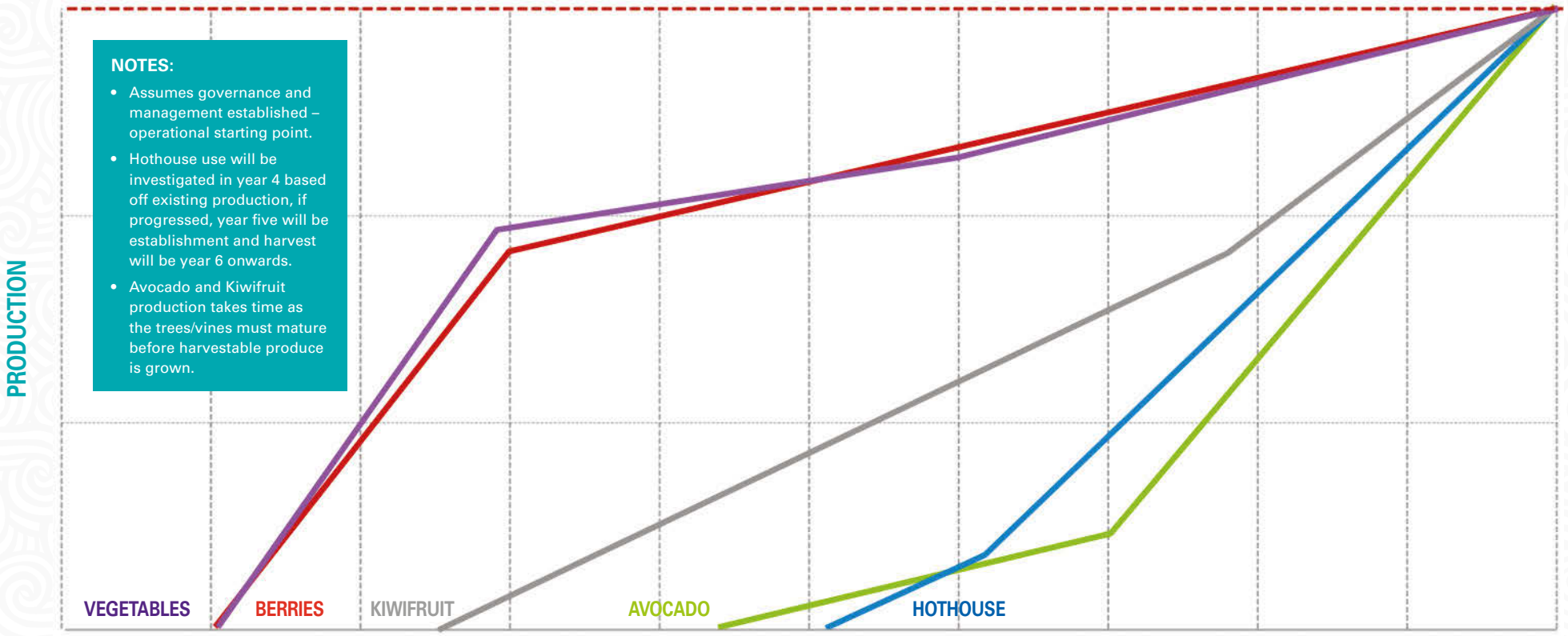


Note: operational processes ideally begin when governance is firmly established.

Source: Graph – KPMG

FLIGHT PATH – TOTAL CROP SUMMARY

Optimised level of production: Assumed maximum level of production capability for the area, plants and soil.



Source: Graph – KPMG

PASTORAL CASE STUDY

KA WHAKARĒREA TE PŪHĀ, KA WAHI KI TE MATARIKI – PROGRESSION TO PRECISION

Picture this – you are driving between Mangakahia and Kaikohe. The paddocks you remember being overrun with Kikuyu are now full of green leafy crops being grazed by thousands of lambs and hundreds of beef cattle. These intensive sheep and beef farm systems are owned and operated by Māori and set up on multiple-owned Māori land blocks that once sat idle.

The sheep and beef farming systems are a demonstration of precision farming techniques, utilising the best knowledge and science to maximise land and climate resources of Northland. The farm targets 400kg of meat production per hectare (well above the industry average) but regularly achieves industry leading 530kg/ha. High-yielding crops like Chicory, Lucerne along with new pasture species make the most of Northland conditions. Providing high quality feed for finishing animals along with allowing flexibility to maximise market opportunities for trading stock. Stock genetics are purposely selected for high-value attributes and thrive in the intensive farming system.

