

Conservation Investment Blueprint: Waipā Catchment Organic Dairy Conversion Blueprint

By Envirostrat, June 2019

i. Overview of the conservation need/opportunity

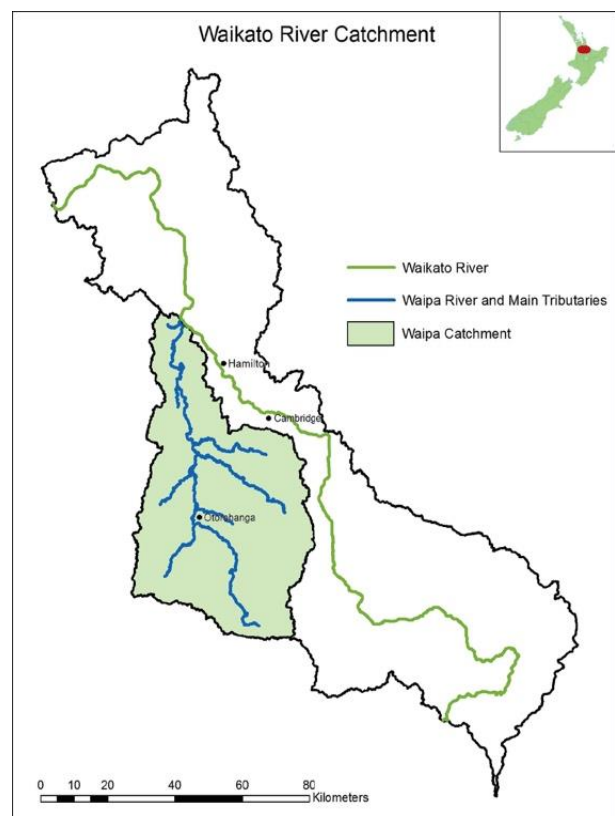
Scale and scope of activities required to address conservation need/opportunity

This Blueprint focuses on dairy farming conversion to organic regimes in New Zealand as a means of achieving water quality improvement, biodiversity conservation and enhanced ecosystem resilience through expansion of forest cover and wetland creation. The opportunity involves the issuance of an NZ\$100 million (US\$66 million) hybrid bond that exhibits both fixed income and equity characteristics. The issued funds will acquire conventional farms in the identified target area that are suitable for the impact investment strategy: conversion to organic farming with additional environmental mitigation initiatives such as native species afforestation and riparian tree planting by waterways.

The Waipā Catchment (i.e. watershed), is located in the Waikato region, New Zealand. It covers just over 300,000 ha of land with the primary landscape feature being pastoral farmland (dry stock and dairying). The remaining land is mostly associated with patches of the original landscape, which have remained intact such as remnant indigenous vegetation, peat lakes and wetlands, and residential and small townships, some of which are located along the Waipā river. Indigenous vegetation provides key habitat for native species and important ecosystem services for primary industry sectors in the Waikato region.

Key environmental stresses for the Waipā catchment include declining water quality and biodiversity, and increased erosion and sedimentation. The Waipā catchment's high contribution of the total run-off contaminants (est. 40% of total) entering the Waikato River catchment is a priority for regulatory intervention and environmental change¹. The Waikato region, also produces substantially higher greenhouse gas emissions, which are 50% higher than the New Zealand per capita average.

Water quality and ecosystem improvements are driven through two processes: The Waikato Regional Council Healthy River Plan Change², which is a regulatory process led by Waikato Regional Council (WRC), and the Waikato River Restoration Strategy, which is a non-binding plan developed by Waikato River Authority (WRA) and intended to support the organizations and groups investing in catchment restoration and protection activities³. Both processes are ultimately working to give effect to the Vision and Strategy for Waikato and Waipā river catchment to achieve the restoration and protection of the health and wellbeing of the Waikato River for future generations. In its role as trustee for the Waikato River Clean-up Trust, WRA has been set up with the express purpose to fund rehabilitation initiatives for the Waikato River. The WRA, therefore, has a strong interest in impact investment and trying to leverage their resources by catalyzing



¹ Over 30% of the nitrogen and phosphorus along with 40% of the sediment was sourced from the Waipā catchment.

² <https://www.waikatoregion.govt.nz/council/policy-and-plans/plans-under-development/healthy-rivers-plan-for-change/>

³ <https://www.waikatoriver.org.nz/projects-and-tools/waikato-river-and-waipā-river-restoration-strategy/>

additional (private) capital and resources to achieve water quality improvements and ecosystem conservation and regeneration.

