Awatea Forest Fund

Awatea Forest Fund:

Te Koawa Station
Tree Crop Valuation
(Existing Tree Crop)

February 2022

Commissioned by:

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Summary

Client and purpose

PF Olsen Ltd (PF Olsen) completed this valuation for Roger Dickie (NZ) Ltd (RDNZ) to provide an estimate of the market value of the planted tree crop on the Te Koawa Station (1131 Whakarau Road, Otoko, Gisborne).

What is the forest value?

We estimated the value of the tree crop as at 17 January 2022 at:

$37,000 plus GST (if any)

What is valued?

This valuation is for 16.5 hectares of radiata pine woodlots (planted in 2017) on the Te Koawa Station which will be acquired by the Awatea Forest Fund (AFF) and managed by RDNZ.

Method

We assessed the market value of the tree crop by discounting costs and revenues at a discount rate of 7.50% applied to pre-tax cash flows.

Cash flows

No inventory is available for this valuation as the trees are still young. PF Olsen estimated yields based on the inventory collected from the older tree crop planted on the Te Koawa Station in 1991. We assessed future costs based on our experience in the Gisborne region. For log price assumptions, we averaged log prices from the last 12 months as our starting point, trending to five-year averages from 2026 (YE March) and onwards.

Valuation standards

We prepared this valuation in accordance with the Forest Valuation Standards prescribed by the New Zealand Institute of Forestry. This valuation of the tree crop complies with the New Zealand equivalent to:

- NZ IAS 41 (International Accounting standard 41 Agriculture)[1], and
- NZ IFRS 13 (Fair Value Measurement).

[1] Issued by the NZ Accounting Standards Board

1. Introduction

Client and purpose

PF Olsen completed this valuation for Roger Dickie NZ Ltd (RDNZ) to provide an independent estimate of the market value of the existing tree crop (radiata pine) planted on the Te Koawa Station.

Data sources

This valuation relies on data from the following sources:

- Property description in the Information Memorandum prepared by Bayleys.
- Forest description provided by RDNZ and its forest manager, Forest Management (NZ) Ltd (FMNZ).
- Investment plan provided by RDNZ.
- Land valuation provided by Logan Stone.
- PF Olsen's previous experience with the property.
- PF Olsen assessment of future costs and revenues.

Business structure

RDNZ intends to set up the Awatea Forest Fund (AFF) as a Portfolio Investment Entity (PIE) for passive investment.

The proposed business structure is to set up FMNZ as the lessee of the land owned by AFF and pay AFF lease payment at the time of harvest. AFF still technically owns both of the freehold land and tree crop. According to the Deed of Lease between AFF and FMNZ, the lease payment paid by FMNZ will be calculated (inclusive of GST) as:

- **Lease Payment to AFF** = (Gross Revenue – Production Costs) x **95.75%**

FMNZ will retain the remaining 4.25% of the lease payment as a harvest management fee.

Despite a forestry right agreement already been in place, the tree crop is technically still planted on freehold land. As a result, PF Olsen will value the tree crop in this valuation as on freehold land.

Conflict of interest

PF Olsen is independent of RDNZ.

2. Valuation methodology

Valuation standards

We prepared this valuation in accordance with:

- NZIF[2] Forest Valuation Standards (May 1999). These standards are currently under revision. We have prepared this valuation in accordance with the standards and exposure drafts. This report does not meet all the disclosure requirements of these standards.
- Standards issued by the NZ Accounting Standards Board, specifically NZ IFRS 13 Fair Value Measurement and NZ IAS 41 Agriculture.

Valuation approach

In this estimate of the tree crop market value, we assess the price, assuming a willing buyer and willing seller, both well informed, acting prudently and operating an arm's length transaction. This meets the definition of "fair value" under NZ IAS 13.

We use a method that is widely accepted by New Zealand forestry companies, insurers, consultants, and investors.

In the absence of sufficient sales information of forests that are directly comparable, we estimate the market value of the forest by discounting costs and revenues at an appropriate discount rate. This rate is derived from transaction information: actual sales and investment decisions that have taken place in recent times.

Discount rate

We applied a discount rate of 7.50% to pre-tax cash flows, considering the recent sales of forests, the relative sensitivity of the value of this forest to future log prices and the description of the tree crop.

Inflation treatment

We assume that inflation impacts equally on both costs and revenues. All costs and revenues are expressed in current 2022 NZ dollar terms exclusive of GST.

Current owner's tax liability excluded

We do not include the current tree crop owner contingent income tax liability (if any) on the income from either an actual sale of the tree crop, or the income from harvesting the tree crop at maturity.

Further information

There is further information on the valuation methodology and discount rate assumptions presented in Appendix 1.

[2] New Zealand Institute of Forestry

3. Land

Introduction

The tree crop is situated on 602.7 hectares (ha) of freehold land which will be acquired by Awatea Forest Fund. It is located approximately 53 km northwest of Gisborne.

Property information

Information of the current certificates of title are listed in Appendix 2.

NES-PF: *National Environmental Standard for Plantation Forestry*

The Resource Management Act governs land use. It is administered by district and regional councils through rules and procedures contained in district and regional plans. The National Environmental Standard for Plantation Forestry (NES-PF) are regulations made under the RMA. Under the NES-PF, land is categorised by erosion susceptibility (Appendix 5). We have considered the NES-PF requirements in our cash flows.

Archaeological sites

No archaeological/historic site[3] have been identified on the property (Appendix 6).

NZETS: *New Zealand Emissions Trade Scheme*

The 16.5 ha tree crop was not planted on land that is registered under the New Zealand Emissions Trade Scheme (NZETS). However, parts of the Te Koawa Station have been registered under the NZETS as post-1989 land (Table 1). The potential carbon credits from the greenfield new planting are excluded in this tree crop valuation.

Table 1: NZETS status

Post-1989 ETS status	Registered area (ha)
Permanent	56.5
Production	30.3

Source: RDNZ, MPI

Further information

There is further information on legal ownership presented in Appendix 3.

[3] Protected under Heritage New Zealand Pouhere Taonga Act 2014.

4. Tree crop

Planted area

We valued 16.5 ha of radiata pine plantations.

This valuation includes only planted and harvestable productive tree crops. Areas not suitable for a profitable harvest, or trees planted for amenity, stock shelter, erosion control or other purposes that will not contribute to log production are excluded.

A forest map is presented in Appendix 7.

Stand history

The information provided by the vendor and Bayleys was limited. RDNZ advised that the 16.5 ha of radiata pine (planted in 2017) is located in the northeast corner of the property.

PF Olsen's field inspection in October 2021 was focused on the production radiata pine plantings which were planted in 1990 and 1991 (30.2 ha) and other greenfield afforestation areas. PF Olsen did not visit during our field inspection, and we have relied on the information provided by the vendor, Bayleys, and RDNZ.