Development of the land was based on foresight, vision and conviction that a prosperous future was within the realms of possibility. There has been an increase in the production levels from the land by more than twice that previously achieved. Providing the avenue for good investment to protect the land for future generations. The development and productive capacity of these blocks allows the farm to link to other farming groups for knowledge sharing, stock supply agreements, labour and equipment sharing, learning and training opportunities for staff. The science within the farm provides the inspiration and opportunity for expertise and jobs beyond the farm gate, showing the next generation that great jobs are associated with the land their ancestors grew up on.

The region looks and feels prosperous, the success of the 500ha finishing development and the value it has brought to the region, socially and economically, has started a chain reaction. The farm has been nationally recognised for its environmental management practices and how it balances these with the economic imperatives. Improved land productivity and employment creates the need for infrastructure investment. The region is focused on sustainable transformation of people, place and builds pride.

Source: KPMG

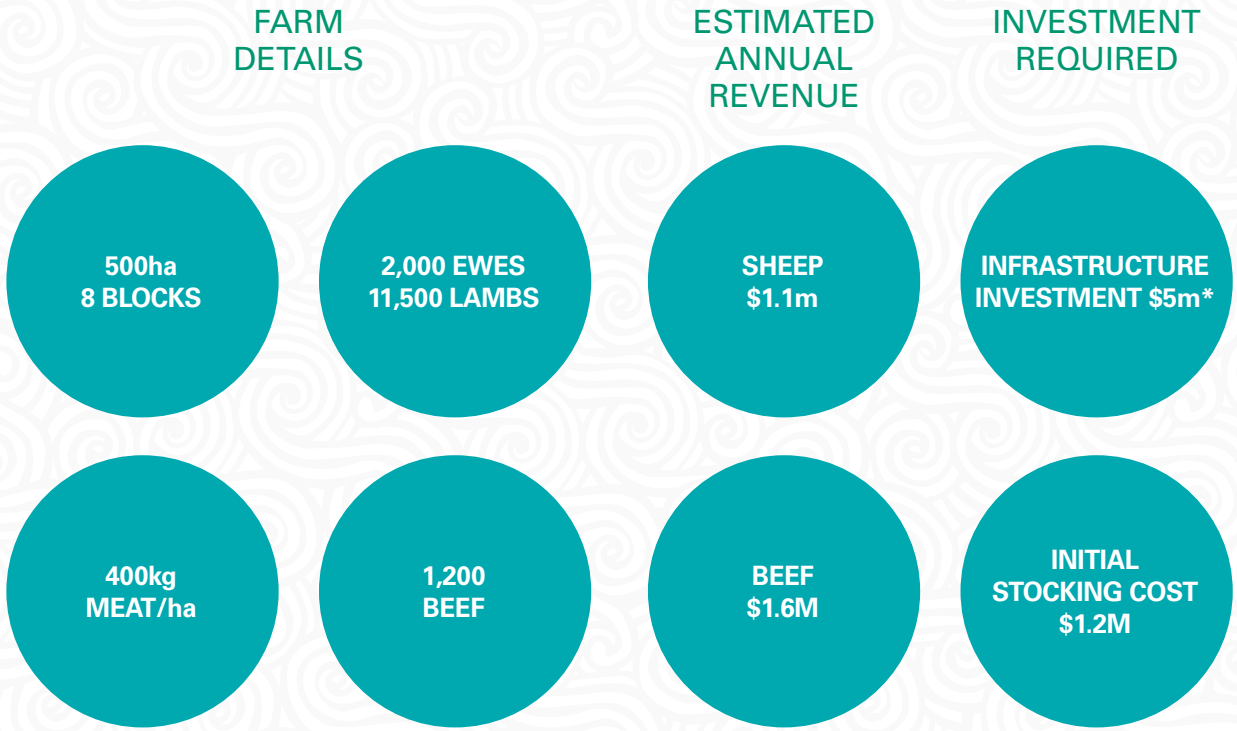
KEY INSIGHTS

Precision farming:

- Science based farm management, that collects and utilises data to make informed decisions about the farming system
- Regular measuring of feed grown
- Regular measuring and monitoring of stock weight gain
- Use of information to provide oversight of the operation and assist in planning
- Provides timely information to plan for and manage changes in climatic conditions.

