

**ITEM XX**

**RURAL LAND STRATEGY**

***Prepared by:***



***Matt Whineray***

***Date:***

***11 March 2010***

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**1. Purpose**

- 1.1 The attached document outlines a rural land strategy approved by the Investment Committee earlier this month. There is also an Annex of supporting material and a separate document that focuses on the NZ dairy sector.
- 1.2 This opportunity fits within the Capture Excess Returns strategy.

***For noting***



## Rural Land Strategy

**[REDACTED]** 4 March 2010

1	Overview – Rural land as an asset class .....	1
2	Why invest in rural land? .....	1
3	Risks .....	7
4	Execution strategy .....	8
5	Timetable .....	11

## 1 Overview – Rural land as an asset class

This paper summarises our proposed rural land strategy. The analytical background to the strategy is contained in an Annex. Because NZ dairy is likely to form the biggest proportion of the investment, we have included a separate background paper on that sector.

In this report, rural land is defined broadly to include all activities up to the farm gate, including ownership of the farmland, livestock, crops, farm capital and other assets such as water licences and co-operative shares. Farmland is typically divided into two broad categories: pastoral land, which is used for grazing livestock; and crop land - either permanent crops, such as vines or olive trees, or row crops which are sown and harvested in a season or two, such as cereals and oilseeds. Row crops are generally less risky and have lower return expectations because land use can be switched more easily than for permanent crops, and operational mistakes do not last as long.

The rural strategy also encompasses swine, poultry and eggs. It does not look at agribusiness past the farm gate because it is easy to get diversified access to downstream food processors *via* listed equity markets.

The nature of the investment exposure varies by country and crop type. At the less risky end of the spectrum, investors can own the farmland and lease it to farmers. Leases can be a fixed rate, where the farmer takes all the operational risk, or the landowner and farmer can share the income risk (for instance, sharemilking). At the other end of the spectrum, investors can own the land and all the farm assets as well, including crops or livestock, and in essence are appointing managers to run an entire farming operation.

Not surprisingly, global trade in the various commodities is dominated by the countries with the biggest natural advantages. Dairy trade is dominated by New Zealand: in whole milk powder, we account for more than twice as much trade as the EU, which is second on the list. Wheat exports are dominated by the EU, the US and Russia/Ukraine. The biggest players in the meat market are Brazil and Australia, followed by the US. China trades comparatively little due to its policy of self sufficiency.

The size of the investable asset class is not large. Data is hard to come by, but one estimate is that there is \$600bn of investable institutional quality farmland in the US. This is about four times as large as investable timberlands. The sector cannot be accessed passively. There are few listed equities whose main line of business is farmland ownership; most listed agricultural companies are downstream food processing enterprises whose assets are mostly factories and brand names. There is a handful of mutual funds specialising in rural land, though the commodity price boom in 2007 and 2008 led to an explosion of fund managers looking to raise equity.

## 2 Why invest in rural land?

Rural land is a relatively under-developed asset class that delivers a range of investment exposures. These include long-term commodity price trends; macro themes such as emerging Asia and clean green food; scope for adding value through active management; and a long-term hedge against inflation. The key risks, such as weather and regulation, are only weakly correlated to the factors that drive equity prices. While some of these investment characteristics can be achieved in cheaper,

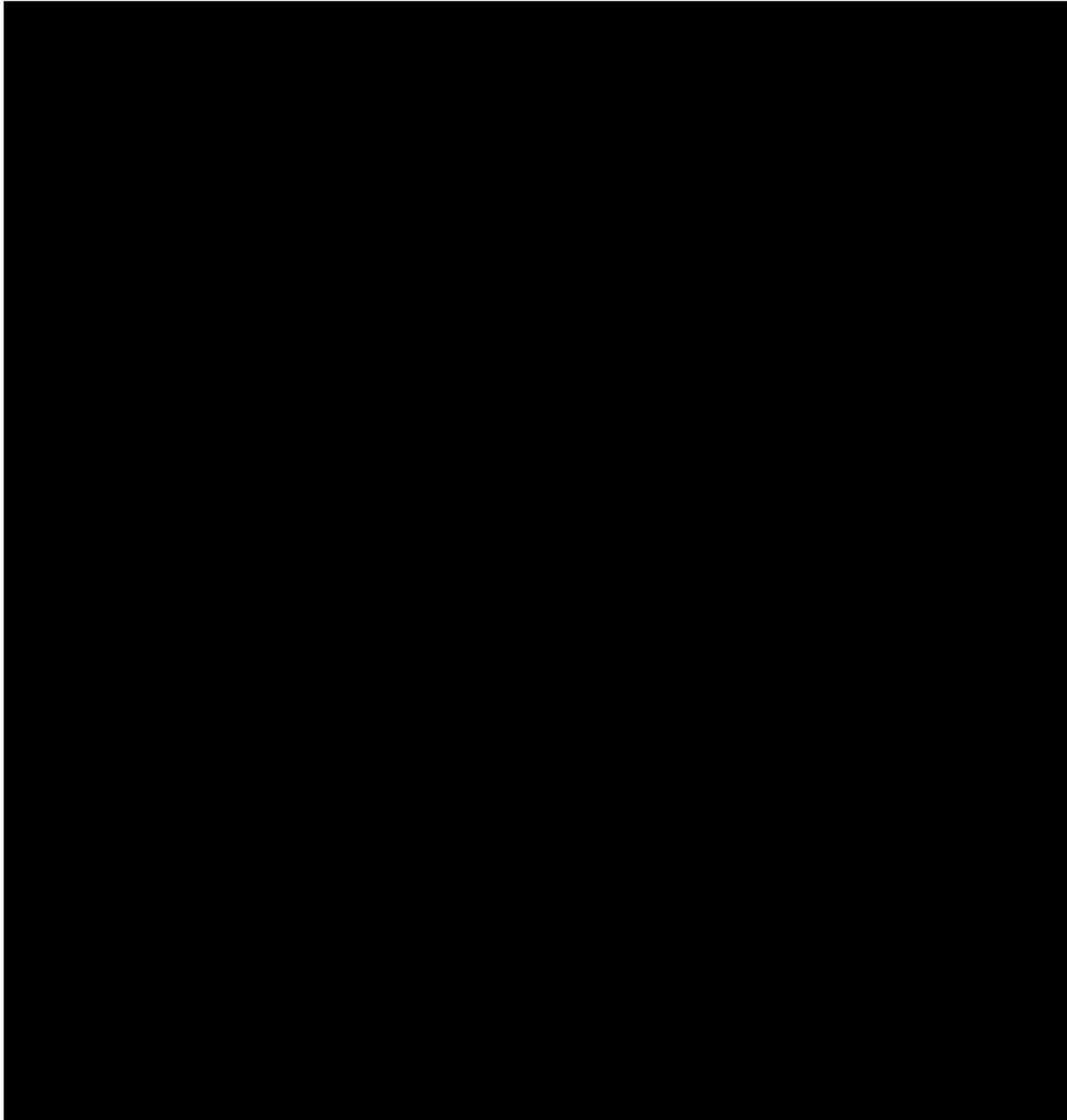
simpler ways, rural land offers an overall package of exposures that is difficult to find elsewhere (refer to Table 1).

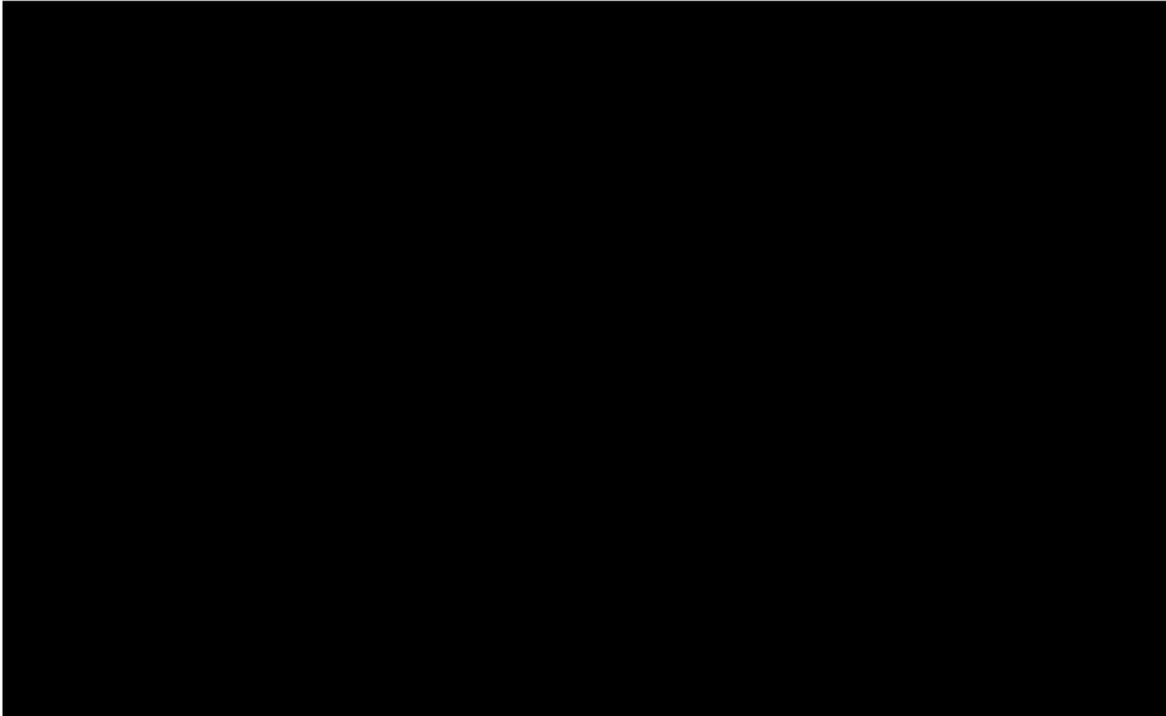
What are we looking for from a rural land portfolio?		
Investment characteristic	Description	Are there other ways to get this?
Exposure to macro themes		
- Developing Asia	There is a level shift upwards in demand for protein once a certain level of per capita income is reached.	Emerging market equities will get you exposure to Asian growth, but it won't bring the level shift expected in certain food types.
- Global growth	Overall global demand growth (population & GDP) is expected to outstrip the (static) supply of arable land, driving up food prices; productivity constraints - environmental damage, water shortages (global warming); and competition from biofuels	Higher food prices likely to accrue pre-farmgate rather than to the upstream producers because there is a lower supply elasticity of farmland and few LT barriers to entry in food production.
- "Clean green" food	Increased demand for environmentally friendly food production techniques and for food safety (traceability back to individual animals). This can cut two ways: food miles and GE food may be negatives.	No.
- GE revolution	GE may trigger a productivity surge. Countries at forefront will benefit.	Buy GE firms.
Exposure to commodity prices		
- Short term	Commodity cycles are capitalised into land prices quite quickly.	Can buy commodity indices directly, though some soft commodities are not easily investable [check].
- Long term	Long term risks should be relatively low ("people have to eat").	Short term commodity futures don't deliver LT exposure (reinvestment risk). Also, LT commodity exposure gives only half the return (miss out on productivity gains).
Diversifier for the Fund	In a risk return sense, it's a lowish beta asset. In a broader sense, it is exposed to a unique set of factors and reacts to "scenario risks" in its own way.	There are other diversifiers, but nothing that offers the same package (in terms of returns, risks, correlations, exposure to themes and other factors, etc).
Alpha via active management	It's a sector with an unusual amount of low hanging fruit, in the sense of poorly managed assets. There are opportunities in a "buy, improve, sell" strategy.	Not many. The wide spread in productivity levels may exist partly because it is difficult for institutional investors to buy out the under-performers.
An empty room	A relatively under-developed asset class from an institutional point of view.	No.
Long duration	We seek long duration assets.	Yes. Various listed and unlisted assets have long duration

Farmland does not fit neatly into any of our existing asset classes. Its investment characteristics are like a mix between property and timberland. In some organisations, it would fall into the "real assets" category because of its properties as a long-term inflation hedge.

There is very little good data on historical farmland returns. The information we have suggests that returns have exceeded equities over the long term, with moderate volatility and minimal correlation with most other asset classes. It has been close to a zero beta asset class.

Over the long haul (since 1954), New Zealand farmland prices (i.e., the capital return, not the total return) have increased by an average [REDACTED] which is greater than residential land and substantially better than NZ equities. Since 1964, US farmland prices have increased by around [REDACTED]





Rural land has been less volatile than equities (and this appears genuine, rather than being due to valuation effects) but more volatile than residential property. Its volatility is on par with timberland.

Other potential benefits of farmland for the portfolio include:

- *Diversification.* Over a period of decades, farmland returns have been uncorrelated with broader equity markets. Rural land prices have been driven by factors largely disconnected from aggregate economic profitability, such as population trends, agricultural productivity breakthroughs and weather. The correlation with bonds has been low and negative, though there has been a moderate positive correlation with commercial property (except in New Zealand).
- *Exposure to long-term commodity price trends.* Food prices have trended down in real terms over the long haul because productivity growth has been so strong in the agriculture sector. However, this does not imply that returns to *farming or farmland* have trended down. At a global level, gains in productivity have offset declines in prices, generating a positive real return from owning farmland. Commodity futures do not give us access to these trends because their duration is too short and there is no futures market in many of the soft food commodities. But most importantly, they deliver only half the long-term effect, and the wrong half at that: they potentially deliver the downside (declining prices) without the offsetting productivity improvements.
- *Access to macro themes.* Farmland may be one of the better ways to benefit from geopolitical and demographic themes such as the economic emergence of Asia, global population growth, and environmentally friendly food. Our portfolio can benefit from income growth in China and India by increasing the exposure to emerging market equities, but rural land benefits from a kicker because the demand for protein products such as meat and dairy products takes a substantial jump once a certain level of income is attained. A second investment theme is the potential for global population growth to outstrip the supply and productivity of agricultural land, reversing the century long downward trend in real food prices. If this pans out, we expect most of

the gains to be captured pre-farm-gate, i.e. by landowners rather than downstream food processors such as Nestle, because there are fewer barriers to entry at the processing stage.

- *A hedge against inflation.* Economy-wide inflation gets passed into food prices quickly – nearly one-for-one within a year. Food prices in turn get passed into farmland prices swiftly as well.
- *An empty room.* The asset class is under-developed globally, and is only now appearing on the radar of most institutional investors.
- *Active management.* In countries such as New Zealand where farming as a lifestyle is more common than large-scale agribusiness, it is not hard to buy farms that are operating well below their potential profitability level. This strategy can deliver outsized returns.
- *Opportunism.* Some heavily indebted farmers in New Zealand present good buying opportunities.
- *Duration.* This is a very long duration asset.

## 2.1 *Key drivers and outlook*

### **Long term demand trends**

At the most basic level, the demand for food depends on the number of mouths to feed. The world's population is projected to grow by about a third, to 9 billion, by 2050. Almost all this growth will occur in developing countries.

At least as important is how many consumers will be lifted out of poverty over this period. As incomes grow, diets move away from staple food crops such as rice, wheat and corn, towards a higher-protein fare of meat, dairy products, fish and eggs. Consequently, the world will require more grazing land and much higher production of feed grains – for instance, it takes 7-8kg of grain to produce 1kg of beef. If today's low income countries end up with a diet similar to what Europeans and Americans had in the mid-1960s, then even if feed conversion efficiencies improve as much over the next forty years as they have over the past forty, then the demand for feed grains alone will more than double between now and 2050.

Taking income and population effects together, most studies expect food demand to double by mid-century.

The demand for food products is also tied to the price of oil. Grain can be converted into an oil substitute, via ethanol. Thus, if the food value of a commodity is less than the fuel value then it will move into the energy economy. The long term oil outlook is highly uncertain, but few experts are expecting a return to cheap energy.

Biofuel subsidies may increase demand for feedstocks such as sugarcane, corn and vegetable oils. They can also squeeze the market on the supply side, as land is used to grow corn for fuel rather than wheat as a feedstock.

### **Long term supply trends**

The main supply drivers will be the quantity of land available for farming and the rate of growth of productivity or yields. Water and environmental concerns may be additional constraints over the long term.

There is potential to increase the supply of arable land in some developing countries (such as Indonesia and Brazil) and some developed economies (such as Australia). However, it is unlikely that new supply will be anywhere near sufficient to meet the expected increase in food demand over the long term. Consequently, increased food supply will come primarily from productivity growth (which gets capitalised into farmland values), with any excess demand putting pressure on real food prices. Increased acreage over the next decade or two is likely to be relatively margin land, so existing prime land is likely to attract an increasing premium.

Productivity, measured by yield per hectare or yield per animal, has shown remarkable improvements over the past sixty years. From 1950 to 1990, grain yields grew by 2 to 2½ percent per annum, though productivity has slowed to just over 1% per annum since 1990. In the dairy sector, the milk yield per cow has grown by around 1% per annum in NZ and 2% per annum in Australia over the long term. Yields per hectare have grown faster than this because stocking rates have increased, but in many areas that process is reaching its limits.

