



**TO THE MAYOR AND COUNCILLORS OF THE
MACKENZIE DISTRICT COUNCIL**

Membership of the Mackenzie Forestry Board:

Cr Graham Smith (Chairman)

Cr Noel Jackson

Cr Evan Williams

Cr Murray Cox

*Notice is given of the meeting of the Mackenzie Forestry Board
to be held on Tuesday September 1, 2015, following the
completion of the Finance Committee Meeting.*

VENUE: Council Chambers, Fairlie.

BUSINESS: As per agenda attached

WAYNE BARNETT
CHIEF EXECUTIVE OFFICER



MACKENZIE FORESTRY BOARD

Agenda for Tuesday, September 1, 2015,

APOLOGIES

DECLARATIONS OF INTEREST

MINUTES:

Confirm and adopt as the correct record the minutes of the Mackenzie Forestry Board meeting held on March 17, 2015.

REPORTS:

1. Financial Report (attached).
2. Forestry Manager's Reports: February 2015 – May 2015 (attached).
3. Forestry Board Valuation to June 30, 2015 (attached).

ADJOURNMENTS: 10.30am - Morning Tea
12pm - Lunch

MACKENZIE DISTRICT COUNCIL

MINUTES OF A MEETING OF THE MACKENZIE FORESTRY BOARD HELD IN THE COUNCIL CHAMBERS, FAIRLIE, ON MONDAY, MARCH 17, 2015, AT 8.58 AM

PRESENT:

Cr Graham Smith (Chairman)
Cr Murray Cox
Cr Noel Jackson
Cr Evan Williams (arrived at 9.15)

IN ATTENDANCE:

Claire Barlow (Mayor)
Wayne Barnett (Chief Executive)
Paul Morris (Manager – Finance and Administration)
Kevin O'Neill (Forestry Manager)
Julie Jongen (Committee Secretary)
Cr Russell Armstrong arrived 9.30
Cr James Leslie arrived 9.39

APOLOGIES:

There were no apologies.

DECLARATIONS OF INTEREST:

There were no declarations of interest.

VISITOR:

Peter Bradley, Consultant for Glenrock Wildings Trees

MINUTES:

Resolved that the minutes of the meeting of the Mackenzie Forestry Board held on October 16, 2014, including such parts as were taken with the public excluded, be confirmed and adopted as the correct record of the meeting.

Murray Cox/Noel Jackson

Kevin O'Neill thanked Terry O'Neill for the maps. Woodburn is not in these maps maybe we can get a copy from Council.

Community Board raised concerns about fire risks with motorbikes and walking tracks in the Tekapo Forestry block.

Wayne confirmed Garth Nixon is actioning points above so signage is been organised.

REPORTS:

FORESTRY MANAGERS REPORT NOVEMBER 2014 – JANUARY 2015:

The Forestry Manager's report is included with the agenda. Kevin O'Neill mentioned that they are half way through their thinning programme but due to dry conditions has been held up. Mackenzie would require a lot more rain before work could commence there. Graham Smith spoke how everyone was been on high alert due to 2 fires near by the plantations.

Resolved that the report be received

Noel Jackson/Graham Smith

FINANCIAL REPORT – JANUARY 2015:

The Finance Manager spoke on his report.

Resolved that the report be received

Graham Smith/Murray Cox

GENERAL BUSINESS:

1. **Wildings** - Kevin O'Neill introduced Peter Bradley, supervisor and director of Glenrock Station. Glenrock station has an extreme issue with wilding pines and are requesting that they work together with council to control these issues. There is a problem at top of Mt Edwards and for the last 5 years have been trying to control with Ecan. The last 3 years Glenrock Station have spent \$160,000, and looking forward it is estimated a further \$750,000 will be the costs to get them back under control. There is an area of 150-200 hectares of seedling pines and to spray it is a cost of approximately \$2200 a hectare. Department of conservation, Ecan and leasees are working together. Burkes Pass also has an area of concern. Blocks on the right and left are council properties. 2 years ago there was a joint effort with rabbit control and the station costs were \$75,000, rabbits now under control. Glenrock budget between \$60,000 - \$80,000 thousand a year and Ecan match dollar for dollar but require funding from LINZ and need assistance from Council. Peter said he is trying to build a relationship with all parties as the station cannot manage this alone. Glenrock station have hired a rabbit controller who is living on the property and is taking out about 300 rabbits a month. ECan are assisting in some ways with rabbit control.

Graham Smith commended Glenrock for what they are trying to do, but they are not the only farm with this issue.
Mayor Barlow said Peter's visit has highlighted the urgency for assistance.

Resolved that this matter be taken to council as the Forestry board is concerned and need a report from council.

Murray Cox/Noel Jackson

2. **Lease Grazing** - Kevin spoke about 3 blocks that are running fine.

Resolved that any grazing alongside highways must have suitable fencing at the expense of the leasee.

Evan Williams/Murray Cox

GENERAL BUSINESS:

Cr Noel Jackson spoke about concerns with forestry blocks adjacent to Graham Pages land and feels that what has been done is different to what was discussed. He feels that if someone wants to channel water out of a forestry block it should come to the Forestry Committee and not be done by a couple of people.

Cr Graham Smith responded that himself and Kevin made the decision as they believed it was an operational decision.

Cr Noel Jackson questioned why did the water have to come from the forestry block and why didn't it come from the paddock. Kevin's response was it needed to be in the forestry block so there was enough fall for the water.

They had been told they needed to get consent from the water users but it appears this wasn't done.

Cr Murray Cox said he believes Mr Gidings will be in touch with Cr Noel Jackson.

Cr Noel Jackson questioned if some of the blocks that are costing council expense could be leased, this land is reserve land.

The Board will look at this further down the track.

THE CHAIRMAN DECLARED THE MEETING CLOSED AT 9.49am

CHAIRMAN: _____

DATE: _____

MACKENZIE DISTRICT COUNCIL

REPORT TO: FORESTRY BOAD

SUBJECT: FINANCIAL REPORT – JUNE 2015

MEETING DATE: 1 SEPTEMBER 2015

REF: FIN 1/2/3

FROM: MANAGER – FINANCE AND ADMINISTRATION

PURPOSE OF REPORT:

Attached is the financial report for the Forestry Board for the period to June 2015, the purpose of which is to update Board members on the financial performance of the Forestry Board as a whole for that period.

Commentary will be provided for any significant variances.

STAFF RECOMMENDATIONS:

1. That the report be received.

PAUL MORRIS
MANAGER – FINANCE & ADMINISTRATION

Mackenzie District Council
Finance Report - Forestry
For The Period Ended June 2014

LYTD Actual June 2014	YTD Actual June 2015	YTD Budget June 2015	Variance	Full year Budget 30/06/15
Income				
241,669	34,527	34,988	(461)	34,988
(388,623)	563,260	0	563,260	0
16,594	10,441	23,105	(12,664)	23,105
(130,360)	608,228	58,093	550,135	58,093
Expenses				
19,838	15,137	33,000	17,863	33,000
16,819	16,119	29,400	13,281	29,400
55,073	51,886	52,400	514	52,400
(144,865)	0	30,000	30,000	30,000
(53,135)	83,142	144,800	61,658	144,800
(77,226)	525,085	(86,707)	611,792	(86,707)
Operating Surplus/(Deficit)				

Mackenzie District Council
Finance Report - Forestry
For The Period Ended June 2014

LYTD Actual June 2014	YTD Actual June 2015	YTD Budget June 2015	Variance	Full year Budget 30/06/15
Operating and Capital Reserves				
0	0	0		0
(77,226)	525,085	(86,707)		(86,707)
(77,226)	525,085	(86,707)		(86,707)
Capital Expenditure				
571,205	493,980	711,000		711,000
(77,226)	525,085	(86,707)		(86,707)
493,980	1,019,065	624,293		624,293
Total Capital Expenditure				
0	0	0	0	0

Kevin O'Neill's Time & Travel Log February 2015

February 2015	Hrs	Kms	Details
3	4.5	57	Don and I met Kurt Crisp at Woodburn and did plots 9 on the flat trees 11-12 metres high and plot 3 on the hill where trees are 15-16 metres high. Trees are 15 years old. Also looked at wildings at Burkes Pass. Don estimated he could clear the sunny face on Rollesby for about \$600.00. Reported back to Terry.
5	2		January Forestry Report.
12	5.5	39	Did plots 6,7,8 at Woodburn. Trees 13 yrs old. 10.5-13.0 metres high being thinned to about 650-700 stems per ha.
15	3	27	Pauline Jackson rang about grazing the plantation beside them. Drought conditions, so checked on Council water race coming through Cabuie. Cleaned two floodgates and one roadside to ensure water gets to downstream users.
16	5.5	36	Visited Kurt Crisp at Woodburn. Assessed the block they are thinning, decided to taper off thinning where wilding Radiata are too thick to be economic to thin. Also if we were to thin it would leave those left vulnerable to the strong nor west that comes over the range behind, causing a down draft where usually you would expect it to be quite sheltered. So, we have Douglas fir intermingled with radiate wildings. Where the Radiata is too thick we will go for wood per hectare rather than quality logs. About $\frac{3}{4}$ of the block will be thinned. Checked the Jackson block, maybe could take light grazing. Trees are 1.5-2.5 metres high. Notified Jacksons they are to tell me when stock are put in the block so as we can keep an eye out for signs of damage. Met with Don Willetts, he would like a row of trees taken out which are planted within two to three metres of the boundary at Woodburn. He also enquired about grazing of the Woodburn Block.
18	1.5	37	Took Mayor Claire to view thinning operations at Woodburn and meet the contractors.
23	5	42	Visited Woodburn to check on progress of thinning. Walked the plantation to check how far to continue into the wildings. Decided on two more days work. Met Don Willets and cut out a number of trees too close to the boundary. Reported progress back to Terry and Graham Smith.
27	1		Spoke with Peter Bradley about wildings on Glenrock and Holbrook. Informed him of Forestry Board Meeting on 17 March. Did an exercise on cost of thinning at Woodburn compared to Cabuie.

