



caring about you & your environment

Public Excluded

Report No. PE-02.609

26 September 2002

File: O/03/02/04 [ceh/reports/pe02.609]

Report to the Utility Services Committee
from Barry Leonard, Plantation Forestry Manager

Plantation Forestry Annual Report and Proposals

1. Purpose

To appraise Councillors of the results of Plantation Forestry activities in the year ended 30 June 2002 and to advise of the activities proposed for the financial year commencing 1 July 2003.

2. Exclusion of the Public

Grounds for exclusion of the public under section 7(2)(h) of the *Local Government Official Information and Meetings Act 1987* are:

That the public conduct of the whole or relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist, i.e.; to allow the carrying out of, without prejudice or disadvantage, commercial activities.

3. Background

This is the third “Annual Report” on the activities of the Plantation Forestry Department. The report provides comparisons of actual outputs against predicted outputs. It also summarises the returns to Council of harvesting activities and comments on silviculture, forest health and roading aspects related to both forest access and harvesting. The report also outlines proposals for the forthcoming year and seeks approval for replanting of the blocks harvested in the current year.

4. Review of Operations - Year Ended 30 June 2002

3.1 Harvesting

The completion of the harvest of the Pakuratahi East Forest continued in tandem with the opening up of the Puketiro Forest harvest. As Rayonier New Zealand was

the successful bidder for the Puketiro Contract and the incumbent for the Pakuratahi East Contract, managing the transition did not present any difficulties.

The new Contract was offered for tender in May 2001. Although 10 sets of documents were uplifted, only two complying tenders were received. A further expression of interest was received but it was on the basis of sole negotiation process based on an assertion that the principal would give us the best deal.

The two complying offers were assessed against both their estimated returns and the officer's calculation based on the valuation data provided by Alan Bell and Associates.

On the basis of this assessment it appeared that, where costs could be identified, (cartage and harvesting) Rayonier was marginally lower. With the estimated volumes to be extracted in the first two years of the Contract, Rayonier expected to extract 96 percent of the estimate but FCF only 72.5 percent. This resulted in a significantly better return from Rayonier, despite their increased commission rate. During the subsequent negotiations we were able to clarify all outstanding issues and negotiate the commission down from an increase over the previous Contract of 44 percent to an increase of 26 percent.

It is of interest that the "losing" tenderer reacted to the news that they had been unsuccessful by suggesting that the analysis process had been tainted and they should have won the Contract. During a visit from them we outlined the tender analysis process, including that the Wairarapa Division was involved through the Forestry Management Group, and made it quite clear that we found their suggestion of improper behaviour most offensive. During the discussions it emerged that they had failed to follow the tender instructions and consequently had disadvantaged their bid. While we refused to "relitigate" the process, we did agree to receive amended figures. Following the meeting we were able to amend their figures with the information available within their tender and advise them as they arrived back in Auckland that the amended figures did not alter the outcome.

Last year's report included the harvesting in the Pakuratahi East Forest for the financial year ended 30 June 2001. For the record, table 1 on page 3 sets out the results for the Pakuratahi East Forest on a block by block basis.

Production switched from Pakuratahi East to Puketiro in November of 2001. Output from this forest to June 2002 is shown in table 2.

Table 2 - Puketiro Forest Output to June 2002

Month	Pruned	Sawlog	Round Wood	Small Sawlog	Rough	Pulp	Total	% Export
November	0	0	0	0	178	397	575	31
December	0	89	0	206	438	539	1,272	51
January	0	208	0	19	493	522	1,242	57
February	678	300	0	477	946	860	3,260	44
March	1,251	1,072	0	331	1,083	1,179	4,914	24
April	980	1,013	0	382	1,037	991	4,403	28
May	549	598	0	252	338	703	2,435	17
June	843	768	0	394	497	401	2,902	25
Total	4,301	4,048	0	2,061	5,010	5,592	21,003	