In countries that are already at the leading edge, future productivity growth will depend on the next generation of innovations such as biotechnology and GPS-based precision farming. Biotech has the greatest potential, but is also the most controversial. GM technology will increasingly supplant conventional plant breeding, aimed at raising vitamin content, improving resistance to insects and pesticides and boosting yields under high stress conditions such as drought.

In other countries, yields can improve just by catching up with global best practice. This is one reason why we prefer a global strategy instead of focussing solely on NZ and Australia. Developing countries can also boost returns by reducing post-harvest crop losses.

Water will be an increasing constraint on supply. Half of the world's population now lives in countries where water tables are falling, and this includes the big three grain producers: China; India; and the United States. Farmers, who take 70% of the fresh water consumed in the world, are the biggest users and biggest wasters of water, mainly because it is free of charge in most countries. This cannot be sustained. At a minimum, water will be priced, raising the input costs to farming. This is likely to result in marginal irrigation-dependent land no longer being used for farming.

Urbanisation may also reduce the supply and average yield of arable land. Typically, towns and cities grow up near the best agricultural land, so as cities expand the most productive land gets taken out of food production.

Environmental concerns could be another supply constraint. A backlash against intensive pesticide and fertiliser usage may result in marginal land being taken out of production. Climate change is expected to lead to more crop spoilage and poorer soil quality through greater incidence of droughts.

### **Production costs**

Costs all the way through the production chain are highly dependent on energy prices, from the production of fertiliser all the way through to food preparation. Oil prices in particular feed straight grain feed and pesticide costs while natural gas affects fertiliser prices. Producers are vulnerable to interruptions in energy supplies used for agriculture, food processing and refrigeration, food transport, and in food retailing.

## Expected returns

Long term returns are uncertain, but based on historical patterns and the expected balance of supply and demand risks going forward, we believe that returns of the risk free rate plus 4% are achievable in the asset class over the medium term. With the current dislocation in the NZ dairy sector, our industry contacts believe that acquisitions with IRRs in the 10%-15% range are realistically achievable.

## 3 Risks

The main risks in farmland investing include:

- *Getting the entry timing wrong.* Because the asset class is cyclical and generates low post-fee cash yields, the investment thesis is sensitive to future capital gains and the ability to realize these through an exit strategy. Consequently, entry timing is more important than for most asset classes. We have been monitoring the asset class for two years and only now feel comfortable making a recommendation to invest. We can further reduce risks around entry timing by phasing in our commitment and by restricting managers from purchasing farms unless the expected cash returns exceed a hurdle rate.
- *Demand.* At a global level, demand is not a major risk: people must eat, and the price and income elasticities of demand for food are low. But the demand for individual food products is less certain, for instance lamb versus beef versus poultry. Part of today's food prices and farmland prices reflects long term optimism about Emerging Asia in particular. This may turn out to be misplaced.
- *Productivity.* Prices are determined in global markets, so profitability depends on being able to keep pace with global productivity growth. For instance, productivity levels in pastoral farming in regions such as Eastern Europe and South America have plenty of scope to catch up with yields on New Zealand and Australian farms. If this happens, it will put a lid on global food prices and squeeze returns to farmland in countries that have already been through their productivity surge.
- *Commodity price cycles.* This business will always be cyclical because of the lag between changes in demand and the required supply response (this is known as the hog cycle in economics). But while the cycles are pronounced, they are also highly unpredictable. There is a rich pantheon of failed price stabilization schemes in which a government agency tried to smooth out the cyclical returns to farmers.
- *Insufficient scale.* There is good evidence that the average pastoral farm is below optimum scale. Economies of scale exist throughout the farming operation, including capital, management, marketing and investment in technology and research. This is less true of cropping, which tends to be dominated by large scale agribusiness. On the other hand, this risk is also an opportunity, for instance through an aggregation strategy.
- *Weather, disease, climate change and water.* These risks affect row crops and permanent crops in different ways. The impact of carbon pricing, either through an emissions trading scheme or a carbon tax, is also a major risk for some products and regions.
- *Operating risks.* These tend to be more severe for permanent crops as poor crop selection or management can take years to recover from.

- *Country specific risks.* These include taxation, the supply chain to market, certainty of title, regulatory and legal systems, and restrictions on foreign ownership and repatriation of capital.
- *Liquidity and exit options.* Individual farms can be moderately liquid so long as they are not too large (i.e., small enough for a family farmer to purchase). Industrial size farms or portfolios of farmland are less liquid, and probably comparable to timberland before it became a well established institutional asset class. Exit strategies include selling down gradually to farm managers or perhaps an IPO.
- *The policy environment.* The policy trend over the past twenty years has been strongly towards reduced support for farmers and for trade policies to be less distorting, such as subsidy payments that provide less incentive to over-produce. Even so, there is no guarantee that this trend will continue. Already we are seeing environmental and phyto-sanitary standards being used as closet protectionist measures. Protectionist import policies remain common in the developing world. Fundamentally, food and farming will always be sensitive politically so the only sure safeguard in the long term is to be “inside the tent” in as many jurisdictions as possible.
- *Environmental and social issues.* Institutional investors need to be wary of farms that use illegal workers or pay at or below the minimum wage. Environmental concerns such as nitrate runoff and the use of pesticides and genetically engineered seeds also need to be managed.
- *Increased return expectations.* Historically, farming has been an unusual industry in that the required rate of return (cash yield) has been so low. This is partly because the capital base (farmland) is a non-depreciating asset, but it also reflects farmers paying extra for a lifestyle. If this changes, and cap rates increase to more “normal” levels, capital gains will be constrained.
- *Finding and aligning managers.* This is discussed in the Section 4.

## 4 Execution strategy

The medium term objective is to construct a globally diversified portfolio of farmland. Diversification helps insulate us from risks related to specific crops or geographies, such as productivity trends, shifts in demand for different food types, short-term weather patterns, long-term climatic changes and regulatory and consumer trends such as trade barriers or resistance to GM products. We would expect to invest in the major food producing regions in the developed world. We would minimise or avoid complex developing regions such as Africa, Ukraine and Russia.

While a global portfolio is the medium term goal, we may favour New Zealand rural land initially so that we can start in the market we know best and where we have a greater ability to identify good managers. We also have local advantages such as tax and overseas investment rules.

### 4.1 Main investment criteria

Based on current market pricing and our reading of current opportunities, the main elements of the execution strategy are as follows.

1. We expect to invest 2–3% of the Fund steadily over a five year period. On current growth forecasts, that would amount to around \$500 million by 2014.

2. We seek a reasonable degree of diversification across farms and geographies, while noting that diversification is best thought of at the fund level rather than the asset class level. Diversification can also be helpful by increasing our exit options.
3. On current assumptions, we would require a rate of return of at least 9% in NZD terms, though the hurdle will vary depending on expected returns in other asset classes.
4. For the New Zealand leg of the strategy, we plan to invest in direct land ownership through a segregated mandate. At today's relative prices, we would expect most of the NZ portion of the portfolio to be invested in dairy land because of its higher expected returns and better cash yields. Currently, returns from sheep and beef are likely to be too low (though that may change, especially for lamb), and other areas such as horticulture, venison and aquaculture are too niche; with the funds available, we would not be able to achieve sufficient diversification (as well as the management time involved in finding and monitoring a specialist manager). \$200m should be sufficient to deliver a moderately diversified portfolio of dairy farms (10-15 farms spread over two or three of the main dairying regions).
5. The global part of the strategy is more likely to be via a collective investment vehicle. We do not have the required funds or management time to construct and manage a land portfolio diversified across crop types and geographies. It would also help avoid complications of direct investment in farmland in foreign jurisdictions such as legal and tax requirements. Obviously, any investment would be conditional on finding a fund with adequate management and governance and with low enough fee drag.
6. In the current environment, with major markets coming off a land price boom and many farmers in debt distress, we should invest opportunistically. To maximize the chances of generating alpha in the asset class, we would be better seeking out poorly managed underperforming farms and improving their operation, rather than hunting the farms with the best track record. We would revisit this strategy if market conditions change.
7. We should rely on the advice of our managers as to whether to own just the land, enter into sharecropping/sharemilking or manage the whole kit and caboodle.
8. Ideally, farms should have as many of the following characteristics as possible:
  - Large enough to achieve operating efficiencies or capable of being aggregated to achieve scale, yet small enough to maintain strong resale potential as exit options are very important in this asset class.
  - Serviced by readily available water from either local sources or an efficient and secure regional/state water distribution system
  - Located in areas of clement climatic conditions conducive to high yield levels
  - Having fertile soil requiring maintenance and enhancement within the cost range of industry norms
  - Located close to market or distribution centres in order to reduce costs.

- Other things equal, have the potential for multiple uses or have other option value (multi-use land is less risky, but usually is more expensive too).
9. Where possible, our commitment should be fed out slowly in order to reduce the risks around entry timing.
  10. As additional insurance against buying too soon, we will attempt to impose on our New Zealand managers a cash return hurdle based on conservative price and productivity assumptions. This should make them search for better alpha opportunities and reduce the risk of over-paying, though we need to consider whether it would also lead them to take on riskier investments (betting the farm, so to speak).
  11. It would be beneficial for all parties if the on-farm manager (as distinct from the investment manager) had a stake in the farm, either by co-investing or through a material performance bonus. For instance, we could partner with young farmers looking to get into the business, with an arrangement whereby they increase their ownership share over time.

#### 4.2 *What to look for in an investment manager*

For the NZ mandate, we have found that most managers specialise in dairy or sheep and beef, and they prefer to stick to their knitting. Thus, if we invest in multiple farming sectors, we may need to appoint several managers.

The manager should have the usual characteristics we look for, as laid out in our conviction framework. Ideally they should have a good track record, though the nature of the asset class in New Zealand means that there may be a tradeoff between track record and their other strengths. The characteristics specific to this asset class that we would look for include:

- Investment management skills (i.e., more than just running a farm)
- A clear strategy for selecting and managing assets
- An analytical basis to their views on the asset class (i.e., views based on more than a hunch)
- Good networks in the farming community, especially for selecting on-farm managers and being able to acquire assets from distressed vendors
- Well aligned
- Focused on seeking land with optionality
- Capable of managing environmental and social objectives

For the global leg of the strategy, we would prefer a fund and manager that:

- Has a long horizon (10+ years)
- Has sufficient scale (USD 500m is a realistic minimum)
- Can access the major regions and crop types
- Appoints the best local managers

#### 4.3 *Internal resource issues*

The Fund would own assets directly, as we do for our timber investments. This will increase the workload on our accounting and legal resources.

We do not anticipate employing an in-house rural expert as we believe we would be better served by specialist managers with established networks and processes.

## **5 Timetable**

March 2010	Strategy to the Board for information
Q2 2010	Identify potential NZ manager
Q3 2010	Ready to invest in NZ, subject to market conditions
Q2-Q3 2010	Review of global fund offerings and selection of fund



## Memorandum

To: Matt Whineray

cc: [REDACTED]

From: [REDACTED]

Date: 10 January 2017

Subject: **NZ Rural – Marlborough Vineyards Opportunity – Altimarloch**

### Purpose

Approve the purchase of Altimarloch vineyards for **\$33M** (land buildings, plant and equipment) plus an additional **\$2.265M** for working capital, transaction expenses and development.

### Background

In response to NZS requesting FarmRight to review NZ rural opportunities outside of the dairy sector, they engaged a specialist permanent crop consultant [REDACTED] to assist in developing knowledge of some of the key permanent crop sectors (pip fruit, stone fruit, kiwifruit, avocados and vineyards). Permanent crops have previously been identified as a sector of interest alongside livestock and row crops in the recent Rural Strategy – Sector Screen study, ([SUPERDOCS-#2239333-Rural Sector Screen](#)).

FarmRight has done a considerable amount of work reviewing the potential for Altimarloch for inclusion in our portfolio, understanding the sector, how the property can be managed and have provided us a recommendation for purchase. This investment does not include any post vineyard-gate assets associated with winemaking, brands or labels.

Whilst FarmRight has no current experience in the management of vineyards, they have proposed a management model that gives us confidence the required skills will be available, including [REDACTED] acting as the Farm Investment Manager for the vineyard. We are confident [REDACTED] has the requisite skills and we will be able to leverage FarmRight's infrastructure (systems, processes, bulk purchasing power) to maintain competitive cost levels.

The vineyard has existing grape supply agreements with two of the industry's larger winemakers and distributors, Pernod Ricard and Indevin [REDACTED]

[REDACTED]

[REDACTED]

## Vineyard

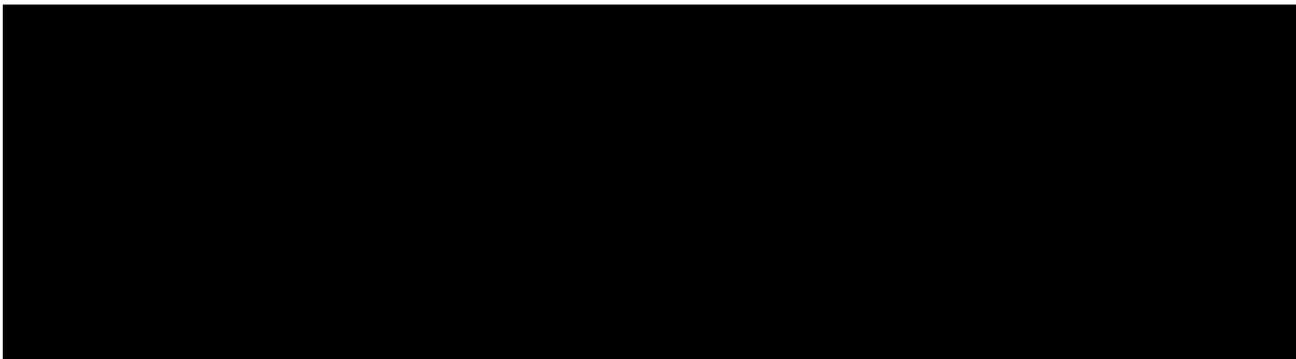
The Altimarloch vineyard is located in the Awatere Valley, Marlborough and is a large scale vineyard of ~200 planted hectares, with a further 12 hectares available for development in 2018/2019. The price reflects the fact that Altimarloch is not located in the “golden mile” of Marlborough vineyards. Vineyards in the Wairau valley command prices some \$100-125K/ha higher than in the Awatere valley.

As land supply continues to reduce, it is likely that the value differential between Wairau and Awatere valleys will compress.

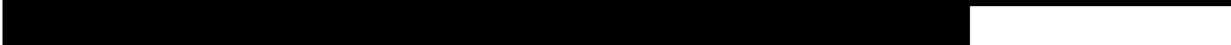
**Figure 1: Location of Altimarloch Vineyards**



The proposed capital investment is **\$35.265M** allocated as follows:



Modelled returns indicate an



Vineyards are a new sector for us and one we have previously shied away from due to the high land values, perceived exposure to fickle consumer tastes, and whether it is a sufficient

diversifier to be included within the Rural strategy. To further understand the sector we conducted the following research:

- ██████████ spent a day in Blenheim on site with the vendor Warren McNabb, Jim Lee and ██████████
- Met with another large grower in Marlborough and former consultant from the USA Dominic Pecchenino (Director - NZ Winegrowers).
- Commissioned an independent review of the Altimarloch property from Nick Winter Vineyard Consultancy Ltd.
- Met with Philip Gregan , CEO NZ Wine Growers regarding market outlook.
- Undertook a review of market dynamics from publically available information.
- Engaged with ██████████ to understand AA's view of the project and appropriate hurdle to apply.

These activities helped reduce many of the negative biases we had of the sector, its future and the risk of Marlborough not continuing to be a key wine growing region. Our view is that the land value is underpinned by increasing demand for Marlborough style white wine in UK, USA and Australia, combined with rapidly declining availability of land in the region.

**Description of assets**

The Altimarloch assets include:

- 320 ha of land;
  - three contiguous largely mature vineyards (194ha),
  - bare land suitable for vine establishment (14ha),
  - headlands and other associated unplatable land (112ha),
- sufficient plant and equipment for all of Altimarloch's vineyard operational requirements that is also contracted out for an additional income stream when not required by Altimarloch;
- staff who will be employed by FarmRight within the NZ Super Staff entity as is done for the salaried dairy farm employees on some of our farms.

The planted area of 194 ha consists of 189 ha of Sauvignon Blanc and 5 ha of Pinot Gris. Of the planted area 130 ha (66%) is older than 10 years hence fully producing, and 65 ha planted in 2015 is entering the full production phase.

There is a further 14.3 ha of bare land suitable for planting to grapes which the model has assumed is planted in years 1 and 2. Planting material has been ordered by the vendor for the first year of this to be achieved and land preparation work is underway irrespective of this transaction.