28			Terry asked me to go to Fox Peak to see if trees planted before we bought the land are ready for thinning. They were planted in 2000 and need to be 9-12 metres in height with up to 2/3 dieback.
TOTALS	28	238	

Kevin O'Neill's Time & Travel Log

March 2015

March 2015	Hrs	Kms	Details
2	4	42	At Don Willetts request on behalf of Peter Anderson, walked the boundaries of Woodburn East with an eye to leasing out for grazing. Nearly 900 metres up roadside that would need fencing plus big floodgate up the top end unless the fence was continued along the top track required another 400 metres of fence. Would need permission also from Stanton Station who own some of the area inside the river boundary fence. Spoke with Mayor Claire about her meeting with LINZ and DOC on wilding tree policy. Spoke with Nick Leguard and Don McConnochie about wilding tree policies.
10	1	5	Inspected the re-routed water race from Pages plantation to give water to two extra paddocks of Pages lease area.
17	1		Forestry Board Meeting.
26	6	67	Don and I to Fox Peak where the top of the block is 800 metres above sea level. Trees are 8-11 metres high with only a few areas where trees are thicker showing any dieback. So , maybe 1-2 years away from thinning, depending on annual growth.
30	1		Had a call from Andrew Holmwood from Cannington, he has been contacted by Alpine wanting to cut trees away from powerlines in two weeks. Contacted Terry to get up to date prices from Shaun Sloper. Informed Graeme Paul and Wayne. Terrys old estimate was about \$4,000 nett.
31			Had a visit from Ian Robertson about getting a permit to recover firewood from thinnings at Woodburn. Ian to contact Andrew Hurst for his permission as well.
TOTALS	13	114	

Kevin O'Neill's Time & Travel Log

April 2015

April 2015	Hrs	Kms	Details
2	4		Received message from Zac Robinson (the new Alpine man responsible for trees near powerlines) that he wants to start taking trees near powerlines down at Cannington. Terry requested me to define boundary between Andrew Holmwood and Council at Cannington Plantation. Responded to Pauls request after making enquiries as to price per hectare to clear stumps and slash per hectare at Woods Plantation, 7-8000 per ha. Better to perhaps sell as a going concern. Terry offered to do a desk top valuation if required.
7			Received a call from Zac Robinson to say he is on his way to start taking down trees near lines at Cannington. Told him to start on Andrew Holmwoods plantation just until I can get the go ahead from Council for our block.
	3		Office work.
8	2.5	67	Met with Zac Robinson for the first time, also Andrew Holmwood and Graeme Smith to discuss the way forward in co-operation with Andrew and Alpine. Marked again for second time boundary line between Andrew and Council so as harvesters can identify each others logs.
20			Zac Robinson rang to see where we are as to starting logging at Cave. Riki Cook – head of logging gang of Point Lumber says he is two weeks away.
24	.5		Met with Kurt Crisp about progress on thinning at Simons Hill.
29			Zac Robinson rang to say he will email me sites where trees need attention along Holden and Lilybank Roads. Met with Suzy Ratahi about same.
TOTALS	10	67	

Kevin O'Neill's Time & Travel Log

May 2015

May 2015	Hrs	Kms	Details
4	8	87	Visited Simons Hill. Did diameter, tree heights and numbers of trees per hectare on plots 5,7,8 and 9 already thinned. Plots 1, 2,3,4 and 6 will be thinned in May, weather permitting. Trees are 20 years old, 11-12.5 metres high on the flat at the bottom of the hill and 10-11 metres higher up the hill. The stocking rate is a little high, but Don and I both think the higher stocking rate for the area is wise. Inspected the new boundary fence alignment with Simons Pass. Two heaps of netting left on our track. Suzy will contact Simons Pass Manager to get it removed.
7	2		Received written quote from Shaun Sloper of \$10,000 plus GST nett of roading access and traffic control for Cannington plantation. Seems a good price as Terry estimated \$4,000.00. Answering rate payer enquiries about sale of forestry.
10	1/2		Rate payer enquiries about forestry sale.
12	2 1/2		Rang Kurt Crisp, he has started thinning Radiata pine today at Cave. It will be second week in June before he gets back to continue at Simons Hill. Laurie Williams rang about too many stock in the trees at Fox Peak. He says fences and flood gates need maintenance carried out. Rang Sam Bell. Cattle will be moved out on Sunday 17 May 2015. This duly happened. Invoices and office work.
13	1 1/2		Terry rang for me to contact Shaun Sloper, re boundaries of the tree block at Cannington as he is now offering only \$5,000.00 as a nett sum because he understood we owned part of the younger plantation belonging to the neighbouring farmer. These trees have a better value at the moment as post material is worth more than export logs at present. Contacted Shaun, Andrew Holmwood and Graeme Smith.
14	2		Spoke with Wayne, Paul, Terry about Cannington. Spoke with Suzy, Nathan about netting and turf left on our forestry track from Simons Pass development next door. Invoices and office work.
18	1 1/2		Visited Shaun Sloper at Point Lumber. His logging gang was ready to start at Cannington but the two men who have to sign off the work are on holiday for the week. Asked why if they are away for a week why will it be two weeks before they start. Was told it will still need a week after they return. Informed Andrew Holmwood, Graeme Smith and Council staff.

19	4 1/2		February, March and April Forestry reports.
20			Rang Terry to inform him of further delay in logging, also inform him of the request from Shaun Sloper to invoice Point Lumber for \$5000.00 + GST. Pauline to action this. Received letter from Ian Robertson thanking me for permission to take firewood from Woodburn.
22	3		Collated plot results from plots 5,7,8 and 9 from Simons Hill and sent to Terry. Trees are 20 yrs old average diameter at breast height. 15.5-25.5 cm are height 9.8.12.8 metres. Plots done at Fox Peak to see if trees are ready to thin. They are 8-11 metres high with only a few patches showing dieback where the trees are thicker. Trees will need to be 9-12 metres high and showing up to 2/3 dieback. Top of the block is 800 metres above sea level. Meet with Sam Bell regarding complaint from Laurie Williams and spraying required to be done by Ecan.
29	1		Kurt Crisp finished thinning Radiata at Cave along highway 8 from Nelsons Road to where the train used to cross the road. Receiving more calls about the sale of forestry land.
TOTALS	26 1/2	87	

MACKENZIE DISTRICT COUNCIL

REPORT TO: FORESTRY BOARD

SUBJECT: FORESTRY VALUATION TO 30 JUNE 2015

MEETING DATE: 1 SEPTEMBER 2015

REF:

FROM: MANAGER FINANCE & ADMINISTRATION

PURPOSE OF REPORT:

To inform Council of the valuation of its forestry assets at 30 June 2015.

STAFF RECOMMENDATIONS:

1. That the report be received and the content noted.

PAUL MORRIS
MANAGER FINANCE & ADMINISTRATION

ATTACHMENTS:

Forestry valuation as at 30 June 2015 prepared by Terry O'Neill, District Forester, Ashburton District Council.

BACKGROUND:

Each year, Council is provided with an estimate of the value of the forestry assets owned by Council.

The current valuation shows Council forestry holding to be \$2.812M – up \$0.563M on last year.

SIGNIFICANCE OF DECISION:

The decision is not considered to be significant.