Table 1 - Pakuratahi East Forest Harvest to 30 June 2001

Stand No.	Area	Pruned	Sawlog	Round Wood	Small Sawlog	Rough	Pulp	Actual Total	Estimated Total	% Diff.	% Export
1001	18.1	340	4,455	82	2,083	1,030	2,178	10,168	11,816	-14	27
1101	9.2	210	1,170	69	738	993	2,584	5,764	4,876	18.2	21
1201	5.3	9	1,209	10	803	319	915	3,265	2,963	10.2	32
1301	3	202	288	0	33	183	119	825	1,137	-27	22
1401	36	0	2,627	30	2,509	3,024	4,935	13,125	11,448	14.6	37
1501	5.8	0	1,025	71	1,080	177	1,227	3,580	3,600	-0.5	16
1502	5.9	0	500	135	1,140	460	1,996	4,231	3,292	28.5	25
1601	17.9	0	2,419	876	2,860	980	3,486	10,621	11,080	-4.1	19
1701	8.6	95	1,197	56	1,143	303	2,574	5,368	4,515	18.9	30
1702	3.6	0	1,012	0	389	314	213	1,928	1,775	8.6	36
1703	11.8	0	3,627	0	689	951	1,596	6,863	6,407	7.1	22
1704	6.7	0	970	0	839	569	1,531	3,909	3,082	26.8	21
1801	4.2	0	485	104	558	174	761	2,082	2,570	-19	27
2001	5	0	834	0	568	895	1,286	3,583	3,300	8.6	31
2101/02	9.8	0	2,047	0	1,179	770	1,521	5,517	5,860	-5.9	23
2201	12.1	0	3,041	76	1,479	850	1,933	7,427	8,204	-9.5	19
2202	5.4	39	939	0	433	246	258	2,015	3,386	40	21
2203	1.5	0	253	0	106	74	530	963	621	61.5	23
2204	4.7	76	1,150	0	114	269	359	1,968	2,773	-29	34
2205	3.3	178	1,604	0	309	606	725	3,422	1,696	101	35
2501	6.7	169	3,128	0	665	908	1,485	6,355	3,846	65.2	29
2601	2.7	0	1,050	0	613	283	529	2,475	1,539	60.8	17
2602	9	0	1,819	29	1,051	331	1,666	4,896	4,833	2.3	29
2701	2.4	0	88	0	4	17	30	139	1,579	-91	15
2702	1.8	0	733	236	174	87	163	1,393	812	71.5	6
2703	2.1	0	266	0	279	139	232	916	1,478	-38	32
2801	4.1	0	464	0	129	71	272	936	2,722	-66	30
2802	5.3	0	319	0	284	252	955	1,810	2,247	-69	18
Total	212	1,366	38,719	1,774	22,251	15,275	36,159	115,544	113,457	+1.83	

Table 3 sets out the gross income at wharf or mill gate for the output of the harvest and identifies the cartage, felling and commission costs to show the net return to Council before roading.

Table 3 - Logging Income - Rayonier Contract - 2001/2

	Mill/Port Price \$	Cartage \$	Harvest Ground \$	Harvest Hauler \$	Management CFH \$	Commission Rayonier \$	Net Return \$	M3 \$	Average \$
July	299,191	47,853	0	169,395	6,843	11,865	63,234	5,539	11.42
August	332,171	53,531	0	161,661	7,584	13,488	95,907	6,102	15.72
September	384,423	55,048	0	172,522	8,288	16,638	131,928	6,477	20.37
October	75,300	9,284	0	33,171	1,561	3,181	28,103	1,176	23.90
November	33,749	9,016	7,382	11,243	154*	3,290	2,665	723	3.69
December	67,226	16,942	25,477	6,331	0	6,361	12,115	1,272	9.52
January	68,557	16,268	16,987	14,439	0	6,288	14,576	1,257	11.60
February	247,959	44,672	42,112	39,400	0	20,060	101,716	3,251	31.29
March	395,924	64,027	76,220	46,363	0	32,126	176,914	4,914	36.00
April	358,980	58,647	69,103	41,006	0	28,321	161,903	4,403	36.77
May	198,503	32,003	33,680	29,242	0	16,359	87,219	2,435	35.82
June	274,074	40,515	24,890	45,363	0	21,304	142,002	2,902	48.94
Adjust.							10,709#		
Total	2,736,057	447,807	295,850	770,408	24,430	179,282	1,027,899	40,452	25.41

* Altered commission rates took effect with the new contract. CFH now paid by Rayonier and only one commission paid by Wellington Regional Council.

Mainly currency adjustments from exports.

The effect of moving from Pakuratahi to Puketiro can be seen in the results for the October to January period, where cleaning up the remnant stands in Pakuratahi and opening up the stands in Puketiro significantly reduced productivity. This period of low production was exacerbated by the Christmas/New Year closedown.

In May the Contractor purchased a larger hauler and output reduced again while this was set up and staff trained to use it. Production was on the increase again by June and was back to 4,000 tonnes per month by July.

The higher average returns achieved since Christmas reflect the better quality logs coming out of the Harris South block.