Characteristics of each vineyard are summarized in Table 1 below.

**Table 1: Vineyard summary**

Description	
Planted area and variety	
Harvest yield	

<b>Grape supply agreement</b>	
<b>Frost protection</b>	
<b>Water allocation<sup>1</sup></b> <i>Class A: c.100% reliable</i> <i>Class B: c.50-70% reliable<sup>2</sup></i>	

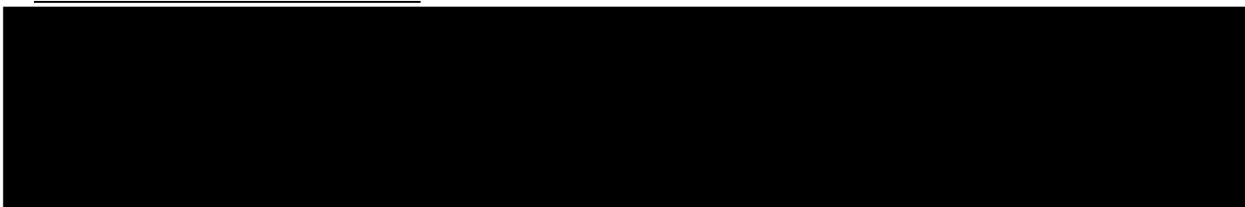
The budget has been prepared to continue with the existing staff (6 FTEs). Casual and contract staff are engaged at pruning and busy periods over the summer months. It is proposed to employ all current staff and recruit a top-quality Vineyard Manager under FarmRight Super Staff Limited. Given the scale of the operation there will be good quality applicants to select from.

Warren McNabb (owner, current vineyard manager) has agreed to be available for 3 months after takeover at no cost but confirmed he will be available after that time period. The Vineyard Manager will report to [REDACTED] as the FarmRight Horticulture & Viticulture Investment Manager.

**Inspection:**

The property was inspected on 1<sup>st</sup> December 2017 by [REDACTED] (NZ Super fund) Jim Lee (FarmRight) and [REDACTED] (sector specialist contracted to FarmRight) and the current owner Warren McNabb. The property appeared well laid out, with good-quality, well maintained and appropriately placed infrastructure.

The property was reviewed by independent vineyard consultant Nick Winter. He considers the vineyard to been well set up with a great deal of thought put into design and ongoing operation. Vines are well established in the older blocks, and vines were looking strong and healthy in a season described as 'challenging'.



In his words,

*“Even though these vineyards are not located in the traditional Marlborough Golden Mile that everyone talks about, there is no reason to think that these vineyards are not highly regarded. Personally, I think as time has gone on and development has occurred in what was regarded as the extreme areas, there has been an acceptance that you don’t have to be in the ‘Golden Mile’ to produce very high-quality grapes that can be transformed into high quality, award winning wines.*

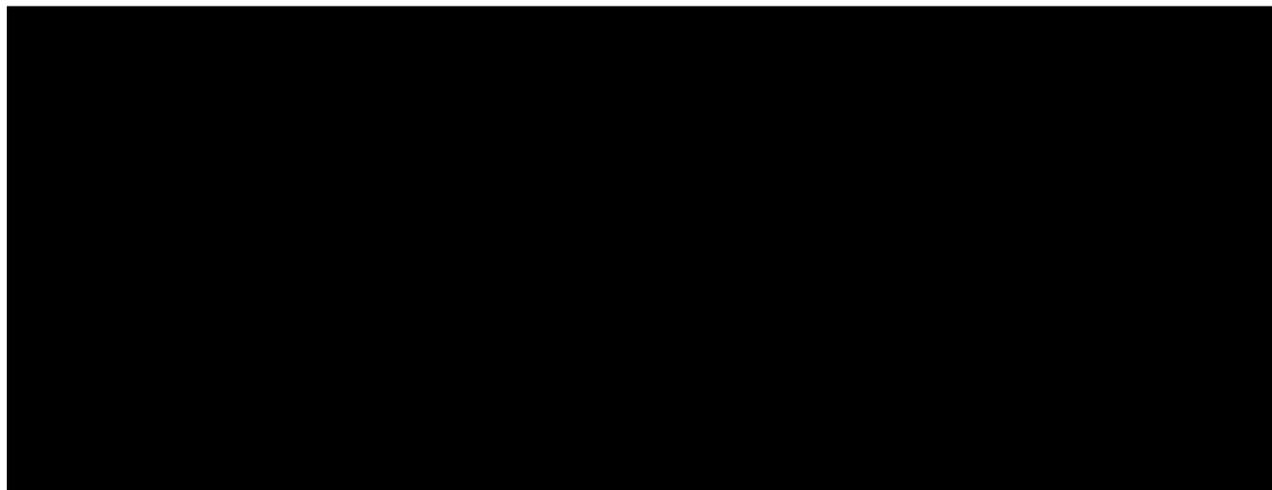
*I see these vineyards as a great investment opportunity for someone to take these vineyards to the next level.”*

The Strengths/Risks section incorporates his more granular assessment of this property.

### **Investment Capital Required**

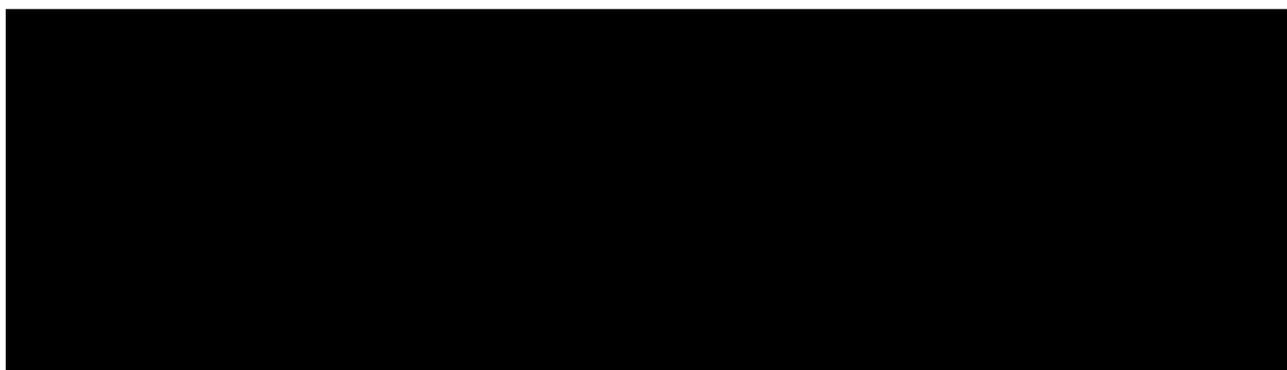
The budgeted total required for the purchase, development and operation of the vineyards is summarised below.

**Table 2: Capital Investment details**

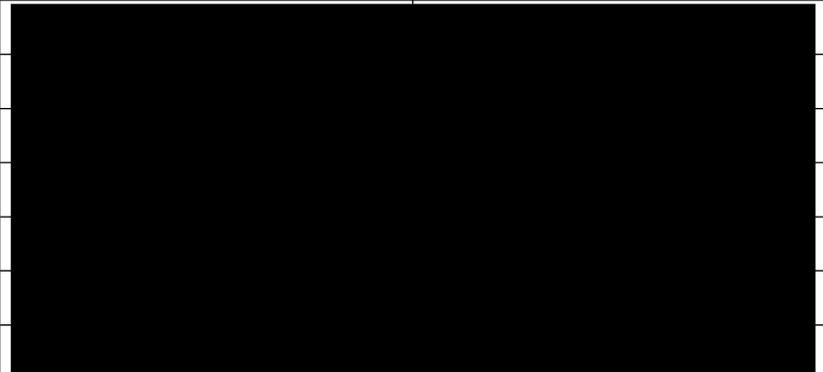
A large black rectangular redaction box covers the content of Table 2, which would have provided details on capital investment requirements.

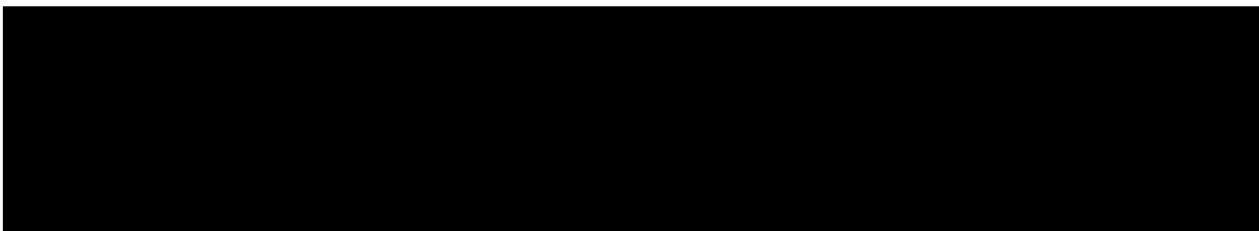
### **Financial projections**

A investment model has been prepared for a 10-year period starting with production season FY18-19 and assuming settlement occurs 1<sup>st</sup> June 2018. This is post harvesting of the FY17-18 season’s crop.

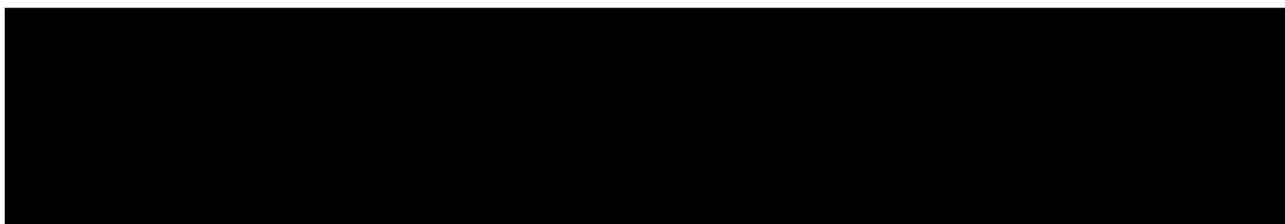
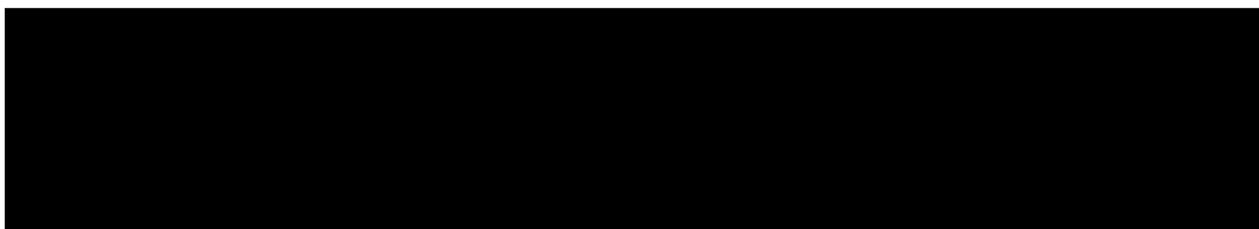
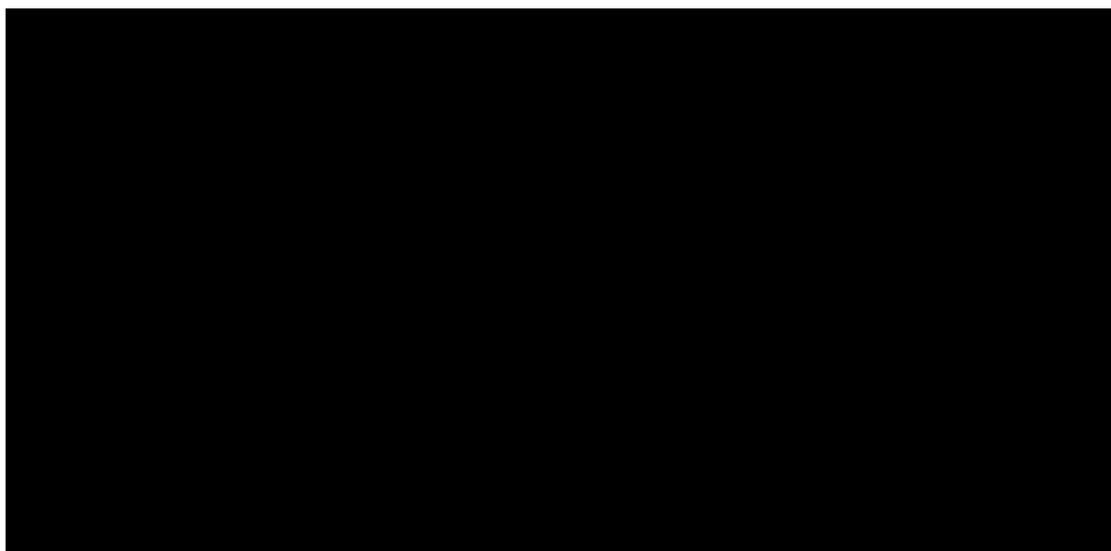
A large black rectangular redaction box covers the content of the financial projections section, which would have included the investment model details.

**Table 3: Financial summary**

Item	FY2019	FY2023 \$
Grape harvest (tonnes)		
Grape sales		
Contracting revenue		
Operating costs		
Contracting costs		
EBITDA		
Development capex		



**Table 4: Sensitivity Analysis : Production and grape prices**

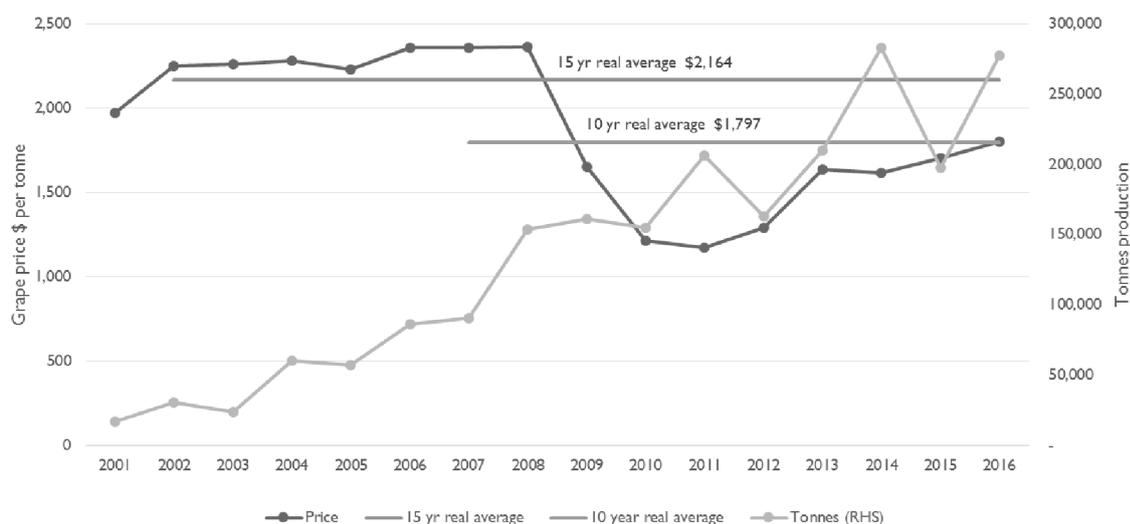


## Market Overview

### Grape Price

Current grape prices are significantly below levels achieved pre 2007, but since 2010 have shown a steady increase and currently sit at close to the 10 year real average price of \$1,797/tonne.

**Figure 2: Sauvignon blanc grape price and production history 2001- 2017**



The global financial crisis coupled with two very large Sauvignon Blanc vintages in 2008 and 2009 (up 63,000 tonnes or 69% on 2007) as speculative plantings made in the early 2000's came into production, dramatically affected the NZ wine industry. Marlborough grape growers and wine companies saw grape prices effectively halve in two seasons.

At the time, speculative financial investors were highly active in the market and commentary suggests their lack of understanding of the supply and demand balance contributed to plantings and subsequent supply getting well ahead of the market, crashing prices. High debt levels common at that time resulted in distress in some parts of the sector, with a number of vineyards going into receivership.

