

**COMMERCE ACT 1986: BUSINESS ACQUISITION  
SECTION 66: NOTICE SEEKING CLEARANCE**

Date: 29 August 2006

The Registrar  
Business Acquisitions and Authorisations  
Commerce Commission  
PO Box 2351  
WELLINGTON

Pursuant to s66(1) of the Commerce Act 1986 notice is hereby given seeking **clearance** of a proposed business acquisition.

<b>EXECUTIVE SUMMARY</b>
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- 1 CRBF Ltd ("**CRBF**") seeks clearance to acquire certain forestry business and operations of Carter Holt Harvey Limited ("**CHH**") consisting of the shares in four subsidiaries of CHH that own, either directly or indirectly, forest properties in the Central North Island and Northland, together with certain forest properties owned directly by CHH in the Nelson/Marlborough region of the South Island. This notice is given for and on behalf of CRBF by Global Forest Partners LP ("**GFP**"), as investment adviser to CRBF.
- 2 GFP is a registered investment adviser under the US Investment Advisers Act of 1940 and advises nine institutional timber investment funds globally. It currently advises four differently constituted closed-end funds in respect to investments in New Zealand, comprising a total of four relatively small forest estates in New Zealand. For ease of reference, their shorthand names are GTI6, NZ1, NZ2 and NZ3. Of the four funds only NZ2 and NZ3 have a business relationship in that NZ3 owns nothing separately from NZ2 (it is a 25% holder of interests in two properties (Mahoe and Madaket), with NZ2 holding the remaining 75%), and is administered co-terminously with NZ2.
- 3 CRBF is a newly created timber investment fund for the special purpose of acquiring the estates being sold by CHH. Although advised by GFP, it is a differently constituted fund (ie, one differently constituted as to investors and is not otherwise contractually related to GTI6, NZ1, NZ2 or NZ3). It is not conceded that any of the funds are associated with one another (other than NZ2/3) or with the bidder for the purposes of the Act. Indeed, the fund documents for each of the funds (including CRBF) explicitly preclude GFP from treating the funds as if they were related entities, with the sole exception of the contractual relationship between NZ2 and NZ3. However, even if the Commission considers otherwise, in only three regions (as defined by the Commission, applying definitions contained in the National Exotic Forest Description from time to time) would there be aggregation between the estates currently offered for sale by CHH and estates

currently administered by GFP on behalf of other funds, namely, Nelson/Marlborough, Central North Island (“**CNI**”) and Northland.

## **CNI**

- 4 NZ2/3 Funds own an estate comprising a number of forest pockets together called Madaket stretching from Wanganui to Kawhia and including Te Wera Forest (servicing an independent sawmill in Taranaki, among others). The total stocked forest area making up the Madaket holding is approximately [ ] ha. Although [ ] ha of this estate falls technically within the CNI region, it is on its western fringe. Additionally GTI6 holds a Forestry Right over [ ] stocked ha in the Tauhara Forest. In combination the Madaket and GTI6 Tauhara estates represent less than 2% of the CNI stocked Area. Any aggregation would be insignificant and no competition issues would arise in the CNI region by virtue of the proposed acquisition.

## **Northland**

- 5 In Northland, GTI6 holds 50% of the Mangakahia Forest comprising 22,000 stocked ha in a joint venture with CHH which is the operating manager, and NZ2/3 Funds own an estate of approximately [ ] ha scattered throughout the Northland region at 4 primary locations. In combination the GFP estate of [ ] ha represent [ ] of the Northland stocked area. Very significant volumes of “free” wood will remain in Northland and no competition issues will arise in that region by virtue of the proposed acquisition.

## **Nelson**

- 6 The only issue which might arise from the proposed acquisition (if association is to be assumed) is in Nelson. NZ1 holds a 49% interest in a joint venture owning a [ ] stocked ha forest, with subsidiaries of Weyerhaeuser Company holding the remaining 51% (and also managing the forest) (“**Nelson JV**”). NZ2 also owns an estate of [ ] stocked ha in Marlborough.
- 7 Prior to the date that CHH announced the bid process for the CHH forests, the Nelson JV had determined to sell their forest. The sale was prompted by the termination of the Nelson JV in accordance with the provisions of the joint venture agreement governing it. Over an 18 month period, the Nelson JV studied its liquidation options and prepared for and engaged in a sales process for the forests and mill held by it. Had the structured sale process proceeded as planned, the sale of the Nelson JV would have been completed or nearly completed by the time the successful bidder in the CHH process was announced. Thus it had been anticipated that if CRBF was successful in bidding for the CHH forests it would by that stage have no other “associated” forest interests in the Nelson/Marlborough region. However, bid values received were lower than expected and accordingly the Nelson JV has determined to reject all bids and [ ]

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- 9 This application for clearance is being made to address the possibility of outcomes other than (a), to provide an appropriate context for the provision of an enforceable divestment undertaking.

<b>PART I: TRANSACTION DETAILS</b>
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**1. THE BUSINESS ACQUISITION**

1.1. Clearance is sought for the possible acquisition by CRBF of:

- (a) All the shares in four CHH subsidiaries, namely, NZ Forest Products Limited, AHI Group Limited, Carter Holt Harvey Equities (No 12) Limited and Carter Holt Harvey Forest Holdings Limited, and
- (b) Forestry assets (including freehold property, non-freehold land interests, standing timber on both, plant and equipment, business contracts, licenses and consents) not owned by those four subsidiaries but owned either directly by CHH or other subsidiaries in the CHH Group of companies,

and as more particularly set out and described in the "Carter Holt Harvey Limited Information Memorandum: Sale of CHH Forest Estates" dated July 2006.

**2. PERSON GIVING NOTICE**

2.1. This notice is given by:

Global Forest Partners LP  
C/- Forest Investment Advisors Limited  
Level 20, ASB Bank Centre  
135 Albert Street  
P O Box 90177 AMSC  
Auckland 1030

Attn: Michael J Edgar  
Director of Asia Pacific Investments

Phone: 09 358 7355  
Fax: 09 358 7340

2.2. All correspondence and notices in respect of this application should be directed in the first instance to:

Matthew Dunning  
Barrister  
Park Chambers  
PO Box 5844  
Wellesley Street  
Auckland

Phone: 09 379 9780  
Fax: 09 377 0361

### 3. CONFIDENTIALITY

- 3.1. Confidentiality is sought for those items deleted from the public copy of this application and indicated by square brackets. The information comprises market share and related data and commercially sensitive and valuable information which is confidential to the applicant. An order under section 100 is sought for it accordingly. In terms of section 9(2)(b)(ii) of the Official Information Act 1982, disclosure of the information would likely unreasonably prejudice the commercial position of the applicant.

### 4. DETAILS OF THE PARTICIPANTS

#### Acquirer

- 4.1. The proposed acquirer is CRBF. CRBF is a newly created, fully formed, GST registered, New Zealand entity timber investment fund for the special purpose of acquiring the estates being sold by CHH. It will comprise non-U.S. institutional investors and U.S. institutional investors such as pension and profit sharing plans and trusts, endowment funds and charitable foundations.
- 4.2. The Investors will be indirect and direct investors in CRBF. GFP will be the investment adviser of the Fund, and (as such) will have sole responsibility for the selection of the Fund's investments and for the management of the business under the supervision of the Board of Directors of CRBF. The relationship between the Investors and GFP (as investment adviser) in terms of the Fund is to be governed by a Shareholders' Agreement (**Shareholders' Agreement**) to be entered into by those parties. [

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#### Target

- 4.3. The shares and assets are being sold by CHH as set out in paragraph 1.1 above. Address details for CHH are as follows:
- Carter Holt Harvey Limited  
640 Great South Road  
Manukau  
Private Bag 92-106  
Auckland
- 4.4. All correspondence and notices in respect of this application concerning the Target should be directed in the first instance to:
- Bell Gully  
Barristers and Solicitors  
Level 21, Vero Centre  
48 Shortland Street

P O Box 4199  
Auckland

Phone: 09 916 8621  
Fax: 09 916 8801

Attn: Phil Taylor/Torrin Crowther

## 5. INTERCONNECTED AND ASSOCIATED PARTIES

### GFP

- 5.1. GFP is a registered investment adviser under the US Investment Advisers Act of 1940 and is a privately owned limited partnership. Further details are available at the businesses website [www.gfplp.com](http://www.gfplp.com).

### CHH

- 5.2. CHH is well known to the Commission. Formerly a public listed company, it was in late 2005 the subject of a 100% takeover by Rank Group Investments Limited.

## 6. BENEFICIAL INTERESTS

- 6.1. There are no relevant beneficial interests between participants.

## 7. LINKS BETWEEN COMPETITORS

- 7.1. Apart from short duration supply arrangements that are normal within the NZ forestry industry there are no links between the competitors.
- 7.2. The GTI6 fund holds a 50% interest in a joint venture with CHH in the Mangakahia Forest in Northland. CHH is the manager of that JV.

## 8. CROSS DIRECTORSHIPS

- 8.1. There are no cross-directorships.

## 9. BUSINESS ACTIVITIES OF EACH PARTICIPANT

### GFP

- 9.1. GFP is a significant US-based timber investment management organisation. It is a successor to the timber investment management business of UBS Timber Investors, which was formerly Resource Investments, Inc. (RII). RII was established in 1982 as a subsidiary of the Boston Company and commenced providing asset management services on behalf of United States institutional investors in 1985. RII operated as an independent investment adviser from 1990 until 1995, when it was acquired by UBS Timber Investors. GFP completed a management buyout of the timber investment business of UBS Global Asset Management in 2003. GFP is a partnership that is wholly-owned and controlled by its nine-member management team who provide investment advisory services for GFP's investor clients.

- 9.2. GFP structures and manages timberland investments on behalf of institutional investors. It currently manages over US\$1.5 billion in assets on behalf of over 80 institutional and private investors through various closed-end funds and other specific mandates, generating investment returns from the acquisition and management of plantation forests of approximately 560,000 hectares of high-quality, investment-grade timberland located in the United States, Argentina, Australia, Brazil, Chile, New Zealand and Uruguay. GFP operates the off-shore timber funds through stand alone businesses, joint ventures with forest products companies and also through long term supply and management contracts with forest products companies such as in South America with Boise Cascade and in both Australia and South America with Norske Skog.
- 9.3. GFP was the first timber investment management organisation to invest in New Zealand in January 1992.
- 9.4. GFP's approach to management of each fund is to employ a suitable locally based management organization to handle the day to day management including the harvesting and marketing of logs, while GFP oversees strategy, financial and operational plans.

#### **CHH**

- 9.5. CHH is well known to the Commission and it should have details of its forestry activities on file, either from previous forestry applications or through applications by other parties relating to this forest sale by CHH.

### **10. THE REASONS FOR THE PROPOSAL**

- 10.1. GFP regards New Zealand as an important component within a diversified international timberland investment portfolio and wishes to expand the presence in the New Zealand forestry industry of its investor clients by making a significant long term commitment in this region, as represented by the opportunity to acquire the CHH Forests estate. GFP intends to nurture, enhance and develop this forestry estate as a high performing business in coming years consistent with the manner in which GFP has overseen the development of other fund's investments in New Zealand. This will include
- facilitating the transfer to New Zealand of forestry management, operational and technical practices developed to the highest quartile standards in other offshore investments advised and managed by GFP, and
  - enabling the best manufacturers and exporters of value added forestry products to expand by entering into stable contracted supply arrangements with them, and
  - facilitating regional development strategies, and
  - continuing to develop markets, particularly offshore, so as to add value to the CHH Forest Estate and the New Zealand forestry sector, and
  - assisting the CHH Forest Estate to capitalize on the opportunities from the continued globalisation of the industry

The proposed investment meets the investment objectives of CRBF, in that the CHH Forest Estate is located in the internationally cost competitive Southern Hemisphere and is projected to generate investment returns that meet the fund hurdle rate within the desired timeframe. In addition, GFP considers New Zealand to be a good place to make forestry investments because there is extensive and established forestry infrastructure, the climate and soil suit forestry, and New Zealand's regulatory system encourages foreign investment.



<b>PART II: IDENTIFICATION OF MARKETS AFFECTED</b>
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**11. HORIZONTAL AGGREGATION**

- 11.1. GFP advises four funds owning forest interests in New Zealand. They are:
- (a) GTI6, which holds 50% of Mangakahia Forest in Northland in a joint venture, with CHH holding the other 50%, and a Forestry Right over [ ] stocked ha in the Tauhara Forest in the CNI.
  - (b) NZ1, which holds 49% of a [ ] ha forest in the Nelson/Marlborough region (including the Kaituna sawmill), with Weyerhaeuser New Zealand Inc holding the remaining 51%.
  - (c) NZ2 and NZ3. NZ3 owns nothing separately from NZ2; it is only a 25% holder of interests in two estates (Mahoe in Northland and Madaket in CNI/Southern North Island, with NZ2 holding the remaining 75%) and is administered co-terminously with NZ2 in those respects. NZ2 also owns an estate of [ ] stocked ha in Marlborough.
- 11.2. The funds are separately constituted, with different investors in each. It is not conceded that they should be considered associated in terms of the Act so as to be aggregated with the fund making this application. The ability of GFP to exert a sufficient degree of influence over the funds in legal terms so they effectively act with the same interest (in the sense required by the Act) is moot. Their only common link is GFP as adviser. Indeed, the fund documents for each of the funds (including CRBF) explicitly preclude GFP from treating the funds as if they were related entities, with the sole exception of the contractual relationship between NZ2 and NZ3. "Association" (between its 51% interest in the Nelson JV and the CHH forest it was bidding for) appears not to have been argued by Weyerhaeuser in 1999, when it sought clearance to acquire CHH's Nelson forest<sup>1</sup>. The circumstances which in that application might have made such an approach appropriate there do not apply so obviously to GFP, neither in general nor specifically in the Nelson/Marlborough region. Weyerhaeuser, as bidder for the CHH forest, was (and is) 51% owner of the Nelson JV forest, which it (via a subsidiary) also managed (and still does).
- 11.3. However, while GFP does not concede the point, a conservative approach is adopted, as if the four funds would be considered to be associated with the applicant through GFP. On either approach, given the undertaking to divest, no issues arise.