Of the 385 hectares included within the current harvest contract, approximately 47 were clear felled in the 2001/2 year.

Attachment 2 is a map setting out the area harvested at Puketiro.

3.2 Replanting

A total of 200,950 seedlings were planted in the 2001 planting season. This was made up of 4.8 hectares replanted in Douglas fir behind Summit Yard on the Rimutaka Incline walkway and a further 129.19 hectares replanted in radiata. Of this latter area, approximately 3 hectares was planted in block 20.01 to stabilise the

steep slopes at the top of the stand. These trees will not be tended or harvested but will provide cover for regenerating native vegetation.

3.3 Silviculture

Again we were unable to complete the programmed silviculture work within the year. This was partly caused by the work carried over from the previous year and partly because the silviculture crews were diverted to assist with the preparation of the Puketiro harvest road by removing up three rows of trees at selected parts of the route where drying problems were foreseen.

During the year the following blocks were tended.

Akatarawa - Akatarawa Saddle	33.2ha	Prune 0 – 6M @350spha
Valley View - Woolshed (Mac)	14.4ha	Thin to 500 spha
Pakuratahi West 8.01	25.1ha	Prune 0–2 m @ 350 spha
Pakuratahi West 9.01	21.5ha	Prune 0–2 m @ 350 spha
Pakuratahi West 7.01	19.0ha	Prune 0–2 m @ 350 spha
Hukinga 15.01	5.8ha	Prune 0–4 m @ 350 spha

All silviculture has now been completed.

The Contract price for this work was \$59,851.40.

3.4 Forest Health

As in previous years, the annual forest health inspections arranged through the Forest Owners Association were carried out by Forest Health Dynamics Ltd. The inspections were made in mid-December and no new pest or disease infestations were found.

The comments by Forest Health Dynamics Ltd were:

Akatarawa Saddle	<i>This forest had improved remarkably from last year with little <u>Dothistroma pini</u> to be seen. Apart from some wind stunted trees on the ridge there are no forest health issues to report.</i>
Hukinga	<i>Apart from <u>Dothistroma pini</u> in valleys this forest is looking good.</i>
Maungakotukutuku	<i>Very low levels of <u>Dothistroma pini</u> noted as was light possum damage.</i>
Mangaroa	<i>Some low level of UMCY but in general a good healthy forest.”</i>
Pakuratahi	<i>All dead trees in this forest were found to be infected with <u>Armillaria sp.</u> a root pathogen which often kills young to mid rotation trees. There are some nutrient problems showing up which was mostly seen by the very pale foliage and high levels of Upper Mid Crown Yellowing in the second crop.</i>

The summary shows this to be “localised” and less than 1 percent.

Puketiro

Cpt3/10 has some very new possum damage but damage is much reduced on last year’s survey. Logs stacked on the roadside were checked and found to have Hylurgus ligneperda and Pachycotes peregrinnus under the bark.

Pachycotes peregrinnus is a boring insect and may reduce log qualities if left too long before being processed.

Spicer

Overall the trees are in good health and no forest health problems were noted.

Valley View

Mortalities caused by Armillaria sp were noted in cpt 502, 1978. Usually trees of this age would not be killed by Armillaria. If many of the trees have Armillaria infection then the stumps may cause severe mortalities in the next rotation of the young seedlings. Cupressus macrocarpa, Cpt 1002, 1081 are showing high levels of seridium unicorn damage, many having up to 75% of their radius affected. As a result the infected wood is full of boring insects and is decaying. Entry of seridium unicorn is mainly through pruning wounds.

Overall incidence less than 1 percent.

Many aphids were found on Pinus radiata in Cpt 801.

Whakatikei

New plantings have grown very well since last year’s visit and no forest health issues were noted here.

Diseases and pests noted included:

Dothistroma pini

Causes premature defoliation, reduced tree growth, and occasional tree death. If severe can be treated by application of copper oxychloride. Fungal disease, which in this area is very weather dependent, and infection can be reduced by pruning and thinning. Generally trees are resistant to the disease by age 15.

UMCY

Upper Mid Crown Yellowing Caused by a deficiency of Magnesium. Most prevalent in the Nelson, Westland and Southland areas. If sufficiently severe can be addressed by the application of fertiliser.

Armillaria

A root rot, which causes crown wilt, and yellowing to yellow-browning of foliage finally turning brick red. This is a native disease that can attack radiata and is most prevalent in areas with a mean annual temperature below 13 degrees and rainfall between 1,000 mm and 1,600 mm per annum.