**Mackenzie District Council
Plantations - 2015**

FOREST ESTATE VALUATION



Lake Ruataniwha - Twizel

Produced for:

Mackenzie District Council
PO Box 52
FAIRLIE

Produced by:

Terry O'Neill ((B For Sc. MNZIF)
Ashburton District Council
PO Box 94
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Date: 14 August 2015

TABLE OF CONTENTS

SUMMARY.....	3
VALUATION PARAMETERS	4
IMMATURE STANDS	4
MATURE STANDS	4
LAND AND FOREST DESCRIPTION	4
LOCATION	4
LAND	4
Downland & Riverflats (Fairlie/Albury Wards)	5
Mackenzie Basin	5
LEGAL DESCRIPTION AND LAND VALUE	5
SPECIES AREA AGE CLASS DISTRIBUTION.....	6
STAND MAPPING AND AREA CALCULATION	6
STAND HISTORY AND SILVICULTURE.....	6
FOREST GROWTH	6
INVENTORY	6
CROP TYPES AND YIELDS	6
LOG GRADES	7
MARKET REVIEW	7
LOG PRICES	8
COSTS.....	9
SILVICULTURE	9
HARVESTING & TRANSPORT	9
OVERHEAD.....	10
STUMPAGE CALCULATION.....	10
DISCOUNT RATE.....	10
RISKS	11
CARBON CREDITS.....	11
VALUE & IFRS DISCLOSURES	12
POINT OF SALE COSTS	13
Sales Agent Commission:.....	13
Sales Memorandum:	13
RECONCILIATION OF VALUE CHANGES	13
Output of Produce.....	13
Planting & Restocking.....	13
Valuation Parameters.....	13
SENSITIVITY	14
DISCLAIMER.....	14
APPENDICES	

SUMMARY

The following valuation is for all plantations owned by the Mackenzie District Council. The valuation does not include land or other improvements. The valuation was commissioned by the Mackenzie District Council to its contracted forestry consultant, the Ashburton District Council.

The purpose of the valuation is for year-end financial reporting. The valuation is for the plantations as at **30 June, 2015**.

This forest valuation has followed the procedures set out in the "Forest Valuation Standards", NZ Institute of Forestry - May 1999. As described in this document the Net Present Value method will be used in conjunction with transaction evidence. The method used values mature stands with inventory information at their immediate liquidation value with remaining stands valued using a crop typing method. Crop types have been used due to incomplete data on all stands. The crop types are based on six different species with yield and cost data derived from stand records.

VALUE: \$2,812,924

The estate valuation has increased from last year's valuation of \$2,249,664. This increase in value can mainly be attributed to increased log prices and tree growth.

Mackenzie District Council Valuation Summary		
Forest Estate/Type	Area (ha)	Value
<i>MDC Forests Species</i>		
Radiata Pine	127.0	\$231,173
Douglas fir	612.2	\$2,263,886
Other Species	247.0	\$317,864
Total	986.2	\$2,812,924
<i>MDC Forest Valuation Type</i>		
Non Production	5.2	\$0
<u>Liquidation Value</u>		
Other Species	24.5	\$48,488
	24.5	\$48,488
<u>Net Present Value</u>		
Radiata Pine	127.0	\$231,173
Douglas fir	612.2	\$2,263,886
Other Species	217.3	\$269,376
	956.5	\$2,764,436
Total	986.2	\$2,812,924

VALUATION PARAMETERS

IMMATURE STANDS

Ideally, the valuation of immature trees would be based on prices being achieved in arms length transactions. Unfortunately, there are few such transactions that would be directly comparable given the likely differences in the key factors affecting forests' value. These factors include age, growth rate, management, crop health, topography, location and access.

Due to the limited market for young plantations, this valuation has to be derived using the Net Present Value (NPV) method. If possible NPV values would be compared with actual transactions, this however has not been possible. The variety of species that the MDC administers makes such comparisons difficult with no immature Corsican pine, Douglas fir or Macrocarpa plantations of significant size being sold in the area. This also applies to yield and price data for these species. Younger stands on poor sites often have negative values, for the purpose of this valuation plantations with negative values are given a nil value. The 16 stands with negative values were worth **-\$37,878**.

Land value is expressed as an annual rental and included in the annual overhead cost.

MATURE STANDS

For those mature stands with recent inventory information their valuation is calculated assuming immediate liquidation. A summary of these mature stands is given below. More details of the valuation are given in appendix four.

Cpt	Std	Name	Species	Est. Year	Area(ha)	Total Vol.	Value
10	3	North River	Mixed deciduous	1953	8.7	2800	\$16,520
27	1	Tekapo River West	Larch	1963	0.8	320	-\$224
27	2	Tekapo River West	Corsican Pine	1963	1.6	320	\$1,896
27	3	Tekapo River West	Corsican Pine	1962	3.3	1540	\$30,072
TOTAL					14.4	4980	\$48,264

LAND AND FOREST DESCRIPTION

LOCATION

The Mackenzie District Council plantations are scattered throughout the district and are planted predominantly on reserve land, see appendix one for locations. A large proportion of the Council's estate (72%) is located in 5 larger plantations. These larger plantations are Woodburn – near Burkes Pass (96ha), Woods – Clayton Road (118ha), Simons Hill – Mackenzie Basin (148ha), Cabuie – Ashwick Flat (223ha) and Fox Peak - Sherwood (158ha). The Council does not have any joint venture or forestry right arrangements.

Council plantations are generally adjacent to Council roads with little or no internal roading required. Roading costs are therefore low. Logging rates are also generally low due to easy terrain. Cartage lead distances vary through the district. The major markets are the Port of Timaru, Hunter Hills Lumber, local South Canterbury sawmills and the Rangiora MDF plant.

LAND

The Mackenzie District Council plantations are scattered throughout the district and occur predominantly on plantation or other types of Council reserve, see appendix one, for locations.

The physical attributes of the land that the plantations occur on vary. Three of the most common land types and their associated crop types are described below:

Downland & Riverflats (Fairlie/Albury Wards)

The Riverflats and Downland land types are similar and share all the same crop types with the exception of *Macrocarpa*. The main differences between these crop types are the lower fertility and land values of the Riverflats and the differences in terrain. Site productivity and therefore yields are generally lower on the Riverflats sites. Rainfall varies between plantations from 650 mm/year at Cave to 1500 mm/year at Fox Peak.

Cost of land preparation is dependent on brush weed cover and previous land use. A cutover site with brush weed potential is expensive to prepare, this is however balanced by a lower land value. In the crop type costing it is assumed clear land is planted, land value is therefore high and land preparation costs lower. Tending costs for the Downland and Riverflats land types assume some hindrance and increased costs from brush weeds.

Council plantations are mostly relatively small and adjacent to Council roads with little internal roading required. Roading costs are therefore low. Logging rates are variable, riverflats with their easy terrain have lower rates while the downland blocks may require tracking and more expensive extraction methods. Cartage is relatively inexpensive, the major market Timaru and the Port being no more than 100 km.

Mackenzie Basin

The Mackenzie Basin land type's harsh climate gives rise to low site productivity. Rainfall varies between plantations from 550 mm/year at Simons Hill to 1100 mm/year at Burkes Pass. Long rotations are therefore required to achieve reasonable yields. Land costs are low along with weed control at planting. Planting costs are relatively high due to the high initial stockings and more expensive tree stocks (function of species and age of seedling). Long rotations mean only minimum tending regimes are used, therefore tending costs are minimal.

Both the Tekapo and Simons Hill plantations require access roading from Council roads, internal roading is also required in these plantations for harvesting. Roading costs are therefore more expensive for the crop types in this land type. Logging rates are relatively low due to easy terrain and relatively large stand size. Cartage is expensive, the major market Timaru and the Port being on average 130 km.

LEGAL DESCRIPTION AND LAND VALUE

All plantations are recorded in the Forest Management System (FMS) which is linked to the Geographical Information System (GIS). Through the GIS system legal descriptions for all the plantations can be accessed. In the valuation land value is expressed as an annual rental and included in the annual overhead cost. Allowance has been made for reserves vested to the Council by the crown such as shingle pits that have been worked out and planted in trees. In effect these reserves, 42% of the Council's plantations, have a nil land value. The remaining land has been given an average value of \$1,500/ha, the annual cost of this land has been set as a rental of 4% on this value that is \$60/ha/year. The impact of the Emissions Trading Scheme lowers the potential land value for pre-1990 forest land due to the carbon liabilities that accrue if the land is deforested.

SPECIES AREA AGE CLASS DISTRIBUTION

The forest estate comprises primarily of Douglas fir with also a significant area of Radiata Pine and Corsican Pine. There are other species included in the resource such as Macrocarpa, Muricata Pine and Larch. Individual stands are listed in appendix two.

STAND MAPPING AND AREA CALCULATION

The net stocked area of each stand is given in plantation list, appendix two. The net stocked areas have been calculated from aerial photos, GPS ground survey and cadastral map information. Orthophotos that are registered into the Geographical Information System (GIS) and sourced from Land Information New Zealand (LINZ) are used for mapping. Areas not included in this valuation include unplanted land, land being prepared for planting or any other land intended for planting. Areas are reviewed when new information is available (new aerial photography) and when areas are harvested. The accuracy of all stocked areas cannot be guaranteed but are the best estimates available.

Species	Area(ha)
Douglas fir	612.2
Radiata Pine	127.0
Corsican Pine	152.3
Other species	94.7
Total	986.2

STAND HISTORY AND SILVICULTURE

Stands records for the Mackenzie District Council plantations have only been formal recorded from November 1992. Therefore stand records are not complete for all plantations in this valuation. Older stands with operations dating prior to stand records being initiated have no operation information (DOS, prune/thin dates). Some mid-rotation inventories have been carried in these stands. Also young stands where no operations have been carried out only have initial stocking and species information.