**Market definition**

- 11.4. Market definitions have been well developed by the Commission through a number of clearances in the last ten years relating to the forestry industry<sup>2</sup>. The applicant accepts, and does not repeat, underlying analyses as to relevant dimensions.

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<sup>1</sup> Decision 342.

<sup>2</sup> The latest and most relevant being Decisions 426 (CHH) and 467 (Fletcher Challenge Forests,) respectively, seeking clearance in 2001 and 2002 to acquire Central North Island Forest Partnership.

- 11.5. There will be no aggregation in woodchips and sawn timber, and on the face of it the only aggregations regionally would be in respect of the CNI, Northland and Nelson/Marlborough regions. However, given that in the CNI region the Madaket collection of forests on the fringe and the Tauhara Forest Right constitute a stocked area of only [ ] ha, the aggregation which would arise in that region is insignificant. Unless required by the Commission, the applicant does not propose to provide any further information in regard to that region.
- 11.6. Accordingly, the following market definitions are applied for the purpose of this application:
- (a) The production and supply of pruned and unpruned sawlogs, and pulp logs, in Northland, for all age periods (2006-2008, 2009-2013, 2014-2018 and 2019-2023 (being the relevant age periods from the report "Resources of The Northern Forests, June 2004" by CFK for Enterprise Northland).<sup>3</sup>
  - (b) The production and supply of pruned and unpruned sawlogs, and pulp logs, in the Nelson/Marlborough region, for the same age periods.

## 12. DIFFERENTIATED PRODUCT MARKETS

- 12.1. The applicant adopts the Commission's approach in previous decisions: although products are differentiated to some extent, they are not so differentiated as to affect the market definition.

## 13. NATURE OF DIFFERENTIATION

- 13.1. Not applicable.

## 14. VERTICAL INTEGRATION

- 14.1. There will be no additional vertical integration as a result of the proposed acquisition. The applicant falls into the (most competitively neutral) third group of large forest owners identified by the Commission in *Fletcher Challenge Forests/Central North Island Forest Partnership*, Decision 467 (paragraph 48). The resulting market structure will be an improvement over the present: to the extent wood fibre will continue to be committed to processing facilities that CHH retains, CHH will have a contractual call only on that wood fibre. In addition, as a non-vertically integrated forest owner, GFP funds have no bias towards any particular processing assets. Its incentives are to supply all comers and, where appropriate (eg Northland), promote new processing facilities to consume increasing volumes of wood fibre being produced, without favour.

## 15. PREVIOUS ACQUISITIONS AND COMMISSION NOTIFICATIONS

- 15.1. There are no previous acquisitions or notifications involving the applicant which are relevant to this proposal. Generally relevant decisions are 426 and 467 (CNIFP: footnote 2 above) and *Weyerhaeuser/Carter Holt Harvey*, Decision 342.

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<sup>3</sup> This data was chosen in preference to the 2000 NEFD because it more accurately reflects the reality of current harvest volumes and woodflows. It is, in fact, more conservative: if the 2000 NEFD was used, the regional harvest volumes would be approximately twice the level they actually are: for instance, the 2000 NEFD showed a regional harvest volume of 4 million m3 by 2002.



there is an opportunity for development of a new chip based processing facility such as MDF manufacture within the region

### **Nelson/Marlborough**

16.5. While the Commission declined a clearance in 1999 for Weyerhaeuser to acquire the CHH forest in the Nelson/Marlborough region (Decision 342), a number of distinguishing factors should be taken into account:

- (a) There is an increasingly significant movement of wood fibre across regional boundaries (ie, to and from Westland and Canterbury) so as to broaden the geographical market beyond what has hitherto been considered to be the case (or, at least, illustrate a greater degree of competitive constraint exists)
- (b) The possibility of export diversion by other log producers within the region, sufficient to constrain pricing by the merged forest owner (a significant factor to the Commission in 2002 when it gave approvals to both CHH and FCF to acquire the CNIFP forests). In 1998 (according to the Commission's 1999 decision in *Weyerhaeuser/Carter Holt Harvey*), 33% of the Nelson/Marlborough region's harvest of 1.439 million cubic metres went into sawlogs for export (ie, approximately 475,000 cubic metres), whereas now (2005 data) more than double that, approximately 1.056 million cubic metres, is exported. 456,000 cubic metres of that comes from Rayonier and other forests not associated with GFP funds, which is expected to increase at a greater rate than that which comes from Nelson JV or CHH forests in the region given the relative age profile of the relevant forests.
- (c) The need for forest owners to maintain their domestic market, to provide a hedge against the volatility of export markets.
- (d) Vertical integration in the region will be broken down insofar as CHH will only have a contractual call on fibre from the forest it is selling, as opposed to ownership. At worst, there will be no real change in the free volumes that are surplus to the Eves Valley mill requirements, available to others, and which are growing as the forest harvest increases. The same processing assets exist in the region (although there has been some increase in processing capacity), but there has been (and will continue to be) a greater increase in forest production.

16.6. However, the matter should be beyond doubt for the reasons set out in paragraphs 7 and 8 of the Executive Summary above. The Nelson JV has terminated in accordance with the provisions of its joint venture agreement.

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16.7. [

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16.8. This application for clearance is being made to address the possibility of outcomes other than 16.7 (a), to provide an appropriate context for the provision of an enforceable divestment undertaking. An undertaking to divest in terms of section 69A of the Act is attached as Appendix 2. For the reasons:

- (a) set out in 16.7 above, and
- (b) management of the Nelson JV forest is conducted by a wholly owned subsidiary of Weyerhaeuser,

no competitive issues should arise during the period of the undertaking pending either partitioning or divestment. Existing supply arrangements will continue.

## **17. CONDITIONS TO EXPANSION BY EXISTING COMPETITORS**

17.1. Significantly increasing volumes of wood from numerous regional forests means there will be surplus volumes which will move to adjacent regions to capture the operational stability offered by domestic customers. These significant increases in regional harvests apply in Northland and to a lesser extent Nelson/Marlborough.

## **18. EXAMPLES OF EXPANSION BY EXISTING COMPETITORS**

18.1. Some examples of surplus volume moving between regions include Northland pulp log and chip from the LVL mill at Marsden Point being transported to the Kinleith pulp mill in the CNI and structural sawlogs to Kopu (Thames) and Kawerau. Pruned logs from the Hawkes Bay and, increasingly, the East Coast are carted into the CNI region and pulp logs near New Plymouth are currently carted to Kinleith pulp mill.

In the Nelson/Marlborough region sawlogs have been carted into the region from Canterbury and the West Coast to Eve's Valley in Nelson.

## 19. CONDITIONS INFLUENCING EXPANSION

- 19.1. The business stability provided by domestic customers and generally rising harvest volumes in adjacent regions means forest owners will look to capture domestic market share as evidenced by the examples in 18 above. If market circumstances justify it (as has occurred in the past) forest owners will alter harvest to increase or decrease the amount of woodfibre being produced within the limits of the age class.

## 20. TIME TO INCREASE SUPPLY

- 20.1. Availability of harvesting equipment and suppliers within a region mean it is relatively easy to increase woodflows as volume and market conditions allow

## 21. EXTENT OF CONSTRAINT BY POSSIBLE COMPETITIVE RESPONSE

- 21.1. The markets will be at least as competitive and constrained as they are now but likely more so by virtue of the non-integrated ownership which will result from the divestment of the CHH forests plus the rising harvest levels within the regions generally

## 22. CONCLUSIONS ON CONSTRAINT BY EXISTING COMPETITION ON EXERCISE OF UNILATERAL MARKET POWER

- 22.1. There will continue to be strong existing competitors, in a market with very little of the vertical integration that characterised it in the past. Supply from non-integrated forest owners with incentives to sell their products to all comers will continue to increase as harvest volumes increase from maturing estates. Export volumes are very significant and projected to increase, providing opportunities for constraint from export diversion and the promotion of new onshore processing facilities.

## 23. MARKET CHARACTERISTICS FACILITATING OR IMPEDING COORDINATION

- 23.1. By virtue of:
- (a) the significant volumes of free wood,
  - (b) the large number of producers (including small woodlots aggregated by brokers) and the dis-aggregation into investment fund owners who are not vertically integrated, and
  - (c) the ease of export diversion and cross-regional woodflows in some areas,
- the market does not presently exhibit characteristics of co-ordination. Nothing will change as a result of the acquisition: if anything, these characteristics will be improved by the dis-aggregation of the last remaining large vertically integrated forest owner/processor.

**Table 1: Scope for co-ordinated market power**

Feature	Comment
<i>High seller concentration</i>	No: range of investment fund and other owners, together with large number of

	smaller competitors.
<i>Undifferentiated product</i>	Yes.
<i>Static production technology</i>	Relatively.
<i>Speed of new entry</i>	De novo forest slow, but existing estates can be harvested earlier or later as circumstances permit. Additionally, availability of harvesting equipment and crews allows rapid increase in market volume
<i>Fringe competitors</i>	Relatively high number.
<i>Acquisition of an unusually vigorous or effective competitor</i>	No. Will be improvement by disaggregation from processing.
<i>Price elastic market demand</i>	Relatively inelastic.
<i>History of co-ordinated conduct</i>	No.
<i>Countervailing power of acquirers</i>	Constrained by countervailing power of large processors, pulpwood particularly.
<i>Existence of excess capacity</i>	Yes.
<i>Industry associations/fora</i>	Yes.

## 24. CHARACTERISTICS POST-ACQUISITION AS TO MONITORING/ENFORCEMENT OF COORDINATED BEHAVIOUR

- 24.1. The same factors which do not facilitate co-ordination apply equally to monitoring/enforcement.

**Table 2: Detection of deviation from co-ordination**

<b>Feature</b>	<b>Comment</b>
<i>Seller concentration</i>	Not really.
<i>Frequent sales</i>	Yes.
<i>Vertical integration</i>	The terms for GFP funds do not permit vertical integration other than to a minimal extent.
<i>Growth in demand</i>	No, but new processing opportunities exist to take up surpluses in supply.
<i>Cost similarities</i>	Yes.
<i>Multi market contact</i>	Not in a vertical sense.
<i>Price transparency</i>	To a degree overall (ie, in aggregate), but individual agreements are not publicised.

**Table 3: Ability to retaliate**

<i>Credibility of threats to abandon collusion</i>	Over-supply and the increasing harvest age would provide incentive to deviate from any cartel.
<i>Availability of excess capacity</i>	High: significant and increasing “wall of wood”. Already large surpluses in Northland, and growing in Nelson/Marlborough.
<i>Profit incentive from collusion</i>	Low because of multitude of suppliers with undifferentiated log products
<i>Ability to disadvantage by dumping in deviator’s allocated section of market</i>	Straightforward due to supply significantly exceeding demand domestically.

**25. EVIDENCE OF PAST OR CURRENT COORDINATION**

25.1. The applicant is not aware of any past or current co-ordination.

**26. CONCLUSIONS ON CONSTRAINT BY EXISTING COMPETITION ON COORDINATION**

26.1. There is no evidence to suggest that the markets, which presently are not co-ordinated in these terms, will become so post-acquisition. If anything, market circumstances will be less conducive to such behaviour and the conclusions of the Commission in *Fletcher Challenge/CNIFP* must apply even more strongly in the current and post-acquisition market landscape.



PART IV: CONSTRAINTS ON MARKET POWER BY POTENTIAL COMPETITION
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The applicant believes that constraint imposed by the conduct of existing competitors would be sufficient to ensure that competition is not likely to be substantially lessened in any market, and therefore chooses not to answer any further questions at this stage.

**This Notice is given by:****GFP as investment adviser to, and for and on behalf of, CRBF Limited**

GFP hereby confirms that:

- all information specified by the Commission has been supplied;
- all information known to the applicant/s which is relevant to the consideration of this application/notice has been supplied; and
- all information supplied is correct as at the date of this application/notice.

GFP, for and on behalf of CRBF, undertakes to advise the Commission immediately of any material change in circumstances relating to the application/notice.

Dated this 29<sup>th</sup> day of August

Signed by Michael J Edgar



Director of Asia Pacific Investments

I am a director/officer of GFP and am duly authorised to make this application/notice.

# **Resources of the Northern Forests**

**June 2004**

**Prepared for the**

**ENTERPRISE NORTHLAND  
FORESTRY DEVELOPMENT GROUP**

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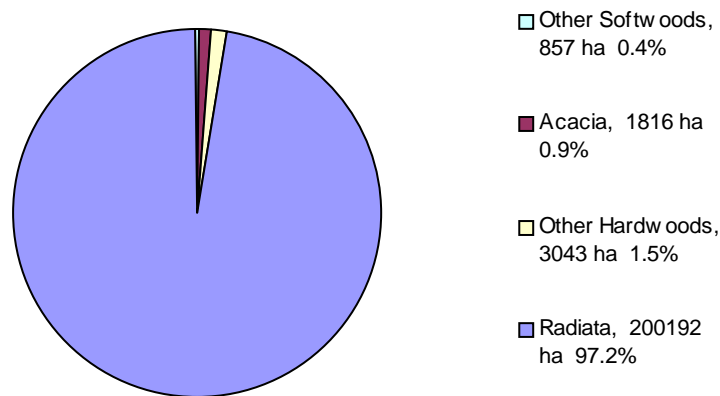
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# 1. RESOURCE

## 1.1 Species/Area/Location

The forest plantation resource in Northern Area – defined, as Rodney, Kaipara, Whangarei and Far North District Council areas - is mainly *Pinus radiata*. (97% of total @ 200000 hectares)

**Fig 1: Northland Plantation Resource**



*Source: 2002 NEFD and Industry sources*

Other hardwoods are primarily Eucalyptus and Acacia species.

