RotoRua foRestRy Investment pRofIle

Our spirit of business innovation

He aha te mea nui o te ao?  
He tangata! He tangata! He tangata!

What is the most important thing in the world?  
It is people! It is people! It is people!
Rotorua feel the spirit
Manaakitanga

This is our brand... it's the unique spirit of the people, land and community culture that gives Rotorua a distinctive investment appeal.
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This document has been prepared by the Rotorua District Council, assisted by contributions from various stakeholders in the Rotorua business community, to provide a broad overview about Rotorua as an investment destination for forestry. Although all due care has been taken, neither Council nor stakeholders accept liability to any person who places reliance on the contents. It is recommended that potential investors carry out their own due diligence and obtain their own advice for any investment planning and decisions.
Welcome to Rotorua

The Home of Plantation Forestry for the World

Home to NZ’s leading producer of high quality outdoor timber products
Home to NZ’s leading producer of high quality outdoor timber products
Home to Future Forest Research (FFR) - focusing on improvement of forest growing and harvesting activities
Home to NZ’s Crown Research Institute, Scion - leading science and innovation for the forest industry

Home to leading sawmills, including Red Stag Timber, Tachikawa and McAlpines
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Home to leading forestry and innovation business parks
Home to Lockwood, NZ’s leading builder of lifestyle homes
Home to leading sawmills, including Red Stag Timber, Tachikawa and McAlpines
Home to NZ’s Crown Research Institute, Scion - leading science and innovation for the forest industry

Home to leading conference and event facilities for forestry
Home to leading sustainable forest management expertise
Home to the international gateway for the Central North Island and Bay of Plenty (BOP)
Home to Kaingaroa Forest, oldest exotic production forest in the Southern Hemisphere
Home to the designer of the world’s first commercial swing-blade portable sawmill
the Home of plantation forestry for the World

Rotorua is New Zealand’s first city to adopt wood as the first choice for construction, interior design and daily living

Home to leading forest engineering and manufacturing services including Patchell Industries and Roadmaster

Home to Radiata Pine Breeding Company (RPBC) - specialists in research into the genetic improvement of radiata pine

Rotorua is New Zealand’s first city to adopt wood as the first choice for construction, interior design and daily living

Home to world famous radiata pine and douglas fir production

Home to Solid Wood Innovation (SWI) - leaders in wood manufacturing improvement efficiencies

Home to Waikariki Institute of Technology School of Forestry and Primary Industries and the Centre of Excellence for the Forestry and Wood Industry

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45% of NZ’s wood harvest in the region

Grow Rotorua is your key contact to facilitate your investment in the forest industry

Rotorua District Council has a client support manager to assist with all regulatory requirements

Home to world famous Whakarewarewa Forest

Home to NZ’s national centre of excellence for mountain biking

Home to NZ’s national school of excellence for wood carving
District Facts

- Rotorua is a multi-cultural district of 78,900. This includes 68,900 residents and 10,000 daily visitors. In summer, the collective resident and visitor population peaks at 100,000.
- Rotorua has excellent infrastructure to facilitate the transfer of goods, energy and information. The Port of Tauranga, New Zealand’s largest export port, is located within an hour of Rotorua.
- There are unique opportunities for investors to work in partnership with local ‘iwi’ (regional tribal groupings of New Zealand’s indigenous Maori population) for profitable returns. The local Rotorua-based iwi, Te Arawa is willing to develop long-term, sustainable and mutually beneficial partnerships. Te Arawa Primary Sector (TAPS) is one such organisation working in the sector, also the CNI Iwi Collective has vested interest in long term development. Both are open to exploring joint venture or collaborative opportunities.
- The city has a diverse economic base with four priority drivers of economic growth: forestry and wood processing, tourism, geothermal (including energy) and agriculture.
- Natural, sustainable resources abound. Rotorua has 18 volcanic lakes (16 accessible), 120 wetland areas, three major rivers, numerous geothermal fields and over 100,000 hectares of forest including Kaingaroa Forest – the oldest exotic production forest in the Southern Hemisphere.
- Globally there is a growing realisation of the potential for geothermal energy and Rotorua is well positioned to take advantage of this. The industry is well established with standards and monitoring in place. Leading SOE NZ energy company Mighty River Power has set up its geothermal headquarters in Rotorua.
- A skilled, English-speaking workforce, competitively priced by OECD standards, and with an aptitude for innovation and a focus on excellence and quality, gives a labour force advantage.
- Lifestyle factors such as short commuting times, housing affordability, work-life balance and easy access to world class outdoor recreation, mean that Rotorua is readily able to attract skilled labour from other areas.

Investor Testimonial - McAlpines (Rotorua) Limited

“McAlpines has operated a sawmill and timber processing business in Rotorua for over 40 years which directly employs 60 local people. This business processes logs into timber products which are sold in New Zealand and exported into various overseas markets.