FOREST GROWTH

Site productivity and therefore yields vary through the district. Drier plains sites with light soils generally have poor growth rates. However where rainfall is greater and/or soils heavier site productivity increases. Site indices vary from less than 18 metres in the dry areas of the Mackenzie Basin to 30 metres on the best sheltered foothill sites.

INVENTORY

All stands have inventory data collected from them during quality control operations when tending is carried, information such as stocking, mean top height, mean diameter at breast height and pruning quality information are collected. This stand data is used to determine which crop type a stand should be allocated to.

CROP TYPES AND YIELDS

A crop type is a group of stands that share a common yield table. Yields for the crop types have been estimated where stand information is available using MARVL inventory information projected to harvest for older stands and growth model (School of Forestry) estimates for younger stands. Yields are validated where possible with actual volume information from plantations that have been harvested, Radiata Pine yields were updated this year. Where stand information is not available, especially minor species, actual harvest volumes from other plantations have been used to derive harvest yields. Plantations have been aggregated according to species, stocking site productivity and prune height. The crop types used are:

Croptype	Species	Stocking stems/ha	Pruning (m)	Site Index (m)	Harvest Age	Log Grade m ³ /ha						Total m ³ /ha
						Pruned	S30	S20	L-grade	Post	Chip	
DFIR	Douglas fir				45			450			50	500
RADLOW	Radiata	<450	>2.5	ALL	30	50	80	50	140	10	100	430
RADHIGH	Radiata	>450	>2.5	ALL	30	20	70	70	175	20	105	460
RM518	Radiata	All	<2.5	<21.0	30	-	65	120	70	0	90	345
RM521	Radiata	All	<2.5	>21.0	30	-	70	125	135	25	85	440
CUMAC	Macrocarpa				35	150	-	225	-	-	75	450
MDCNIG	Corsican				45		-	300	-	65	35	400
MDCMUR	Corsican				35		-	100	190	-	160	450
OTHSP	Others				40	-	-	400	-	-	50	450

Details regarding silvicultural costs and scheduled operation dates for crop types with younger stands are included in silviculture section of this report.

LOG GRADES

The log grades used for this valuation represent the usual log grades sold by MDC. These grades are defined by minimum small end diameter (SED), maximum branch size, sweep and lengths. The following table shows the definitions for each log grade used in this valuation:

Log Grade	Max. Branch	Min. SED	Sweep	Lengths (m)
DOUGLAS FIR	(mm)	(mm)		
Sawlog (S1-S3)	80 or SED/4	200	SED/4	3.6*,4.2*,4.9,5.5,6.1
Firewood	No limit	100	Safely load	2.4-6.1
RADIATA PINE				
Pruned (P1/P2)	No branches	300	SED/4	3.7,4.3,4.9,5.5
S30 (S1/S2)	80	300	SED/4	3.6*,4.2*,4.9,5.5,6.1
S20 (S3)	SED/4	200	SED/4	4.9,5.5,6.1
L-grade (L1-L3 & S3 shorts)	150	200	SED/3	3.7,5.5,7.3
Posts (S4)	50	100	SED/4	1.8,2.1,2.4,2.7
Chiplogs	No limit	100	Safely load	2.4-6.1
Other Species				
Sawlog (S1-S3)	80 or SED/4	200	SED/4	3.6*,4.2*,4.9,5.5,6.1
Firewood	No limit	100	Safely load	2.4-6.1

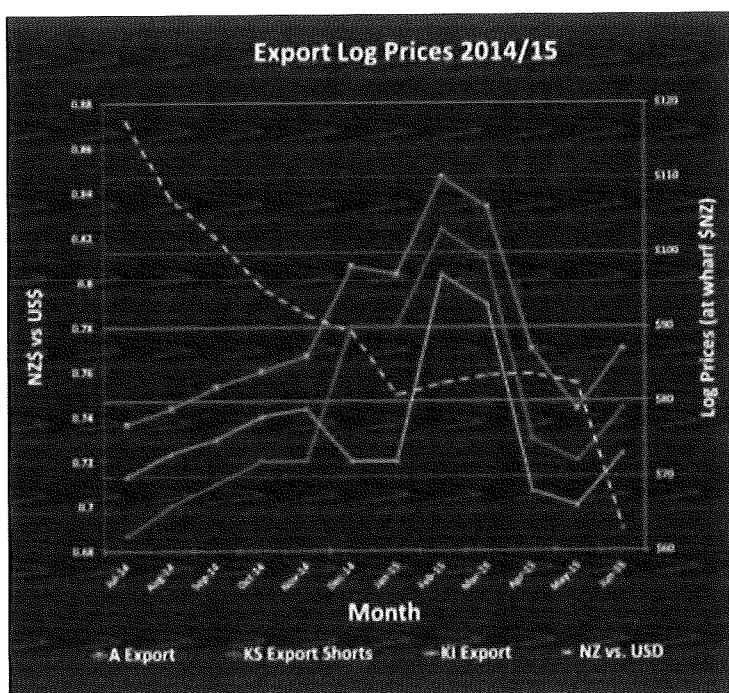
* shorts maximum proportion 20%

MARKET REVIEW

The log market in Canterbury is characterised by a number of features. A well developed sawmilling industry is present with a number of medium sized sawmills mainly in and around Christchurch. Log grades uplifted by these mills included pruned sawlogs, S30 and S20 sawlogs. The principle timber markets for these mills are the domestic market and Australia. South Canterbury has less a limited number of small sawmills with the most significant processor Hunter Hills Lumber recently shutting down.

The plywood mill at Greymouth (International Panel & Lumber) purchase higher grade logs from the Canterbury region, large high quality pruned logs were also purchased by Gunns Veneers in Christchurch however this plant has now closed. Smaller industrial logs are processed locally by Shands Road Sawmill (L-grade). The most significant demand for logs unsuitable for sawmilling comes from the Medium Density Fibreboard (MDF) plant at Sefton, this plant utilises both chiplogs and slab wood chip from sawmills. Firewood processes are the other major chiplog customers in the region. The robust agricultural sector of Canterbury provides good demand for posts with a number treatment plants in the region. The local wood processing industry generally provides a relatively stable market for the higher quality logs produced from the Council's forests.

For the last twenty years regular shipments of export logs have been leaving Canterbury. This trade was initiated when Rayonier New Zealand entered the Canterbury market. Since the withdrawal of Rayonier other companies have continued the trade included Forest Management and Carter Holt Harvey. Rayonier again have a presence in the region buying the CHH estate. Logs have been exported from both the Port of Timaru and Lyttelton. With some exceptions the log export trade has mainly provided an outlet for lower grade and short (3.7-4.1m) logs (L-grade). The log export market tends to be more erratic than the domestic market with factors such as the exchange rate making them difficult to predict.



LOG PRICES

The valuation uses AGRI-FAX log prices. Agri-Fax provides regional prices and log grades close to those that the Council commonly trades. Export log markets over the 2014/15 financial year fell sharply and then recovered through the year to dip again in March 2015. Log prices fell as a result of high log inventories in the China market and due to credit problems with some log buyers. The recent strengthening of the US\$ has helped a recovery of the wharf gate prices.

Domestic sawlog prices have again been relatively stable with increasing demand for all wood products due to the Christchurch rebuild. A strengthening NZ\$ against the AUS\$ has made trading in the Australian market difficult for Canterbury solid wood manufactures.

Prices for the predominant log types – Radiata pine and Douglas fir - are derived from the Agri-Fax prices and adjusted according to current log sales from the Council. Other prices are taken from historic sale data or are related to the Agri-Fax prices. See appendix three for more details. **Gross log prices have increased by 4.2%** which has decreased the valuation since last year. The log prices used in the valuation are in the adjacent tabled

Log Prices – June 2015

Log Type	Delivered Price
<u>Radiata Pine:</u>	
Pruned Sawlogs	\$123.00
S30 sawlogs	\$104.00
S20 sawlogs	\$98.00
L-grade	\$77.50
Smallwood/Posts	\$70.00
Chiplogs	\$48.00
<u>Douglas fir:</u>	
Sawlog (S1-S3)	\$130.00
Firewood	\$50.00
<u>Other Species:</u>	
Corsican & other sawlogs	\$85.00
Corsican pine posts	\$80.00
Macrocarpa pruned	\$123.00
Macrocarpa sawlogs	\$101.00
Dfir & Macrocarpa firewood	\$50.00
Cosican pine firewood	\$36.00
Other species firewood	\$45.00

COSTS

SILVICULTURE

Cost of land preparation is dependent on brush weed cover and previous land use. A cutover site with brush weed potential is expensive to prepare, this is however balanced by a lower land value. For all Radiata Pine crop types land preparation it is assumed cutovers are being planted; mechanical land preparation and pre-plant spraying both undertaken. With land preparation undertaken (including deep ripping) planting costs are relatively low. The cost of tree stocks is the current contracted price with the nursery. Tending costs assume some hindrance and the increased costs from brush weeds. An allowance is made for the small size of some stands and the increased cost associated with this. The following table summarises silvicultural costs for each crop type, some costs have been increased since last year;

Crop Type Silvicultural Costs

Crop Type	Clearing		Plant		Release		1 st Prune		2 nd Prune/Thin		Struct. Thin	
	Year	Cost	Year	Cost	Year	Cost	Year	Cost	Year	Cost	Year	Cost
DFIR	0	\$500	0	\$900	0.3	\$250					18	\$450
RADLOW	0	\$700	0	\$650	0.3	\$350	8	\$700	10	\$850		
RM518	0	\$700	0	\$650	0.3	\$350					12	\$400
RM521	0	\$700	0	\$650	0.3	\$350					10	\$400
CUMAC	0	\$150	0	\$900	0.3	\$180	9	\$1200	12	\$1500		
MDCNIG	0	\$150	0	\$1000	0.3	\$250						
MDCMUR	0	\$150	0	\$650	0.3	\$180					12	\$400
OTHSP	0	\$500	0	\$850	0.3	\$250					12	\$450

Current costs for operations and general overheads are used for all crop types. Operational costs are mainly from Council tenders, these costs do not include supervision costs.