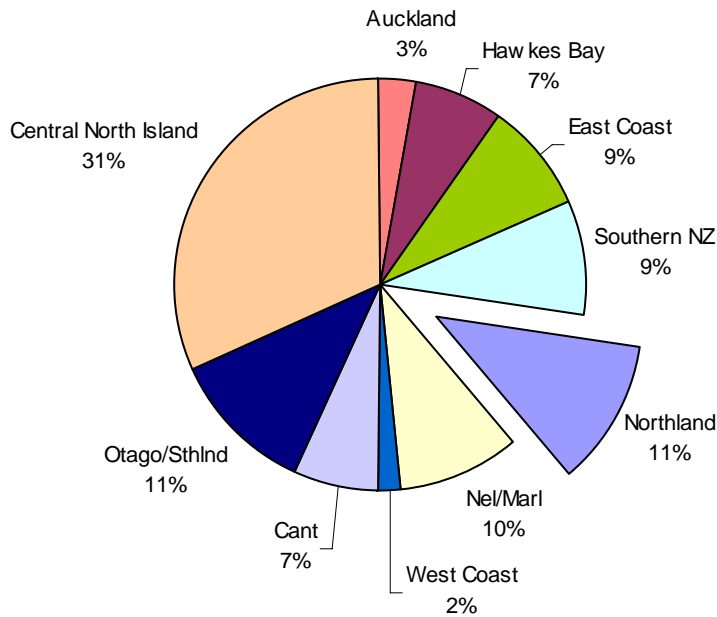
The Acacia is the Marusumi pulp crop programme which continues to expand utilising *A. mernsii* (85%) and *A. dealbata* (15%). Harvesting is scheduled to commence in 2005 at around 50,000m<sup>3</sup> pa.

Other softwoods includes Cupressus species.

The area in species other than radiata may well increase in future, but currently represents a very small proportion of the Northland estate. This report deals in particular with the existing resource and is therefore focused on radiata.

Northland contains approximately 11% of New Zealand's radiata resource.

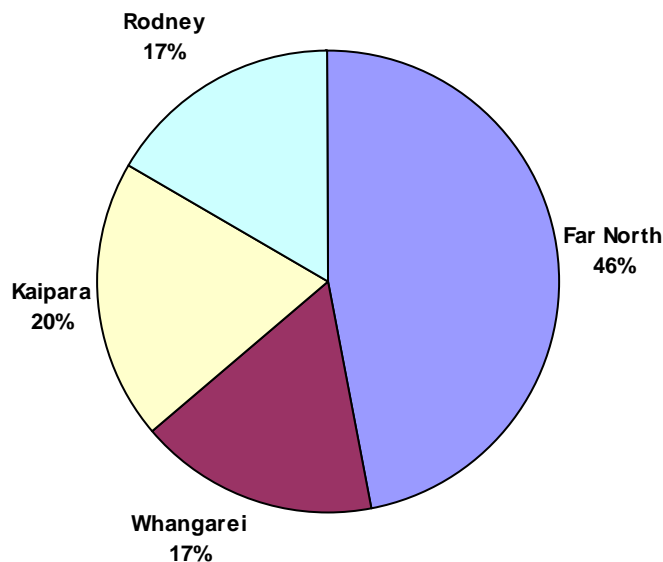
**Fig 2: New Zealand Radiata Resource**



The resource is spread throughout the Region, as is shown in Map X. (FIEA Map)

Almost half of the Northland plantation estate is in the Far North District Council area.

**Fig 3: Northland Resource By District**



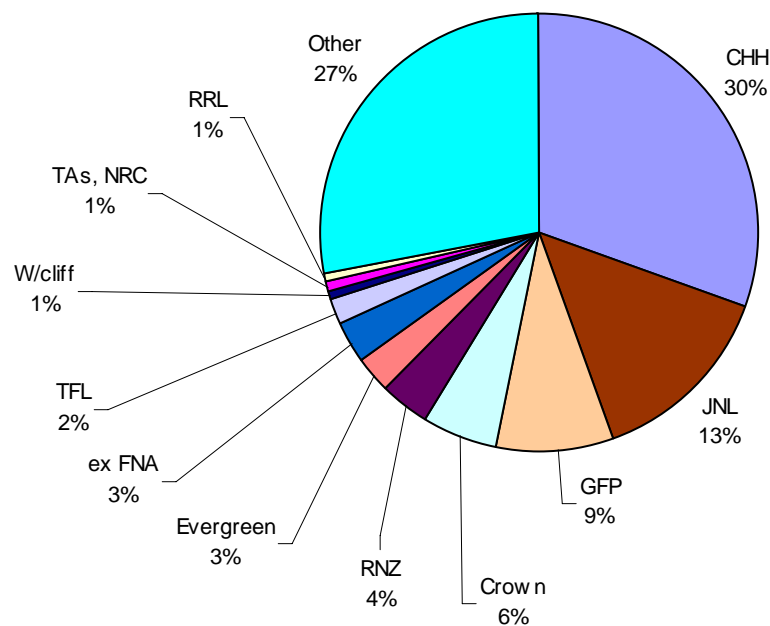
There are no distinct supply zones in Northland. Logs from forests in all Districts are transported to Marsden Point (export and LVL plant) and to mills in Whangarei and other towns.

Logs are also sold to mills outside the region, particularly from forests in the south such as Woodhill and Riverhead.

## 1.2 Forest Ownership

Forest ownership is diverse and ranges from large corporate forestry companies to individual woodlot owners. The corporate foresters own the bulk of the resource. Carter Holt Harvey Forests (CHH) is the largest single owner with approximately 30% of the estate.

**Fig 4: Northland Resource By Ownership**



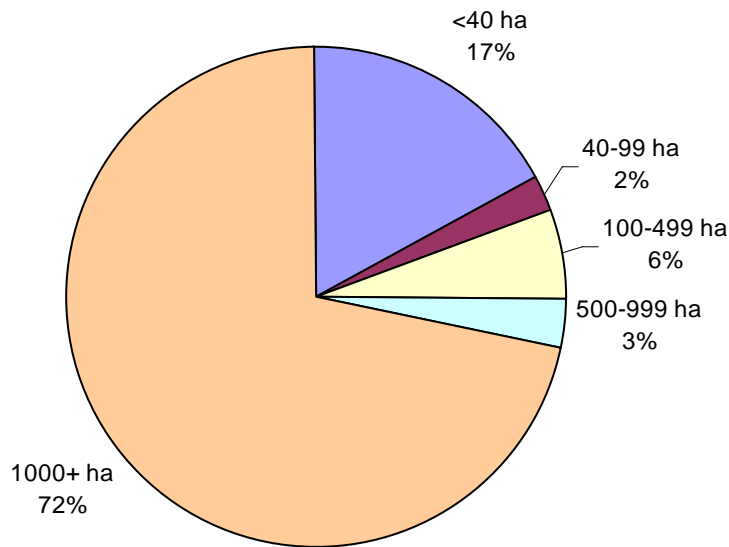
In recent years there has been increasing forest ownership in New Zealand by offshore investment funds. The most recent of these are the sales of the large Central North Island Partnership forests and the Fletcher Forests entire estate. In both cases the buyer is, or is backed by, an American investment fund. Northland is no exception to this trend. In 2001, Funds managed by Global Forest Partners LP (GFP), formerly UBS Timber Investors, purchased 50% of the Mangakahia Forests from Shell Renewable Resources. The other 50% of Mangakahia Forests is owned by CHH. Mangakahia Forests is managed by CHH on contract.

In the above ownership pie chart, the 50% of Mangakahia Forests owned by GFP companies is included as GFP area, and is added to their former Northland estate.

Similarly to New Zealand as a whole, almost  $\frac{3}{4}$ 's of the resource is owned by organisations with at least 1,000 hectares.



**Fig 5: Northland Resource By Ownership Size**

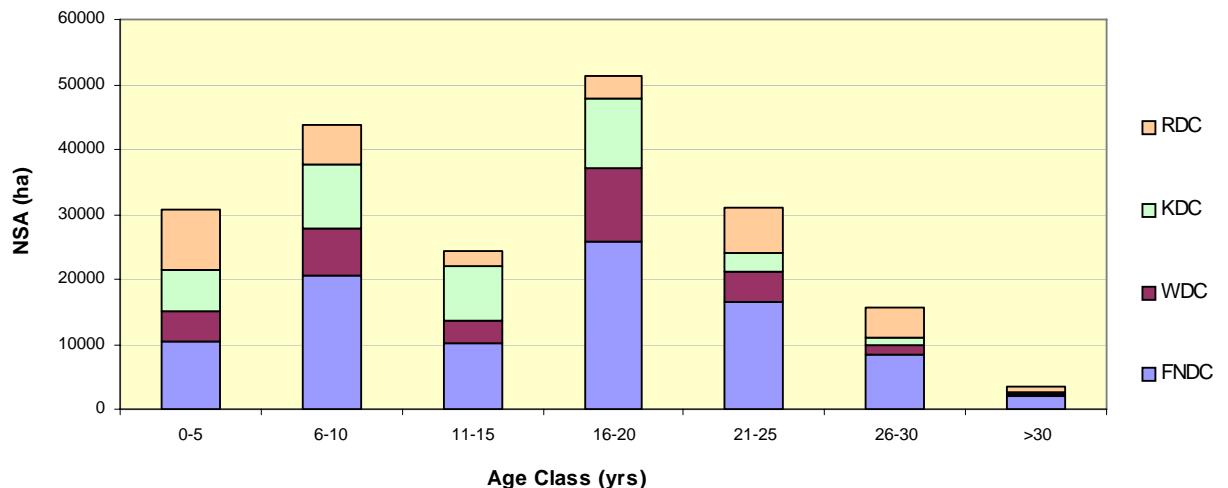


The second largest ownership entity is small woodlot owners; the individual holdings of whom may be small but combine to make up 17% of the estate.

### 1.3 Age Class

The age class distribution shows a large area of forest is approaching maturity – that is, aged 16-25 years. This area equates to an average annual harvest programme over the next 10 years of approximately 8,000ha (4 to 4.5 million m<sup>3</sup> of logs pa).

**Fig 6: Northland Radiata – Age Class Distribution**



## 1.4 Wood Quality

Radiata pine is a general-purpose wood suitable for a wide range of end uses including structural timber, packaging, plywood and veneer, furniture, joinery, posts, poles, reconstituted panel products, and pulp and paper.

Its strengths include:

- Versatility – range of uses to which it can be applied.
- Ability and ease with which it can be preservative treated for protection against insects and fungal decay.
- Desirable working properties for mouldings and furniture components
- Good fibre properties for making pulp, paper, and other reconstituted products.

It is, in general, of medium strength and stiffness which makes it less attractive for structural end uses in comparison to higher rated species such as Douglas fir.

For processing, the principle wood properties are:

**Tab 1: Radiata Pine Wood Properties**

Parameter	Property	Characteristic
Density	Medium to low basic density	Comparatively light and soft, reasonably strong, easily penetrated by preservatives
	Variation with site	Density increases with tree age and mean annual temperature.
Texture	Contrast between early- and late-wood is not excessive	Comparatively even texture and so easy to slice, peel, mould, turn, sand, plane, glue, stain, and paint.
Colour	Creamy colour	Easy to stain and hence particularly suitable for furniture and joinery.
Fibre length	Species variation	Impacts on potential uses (eg fine papers requires species with shorter fibres than radiata) and pulp yield. Makes good newsprint paper. Fibres (tracheid length) increases out from the pith.
	Regional variation Within tree gradient	
Durability	Susceptible to decay due to fungal and insect attack.	For long term use, it must be dried and kept dry or chemically treated. It is easy to penetrate with preservatives.
Juvenile wood	Limited potential uses	Large microfibril angles, high spiral grain, short tracheid length, low density. Properties are favourable for some paper grades. Significance reduced by harvesting trees on rotations longer than 25 years.
Heartwood	Typically low content	Heartwood is dark, resinous, and starts to develop at around age 10 years. Although not a particularly positive attribute, at typical harvest ages (25-28 years) it is not a prominent feature.
Branches	Persistent	Branches do not shed naturally. Production of knot free timber requires pruning or cutting short lengths from between the branch whorls. Long lengths and clear boards can be produced from large diameter pruned logs.
Site Response	High variability in physical properties requires careful assessment.	Radiata responds to site and silvicultural regime, and varies with age and genetics.

Northland is characterised by wood of comparatively high density and short internodes. It is the best region in New Zealand for the production of strong, stiff

framing timber and other products such as structural plywood and laminated veneer lumber, where strength is important, and for high-tear strength kraft paper grades.

A regional strategy should aim to maximise the advantages of higher wood density through the production of structural timber and other engineering products. There is an obvious opportunity for new fibre industries where, again, the high wood density will have advantages in both properties and yield efficiencies.

Resin pockets and streaks downgrade timber quality, particularly appearance grades. In Northland, the incidence of resin pockets is low (<20/m<sup>3</sup>) compared to problematic areas such as Canterbury. The cause of the occurrence of resin pockets is not well understood, and hence their presence is difficult to predict. One current processor has identified resin pockets as an issue, and their experience is that there is considerable variability from forest to forest.

Further description of wood quality is attached as Appendix 1.

## **1.5 Environmental Certification**

Environmental certification provides verification that the produce has come from a sustainable managed resource. Increasingly, certification is becoming a right of entry for processed products into markets such as the USA and Europe.

New Zealand standards for environmental certification of plantation forests are currently under development.

In Northland only Evergreen Forests and JNL have certification for their forest resource. Evergreen recently achieved FSC certification; JNL have ISO14001 certification.

## **2 PHYSICAL ENVIRONMENT**

### **2.1 Physiography**

There is considerable variety in the land types upon which the forests have been established, ranging from flat to easy rolling coastal sands, to short steep dissected clay hills. The ability of the range of sites to sustain tree growth is also very variable. The soil types vary from those with low nutrient status - the strongly podzolised clays that are particularly deficient in phosphate, and the nitrogen deficient recent coastal sands – to the comparatively fertile clays which sustain some of the most rapid growth to be achieved anywhere in New Zealand.

In general, the poorer sites tend to produce slower growth rates but finer branching habits.

## **2.2 Terrain / Soils / Harvesting**

The technique utilised to most efficiently harvest the resource depends largely on topography and soil type.