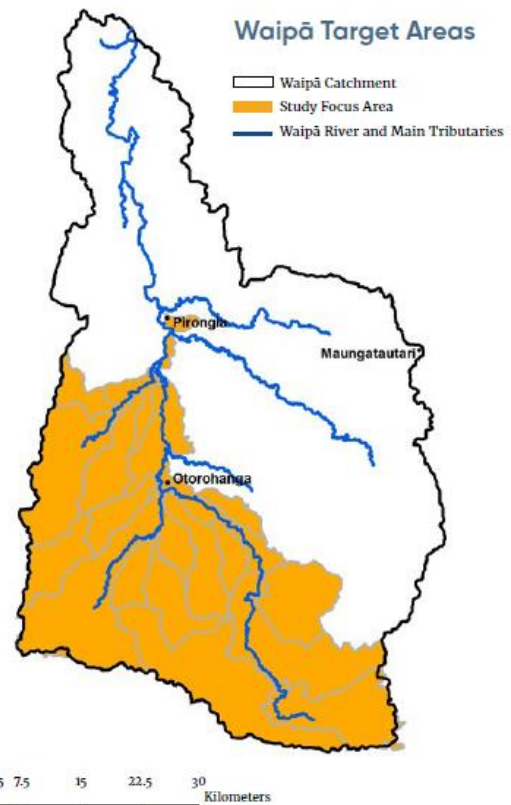
Waikato River: total environmental loads per annum

Catchments	Area (ha)	N leaching (kg)	P Loss (kg)	Sediment loss (tonnes)	E.coli (peta)
Waikato River	1,095,065	11,800,136	857,488	981,948	1,653
Waipā catchment	309,332	4,143,495	287,077	394,073	438
Waipā as proportion of Waikato catchment	28%	35%	33%	40%	27%

Source: MOTU 2017

The biodiversity conservation needs of the catchment are focused on soil conservation, improvement of water quality and associated ecosystems (rivers, lakes and wetlands) and enhancement of native vegetation through increased connectivity, restoration and better management of and prevention of expansion of pastoral land.

Dairying land-use is a main contributor to elevated nutrient levels and faecal contamination (E. coli) in the Waipā river but it provides good financial returns and operating profits on a per hectare basis compared to other land uses such as dry stock or forestry. Dairy farmers are under pressure to improve their environmental performance to meet regulatory requirements and maintain their license to operate. Extensive science and economic analysis that has been carried out on the Waipā Catchment supports the conclusion that targeted interventions and land use change on dairy farms can achieve significant environmental and social impact and a competitive return on investment.



ii. Describing how the Blueprint contributes to conservation goals

Overall Statement

This model involves acquiring and converting dairy farms to organic status, and delivering reduced environmental impact in Waipā catchment by reducing farm run-off pollution while achieving strong investment returns. Extensive scientific and economic feasibility analysis in the Waipā Catchment demonstrates that targeted interventions and land use change on dairy farms can achieve significant biodiversity, social and broader environmental impacts and a competitive return on investment. This impact investment opportunity is aligned with increasingly aware public, political and investor expectations that the environmental impact of intensive, conventional dairy farming in New Zealand needs to be significantly reduced.

One of the principal conservation benefits of this model is the focus on increasing coverage of native vegetation (a target of 15% land cover of all farms under the programme). Depending on site/context, we will target a combination that involves not just grasses, sedges, flaxes and small shrubs but also long-lived canopy native trees to achieve rapid ecological succession and recreate the historic riparian vegetation that may have been there. Key native species to be used in the restoration process including Kahikatie (*Dacrycarpus dacrydioides*), Pukatea (*Laurelia novae-zelandiae*), Totara (*Podocarpus totara*) and Manatu (*Plagianthus regius*, amongst others. For each farm a planting plan will be developed by a specialist, focusing on a selection of species that fit the purpose and context. This will also be planned to enhance connectivity between remnant areas of native vegetation and include ecological restoration along riparian zones using native species. For decisions regarding species selection at each site, consultation with the Maniapoto iwi (local tribe) will be held to ensure alignment with their Environmental Plan and priorities (<http://www.maniapoto.iwi.nz/priorities/te-taiao/>).

In addition, the reductions in pollution and runoff into the river from this model will greatly benefit populations of freshwater fish, invertebrate and amphibian species and river vegetation. This will also include wetlands creation and/or restoration, given the extent of wetland loss in Waipa/Waikato. Table 1 summarises the species numbers present in Waipa/Waikato.