HARVESTING & TRANSPORT

The harvesting costs used for the valuation are derived from the current average cost for operations. Logging costs for MDC's plantations are reasonable high due to varied terrain and small stand size. Internal roading is generally inexpensive due to terrain and soil types and is included in the logging and loading rate. All plantations are able to be harvested using conventional ground based systems.

- Logging, Loading & Roading; \$27.50/tonne
- Log Sale Management commission etc. included in overhead

Log cartage is well serviced in Canterbury. Within the Ashburton District Philip Wareing Ltd offers log cartage services with the other major log cartage firm being Steve Murphy Transport based in North Canterbury. The transport base rate is \$4.00/tonne and the variable rate is \$0.22 per tonne/km. The average cartage distance for Downlands plantations is 90km and 120km for Mackenzie Basin plantations. Both log cartage and logging costs have not changed since last year.

OVERHEAD

Overhead costs, expressed as an annual cost per hectare, include all management costs. Items included in the annual overhead are listed below;

Annual Overhead Items	Total Cost	Cost/ha
Costs:		
* Contract Management of Operations (Forest Manager & Consultant)	\$35,000	\$35
* Perimeter spraying, firebreaks, fencing, pest control & other mntce	\$18,000	\$18
* Administration (Corporate, other support, insurance & rates)	\$32,500	\$33
Total Costs	\$85,500	\$86
Income:		
Other income (grazing licences etc.)	\$6,000	\$6
Net Overhead (excluding land costs)		\$80
Net Land Costs (excluding reserves) - 55% non reserve land @ \$60/ha/year rental		\$37
MDC plantation overhead (including land costs):		\$117

The overhead is reduced by plantation income from other sources, mainly grazing contracts.

STUMPAGE CALCULATION

Stumpage is the value of standing timber after the costs of roading, harvesting, transport and management have been deducted from the delivered price of the logs. The stumpage calculation is shown in the following table;

Log Type	Price (at-mill)	Road/Log/ Load*	Log Cartage	Stumpage Price	Log Cartage	Stumpage Price
			Downlands		Mackenzie Basin	
<u>Radiata & Muricata Pine:</u>						
Pruned Sawlogs	\$123.00	\$27.50	\$23.80	\$71.70	\$30.40	\$65.10
S30 sawlogs	\$104.00	\$27.50	\$23.80	\$52.70	\$30.40	\$46.10
S20 sawlogs	\$98.00	\$27.50	\$23.80	\$46.70	\$30.40	\$40.10
L-grade	\$77.50	\$27.50	\$23.80	\$26.20	\$30.40	\$19.60
Posts	\$70.00	\$27.50	\$23.80	\$18.70	\$30.40	\$12.10
Chiplogs	\$48.00	\$27.50	\$23.80	-\$3.30	\$30.40	-\$9.90
<u>Douglas fir:</u>						
Sawlog (S1-S3)	\$130.00	\$27.50	\$23.80	\$78.70	\$30.40	\$72.10
Firewood	\$50.00	\$27.50	\$23.80	-\$1.30	\$30.40	-\$7.90
<u>Corsican Pine:</u>						
Sawlogs	\$85.00	\$27.50			\$30.40	\$27.10
Posts	\$80.00	\$27.50			\$30.40	\$22.10
Firewood	\$36.00	\$27.50			\$30.40	-\$21.90
<u>Macrocarpa:</u>						
Pruned sawlog	\$123.00	\$27.50	\$23.80	\$71.70	\$30.40	\$65.10
Unpruned sawlogs	\$109.00	\$27.50	\$23.80	\$57.70	\$30.40	\$51.10
Firewood	\$50.00	\$27.50	\$23.80	-\$1.30	\$30.40	-\$7.90
<u>Other Species:</u>						
Sawlogs	\$85.00	\$27.50	\$23.80	\$33.70	\$30.40	\$27.10
Firewood	\$45.00	\$27.50	\$23.80	-\$6.30	\$30.40	-\$12.90

DISCOUNT RATE

The discount rate used for the NPV method represents the foregone rate of return on the marginal project displaced by the forestry investment. A method for determining discount rate has been debated vigorously during submissions on the NZ Institute of Forestry (NZIF) drafting of valuation standards.

The most significant sale of a forest estate that has occurred in the region is the sale of Geraldine forest by Ngai Tahu to Blakely Pacific. Unfortunately detail regarding this sale is not available, Geraldine forest is also significantly different to the Councils estate.

This valuation uses the discount rate for asset reporting most commonly employed by publicly-reported companies list in the NZIF Valuation Standards. The compounding rate represents the opportunity cost of capital. Compounding rates are usually conservative and generally lower than rates used in discounting future revenues.

Valuation Pre-Tax Discount Rate: 8.0%

The valuation assumes that costs and revenues fall on the 1 July each year.

RISKS

There are various risks that could possibly affect the value of MDC's plantation resource, it is however difficult to quantify these and generally the risks are reasonably remote. Some of the possible risks that threaten the value of MDC's forests are;

- Outbreak of a new disease or pathogen e.g. Pine Pitch canker.
- Risk of catastrophic wind event, e.g. 1975 wind storm.
- Risk of large snow event affecting young plantations.
- Imposition of environmental constraints, e.g. requirement for continuous canopy harvesting systems for plantation forestry.

CARBON CREDITS

The Emissions Trading Scheme (ETS) has different rules to be applied to different parts of the forest estate, according to which of the two main categories a given area falls into – i.e. pre 1990 or post 1989 forest.

For pre-1990 forest, there was an opportunity for the owners to register their interest in obtaining the 'compensation' credits, the Council's pre-1990 forests have now received this allocation of credits. The Council also has over 562 hectares of post 1989 forest registered in the Emissions Trading Scheme with credits having been transferred to the Council for carbon capture during 2008, 2009. The Council has sold credits (NZU's) earned from these forests in 2010 and 2011. NZU's have sold for prices ranging from \$23 per unit down to a price of approximately \$1.80 per unit.

An evaluation of the carbon credits revenue and subsequent liabilities for post 1989 forest values has been undertaken, see the table below. The carbon price used for this cashflow was \$6.65/tonne – see appendix five for more details. The quantity of carbon was calculated using the owner specific lookup tables generated using the Forest Measurement Approach plots that were measured recently. The net present value calculations assume a single rotation from the stands current age; carbon accumulations plus liabilities and decay following harvest.

Carbon Credits Net Present Value – Post 1989 Tree Crop				
Stand	Crop	Area	Plt Year	CARBON NPV
22/3	MDCNIG	7.4	1992	\$10,730.93
22/6	MDCNIG	2.9	1994	\$4,629.54
22/7	MDCNIG	10.0	1994	\$13,569.33
22/8	RM518	14.2	1995	\$3,887.70
22/9	MDCNIG	21.4	1995	\$35,554.64
23/1	DFIR	46.4	1990	\$79,245.60
23/2	DFIR	39.7	1991	\$78,717.29
23/3	CUMAC	5.9	1992	\$6,779.80
23/4	DFIR	1.6	1994	\$2,015.18
23/5	CUMAC	15.5	1994	\$19,747.87
24/3	DFIR	1.2	1993	\$2,367.24
25/1&2	MDCNIG	2.3	1995	\$3,751.18
100/1	DFIR	5.9	1997	\$12,314.14
103/1	DFIR	47.8	1998	\$98,406.35
104/1	DFIR	25.1	1999	\$51,599.97
105/1	DFIR	27.8	2000	\$57,156.95
106/1	DFIR	31.6	2001	\$61,104.87
107/1	DFIR	29.5	2002	\$64,616.94
108/1	DFIR	22.9	2003	\$50,075.71
109/1	DFIR	17.4	2004	\$36,438.38
200/1	DFIR	44.4	2000	\$87,812.07
201/1	DFIR	17.9	2003	\$33,045.92
202/1	DFIR	39.1	2004	\$79,152.25
203/1	DFIR	20.0	2005	\$37,363.00
203/2	DFIR	17.0	2007	\$33,254.04
204/1	DFIR	44.3	2006	\$86,880.63
Total*		559.2		\$1,050,217.51

The New Zealand Institute of Forestry (NZIF) is planning to produce guidelines regarding carbon cash flows and forest valuation. Initial discussions have suggested that carbon values should be reported separately from values of the tree crop and land. The value assessed above is therefore not included in the tree crop value.