Where the slope of the land allows, ground based harvesting using wheeled or tracked machines is the most cost effective. The free draining nature of the sand forest allows for relatively inexpensive all-weather mechanical harvesting. However, clay soils are susceptible to compaction by heavy machinery when wet, restricting machine type and adding cost. At present, ground based harvesting ranges from motor manual to fully mechanised systems.

On hilly land, a variety of cable harvest equipment and systems are utilised depending on the tree size, and the length of and shape of the slope. In general, cable systems are less flexible, require a more highly skilled work force, and considerably higher capital investment. They are therefore, more costly than ground based systems. The availability of crews and specialist systems has been limited in the past by the lack of continuous demand for equipment with a narrow range of optimum operating conditions. The increasing harvest provides the potential to offer more continuous use of such equipment and skilled workers.

The combination of steep, unstable slopes, clay soils, and increasingly frequent and significant weather events (e.g. heavy rain and strong winds), will impact on the year round supply of logs. Whilst the larger forests can minimise the potential impact of this, harvesting of smaller forests and woodlots will tend to be confined to drier (summer) months.

## **3 INFRASTRUCTURE**

### **3.1 Transport**

#### ***In Forest***

Much of the resource is first rotation. In most situations, therefore, harvesting requires significant new road and landing construction. The exceptions to this are most of the sand forests where production thinning and clearfelling operations have left the forests reasonably well roaded.

Where the forests are growing on hill country sites with soils that are not well drained, road cuts and fills can be prone to slipping and slumping. Often the slopes are short and convex which generates the need for relatively high roading densities. Having to build relatively high road distances in poor substrate results in high roading costs compared to the more established forestry areas within the country.

In general, road metal supplies are adequate. However some areas, such as Pouto and the North Hokianga, face significant metal costs due to the lack of a local supply. Where this problem is combined with an inadequate substrate (poorly drained clay soils) roading costs will be at the high end of the scale.

### ***Off Forest***

The current state of the region's roading network and the changes required to meet the needs of the developing forest industry are covered in the Northland Integrated Transport Study (GHD, March 2002). Key points of the report include:

- recognition that the roading network needs improvement;
- whenever possible, separate local from tourist traffic;
- retain the existing rail network;
- Mangakahia Road and Otaika Valley Road become the primary route for heavy traffic to and from Marsden Point;
- a rail link from Oakleigh to Marsden Point is provided by 2005;
- a Hokianga bridge is completed by 2005; and
- a western route to Kaitaia via Papinga and the Kaitaia/Awaroa Roads be upgraded.

Following the study, action has been rapid, at least with respect to roading in some areas. Central government is currently funding approximately \$12 million per annum for roads with heavy forest product usage – Regional Development Roding Fund (RDRF) projects. It is proposed the RDRF programme is to continue for some years.

### **3.2 Energy**

Electricity requirements for wood processing industries vary hugely depending on the particular process. The purpose of this section is to briefly outline the electricity infrastructure in Northland, and to identify the main issues.

#### ***Organisation***

The electricity supply industry in Northland consists of:

- Transpower, a State owned enterprise, operates the National Grid. It delivers electricity through 110kV and 220kV lines to Grid Exit Points (GXPs).
- Lines companies are then responsible for the distribution network from the GXP to consumers. However, a large industry may deal directly with Transpower for a direct supply. The lines companies are:
  - Top Energy – basically covers the Far North District Council.
  - North Power – Kaipara and Whangarei District Councils.
  - United Networks – Rodney District Council. (The network is owned by Vector Limited, trading as United Networks).
- Electricity is purchased through one of the competing energy retailers.

## *Transmission*

The Main Grid electricity supply for Northland originates at Henderson (West Auckland) where it links Marsden Point by way of a 220kV line, and Maungaturoto by way of a 110kV line. There are transmission constraints through Auckland which in effect reduce the security of supply at peak load times. (The security of supply is constrained by having two circuits on one tower line – if a tower is lost, all power to Northland is lost, regardless of load at the time. Capacity is also a constraint and Transpower are in the process of upgrading the lines)

The ability of the existing network to supply a wood processing facility will depend on the specific demands of the particular process and its location. Rural distribution networks have limited capacity and large point loads may not be easily supplied without reinforcement to the network. Load demand, security and quality of supply, and co-generation potential/capacity at the processing plant are all important considerations in external electricity supply.

Quality of supply generally refers to voltage fluctuations, which can include daily fluctuations with network load sags/surges which are often the result of faults, network switching, lightning etc. Also with the common use of large power electric devices, such as modern motor speed drives, harmonics may be an issue.

Quality of supply generally refers to voltage fluctuations, which can include normal fluctuations with network load sags/surges which are often the result of faults, network switching, lightning etc. It can also refer to the frequency of actual power outages. With the common use of large power electric devices, such as modern motor speed drives, harmonics may be an issue.

The more stringent the supply requirements, the more significant the plant location or transmission issues (costs) may become. For example, the cost of a backup supply could be lower than the cost of a two hour outage for a facility with a continuous process which is highly sensitive to electricity supply.

Large industries generally pay electricity distribution costs on the basis of the capital required to meet their supply requirement plus their share of the Transpower transmission charges. That is, large new connections have an up front connection charge plus on going line charges (which include transmission charges) from the lines company. The further a facility is located from the existing infrastructure, the greater the capital cost of providing supply.

The current infrastructure could only support a major processing plant, such as an 800,000 MWh pulp mill, at Marsden Point, and even there the substation would need extending. In Northpower's area, the transmission network is strongest in the Marsden Point area, followed by the Maungatapere/Whangarei city area. It is weakest at Dargaville, where a large increase in load would require upgrading of the transmission lines back to Maungatapere.

In the Top Energy area the maximum capacity is available in the Kaikohe area adjacent to the Transpower Connection and the Ngawha Power station.

In summary, the cost of electricity supply to any proposed location will depend upon the specific requirements of the facility and the ability of the existing transmission and distribution networks to meet those requirements.

### ***Generation***

Electrical energy is most efficiently utilised close to the point of generation as all transmission involves energy loss.

Top Energy has a 10 MW geothermal power plant at Ngawha which has an annual output of 85GWh, roughly 35% of the Far North current requirement. Top Energy currently has a larger plant awaiting resource consent which will raise output to 25MW. The annual output from Ngawha would then be close to the current total Far North requirement.

Northpower has a small hydro near Titoki with a peak output of 3.6 MW and an annual output of 20-25 GWh.

A large industrial plant with integral combined cycle generation can produce synergies in conjunction with local distribution companies.

There are other parties considering wind powered generation.

### ***Price Volatility***

Electricity price volatility is a major concern for industrial processors in New Zealand. There are recent examples, such as Pan Pac Forest Products in Hawkes Bay, where production has been stopped due to the sudden increase in electricity costs. Increased local generation and long term supply arrangements offer possible mitigation.

### ***Summary***

The requirements of a specific wood processing facility, the existing transmission infrastructure, the risk profile of the process to electricity supply, and potential advantages of co-generation will all need to be considered in the planning process for the development of the facility.

## **3.3 Water**

There is a wide range in the potential requirement for water depending on the type of processing. Some wood processing plants require significant supplies of water. For example, an MDF plant may require approximately 1m<sup>3</sup> of water per m<sup>3</sup> of finished product. A plant with an annual production of 200,000 m<sup>3</sup> will therefore require 200,000 cubic metres (m<sup>3</sup>) of water per annum. Water quality is not so important as there is technology to resolve fresh water quality issues, and to some extent quantity issues.

By comparison with many other parts of New Zealand, the water available from surface water in Northland resources is relatively limited, particularly during “dry” periods. Where river water is inadequate to meet demand, alternative water sources such as dams and reservoirs may have to be developed. More effective ways of utilising existing water sources may also need to be considered, including strategies to harvest water at high river flows for use during periods of high demand and low availability. Avoiding wastage will also be an important consideration.

There is heavy demand for water in some areas, and some rivers have little or no potential for further water draw-offs. Where a plant requires in the order of 200,000 m<sup>3</sup> per year (equivalent to an instantaneous rate of taking of approximately 6 litres per second (L/s) over the entire year), abstraction would generally be limited to “larger” rivers with mean annual low flows greater than approximately 60 L/s. This would therefore exclude many of the small coastal catchments, which are fed by smaller first and second order streams. Closer examination of water allocations within some of the larger catchments would also need to be undertaken as some catchments are either “fully allocated” or “heavily allocated” and may be unable to support any further significant abstractions (e.g. Kerikeri River, Mangere Stream).

A further water source that may be considered would be groundwater abstraction. Some areas of Northland have a good supply of groundwater, however pressure on this resource has increased in some areas in recent years.

To establish a secure water source, a combination of “run of stream” as well as supplementary storage is recommended. This practice has been utilised by other large industries in Northland not supplied by the local territorial authority (e.g. Fonterra Kauri Dairy Factory).

## **4 SOCIAL, ECONOMIC AND POLITICAL ENVIRONMENT**

### **4.1 RMA and Planning**

Under the Resource Management Act 1991 (RMA), Regional Councils are responsible for the management of air, water, soil and coastal resources. In addition, District Councils are responsible for the sustainable management of natural and physical resources in providing for the well being of the people in their Districts.

The Far North, Whangarei and Kaipara Districts are in the Northland Regional Council area. Rodney District is in the Auckland Regional Council area.

Resource Consents from the relevant Regional Council are generally required for activities that have an adverse effect on the environment. A Resource Consent is a legal authorisation allowing the holder to use or take resources, or discharge water or wastes into air, water or onto land, including undertaking activities within the coastal marine area.



Resource Consents include conditions that are designed to ensure that any adverse effects that may result from an activity are avoided, remedied or mitigated. A Resource Consent is not required for Permitted activities. However, a Permitted activity may require compliance with a range of conditions or criteria. If these cannot be complied with, then a Resource Consent will be required.

A Resource Consent may also be required from the relevant District Council if the land use is not a Permitted Activity under the District Plan.

In light of the analysis in Appendix 2 it is possible to draw some preliminary conclusions about the resource consent requirements for a timber processing plant within the region (see Table 3.2).

The Resource Management Act states that resource consent applications should be publicly notified unless:

- the consent authority is satisfied that the adverse effect will be minor; and
- written approvals are secured from effected parties.

As a guide, the following processing times (after lodgement of applications) are indicative for planning purposes for resource consents. These times are based on experience and are not minimum time frames specified within the Act:

- Non-notified applications: 3-5 months.
- Notified applications: 8-12 months (excluding Environment Court appeals).

It is highly probable that any significant new processing facility will be either non-complying or discretionary. The latest new plant in Northland was CHH's LVL plant at Marsden Point. The various activities for which consents were required from the NRC for this development were either controlled or discretionary. And the land use consent from Whangarei District Council was discretionary under both the Proposed and Transitional District Plan. The time from application to attainment of the Resource Consent was approximately 12 months.

Forest harvesting has been occurring in the ARC and NRC areas for many years and unless there is a departure from recent processes, no major issue will impact on the ability to harvest. However, there is currently considerable concern over the implementation by the ARC of their guidelines for erosion and sediment control. ARC's technical publication TP90 was initially designed for urban subdivisions. Application of this to the forest situation, and rules rather than guidelines, is causing forest owners considerable concern. No such implementation is proposed by the NRC.

Note that any proposed development which requires the approval of both the NRC and the relevant District Council should be processed together so that the full implications of the development are apparent. This will minimise overall consent processing time.



**Tab 2: Summary of Planning Constraints for Timber Processing Plant in Northland**

Consent Type	Far North District Council	Kaipara District Council	Whangarei District Council	Rodney District Council
Land Use	Few limits on availability of land for industrial development with both the industrial and general rural zones having potential sites.	Relatively small parcels of land are available within the industrial zone (<2ha). Some allowance is made for timber processing within the Rural Zone as a discretionary activity.	Industrial activity is possible within Business Zones 2 and 4. Council is currently taking action to increase the amount of available land within both zones at Marsden Point. Some timber processing activities are not permitted activities and environmental standards are generally higher in Zone 2.	There is land available within the proposed industrial zone at Helensville, Kumeu, Warkworth, Wellsford and Silverdale.
	Activities that do not comply with environmental standards will fall into controlled, restricted discretionary or discretionary depending on which standards are not met.	Activities that do not comply with environmental standards within the industrial zone would be either restricted discretionary or discretionary depending on which standards are not met.		
	Regional Council Consent Requirements			
Coastal	Coastal consents will only be necessary if it is proposed to discharge waste water to the coast, take sea water or to erect structures within the coastal marine area (e.g. pipelines). In general, these are discretionary activities and are likely to require public notification (especially any discharge consent).			
Land Disturbance	Consent may be required given the volume and scale of earthworks. If these exceed 5000m <sup>3</sup> in any 12 month period or roading / tracking exceeds 200m in length, discretionary consent will be required. A minor to moderate exceedance may be processed on a non-notified basis if neighbour consents are secured.			
Discharges to Land or Water	Waste, cooling water and storm water discharges may all require resource consents. Cooling water and storm water discharge may well qualify as permitted if strict performance standards are met. Likewise non-notification of a 'waste water to ground' consent is conceivable if carefully assessed, designed and managed. However, this would depend on the volumes and the nature of the discharge and receiving environment.			
Discharges to Air	Discharges to air may be minor, qualifying as permitted activities. However, resource consents will be needed if threshold volumes are exceeded, for example, if kilns are installed. The scale of exceedance will influence the decision on notification status.			
Water Take	A minor take (less than 10m <sup>3</sup> per day and 5 litres per second) is permitted. Beyond this discretionary consent is needed. The likelihood of notification increases with volume.			

## 4.2 Labour

Forestry is a significant employer in Northland. In 2000, approximately 1,550 people were directly employed in the Northland Forest Industry, of which 56% were in forestry and 44% in forest products processing (Statistics New Zealand 2000). These figures will have significantly increased since then.

Unemployment in Northland is around 8% of which 50% do not have formal school qualifications.

