

Hokoroa Group

Allocation of Share of Collective Harvest

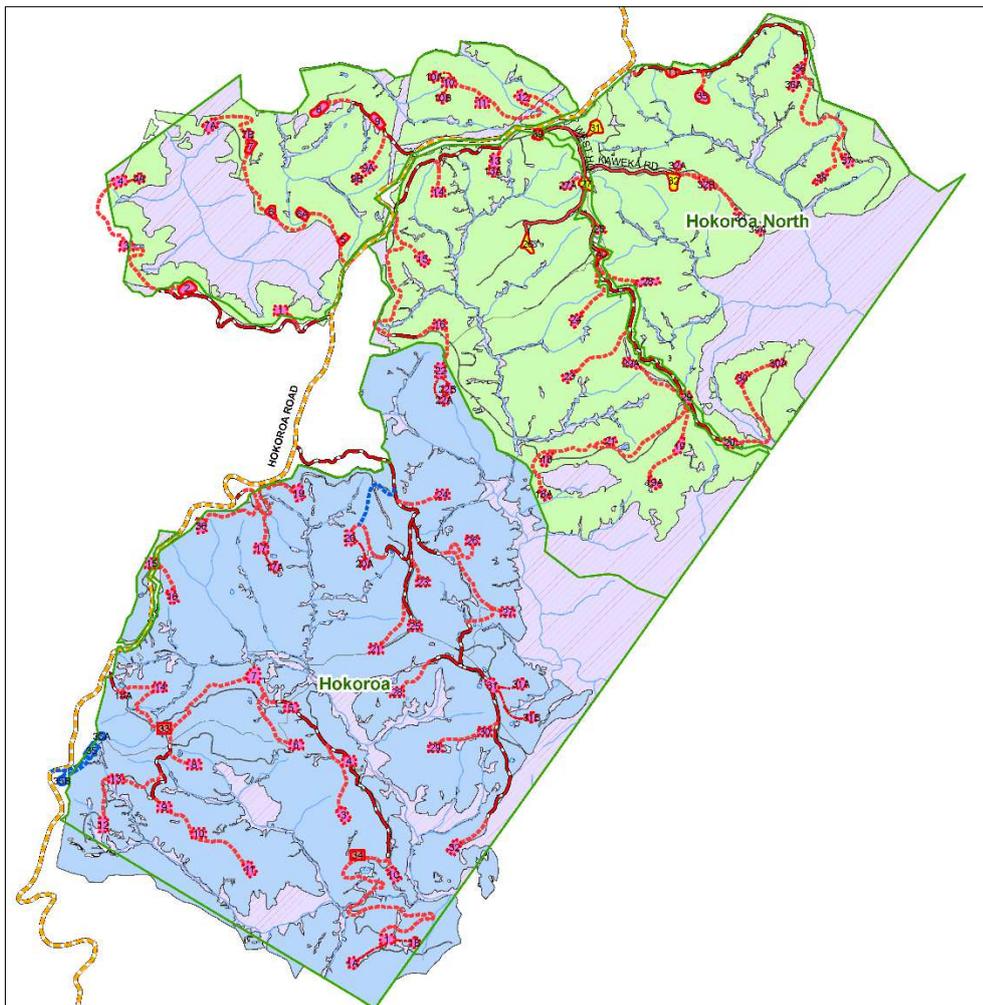


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Investments in the Hokoroa Group (for Collective Harvest by Joint Venture)

Hokoroa Forest Investment
Hokoroa North Forest Investment

Background

The Hokoroa Group of investments will be voting on a proposal to implement collective harvest by joint venture of their mature forest. The underlying rationale of the proposal is that each investment is better off receiving a percentage share of the total revenue from the collective harvest of the forests owned by each investment in the joint venture than 100% of the revenue from the harvest of their forest.

The harvest revenue sharing methodology to be used is the *Forest Crop Value* as set out in *Appendix 1 - Notes on Harvest Share Methodology*. These notes are the relevant sections extracted from the comprehensive report entitled *Collective Harvest by Joint Venture - for Forest Enterprises Managed Investment Schemes*.

The purpose of this document is to report to the Investors in the Hokoroa Group investments -

1. the calculated harvest shares for each investment; and
2. to identify and discuss the differences in the participant forests impacting on the calculated harvest shares.