PF Olsen has assumed that RDNZ will manage the 16.5 ha of radiata pine under a framing silvicultural regime (unpruned). Table 2 summarises the pruning and thinning status assumed in this valuation.

Table 2: Planted area by stand history

Planted area (ha)	Planted year	Pruning status	Thinning status
16.5	2017	No pruning	Age 9

Source: RDNZ,

Planted area adjustment

We have applied a -13.5% adjustment to the planted area to allow for attrition between the last mapping date and harvest date for potential crop losses (wind, disease, wet areas). This also includes the potential area adjustment from gross area to planted area (which usually reduce area by 10 to 15%).

Further information

Appendix 8 includes more details on forest and stand areas, and on the estimation methods used.

5. Yields

Yield estimation method

No inventory has been collected for this valuation. PF Olsen used Forecaster[4] to derive a set of yield table for the existing plantings based on the site productivity. Details of the Forecaster setting used for this valuation are presented in Appendix 9.

Yield tables

The yield table was based on an export strategy with export grades (i.e. P40, P35, A, K, KI, KIS). Pulplog (Domestic) grade is assumed to be left in the forest at break-even revenue.

Figure 1 illustrates the yield table applied in this valuation by log grade.

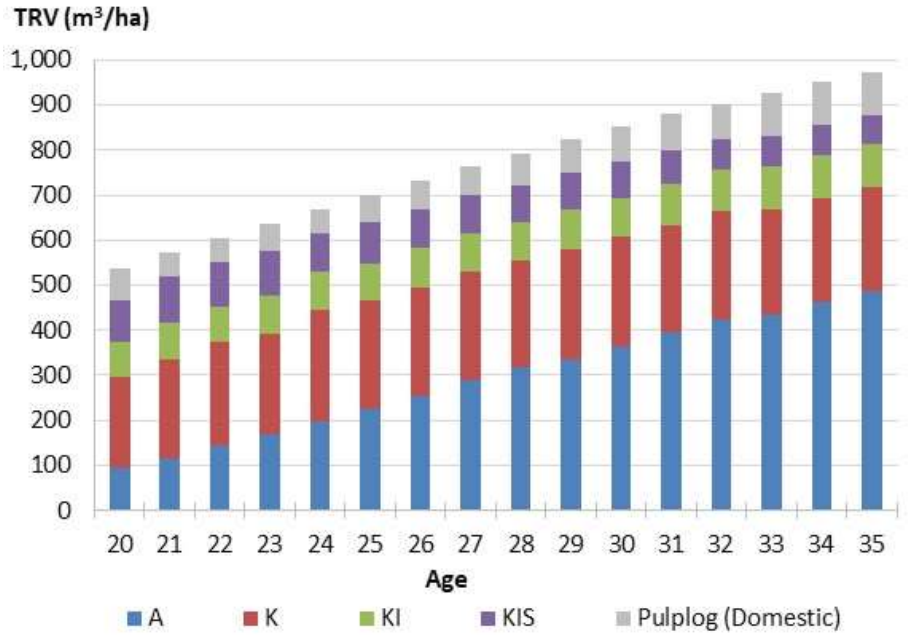

Figure 1: Yield table by grade

Reconciliation

No reconciliation data is available for this valuation. PF Olsen undertook some yield analysis to benchmark the yield table with our internal database and MPI yield table in Appendix 9.

Further information

More details of the yield table for this valuation are detailed in Appendix 9.

[4] ©Integral Ltd - a growth & yield modelling software

6. Costs

Future costs

Future costs used in this tree crop value assessment include forestry costs, annual costs, land costs, log production costs and transport costs.

Forestry costs

The future forestry cost assumptions applied in this valuation are summarised in Table 3.

Table 3: Forestry cost assumptions

Operation	Age	Cost ($/ha)
Waste thinning	9	948

Production costs

Production costs are defined as all costs from stump to price point, here assumed as at wharf gate (AWG) or at mill gate (AMG).

Our production cost assumptions are based on what we have experienced in the region for a similar property. These costs are summarised in Table 4.

Table 4: Production cost assumptions

Costs	$/unit	Unit
Log & load[5]	42.80	$/m^3
Roading construction	13.01	$/m^3
Road maintenance	2.00	$/m^3
Pre-harvest inventory	0.20	$/m^3
Harvest management	3.00	$/m^3
Post-harvest, other harvest related costs, and contingency	4.00	$/m^3
Cartage (to port)	18.20	$/m^3
Total production cost	**83.21**	**$/m^3**

[5] We assume 100% of the planted area will be harvested by hauler-based operation.

Annual costs

Annual costs include the costs of forest management, maintenance and protection, administration, forest insurance, and council rates.

Table 5: Annual cost assumptions

	$/unit	Unit
Forest management	25.00	$/ha p.a.
Protection & maintenance	20.00	$/ha p.a.
Administration	25.00	$/ha p.a.
Insurance (age 4 – 25)	18-76	$/ha p.a.
Council rate	27.20	$/ha p.a.

Notional land rental

A notional market land rental is included to simulate an annual financial cash return for the use of the land. This notional rental is equivalent to the opportunity cost of using this land for growing the tree crop.

From the unimproved land value estimated by Logan Stone (land valuer section in Appendix 4), we applied a notional land rental of $130 per plantable hectare per annum in this valuation based on 4% of the land value.

Further information

The cost assumptions applied in the valuation are detailed in Appendix 10.

7. Prices

Log price assumptions

Log prices are specified on a roundwood basis for export log grades as specified in the yield table. PF Olsen applied our own regional average conversion factors to convert log prices from NZ$/tonne or NZ$/JASm^3 to NZ$/m^3 basis for this valuation.

Price point is assumed to be either At Wharf Gate (AWG) for the export markets or At Mill Gate (AMG) for the domestic market (Figure 2).

Figure 2: Eastland Port radiata pine log price series

The log prices used in this valuation represent our projection of future log prices. They are summarised in Table 6.

Table 6: Log price assumptions (YE March)

	Actual	Projection				
Log grade	Last 12 months	2022	2023	2024	2025	2026+
P40	170	171	173	175	177	179
P35	168	145	147	149	150	152
A	131	133	135	136	138	140
K	118	120	121	123	124	126
KI	104	106	107	109	110	112
KIS	94	96	97	99	100	102
Pulplog (Domestic)	55	Break-even				

Further information

Further details on prices used, log price derivation and conversion factors are presented in Appendix 11.

8. Tree crop value

Value assessment method

To assess the tree crop value, we:

- Assessed the net harvest revenue (stumpage) at clearfell.
- Deducted 2% from the planted area to allow for attrition between the last mapping date and date of harvest for potential losses to the crop (wind, disease, wet areas).
- Discounted pre-tax cash flows at a discount rate of 7.50% p.a.