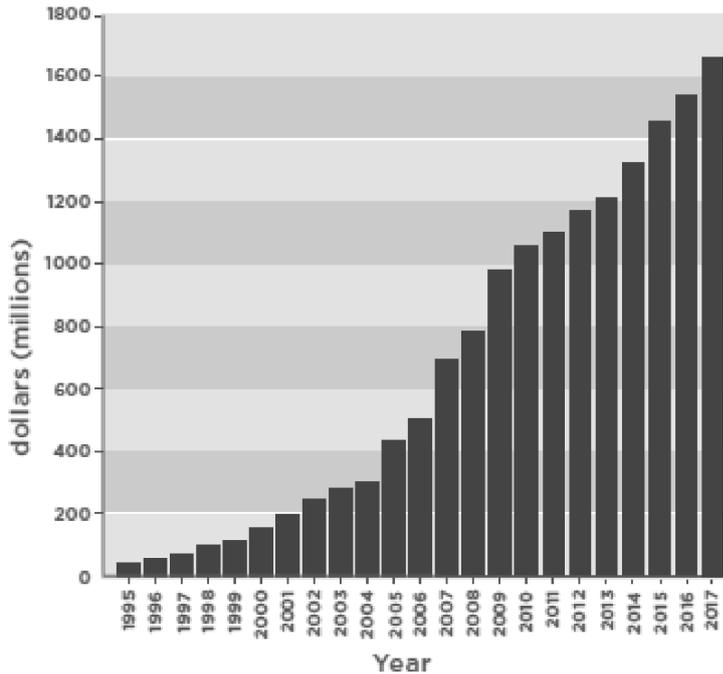
Since then, prices have steadily improved to around \$1,800 per ton in 2016 and forecast similar levels for 2017. This is despite production continuing to trend upwards since 2010.

The regional supply picture appears to be in balance but does vary from wine company to wine company. [REDACTED] has had communication with two key players' (Indevin and Pernod Ricard NZ) grape supply/viticulture managers and their view was current grape prices of around \$1,800/tonne are sustainable going forward.

### Supply and Demand

NZ continues to be well regarded as a wine making region, particularly for white wines. Since 2011 exports have grown from \$1.1bn to \$1.7bn whilst the domestic market has remained reasonably static, used by the industry to mop up product in excess of that demanded by export markets. The sector is targeting export sales of \$2bn by 2020.

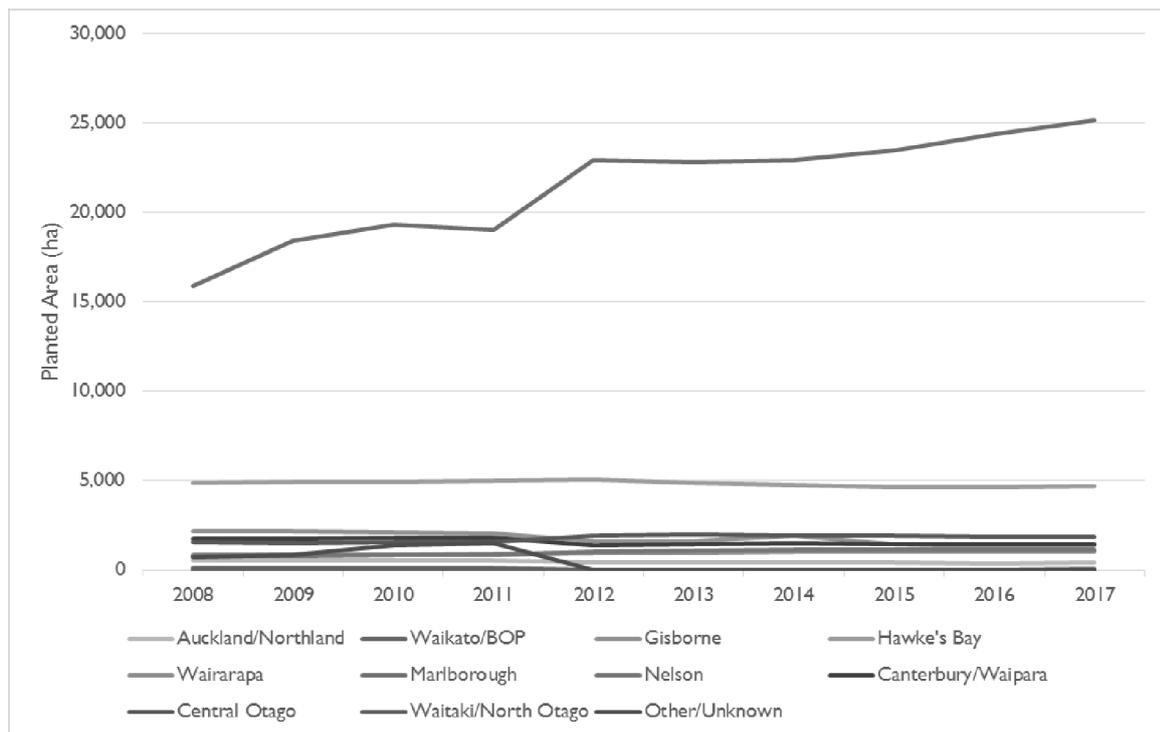
**Figure 3: Wine Export values (NZD) 1995 – 2017**



Marlborough is New Zealand’s dominant wine growing region with five times as much area planted as the Hawke’s Bay which is the next largest producing area, Figure 4. The Marlborough region produces 80% of exported wine volume from New Zealand.

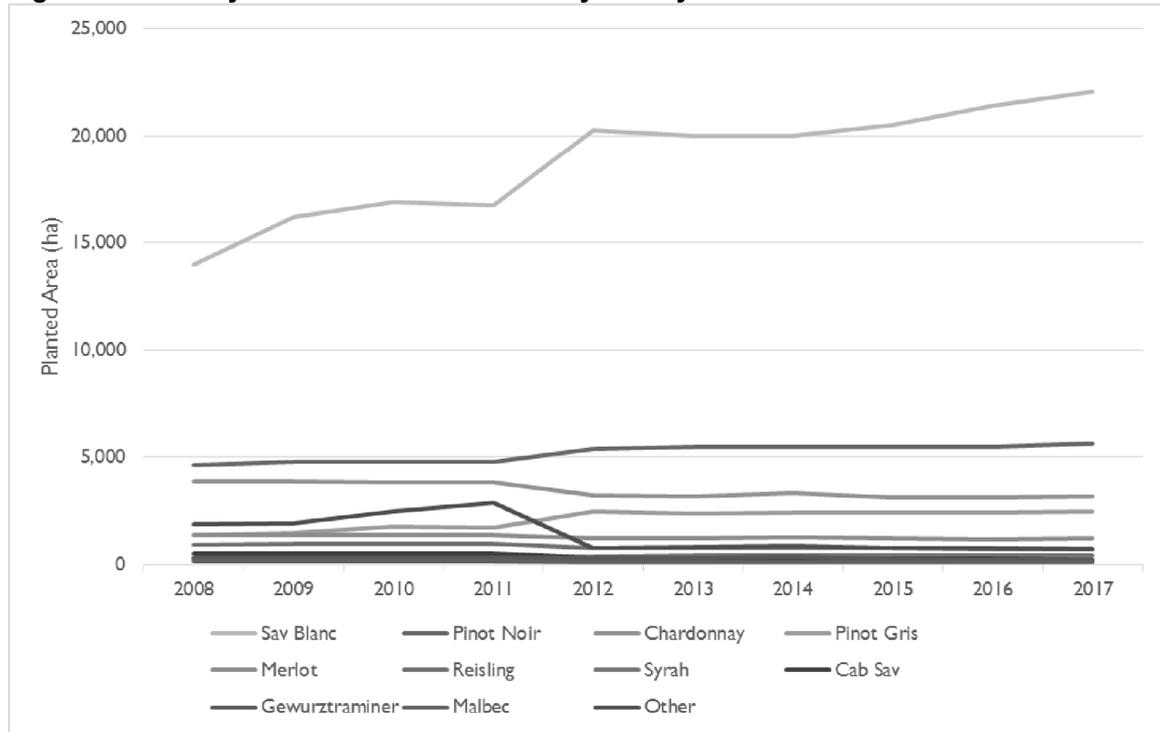
Marlborough has been registered as a “Region” within the Geographic Indications Registrations Amendment Bill and marketing now refers to the region as opposed to focusing on a specific grape variety. The aim is to have the region known for more than a single variety of white wine if market tastes change to alternative white varieties.

**Figure 4: New Zealand Wine Estate – Planted area by Region**



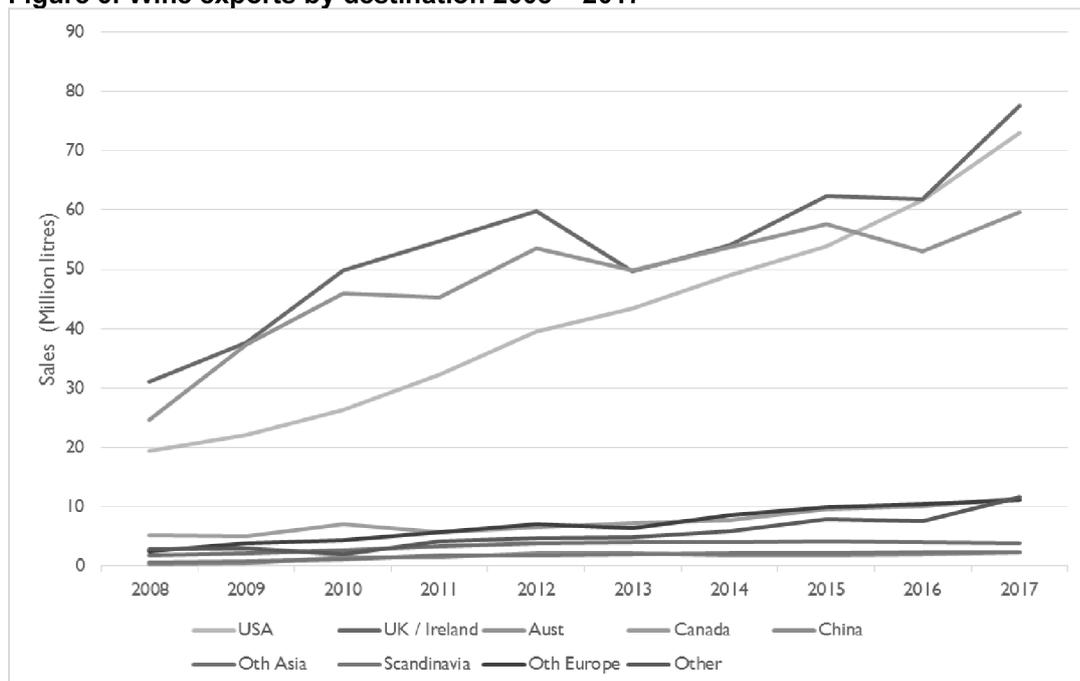
Sauvignon blanc is the dominant variety in the NZ wine sector, Figure 5, and represents ~75% of exports having experienced continued strong growth since 2008. Other key varieties are Pinot Noir and Chardonnay but at markedly lower volumes. Whilst Pinot Noir production is stable, Chardonnay has been steadily decreasing in recent years.

**Figure 5: NZ Vineyard Estate - Planted area by Variety**



The USA market has grown to replace Australia as the second key market for NZ white wine and is demonstrating strong demand that the industry believes has some time to run based on consumption dynamics.

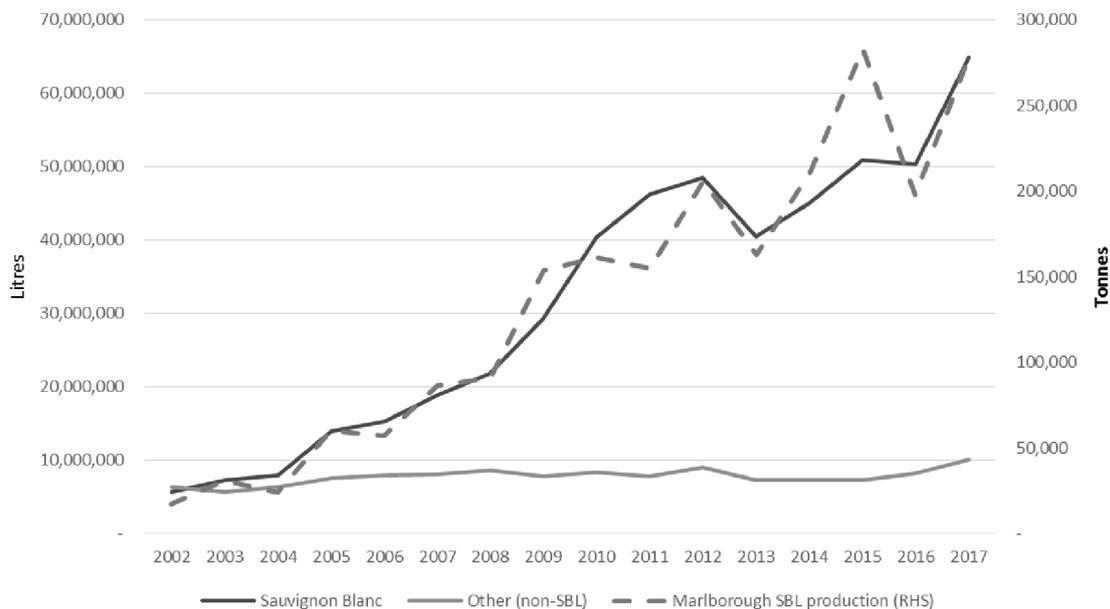
**Figure 6: Wine exports by destination 2008 – 2017**



USA wine consumption is less mature than the other main export markets, estimated at 16L/capita compared with NZ and Australia at 20L and UK slightly higher. The USA is a large scale wine producer and imports from NZ represents 0.2L/capita, while for the UK they are closer to 1.1L. NZ is the third largest supplier by value behind France and the consumer enjoys the fresh taste and links to the NZ clean, green and traceable product story. Even a modest market share increase in a large market like the USA will be beyond NZ's current capacity to supply.

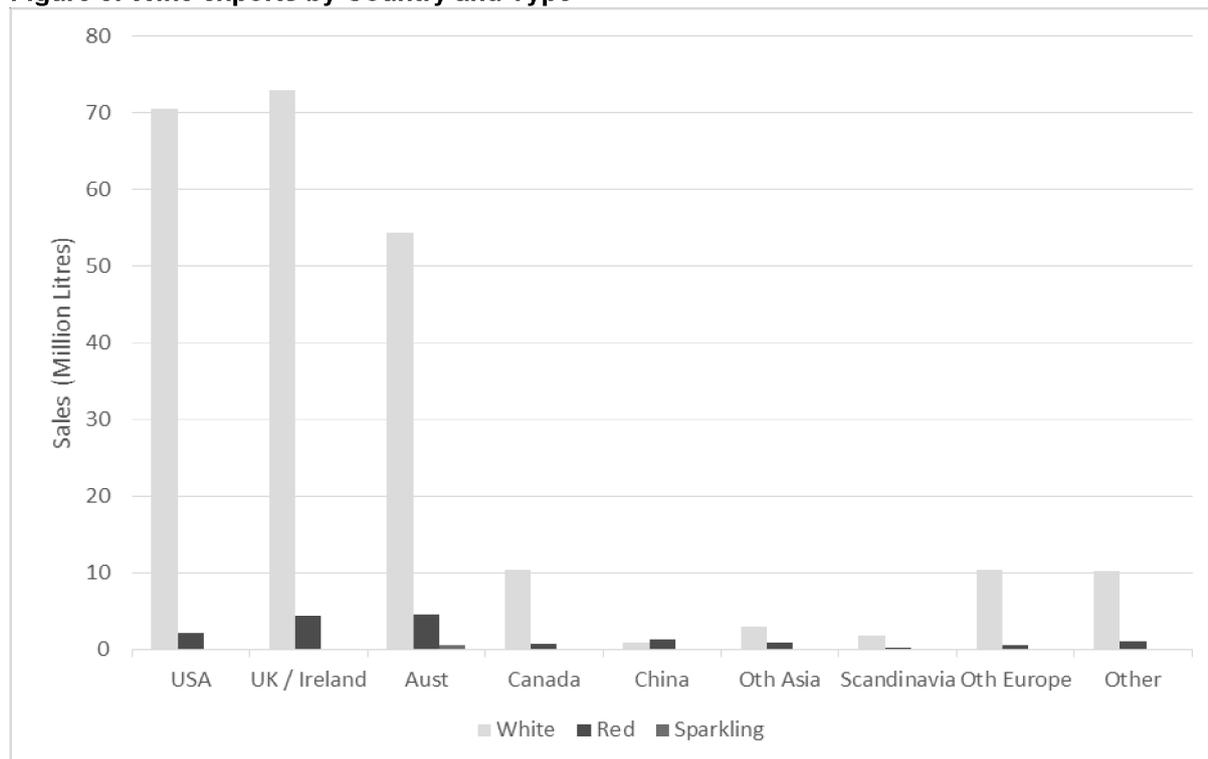
The perception that UK demand for NZ white wine and Sauvignon Blanc has peaked and is in decline is not proven out with the statistics, Figure 7. Whilst there was a decline in 2013, this coincided with a poor vintage yielding a 21% decrease in production, so less wine was available for export. Sales have since rebounded (volume and value) and the outlook is considered positive.