The company sees a number of advantages in being a Rotorua-based business. These are:

- Rotorua is relatively close to large, sustainably managed, plantation forests
- Availability of a wide range of potential employees with diverse skills
- Easy access to the largest export port in NZ
- Relatively close to the largest timber market in NZ, Auckland
- Good infrastructure to support the movement of raw materials and finished goods
- Excellent, locally based, training and support facilities
- Excellent, locally based, engineering and sawmill support companies

McAlpines has invested in new equipment and technology to retain its competitive position in the NZ sawmilling industry.”

Graeme Bell, Site Manager - McAlpines Rotorua
Rotorua is positioned right in the centre of the most concentrated man-made forestry plantations and wood processing infrastructure in New Zealand.

It is not by chance that Rotorua is the home of New Zealand Forestry. Nor is it a coincidence that New Zealand leads the world in growing sustainable tree crops for supplying wood to the world. The reasons for this are etched into history. Until relatively recent times, the world relied solely on natural forests for its burgeoning wood supply needs. In 1913 a Royal Commission was set up by the New Zealand Government to look at the long term future of wood supply for New Zealand. The commission determined that New Zealand would run out of its native timber supplies by the 1960s. By that time native forests would be exhausted and New Zealand would have no naturally grown wood supply.

The Government-owned New Zealand Forest Service (NZFS) set about developing a replacement supply by planting exotic tree crops in the Central North Island Plateau, surrounding Rotorua. They trialled different species, planted huge areas and used unemployed labour through the Great Depression to establish vast areas of man-made forests. What we now know as the 170,000 hectare estate of Kaingaroa Forest, was born from such beginnings.

Building off this, NZFS set up a research arm called the Forest Research Institute (FRI) at Rotorua in 1947. Throughout the mid-latter part of the millennium a group of scientists at FRI developed intensive forest tree breeding and forest management regimes, which resulted in a unique ability to grow high quality, knot free clearwood, in just 25-30 years. This contrasted with the many hundreds of years that clearwood takes to grow in natural forests. This was a revolutionary step change in forestry thinking world-wide and the New Zealand forest industry quickly took up the new ways. Others followed from around the globe.

Rotorua became the forefront of international science and knowledge for plantation forestry and today FRI is called Scion. Scion is headquartered at Rotorua and leads wood processing research and the creation of new and innovative materials and energy sourced from the massive plantation forests that surround Rotorua.

**New Zealand’s largest export port is located within an hour’s drive...**

... allowing for cost effective and reliable transport including panel, pulp, paper and logs.

**50% of New Zealand’s population live within three hour’s drive**

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**CENTRAL AND ACCESSIBLE**

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New Zealand’s largest export port is located within an hour’s drive...
**SUCCESS STORY - RED STAG**

Red Stag Waipa sawmill is an institution in the New Zealand forest industry and was built by the government to change the face of sawmilling by moving the industry from milling mostly native timber to taking advantage of the success of plantation forestry by processing Radiata Pine and Douglas Fir.

Environmentally, Waipa was an early major producer of bio-energy and, in later years, innovative in cleaning up historic pollution caused by timber preservatives.

Today Waipa has a new lease of life, from visionary new owners who saw potential where others saw problems. Phil Verry and his son Marty saw an opportunity for an independent sawmill that could succeed as a stand-alone business, and in six years they led the board-management team that has revitalised Red Stag Timber and Waipa Mill.

The Red Stag $60m re-investment programme to date has included the recent opening of a state-of-the-art remanufacturing plant, in a huge timber-framed building using 43 metre clear span glulam engineered timber trusses made from Red Stag’s own lumber over its 110 metre length. The building won a NZ Wood Timber Design Award for its builder Kanuka Engineering.

The company’s last half dozen buildings have all been constructed of wood, providing a new treatment plant, drying sheds and mill extension as well as the remanufacturing plant.

Since taking over the mill in October 2003 Red Stag Timber has progressively upgraded its capability, following a clear business philosophy that matches the economic development needs of the district as well as the growth of the company.

Red Stag has aimed to leverage its existing facilities (and continues to do so with upgraded kilns and sawmill as well as the remanufacturing plant), progressively adding productivity gains and rewarding staff with relative income increases, making them among the highest paid for their skill levels.

In spite of the global economic meltdown, Red Stag investment went up another gear in 2009/2010 with the opening of a new Boron/LOSP treatment facility, the arrival of a third Machine Stress Grader to ramp up speed in the Planer Mill and the purchase and installation of a new Pusher-lug Sawmill Binsorter, replacing the old 90 lug-per-minute ‘J’ Hook Bin-sorter. When it was installed at Waipa it was the first in New Zealand and not long afterwards the mill hit a new daily production record of 3,000m³.