VALUE & IFRS DISCLOSURES

The accounting standard IAS 41 for biological assets states that the asset should be valued at its fair value less any point of sale costs. Due the limited market for forest sales especially with similar characteristics this valuation uses the net present value method to estimate the fair value. With regard to point of sale costs these relate to the cost of selling the asset including commissions to brokers and dealers. The standards also require that information is disclosed regarding changes in the carrying amount between the beginning and the end of the current period.

POINT OF SALE COSTS

Point-of-sale costs are detailed as the commission that would be charged by an agent selling a forest estate (i.e. real estate margin) and costs associated with the provision of information regarding the estate for the sales process (sales memorandum).

Sales Agent Commission:

The commission charged by the sales agent can be of a significant value. Forestry consulting companies have suggested a commission similar to that charged by real estate agents could be used (3.0 to 3.5%). Commissions on assets of significant value can generally be discounted however with a rate of 2.0% possible. The sales agent commission could therefore cost between \$30,000 and \$55,000, for valuation purposes \$50,000 will be used.

Sales Memorandum:

The sales process for a forest estate will require the preparation a sales information memorandum. The cost suggested by Theo Vos (P F Olsen & Company Ltd) for a multiple age class forest of 1,000 to 2,000 ha was \$15,000. For a scattered forest estate such as the Councils this document will be complex and relatively expensive to put together therefore a cost \$15,000 has been allowed.

RECONCILIATION OF VALUE CHANGES

The IFRS standards also require the disclosure of key information that gives rise to changes in the asset value. This information includes the output of produce, total of areas established with trees, changes due to sale or purchase of standing trees and changes in key valuation parameters such as log prices.

Output of Produce

Since the last valuation no harvesting took place.

Planting & Restocking

During the financial period only two plantations were replanted.

Plantations Restocked – 2014

Cpt	Croptype	Area (ha)
1/05	RM521	1.2
8/01	RM521	5.2
Total		6.4

Valuation Parameters

There were no purchases or sales of standing trees during the financial year. Below is summary of the valuation parameter changes and their effect on the valuation:

Changes	Value	Change	Quantity of Change
Last year's value	2,249,664		
Less area change; harvesting & remap	2,256,913	0.3%	
Plus 1 year's growth on remaining forest	2,499,556	10.8%	Increase \$242,644
Lower log prices	2,812,924	13.9%	Gross log prices +4.2%

SENSITIVITY

The net present value method that is used for valuing the majority of MDC's plantations is particularly sensitive to changes in log prices and discount rate, see the table below;

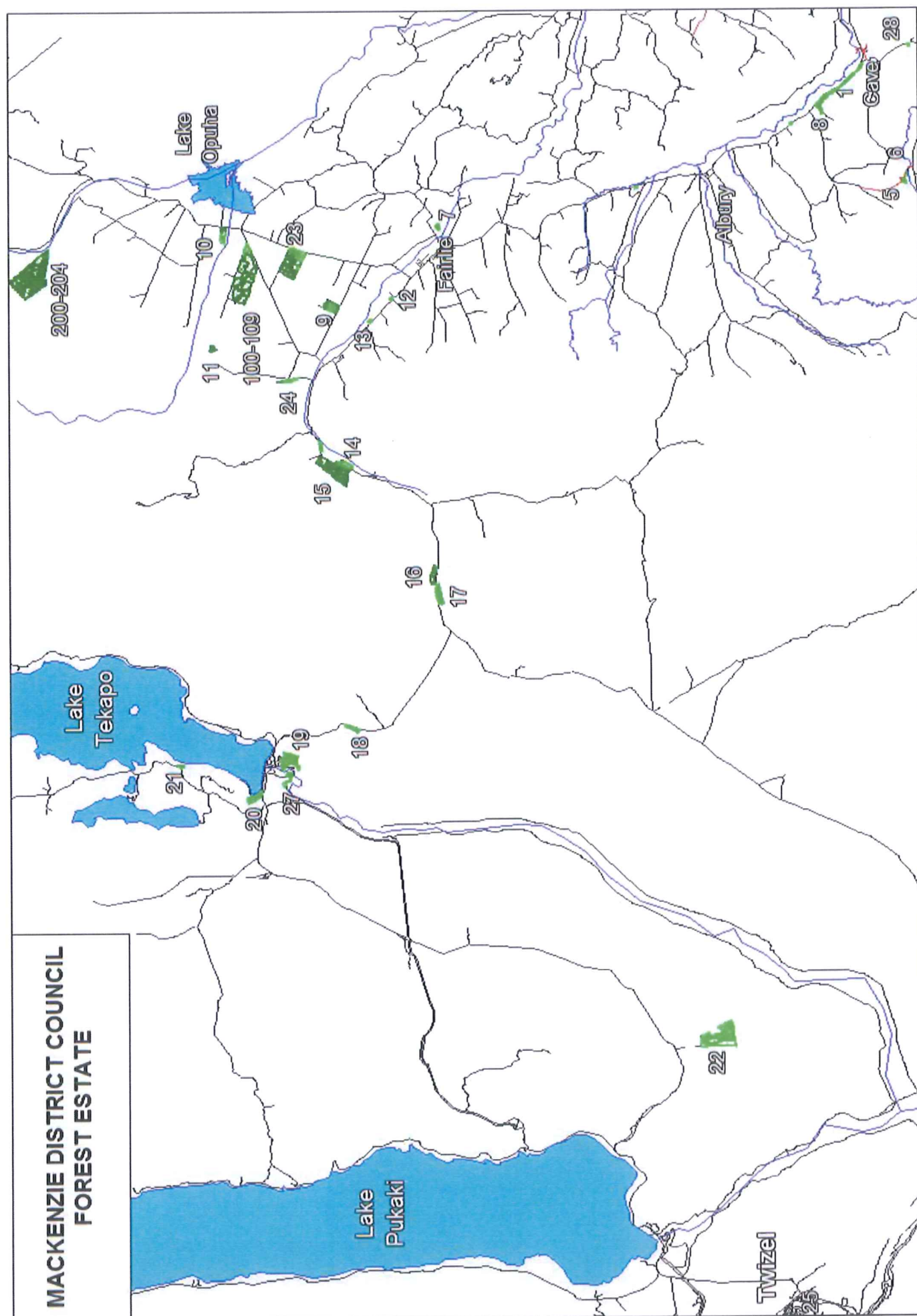
Valuation Parameters	Value	Diff.
Valuation using set parameters	\$2,812,924	
Low NPV (6%)	\$4,491,428	60%
High NPV (10%)	\$1,858,008	-34%
Low Log Prices (less 10%)	\$1,725,937	-59%
High Log Prices (up 10%)	\$3,799,306	35%

DISCLAIMER

The valuation does not imply any warranty or guarantee that it is the actual price or value of the forest that may be established in a market transaction. The completeness and accuracy of area and other stand data is also not guaranteed. The best data available at the time of valuation has been used.

APPENDIX ONE

Plantations Location Map



APPENDIX TWO

Plantation List

STAND	PLANTATION	CROP TYPE	AREA PLANTED	AGE NOW	NET PRESENT VALUE
001	CAVE				
1	P.RAD (2008)	RM518	12.7	7	\$244.13
2	P.RAD (2008)	OTHSP	2.3	7	\$0.00
3	P.RAD (1975)	LIQRD	0.0	40	\$0.00
4	P.RAD (1986)	RADLOW	1.2	29	\$18,196.97
5	P.RAD (2014)	RM521	1.2	1	\$0.00
6	P.RAD (2003)	RM521	10.3	12	\$25,353.52
7	P.RAD (1989)	RADLOW	0.7	26	\$8,214.90
8	MACROCARPA	CUMAC	0.0	60	\$0.00
9	P.RAD (1999)	RM518	1.8	16	\$3,638.14
002	CRICKLEWOOD	0.05			
1	P.RAD (1976)	RADLOW	0.0	23	\$0.00
003	MA WARO				
1	P.RAD (2008)	RM518	1.8	7	\$34.60
004	CONNORS ROAD				
1	P.RAD (1965)	RADHIG	0.0	50	\$0.00
005	PAREORA GORGE				
1	P.RAD (1992)	RADLOW	4.4	23	\$39,661.60
006	NEXT PAREORA RIVER				
1	P.RADIATA (1990)	RADLOW	2.0	25	\$21,517.15
007	BEHIND COUNCIL YARD				
1	P.RAD (1983)	RADLOW	3.7	32	\$46,612.60
008	WREFORDS (NEXT NELSONS RD)				
1	P.RAD (2014)	RM521	5.2	1	\$0.00
009	STRATHALLEN				
1	PSMEN (1986)	DFIR	2.4	29	\$21,501.34
2	PSMEN (1981)	DFIR	8.3	34	\$114,947.85
3	PSMEN	DFIR	0.0	72	\$0.00
4	PSMEN (1990)	DFIR	5.5	25	\$34,086.44
5	P.RAD (1996)	RADLOW	14.9	19	\$24,058.61
010	NORTH RIVER				
1	P.RAD (1986)	RM518	5.5	5	\$0.00
2	PSMEN (1979)	DFIR	3.4	36	\$55,756.18
3	HARDWOOD MIXTURE	LIQOTH	8.7	62	\$16,520.00
011	GALLAGHERS				
1	PSMEN (1986)	DFIR	6.3	29	\$56,441.03
012	BLUNTS - AREO CLUB				
1	P.RAD (2012)	RM521	1.6	3	\$0.00
013	PAGES - KIMBEL				
1	P.RAD (2010)	RM521	1.8	5	\$0.00