Recruitment and retention of experienced personnel is an issue for the forest industry. Local mills report having difficulties getting skilled staff, and expansion is, therefore, limited by the availability of appropriately qualified personnel.

Similarly, recruitment and retention is also a major issue for harvesting. In New Zealand, and especially in Northland, the economics of harvesting are dependent on export demand and prices. Changes in log prices, demand, or costs, especially for export grades, can have immediate impacts on continued harvesting. Examples of this are the 'Asian crisis' in 1998 and the recent significant reduction in harvest by CHH.

The frequency with which there have been sudden changes in the harvest volumes, and hence the opportunities for harvesters, has led a number of experienced loggers to move away to other industries or areas. Historically, when harvest activity has increased again, some of these loggers have returned, but many are lost to the industry.

Forest Industries training is available from various sources. Enterprise Northland commissioned a survey of forest industry training in Northland, which was completed in July/August 2003. The draft survey report provided recommendations for forest industries training including:

- increase the number and quality of trainers and assessors;
- provision of a wide range of short courses to facilitate access on a progressive basis;
- offer training during normal working hours and on-site;
- monitoring of courses to ensure training is at the appropriate level;
- review the ratio of theoretical to practical training to ensure it is appropriate to the course; and
- strict monitoring of trainees, including sporadic and independent drug testing.

The survey identified that poor personal skills – bad attitudes, lack of discipline and motivation – literacy, numeracy and communication skills, are causing low retention of personnel.

The industry must attract and retain motivated people. The survey further recommended that to attract young and enthusiastic individuals, the image of the forest industry and the awareness of career options need to be improved.

## 5 PROCESSING AND MARKETS

As New Zealand harvest volumes have increased rapidly over the last decade, the industry has responded by developing export markets. The most rapid growth has been in log exports. The following sections review the current processing and markets.

A diagrammatic representation of log making and utilisation is attached as Appendix 3.

A summary of processing in New Zealand is attached as Appendix 4.

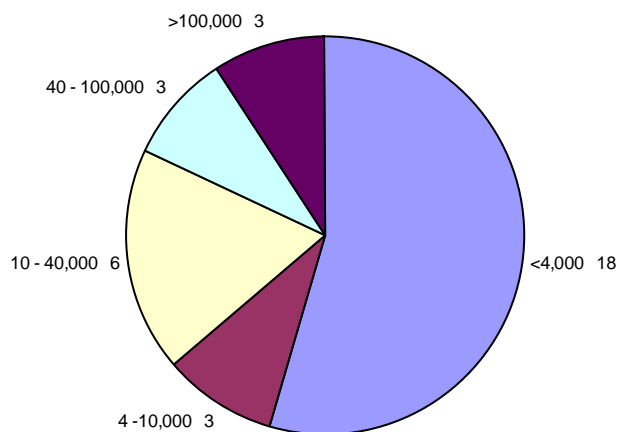
### 5.1 Northland

#### *Primary Processing*

There are approximately 33 processing plants in Northland. These consist of 1 LVL plant, the integrated sawmill/veneer mill/Triboard facility in Kaitaia, 2 roundwood/sawmill facilities, 1 chip mill, and 2 roundwood plants, with the remainder being sawmills.

Almost half of the sawmills produce less than 1000m<sup>3</sup> (s) pa. These small mills variously cut pine, eucalypt, macrocarpa and native species.

**Fig 7: Northland Primary Processing Plants By Log Intake**



*Source: MAF and CFK research*

Two companies, TDC and CHH have plans to substantially increase their processing capacity to world class scale. TDC is in the resource consent process to construct a large new sawmill, with staged expansion to eventually increase log intake to approximately 700,000 m<sup>3</sup> pa.

CHH has carried out planning and initial design for construction of a new mill (BigFoot project) at Marsden Point. However, no formal decision to proceed has been made. The plan is for the mill to process a range of log grades, and be of a similar scale to TDC's plans.

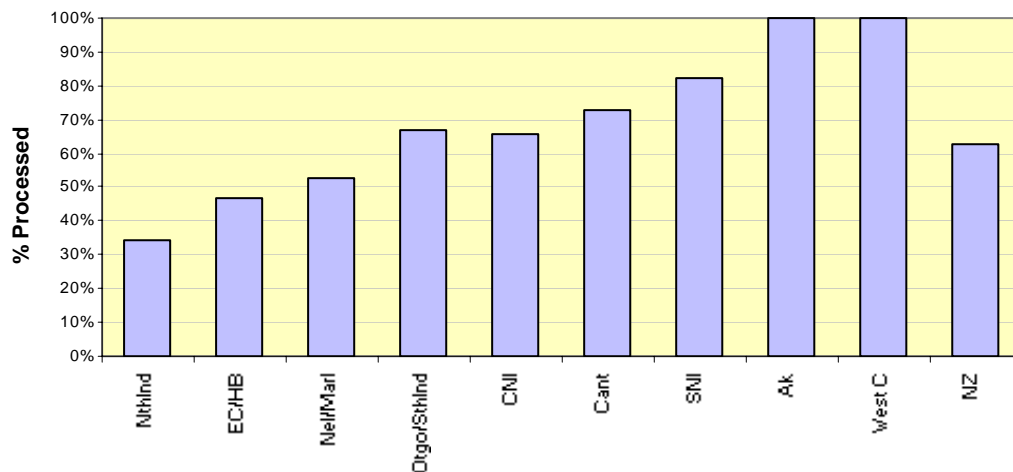
The more significant primary processing plants, including the TDC planned expansion, are described in Table 3.3.

JNL and the CHH LVL mill are the only processors that export almost all of their production. The CHH LVL plant produces LVL primarily for structural construction, concrete formwork, and scaffolding. Currently 90% of production is exported to Australia, Saudi Arabia, United Arab Emirates, USA, Japan, Taiwan, South Korea, and China.

Most of the product from the other processors is sold into the domestic market. Some of the product sold domestically is exported via secondary processors. Auckland is the destination of most of the domestic product.

MAF statistics indicate that Northland has the lowest proportion of primary processing relative to total harvest removals of any region in New Zealand.

**Fig 8: Proportion Of Harvest Removals Processed**



Source: MAF, Forest Statistics

The volume of logs sold to mills outside of Northland will increase the proportion processed, but not substantially.

**Tab 3: Northland Primary Processing**

Name	Location		Log Grade Mix				Log Intake (000m <sup>3</sup> r pa)								
			Prnd	S1/S2	A,K	S3	KI	Pulp	Total	Prnd	S1/S2	A,K	S3	KI	Pulp
Juken Nissho	Kaitaia	Triboard facility Sawlog sawmill Pruned log sawmill Veneer mill	Immaterial to Strategy as all grades are processed on the Kaitaia site.				400	Not included in Strategy volumes							
Kaitaia Timber Co.	Kaitaia	Sawmill	30%	70%			60	18	42						
Timber Enterprises	Kaingarua	Sawmill	90%	10%			5	5	1						
Collins Bros	Kerikeri	Sawmill				100%	8				8				
Bay Lumber	Kerikeri	Sawmill		100%			3		3						
Mt Pokaka	Kerikeri	Roundwood, Sawmill				30%	20%	50%			16	11	27		
Grand Pine Enterprises	Moerewa	Sawmill			100%					20					
Kaihu Valley Sawmills	Kaihu	Sawmill		33%	33%	33%			5	5	5				
Croft Timber Co	Opuawhanga	Roundwood, Sawmill				90%		10%			36			4	
Herman Timber	Hikurangi	Sawmill			100%					8		8			
TDC – large log line	Whangarei	Sawmill	20%	80%					40	160					
Rosvalls	Whangarei	Sawmill	80%	20%					40	10					
Marasumi	Portland	Chip mill						100%						70	
CHH LVL	Marsden Point	LVL		40%	35%	25%				64	56	40			
Northpine	Waipu	Sawmill	50%	50%					10	10					
Kaipara Pine	Topuni	Roundwood				90%		10%			16			2	
<b>Total Existing (excluding JNL)</b>									<b>730</b>	<b>113</b>	<b>294</b>	<b>89</b>	<b>121</b>	<b>11</b>	<b>102</b>
TDC – New Sawmill	Whangarei	Resource Consent Process		35%	35%	25%		5%			245	245	175		35
<b>Total Existing and Planned (excluding JNL)</b>									<b>1,430</b>	<b>113</b>	<b>539</b>	<b>334</b>	<b>296</b>	<b>11</b>	<b>137</b>

### *Secondary Processing in Northland*

In addition to the primary processing, there are several plants in Northland which undertake secondary processing which is either a product for the consumer or for a client who uses the product in a further manufacturing process (e.g. making furniture). The secondary processing plants in Northland are set out in Table 3.4.

**Tab 4: Northland Secondary Processing**

<b>Name</b>	<b>Location</b>	<b>Processes</b>	<b>Intake</b>	
Cains Timber Co	Whangarei	Finger jointing, LOSP, dehumidifier/kiln, 4 sider planer/moulders, beam press, profile grinder	Rough sawn timber – clears, No1 framing for beams	Glulam cus
Legacy Timber	Whangarei	Docking saws, panel saw, sanders, 4 sider planer /moulders, edge glue laminating press,	Approx 7,000m <sup>3</sup> pa rough sawn timber	Solid wood primarily for ex larger panels fo
M & M	Whangarei / Ruakaka	4-sider planer/moulder, finger-jointer, docking saw, recutting band saw, LOSP	Approx 5,000m <sup>3</sup> pa rough sawn timber	Cut to leng weatherboards, market. P
Collins Bros	Kerikeri	4-sider planer/moulder, Boric.	Sawn timber from their sawmill	Primarily pro
Rosvall	Whangarei	Kilns, 4-sider planer/moulder, finger jointer, machine stress grader (not used), frame and truss plant.	Sawn timber from their sawmill	
Kaitaia Timber Co	Kaitaia	Planer, CCA and Boric treatment	Sawn timber from their sawmill	Framing and
Tristyle International	Awanui	Re-saw, 4-sider, kiln, production of kit-set homes	Green sawn timber, framing timbers, plywood, polyurethane foam, house components – to carpets.	Kitse

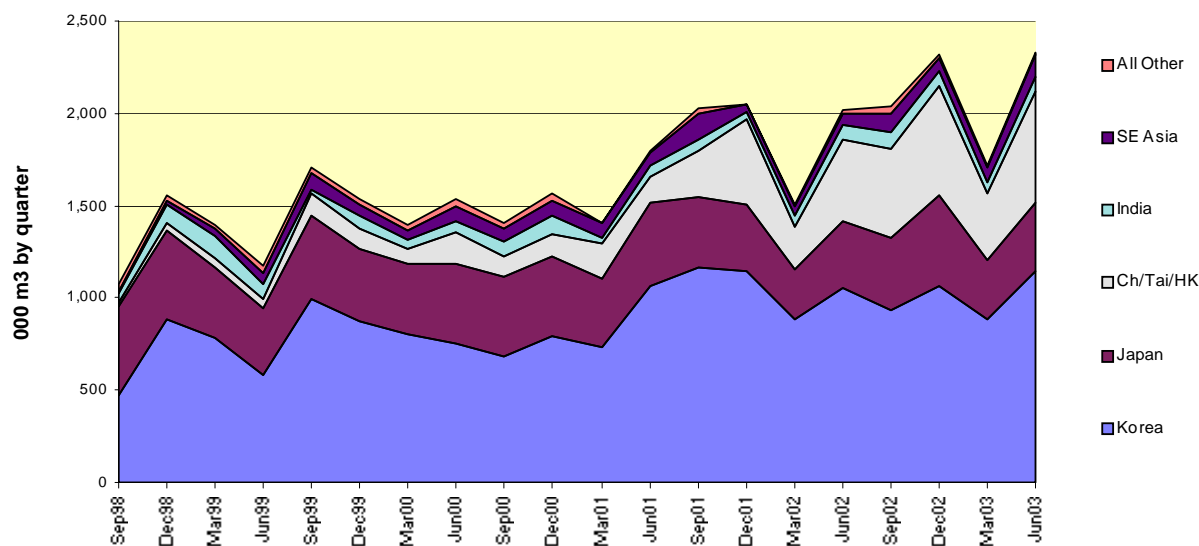


## 5.2 Log Exports

Log exports are a major market for forest products from New Zealand. In the last 5 years, this trade has almost doubled from 4.8 to 8.0 million m<sup>3</sup> pa.

The principle destinations are Korea, China and Japan.

**Fig 9: Log Exports From New Zealand**



Volume into Korea has increased steadily while into Japan it has shown a gradual decline. The main growth market has been China.

Log exports have and will continue to be a significant market sector for logs. The primary export grades are larger branched logs (A,K), KI and pulp. The export log trade is considered in Section 4.1. The higher quality, small branched sawlogs generally go into the domestic market, depending on price.

Northland's log export trade is a close reflection of the national picture. For the YE June 2003, almost 1.3 million m<sup>3</sup> was exported.

## 5.3 Environmental Certification

The only processing plant in Northland with environmental certification is the JNL facility at Kaitaia, which has ISO 9001 certification.

## **6 WOOD FLOW**

The Northland radiata pine resource will produce annual wood flows across a variety of grades. The year by year quantum of this wood flow will depend upon the timing of harvest which, in turn, will vary according to economic conditions, and other pressures, of the day. When future wood flows are projected assumptions concerning age of harvest that must be made mask these year on year fluctuations.

For the purposes of this document, volume flows are presented as annual averages over 5 year periods.

The following wood flows are based upon:

- wood flow data supplied directly by forest owners;
- yield data supplied by forest owners and converted to wood flows by CFK; and
- CFK best estimates of yield and resultant wood flows where only area data is available.

Where wood flow information has been supplied by the forest owner, harvest age assumed is not known but is likely to be in the range of 25 to 28 years. Where the wood flows have been derived by CFK, a harvest age of 26 or 27 years has been assumed.

This section first discusses wood availability and ownership. Log grades are then defined and estimates made of current processing by those log grades. The section then sets out projected, indicative, future wood flows – by grade and ownership – and compares them to current processing and announced expansion plans.