Although some fatalities can result at an early age most trees which survive to 10 years of age will be rid of most symptoms by age 20.

Hylurgus ligniperda

The Golden Haired Bark Beetle mainly attacks felled logs and can create a problem if logs are stacked for too long before processing. Can be a problem with export logs. The logs mentioned in the report had been felled to “daylight” the access road and were not merchantable with most finally sold for firewood.

Pachycotes peregrinus

A native beetle which also attacks stored logs. This can be avoided by early removal of felled logs from the forest floor.

Seiridium unicorne

Cypress canker. Infection generally occurs at times of high humidity with optimum temperatures being in the range of 24-25 degrees C. Infection usually occurs through wounds or in our case through the exposed pruned faces. If necessary infection can be controlled by the application of copper oxychloride or Benlate.

Possum damage has not been a significant issue this year with a couple of minor outbreaks being dealt with by ground based methods. The major possum programme was the aerial baiting of the Pakuratahi and Maymorn, ground based operation at Mangaroa areas. However, these have been delayed and will now occur in the current year.

Overall the health of the forests is as expected with no new infestations and no specific actions are required.

3.5 **Forest Access**

The harvesting of Pakuratahi East was completed without any access issues. Although the road into Puketiro was prepared in good time and proved a satisfactory access from the commencement of harvesting in November through to May, as soon as the wet weather arrived in June the road began to deteriorate rapidly.

Both the “Wainui” bridge and the Rallywood Bridge have remained in use and the major climb above the Rallywood Bridge, which was predicted to be a potential source of problems, required only minimal maintenance.

As the surveying of the route through Valley View and Rallywoods has not been completed, the documentation to give permanent legal effect to our access agreements is still unsigned.

All other access, except Maungakotukutuku, is satisfactory. We can currently access Maungakotukutuku by four wheel drive vehicle and this meets our present requirements.

We approached an adjoining neighbour for an access route from the Puketiro harvest site on to Paekakariki Hill Road but were unable to reach agreement. We would still like access in this direction and will continue investigating all available options.

4. **The 2002/3 Programme**

This year was programmed as the completion of the harvest of the MOT blocks and the harvest of the greater part of the Harris blocks. Because of access difficulties, most harvesting has been concentrated on the Harris blocks. It is estimated that these will take until April next year to complete, at which time we will shift harvesting to the Reservoir Ridge block in Valley View. The roading difficulties outlined above have continued into the present year and this experience has led us to reschedule the harvest plan to reduce the “in forest” haul during next winter. The Reservoir Ridge block is within 5 km of the Totara Park entrance, rather than the 20 km the trucks are travelling at present.

Initial plans have been prepared for the roading required for the harvest of the Blow Fly and Kaika Mako blocks. When this is finalised, it is hoped to road line and prepare skid sites over the coming summer, so that they have settled before harvesting commences in the summer of 2003/4. At the same time a similar exercise will be carried out at Reservoir Ridge, so that the hauler can move in and immediately commence work when the decision is made to withdraw from Puketiro for next winter.

There are some residual stands remaining at Maymorn and a 7 ha stand at Hukinga, all of which are ready for harvest and for which we do not have crews allocated at this stage. Rayonier have some remaining harvesting at Gabities, a neighbour of our Maymorn block, and it is hoped that this crew can complete the Maymorn harvest, as the logs will be trucked out through Gabities land. The Hukinga stand is high quality pruned, which can be winter logged. At present it is proposed to leave it unallocated but able to be harvested if weather or other factors conspire to frustrate our plans elsewhere. It would be preferable to harvest this stand while JNL and/or Eurocell were purchasing pruned logs.

5. **Proposals for the 2003/4 Year**

5.1 **Harvesting**

As set out above, harvesting is becoming more and more dependent on the weather and access issues. The original Contract contemplated Blow Fly being harvested this year. However, a more likely scenario commencing 1 July 2003 is.

	Tonnage Expected	ha
Hauler		
3-4 months harvest at Reservoir Ridge	say 12,000	21
1 month to complete Harris South	say 4,000	10
6 months Blow Fly	say 20,000	51
1 month Reservoir Ridge	say 3,500	6
Ground Based		
Road lining Reservoir Ridge	say 5,000	9
Road lining/ clear fell Blow Fly	say 5,000	14
Road lining Kaika Mako	say 3,000	5
Total	say 52,500	116

Attachment 3 shows the blocks proposed for harvest in the 2003/4 year.