**Figure 7: White wine exports to the UK 2002 – 2017**



Exports from NZ are dominated by white wine (reflecting the dominance Marlborough has in the NZ wine sector), Figure 8. Asia has not featured strongly as an importer of NZ wine, and China imports more red wine than white. The industry indicates wine sales to China are increasing slowly and that Canada is also becoming a stronger market. It is expected that Chinese palates will take some time to adjust to NZ style white wines, although an opportunity is seen for Sauvignon Blanc given high seafood consumption. However with the growth in western markets (USA, Canada and Europe) is likely to test NZ's ability to supply this is not a near term issue.

**Figure 8: Wine exports by Country and Type**



### Land Values

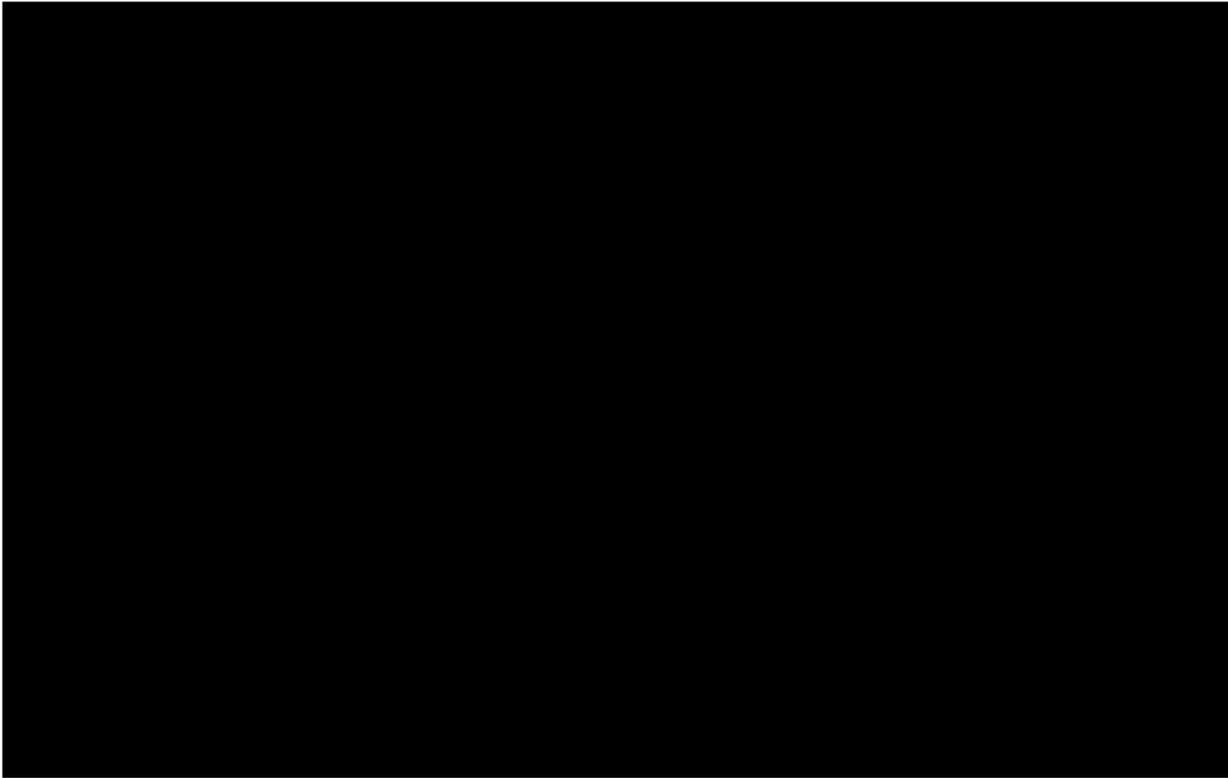
It is estimated that Marlborough has only ~30,000 ha of suitable vineyard land, and as at 2017 approximately 26,000 ha has been planted.<sup>4</sup> As a result the demand for established vineyards (predominantly Sauvignon Blanc) and bare land for conversion in Marlborough is very strong. The larger winemakers are recognising that there is a limited supply of suitable land for development and are actively purchasing more land and forming contract relationships with vineyard owners to secure supply.

Three of the top five US wine companies and three of the largest European alcoholic beverage companies are active in New Zealand. In addition, three of the top five Australian wine companies are in New Zealand. We were advised during discussions that it is key to have strong relationships with the key larger wine makers and short term (<5 years) supply contracts, and to take leads from them as to what changes are occurring in the market from a taste perspective.

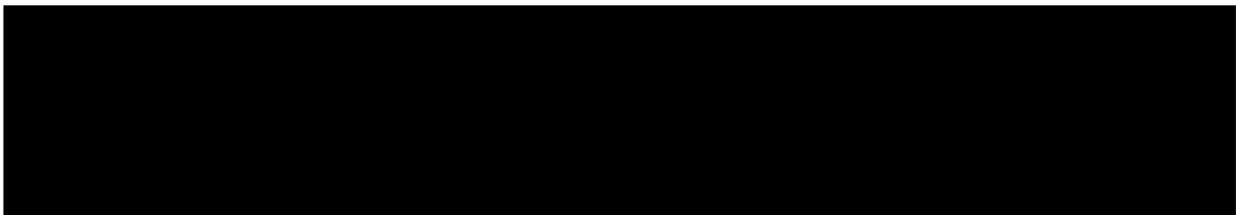
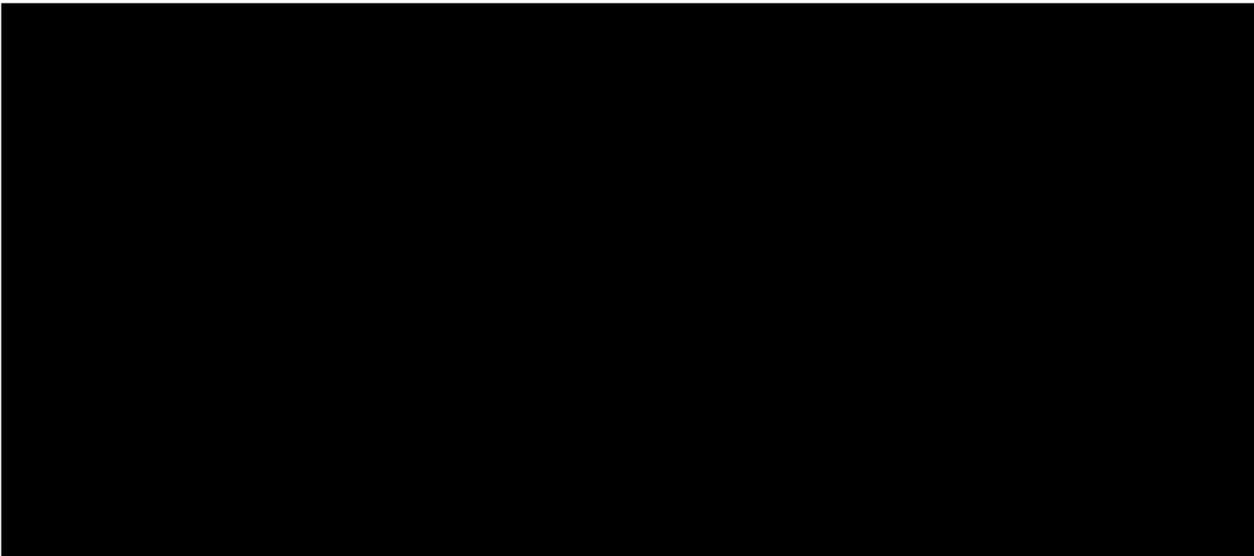
Current sales evidence show that there have been only two transactions of the scale of Altmarloch in the region, one in Awatere valley and one in the Wairau valley. There have been a number of small areas transacted but it is likely there were associated with lifestyle with housing etc.

<sup>4</sup> Source: Wine Marlborough, NZ Winegrowers

**Figure 9: Comparable sales data**



This property is being purchased at what we believe is market value, given its scale, quality of infrastructure (water and frost protection) and location. It provides a solid platform for leveraging a relationship [REDACTED] the operations team and FarmRight to access other development or established opportunities in the region.



## Strengths and Risks

The property was assessed by independent vineyard consultant Nick Winter. The findings of his report ([SUPERDOCS-#2409028-Consultant SWOT analysis - Altimarloch Vineyards](#)) are incorporated in NZSF's view of the strengths and risks of the property below.

### Physical/Property specific strengths

Location	Whilst it is considered second-tier to the Wairau valley, property prices are lower and given yields are capped in the region at lower than the productive potential of these sites to maintain grape quality cash yields are correspondingly higher. One might expect over time that property value differentials may close as the valley gets a stronger reputation supporting the potential for capital gain.
Scale	<p>The scale of the orchard can justify owning its own equipment and staff complement, with spare capacity when it occurs able to be used to generate additional income from managing neighbor operations. The vineyard continues to be the priority and as the vineyard expanded external contracting would reduce. A 200 ha vineyard unit is considered to be an efficient scale for labour and machinery utilization.</p> <p>At full production and with current grape supply agreements we expect to be supplying ██████████ of Indevin and Pernod Ricard's total Sauvignon Blanc intake respectively, making us important suppliers whose relationship will be valued.</p>
Climate	Suitable for the production of grapes exceeding volumes and meeting quality expectations of customers. <sup>5</sup>
Land Suitability	<p>Suitable for the production of grapes exceeding the quality expectations of two of the major winemakers Pernod Ricard and Indevin. Soil nutrition plans are in place supporting soil health. The vineyard has been planted and well-laid out in order to optimize production and operating efficiencies.</p> <p>Soil variety across the property yields a diversity of flavor profiles meaning healthy potential for production of other varieties.</p> <p>Additional land is available on the property for the establishment of vines.</p> <p>There are reportedly other reasonable scale properties within the working circle of Altimarloch that may be available for purchase in time.</p>
Production:	Track record of increased production and evidence that modelled harvest volumes can be achieved. High quality and suitable rootstock was noted by the vineyard consultant, and the pruning regime has been reviewed and is considered a strength of the property, setting it up well for quality rather than pure quantity.
Infrastructure	High quality, well thought out and considered an example of a property that has invested in almost totally removing the risk of frost damage. Water infrastructure is sufficient for the orchard, with some additional storage options (~\$200K) if further de-risking was considered appropriate.

<sup>5</sup> Climate change predictions suggest slightly warmer temperatures which are beneficial, and potentially less rainfall in winter which may impact river flows. This is countered to some degree with slightly higher summer rainfall.

Next best use	Suitable for the production of other grape varieties (including red) as the next best option in the event Marlborough sauvignon blanc becomes unpopular. Given the land and water resource it is likely that other permanent crops could also be established.
Contracts	[REDACTED]

### Industry/Sector level strengths

Strong Brand	Marlborough is registered as a supply region and well respected internationally for producing cool climate white wines with a distinct style.
Infrastructure	Well-developed infrastructure with many of the key international wines and spirits manufacturers and marketers present.
Major part of local economy	Not only is the wine sector an important export earner, but it also dominates the Marlborough region as a land use option and is critical to the local economy. This is likely to be beneficial in ensuring that local regulations are considerate of the industry, and that maximum efforts will be applied to for example combat bio security threats, and ensure labour availability.

### Physical/Property specific risks

Location	The location of the property is ~40km from Blenheim and labour and contractor availability is lower. This is mitigated to some extent through having the scale to maintain a work force and equipment all year round.
Climatic (drought / frost)	<p>The property has high quality infrastructure with excellent frost protection via water and fans. Consultants reports suggest the property is very well laid out with high levels of frost protection.</p> <p>The property has water rights and storage that have been adequate to date. To further mitigate the future risk of drought and increase frost-fighting reserves, an existing informal agreement with the neighboring property allowing water to be drawn from their reservoir will be formalised as a condition precedent to the transaction closing. [REDACTED]</p>
Land Suitability	Whilst the land is not in the Golden Mile, the property has demonstrated a good history of meeting required production levels.
Next best use of land	The next best land use is other grape varieties, likely at a lower level of return. Given the terrain, climate and water it is probable that another high value crop i.e. stone/pip fruit or nuts could be established, which also support higher land values than merino sheep grazing. Further down the value chain activities such as vegetable cropping (\$25-30K/ha), specialist cropping i.e small seeds (\$20-30K/ha) and sheep grazing (\$10-15K/ha) are alternate land uses.

### Industry/Sector level risks

Brand fashion	Consumer tastes may alter over time however strong relationships with the brand companies will provide early warning signs of that occurring. New varieties can be grafted onto existing root stock and could be producing within c. 3 years. The existing vineyard infrastructure would not need replacing.
Oversupply/ability to swap out	A number of elements of this deal help mitigate some of those downsides, being scale, Marlborough has a long history of wine production and strong regional brand, the offtake agreements are with well-known sophisticated entities, there is only a finite supply of suitable vineyard land left in Marlborough which continues to support grape and land prices.

## Hurdle Analysis

The proxy for Rural [REDACTED] and the current Rural hurdle [REDACTED] Asset Allocation don't see any support for vineyard investments attracting a different proxy given the sector's consistency with the Fund's Rural Strategy.

## Consistency with Rural Strategy

Discussions with [REDACTED] post his initial review of the project suggests that he is comfortable that it vineyard investments fit the Rural strategy for the following reasons:

- Land forms the basis of the grape growing business.
- This land is in limited supply – growing grapes requires certain soil types and microclimates – and land in a distinct wine producing region is very much fixed in supply, strengthening the case that economic rents will be capitalised into land value.
- There is no direct exposure to downstream processing.
- The grapes are a commodity in much the same way as milk.
- The increasing demand for grapes is being driven by two global themes: changing tastes in the West; and rising incomes and changing tastes in developing Asia.
- The thematics are arguably stronger for wine than dairy in that there is still strong growth in wine consumption in developed markets – we haven't even tapped into developing markets yet. With dairy we are reliant on developing markets to deliver the growth – developed markets will never be a source of meaningful growth.
- The grape growing industry is still dominated by small, family vineyards. There is scope for boosting returns through increased efficiency.
- There is less reliance on spot markets in grapes than in many other agricultural commodities – grape growers typically have supply contracts in place. This is only a relevant consideration if the grape supplier has few (or no) outside options in terms of buyers as in this case the grower is effectively exposed to downstream brand and processing risks.
- The basic requirements of growing grapes (water and decent soil) are such that there are various alternative uses for the land. Other permanent crops (olives, fruits) would be the obvious option.

The Rural Strategy was designed to access the following characteristics:

Macro Themes	Description	This Sector / Property consistency
Developing Asia	An upward shift in demand for protein once a certain level of per capita income is reached	<b>Low:</b> Wine (white) demand from NZ is largely UK, USA and Australia. Whilst China demand is growing it is off a very low base.
Global Growth	Overall Global demand growth (population and GDP) is expected to outstrip the (static) supply of arable land, driving up food prices; productivity constraints we may face exacerbating this shortage include environmental, water and competition from biofuels for the	<b>High:</b> NZ's market is currently dominated by developed countries. There are constraints as to how much Marlborough white wine can be grown with its specific characteristics. Whilst fashion may change it is not possible to duplicate the specific characteristics of wine from

	same land types.	Marlborough outside of the region.
Cleaner green foods	Increased demand for environmentally friendly food production techniques and traceability.	<b>High:</b> Consumers with higher levels of wealth who have discretionary spend for food items such as wine are increasingly concerned about the quality and heritage of their food. This property and the region is well positioned to capitalize on that.
Exposure to commodity cycles – short term	Commodity prices capitalized into land value quickly	<b>Likely high:</b> Land values have continued to rise over time. This is likely to be in response to the scarcity value of the land in this region in addition to the improved profitability of the sector.
Exposure to commodity cycles – long term	Long term risks should be low, as people need to eat	<b>Low:</b> Wine is not a necessity for survival, however the flat arable land combined with water availability should make the property suitable for other food production uses if that became more profitable.
Diversifier for fund	Low beta asset	<b>Moderate:</b> A group of listed comparable wine companies (albeit with branding and retail exposure) yielded an average asset beta of 0.1-0.2. Although imperfect comparators given this opportunity does not have exposure beyond the vineyard gate, this suggests the industry has low beta characteristics.
Alpha via Active management	A sector with an unusual amount of poorly managed assets	<b>Low:</b> There will be some opportunities to acquire assets that need development however this is likely to be sporadic. The benefits to us from a tightened OIO regime may occur.
An empty room	Relatively undeveloped asset class from an Institutional perspective.	<b>Moderate:</b> Institutions have invested in this sector at a low level, but like other agriculture classes only few are well advanced.
Long Duration	We seek long duration assets.	<b>High:</b> Vineyards by their nature are long duration.