Table 1: Status of a range of species found in the Waikato region (not including marine species) – (From Waikato Regional Council – *Waikato’s ecosystems*⁴)

Species types	Indigenous ¹	Exotic ¹	Threatened ²	Comment
Mammals	2	17	2	There are 2 land based native mammals the short-tailed and long-tailed bats. Exotic species include deer, rats, cats, pigs, goats, mustelids and possums. Excludes farmed animals and marine mammals for example dolphins and seals.
Birds	124	36	36	Native birds comprise 75 estuarine and seabirds, 20 wetland birds, 29 forest and scrub species.
Reptiles	19	0	7	Tuatara, skinks, geckos (excludes marine turtles and sea snakes which are occasional visitors to New Zealand waters).
Amphibians	2	3	2	All are frogs.
Invertebrates	unknown	unknown	>4	Includes the Mahoenui giant weta, the Mercury Islands tusked weta, and the Moehau stag beetle.
Plants	>900 ³	>660 ⁴	>40	Estimate for higher plants only. Excludes mosses, liverworts and algae.
Freshwater Fish	19	10	7	For example eels and Inanga (whitebait). Excludes estuarine fish, which migrate into rivers, for example mullet, flounder.
Total	>1,066	>726	>98	> indicates minimum estimates.

The restoration strategy for the Waikato and Waipa river has identified priority projects based on state and pressure analysis, which will form the strategy adopted by the this model in farm and site selection.

STAR analysis

A STAR analysis has found that in the Waipa catchment, abating threats to species within their existing habitat can contribute to a reduction of approximately 0.6% of New Zealand's threat abatement score. Similarly, restoring lost habitat in this area (and abating threats to species within the restored area) can reduce by around 0.6% the New Zealand's threat abatement score. STAR analyses are based on the presence (current or historic) of globally threatened species which, in the Waipa region, include 16 birds, two mammals and one amphibian. The main threats to these species in both their current habitat and the habitat they have lost over time come from: 1) the presence of invasive non-native/alien species/diseases, 2) mining & quarrying and, 3) logging & wood harvesting.

⁴ Waikato Regional Council (2019). *Waikato’s ecosystems*. Available online: <https://www.waikatoregion.govt.nz/community/about-the-waikato-region/our-natural-environment/the-waikatos-ecosystems/>

Ultimately, the goal is to invest capital to transform NZ agriculture to higher value, lower impact farming practices, improving water quality and biodiversity, while protecting capital and achieving appropriate financial returns. Whereas the initial focus is on dairy farming with additional environmental mitigation initiatives such as afforestation and riparian tree planting with native species by waterways, a long-term investment plan would target dry stock farmers as well.

Identifying Key Metrics

Four main outcome metrics are used to assess how the investment contributes to environmental and business outcomes. Specific indicators and targets are described below:

1. Water quality (targets are for year 5 against current baseline)

- Nitrogen (kg; 'N'): -45% or greater
- Phosphate (kg; 'P'): -40% or greater
- Sediment loss (tonnes): -45% or greater
- E.coli (tera): -45% or greater

2. Land conservation (targets are for year 5 against current baseline)

- Farm area under organic regime: 100% of the 330 ha of effective dairy land (from 361 ha of original conventional dairy land)
- Farm area under native forest cover: over 59% (additional 55 hectares of forest planted)
- Length of stream with riparian management: 100% (100,000m² of tree planting and fencing along waterways)
- Percentage of total farm areas set aside for riparian, afforestation or wetland creation: 15% targeted

3. Biodiversity conservation

- Increases in populations of native terrestrial species – targets to be set based on discussion with Waikato Regional Council and scientific research organisations.
- Increases in population of native freshwater species – target to be set based on discussion with Waikato Regional Council and scientific research organisations.

4. GHG emissions (targets are for year 5 against current baseline)

- Greenhouse gas emissions CO₂ (tonnes; 'GHG CO₂'): -45% or greater

5. Financial returns (Year 4)

- IRR: 8 to 10% (after fees) with no leverage; NZ\$100 million investment.
- EBITDA%: 7.19%
- Sales from certified organic produce: NZ\$2.4 million (note: sales value may change slightly pending organic milk payout).