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Also on site is another example of the utilisation of latest technology, New Zealand’s largest continuous flow drying kiln (and a first for radiata pine), designed and built by Mahild, which overcame a bottleneck in the system by providing an additional 115,000m³ of drying capacity, whilst using 25% less energy. Further kiln capacity is being planned.

Effectively the investment programme has more than doubled the annual production capacity of the Red Stag Waipa sawmill from around 200,000m³ when the Verrys took over, to 420,000m³ today. With more investment planned and markets permitting, it could conceivably reach 1 million cubic metres per year, which would cement its current place as the biggest and most productive sawmill in Australasia.

Red Stag generates its own electricity and steam from its two boilers and turbine, and is interested in working with parties on geothermal exploitation, or as landlord for further processing operations on its 20 hectares of surplus industrial and commercial land.
The opportunity

WHAT IS THE SIZE OF THE PRIZE?

ALTERNATIVE PATH: Strong promotion of wood, diverse export markets, transformed construction industry, high-value wood-based manufacturing streams, growing domestic processing capacity, supported by collaborative and aligned industry sectors.

CURRENT PATH: Increased reliance on log exports, narrowing range of markets, exposure to more volatile market conditions, declining solid wood processing capacity, constrained residue availability, inefficient infrastructure.

$4.5 BILLION EXPORT EARNINGS

$12 BILLION* EXPORT EARNINGS

Strategic actions by the industry have the potential to increase export earnings by $5.9 Billion

$6.1 BILLION EXPORT EARNINGS

2011 -- 2022

In the ten years to 2022, annual export earnings will more than double to $12 billion from a New Zealand forest and wood products industry that is:

- Delivering innovative wood-based solutions from a sustainable resource to meet customers’ needs.
- Manufacturing a range of high-value, fibre-based products, including new biochemical and biofuel value streams.
- Recognised as a world leader in timber-engineered building solutions.
- Underpinned by forest growing, as a valued and profitable land use.
- Recognised as a key New Zealand growth industry, delivering strong economic and environmental benefits.
- Connected and collaborative across the value chain, from seedling to end-product.
- Characterised by industry players that have pride in each other, with the sector regarded as a preferred career option for our brightest talent.

In domestic and international markets are within easy sea freight reach of Rotorua’s sea port at Tauranga. Excess volume from the surrounding forests is presently exported to China, South Korea, India and Japan, in that order of scale. Sawn lumber is exported to these territories and also to many other countries, especially Australia.

Forecast GDP growth in these territories is the strongest anywhere by world standards. China’s demand for lumber and wood panels is forecast to grow by around 15-20 million m³ per year for the period ending 2015. India has recently introduced measures aimed at ceasing tree felling and is searching for imported wood solutions for much of its requirements. Japan is facing a major rebuilding program after the tsunami of 2011. In New Zealand the city of Christchurch faces 10 years of intensive rebuilding after the 2010/11 series of earthquakes. Wood is the material of first choice for much of the earthquake prone building activity.

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**BUSINESS CYCLE & OUTLOOK – GDP**

<table>
<thead>
<tr>
<th>Country</th>
<th>2010(e)</th>
<th>Growth to 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td></td>
<td></td>
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<tr>
<td>Australia</td>
<td></td>
<td></td>
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<tr>
<td>Korea</td>
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<tr>
<td>Indonesia</td>
<td></td>
<td></td>
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<tr>
<td>Taiwan</td>
<td></td>
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<tr>
<td>Thailand</td>
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</tr>
<tr>
<td>Malaysia</td>
<td></td>
<td></td>
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<tr>
<td>NZ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
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<td></td>
</tr>
</tbody>
</table>