Tree crop value

We estimated the value of the tree crop as at 17 January 2022 at:

$37,000 plus GST (if any)

Sensitivity analysis

The following table shows the effect on the tree crop value of varying both the discount rate and log prices.

Table 7: Sensitivity analysis - log price and discount rate

Change in discount rate	Change in log price ($ 000s)				
	-10%	+5%	0%	+5%	+10%
9.5%	*-6*	*4*	*14*	*24*	*33*
8.5%	*0*	*12*	*24*	*36*	*48*
7.5%	*8*	*22*	**37**	*51*	*65*
6.5%	*18*	*35*	*53*	*70*	*87*
5.5%	*31*	*52*	*73*	*94*	*115*

Cost to sell

The estimated costs to sell, as defined by NZ IAS 41, are estimated at 5% of market value which is:

$2,000 plus GST

Such costs include commissions to sales managers and/or agents. These costs have not been deducted from the tree crop market value estimate.

Further information

Further detail as tabulated value by stand is presented in Appendix 12.

Appendix 1: Valuation methodology

Implied Discount Rate (IDR)

To select an appropriate pre-tax implied discount rate, we have analysed forest transactions (Figure 3). In this analysis, we have assessed the cash flow and derived the discount rate that resulted in the price agreed by the seller and the buyer. These implied discount rates provide appropriate benchmarks for the valuation of this forest.

By using Discounted Cash Flow (DCF) analysis with discount rates derived from actual transactions we take account of the specific characteristics of the forest that is the subject of this valuation. The pre-tax costs and revenues estimated for this forest take account of the physical characteristics of the land and the trees and the regulatory constraints as these affect future operations on this forest. Every market transaction implies a discount rate that satisfied both the seller and the buyer. By using DCF analysis we can take account of many sales that have taken place over a relatively long period.

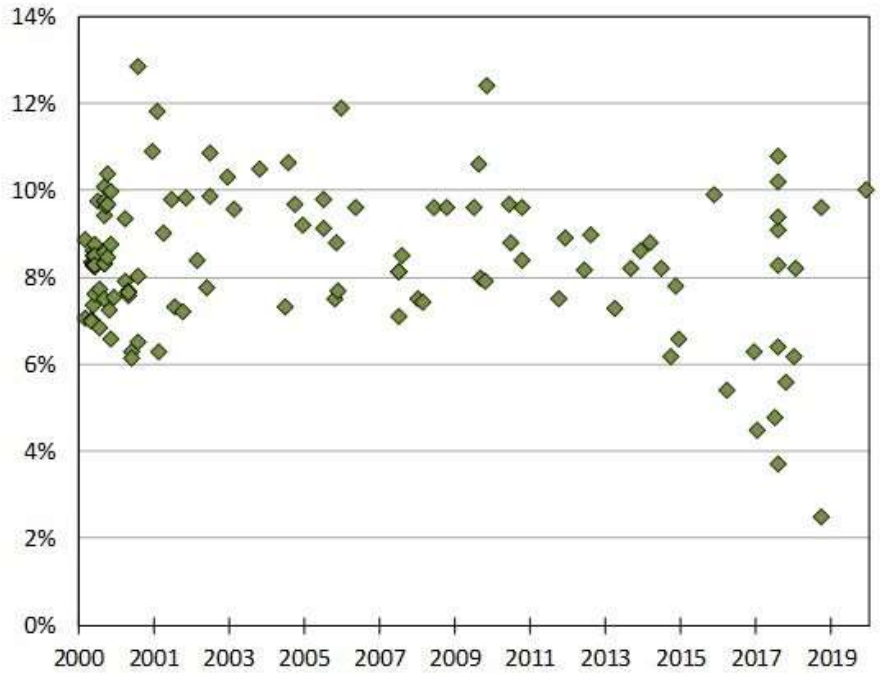

Figure 3: Transaction evidence – IDR on pre-tax cash flows

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The pre-tax implied discount rates listed in Table 8 pertain to the transactions analysed by PF Olsen during the past six years.

Table 8: Implied Discount Rate (IDR) on pre-tax cash flows

Analysis	Implied Discount Rate (IDR)
Recent Transaction Range	2.5% - 10.8%
Average last 6 years	7.5%
Area-weighted average last 6 years	6.5%

Risk and the choice of discount rate

Forestry is subject to various risks and uncertainties, which will affect the costs and the revenues. The physical description of the land and the tree crop contained in this valuation identifies those risks that are specific to this forest. The future cost and yield estimates take into account these forest–specific risks and make allowances for contingent losses. Actual costs and yields could be more or less.

Future revenues are based on an assessment of current log markets. Actual prices could be lower or higher and the impact of this uncertainty is shown in the sensitivity analysis included in this report. The value of this particular forest estate is considered to be moderately sensitive to changes in log prices, because of its scattered nature and generally long distances to established markets. This moderate sensitivity impacts on the discount rate we expect a rational buyer to apply.

After considering the recent sales of forests, the relative sensitivity of the value of this forest to future log prices and the uncertainties with respect to the description of the tree crop, we conclude that for the purpose of estimating the market value of the tree crop, which is the subject of this valuation, a pre-tax discount rate of 7.5% per annum applied to pre-tax cash flows is appropriate.

A sensitivity analysis of the tree crop value over a range of discount rates from 6.5% to 8.5% is presented in Section 8 of this report.

Valuation assumptions

The valuation assumptions are summarised in Table 9.

Table 9: Summary of valuation assumptions

Item	Assumption
Duration of the cash flow	Single rotation
Modelling assumptions	Stand based
Client specified assumptions (if any)	None
Treatment of land costs	Notional land rental
Land value/ tree crop value interrelationship	We have valued the tree crop only.
Treatment of forest roads and other durable assets	Included as avoided costs.

Other relevant legislation

The following legislation is also relevant to the growing and harvesting of the tree crop:

- Biosecurity Act 1993.
- Fire and Emergency New Zealand Act 2017.
- Forests Act 1949.
- Pesticides Act 1979.
- Health and Safety at Work Act 2015.
- Heritage New Zealand Pouhere Taonga Act 2014.
- Climate Change Response Act 2002.

Forest owners can be held liable for breaches of these acts and may be liable for damages incurred by third parties. Management costs included in the valuation reflect the costs of compliance with these acts.

Appendix 2: Land information

Certificate of title

Details of the certificates of title are summarised in Table 10.

Table 10: Summary of the Certificates of Title

Title No.	Description	Title Area (ha)	Rates (excl. GST)
GS3B/224	Part Poututu C4 Block	26.7884	1,362
GS5C/581	Section 1 Block XIII Mangatu SD	575.9153	10,877
Total		**602.7037**	**12,240**

Source: Information Memorandum (Bayleys, 2021) and Gisborne District Council

NZETS: *New Zealand Emissions Trade Scheme*

The tree crop is situated on pre-1990 and post-1989 forest land as defined in the Climate Change Response Act (2002).