Calculated Harvest Share Percentages

The methodology used resulted in *Forest Crop Values* for Hokoroa Forest of \$9,202,311 and for Hokoroa North Forest of \$8,728,843. The table below shows these values inputted into the allocation formula and the resulting percentage shares of the harvest allocated to each of the two investments.

Investment Name	Forest Crop Value	Calculation of Harvest Share %	Calculated Harvest Share %
Hokoroa Forest Investment	\$9,202,311	$\$9,202,311/\$17,931,154$	51.32%
Hokoroa North Forest Investment	\$8,728,843	$\$8,728,843/\$17,931,154$	48.68%
Total Forest Crop Value	\$17,931,154		100.00%

The output is that the Hokoroa Investment will receive 51.32% of the total net revenue from the collective harvest and the Hokoroa North Investment 48.68%.

Separate to this report, the Forestry Auditor (Forme Consulting Group) has reviewed the assumptions for the forestry inputs, and the Financial Auditor (Staples Rodway) has reviewed the Cashflow used, to arrive at the calculated *Forest Crop Values*, plus the resulting calculated harvest shares. These reports are on the HKG Webpage.

Net Stocked Area Comparison

As expressed in the Notes in Appendix 1, the key measure against which the calculated harvest share percentage is reported is by comparison with the net stocked area percentage of each forest. This is because, all other factors being equal, the calculated harvest share percentage for each forest would be the same percentage as the net stocked area percentage. Any differences in the calculated harvest share percentages must be explained and rationalised with reference to actual differences between each participant forest.

The table below compares the calculated harvest share percentage with the net stocked area percentage.

Investment Name	Net Stocked Area	Net Stocked Area %	Harvest Share %	Difference
Hokoroa Forest Investment	405.8	48.96%	51.32%	+2.36%
Hokoroa North Forest Investment	423.1	51.04%	48.68%	-2.36%
Total Forest Crop Value	828.9	100.00%	100.00%	



The comparison highlights that Hokoroa Forest has forest differences compared with Hokoroa North which result in a small harvest share percentage shift from Hokoroa North to Hokoroa, relative to net stocked area. The balance of this report identifies and discusses these forest differences.

IMPORTANT NOTE - The differences in the calculated harvest share percentage compared with the net stocked area percentage are **NOT** a measure of the investment return for each of the Hokoroa Group Investments. The investment return is a factor of both the income to be received from the harvest share percentage, PLUS the costs incurred by each forest from land purchase to the conclusion of the investment, and each investment has a different cost history.

Forest Differences Identified

The differences between the Hokoroa Group Forests impacting on the calculated forest crop value (therefore the calculated harvest share percentages) are found in -

1. the age class mix; and
2. the projected stumpage.

Age Class Mix Differences

The table below analyses the Hokoroa Group Forests net stocked areas by age class, and the resulting totals -

Forest Name	1993		1994		Total Net Stocked Area Hectares	Total Net Stocked Area %
	Hectares	%	Hectares	%		
Hokoroa Forest	200.0	49.29%	205.8	50.71%	405.8	48.96%
Hokoroa North Forest	246.0	58.14%	177.1	41.86%	423.1	51.04%
Totals					828.9	100.0%

The Hokoroa Forest has an almost equal split between the 1993 and 1994 age classes (49.29% and 50.71%) whereas the Hokoroa North Forest has a greater percentage of the older 1993 age class compared with the 1994 age class (58.14% and 41.48%). The discount rate adjusts for this difference in age class.

Projected Stumpage Differences

The table below sets out the projected stumpages for each forest.

Forest Name	Projected Stumpage
Hokoroa Forest	\$34,318
Hokoroa North Forest	\$30,950

The Hokoroa Forest has a higher projected stumpage than the Hokoroa North Forest. The projected stumpage summaries resulting in the figures in the table above are set out in *Appendix 2 - Projected Stumpage Summaries*.

The differences between the Hokoroa Group Forests impacting on the projected stumpages are found in the following elements of the projected stumpage.

Projected Recoverable Volume and Log Types

The inventory analysis of each forest has identified projected recoverable volume of 781.98 m³ per hectare in Hokoroa and a slightly lower volume of 763.82 m³ per hectare in Hokoroa North.