*** Infrastructure required estimated at $10k per hectare:**

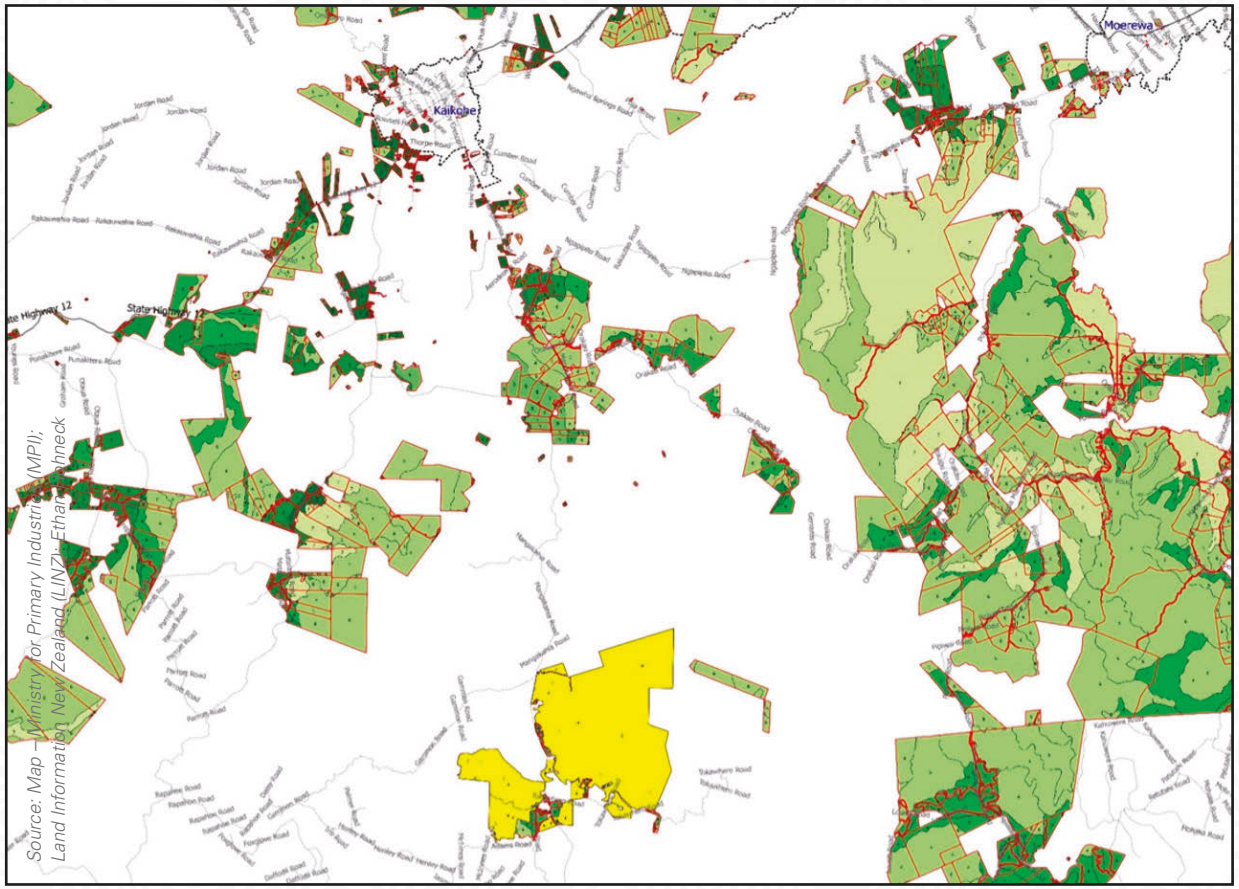
- Intensive subdivision into small paddocks – known as 'techno beef fencing'. This provides for grazing efficiency
- Water reticulation to all areas
- Modern sheep and beef stock handling yards and facilities
- Machinery, tools and vehicles.