Pre-1990

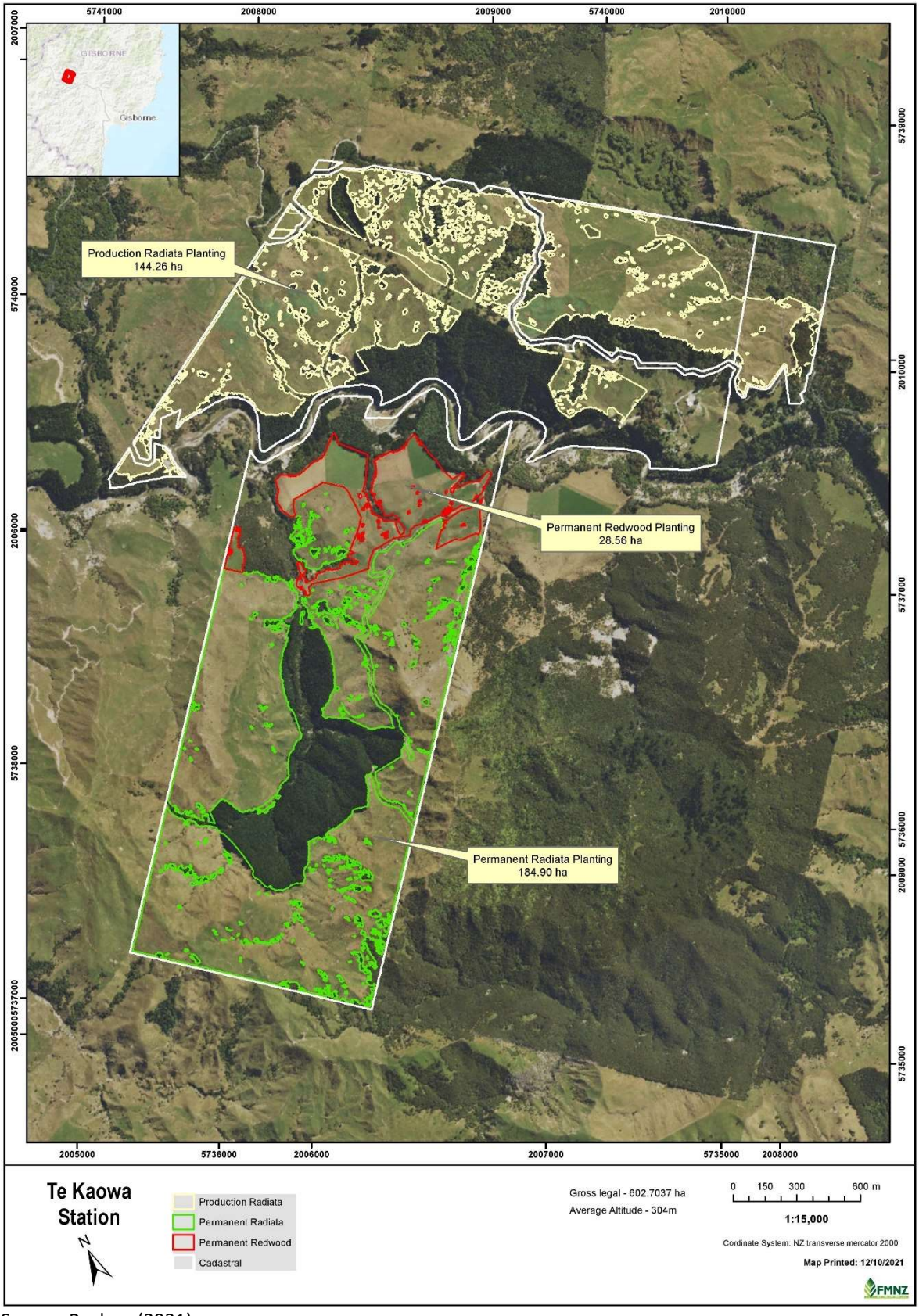
In our opinion, the liabilities associated with possible deforestation of pre-1990 land may impact on the market value of this land, but do not impact on the tree crop market value estimate. They are not included in this tree crop valuation.

Post 1989

Post-1989 land is eligible for registration into the New Zealand Emissions Trading Scheme (ETS). Registered land can receive New Zealand Unit (NZU) carbon credits for carbon sequestered by the tree crop, and may have an NZU liability at harvest.

No carbon value is included in this tree crop valuation.

Appendix 3: Te Koawa Station – estate map



Source: Bayleys (2021)

Appendix 4: Land value

Introduction

PF Olsen staff are NZIF Registered Forestry Consultants[6], but we are not registered Land Valuers. The Te Koawa Station purchase consists of the acquisition of the land, carbon (accrued and future), and existing tree crop.

Land value

RDNZ engaged Loga Stone (a registered valuer – MPINZ[7] and ANZIV[8]) in January 2022 to value the Te Koawa Station. In the Logan Stone report, the title area is assessed to be 602.70 ha more or less. Of which, 464.15 ha more or less is estimated to be productive (or plantable for forestry uses).

The market value of the Te Koawa Station estimated by Logan Stone was $8.63 million as at 17 January 2022 (Table 11). Of which, the unimproved land value for the existing tree crop (16.5 ha of pine) was estimated to be $3,200/ha (or $53,000).