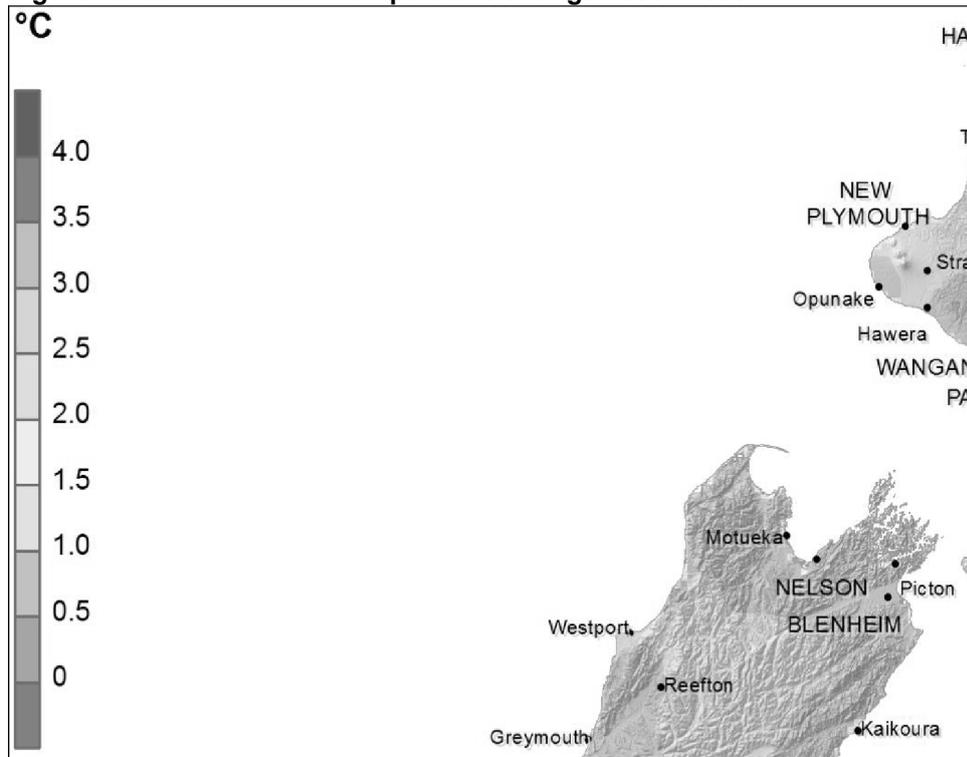
## Climate Change impacts

A review of NIWA's<sup>6</sup> predictions for the Blenheim region where these vineyards are located suggests that temperatures will increase by 0.5-1.0 degree Celsius in both winter and

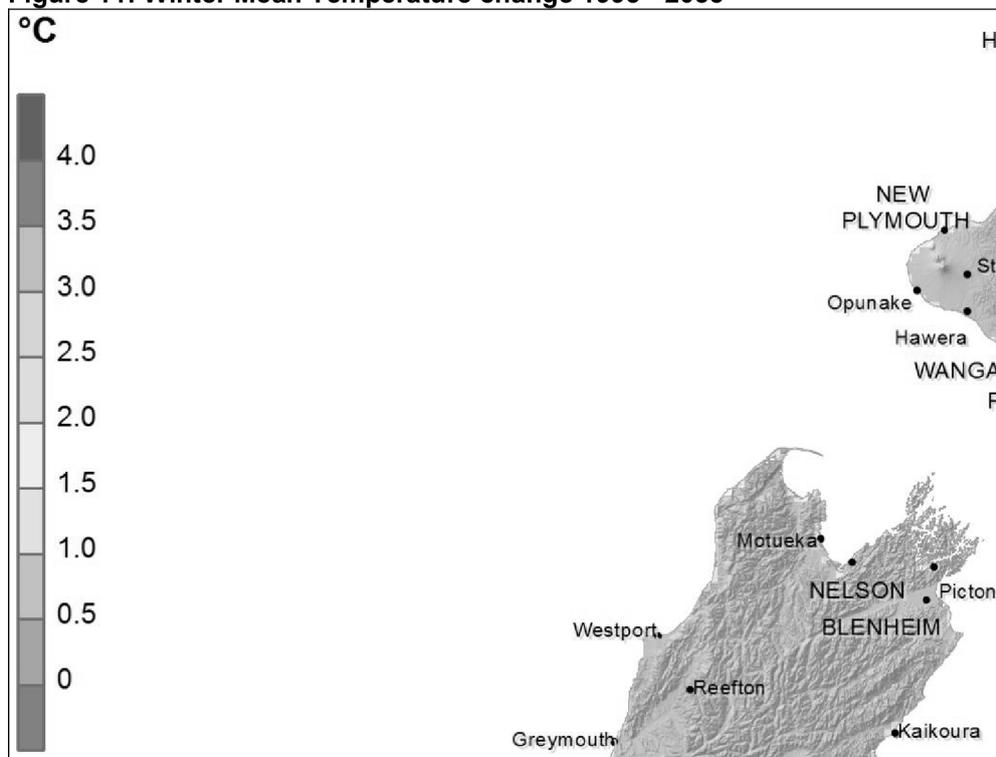
<sup>6</sup> <https://ofcnz.niwa.co.nz/#/nationalMaps>, Model adopted 6-model-average climate prediction, Representative Concentration Pathway RCP6.0 mid-high.

summer. This has the potential to benefit the region, reducing frost risk and improving ripening conditions with the potential to carry larger crops to the required Brix level.

**Figure 10: Summer Mean Temperature change 1995 - 2055**



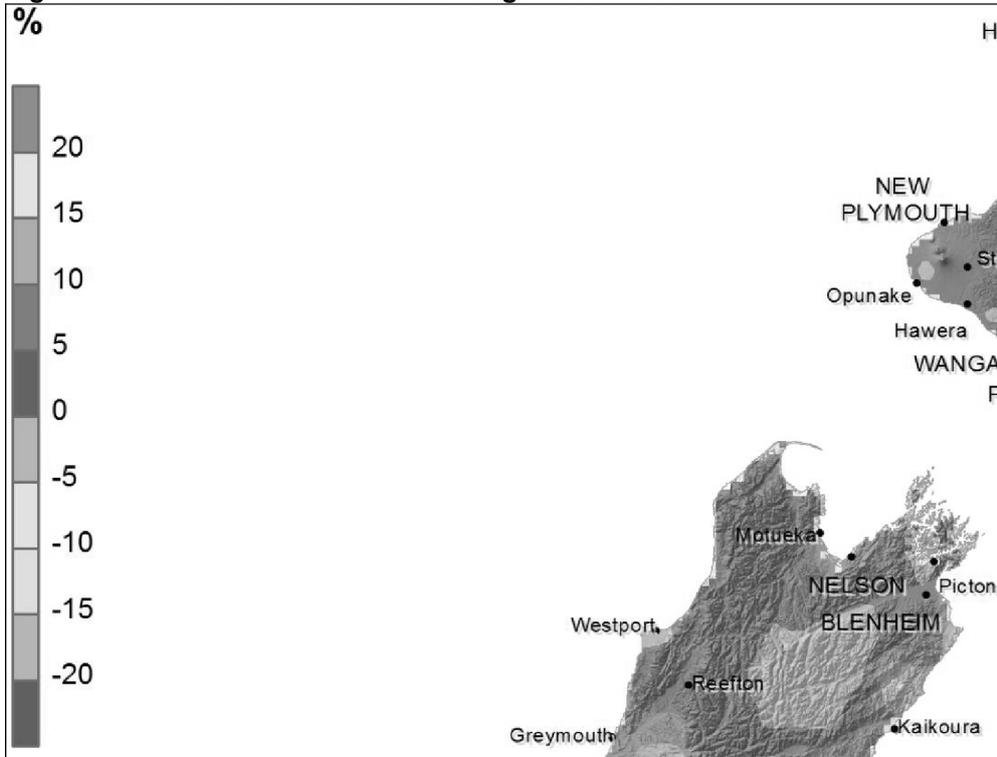
**Figure 11: Winter Mean Temperature change 1995 - 2055**



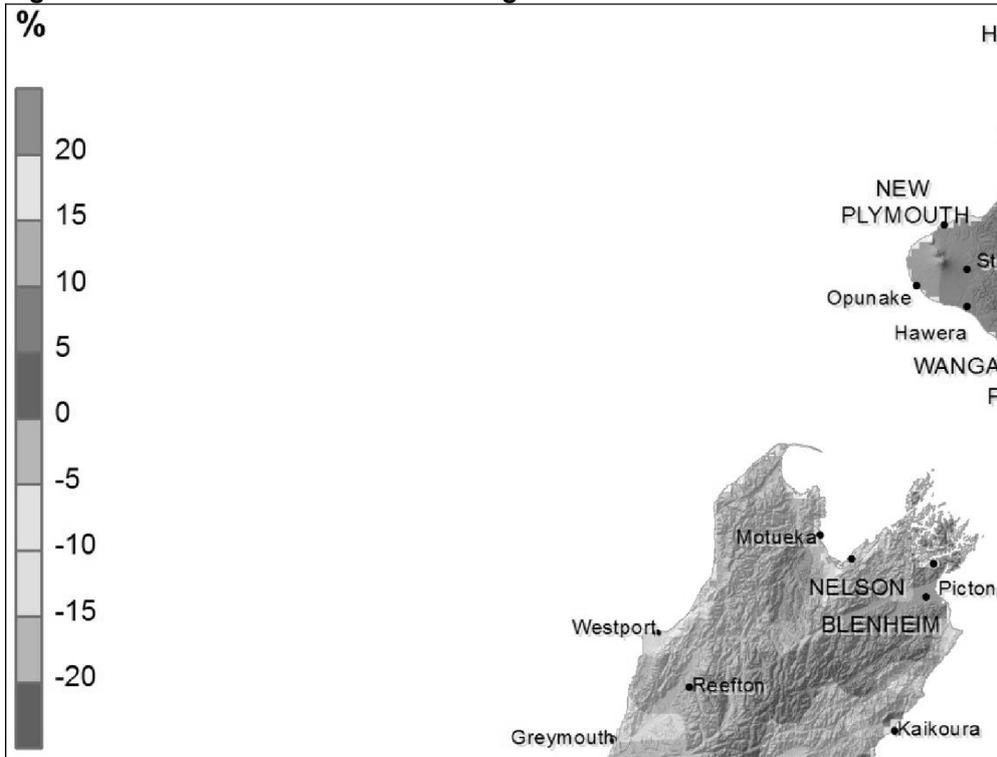
Rainfall is predicted to increase by 5 – 10% . Although summer rainfall in the mountains that form part of the catchment for the Awatere river is predicted to decrease by 10%. Winter

rainfalls are predicted to increase. This may impact on irrigation water availability over summer and infrastructure requirements to reduce the irrigation risk if river flows reduce.

**Figure 12: Summer Mean Rainfall Change 1995 - 2055**



**Figure 13: Summer Mean Rainfall Change 1995 – 2055**



- New Zealand
  - New Zealand is a key producer of livestock both from a per capita and land area perspective
    - Beef, sheep and especially dairy are large outperformers vs the OECD average, while pig production is significantly under performing
  - New Zealand underperforms OECD averages when row crop production and land devoted to permanent crops are considered

## Sector screening output – country summaries

The results of our screen inform our initial target sectors and geographies

		Australasia	
			New Zealand
<u>Livestock</u>	Established sector?		Yes
	Peer investment?		Yes
	Returns above hurdle?		Yes
<u>Row crops</u>	Established sector?		Maybe
	Peer investment?		Yes
	Returns above hurdle?		Yes
<u>Permanent crops</u>	Established sector?		Maybe
	Peer investment?		Yes
	Returns above hurdle?		Yes

Conclusion			
<u>Priority of focus</u>	Livestock		Primary
	Row crops		Primary
	Permanent crops		Primary

**Conclusion: focus near term efforts on exploring livestock, row crop and permanent crop opportunities in USA and Australasia**

[REDACTED]

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**From:** [REDACTED]@mcleodnz.co.nz>  
**Sent:** Monday, 11 December 2017 1:00 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Altimarloch DD - High Level SWOT Analysis - Nick Winter Vineyard Consulting  
**Attachments:** FARMRIGHT - ALTIMARLOCK VINEYARD SWOT ANALYSIS.docx

Alert: External email.

[REDACTED]

- As attached
- [REDACTED] does raise the question about sufficient water for the Altimarloch Vines (Altimarloch Vineyard only) – has a consent [REDACTED] – general industry standard is [REDACTED] all soil types including gravel soils
- The soil types present on Altimarloch are of good water holding capacity – [REDACTED]  
[REDACTED]
- As mentioned he has an informal agreement with the owner of the Homestead to draw from the pond if required
- An option might be to try and formalise the arrangement to have some surety - say annual royalty payment whether it is utilised or not with certain parameters in a formal document

Any queries let me know

Regards

[REDACTED]

NICK WINTER VINEYARD  
CONSULTANCY LTD



**Altimarloch Group - Vineyard SWOT Analysis**

Property Reviewed by: Nick Winter Vineyard Consultancy Ltd.

I visited all three vineyards on Friday 8<sup>th</sup> December 2017. This was really a follow up review of the vineyards from the earlier visits I completed back in mid July 2017. The basis of this report will have included the time spent looking over the vineyards in July and the subsequent report completed at the time.

It was in fact good to follow up the vineyards in the height of the growing season. My visits in July was still in the middle of pruning time. This season so far has been quite positive in terms of the weather we have experienced. Compared to last season, we have not had the persistent spring winds and the temperatures have been more consistent, to the point of being like summer, not spring. We have had very good spring rains to help build up the aquifers and get the vines off to a great start. But, through November, it has turned dry quite quickly.

My first impression of the vineyards throughout this visit was positive. The vines had a great health and colour in the canopy. Flowering is progressing across all blocks and all varieties. The Pinot Gris on the lower terrace at Gosling Creek was virtually finished.

After my visit last week and the previous visits back in July, my observations would be as follows.

**STRENGTHS**

This has been a well set up vineyard from the start. Thought has been put into the outlay of the vineyard. E.g., it looks like the vineyard has been almost placed around the placement of the frost fans. You will note the headlands are situated where the frost fans are placed. This has eliminated the need to leave a row of grapes for future access to the frost fans for maintenance.

The plant/row spacing is a compromise between the soil type and the growing season. At 2.5m between rows and 1.8m between vines gives the vines the chance to produce a balance yield without making the vines over-work to reach maturity.



A full detailed climate report was completed to determine the potential frost risk. This was also to determine the precise placement of the frost fans to help control the potential frost risk.

The pruning regime has been given some detailed thought. On some blocks, the bud numbers had been reduced so that the plants would not over crop and later struggle to ripen. My observation from July was on the new Cattlemen's Creek vineyard. I was impressed to see that the new vines didn't have too many buds laid down in its first producing season. It is all too easy to lay too many buds on young vines just to get a bigger crop in its first year. I have seen it too many times where the first cropping season was too heavy and the vines in the subsequent years have suffered.

The older vines on Altimarloch and Gosling Creek had been pruned to 3.5 canes per vine. This would have been easy to say to the contractors to just lay 4 full canes. They are thinking about balance in the vine and the yield.

Soils and the nutritional qualities are, to me, are huge part of good vineyard management. It was pleasing to see that Warren has an extensive nutritional plan in place to maintain the health of the soil.

Thought was also given at the time of establishment when placing the plant orders. A good example of this is on Altimarloch. You will see the change in rootstock placement in the vineyard running from West to East. The western side is heavier in soil type, hence the use of Schwarzman rootstock. This can handle the wetter, heavier ground. As the vineyard moves towards the Eastern side, the soil types become lighter and more free draining. As a result, the rootstock changes from Schwarzman which has de-vigourating characteristics to 101/14 and then onto S4 which are more suited to the lighter soil type.

All three vineyards have an established water permit in place. Apart from Cattlemen's Creek vineyard, these vineyards are fully producing and well established. Consequently, this means that the vines will be able to handle the adverse weather conditions that Mother Nature can provide at times. Furthermore, there is the potential of future water storage options.

Altimarloch and Cattlemen's Creek had been well set up with efficiencies in place regarding machinery operating. The less turning on headlands the better. Hence, the long rows.

Between the three vineyards, they cover a wide spectrum of soil types. This leads to wide and diverse flavour profiles and characters. These vineyards would not be one dimensional. This is as an appealing aspect from a wine-makers point of view.

## **WEAKNESS**

Although these vineyards all have water permits associated with them, Altimarloch, to me, could do with more water availability. Albeit these vines are well established and



NICK WINTER VINEYARD  
CONSULTANCY LTD



approximately a third of the vineyard is heavier, clay base soils, [REDACTED]  
[REDACTED] I would like to see this improved for the extreme dry seasons that can be experienced in the Marlborough and the Awatere Valley. Thought must also be given to the drying wind conditions that can rob vines of valuable moisture. (And as evidence suggests dryer seasons and so on...)

Being in the upper Awatere Valley, there is the potential for a shorter growing season. There is the risk of spring frosts and as well as autumn frost that could upset the ripening process. Having said that, Marlborough in general, is a cool climate growing region. For this reason, Marlborough is prone to frost issues. It is more a case of how you prepare for it. On the 19<sup>th</sup> of November 2002, for the 2003 vintage, there was a wide spread frost event that affected half of Marlborough. The curious aspect of this event was that the frost affected areas that you would have never thought that a frost would have occurred.