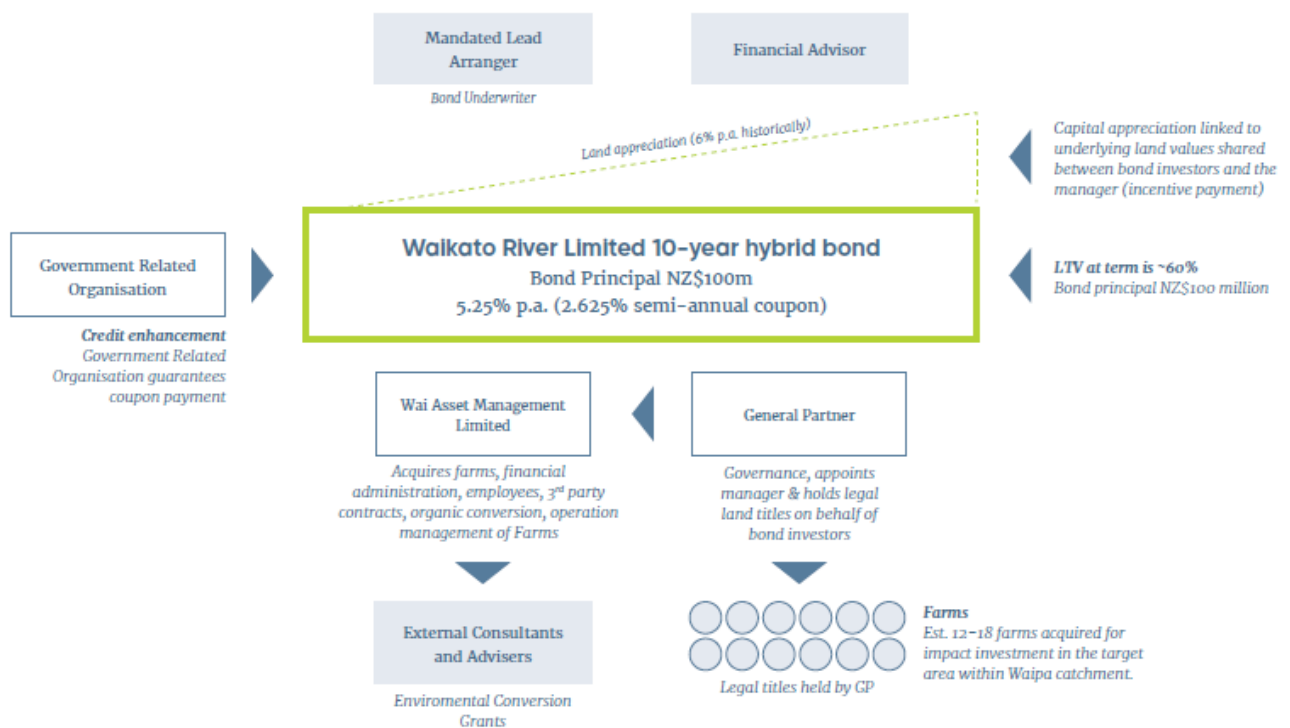
iii. The business model

Organisation and governance

Impact investment, and specifically investment in environmental outcomes is a relatively new concept in New Zealand and organizations and structures that can execute impact investment opportunities are still emerging. New Zealand currently faces the challenges of both being able to leverage existing public investment to attract new private capital to invest in scalable solutions for sustainable land use management and of building capacity to generate projects of sufficient size.

Waikato River Limited is a special purpose company listed on the NZX Debt Market (“NZDX”) that will issue a NZ\$100 million bond arranged by a mandated lead arranger that is likely to be a leading domestic broker. The issued funds, termed the Wai Fund, will acquire conventional farms in the identified target area that are suitable for the impact investment strategy. Wai Asset Management Limited (“WAML”) will manage the acquisition of conventional target farms, ongoing organic management and environmental transition.

The General Partner (GP) is an independent board of directors that will be responsible for governance, the appointment of manager that will sit under WAML and holding the legal land titles on behalf of bond investors. The manager will be responsible for overseeing the acquisition of farm assets, employing highly skilled organic farming and environmental specialist staff to form the WAML management team and engaging external environmental consultants and advisors. The management team, which will be composed of an operational management and an impact team, will be responsible for the operation of the farm assets and execution of the investment strategy, as well as providing overall fund administration.



The fragmented dairy production that currently characterizes the Waipā catchment means that there exists the opportunity to acquire farm assets that are geographically situated in relative proximity. Scale benefits could then be attained through optimization of logistics, ecological farm management knowledge transfer and investment efficiencies. The Manager will identify appropriate assets which meet the investment objective and are suited to ecological transformation and assess them using the following key due diligence aspects:

1. Historical fertilizer/feed/chemical inputs;
2. Animal health status;
3. Soil type and status;
4. Land use capability and cover;

5. Pasture;
6. Water;
7. Weeds and pests;
8. Infrastructure;
9. Climate/location; and
10. Access to market/supply chain considerations.