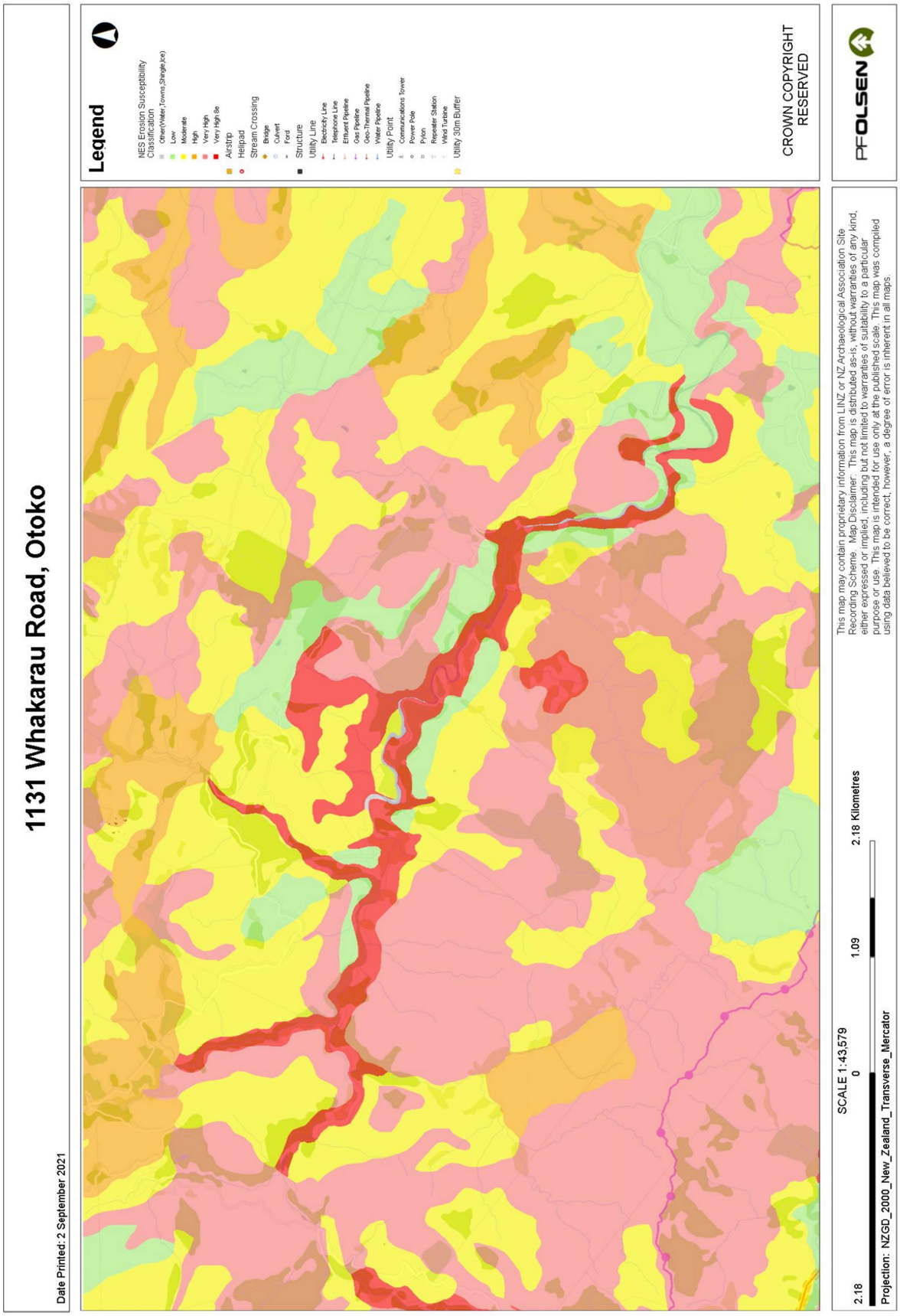
Table 11: Land Value – Te Koawa Station

Item	NZETS type	Area (ha)	$/ha	Value ($ million)
Plantable – greenfield	Averaging	142.67	15,520	2.214
Plantable – greenfield	Permanent	217.00	9,049	1.964
Planted – existing	Permanent	88.00	12,378	1.089
Planted – existing	Pre-1990	16.48	3,200	0.053
Building & other improvements				0.972
Carbon credits accrued and receivable				2.337
Total Te Koawa Station				**8.630**

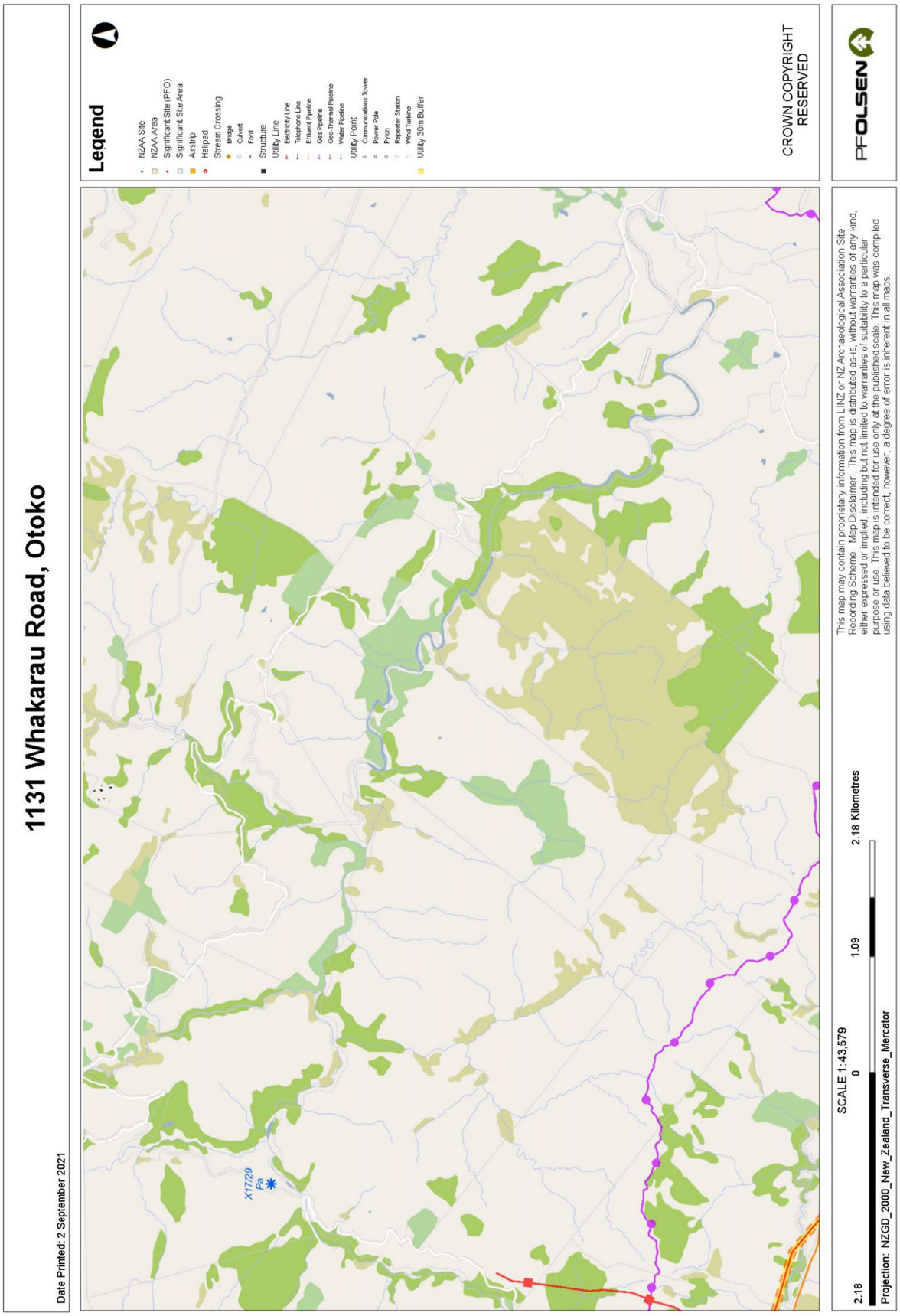
Source: Logan Stone (Jan 2022)