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**LOG EXPORTS BY PORT**

**SAWN TIMBER EXPORTS BY PORT**

<table>
<thead>
<tr>
<th>Port</th>
<th>Percentage</th>
<th>Total Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whangarei</td>
<td>14.7%</td>
<td>12,787,000 m³</td>
</tr>
<tr>
<td>Auckland</td>
<td>0.0%</td>
<td>1,907,753 m³</td>
</tr>
<tr>
<td>Tauranga</td>
<td>37.4%</td>
<td></td>
</tr>
<tr>
<td>Gisborne</td>
<td>12.6%</td>
<td></td>
</tr>
<tr>
<td>New Plymouth</td>
<td>1.5%</td>
<td></td>
</tr>
<tr>
<td>Napier</td>
<td>8.2%</td>
<td></td>
</tr>
<tr>
<td>Wellington</td>
<td>5.1%</td>
<td></td>
</tr>
<tr>
<td>Nelson</td>
<td>4.9%</td>
<td></td>
</tr>
<tr>
<td>Picton</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td>Lyttelton</td>
<td>2.2%</td>
<td></td>
</tr>
<tr>
<td>Timaru</td>
<td>2.4%</td>
<td></td>
</tr>
<tr>
<td>Dunedin</td>
<td>4.7%</td>
<td></td>
</tr>
<tr>
<td>Bluff</td>
<td>2.2%</td>
<td></td>
</tr>
<tr>
<td>Whangarei</td>
<td>0.8%</td>
<td></td>
</tr>
<tr>
<td>Auckland</td>
<td>11.1%</td>
<td></td>
</tr>
<tr>
<td>Tauranga</td>
<td>47.9%</td>
<td></td>
</tr>
<tr>
<td>Gisborne</td>
<td>0.1%</td>
<td></td>
</tr>
<tr>
<td>New Plymouth</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Napier</td>
<td>13.6%</td>
<td></td>
</tr>
<tr>
<td>Wellington</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td>Nelson</td>
<td>7.3%</td>
<td></td>
</tr>
<tr>
<td>Picton</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Lyttelton</td>
<td>7.5%</td>
<td></td>
</tr>
<tr>
<td>Timaru</td>
<td>0.1%</td>
<td></td>
</tr>
<tr>
<td>Dunedin</td>
<td>3.1%</td>
<td></td>
</tr>
<tr>
<td>Bluff</td>
<td>4.3%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Statistics New Zealand

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**SOURCE:** Statistics New Zealand / Graph reproduced by kind permission of FIA.
The dominant species grown is *Pinus radiata*. It is a North American native and is chosen because it is extremely fast growing and site tolerant and can be grown in about 26 years on highly variable sites. Furthermore, the timber is readily processed, machined, and easily treated against fungal and insect attack, including termites. It is also an excellent feedstock for pulp and paper manufacturing.

Because all New Zealand forests are intensively managed plantation crops, it is possible to model and forecast future harvest yields with accuracy, in both quantitative and qualitative terms.

Initial breakdown of logs produces green sawn lumber, peeled veneers and wood chips/residues. These chips and residues are an ideal source of supply for pulp and paper making, reconstituted panel boards, or bio-energy. The sawn and peeled solid wood can be readily kiln dried and then utilised in all applications where there is no contact with water. Where contact with water will occur, various preservation treatments are easily and safely applied, which will protect the wood for decades against all forms of fungal and insect attack – including termites and marine applications.

*Radiata* machines easily for on-manufacturing into joinery, furniture, mouldings and a host of structural and visual applications. Modern technology allows defecting and finger jointing to develop high quality visual and structural products to be made from lower quality logs. Lamination creates extremely strong and durable products for post and beam-type structures, including medium rise buildings.

### Scion has a long track record of providing research, knowledge and novel technologies in partnership with industry, government and Maori stakeholders.

Examples of emerging opportunity include:

#### WoodScape Model

Half of New Zealand’s annual forestry harvest is exported as unprocessed logs. Greater onshore processing of these logs will provide more value to the regional and national economy.

**WOODSCAPE MODEL**

*Return on Capital Employed (%) by technology group*

<table>
<thead>
<tr>
<th>Technology Group</th>
<th>ROCE %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sawmill</td>
<td></td>
</tr>
<tr>
<td>Pulp and paper</td>
<td></td>
</tr>
<tr>
<td>Secondary wood processing</td>
<td></td>
</tr>
<tr>
<td>Reconstituted panel</td>
<td></td>
</tr>
<tr>
<td>Fuels</td>
<td></td>
</tr>
<tr>
<td>Engineered wood products</td>
<td></td>
</tr>
<tr>
<td>Power and heat</td>
<td></td>
</tr>
<tr>
<td>Chemicals</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

Scion has developed the WoodScape model to evaluate investment decisions in wood processing technologies in New Zealand. Containing detailed financial data, the model has been tested on almost 40 traditional and emerging wood processing technology options and is used to determine which are most promising for investment. The model has undergone rigorous industry review and can now be used to assist individual companies with their own investment decisions.

#### Industrial Symbiosis Aotearoa

Industrial clusters sharing resource streams can achieve greater energy and material efficiency. Due to the co-location of plantation forestry and geothermal resources, the Bay of Plenty is primed for industrial clusters that utilise geothermal heat to process logs into higher value products. Scion and GNS Science have begun a collaboration to understand local geothermal and forestry resources, to design effective industrial clusters and evaluate how individual companies can participate.

#### Wood Fibre Dice

A technology that binds wood fibre in pellet form to produce ‘dice’ is an example of added-value manufacturing. Developed and patented at Scion under its biofibre research programme, with investment from the Ministry of Science and Innovation, it is being commercialised in Europe as “Woodforce” by Sonae Industria. This process enables traditional MDF plants to produce a higher value wood fibre for use in leading edge plastic components where strength, stiffness and light weight are required. The global automotive industry and furniture manufacturers are prime markets. Scion scientists continue research in developing this technology as well as providing technical support to a number of plastics compounding and manufacturing companies.