Source: KPMG; Graph – Beef + Lamb NZ, PGG Wrightson, Dairy NZ, NZ Forage Systems, Agricom, Agfirst Northland

PASTORAL CASE STUDY

SUITABLE LAND BLOCKS



Source: Map – Ministry for Primary Industries (MPI); Land Information New Zealand (LINZ) – Ethan Kinneck

- 500ha
- Land use classification (LUC) classes 1-3, suitable parts within yellow highlighted blocks
- Consists of 8 blocks
- 21km south of Kaikohe
- Nearest processing plant – Moerewa (38.5km).

Please note:

Average Northland hill country sheep and beef farm size is 322ha. The case study scale provides farming system flexibility and spreads the cost of technology over a greater activity.

Verification of actual land production activity is yet to occur due to relevant information not being obtainable.

FLIGHT PATH – GOVERNANCE CONSIDERATIONS

	MILESTONE 1: AGREE	MILESTONE 2: BUILD & ANALYSE	MILESTONE 3: DEVELOP	MILESTONE 4: CULTIVATE

GOVERNANCE	• Collective purpose
	• Collective values
	• Key strategic objectives
	• Governance and operating model.
	
	Until this milestone is completed no further progress is possible.
		• Strategic plan	• People capability – governance recruitment and appointment
			• People capability – key management recruitment and appointment.
				• Monitoring and review:
				  • Strategic plan progress
				  • Operational results
				  • Board performance
				  • Key management performance.

Source: KPMG

PASTORAL CASE STUDY

FLIGHT PATH – OPERATIONAL CONSIDERATIONS

	MILESTONE 1: AGREE	MILESTONE 2: BUILD & ANALYSE	MILESTONE 3: DEVELOP	MILESTONE 4: CULTIVATE

OPERATIONAL	• Business case requirements:
	  • Blocks in scope
	  • Development required
	  • Stocking mix
	  • Funding requirements and sources
	  • Key partners and relationships
	  • People capability
	  • Financial modelling
	  • Local government regulation considerations
	  • Key infrastructure/ resource requirements, i.e. water.
	
	Until this milestone is completed no further progress is possible.
		• Business Case information
		• Soil testing for crop planning
		• Precision farm mapping to plan infrastructure development
		• Detailed farm plan, design of farming calendar.
			• Project management plan
			• Land preparation
			• Infrastructure
			  • Fencing
			  • Water reticulation
			  • Equipment
			• Initial stock purchases
			• People capability – recruitment and appointment
			• R & D of farm systems, knowledge and science.
				• Grow and refine animals genetics and consistent quality carcass output
				• People capability – retention and progression.

Source: KPMG

FARM MODEL

Stock policy and farming cycle:

- Small flock of self replacing breeding ewes, 2000 to lamb each year targeting 175% lambing survival to sale – 3000 of these are finished by December.
- 8,500 further trading lambs are finished from January to May achieving 60 day turn around.
- Finishing of 1200 bull beef animals from purchase as R1's in May/June. 700 of the bulls are finished before second winter (15-20 months old). The remaining 500 bulls are finished and sold in the following spring (24-28 months old).

Key model assumptions:

- Lamb price $ 5.50 kg carcass @ 17.5/hd, beef price $4.50/kg carcass @ 320kg/hd R2s, 290 kg/hd R1s.
- Pasture/crops growth and animals growth rates are based on those achieved either in trial or by other top producing farms around the country adjusted for Northland conditions. The lamb grow rates shown to the right are actual examples from those achieved on Bonaveree Farm Marlborough.
- Ability to grow required feed and for animals to convert to weight is based on high level analysis, actual results may vary from those indicated.

Development timeline:

- Only possible once milestone 1 (both governance and operational) is achieved.
- Year 1:
  - Milestone 2 planning and analysis
  - Milestone 3 development – infrastructure built and initial crops/pastures sown.
- Years 2-4:
  - Initial stock is bought on farm and built up over time to full capacity in trading stock numbers.
- Years 5-10:
  - Refinement of animals genetics and quality output
  - Crops renewals and pasture maintenance are on-going.

Ewes growing lambs at 360 grms per day birth to weaning.

Average for NZ is 175 grms per day

Source: Photo – Ministry for Primary Industries (MPI)

CASE STUDIES

POTENTIAL OPERATING MODEL - KEY POINTS

Collaboration Zone – the foundation of any collective activity is collaboration. The active sharing of ideas and insights allows the pace of change to gain momentum. This step is about building common understanding and trust, working through any questions or challenges.