[6] New Zealand Institute of Forestry – Registered Forestry Consultant
[7] Member of Property Institute of New Zealand
[8] Associates Member of New Zealand Institute of Valuers

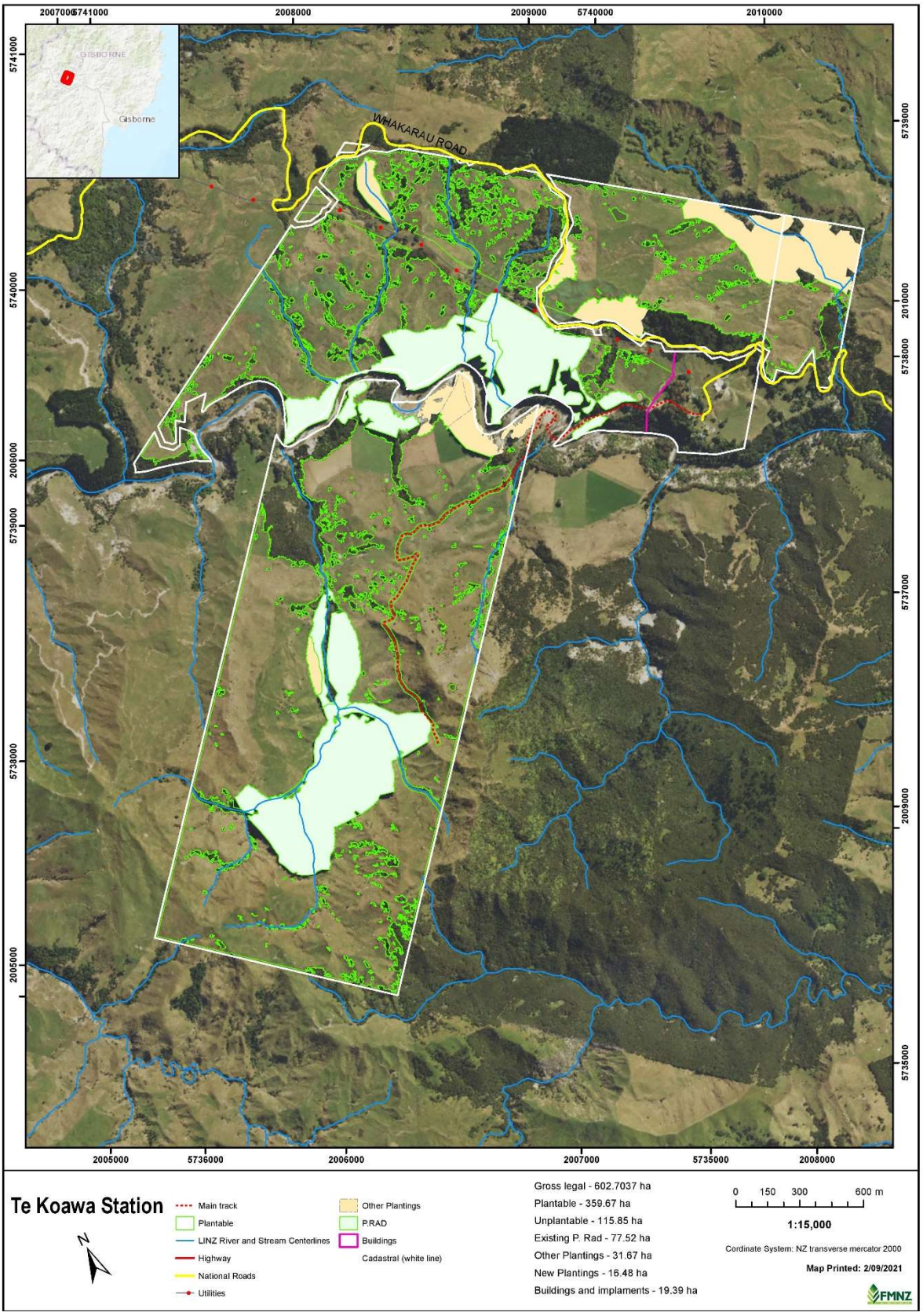
Appendix 5: NES-PF (*National Environmental Standards for Plantation Forestry*)



Appendix 6: Archaeology site



Appendix 7: Te Koawa Station – existing tree crop



Appendix 8: Tree crop description

Planted area

PF Olsen relied on the information provided by RDNZ and vendor.

Attrition and survival

Attrition assumption allows for future losses during the remainder of the rotation from agencies such as wind, disease and land erosion, but not including loss of individual trees from competition, which is accounted for in the growth and yield models used.

Stand history

Stand history known by PF Olsen is detailed in Table 12.

Table 12: Stand history information

Category	Detail
Stand history provided	No
Provided by	Relied on vendor and info provided by RDNZ
PF Olsen verification	None
Reliance on stand history	Yes
Regime(s)	Framing unpruned

Risks

The following risks can affect the tree crop:

- **Fire:**

  The East Coast often has dry summers and rural fires are a relatively high risk. Forestry operations, particularly those involving the use of chainsaws, should be stopped during periods of extreme fire risk.

- **Wind:**

  Wind damage can occur at any time of year, and the East Coast has suffered from significant losses due to wind in some historical catastrophic events.

- **Snow:**

  Heavy snow can damage the crowns of radiata pine planted at higher altitude. This can result in broken tops and a higher incidence of stem malformation.

- **Insects and disease:**

  While it remains possible for insects or diseases to become established in New Zealand and threaten forestry plantings, the economic importance of the industry suggests that border controls will continue to be stringent. Should any pest or disease be introduced, eradication or control efforts should allow most affected stands to reach maturity.

Fire and wind are insurable risks, and we have allowed for insurance costs in the valuation. Snow, insects and disease risks are currently uninsurable.

Appendix 9: Growth & Yield model assumptions

Yield tables

No pre-harvest inventory is available for this valuation.

A single generic yield table was derived from Forecaster for this valuation.

Yield estimation methods

The Forecaster settings used to derive the yield tables are presented in Table 13.

Table 13: Forecaster settings

Parameter	Forecaster
Growth model	300 Index (PRAD)
Volume & Taper model	182
Breakage model	1
Stump height	0.3m

Cutting strategy

The cutting strategy applied in Forecaster is summarised in Table 14.

Table 14: Cutting strategy in Forecaster

Grade	Min Small End Diameter (SED) (cm)	Max Branch Size (cm)	Length (m)	Description
P40	42	0	4.4, 5.0	Large pruned log
P35	37	0	4.4, 5.0	Small pruned log
A	33	12	4.0, 6.0	Large sawlog
K	24	12	4.0, 6.0	Small sawlog
KI	26	25	4.0	Industrial log
KIS	14	No limit	4.0	Small Industrial log
Pulplog (Domestic)	10	No limit	3.7-8.1@1m	Domestic pulplog

Consistency of yield estimates with the forest description

Yield tables are generated and expressed in m^3/ha. The base volume unit for the valuation is m^3, so there is no conversion factor required for the yield estimation process.