### **6.1 Wood Availability**

Although very little of Northland's future wood flow is firmly committed by reason of contractually binding or long-term supply agreement, ownership of the resource will significantly affect the probable availability of logs to the open market.

In addition, some of Northland's wood is sold to mills outside the region and this is likely to continue.

These aspects of wood availability are discussed below.

#### **Juken Nissho**

The policy of Juken Nissho Limited (JNL) in Kaitaia is to process what they grow. The annualised normal harvest from their forests is around 400,000m<sup>3</sup> pa.

JNL do not release information about their estate. Whilst an age structure for JNL has been included in the area statements presented previously, it was largely derived from sources other than JNL. However, other than the total approximate annual harvest, no other volume information is available.

It is highly unlikely that any significant part of the JNL future wood flow will be available for sale. Hence, in considering the Northland resource, the JNL portion is initially identified in the total then subsequently excluded from consideration.

### **Carter Holt Harvey**

CHH, owner of the largest portion of the Northland resource, is also a wood processor. However, it currently processes only part of its annual harvest, exports some as raw logs and sells some to other mills. A proportion of its wood flow is drawn from joint ownership plantations which dilutes the company's control of that wood flow. CHH also buys third party wood to meet demand from its own plants or demands it has generated in external markets.

The LVL mill is achieving current design rates. It is designed for a second press though there are no plans to install one at present.

CHH has signalled an intention to construct a large, world scale (e.g. 7-800,000 m<sup>3</sup> pa) sawmill complex at Marsden Point, designed to handle a range of sawlog grades. If constructed, such a mill would be operational before 2007.

As a consequence of the above there are substantial uncertainties about the availability of the CHH wood flow. Although this report assumes it is available, it is important to maintain separation between CHH and other wood.

### **Other owners**

There are two categories of "Other" forest owners, A and B. Category A owners are those for whom volume information is available. For example Evergreen Forests and Global Forest Partners. Category B owners represent the many numerous smaller holdings for which volume estimates are based on a generalised yield table.

Other owner philosophies include "pure play" forest owners (e.g. Evergreen and small owners) and owners such as Taitokerau Forests Ltd (TFL) who may be seeking vertical integration opportunities. There are also some small areas owned by, or with ownership links to, existing processors.

All this wood is considered available.

## Wood Sold To External Mills

A significant proportion of the volume produced in Southern Rodney is currently sold to domestic mills outside of Northland. This is particularly the case for the higher value pruned and S grade logs. A proportion of this volume would be available for processing in Northland only if the Northland processor was more competitive than the existing markets. The proportion currently supplied by CHH directly to its own mills outside of Northland would likely not be available for processing in Northland unless CHH constructed a new mill and rationalised supplies to their existing mills.

The bulk of the volume produced in Southern Rodney is from CHH forests. CHH provided production data from their southern Northland forests for 2003, together with the volumes sold to mills outside of Northland. For the purpose of identifying this volume in the projections, it is assumed that the proportion of the production from these forests sold to external mills remains at or about 2003 levels and is, therefore, not available.

No allowance has been made for volume from other Northland owners that is sold to mills outside Northland.

## 6.2 Log Grades

There is no industry standard set of market log grades. There are many different log grades and the specifications for each can change depending on the prevailing market conditions. Nor are the market grades mutually exclusive – logs may be cut to maximise value at the time of sale or to satisfy demand commitments.

Log grades are generally defined in terms of:

**Tab 5: Log Grade Criteria**

Parameter	Unit	Notes
Minimum diameter or sed	cm	The minimum small end diameter.
Maximum branch or knot size	cm	The maximum branch size permitted. There may also be a constraint on the frequency of branches.
Length	m	Most log grades will have a specific length or a number of specific lengths. These may change with market conditions.
Quality		Each log grade may have specifications as to straightness, ovality, and spike knots. This is particularly applicable to the higher grade logs. For pruned logs there may also be a clearwood content requirement.

The value and use of different log grades varies from high value pruned logs for knot free furniture components to pulp logs for use in re-constituted wood processes. The development of this Strategy requires the application of a set of general log grades that will at least provide some qualitative description to the resource.

The National Exotic Forest Description (NEFD) provides volume estimates by 3 broad grades – Pruned, unpruned, and pulp – based on 4 general yield tables. Whilst this is useful in identifying the pruned and pulp resource, it provides no information on the unpruned log categories, which constitute the bulk of the volume.

For the purposes of this document, the following set of log grades is used:

**Tab 6: Log Grades**

<b>Log Grade</b>	<b>Sed</b>	<b>Description</b>	<b>Current Uses – examples</b>
Pruned	35 cm	Pruned logs – no branches.	Wherever knot free timber is required. E.g. peeling for clear veneer, mouldings, furniture components.
S1/S2	30 cm	Straighter, larger diameter logs with small (max 7cm) knots.	Structural logs. Used primarily by the domestic processors to produce structural timber and LVL.
A,K	24 cm	Utility grade logs such as the export grades of A and K.	Much of volume of these logs is currently exported as A or K grade logs to Japan, Korea, and China.
S3	20 cm	Straighter, smaller diameter logs with small (max 7cm) knots.	Small sawlogs, both export and domestic. Not preferred by structural grade sawmills as the recovery is lower than for S1/S2. Roundwood for poles is a higher value end-use for some of this material.
KI	26 cm	Industrial grade logs. These are larger logs with larger branches.	Most of the volume of this material is exported.
Pulp	10 cm	Small diameter (min 10cm), no limit on branch size, more liberal straightness requirements.	The lowest value grade. Most is exported though as much as possible is high graded for posts or shorter length small sawlog.

The assessment of the Northland resource in terms of these grades has not been an exact process. It has been achieved through a combination of detailed information, often provided by the major forest owners, and CFK’s experience through a long history of involvement within the industry in Northland.

The most difficult component for which to derive any indication of log grades is the multitude of woodlots which constitute 27% of the Northland resource. The quality and management of this component will vary hugely, and CFK has simply applied the general yield table as set out below.

**Tab 7: General Yield Table**

<b>Log Grade</b>	<b>% of Volume</b>	<b>Volume (m<sup>3</sup>/ha)</b>	<b>Comments</b>
Pruned	15%	75	A well pruned stand should yield up to 30% of the volume as pruned. Although many of the woodlots will have been pruned, the quality of the pruning will be variable.
S1/S2 sawlogs	15%	75	Stands that have been thinned to lower stockings, as many pruned stands will have been, will not yield high volumes of small branched logs.
A,K sawlogs	40%	200	Conversely to the S1/S2, the lower stockings in pruned stands tends to increase branch size and hence the volume of utility grade logs. This is exacerbated on fertile sites.
S3 sawlogs	5%	25	On more difficult sites diameter and branch growth is restricted and hence smaller diameter, small branched logs are produced.
KI sawlogs	5%	25	In stands thinned to lower stockings and in trees growing on stand edges, diameter growth and branch development are encouraged. Similarly, in lower stocked pruned stands on fertile sites, the first log above the pruning can have large branches.
Pulp	20%	100	Logs suitable for pulping, though some will also be used in lower value processes.
<b>Total</b>	<b>100%</b>	<b>500</b>	

### 6.3 Current Processing By Log Grade

Current processing within the region, announced expansion plans and the wood sold to mills outside the region need to be placed into the context of the future available wood projections that are presented later in this section. The following table presents a summary of current processing, one major expansion plan and the estimated sales to mills outside of Northland.

**Tab 8: 2003 Northland Processing**

<b>Description</b>	<b>Log Intake (m<sup>3</sup> roundwood per annum)</b>						
	<b>Total</b>	<b>Pruned</b>	<b>S1/S2</b>	<b>A,K</b>	<b>S3</b>	<b>KI</b>	<b>Pulp</b>
Domestic processing	730	113	294	89	121	11	102
External Mills	194	18	66		42		69
<b>Total Domestic</b>	<b>924</b>	<b>131</b>	<b>360</b>	<b>89</b>	<b>163</b>	<b>11</b>	<b>171</b>
TDC Plan	700		245	245	175		35
<b>Total Processing</b>	<b>1,624</b>	<b>131</b>	<b>605</b>	<b>334</b>	<b>338</b>	<b>11</b>	<b>206</b>

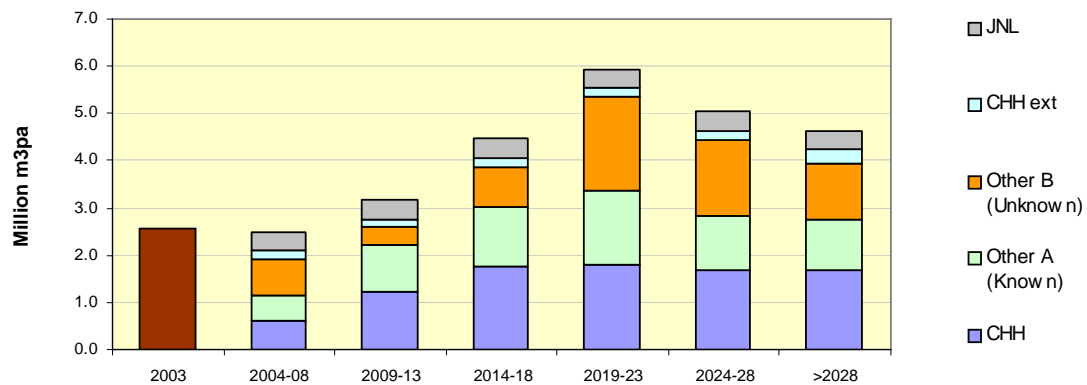
## 6.4 Future Wood Flows By Harvest Period

### 6.4.1 Totals

#### *By Ownership*

Figure 8 shows estimated average annual wood flows, by 5 year harvest period, by ownership.

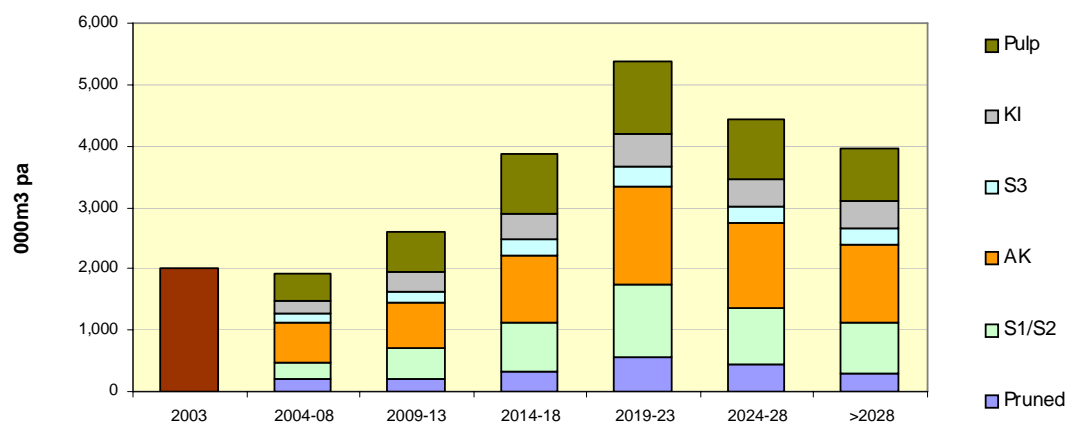
**Fig 10: Annual Wood Flows By Ownership Category**



#### *By Log grade*

Figure 9 shows estimated average annual wood flows, by 5 year harvest period, by log grade. It excludes both the JNL volume and the volume sold to external mills outside Northland.

**Fig 11: Annual Wood Flows By Log Grade**



#### **2003 Harvest**

In both of the above histograms, an estimate of the current, annualised harvest is also shown. This was derived as follows.

For the YE June 2003, the MAF statistics show that 195,500 m<sup>3</sup> of sawn timber were produced in Northland. Assuming a conversion of 50%, then the annual log intake of sawmills would be approximately 400,000 m<sup>3</sup> pa. Interviews with domestic processors indicates that the MAF statistics are conservative, and that the current log intake at sawmills is more like 650,000 m<sup>3</sup> pa.

Combining that with other data, the estimated current annualised harvest volume for Northland is approximately 2.57 million m<sup>3</sup>. Removing the JNL harvest at 400,000 m<sup>3</sup> and the volume sold to mills outside the region at 164,000 m<sup>3</sup> reduces this figure to 2.17 million m<sup>3</sup>. This derivation is shown in Table 4.5.

**Tab 9: Estimated 2003 Northland Harvest Volumes**

<b>Category</b>	<b>Roundwood intake (m<sup>3</sup>)</b>
Log Exports	1,278,000
LVL/Veneer	210,000
Pulp/chip	170,000
Sawmills & roundwood plants	712,000
<b>Subtotal</b>	<b>2,406,500</b>
Volume to mills outside the region	164,000
<b>Total Northland</b>	<b>2,570,400</b>
JNL Volume	400,000
<b>Total Northland less JNL</b>	<b>2,170,400</b>

**Based on interviews with domestic processors. Chip log supply excludes Binwood volume.**

Recently CHH significantly reduced their harvest and hence the actual harvest for the 2003 calendar year will be less than the estimated 2.57 million m<sup>3</sup> for the June year.

For comparison, the 2001 harvest was approximately 1.6 million m<sup>3</sup>.

## **6.2 Wood flows by Grade and Supply Balance**

As discussed previously, there is a significant link between availability and ownership and the consequent need to illustrate future annual flows by grade in the context of ownership. The following sections do this on an individual log grade basis.

The specifications for each log grade define the physical characteristics of the available volume. They include a range of log lengths assumptions. If the market requirements for a grade vary significantly from these, then the available volume in the grade could change substantially.