The acquired farm assets will enter into the organic conversion process, with the goal to achieve organic certification recognized by all international markets, by year 3. A development/transformation plan will be prepared by the WAML team in co-operation with the farm manager – with measurable impact performance metrics linked to specific farm interventions. The plan will be the guiding strategic document for each property through conversion and in its on-going management beyond the achievement of full organic certification and will also include a Farm Environment Plan and non-financial impact metrics and performance targets.

The WAML team will be responsible for coordinating quarterly property visits/meetings (and monthly visits/meetings as required) along with the farm managers to evaluate performance and consider overall strategy for individual properties. These visits and meetings will feed into a yearly report on impact metrics and progress against performance targets. A pathway for farm managers to become shareholders/partners in the farming business on a case-by-case basis to foster commitment, ownership and sustainable growth of the businesses will be considered.

There exists multiple processors seeking organic milk supply in the wider Waikato region, including Fonterra and the Organic Dairy Hub. A relationship will be established with one of these processors based on a thorough evaluation of their strategy, track record and alignment with the long-term underlying goals of the WAI Fund.

The manager will also seek opportunities for investment in ecological property infrastructure in order to improve base performance by enhancing resilience and self-sufficiency as well as enhancing the capital appreciation of the property and mitigating operational risk. When and where possible, additional revenue and benefits will be sought by pursuing public grants (e.g. afforestation and riparian planting grants) from a variety of sources including central government agencies (Ministry for Primary Industries, Department of Conservation, and Ministry for the Environment), Waikato Regional Council, and Waikato River Authority. Management will also explore opportunities to generate alternative revenue streams, such as Manuka honey production, farm-stay tourism, carbon credits and on-site biogas installation. Engagement with Waikato Regional Council and Waikato River Authority will be driven by the goal to generate impact that contributes to the Vision and Strategy for Waikato River.

To execute the investment strategy, an operational management and impact team is in place. The Operational Management Team directly implement strategy, and oversee the operational farm organic conversion & farm management, working directly with the individual farm managers. Core roles and responsibilities include:

- Chief Farming Officer: asset identification and evaluation; Portfolio and operational agri-strategy execution; Investment Committee
- Organic Farm Hub Manager: overseeing organic conversion and farm operations
- Agronomic Technical and Strategy Advisor: advise with evaluation, assessment and insight, operational strategy and innovation

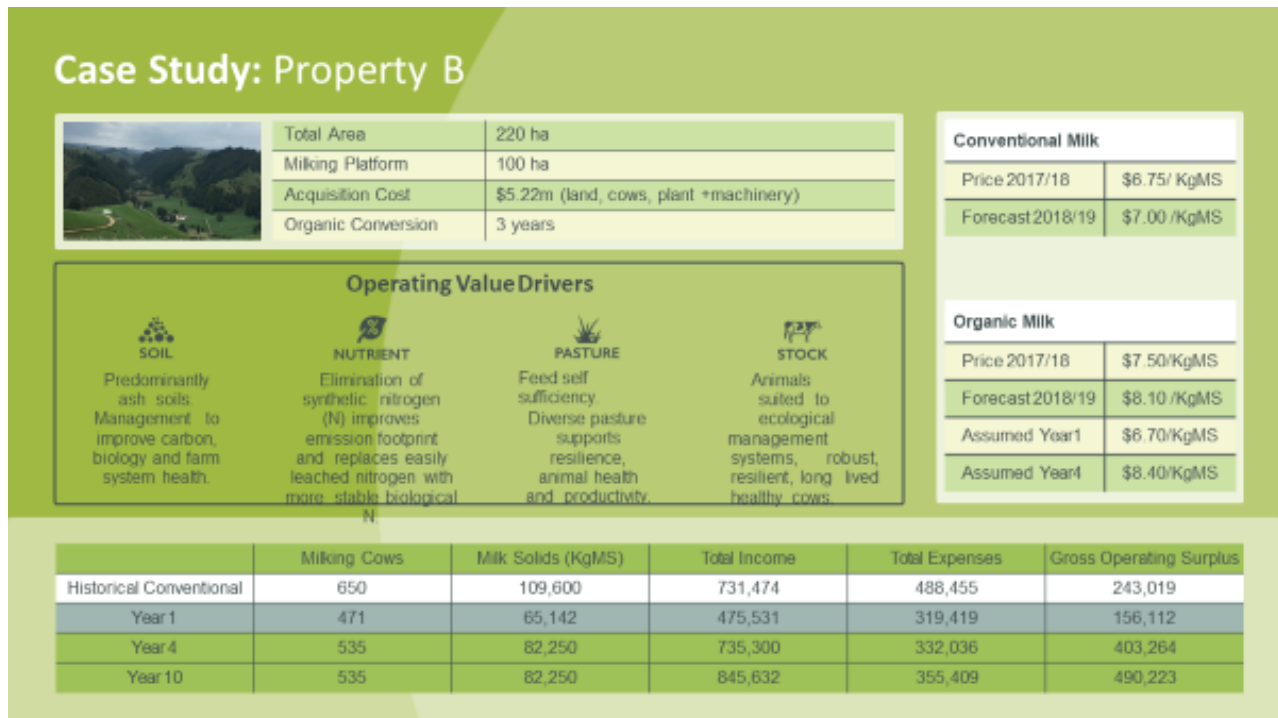
The Impact Team leads the development and execution of environmental mitigation activities, and engagement with regulators and stakeholders, including seeking grant funding to offset mitigation costs. Core roles and responsibilities include:

- Chief Executive Officer: Project identification and development lead, government relations and investment committee
- Chief Impact Officer: Oversees environmental mitigation program and overall monitoring and reporting of impact

Products and services being sold

The revenue generation model is based on the production and sales of certified organic milk. On average, conventional dairy farms acquired will reduce cow numbers by 19% and milk production measured by kilograms (milk solid kg) will fall by 22% by year 4. However, the lower MSk output is offset by the premium earned on organic milk that has ranged 15% to 30% above conventional milk price since 2004 (organic milk's pricing origins) which is historically less volatile as well⁵. By year 4, the revenue on organic conversions will exceed that from conventional farms by an average of 9%. It is also possible that sound pasture management and good animal health may lead to a small reduction in milk output than the assumed 22% - with positive outcomes for revenue.

An example of revenue calculation is provided below for one of the assets taken through due diligence (overleaf):



The revenue projections above do not include potential revenue from alternative sources such as carbon credits, tourism or Manuka honey, since a conservative approach to assessing investment returns was applied. However, there is high likelihood that additional revenue will be generated as result of specific mitigations and land use change on farm.

The environmental outcomes are achieved as results of several interventions:

- Stocking rate reduction
- Afforestation with native species
- Riparian management and wetland maintenance
- Sediment traps
- Shift away from cropping

⁵ Historically, NZ's organic milk price is relatively stable with the underlying conventional milk price exhibiting volatility, hence the range.

Cash flows and commercial sustainability

On average, conventional dairy farms acquired will reduce cow numbers by 19% and milk production measured by kilograms (KgMS) will fall by 22%. However, the lower KgMS output is offset by the premium earned on organic milk that has ranged 15% to 30% above conventional milk price since 2004 (organic milk’s pricing origins) which have historically exhibited lower volatility as well. In one case study by year 4, the revenue on organic conversions exceeded the conventional farm by an average of 9% with the environmental impact largely mitigated. Potential additional revenue from Manuka honey, tourism or carbon credits is not included in the current projections.

Overall, the organic farm by year 4 had 31% lower operating cost base than the conventional farm. The removal of over-stocking lowered feed costs. In addition, the organic farm does not require the heavy use of imported fertilizer chemicals on the soil, a major component of operating expenditure. The operating surplus (EBITDA) in all cases produced a higher level than the conventional farm by year 4 when the conversion period was concluded based on the above summary of higher revenue on premium organic milk sales off a lower cost base with less feed and fertilizer expense.

Financial Summary (year 4)

	Current	Year 1	Year 4	
EBITDA margin (%) ¹⁹	2.9%	1.8%	7.19%	
Cost of production / KgMS	NZ\$3.96/KgMS ²⁰	NZ\$4.81/KgMS	NZ\$3.96/KgMS	
Gross operating surplus / KgMS	NZ\$4.73/KgMS ²¹	NZ\$2.49/KgMS	NZ\$4.98/KgMS	
	Conventional 18/19	Organic 18/19	Year 1	Year 4
Forecast/Assumed milk price	NZ\$7.00/KgMS ²⁰	NZ\$8.10/KgMS ²¹	NZ\$6.50/KgMS	NZ\$8.40/KgMS

External dependencies

Changes in legislation and government policy, taxation, environmental policies, accounting rules and organic standards may affect the intrinsic value of the assets, the operations and performance of the business or on the returns achieved for investors. As a counter to legislative risk, NZ is working towards Zero Carbon legislation and a national organic standard, which would further strengthen the enabling environment, though this model is not dependent on these being in place.