#### Bioplastics

Scion uses renewable resources to develop new bioplastic or biocomposite compounds and derive products with unique functionality such as tensile strength, insulation properties and biodegradability/compostability of the product at the end of its life. Biodegradability testing provides evidence to support environmental and marketing claims for products. New Zealand kiwifruit exporter Zespri and Scion produced a ‘biosplice’ (spoon/knife) that uses bioplastics and kiwifruit residues, improving Zespri’s carbon footprint and allowing the spine to be composted once used. Other New Zealand companies have used Scion’s bioplastic technologies to develop novel plastic products and packaging made through injection moulding, extrusion or thermoforming.

#### Biochemicals

Biological material can be a rich source of chemicals. Beyond pulp, paper and timber products, numerous chemicals can be viably extracted from radiata pine. These chemicals, such as rosin and terpenes, can be extracted from harvesting residues such as bark and tree stumps. Harnessing and processing these chemicals provides new business opportunities and has attracted recent investment in the Rotorua area.
Forestry Industry - 5 reasons to invest in Rotorua
I. EXTENSIVE NATURAL RESOURCES

A. Forest Resources

The NZ government began with three experimental plantations (Whakawewera was one of the three) in the 1890s. State plantation forestry (with a State Forest Service) began in the 1920s (after the 1st World War) as did private sector afforestation. Today the national estate of plantations stands at almost 1.7 million hectares of planted forests. Some 513,400 hectares (29.9%) of these are situated in the Central North Island, (CNI) surrounding Rotorua.

There are two major forest owner entities operating in the surrounds of Rotorua, and many smaller forest owners. Working closely with one or both of the two big owners can ensure a secure supply with long term contracts for a base load volume. The larger players are Hancock Natural Resources Group and Kaingaroa Timberlands. Variable top-up volume can then be purchased on a more short term basis from the market of smaller suppliers. Local forestry consultants offer their services as log procurement agencies for this purpose.

FCS™ Certified

Throughout the world, companies and governments are coming under increasing pressure to adopt measures to verify that products are produced by methods that are environmentally acceptable. Rotorua has plantation forests and processes with FSC™ Certification.

CNI – MAIN FOREST OWNERS

FOREST OWNERSHIP IN THE REGION IS DIVERSE

Much of the underlying land on which the forest estate presently grows is freehold land under ownership of the forest growers. However, a significant amount is owned by Maori trusts and leased to the forest owners. Maori take a long term view of business and are favourably predisposed to work with investors for the long term good of both parties. Most Maori business is run through modern day commercially orientated trusts, which operate with a mandate from wider tribal owning groups which have significant capital to invest in their own right.

The owners of forests on this leased land operate under long term lease agreements (usually 35-70 years) with the Maori owners. As these lease agreements expire over time, there are orderly processes for either renewal or transition to new supply arrangements with the land owners.

WHERE THE PLANTATION FORESTS ARE

- 11.0% Northland 189,500 ha
- 3.2% Auckland 55,400 ha
- 29.9% Central North Island 513,400 ha
- 9.1% East Coast 156,400 ha
- 7.6% Hawke’s Bay 128,100 ha
- 9.8% Southern North Island 168,700 ha
- 9.7% Nelson/Marlborough 167,100 ha
- 1.9% West Coast 32,600 ha
- 6.0% Canterbury 103,300 ha
- 11.9% Otago/Southland 204,800 ha

Each complete tree represents 1%

Total 1,719,000 hectares

SOURCE: NEFD 2011 / GRAPH REPRODUCED BY KIND PERMISSION OF FOA.
Rotorua supports Wood as the first choice for construction, interior design, and daily living.
B. Uncommitted Wood

The graph shows the volume of uncommitted wood potentially available for processing in thousands of cubic meters for each year from 2012 to 2040. The analysis takes into account total available wood less that estimated to be used by existing processors in the region.

SOURCE: MINISTRY FOR PRIMARY INDUSTRIES

FOREST INDUSTRY AND WOOD AVAILABILITY FORECAST

CNI UNCOMMITTED WOOD AVAILABILITY

Future opportunities for value creation from Rotorua wood processing

- Timber
- Pulp & Paper
- Smart packaging
- Biofuels & bioenergy
- Ecosystem services
- New biomaterials
- Fine chemicals
- Pharmaceuticals
- Fertilisers
- Waste recovery
C. Natural Energy

The region is well serviced by electricity from two main sources of renewable energy: hydro and geothermal. Energy costs in NZ are low relative to other countries. NZ prices are in the lowest third of industrial electricity prices in the OECD. This offers a comparative advantage for processing logs in NZ, from both cost and environmental perspectives.