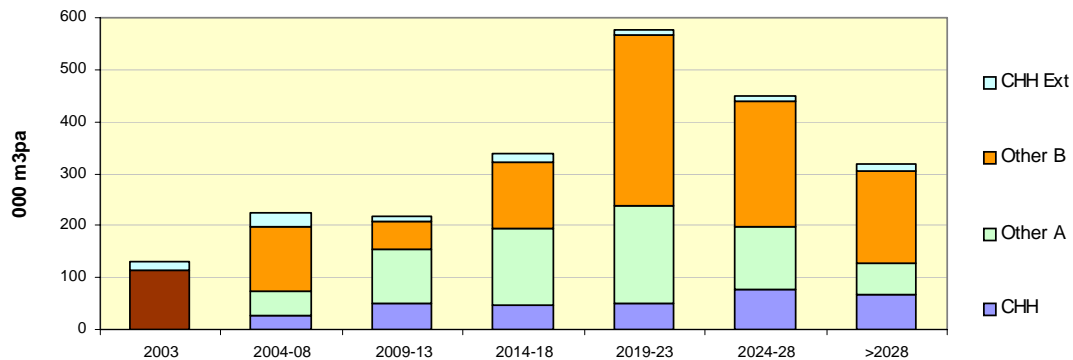
For example, in recent years market demand for pruned has been dominated by 4.4m and 5.0m log lengths for the USA Mouldings-and-Better market. Clearly the consequence of this is that any pruned length longer or shorter than this would be downgraded to the quality of the next log to which it is attached.

For each grade, the current processing demand (2003) is also shown on the histogram to provide a picture of the supply balance for that grade. The TDC expansion plan is included for reference though the log grade intake is fluid at this stage.

**Pruned**

The indicative average annual pruned volume, excluding JNL, is:

**Fig 12: Annual Pruned Volume**



Until recently, the demand for pruned logs was very strong with mills actively seeking additional supplies. The decline in USD prices for Mouldings-and-Better and the increased NZD:USD exchange rate resulted in returns from this market falling sharply. Production thus decreased or switched to cutting other grades or products. Current processing is less than the average annual supply.

However, it is important to note that to realise the pruned volumes available will require markets for a range of log lengths. Pruning has historically been done to achieve a pruned height of 6-6.5m, and the consequent log lengths are inherent in the pruned supply volumes. Cutting logs to 4.4m and 5.0m lengths will significantly reduce the effective volume of pruned logs available. Similarly, it is important for the forest owner that viable markets are developed for a range of pruned lengths to justify continued investment in pruning.

Also, there is no assessment of the internal quality of the pruned log volumes in the above table. Whilst the bulk of the pruned volume will come from trees that have been well managed in terms of timing of the operations, a proportion will have been pruned late and so may effectively be unpruned.

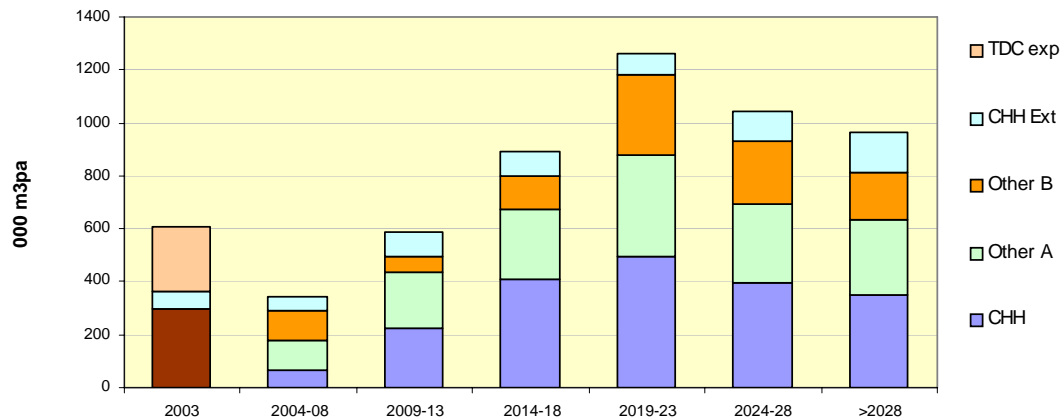
The incidence of resin pockets is undesirable for some products - for example clear boards. The cause of resin pockets is not well understood and consequently the incidence has low predictability. Experience demonstrates that areas in the Central North Island are likely to have the lowest incidence of resin pockets and forests on the Canterbury Plains the greatest. All other areas tend to fall in the middle. In New Zealand, inter- and intra- forest variability can be as great as the variation between any two regions.

In summary, there is an opportunity to increase the processing of pruned logs, but better utilisation through processing a wider range of log lengths would be required.

***S1/S2 (Small branched logs with an sed of 30cm+)***

The indicative average annual S1/S2 volume, excluding JNL, is:

**Fig 13: Annual S1/S2 Volume**



The main advantage with *Northland radiata* is comparatively high density, and so this grade of logs is well suited for structural grade timbers. Hence, the demand for S1/S2 logs, which provide the highest recovery of framing timbers, is strong.

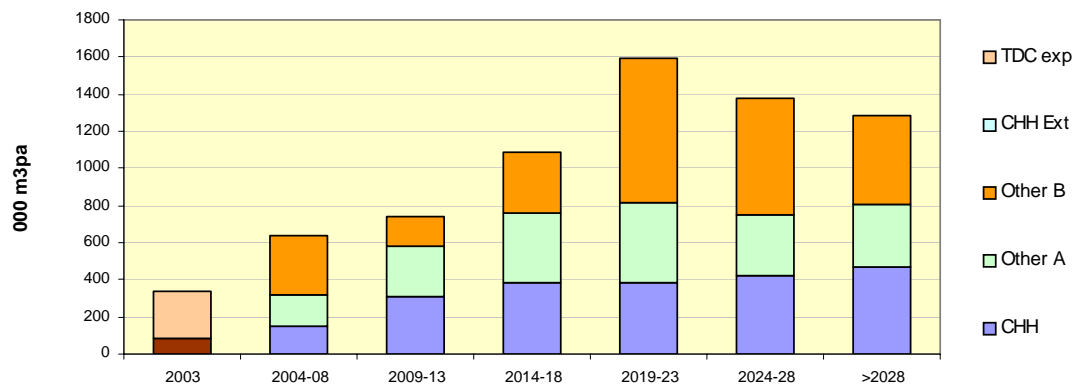
Current domestic processing, including the external mills on the periphery of Northland which draw log supplies from Northland, is well balanced with the annual supply for the initial 5 years of the strategy period. For the second 5 year period, the supply is 240,000 m³ pa, or 70%, greater.

If the TDC plan is realised, the domestic supply will be less than demand until around 2009.

***A,K (Medium branched logs with an sed of 24cm+)***

The indicative average annual A,K volume, excluding JNL, is:

**Fig 14: Annual A,K Volume**



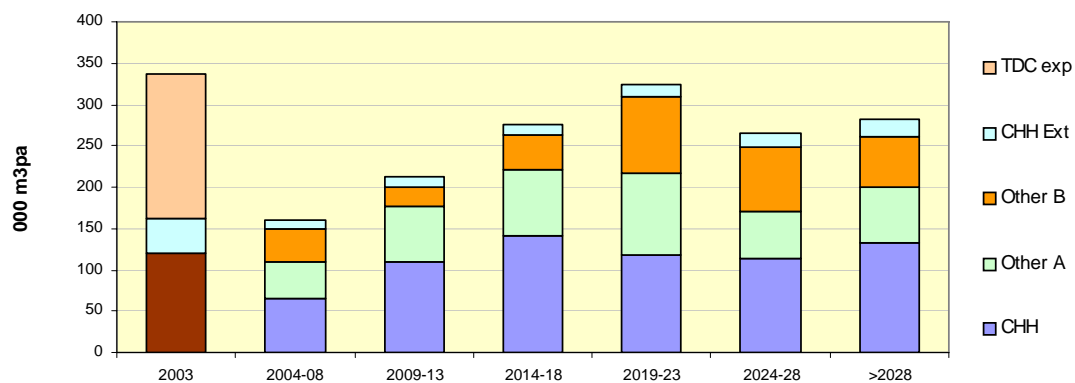
Currently the bulk of A,K type logs are exported. The TDC expansion targets S grade logs, though is likely to utilise a range of grades. For the purpose of this strategy, a proportion of this expanded log intake is allocated as A,K grade.

Clearly there is a large excess of A,K grade logs above current domestic processing capacity.

***S3 (Small branched logs with an sed of 20cm+)***

The indicative average annual S3 volume, excluding JNL, is:

**Fig 15: Annual Volume**

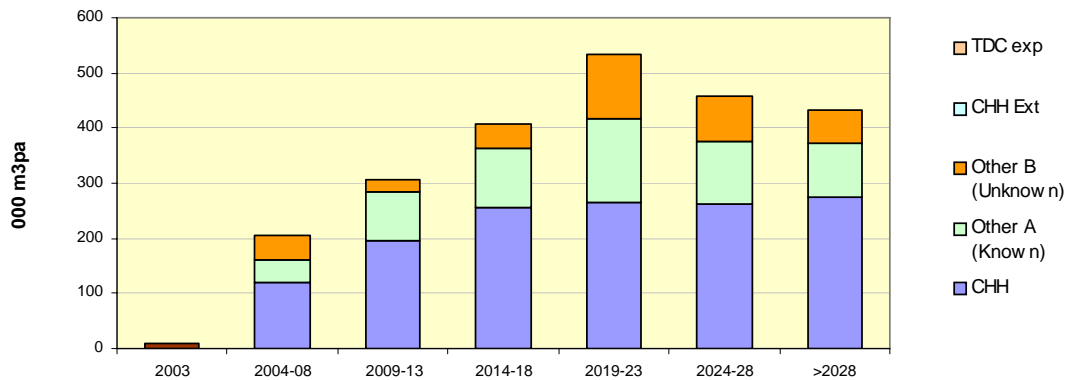


Current processing demand appears well balanced. A significant proportion of the volume is used by mills associated with roundwood facilities. Beyond the initial period there is an excess supply, but well short of the volume required to fulfil the stated intentions of TDC’s expansion.

***KI (Large diameter, larger branched logs)***

The indicative average annual KI volume, excluding JNL, is:

**Fig 16: Annual KI Volume**



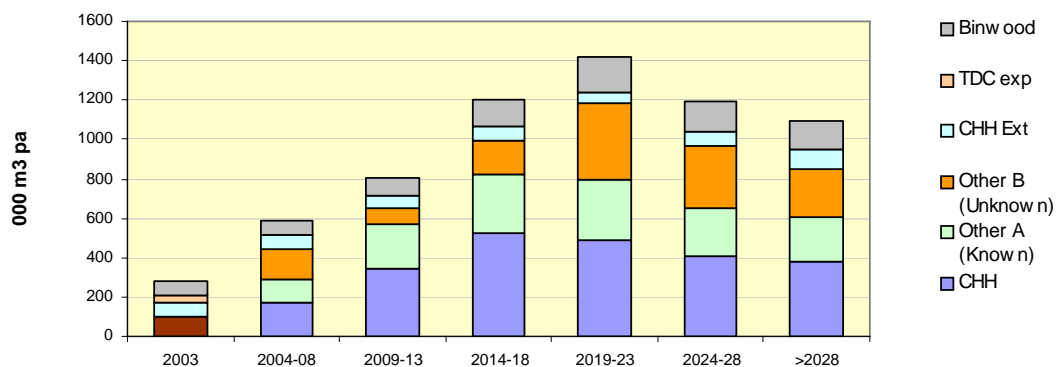
Currently almost all KI type logs – large logs with large branches – are exported.

**Pulp (Low grade industrial logs)**

Current processing of pulp grade logs includes the Marusumi chip plant, and plants associated with roundwood facilities. Approximately 50% of the Marusumi intake is in the form of pulp grade logs, with the remainder (75,000 m<sup>3</sup> being binwood. This volume of binwood equates to approximately 3.5% of the total estimated harvest volume for 2003. In the following chart, binwood is included at 3.5% of the annual volumes.

The indicative average annual pulp (including binwood) volume, excluding JNL, is:

**Fig 17: Annual Pulp Volume**



Binwood is not included in the wood flow volume estimates or the current processing volumes.

Note that the supply considers pulp logs only. In addition to this volume will be residue from forests (Binwood) and from other processing plants (sawdust, chip,

shavings). The later category could equate to 50% of the input volume to primary processors.

### **Summary of Supply Balance**

For all grades, the supply is increasing.

- Pruned – there is an opportunity to increase the domestic processing of pruned logs, but better utilisation of the available resource is required. Current domestic processors have the capacity to process the available supply, at least for the next decade.
- S grade – in total, the demand for S grade logs is well balanced with supply for the next 5 years. For the subsequent 5-year period, supply increases by approximately 50%. If the TDC expansion targets S grade logs, then they could have the capacity to process the available volume until around 2019.
- A,K grade – there is minimal current processing of this significant volume.
- KI grade – there is virtually no domestic processing of this volume.
- Pulp grades – current processing is well below supply.

## 7 ANALYSIS OF NORTHLAND

### 7.1 Swot Analysis

In this section, the strengths, weaknesses, opportunities and threats for processing in Northland are considered.

#### Strengths

Strengths are factors that provide Northland processors with potential competitive advantages. They include the following:

Strength	Competitive Advantage
Large volume of uncommitted wood	Availability of volume for processing or export.
Relatively high basic density of wood	Competitive advantage in structural products over other regions
Improving Infrastructure	Recognition of need and consequent provision of funds by central government. Region has developed a pragmatic, strong, industry led linkage with the direction and spending of these funds – the Enterprise Northland Forestry Development Group, Transport Working Group.
Range of harvesting crews	Improved alignment with harvesting constraints. Broadening career development opportunities within the harvesting sector.
Deep water port	Single port loading. Top up ships from other ports – also the northernmost port. Capable of handling a wide range of products.
Electricity transmission	Capable of handling some expansion of processing capacity.
Existing Training providers	There is an established training industry.
Active independent processors	Core of timber industry entrepreneurs already operating in Northland, capable of making the processing investments required to further develop the industry.
Presence of corporate processors	Commitment from large corporates with significant investments in Northland, elsewhere in NZ, and Australia and Japan. Access to technology (eg existing plants). Market knowledge and access (eg CHH own several value added processing plants in Australia).
Existing Processing Industry	Current and planned processing is capable of processing the higher grade logs, and is particularly focused on capturing Northland's primary source of competitive advantages - basic density and proximity to Auckland. Ability to leverage off existing technology and markets.
Proximity to Auckland	Close to New Zealand's largest and fastest growing construction market.
Labour availability	Relatively high (rural) unemployment.
Political Stability	It is generally accepted that NZ has low political risk on a central government basis. However, this may have a finite shelf life as the image of countries such as Chile, Brazil and China continues to develop.