The projected percentage of log types (log grades) for each forest are very similar.



Logging Costs

The logging costs used for hauler and ground-based logging are the same in both projected stumpage calculations therefore the difference in the average logging cost for each Forest reflects the difference in the mix between ground-based (less cost) and hauler logging (higher cost) as follows -

Forest Name	Logging Cost	Ground Based	Hauler
Hokoroa Forest	\$37.31	16%	84%
Hokoroa North Forest	\$39.02	14%	86%

The Hokoroa North Forest has a projected higher percentage of the more expensive hauler harvesting, therefore the higher average logging cost at \$39.02 per tonne, compared with Hokoroa Forest projected at \$37.31 per tonne.

Roading Costs (including processing areas crossings, entranceways and maintenance)

A total of 33.4 kilometres of roads, 136 processing areas, 1 crossing and 12 entranceways are required across the Hokoroa Group Forests. The share of the cost attributed to each forest is then calculated based upon the tonnes of logs, or the tonne kilometres of logs (for the roads), which will use each cost element.

The resulting calculated percentage share per forest is then applied to the projected total cost -

Forest Name	% Share	Resulting Cost Share	Cost per Tonne
Hokoroa Forest	46%	\$3,373,285	\$10.63
Hokoroa North Forest	54%	\$3,965,310	\$12.30
Total	100%	\$7,338,595	

The projected dollar cost share is then divided by the total tonnes projected to be harvested from each forest which results in a cost per tonne for the Hokoroa North Forest of \$12.30 and \$10.63 for the Hokoroa Forest.

Cartage Costs

The cartage cost difference of \$26.20 for Hokoroa Forest and \$27.20 for Hokoroa North Forest reflects the slightly longer distance the Hokoroa North Forest logs must travel to the same markets, assuming use of the shortest route, which is south from the Forests.

Projected Stumpage Differences from Annual Report

The *Forest Crop Value* data used for the December 2017 Financial Reports was the base data for the calculated harvest share percentages, after the following adjustments -

Net Stocked Area

The harvesting completed to 31 December 2017 was added back into the total net stocked area.

Harvest Year Standardised

The harvest year was assumed to be the 28th year for both forests for the total net stocked area i.e. any harvesting completed, or projected for the December 2018 year, was accounted for in its respective 28th year.

These two adjustments resulted in increases in the projected stumpages for each Forest, therefore increases in the calculated *Forest Crop Value* compared with the same figures in the December 2017 Financial Reports.



Appendix 1 – Notes on Harvest Share Methodology

Calculation of each MIS's Equitable Share of Collective Harvest

Overview of Collective Harvest Share Calculation

The underlying principle behind sharing the total revenue from collective harvest is that each MIS is better off receiving a percentage share of the total revenue from the collective harvest of the forests owned by the multiple MIS in the joint venture than 100% of the revenue from harvest of their forest.

A sharing methodology is required, and the methodology used is to calculate each MIS's forest crop value at the same date using the same assumptions, and to input the calculated figures into the following formula -

Percentage Shares = $\frac{\text{The percentage of each MIS forest crop value to the total of the forest crop values for all MISs in the joint venture}}$

Worked example of formula -

MIS Name	Forest Crop Value	Calculation of % Share	Calculated % Share of Collective Harvest
MIS 1	\$10.5 million	\$10.5/\$43.0	24.42%
MIS 2	\$15.0 Million	\$15.0/\$43.0	34.88%
MIS 3	\$17.5 million	\$17.5/\$43.0	40.70%
Total Forest Crop Value	\$43.0 million		100.00%

Forest Crop Value

The benefit of using forest crop value is because the methodology is -

- Prescribed by International Accounting Standard IAS 41, the accounting standard for valuation of biological assets.
- Complies with the New Zealand Institute of Forestry valuation standard.

The calculation uses a subset of each MIS's projected Cashflow.

Given the application of the calculated value, a valid question is *Does IAS 41 result in a logical value of a forest crop, especially for comparison purposes with other forest crops?* As the name expresses, international accounting standards apply internationally and are arrived at via a consultation process. Sometimes these processes can produce a less than optimal result in specific circumstances. In the case of a New Zealand plantation Radiata pine forest crop, IAS 41 produces a logical value for a forest crop, especially for comparison purposes.