With regards process heat energy, Rotorua sits on a vast zone of geothermal activity which offers further opportunities for renewable energy usage. Additionally, there are opportunities for biomass as a further source of renewable energy. Many wood processors use biomass energy for in-house energy requirements and for manufacturing activities such as kiln drying.

Scion has a dedicated team working on bioenergy research at a national level.

Environmental Responsibility

Plantation forests and wood based products made from plantation trees are now recognised under the International Protocols on Climate Change as legitimate and valuable carbon sinks. Rotorua’s energy supply is environmentally clean and low cost. Any investor looking for competitively priced growth in ‘green’ business need look no further than wood manufacturing in Rotorua.

CO2 and Climate Change

On average a typical tree absorbs, through photosynthesis, the equivalent of 1 tonne of carbon dioxide for every cubic metre of growth, while producing the equivalent of 727kgs of oxygen.5

Using wood products can help slow the growth of global warming. Harvesting trees, before their death or decay, allows much of their stored carbon to continue to be stored throughout the life of the resulting wood products, while at the same time supporting an industry which has the incentive to plant new trees in their place.
Rotorua enjoys a unique position as the city in the centre of New Zealand’s green triangle of forests and wood resources. These resources have large volumes of quality raw material available for existing and new processing ventures. Rotorua International Airport is the international gateway for the wider Bay of Plenty region and the Central North Island. Daily domestic services to key centres and an international service to Sydney enables quick and easy business market access. Rotorua’s proximity to New Zealand’s largest export port is also a key advantage with the capacity and infrastructure to handle large volumes of forestry and other products.

SUCCESS STORY - PORT OF TAURANGA

Port of Tauranga is the natural gateway to and from international markets for many of New Zealand’s businesses.

The port’s location is central to key export commodity sources. It has direct and dedicated access to New Zealand’s largest import market, the capacity to expand infrastructure, and unrivalled sea, road and rail connections.

A commitment to customer service and innovative shipping solutions has established the Port of Tauranga as New Zealand’s largest and most efficient port.

The Port’s key strength lies in its ability to grow to meet customer requirements and market demands. It has the land holdings to expand, and the integrity, innovation and commitment to meet customers’ future needs.

Port of Tauranga is New Zealand’s largest port by volume – and its most efficient, with export volumes in excess of 12 million tonnes.

Log exports totaled 4.9m tonnes, sawn timber 1m tonnes and pulp, paper and panels another 1.4m tonnes. Combined, the total of all forestry products is 60% of its export volume. Rotorua and the central North Island forestry estate play a strategic role in the supply chain and the services provided to the forestry industry. Excellent road and rail infrastructure enables efficient cargo flows.
A. Existing Wood Processing Infrastructure

Rotorua sits almost exactly in the centre of a ‘green triangle’ of wood processing infrastructure which feeds off the CNI forestry resource for its raw material. The green triangle is bound by Kawerau 55km to the East, Tokoroa 60 km to the West, and Taupo 90km to the South. Tauranga 86km to the North is the main export port for NZ forest products.

The industry is well serviced by excellent logging and trucking contractors and very good (and improving) heavy load access.

All five centres are connected by major sealed arterial roads and wood products flow freely between the various stages of fabrication across the region. The CNI region also has well-established rail infrastructure to support the movement requirements of wood and timber related industries.
Rotorua’s ‘Wood First’ is an initiative Rotorua District Council is proud to lead as a local government body and will be a New Zealand first, brought to fruition by working in partnership with a number of key stakeholders. Rotorua’s ‘Wood First’ is about maximising the amount of value-added wood used in the district’s development and upkeep. As a destination we will be promoting the use of wood and Rotorua wood products and services.

The overall goal of ‘Wood First’ is to encourage a cultural shift towards viewing wood as the first choice for construction, interior design and daily living. Not only is wood durable, it is cost-effective and climate friendly.

Grow Rotorua has been established to drive implementation of the Rotorua Sustainable Economic Growth Strategy. This organisation can help you facilitate your investment in the forestry industry and is open to discussing business set-up incentives to attract new value-added forestry related business that will benefit the local economy.

For more information visit www.growrotorua.com

Rotorua District Council is committed to working collaboratively with public and private partners to grow the Rotorua economy in line with the Rotorua Sustainable Economic Growth Strategy. RDC aims to create a customer-focused ‘can-do’ attitude to the delivery of regulatory service functions. RDC has a Client Support Manager to support investors with any regulatory requirements including stepping investors through the process.

For more information visit www.rdc.govt.nz

Scion is a Crown Research Institute that undertakes research, science and technology development in forestry, wood products, biomaterials and bioenergy. Formerly the New Zealand Forest Research Institute, it is located in Rotorua and provides a world class research service across the full forestry value chain, from genetic improvement to leading edge consumer products sourced from trees. Scion also operates an industrial park for offices of forestry and wood industry participants, on its campus. This park is known as Te Papa Tipu Innovation Park and a number of industry leaders are headquartered on this site, making for a centre of excellence and easy communication between the players.