## Weaknesses

Weaknesses are factors that negatively impact the ability of the Northland Industry to compete or the perception which investors have about potential processing in Northland. They include the following:

Factor	Consequence
Low level of environmental certification	Very limited ability for a processor to produce products that are certified as coming from sustainably managed forests.
Comparatively high forest production costs	Combination of topography, soils and underdeveloped on-forest roading networks results in higher production costs than some other, older established forestry regions.
Unskilled Labour	Increased set up (training) costs and turnover, exacerbated by (expanding) harvesting sector. Increased exposure to health and safety concerns. Skills rather than numbers becoming increasingly important in forest processing – Northland has the numbers (high unemployment) but not the skills. Central government initiatives in tertiary education not industry guided – <i>very recent changes to include industry may well change this.</i>
Shorter internodes	Reduced potential for clear cuttings and subsequent finger-jointing. This reduces the potential to high grade lower grade wood.
Roads	Improving, but still poor secondary public roads results in high travel times and truck maintenance costs.
Multiple resource description agencies	Forest description data is collected for various reasons, and provides the information for the particular scopes. A potential processor is unable to obtain a relevant, up to date resource description.
Planned Expansions	Both TDC and CHH have publicised their intentions to expand their capacity and, on the face of it, reverse the supply/demand balance for some grades. Until these plans are achieved or dismissed, new major processors may be unwilling to risk a price war for the resource and commit to greenfields development or substantial expansion. This will mean continued log exports.
Supply uncertainty	Construction of a large pulp log and residue utilisation facility (eg MDF plant) will require certainty of supply. Certainty of supply will require co-operation and commitment from a range of forest owners, especially including CHH. Forest owners to date have tended to be spot market dealers.
Energy and Water	The current electricity infrastructure may restrict the location of potential processing or require significant upgrade. Price volatility is a national concern. Processes which require significant quantities of water may be restricted in potential locations.
Multiplicity of local government agencies	Increases the potential for inconsistencies across Northland.

## Opportunities

The opportunities identified below have been selected from the Wood Processing Market Report prepared for Investment New Zealand (March 2003). Opportunity selection was based on the following criteria:

1. Leverage – to have an advantage over other NZ regions in any product / market the industry must make use of the strengths Northland already has in its resource and existing industry. Those opportunities identified for Investment New Zealand that took advantage of the strengths listed above are rated more highly than other opportunities.
2. Whole Tree Solution – like any natural resource, forests produce a range of products when harvested. Capturing the full value of the resource is dependent not only on effective utilisation of the higher value log grades but also on profitable utilisation of the lower grades. Some opportunities were deliberately included to ensure this is possible.
3. Strategic Objective – A strategic objective of the NFIS is increasing the wealth of the region through increasing GDP and creating more full time employment. Both parts of the objective need to be satisfied if the strategy is to be considered successful. Some opportunities are more effective at job creation than others.

Factor	Opportunity
Comparatively high basic density gives Northland a competitive advantage for structural uses.	Well accepted as a structural timber in Australasia and recent recognition in Chinese standards.  LVL into Japan and Australia – leverage off existing technologies and market access. Also uses a component of the medium grade logs (A).
Large volume of uncommitted medium and lower grade sawlogs	Packaging – Japan and China identified as having a need in the satisfaction of which, we can compete. Temporary construction materials – especially targeting north Asia and possibly India. Large volume, commodity processing of unpruned logs with export of undifferentiated product to countries with low labour and machinery costs.
Large volume of pulp logs	Leverage off existing chip plant. MDF - especially targeting USA and Asia.
Large volume of residues	Bio-energy. eg the supply (fuel) pellets to Auckland and potentially for export. Electricity generation – co-generation (heat and electricity) at major plants, conversion of Mighty River’s Marsden Point plant to wood biomass.
Recovery of pruned logs	Currently a proportion of high quality pruned logs are downgraded due to length specifications. Use of a wider range of lengths will increase the recovery of this high quality product.
Co-operation: Training and industry perception	The EN survey on training recommends how the training industry and the perception of the forest industry as a career opportunity can be improved.
Co-operation: Supply Commitment	Construction of a large pulp log and residue utilisation facility



	will require certainty of supply. Co-operation of the forest owners in deriving an offer of supply commitment will be required.
Niche Processing	High value, high tech processing targeting specific products/markets. Includes complete supply solutions (eg export complete, furnished, pre-cut house)

## Threats

Threats are factors that have the potential to negatively affect the ability of Northland processors to compete or the perception which investors have about potential processing in Northland. These include:

Factor	Effect
Lack of co-operation	Lack of co-operation between forest owners and processors threatens service aspects of marketing. This is exacerbated by the lack of strategic direction for the industry as a whole. Lack of co-operation between processors, including primary and secondary processors. The NFDG and wood processing cluster are encouraging starts. Lack of co-operation amongst forest owners to derive a pulp supply commitment.
Cost competitiveness	Rising production costs in comparison to competitors (eg Chile, China), especially of energy and labour. Utilisation of technology and fewer, highly skilled (and better paid) labour may not be enough. Chile, Brazil can and are doing both with lower labour rates. Thus we have to combine better labour with even better technology, superior design, marketing savvy and detailed attention to consumer needs. All of this may need to be done through joint ventures with people in target markets.
Potential Energy Costs	Considerable distance from major, national grid generation plants. Cost and cost volatility are both significant issues.
Log Market Volatility (Boom/bust cycle)	Available markets for all log grades as it is a threat to the whole tree solution. Harvesting labour force stability and loss of skilled labour.
Increasing international demand for environmentally certified wood.	Only a small proportion of the Northland resource has environmental certification.
Territoriality	The Northland industry needs another key pulp/residue utiliser. The location of such a plant is important to its financial success. Encouragement for the development of such a facility should be based on the most economically viable and sustainable site rather than within any Territorial Authority area.
Local Government issues	For a relatively small region, strategy area has 4 territorial authorities and 2 Regional Councils. This can be a source of uncertainty, especially for forest owners but also processors, with inconsistencies between and within authorities. Inconsistencies between local and national government initiatives. Eg The current roading funding and the recent KDC newspaper articles on differential rating (for roads).

## **7.2 Northland Overview**

- Northland has a large, radiata pine, forest resource. Harvest volumes are significant and increasing. To sustain a viable forest industry, whole tree market solutions are required.
- Northland needs more environmental certification of the resource to improve market access.
- Northland needs to keep pushing the improvements to its infrastructure.
- Current and planned primary processing will have the capacity to process all the pruned, S grade, and a proportion of the A grade logs. That is, Northland should encourage, scrutinise and improve that which is already here (or planned).
- Northland needs to encourage the development of utilisation of lower sawlog grades.
- Northland needs to encourage the development of residue utilisation.

Northland needs more co-operation and unity between industry players, between and within local authorities and between both of these and central government.

Log markets will continue to be a significant market for mid to lower grade logs.

## ACRONYMS AND ABBREVIATIONS

ARC	Auckland Regional Council
CFK	Chandler Fraser Keating
CHH	Carter Holt Harvey
cm	Centimetre
CNI	Central North Island
EC	East Coast
EN	Enterprise Northland
FCF	Fletcher Challenge Forests
FDG	Forest Development Group
FIEA	Forest Industry Engineering Association
FNA	Far North Afforestation
FNDC	Far North District Council
GFP	Global Forest Partners
Glulam	Glued and laminated timber products
HB	Hawkes Bay
IPL	International Panel and Lumber
JNL	Juken Nissho Ltd
KDC	Kaipara District Council
LVL	Laminated Veneer Lumber
m	Metre
m <sup>3</sup>	Cubic metre
MDF	Medium Density Fibreboard
Mouldings and Better	This refers to the market grades of lumber used for producing mouldings for the USA market.
NEFD	National Exotic Forest Description
NFIS	Northland Forest Industries Strategy
NITS	Northland Integrated Transport Study
NRC	Northland Regional Council
OSB	Oriented Strandboard
TDC	TDC Sawmills Ltd
TEC	Tertiary Education Commission
RMA	Resource Management Act 1991
RDC	Rodney District Council
RDRF	Regional Development Roding Fund
RNZ	Rayonier New Zealand
RRL	Renewable Resources Ltd
sed	Small end diameter
SNI	Southern North Island
WDC	Whangarei District Council
WINZ	Work and Income NZ

## **DISCLAIMER**

The projected forest yields presented in this document have been prepared from various sources of data. In some cases the data, or interpretation of supplied data, is based on Chandler Fraser Keating Limited experience in Northland. Whilst considerable effort was made in attempting to present a realistic representation of the resource, the volumes presented are not a guarantee or promise by Enterprise Northland or Chandler Fraser Keating Limited of actual volume flows, which may be greater or less than those presented.

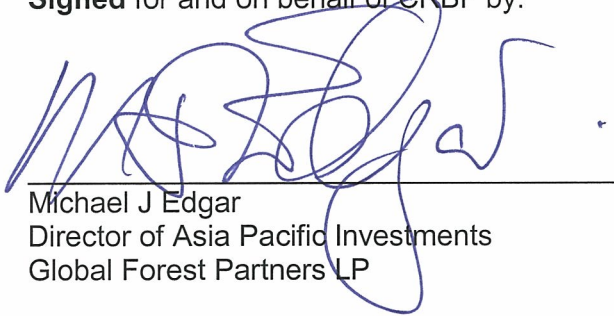
This document has been prepared for the Forestry Development Group of Enterprise Northland. Copying of this document for legitimate purposes is welcomed though recognition of the source would be appreciated.

**DIVESTMENT UNDERTAKING PURSUANT TO SECTION 69A OF THE COMMERCE ACT 1986**

1. This divestment undertaking ("**Undertaking**") is made pursuant to section 69A of the Commerce Act ("**Act**"). The Undertaking is made in support and forms part of the notice by CRBF Limited ("**CRBF**") dated 29 August 2006 seeking clearance under section 66(1) of the Act.
2. CRBF is a newly created closed-end timber investment fund managed by the US timber investment organisation, Global Forest Partners LP ("**GFP**"), that is seeking to purchase certain forest properties currently being offered for sale by Carter Holt Harvey Limited in the Nelson, Central North Island and Northland regions of New Zealand
3. [ ] NZ1 holds an undivided 49% interest in the forests and sawmill business known as the Nelson Joint Venture ("**Nelson JV**") located in the Nelson and Marlborough regions of the South Island and comprising a total of [ ] stocked ha. Nelson Forest Products Limited ("**NFP**"), a subsidiary of Weyerhaeuser Company, owns the remaining 51% undivided interest, with Weyerhaeuser New Zealand Inc ("**WNZI**"), another subsidiary of Weyerhaeuser Company, acting as the operating manager. Neither NFP, WNZI nor any other Weyerhaeuser entity has any economic or other business relationship with NZ1.
4. [ ]
5. [ ]

**DATED** this 29th day of August 2006

**Signed** for and on behalf of CRBF by:



Michael J Edgar  
Director of Asia Pacific Investments  
Global Forest Partners LP

## APPENDIX 1: Northland Regional Forestry Information

Table 1: Regional Area Analysis – Pre and Post Ownership Change.

Area Data - Excl Juken (Stocked Hectares)	Pre Sale Area Ownership	Post Sale Area Ownership	Post Sale % Ownership
CHH			
GFP			
Matariki			
Crown			
All Others			
Total			
(Juken Nissho ( Total = NEFD 1 April 2005			Total of Top 3 =
Note 1 - Juken Nissho use all harvested volume internally therefore removed for analysis			

Table 2: Woodflow Analysis Pre and Post Ownership Change

Product	Period	Projected Woodflow *	GFP - NZ2/3	GFP: Current 50% of Mangakahia	CHH	GFP Post Aquisition Total %
Pruned Sawlogs	2006 - 08					
	2009 - 13					
	2014 - 18					
Unpruned Sawlogs	2006 - 08					
	2009 - 13					
	2014 - 18					
Pulplogs	2006 - 08					
	2009 - 13					
	2014 - 18					
Total	2006 - 08					
	2009 - 13					
	2014 - 18					

\* Source: "Resources of Northern Forests - June 2004" prepared by CFK for Enterprise Northland Forest Development Group

Note - volumes x '000 m3

Note - CHH ex Information Memorandum data

Note- Regional study volume excludes Juken Nissho harvest

Note: CHH Information Memorandum Data corroborates study total volumes:

Harvest Period  
2006 – 2008

Total Harvest ('000 m3)

Table 3: Woodflow Analysis Pre and Post Ownership Change – Less Volume Contracted to CHH Woodproducts LVL Plant.

Product	Period	Projected Woodflow *	GFP Post Acquisition Total %	CHH Contract Volume **	GFP Post Acquisition Less CHH Volume %
Pruned Sawlogs	2006 - 08 2009 - 13 2014 - 18				
Unpruned Sawlogs	2006 - 08 2009 - 13 2014 - 18				
Pulplogs	2006 - 08 2009 - 13 2014 - 18				
Total	2006 - 08 2009 - 13 2014 - 18				

\* Source: "Resources of Northern Forests - June 2004" prepared by CFK for Enterprise Northland Forest Development Group

\*\* Wood Supply Agreement for volume to [ ]

Note - volumes x '000 m3

Note - CHH ex Information Memorandum data

Note- Regional study volume excludes Juken Nissho harvest

Table 4: Export Surplus Analysis

Wood Flows, Local Processing Capacity and Export Surplus. ('000,000 m3)	Regional Harvest	Regional Processing Capacity	Export Surplus	Export Surplus %
2006 - 08				
2009 - 13				
2014 - 18				
2019 - 23				

Note - Regional Harvest and Regional Processing Capacity exclude Juken Nissho volumes