The figures in the Cashflow are gross (before tax) therefore the discount rate used is 10%. This gross rate is equivalent to approximately 7.5% on the net after tax Cashflow, which is an historically used targeted after-tax return for forestry investments.

Calculation, Checking and Reporting Shares to Investors

Forest Enterprises prepares the forestry and other inputs, enters these into each MIS's Cashflow, and calculates the resulting shares for each MIS in the joint venture.

The assumptions for the forestry inputs are reviewed by the Forestry Auditor (Forme Consulting Group Limited).

The Cashflow, the calculated forest crop value, plus the resulting shares of the collective harvest joint venture revenue are reviewed by the Financial Auditor (Staples Rodway).

Forest Enterprises prepares a report to Investors in each MIS setting out the relevant forestry assumptions, the calculated forest crop values, plus resulting calculated shares of the collective harvest revenue. Supporting this report are the review letters received by the Supervisor from the Forestry and Financial auditors.

The key measure against which the calculated harvest shares is reported is comparison with the percentage of net stocked areas of each MIS in the joint venture. This is because, all other factors being equal, the percentage allocation of harvest to each MIS would be the same percentage as the net stocked area. The differences in the calculated percentage shares is therefore explained and rationalised with reference to the actual hard data relating to valid actual differences between each participant forest in the joint venture.



Appendix 2 – Projected Stumpage Summaries

Hokoroa Forest Projected Stumpage

Log Type	Projected Recoverable Volume (m ³ / ha)	Percentage	FEL Price at Point of Sale (\$ / m ³)	Logging	Roading	Cartage	Cont	Man & Mark	Total Production Costs (\$ / m ³)	Net Return Stumpage (\$ / m ³)	Contribution to Stumpage (\$/ ha)
Export P40	153.51	20%	\$177.30	\$37.31	\$10.63	\$26.20	\$2.77	\$4.20	\$81.11	\$96.19	\$14,765
Export P30	62.32	8%	\$142.65	\$37.31	\$10.63	\$26.20	\$2.77	\$4.20	\$81.11	\$61.54	\$3,835
Export A	294.10	38%	\$118.50	\$37.31	\$10.63	\$26.20	\$2.77	\$4.20	\$81.11	\$37.39	\$10,996
Export K	155.72	20%	\$104.50	\$37.31	\$10.63	\$26.20	\$2.77	\$4.20	\$81.11	\$23.39	\$3,642
Export KI	57.70	7%	\$96.30	\$37.31	\$10.63	\$26.20	\$2.77	\$4.20	\$81.11	\$15.19	\$876
Export KIS	58.63	7%	\$84.60	\$37.31	\$10.63	\$26.20	\$2.77	\$4.20	\$81.11	\$3.49	\$205
Totals	781.98	100%									\$34,318

Hokoroa North Forest Projected Stumpage

Log Type	Projected Recoverable Volume (m ³ / ha)	Percentage	FEL Price at Point of Sale (\$ / m ³)	Logging	Roading	Cartage	Cont	Man & Mark	Total Production Costs (\$ / m ³)	Net Return Stumpage (\$ / m ³)	Contribution to Stumpage (\$/ ha)
Export P40	159.81	21%	\$177.30	\$39.02	\$12.30	\$27.20	\$2.77	\$4.35	\$85.64	\$91.66	\$14,659
Export P30	50.23	7%	\$142.65	\$39.02	\$12.30	\$27.20	\$2.77	\$4.35	\$85.64	\$67.01	\$2,865
Export A	311.98	41%	\$118.50	\$39.02	\$12.30	\$27.20	\$2.77	\$4.35	\$85.64	\$32.86	\$10,262
Export K	140.88	18%	\$104.50	\$39.02	\$12.30	\$27.20	\$2.77	\$4.35	\$85.64	\$18.86	\$2,668
Export KI	51.29	7%	\$96.30	\$39.02	\$12.30	\$27.20	\$2.77	\$4.35	\$85.64	\$10.66	\$544
Export KIS	49.62	6%	\$84.60	\$39.02	\$12.30	\$27.20	\$2.77	\$4.35	\$85.64	-\$1.04	-\$49
Totals	763.82	100%									\$30,950