The distance of these vineyards from Blenheim could be a limiting factor. But, this doesn't have to be. If you set up a good relationship with the contractors that you deal with, then this should not be an issue.

Apart from Cattleman's Creek, the other vineyards could be improved with more clips/nails on the intermediate posts. Without the current clips set up on the posts, the options are more limited when wire lifting. I have made comment on this in my July report. Not a major issue.

There are some vine health issues on Altimarloch under the Western side of the vineyard. There is extra run-off from thaw gullies on the neighbouring property that flows onto the vineyard that has created minor vine health issues. This is already being mitigated with a replant program, Not a major issue. There have also been drains installed to help alleviate this problem.

**OPPORTUNITIES**

One opportunity that I see influences the profit of the vineyard. [REDACTED]  
[REDACTED]

---

[REDACTED]



I am a believer in Balance. This a key to growing quality grapes. Differing soil types require differing cropping levels. I see the potential here to either discuss with Pernod Ricard about allowing a higher cropping level, or, start discussions with another wine company that would allow a higher cropping level so that the vineyards can maximise on its potential.

Soil nutrition and, soil biology, is always an area that can be improved. Currently, the vineyards have a good soil nutrition program in place. There may be an opportunity to start on the specific soil biology. This is not an overnight fix. But the results can be very beneficial for the health of the soil, the vines and the future crops produced.

With the ever-increasing pressure on water availability, there is always a push for growers to investigate having their own water storage. I could see an increase in this storage on Cattleman's Creek vineyard. There is a small water course between Cattleman's and Altimarloch. I think there are some environmental issues at the moment, but this could be a future option for water storage.

At present, Cattleman's Creek is the only vineyard that is set up for the Klima striping machine. There is an opportunity to convert Altimarloch at Gosling Creek to utilise the Klima machine for future pruning cost savings.

## **THREATS**

The ever-present danger of Spring and Autumn frosts are always going to be there.

In the extreme dry seasons, there is the potential for the dry conditions to be a problem. In future, all vineyards should be looking at their own water storage option. It doesn't matter where you are growing grapes.

## **SUMMARY**

These vineyards have been well established with a great deal of thought put in to the design

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NICK WINTER VINEYARD  
CONSULTANCY LTD



and on-going operations. The right variety has been planted with a small option of Pinot Gris.

They are well established in terms of production and vines age. Cattleman's Creek is the youngest vineyard with still a few years to reach its full production figures.

The vines are looking strong and healthy in a season that is currently proving challenging. Vine balance is shaping up to be looking great with good flowering potential with the classic Marlborough weather we are experiencing at time of typing.

Even though these vineyards are not located in the traditional Marlborough Golden Mile that everyone talks about, there is no reason to think that these vineyards are not highly regarded. Personally, I think as time has gone on and the development that has occurred, in what was regarded as the extreme areas, there has been an acceptance that you don't have to be in the 'Golden Mile' to produce very high-quality grapes that can be transformed into high quality, award winning wines. I see these vineyards as a great investment opportunity for someone to take these vineyards to the next level.

I see these vineyards as a sound investment opportunity.

Nick Winter



**Disclaimer**

This report is based on vineyard visits made in early November 2017. The vines were in the process of flowering. Information had been supplied by Warren McNabb from the Altimarloch Group. Any subsequent action that relies on the accuracy of this report is at his/her own risk. Accordingly, Nick Winter Vineyard Consultancy Ltd disclaims any liability whatsoever for any losses or damages arising out of the use of the information in this report.



**C3 - Restricted Confidential**

27 April, 2018



Hon. Grant Robertson MP  
Minister of Finance  
Parliament Buildings  
WELLINGTON

Dear Minister,

**COMMERCIAL-IN-CONFIDENCE**

**NEW ZEALAND SUPERANNUATION FUND QUARTERLY REPORT TO 31 March 2018**

- 4.8 **Altimarloch Vineyard** – Through NZSF's farm manager FarmRight, we recently acquired a ~200ha vineyard in Marlborough for ~\$35m. All the grapes produced on the vineyard are sold under contract to third party winemakers.

Information Memorandum for  
New Zealand Superannuation Fund

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# Altimarloch

Prepared by FarmRight Limited



December 2017

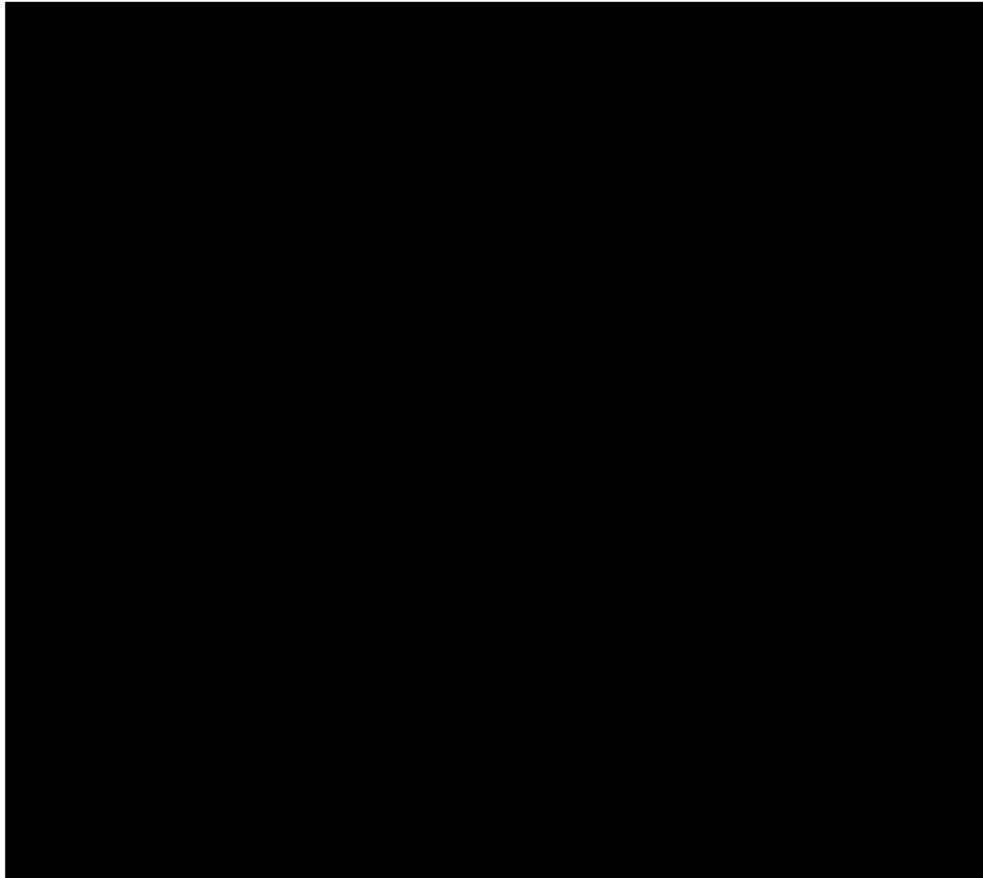
# KEY CONTACTS

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**Physical address**

**Management company**

**Contacts**





# TABLE OF CONTENTS

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## Contents

EXECUTIVE SUMMARY.....	4
CAPITAL TRANSACTIONS .....	5
FINANCIAL PROJECTIONS .....	7
LEGAL DUE DILIGENCE.....	10
PROPOSAL STRENGTHS AND RISKS .....	11
COMPARABLE SALES.....	14
EXIT STRATEGY AND OPTIONS.....	15
PROPERTY DESCRIPTION .....	16
VINEYARD OPERATING SYSTEM .....	17
ENVIRONMENTAL, NUTRIENT AND CONSENT MANAGEMENT.....	18
MARKET DYNAMICS – DOMESTIC & INTERNATIONAL .....	19
APPENDIX I – FINANCIAL .....	22
APPENDIX II – MARLBOROUGH VINEYARD REPORTS ETC.....	23
APPENDIX III – EXPORT AND VINEYARD GROWTH DETAIL.....	24
APPENDIX IV – VINEYARD REPORT & OTHER REPORTS.....	25
APPENDIX V – PROPERTY & LOCATION MAPS.....	26
APPENDIX VI – DUE DILIGENCE DOCUMENTATION .....	27

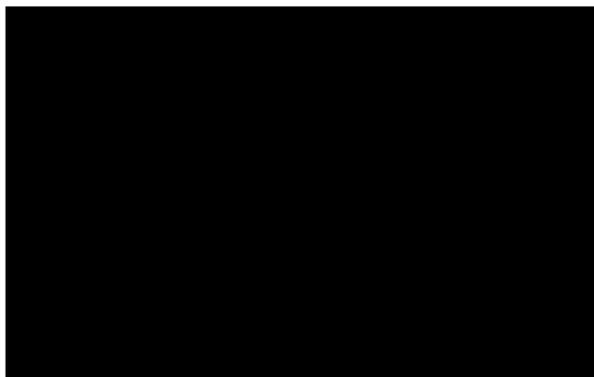
## EXECUTIVE SUMMARY

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Altimarloch is a group of three contiguous Vineyards in the Awatere Valley of Marlborough. The property is situated 30 mins south west of Blenheim (42km). Total area is 320 hectares with 194 ha of combined net planted area in grapes.

The investment totals [REDACTED] including working capital of [REDACTED] which will be repatriated as cash flow allows.

Approximately [REDACTED] of plant and equipment (subject to valuation at settlement) will be purchased which includes Contracting plant and equipment.



Detailed budgets indicate an average return on assets [REDACTED] over the period modelled, and an internal rate of return [REDACTED] annualised over the investment period using a capital growth approach.

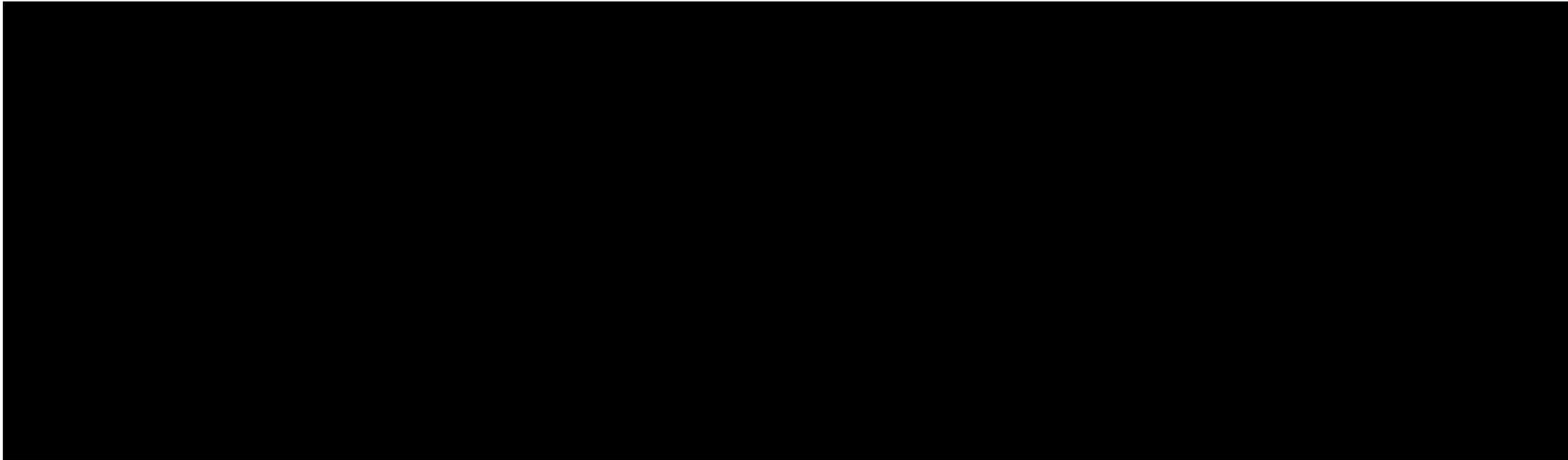
Comprehensive legal, physical, financial and operational due diligence is currently being

undertaken and will be completed by the 21<sup>st</sup> December 2017. The major strengths of this property are its scale, the quality of infrastructure, its track record of consistent performance and potential yield upside. The contracting business compliments the vineyard operation well, allowing for a greater range of plant & equipment, sharing of resources and strong operating profits. The property represents a solid base opportunity to grow and expand by acquiring smaller vineyard assets.

Identified risks relating to this property are those generally associated with viticulture, such as climatic effects and small reliance on Class B water from the Awatere River.

## CAPITAL TRANSACTIONS

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The table above details the capital requirements for the purchase of Altimarloch, including the working capital which will be returned as cashflow allows.

The full amount of capital is due on settlement on the 1<sup>st</sup> May 2018, however legal fees may be

required earlier. [REDACTED] will also be required upon the property becoming unconditional.

The Sale and Purchase Agreement is for land and buildings to a total value of [REDACTED] and plant & equipment at valuation (circa [REDACTED]).

In addition to that we have budgeted for legal fees, capital development and working capital to a total of \$35,265,000.



# FINANCIAL PROJECTIONS

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## Investment Returns

These are detailed in Appendix I which include

- Consolidated operating budget
- Discounted cash flow.

Returns can be in the form of cash returns from the profit of the business, and capital growth.

The RoA averages [REDACTED] over the modelled investment period. This RoA is calculated as earnings before interest and tax divided by the total asset value at the beginning of each year.

The IRR for this investment has been calculated over the period starting from FY18-19 and reflects the final income based on a capital growth model after an assumed sale at [REDACTED]

## Proposed Management

This will be a FarmRight Ltd managed operation, with budgeted operating costs based on the contract pricing for the vineyard and previous years' operating costs for the contracting operation.

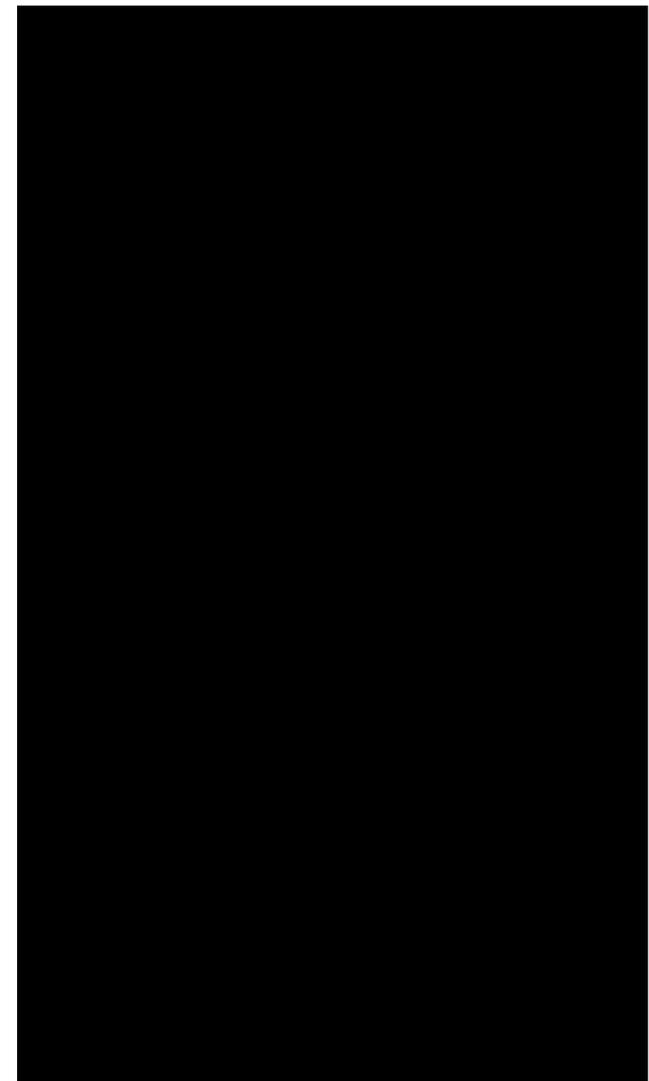
## Budget Assumptions

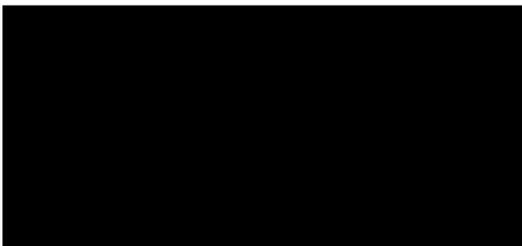
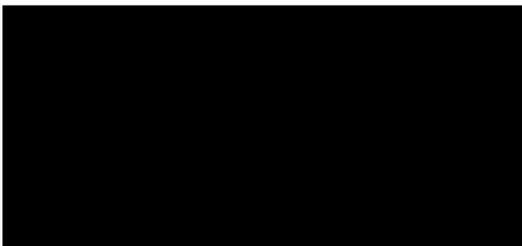
### 1. Operating vineyard

The budget for Altimarloch has been prepared by FarmRight Ltd in consultation with Berakah Vineyard Management (BVM), an established Marlborough vineyard management company.