Yield adjustments

PF Olsen applied these adjustments to the raw Forecaster outputs:

- A -10% adjustment across all grades

Total recoverable volume (TRV)

Figure 4 compares the adjusted total recoverable volume per hectare with the Gisborne regional average published from MPI[9]. It can be seen that the adjusted TRV from Forecaster is predicted to be much higher than the regional average.

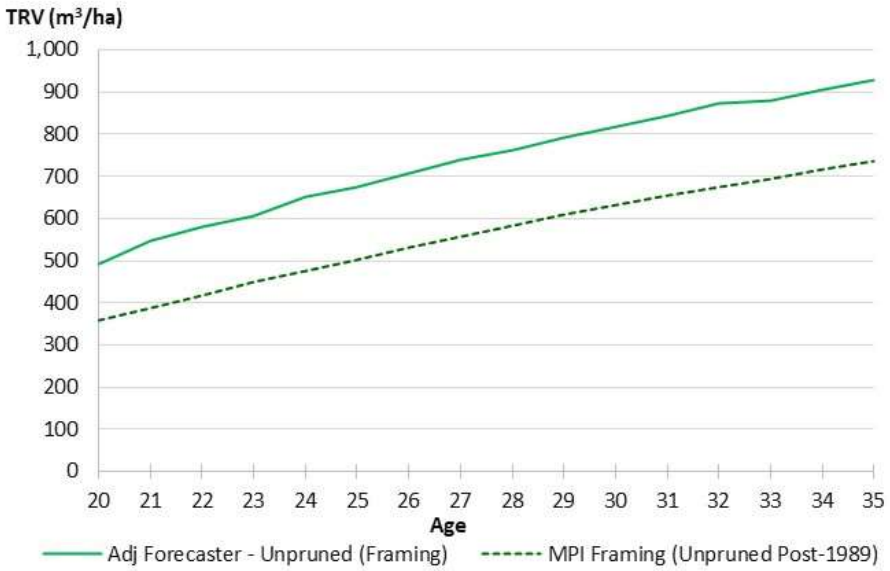


Figure 4: Yield table by total recoverable volume

[9] MPI – Ministry for Primary Industries

Grade out-turn

Figure 5 compares the adjusted Forecaster grade out-turn with PF Olsen's regional average at age 30 years old. It can be seen that the adjusted Forecaster yield table is in-line with PF Olsen's regional average.

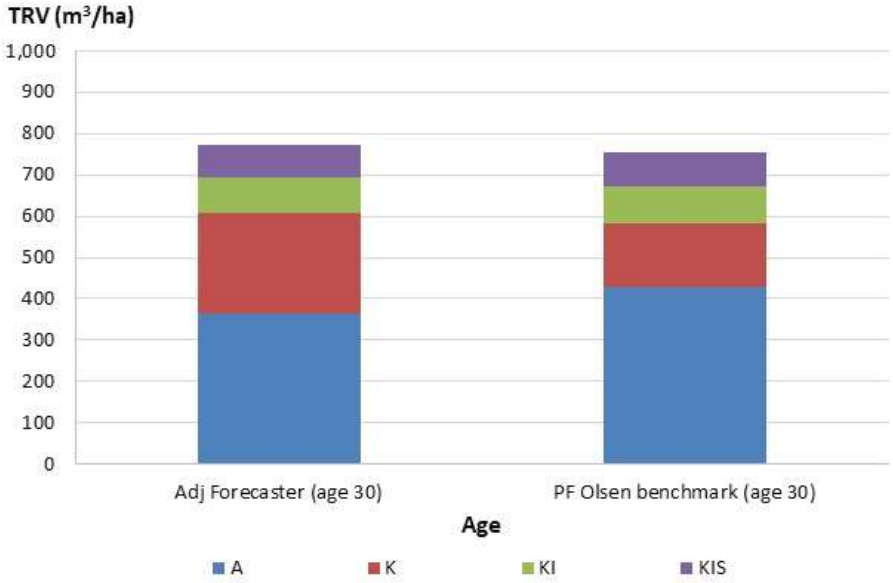


Figure 5: Yield table by grade (at age 30)

Appendix 10: Costs

Forestry costs

The future forestry cost assumptions applied in this valuation are summarised in Table 3.

Table 15: Forestry cost assumptions

Operation	Age	Cost ($/ha)
Waste thinning	9	948

Production costs

Logging and loading costs depend on the terrain and the piece size at clearfell.

Logging and loading costs encompass all operations from tree felling to loading, including extraction, delimbing, log-making and fleeting. Also included are costs of logging supervision, training, quality control and labour accommodation.

Log and log costs vary by terrain and types of harvest operations (hauler-based, roadline, ground-based).

Roading construction costs consist of the constructing main roads, internal forestry roads, and skid sites constructions.

Road maintenance costs refers to the costs of maintaining and resurfacing the roading infrastructure.

Pre-harvest inventory costs refers to the cost of gathering forest information prior to harvesting to inform harvest planning and marketing of forest produce.

Harvest management costs include items such as:

- harvesting planning;
- environmental compliance monitoring;
- production monitoring;
- log value recovery quality control;
- log marketing; and
- reporting and documentation.

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Post-harvest, other harvest related costs, and contingency costs include:

- debris clearance;
- weighbridge fees and consumables (paint, stencils, etc);
- Forest Growers' Commodity Levy ($0.33/m^3 as of January 2021);
- machinery relocations; and
- other contingency costs.

Cartage cost assumptions are based on a regression of actual recent cartage rates incurred by PF Olsen in the Gisborne region.

Table 16 illustrates more details of the production cost assumptions.

Table 16: Production cost – detailed assumptions

Costs	%	$/unit	Unit
Log & load (hauler-based)	*65%*	*47.00*	*$/m^3*
Log & load (ground-based)	*35%*	*35.00*	*$/m^3*
Log & load (roadline)	*0%*	*40.00*	*$/m^3*
Log & load		**42.80**	**$/m^3**
Roading construction		*8,000*	*$/ha*
Total recoverable volume per ha		*615*	*m^3/ha*
Roading construction		**13.01**	**$/m^3**
Road maintenance		**2.00**	**$/m^3**
Pre-harvest inventory		*120*	*$/ha*
Total recoverable volume per ha		*615*	*m^3/ha*
Pre-harvest inventory		**0.20**	**$/m^3**
Lease Payment 4.25% of (Gross Revenue – Production Costs)	*4.25%*		
Harvest management (to FMNZ)		**3.00**	**$/m^3**
Post-harvest, other harvest related costs, and contingency[10]		**4.00**	**$/m^3**
Cartage distance (all export log grades to Eastland Port)		*53*	*km*
Cartage rate assumption:			
Cartage		**18.20**	**$/m^3**
Total production cost		**83.21**	**$/m^3**

[10] This includes: a Forest Growers Commodity Levy of $0.33/m^3.