Risk management

Risks associated with the investment that have been identified include the following. Please note that risk management strategies for these issues are currently in development.

- **Macroeconomic factors** - Investments will be influenced by the domestic and global environment with developments which may be completely unpredictable, unforeseen and beyond the control of the Manager. These could include currency fluctuations, wars, global pandemics, livestock, plant or human diseases, government policies, global trade rules, agreements, and disputes.
- **Country Risks** - New Zealand’s economy is small and can be vulnerable to negative economic factors. These factors may also increase or decrease the intrinsic value of the portfolio or any particular investment. The Overseas Investment Office is responsible for assessing applications for consent from foreigners who intend making substantial investments in New Zealand (more than 24.9% share in investments in what is deemed “sensitive land”). This process can take between 6-9

months to complete but is not expected to negate the proposed strategy. This is of course entirely outside the control of the Manager.

- **Currency** - The exchange rate is affected by a number of factors all of which are beyond our control and are difficult to predict reliably. Appreciation in the value of the NZ dollar will negatively impact on returns from export markets and could affect the value of the business adversely. Depreciation of the NZ dollar against foreign currencies will impact negatively on the value of the NZ based assets in those foreign currency terms. The Manager does not intend to hedge any currency exposure.
- **Legislation** - Changes in legislation and government policy, taxation, environmental policies, accounting rules and organic standards may impact upon the intrinsic value of the assets, the operations and performance of the business or on the returns achieved for investors. As a counter to legislative risk, NZ is working towards Zero Carbon legislation and a national organic standard – these are drivers for impact investment, not risks. Rural property and commodity price risks It is possible that farm values could stagnate for a period if international agricultural commodity markets suffer setbacks. The market for agricultural products can be volatile depending on a number of factors beyond the control of the group; including but not limited to, global economic growth, the price of oil, demand for organic food/fibre and supply disruptions. These factors could cause fluctuations in the price of farm products and therefore investment returns.
- **Weather and climate change** - The climate and the impacts of climate change are uncontrollable variables. Adverse weather conditions can have a significant impact on production and returns.
- **Environment** - The nature of this business is such that it is susceptible to the damage, including potential loss, of organic certification caused by pollution, or climatic matters such as floods or drought. This may also adversely impact on the revenue and profitability of farms and the overall business.
- **Increasing protectionism** - There has been a broad reduction of trade barriers and protectionism over the past two decades. It is possible however that this trend may reverse. Increased trade barriers could make exporting agricultural produce more problematic and returns lower.
- **Business risks** - The intention is to hold the investments long term. The prevailing market conditions may change significantly over the tenure of ownership, which could reduce the value of the assets held.
- **Pest and disease** - The risk of pest and disease is a normal farming risk, which could impact negatively on production performance and consequently investment performance. The broad application of an agro-ecologically competent organic farming strategy which focuses on prevention rather than reaction is, in our considered opinion, the best strategy for mitigating this risk.
- **Manager risk** - The performance of the business could suffer if the Manager ceases to be involved in the management of the business. Similarly, performance could be affected if the business or Manager were to experience a significant loss of key personnel. The Investment Portfolio's future also depends on its ability to attract, employ and retain skilled and experienced agricultural staff. Failure of the company to do so may have an adverse impact on the business.
- **Suitable asset risk** - Further research, identification of suitable assets for investment and negotiations for purchase prices are needed. Until appropriate assets are purchased, the capital raised may remain liquid for longer than otherwise intended. The business may not be able to establish the portfolio of investments that it seeks to. As a result, the returns may be lower and risks may be higher. In addition, the ability to acquire the targeted properties in order to achieve the portfolio strategy depends upon the success of the capital raising.
- **Business model** - The business model makes certain assumptions regarding the acquisition, development and conversion costs of properties in NZ. These are based on current market conditions and prices in NZ, and could change and in turn reduce the overall profitability and returns to investors.

iv. The investment model

The financial instruments being sought to fund the business model

The overarching strategy is to acquire profitable conventional dairy farms suitable for conversion to organic production and apply holistic, ecological science-based management to the operational activities. Waikato River Limited, a special purpose company listed on the NZDX, will issue a NZ \$100 million hybrid bond with a term of 15 years with a with a five year swap (currently 2.25%) reset with a 300 basis points margin, an annual coupon of 5.25%. The proceeds of this issue will be managed by managed by WAML and will be used to fund the acquisition of conventional target farms, ongoing organic management and environmental transition in the Waipā catchment.