STAND	PLANTATION	CROP TYPE	AREA PLANTED	AGE NOW	NET PRESENT VALUE
014	WILLETS				
01	P.RAD (2010)	RM521	15.7	5	\$434.50
02	P.RAD (1996)	RADLOW	2.4	19	\$11,077.79
03	Hardwood	NON PROD'N	0.0		
015	WOODBURN				
01	PSMEN (1979)	DFIR	17.0	36	\$278,780.91
02	PSMEN (1980)	DFIR	10.1	35	\$152,239.31
03	PSMEN SH8 2001	DFIR	2.1	14	\$3,133.04
04	PSMEN 2001 North Boundary	DFIR	1.1	14	\$1,641.12
05	PSMEN (1999)	DFIR	1.5	16	\$2,942.20
06	PSMEN (2001) SW boundary	DFIR	5.5	14	\$8,205.59
07	PSMEN (2004)	DFIR	1.5	11	\$1,308.51
08	PSMEN (1981)	DFIR	11.2	34	\$155,110.36
09	PSMEN (1982)	DFIR	6.4	33	\$81,380.42
10	PSMEN (1998)	DFIR	4.3	17	\$9,611.31
11	PSMEN (1991)	DFIR	10.3	24	\$57,994.14
12	PSMEN (1985)	DFIR	10.5	30	\$102,816.12
13	PSMEN (1997)	DFIR	8.2	18	\$20,967.10
14	PSMEN (1992)	DFIR	0.3	23	\$1,531.22
15	P.rad (1998)	RM521	6.3	17	
016	BURKES PASS CUTTING				
1	Dfir 1998	DFIR	8.3	17	\$18,352.26
2	L.DEC (1993)	OTHSP	2.4	22	\$4,571.79
3	PSMEN (1994)	DFIR	7.2	21	\$29,482.41
017	TOP BURKES PASS				
1	P.NIG (1987)	MDCNIG	2.1	28	\$3,376.35
2	P.NIG (1993)	MDCNIG	9.4	22	\$4,201.68
3	P.MUR (1979)	MDCMUR	2.3	36	\$9,816.40
4	P.NIG (1978)	MDCNIG	1.9	37	\$8,881.91
5	P.NIG (1984)	MDCNIG	7.1	31	\$17,072.39
018	SANDY CUTTING				
1	P.NIG 1	MDCNIG	7.1	23	\$1,003.44
2	P.NIG 2	MDCNIG	1.4	22	\$4.66
3	P.NIG (1985)	MDCNIG	1.5	30	\$1,929.49
019	TEKAPO DUMP				
1	P.NIG (1995)	MDCNIG	6.4	20	\$0.00
2	P.mur (1950)	MDCMUR	0.0	65	\$0.00
3	P.NIG (2013)	LIQOTH	10.0	2	\$0.00
4	DFIR (1995)	MDCNIG	4.0	20	\$0.00
5	P.nig (1998)	MDCNIG	0.0	17	\$0.00
6	P.nigra (1996)	MDCNIG	10.2	19	\$0.00
7	P.radiata (1996)	RM518	1.2	19	\$700.44
8	P.radiata (2000)	RM518	6.0	15	\$173.37
9	P.radiata (1970)	RADHIG	0.0	45	\$0.00
020	TEKAPO CAMPING GROUND				
1	MIXED SPECIES	NON PROD'N	0.0	65	\$0.00

STAND	PLANTATION	CROP TYPE	AREA PLANTED	AGE NOW	NET PRESENT VALUE
021	MOUNT JOHN				
1	P.NIG (1989)	MDCNIG	4.6	26	\$2,566.66
022	SIMONS HILL				
01	P.MUR	MDCMUR	36.2	30	\$17,928.39
02	P.NIG (1985)	MDCNIG	29.9	30	\$38,461.17
03	P.NIG (1992)	MDCNIG	7.4	23	\$1,045.84
04	P.PON (1985)	MDCNIG	6.0	30	\$7,717.96
05	P.NIG (1987)	MDCNIG	8.8	28	\$7,870.93
06	P.PON (1994)	MDCNIG	2.9	21	\$0.00
07	P.NIG (1994)	MDCNIG	10.0	21	\$0.00
08	P.radiata 1995	RM518	14.2	20	\$10,420.21
09	P.NIG (1995)	MDCNIG	21.4	20	\$0.00
10	PMUR (1985) Pruning Trial	MDCMUR	1.7	30	\$841.94
11	Dfir/P.nig Mix	MDCNIG	1.1	28	\$983.87
023	WOODS				
1	PSMEN (1990)	DFIR	46.4	25	\$287,565.63
2	PSMEN (1991)	DFIR	39.7	24	\$223,530.80
3	CUMAC (1992)	CUMAC	5.9	23	\$43,629.52
4	PSMEN (1994)	DFIR	1.6	21	\$6,551.65
5	CUMAC (1994)	CUMAC	15.5	21	\$93,518.75
6	Psmen 1997 (Replant)	DFIR	0.9	18	\$2,286.81
7	PSMEN (1994)	DFIR	4.3	21	\$17,607.55
8	Cumac (1990)	CUMAC	0.4	25	\$3,547.91
024	DOBSON				
1	VARIOUS SPP	LIQOTH	5.2	75	\$0.00
2	P.RAD (1996)	RADLOW	2.9	19	\$13,385.66
3	PSMEN (1993)	DFIR	1.2	22	\$5,446.85
025	TWIZEL DUMP				
1	P.NIGRA (1994)	MDCNIG	2.0	21	\$0.00
2	L.DEC	OTHSP	0.3	20	\$247.71
027	TEKAPO RIVER WEST				
01	Larch	LIQOTH	0.8	49	\$0.00
02	P.nig/P.cont	LIQOTH	1.7	49	\$1,896.00
03	P.nig	LIQOTH	3.3	53	\$30,072.00
03	P.nig	MDCNIG	4.8	5	\$0.00
028	PAREORA/CAVE RD				
01	P.radiata	RM521	0.0	29	\$0.00
100	ASHWICK/CABUIE				
01	ASHWICK SCHOOL - DFIR 1997	DFIR	5.8	18	\$14,830.39
101	P.RAD (MATURE)				
01	P.RAD (MATURE)	RM518	9.5	15	\$7,449.08
102	DFIR (MATURE)				
01	DFIR (MATURE)	DFIR	0.0	50	\$0.00

STAND	PLANTATION	CROP TYPE	AREA PLANTED	AGE NOW	NET PRESENT VALUE
103	CABUIE FARM - DFIR 1998				
1	Monument Rd - Dfir 1998	DFIR	47.5	17	\$106,171.50
104	CABUIE FARM - DFIR 1999				
1	Ashwick Flat Rd - Dfir 1999	DFIR	24.6	16	\$48,252.09
105	CABUIE FARM - 2000				
1	Ashwick Flat Rd - Dfir 2000	DFIR	27.5	15	\$47,356.84
1	Ashwick Flat Rd - Larch	OTHSP	0.3	15	\$157.29
106	CABUIE FARM - DFIR 2001				
1	Ashwick Flat Rd - Dfir 2001	DFIR	31.4	14	\$46,553.72
107	CABUIE FARM - DFIR 2002				
1	Ashwick Flat Rd - Dfir 2002	DFIR	29.1	13	\$37,050.80
108	CABUIE FARM - DFIR 2003				
1	Ashwick Flat Rd - Dfir 2003	DFIR	21.5	12	\$22,836.97
109	CABUIE FARM - DFIR 2004				
1	Ashwick Flat Rd - Dfir 2004	DFIR	17.6	11	\$15,413.85
200	FOX PEAK - RED TUSSOCKS				
1	Fox Peak - Dfir 2000	DFIR	45.6	15	\$78,801.90
201	FOX PEAK - MIDDLE CREEKS				
1	Fox Peak - Dfir 2003	DFIR	17.6	12	\$18,554.24
202	FOX PEAK - NORTH CORNER				
1	Fox Peak - Dfir 2004	DFIR	38.1	11	\$33,048.94
203	FOX PEAK - LOWER HILL				
1	Fox Peak - Dfir 2005	DFIR	20.2	10	\$14,038.04
2	Fox Peak - Dfir 2006	DFIR	15.4	8	\$5,779.91
204	FOX PEAK - FLATS & EAST BDY				
1	Fox Peak - Dfir 2006	DFIR	44.8	9	\$23,979.05
2	Fox Peak - Prad 2009	RM521	0.0	6	\$0.00
Total			986.2		\$2,812,923.71