Should we be able to achieve acceptable access into the MOT blocks, these will take precedence over both Blow Fly and Kaika Mako.

An alternative will be to endeavour to arrange an additional crew and harvest the blocks in tandem. This would be especially advantageous if logs from the MOT blocks are transported out to Paekakariki Hill Road.

5.2 **Replanting**

5.2.1 ***General***

It is recommended that the area above be replanted in the winter after harvest. All blocks have produced reasonable timber in the first rotation and an improved result can be expected in the second rotation through improved genetics and better management techniques.

5.2.2 ***Environmental Issues***

There are no specific environmental issues with these blocks. In the first rotation crop trees were planted right up to the stream banks. When replanted standard riparian margins will be left to regenerate. These will be set out in conjunction with the Council's Soil Conservator. As is our present practice, an independent soil scientist will monitor all harvesting and replanting. Any issues that may arise will be dealt with in accordance with "best industry practice" and on advice from the Regional Council's Environment Division.

5.2.3 ***Heritage Issues***

There are no known heritage issues within the blocks proposed for harvest.

5.2.4 ***Recreational Issues***

We have adopted a strategy of withdrawing blocks from recreational use as they fall due for harvest. To date this proposal has worked well and we are not aware of any concerns either from the harvest crews as it relates to the security of their machinery or from the regular recreational user groups. At present logging is restricted to working days and access for recreation is unhindered on weekends except for the specific blocks being harvested. It is proposed to retain this arrangement.

5.2.5 ***Suitability for Replanting***

Present returns confirm that these areas will produce enhanced volumes in the second rotation. In some cases non-merchantable trees on ridgelines will not be harvested but will be retained to provide shelter from the prevailing winds for the new crop. Returns in the vicinity of 550–600 M3 per hectare can be anticipated.

5.2.6 ***Financial***

Attachments 4–6 set out the projected returns on a whole block basis from the stands recommended for replanting.

The net present values of the second rotation with sensitivities are:

Net Present Values

Forest Block	8%	9%	10%
Harris South	152,332	84,531	35,486
Reservoir Ridge	46,297	24,761	8,803
Blow Fly	99,972	55,476	23,289
All blocks	298,601	164,768	67,578

Internal Rates of Return

Forest Block	Base Case	+10% Revenue	-10% Revenue
Harris South	11.01%	12.31%	10.18%
Reservoir Ridge	10.74%	12.02%	9.93%
Blow Fly	11.01%	12.31%	10.18%

These figures set out the improved returns that can be anticipated from a well tended second rotation.

5.3 Silviculture

The following blocks are programmed for silviculture during the coming year. The programme may be modified

Pakuratahi West 8.01	Medium prune/thin to 500 spha	25.1 ha
Pakuratahi West 9.01	Medium prune/thin to 500 spha	21.5 ha
Pakuratahi West 7.01	Medium prune/thin to 500 spha	19.0 ha
Hukinga 15.01	Medium prune/thin to 500 spha	5.80 ha
Pakuratahi West 2.02)		
3.01)		
10.02)		
11.02)		
15.03)		
13.03)	All low prune	113.9ha

Planting Harris South, Blow Fly and Reservoir Ridge

Fertilise new plantings at 18 months and other areas as indicated by foliage analysis.

5.4 Recreational Implications

As stated above, eight months experience in the Puketiro Forest suggests that all significant issues have been addressed and the inconvenience to recreational visitors has been kept to a minimum. It is anticipated that this position will continue through this year.

With the harvest of Reservoir Ridge, it may be necessary to place restrictions on the use of the Cannon Point walkway at least until felling is more than two tree lengths from the walkway. As the proposal is to harvest in winter, any effect will be minimised. Walkers will still have access to the track on weekends. Any closure will be managed in conjunction with Landcare Division staff.

6. Recommendations

- (1) *That the report be received and the information noted.*
- (2) *That Council approve the replanting of the areas specified within this report in the winter immediately following harvest.*

Report prepared by:

Approved for submission:

BARRY LEONARD
Plantation Forestry Manager

DAVID BENHAM
Divisional Manager, Utility Services

Attachments

- 1 Location of Plantation Forests
- 2 Map Setting Area Harvested at Puketiro
- 3 Blocks Proposed for Harvest in the 2003/4 Year
- 4 Analysis of Financial Returns from Replanting of Reservoir Ridge Block
- 5 Analysis of Financial Returns from Replanting of Blow Fly Block
- 6 Analysis of Financial Returns from Replanting of Harris South Block