Collective Governance – sets objectives, appoints the board and monitors overall performance. The role and mix on this collective governance group including the basis of voting rights would need to be agreed. Consideration should be given to the role of an independent governance advisor.

Board – sets strategies to achieve objectives while balancing growth and risk, appoints key management. The board could include independent members with desired skills.

Management – implements strategies set by the board, transitioning individual contributions (e.g. non-land assets) into the collective organisation and progression up the maturity flight path.

Operations – potential to be established as "modular units" to reflect the stages of development and enable clean entry/exit of individual entities.

- The developing units – less well developed units that are separately managed to bring them to a minimum standard. These units would transition over time to developed units.
- The developed units – mature properties with high performance that set the standard and are being optimised to be in the top 20% of operations within the region.
- Value add – management of value add activities and collaboration would be repeated at this stage of evolution.

Shared Services – are the back office functions able to support both management and individual entities.

Source: KPMG

POTENTIAL OPERATING MODEL

CURRENT → **FUTURE**

CONCLUSION

A rich history of stewardship and enterprise has existed within Māoridom for generations. The journey of restoring land to production, lead by owners, is a return and realisation of the aspirations of many. Utlimately the decision and the right to decide recides with owners. In closing:

- There is an economic case that warrants more detailed analysis based on factual information about each land parcel.
- Fragmentation is now less a constraint as agribusiness progresses towards intensive precision farming and a greater variety of feed types / horticultural crops.
- Collectivisation under an effective operating model aids optimisation where fragmentation is an challenge.
- Contingent upon fit for purpose capability – both governance and operational, the main challenge is organisational change not physical change.
- Providing owners with confidence is imperative. This can be aided by engaging early with owners and governors of identified land parcels and undertaking a pilot (utilising the existing knowledge of advanced operations).
- Understand and accept this journey as a long term development (minimum of 20 years inclusive of pre and post establishment).

IMMEDIATE NEXT STEPS

The following should be considered moving forward:

- Engagement strategy with owners to identify level of interest of being involved.
- The options are to be discussed with owners, then other relevant parties. Initially with a focus on working together in collaboration. Ultimately with a long term view to collectivisation and how that would work in practice.
- Determine what blocks will be considered for further development investigation.
- Individual farm reports to be developed with input from owners and other relevant parties.
- Fully develop options for the selected land blocks.

Due to the variety of block sizes and locations, success will be dependent on a collective approach and relative proximity of land parcels to each other. This will assist in achieving economies of scale.

SOURCES

REFERENCES AND SOURCES

Beef + Lamb New Zealand

Dairy NZ

Far North District Council

Financial Budget Manual – Lincoln University (2006)

KPMG New Zealand

Landcare Research

LINZ Topographic Maps

Māori Land Online

Ministry for Primary Industries

Ministry for the Environment

Northland Regional Council

Quickmap Custom Software Limited

Statistics New Zealand

The Ironing Board New Zealand

Whangarei District Council

APPENDIX A

AGRICULTURAL REFERENCES

LAMBING %	The number of lambs tailed from ewes as a percentage of ewes mated in the previous autumn (adjusted for dries sold before 30 June and the sale or purchase of in-lamb ewes).
CALVING %	The number of calves marked as a percentage of cows mated (adjusted for empties sold before 30 June and the sale or purchase of in-calf cows).
FAWNING %	The number of fawns born as a percentage of hinds mated (adjusted for hinds sold before 30 June and the sale or purchase of mated hinds).
EXPENSES	Farm operating expenses, including: wages/salaries, animal health, weed and pest, shearing, fertiliser, lime, seeds, vehicles and fuel, electricity, feed and grazing, cultivation/sowing, cash crop, R&M, cartage, administration, insurance, rates, interest and depreciation.

Ministry for Primary Industries
Manatū Ahu Matua

NGĀPUHI
Te Rūnanga-Ā-Iwi O Ngāpuhi

Far North District Council
Te Kaunihera o Tai Tokerau Ki Te Raki

KPMG

IBSN 978-1-77665-227-3 (online)
IBSN 978-1-77665-228-0 (print)