APPENDIX THREE

VALUATION DETAILS

The following values are general parameters that are applied to all the crop types:

LOGGING COST:	\$27.50 /tonne (Ground based) \$36.00 /tonne (Steep)	TRANSPORT COSTS:	Base: \$4.00 /tonne Variable: \$0.22 /tonne/km
CARTAGE DISTANCE:	100 km (Average)	OVERHEADS:	\$117.00 /ha/year
DISCOUNT RATE:	8.0%		

LOG PRICES (AT MILL):

AGRI-FAX Northern South Island Prices used

LOG GRADE	\$/TONNE	COMMENTS
RADIATA S30 SAWLOGS	\$104.00	AGRI-FAX prices: S1/S2 Long price
RADIATA S20 SAWLOGS	\$98.00	AGRI-FAX prices: S3 Short price
RADIATA PRUNED SAWLOGS	\$123.00	AGRI-FAX prices: Canterbury pruned sawlogs low premium: P2 price
RADIATA L-GRADE	\$77.50	AGRI-FAX prices: KS Short (75%) & KI (25%) prices
RADIATA POSTS	\$70.00	AGRI_FAX prices: Roundwood less \$10.00 for extra cartage & harvest costs.
RADIATA CHIP	\$48.00	AGRI-FAX prices: 70% pulp price, reduced by \$7.00 extra cart & 30% export pulp
DOUGLAS FIR SAWLOGS	\$130.00	Index prices unavailable - use current Council prices for S1-S3 log mix
DOUGLAS FIR & MAC FIREWOOD	\$50.00	Index prices unavailable - use current Council prices for firewood
CORSICAN PINE SAWLOGS	\$85.00	Index prices unavailable - use current Council prices for S1-S3 log mix
CORSICAN PINE SMALLWOOD	\$80.00	Current local market prices less \$10 extra cartage & harvest costs.
CORSICAN PINE FIREWOOD	\$36.00	Current local market prices
MACROCARPA PRUNED SAWLOGS	\$123.00	AGRI-FAX prices unavailable - same pruned Radiata price
MACROCARPA SAWLOGS	\$101.00	AGRI-FAX prices unavailable – Median of Radiata S1/S2 & S3 prices.
OTHER SAWLOGS	\$85.00	Index prices unavailable - use current Council prices for S1-S3 log mix
OTHER FIREWOOD	\$45.00	Index prices unavailable - use current Council prices for firewood



AgriHQ
incorporating Agriflex

JUNE 2015

LOG PRICE DATABASE UPDATE



A-GRADE
(NZ\$/TONNE)

86



S1
(NZ\$/TONNE)

107



P1
(NZ\$/TONNE)

161



PULP
(NZ\$/TONNE)

50

Median price delivered to mill (NZ\$/tonne)

Grade	P1	P2	S1 / S2 Long	S3 Short	L350	Pulp	Industrial / Pulp	Roundwood
Pruning	Pruned	Pruned	Unpruned	Unpruned	Unpruned	Unpruned	Unpruned	Unpruned
SED (minimum) cm	40	30 - 40	40 / 30	20 - 30	35	10	10	10
Knot size (maximum) cm	0	0	6	6	13	No limit	No limit	
Length (minimum) m	3.7 - 4.8	3.7 - 4.8	4.8 - 6.1	3.7 - 4.7	4.9-6.1	3.7	3.0 - 6.0	8.0 - 13.0
Northern North Island	166	131	109	96	99	50	81	85
Southern North Island	161	133	108	95	88	51	0	83
North Island*	164	132	109	96	95	50	81	85
Northern South Island	149	123	104	98	94	48	81	80
Southern South Island	139	113	94	88	86	47	63	90
South Island*	146	120	101	95	91	48	75	83
New Zealand*	161	130	107	96	95	50	80	84

Median price delivered to mill (NZ\$/m³)

Grade	P1	P2	S1-S2 Long	S3 Short	L350	Pulp	Industrial/Pulp	Roundwood
North Island*	174	139	115	102	101	53	86	89
South Island*	154	127	107	101	97	51	80	88
New Zealand*	170	137	114	102	100	53	85	89

Median price delivered to wharf (NZ\$/tonne)

Grade	Export P	A	K	KS	KI
Pruning	Pruned	Unpruned	Unpruned	Unpruned	Unpruned
SED (minimum) cm	36	30	20 - 34	20 - 26	26
Knot size (maximum) cm	0	10	15	15	25
Length (minimum) m	4	3.7-6.1	12.0 / 11.0	3.6 - 4.0	4.0
Northern North Island	150	84	76	77	71
Southern North Island	134	87	89	79	74
North Island*	145	85	81	78	72
Northern South Island	169	87	68	79	73
Southern South Island	148	90	79	81	73
South Island*	162	88	71	80	73
New Zealand*	148	86	79	78	73

Median price delivered to wharf (NZ\$/m³)

Grade	Export P	A	K	KS	KI
North Island*	153	90	85	82	76
South Island*	172	93	76	84	78
New Zealand*	157	91	84	83	77

* North Island (Weighted Northern North Island – 85%, Southern North Island – 15%), South Island (Weighted Northern South Island – 66%, Southern South Island – 34%), New Zealand (Weighted North Island – 80%, South Island – 20%)

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APPENDIX FOUR

Valuation of Mature Stands

Cpt	Std		Ldec firewood	Corsican sawlog	Corsican posts	Corsican firewood	Hardwood firewood	Total
		Stumpage/tonne	-\$0.70	\$29.30	\$24.30	-\$19.70	\$5.90	
10	3	Total Tonnes					2800	2800
		Total Value					\$16,520	\$16,520
27	1	Total Tonnes	320					320
		Total Value	-\$224					-\$224
27	2	Total Tonnes		100	75	145		320
		Total Value		\$2,930	\$1,823	-\$2,857		\$1,896
27	3	Total Tonnes		290	1050	200		1540
		Total Value		\$8,497	\$25,515	-\$3,940		\$30,072
Total Tonnes			320	390	1125	345	2800	4980
Total Value			-\$224	\$11,427	\$27,338	-\$6,797	\$16,520	\$48,264

APPENDIX FIVE

Carbon Credits Price – Financial Trader & Emissions Unit Register Report


www.omf.co.nz

CARBON REPORT

DAILY REPORT

30 June 2015

OVERVIEW

Nigel Brunel

- It was a very quiet day yesterday with market closing at \$6.65.

COMMENTARY

It was a very quiet day yesterday with smalls trading and the market closing at \$6.65 on CommTrade. No change to depth with 30k on the bid at \$6.50 and 70k on the offer above \$7. It does appear this is the lull before the storm simply because, as we move through the year more buyers will have to step up to buy to fulfil requirements.

It's hard to get an exact take on who requires what but it's fair to say that some NZUs have been compiled over the years before and as ERUs became the cheapest unit to surrender, but whether that is enough to satisfy this year remains to be seen. We generally see an extended quiet period before the market has a strong rally and this is no different.

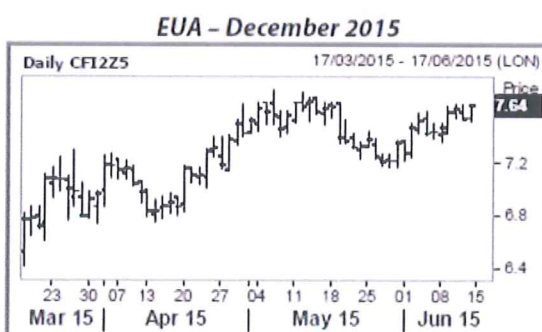
On the derivatives front there is interest to sell a May 2016 \$8 Call and buy a May 2017 \$8 Call; different parties. Price to be discussed and there is flexibility around the strike price (i.e. different from \$8) and maturity date. Volume is circa 250k minimum and up to 1 million tonnes. These trades would either suit an emitter looking to cover upcoming liabilities or a forest owner looking to create income.



New Zealand Carbon Prices – NZ\$

See [CommTrade](http://www.commttrade.co.nz)
www.commttrade.co.nz

*Prices indicative and subject to change
without notice*



Carbon	NZD Bid	NZD Offer	LAST or FIX
NZU Spot	\$6.60	\$6.80	\$6.60
NZU May 16	\$7.00	\$7.70	\$7.35
NZU May 17	\$7.10	\$8.00	\$7.55

Auckland Foreign Exchange – 64 9 523 2221
 Equities Dealing – 64 9 524 8712
Wellington 64 4 499 0028

Futures, Options Dealing – 64 9 523 1166
 Carbon, Energy, Dairy – 64 9 521 7802

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