For more information visit www.scionresearch.com

Waiariki Institute of Technology is a tertiary education facility (or Polytechnic) based in Rotorua with regional campuses in Taupo, Tokoroa and Whakatane. Waiariki is New Zealand’s fastest growing tertiary institute, set in a clean, green and safe rural environment less than ten minutes drive from the city centre.

Waiariki works with industries, training organisations, businesses and community groups to support today’s requirements by providing qualifications and training to fill gaps where skilled employees are needed.

For more information visit www.waiariki.ac.nz

**Investor Testimonial - Forest Industry Engineering Association**

“For over 20 years the Forest Industry Engineering Association (FIEA) has been bringing together national and international technical experts for its quarterly forest and wood products conferences in Rotorua, helping to reinforce the city as the ‘Centre of Wood Products Excellence’. Rotorua District Council has been instrumental in this activity through their networks with both public and private organisations servicing forestry and wood manufacturing.

Since 1998 FIEA has been headquartered in Rotorua. In conjunction with Innovatek Limited, CONNEX event innovators and the Forest Industry Contractors Association, FIEA is proud to call Rotorua home. Wood producers from around Australasia have long recognised the valuable and high concentration of wood industry expertise that is based in the Rotorua region. We look forward to continuing success in highlighting the leadership role of many wood-focused suppliers and service providers based in this excellent Central North Island region. Rotorua District Council’s support for adding direct airline links to Sydney, Australia has enhanced that reputation.”

John Stulen, Director – Forest Industry Engineering Association (a division of Innovatek Limited)
Rotorua offers quality forestry training... including forest management, forest operations, wood processing, biotechnology and sustainable energy.

Forestry has a wide range of career options and possibilities, and Rotorua offers training in a range of disciplines from silviculture and practical logging through to timber remanufacturing including saw doctoring and timber machining. Training is also available for forest managers and harvest planners.

**FOREST INDUSTRIES TRAINING STATISTICS**

**TRAINEES AND APPRENTICES BY SECTOR**
as at December 2011

- Forestry (3,235) 54%
- Furniture (618) 10%
- Pulp & paper (267) 4%
- Solidwood processing (1,408) 24%
- Wood panels (374) 6%
- Credit & finance (87) 1%

**TRAINEES AND APPRENTICES BY REGION**
as at December 2011

- Northland: 1200
- Auckland: 1400
- Waikato: 1000
- Bay of Plenty: 1200
- East Coast: 1400
- Wellington: 400
- Taranaki: 600
- Carterton: 800
- Nelson/Marlborough/West Coast: 200
- Canterbury: 400
- Otago/Southland: 600

Source: FITEC / Graph reproduced by kind permission of FOA.

The Waiariki School of Forestry and Primary Industries

This is the largest vocational forestry training institute in New Zealand. It was established over 60 years ago by the New Zealand Government to train students in plantation forest management, sawmilling and wood manufacturing.

The school operates from two core sites in Rotorua with leading equipment and capability to train industry-ready people in a hands-on environment. The school has an excellent reputation for agriculture, horticulture, forest management, forest operations, wood processing, biotechnology and sustainable energy. For more information visit www.forestryschool.ac.nz

Waiariki National Centre of Excellence for Forestry and Wood Processing

This is a custom-designed and built facility dedicated to providing ongoing educational opportunities for people within forestry and wood processing. The building of the centre is the result of a partnership among Waiariki, Forest Industry Training and Education Consortium (FITEC) and University of Auckland.

The centre is outfitted with a specialist computer suite used to run state-of-the-art computer simulation software relating to forest mapping, forest operations, saw doctoring, machining and other related timber applications. This facility supports all forestry and wood manufacturing courses provided by Waiariki’s School of Forestry and Primary Industries, including the National Diploma in Forestry and the Diploma in Manufacturing.

Its aim is to develop technical expertise and research capabilities to equip students with the necessary skills to transform the wood processing industry from its current commodity orientation to one that focuses on high value-added products for export. Course emphasis is placed on innovation and the development of products and processes, and on developing industry leaders who are able to manage the change and transformation processes.

Competenz Forestry and Wood Manufacturing

This industry training organisation has a local office operating from the Scion campus and offers pre-entry and post-entry training for forest and wood industry operators. For more information visit www.competenz.org.nz
Rotorua has a warm temperate climate with natural thermal spas, clean spring water supplies, great health and educational services, all manner of business support services, modern shopping malls, excellent dining and moderately priced housing and property markets. Rotorua also offers a wide array of outdoor recreational pursuits including trout fishing in the numerous surrounding lakes and streams, water skiing, swimming, hunting and tramping in the local wilderness parks. There is also snow skiing nearby, a variety of golf courses, world class tourism activities and world famous mountain bike trails. Nearby Bay of Plenty beaches offer the opportunity to partake in your favourite sea sports. Rural lifestyle properties are available at affordable prices. Rotorua is a fantastic place for family activities and for bringing up a family in a healthy and fun environment.