The notes will pay a fixed semi-annual coupon of 2.625% (half of 5.25%) or NZ\$2.65 million with any shortfall guaranteed by a government-related organization. At the conclusion of the 10-year term, the land is expected to appreciate with a profit share structured in the following order:

1. Repay advancements (if any) made for bond holder coupon shortfalls over the term
2. 50% share of the land appreciation net of (1.) distributed to bond investors (the equity component)
3. 25% paid to the government related organization net of (1.) (the principal scheme backer)
4. 25% paid to the manager net of (1.) (incentive payment)

Grants and Government Support

The fund manager has considerable experience successfully raising funds through grants to offset the costs associated with environmental mitigation. There are a number of potential sources of grant funding, including central government agencies (NZ Ministry for Primary Industries, Department of Conservation, and Ministry for the Environment), Waikato Regional Council, and Waikato River Authority. These funding sources will be pursued as means to improve investment returns or enable further investment in environmental outcomes.

The relative size of these instruments and basic information on their terms

The main terms of the Waipā fund are explained below.

Issue Amount	NZ\$100 million.
Term	15 March 2029 (10 years) with a 5-year swap reset at 15 March 2024.
Coupon	Semi-annual coupon payments - 300 bps over 5-year swap (2.25%), all-in 5.25%.
Uses	Acquisition and part funding (to accompany grants) environmental improvements of conventional dairy farms situated in the Waipā Catchment.
Assets	690 ha aggregated land including 330 ha organic dairy platform, 116 ha grazing land and 244 ha forest. Organic herd size est.770. This only covers initial assets (2 farms) that have had due diligence carried out. 12-15 farms are eventually expected in total.
Waikato River Limited	Investment is made via a Limited Partnership structure which allows which allows for pre-taxed income to be distributed, so investors can manage their own tax obligations.
Forecast IRR	8%-10% over 10 years.
Valuation	Annual valuations and reporting.
Liquidity	Notes are listed on the NZDX.
Fees	100 bps upfront.

Capital Appreciation	Investors will receive 50% of the land appreciation at Term.
Management Incentive	The Government related-organization and the Manager will receive the remaining share of the land appreciation at Term.

Risk mitigation instruments used and how these were incorporated into the investment structure

The notes will pay a fixed semi-annual coupon of 2.625% (half of 5.25%) or NZ\$2.65 million with any shortfall guaranteed by a government-related organization.

The exit strategy employed

The New Zealand fixed income market is deeper and more liquid than the listed equity market. Investors are able to exit their position via a broker. The Waikato River notes will be listed on the NZDX with fixed semi-annual coupon payments. The principal is expected to appreciate over time based on annual valuations of the underlying farm land. At the note's expiry at year 10, the notes are expected to be refinanced at the value of the farmland based on the independent valuation. Investors can opt to reinvest or receive cash based on the principal plus the share of the land appreciation.

Innovative features of the investment model

This green hybrid bond represents an investment novelty for the dairy sector in New Zealand and beyond. Whereas traditional opportunities to invest in dairy assets through equity instruments are available, green and impact-related bond instruments are missing from the agriculture sector. The hybrid nature of the bond is particularly new and of interest to individuals and organisations that are interested to invest for impact.

Replicability and Scalability

The initial NZ\$100 million will aim to transform 361 ha of conventional dairy land to a target 330 ha of organic dairy land out of the total 130,351 in the Waipā Catchment (currently of which 3,484 ha is used for dry stock farming and 3,055 is dairy land). Given the fragmented dairy production that currently characterizes the Waipā catchment, there exists the opportunity to acquire farm assets that are geographically situated in relative proximity with future note issues, and scale up organic conversion under the same business model.

This model can be directly replicated in other catchment areas where the dairy/beef industry is dominant, access to premium organic markets is viable and there are investors available with the appetite to invest.

There is also potential to replicate the model in a range of other agricultural contexts. As examples, this could support:

- i) Ranching for meat or dairy combined with afforestation (potential for carbon credit revenue) with selective cropping, and;
- ii) Managing multiple benefits in agriculture-dominant catchment areas (water quality improvements, biodiversity, GHG emissions reduction, carbon sequestration, cultural and aesthetics benefits).

The model can also be replicated across other catchment types (e.g. the urban-rural interface, coastal catchments) with adaptations to fit with these different contexts.

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