Annual cost

Forest management cost refers to the annual cost of managing the forest.

Protection & maintenance costs include the cost of pest control and general property maintenance.

Administration refers to the cost of annual auditing, legal, and other administration costs.

Insurance costs include the insurance cost of fire and public liability.

- Insurance costs are age and silviculture regime dependant.
- The detailed insurance cost assumptions applied in the valuation are presented in Table 17.

Table 17: Insurance cost assumptions by age ($/planted ha)

($/planted ha)								
Age	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Insurance cost	19	21	24	27	30	32	35	38
Age	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**
Insurance cost	41	43	46	49	52	54	57	60
Age	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**
Insurance cost	63	65	68	71	74	76	79	82

Council rates include to the annual regional and local council rates.

- For the Te Koawa Station, the total council rate for 2021/22 (YE June) was $14,075 incl. GST or $12,240 excl. GST.
- The council rate will increase by 3% from 2021/22.
- Total plantable area is 462.9 ha
- = $12,240 ÷ 462.9 ha x 16.5 ha x 103% = $27.20/plantable ha

Table 18: Annual cost - detailed assumptions

	$/unit	**Unit**	***Source***
Forest management	25.00	$/ha p.a.	*PF Olsen*
Protection & maintenance	20.00	$/ha p.a.	*PF Olsen*
Administration	25.00	$/ha p.a.	*PF Olsen*
Insurance (age 4 – 27)	19-82	$/ha p.a.	*PF Olsen*
Council rates	27.20	$/ha p.a.	*Gisborne District Council*

Notional land rent

Notional land rental is a non-cash expense to separate the values of tree crop and freehold land. It is also equivalent to the opportunity cost of using this land for forestry

The Te Koawa Station tree crop is situated on freehold land. The freehold land (unimproved) is estimated to be around NZ$3,200/plantable ha as at 17 January 2022 by an independent land valuer, Logan Stone (Appendix 4).

PF Olsen has relied on some forestry-related market rental evidence in determining the freehold notional land rental in this valuation. Given the proximity to the markets and the site productivity of the Te Koawa Station, our internal database suggests that the current market rental yield for a similar property ranges between 2% and 5% of the unimproved land value.

For this valuation, PF Olsen has assumed a market rental yield of 4% of the land value to derive the freehold notional land rental of NZ$130/planted ha per annum (based on the unimproved forest land value provided by the land valuer).

Appendix 11: Prices

Conversion factors

Conversion factors (JASm^3/m^3) have been updated based on actual 2019-2020 regional averages for the respective log grades.

Table 19: Conversion factors applied in the Gisborne region

Log grade	JASm^3/m^3
P40	0.990
P35	0.990
A	1.050
K	0.965
KI	0.970
KIS	0.920

Log price assumptions

Export log prices are derived from an inflation-adjusted average of monthly prices offered to PF Olsen at the Eastland Port (at wharf gate).

We assume the log prices will gradually revert from near-term averages (last 12 months) to long-term averages by 2026 (YE Mar):

- The near-term averages are based on the actual prices that PF Olsen achieved in the last 12 months.
- The long-term averages (from 2026+ YE Mar) are based on the actual prices that PF Olsen achieved in the last 5 years (inflation-adjusted).

In the opinion of PF Olsen, based on market evidence analysed, the log prices assumed in this valuation represent a fair and reasonable view of long-term prices by log grade. These prices are considered suitable for use in estimating the market value of the tree crop situated on the Te Koawa Station.

Appendix 12: Harvest revenue assessment

Stand	NSA (ha)	Planted Year	Species	Revenue (NZ$/ha)	Production Costs (NZ$/ha)	Cartage (NZ$/ha)	Stumpage (NZ$/ha)	Stumpage (NZ$/$m^3$)	Current Age	Clearfell Age
Stand 01	16.5	2017	PRAD	77,288	39,967	11,189	26,132	42.50	4	25

Appendix 13: Cash flows summary

CURRENT ROTATION

SUMMARY

Year End March		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Area of Current Rotation																							
Current Rotation Area at Beginning of Year	[ha]	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
Final Fell Harvest Area	[ha]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.5
Area Waiting Regeneration	[ha]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Current Rotation Area at End of Year	[ha]	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	-
Volume from Current Rotation																							
Volume from Clearfell Operations (CF)	[000 m3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.1
Volume from First Thinning Operations (T1)	[000 m3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volume from Second Thinning Operations (T2)	[000 m3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volume from Other Thinning Operations (T3+)	[000 m3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roundwood Equivalent from Wood Residues	[000 m3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Delivered Roundwood Equivalent Volume (RWE)	[000 m3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.1
Cash Flow from Current Rotation																							
Revenue from Log Sales	[NZD 000]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,275.3
Production Costs	[NZD 000]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(659.5)
Transport Costs	[NZD 000]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(184.6)
Third-Party Share	[NZD 000]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Margin	[NZD 000]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	431.2
Direct OPEX Expenditure	[NZD 000]	(0.1)	(0.4)	(0.4)	(0.4)	(0.5)	(16.2)	(0.6)	(0.6)	(0.7)	(0.7)	(0.8)	(0.8)	(0.9)	(0.9)	(0.9)	(1.0)	(1.0)	(1.1)	(1.1)	(1.8)	(1.9)	(2.0)
Direct CAPEX Expenditure	[NZD 000]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
In-Direct Area Based SG&A	[NZD 000]	(0.3)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)	(1.6)
In-Direct Harvesting Based SG&A	[NZD 000]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
In-Direct Non-Harvesting Based SG&A	[NZD 000]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revenue from 'Other' operations	[NZD 000]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Expenditure from 'Other' operations	[NZD 000]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Investment Cash Flow before Non-Cash Charges	[NZD 000]	(0.4)	(2.0)	(2.0)	(2.0)	(2.1)	(17.8)	(2.2)	(2.2)	(2.3)	(2.3)	(2.4)	(2.4)	(2.5)	(2.5)	(2.5)	(2.6)	(2.6)	(2.7)	(2.7)	(3.4)	(3.5)	427.6
Non-Cash Freehold Land Use Charge	[NZD 000]	(0.4)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)
Net Investment Cash Flow	[NZD 000]	(0.8)	(4.1)	(4.1)	(4.2)	(4.2)	(19.9)	(4.3)	(4.4)	(4.4)	(4.5)	(4.5)	(4.6)	(4.6)	(4.6)	(4.7)	(4.7)	(4.8)	(4.8)	(4.9)	(5.6)	(5.6)	425.5