Investor Testimonial - PF Olsen

“We located our national head office in a new building in the Te Papa Tipu Innovation Park in late 2007. The reasons for the move included:

- Proximity to other forestry related businesses, especially Scion where we have frequent meetings at both industry and science levels
- Excellent working environment for staff, located right beside the beautiful Redwood Grove and mountain bike trails - being quiet, relatively traffic-free, yet still close to the Rotorua CBD
- Good shared site security, IT hosting with generator backup and fibre optic cable with circuit redundancy in case of accidental cutting
- Safe access in and out of the park
- Plenty of free parking

PF Olsen has not regretted its move to Te Papa Tipu Innovation Park. We are confident it is a factor in attracting and retaining good staff – the most valuable asset of any professional or service business.”

Peter Clark, Chief Executive
SUCCESS STORY - SCION

Scion plays a vital role in providing the research talent needed by New Zealand's thriving forest industry and the wood product and wood-derived materials and biomaterials sectors. Scion employs scientists from around the world in disciplines that include forest ecology, resource monitoring, pathology (forest diseases), entomology (insects), molecular biology, material sciences, chemistry, engineering, statistics, microbiology and much more.

Since 1947, in Rotorua, the New Zealand Forest Research Institute (now trading as Scion) has been providing the science behind one of the most productive plantation forest industries in the world. As the industry has evolved so has the institute. Scion has grown into a world-class organisation employing 300 staff. With annual revenue averaging around $45 million, Scion generates wealth in many forms for the Rotorua economy and community. Aside from being a major employer, Scion has spawned a distinct culture of innovation within the region such as a cluster of local businesses dedicated to conifer breeding and propagation.

In recent years Scion has diversified its science programmes to include new material development using chemicals and fibres derived from renewable resources. One such technology involves the use of wood fibres as reinforcement for plastic products. Finding alternatives to fossil fuels has driven equally exciting research in biofuel and renewable energy development. Scion recognises the need for on-going product and process innovation and the expansion of export markets. With plantation forests, geothermal energy sources and a port close by, Scion’s location in Rotorua is ideal to providing focussed research and innovation that is critical to harnessing the full potential of the forest industry.

SUCCESS STORY - ROADMASTER

Roadmaster Ltd was started in 1991 by Ross Bell, Pat Mear, Lyall McGee and Bill Lacey. It has been operating for 21 years and today has 81 staff. Roadmaster specialises in manufacturing high quality road transport trailers and truck bodies, mainly for the New Zealand market, and has also successfully exported purpose-built short semi trailers to Laos.

Roadmaster has developed a strong market segment with the B Train design. It’s tried and true. Quality of build is excellent and exceeds a lot of its competitors’ build quality. Roadmaster listens to its customers and can adapt quickly to customer needs and requirements. Using the best technology from overseas has also been a key success factor.

Innovation is also important to Roadmaster. The curtainsiders you see on the road, B Trains, Hardsider trailers, 3, 4 and 5 axle full trailers, trombone trailers, transporters, tipping trailers, are some of Roadmaster’s key products.

Roadmaster will try just about anything to remain competitive – a most recent example is the prototype 7 axle skeleton B Train currently trialling under NZTA.

Roadmaster has also introduced into its product mix the next generation twistlock technology called QuickLocks – a heavier mechanism where the container does not rattle and has higher safety standards.

Meryn Morrison, General Manager Administration claims “Rotorua is a great place to live and do business compared to bigger centres such as Hamilton and Auckland. Roadmaster can deal with customers visiting our premises. We have space and can negotiate streets easily with trailer movements. Customers have room to come and go. Organisations that support businesses are positive and provide us with sound information and contracts”.

... New Zealand’s leader in forestry research, science and technology development
If you would like more information about investing or doing business within Rotorua's forestry industry, contact:

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This document was largely prepared by consultant and lead author Bryce Heard with valuable input also provided by key forestry industry stakeholders:

**Testimonials & Success Stories**
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Graeme Bell, Site Manager - McAlpines Rotorua  
Christl McMillan, Marketing and Communications Manager - Scion, Rotorua  
Tim Rigter, General Manager - Red Stag Timber Ltd, Rotorua  
Mark Whitworth, Customer & Cargo Services - Port of Tauranga Ltd, Tauranga  
Meryn Morrison, General Manager Administration - Roadmaster

**Graphs, Images and Other Information**
Rotorua welcomes *forestry investment partnerships* that are mutually beneficial.