The budget has been created with the following assumptions:

- [REDACTED] provided a contract price for a full management package (including a vineyard management supervision fee) with Altimarloch supplying all its own vineyard plant & equipment - at [REDACTED]
- The writer has added a margin of [REDACTED] as a conservative approach.
- Total all up vineyard operating costs are [REDACTED] plus [REDACTED] annual CPI.
- The Investment model is based on grape income at [REDACTED] plus [REDACTED] annual growth.
- [REDACTED] is based on a 3-year average price paid by Indevin & Pernod Ricard New Zealand under existing grape supply agreements.



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Both Indevin and PRNZ continue to grow their grape resource with PRNZ actively seeking more contract growers currently

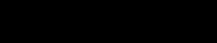
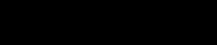
Please refer to Market Dynamics, Proposed Strengths and Risks – Industry Specific & Appendix I for more commentary

## 2. Contracting

Since 2005, Altimarloch have operated a wholly owned contracting division and provides services to 3<sup>rd</sup> party vineyards as well as Altimarloch (at market rates).

For budget purposes we have used 2016-17 income and expenses as supplied by the vendor plus an allowance for income to be generated by the new Pellenc Harvester (as confirmed by the vendor).

### Contracting budget assumptions

- Gross revenue: 
- Direct expenses: 
- OPM: 

The contracting arm generated an average operating profit margin (OPM) of  in 2016-17. The balance of circa  will be applied for an annual plant replacement figure.

Please refer to Appendix I for more detail

### Sensitivity to Grape Price

A sensitivity analysis has been prepared to show the effect of grape price on EBITDA and ROA. The model output summary is shown on the next page.

<b>EBITDA &amp; ROA Sensitivity Analysis</b>											
[Redacted Content]											

# LEGAL DUE DILIGENCE

Category	Responsibility	Comments
<b>Legal</b>		
Legal description	Duncan Cotterill	Under review.
Covenants/Easements/Consents	Duncan Cotterill	Under review.
Water rights	Duncan Cotterill	Under review.
Codes of compliance	Duncan Cotterill	Under review.
<b>Operational</b>		
Staffing	[REDACTED]	Finalising details to take over existing staff on new FarmRight Ltd employment agreements
Vineyard operating model driving financial returns	[REDACTED]	Confirmed and linked to budget models
<b>Infrastructure</b>		
Vineyard	[REDACTED]	To confirm suitability of harvester & sprayer wash down areas meet compliance requirements
Plant & Equipment	[REDACTED]	To review all P&E on the property against detail provided
<b>Risks</b>		
Labour availability	[REDACTED]	Existing staff to be offered ongoing employment on similar terms and conditions as per current.

## Legal Due Diligence Report

The legal due diligence report has not yet been received from Duncan Cotterill. This will be forwarded as soon as it is received.

# PROPOSAL STRENGTHS AND RISKS

Strength	Details
Quality well-presented Infrastructure	Altimarloch is a high quality well developed and established property. Top quality frost protection with water and frost fans utilising telemetry controlled via ORSAT (satellite control system) for remote control
Soil types	Good quality silt loam soils are present to most of the property which supports sustained grape production levels. The river terrace adjacent to the Awatere River is stonier than upper terrace areas. The better soils lend themselves to other intensive farming enterprises should the need arise.
Scale	Good overall scale to achieve efficiencies with labour and machinery, ability to attract good quality management and vineyard staff and allow for beneficial purchasing of vineyard supplies etc.
Grape supply agreements	
Altimarloch name	
Production upside	
Contracting business	

Risk	Rating	Details	Mitigating factors
<b>Vineyard specific</b>			
Vineyard management and staff	Moderate	Distance from Blenheim can limit availability of quality staff	FRL will look to take over existing staff on similar terms to existing. The vineyard is well set up with good quality infrastructure and machinery and together with its scale quality staff can be attracted and paid accordingly. The current owner has a good track record of recruitment and retention.
Vine health	Moderate	The vineyard managers attention to detail is critical to ensure we achieve optimal growth rates and maximise productivity.	FarmRight Ltd will work closely with the vineyard manager to ensure target cropping levels and quality parameters are met through benchmarking against industry targets and utilise technical advice where appropriate.
Climatic variations	Moderate	Climatic variations can influence production levels.	Given the location of the property, frost risk is higher than the Wairau Valley in general. Quality frost protection infrastructure with offsite monitoring allows best possible mitigation opportunities.
Production variability	Moderate	Shorter growing season than Wairau Valley on average	Careful monitoring of the growing season alongside good vine health will help mitigate this. Accurate yield estimating will provide metrics to make strategic crop level adjustments
Location	Low	Perceived as a distance from Blenheim	[REDACTED]
Water availability	Low	Good source of water	Good consents in place with majority of very reliable Class A water supplemented by Class B water held in on vineyard pond storage. [REDACTED]
<b>Industry specific</b>			
Financial returns	Moderate	Grape price fluctuations	[REDACTED]

			<p>the future. Both companies grape pricing has been at this level (and Indevin above) over the last three years. Both grape supply agreements provide a top up to the annual Marlborough district average – this has not been required since inception.</p> <p>[REDACTED]</p>
Changes in asset value	Moderate	Most of the investment is in land so open to the land market changes up or down	Altimarloch is valued at the mid-level for its productive value. The asset value will ultimately be related to grape price and the scarcity/availability of suitable land for grapes has/is affecting asset values positively.
Environmental compliance changes	Low	District plan changes	Given the location and distance from Blenheim, any proposed plan changes will have a lesser affect. Legal due diligence will cover any major concerns.
Input cost variations	Low	Price rises for vineyard consumables and labour	The scale of the operation will ensure the property will always be able to buy in bulk well. Same applies to labour – permanent and contract staff can be utilised over a large area of vineyard.
Biosecurity	Low	Transmitted diseases	Low in the wine industry overall but treated seriously. Machinery and equipment is cleaned before entering the vineyard as is any contract staff with pruning equipment etc.



# EXIT STRATEGY AND OPTIONS

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## **Potential Exit Strategies**

The strategy presented in the Information Memorandum is to hold the property for a consistent, long-term return on invested capital. Altimarloch is currently run as 3 separate entities all on separate titles. This allows for

separate blocks to be marketed and sold individually if required in the future.

## **Potential Future Growth Opportunities**

This property is set up well to be a high producing, consistent returning investment.

Altimarloch presents a very strong opportunity to grow from with more vineyard/winery assets in Marlborough. Given the potential management to be in place and the contracting arm of the operation, there will be a strong opportunity to acquire and add smaller vineyards to the operation.

# PROPERTY DESCRIPTION

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## Location

Altimarloch is 42km south west from Blenheim and 15km from Seddon in the upper Awatere Valley. This is an established grape growing and farming area. [REDACTED]

## Land Use and Area

Altimarloch comprises 319.65ha in total. There is approx. 250ha of flat terrace areas of which make up the planted/to be planted hectares including headlands etc. The balance is a mixture of tracks, sidings, south facing scrubby hill and waste areas.

## Farm Layout

The vineyard blocks are predominantly north-south row orientation where possible and planted areas have been maximised relative to the shape and contour of the land. [REDACTED]

## Topography

The property is split into two main upper terraces and river terrace adjacent to the

Awatere River. The balance is south facing scrubby hill which forms part of the Black Birch Range.

## Soils and Fertility

On the upper terraces there 3 main soil types, Dashwood shallow silt loam, Glenbrae and Marathon moderately deep silt loams. These soils have good natural fertility and are free draining. The river terrace area has predominantly Omaka Stoney Sandy Loam, moderately stony and medium natural fertility.

## Weeds, Pests and Disease

No major issues with weeds. There are standard pest and disease risks with viticulture and are managed and mitigated with recommended spray programs and canopy management. Altimarloch is an accredited Sustainable Winegrowing New Zealand (SWNZ) member. SWNZ sets spray program protocols which set best practise standards with emphasis on lower spray intervention limits.

## Climate

Altimarloch enjoys a typical Marlborough climate and is well suited to high quality grape

production. The property receives ~600-650 mm of rainfall annually with a typical dry summer-autumn periods.

## Water Supply

Water reticulation to the buildings is via the irrigation system and gravity fed from the Altimarloch Stream.

## Buildings

Three bay implements shed with 3 lockable storage containers

Washdown spray pad and chemical shed

Two-bedroom cottage with shower and toilet used for smoko and meeting room/storage

Workshop & 4 bay lean to shed is leased by Altimarloch from the owner of the Altimarloch Homestead for [REDACTED] Employee [REDACTED] [REDACTED] rents the cottage at [REDACTED] – net cost to the business [REDACTED] pa.

# VINEYARD OPERATING SYSTEM

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## System Overview

Altimarloch operates as a single vineyard operation for the activities throughout the year. The vine management protocols can vary around crop yield limits as set by the grape supply agreements over the various blocks.

Given the size of the property, economies of scale are achieved. The contracting arm integrates well into the vineyard operations and allows for effective use of permanent and casual/contract staff.

## Personnel

The budget has been prepared to continue with the existing staff of 6 FTE's. The current owner supervises fills this position.

Casual and contract staff are engaged at pruning and busy periods over the summer months.

Key staff are:

1. [REDACTED] manages the vineyard machinery operations and contracting supervision.
2. [REDACTED] is the vineyard supervisor and manages and coordinates the vineyard activities alongside Robert.

All staff report to [REDACTED]

It is proposed to employ all current staff and recruit a top-quality Vineyard Manager under FarmRight Super Staff Limited. A full job description is being prepared.

Given the scale of the operation there will be good quality applicants to select from.

The Vineyard Manager will report to [REDACTED] as the Horticulture & Viticulture Investment Manager.

# ENVIRONMENTAL, NUTRIENT AND CONSENT MANAGEMENT

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Key environmental issues on vineyard are based on the

1. Management of machinery and spray washdown effluent.
2. Chemical shed bunding and lockup.

The property is compliant with a bunded concrete pad and chemical shed regulations.

Nutrient management is not a major issue in relation to effective land management techniques for vineyards

Key consent management for the vineyard is focused around irrigation and water use efficiency. This occurs at the consent renewal stage where unused allocations may be reviewed and lowered to actual usage.

Duncan Cotterill are engaged to provide a full review of all consents for the property.

# MARKET DYNAMICS – DOMESTIC & INTERNATIONAL

## Domestic

The demand for established vineyards (predominately Sauvignon blanc) and bare land suitable for development is very strong. This is primarily driven by two factors

- Marlborough is estimated as having 30,000ha of suitable vineyard land. Current plantings of circa 26,000ha as at mid-2017 exist. (source Wine Marlborough/NZ Winegrowers).

Wine companies are scrambling to secure assets to ensure they have sufficient grape resource to meet future growth opportunities. Companies active range from the smaller Wairau River Wines & Whitehaven through to Constellation, Delegats & Yealands. Pernod Ricard Winemakers & Delegats are actively seeking new contract growers to meet future demand.

Marlborough Grape Producers (MGP), a local grower co-op supply bulk wine to The Wine Group (TWG) who sell under the Cup Cake brand in the USA. TWG is the 2<sup>nd</sup> largest privately-owned wine company behind Gallo. MGP's business has grown from small beginnings 5 years ago to a [REDACTED] grape intake with strong future growth projections into the future.

- Strong export growth particularly into the USA and Canada where we have seen double digit growth of these markets at a high-end price point.

Over the 15-year period 2001-02 to 2016-17, Marlborough Sauvignon blanc production (SBL) went from circa 17,000 tonnes to circa 263,000 tonnes which included significant year on year growth in volumes.

Refer appendix III for the NZ & Marlborough Export Value Growth 1990-2016.

In the period 2001-2008, the Marlborough SBL average price fluctuated between [REDACTED] [REDACTED] with several companies paying as much as [REDACTED] to secure fruit.

The 2008 vintage was circa 68% (+63,000 tonnes) up on the 2007 vintage. This combined with the Global Financial Crisis (GFC) at the time created a large vintage overhang with finished wine still in tanks heading into vintage 2009. Large volumes of bulk wine were sold at historical low levels to make space for the upcoming vintage. Alongside constrained cashflows, the average price for SBL dropped from [REDACTED]

A similar trend continued with average prices reaching [REDACTED] in 2010 and 2011 [REDACTED]

During this period where previously SBL was short of supply, new large areas of vineyards were coming into production (circa 2-3,000ha pa) which meant production was outstripping sales demand. This combined with the GFC created a perfect storm for the industry where grape prices had to recalibrate.

Over the 6-year period since 2011, we have seen average Sauvignon blanc grape prices steadily climb back to around [REDACTED] this was on the back of strong production growth of +35% (72,000 tonnes).

Overall, it's been a growth story for Marlborough Sauvignon blanc where the industry has gone from circa 1,500ha in 1999 to 26,000ha in 2017 total plantings and we have seen "speed bumps" along the way.

See appendix III for Marlborough vineyard planted areas 1999-2014.

## International

██████████ at New Zealand Winegrowers provided a recent presentation which highlighted the incremental changes over the 6-year period from 2011 (low point for SBL grape prices) to 2017.

Key metrics include

- Total sales volumes have increased 38.9% (221.0M litres to 307.0M litres)
- Export volumes have increased 63.5% (154.7M litres to 253.0M litres)
- In 2011, Australia was the largest export market in dollar terms \$337.7M
- In 2017, USA was the largest export market at \$517.3M - + 53.2% (\$179.6M) over Australia in 2011
- In 2011, Sauvignon blanc (SBL) was 131.7M litres, in 2017, 217.9M litres +65.4% (86.2M litres)
- In 2011, SBL was \$865.3M, in 2017 \$1,335.3M + 56.6% (\$490.0M)
- A greater proportion of SBL is now exported in bulk and bottled in market to save costs and allow for greater flexibility. Much improved bulk wine tanks etc has meant quality remains high compared to past issues with bulk wine exports.

- Total NZ wine exports are now close to \$1.70B
- North America is driving the growth with the USA +123.1% and Canada +81.5% over the period.  
Other export markets continue to grow with the UK +32.6% and total other +62.4%. Australia has slowest growth at 9.8%.
- FOB packaged wine returns are down 2016 vs 2017, partly on the back of a strong Kiwi Dollar
- In the UK market where the dip has been greatest, NZ wine average per 750ml bottle has increased from 6.32 to 7.15 pounds +13.1%

Please refer to appendix III for the presentation.

The 2017 Fresh Facts publication by Ministry of Primary Industries (MPI) Neilson data shows in the USA that Sauvignon blanc has the fastest growing wine consumption by variety and New Zealand is the fastest growing country for US wine imports.

The report notes that Sauvignon blanc is an established success but there are also opportunities for other NZ varietals such as Pinot Noir. It notes US consumption of Pinot Noir has increased faster than any other varietal (except Sauvignon blanc) growing from

56.0M litres to over 80.0M litres (2010-2016). If the trend continues the US will consume another 40.0M litres of Pinot Noir by 2021. New Zealand wines are seen as better value compared to the traditional Burgundian Pinot Noirs.

Please refer to appendix III for details

While Sauvignon blanc dominates export statistics other varieties are gaining some prominence albeit off a low base with Pinot Noir & Pinot Gris in particular growing strongly.

Marlborough is one of the few wine regions in the world that can grow both top quality whites and reds which offers diversity of grape varieties.

Continuing sustainable growth in export markets alongside managed grape intake volumes will see the grape price of Marlborough sauvignon blanc grapes remaining at the current sustainable level with some upside into the future.

A number of factors lead us to believe Sauvignon blanc pricing is sustainable at [REDACTED] with incremental upside

- Rapid production growth in that period was not matched by subsequent rapid sales growth and the industry developed a significant volume of unsold wine being carried through as either finished goods or wine in tank from one vintage to the next. This meant sales of bulk wine at low/no margin to empty tanks and to significantly lower crop yields to manage grape intakes.

- Sauvignon blanc grape pricing had to become more realistic and aligned to sales returns. This combined with the GFC created a significant downside of returns for the overall industry. Some commentators thought it was in a reality check the industry needed but not necessarily wanted.
- Grape prices have risen steadily 2010-2017 +49% and most participants (growers and wine companies) have a view that at

around [REDACTED] all parties can have a sustainable future.

- Continuing strong export growth into large affluent markets at good price points present a very healthy outlook for Marlborough Sauvignon blanc. Coupled with a limited amount of future suitable land available in Marlborough for new vineyard development leads to the conclusion that there appears to be long term sustainability of the Marlborough and New Zealand wine industry.