

Forest investment for individuals

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Figure 1: Richmond Hills, Nelson

Abstract

Forestry can be classed as an alternative investment, compared with other classifications such as shares, commercial property or bonds. Alternative investments as a category, and certainly individual forest investments, have opportunity for improved revenues or outcomes from the application of skilled management practices. Conversely, the lack of specific competency in forest and investment management will greatly increase investment risk. Investors considering forestry as an investment need to be aware of several features that distinguish it from other investment options. This paper discusses plantation forest investment in radiata pine.

Advantages and disadvantages of forestry as an investment

The most important distinguishing features are listed below:

Advantages

- An investment with returns linked directly to international prices for forest products
- Ethical investment classification

- Where land is purchased, an investment in rural land
- A wide timeframe over which the forest can be harvested, which allows the forest to be carried forward over periods when markets are less favourable
- Versatility of end uses for forestry outputs, which diversifies the market risk
- Prices of logs have historically kept up with inflation and forestry investment is still generally recognised as a hedge against this. The historical world demand for industrial wood is closely correlated with a combination of population and gross domestic product growth
- There are taxation advantages, both through deductibility and deferral of taxable income until the end of the project
- An investment that can be professionally managed
- The relatively free trade for forest products
- An investment well suited to spreading risks in a balanced investment portfolio
- A traditional investment that has not been undercut by rapid changes in technological developments

- An environmentally sound renewable resource with low energy inputs and the capacity to reduce atmospheric carbon
- A cashflow that suits superannuation requirements
- The ability to be closely involved with a tangible biological investment
- Recreation opportunities.

Disadvantages

- The investment is long term in nature, as radiata pine in New Zealand will require a rotation of typically 25–30 years before maturity is reached
- In most forest growing investment ventures, any income prior to forest maturity will be minor unless there are available carbon credits to sell
- The cashflow profile of forest growing requires an ongoing funding commitment during the establishment and tending phases. The tending phase, usually from years 4–10, normally requires a higher level of funding than the initial establishment. The major costs are incurred in years 0–2, followed by a growth period until tending can occur as trees grow
- Future markets 25–30 years ahead are impossible to predict so market risks may be significant. Market returns are affected by substitution from other products, input costs (including freight rates to get wood to markets), and the relative long-term strength of the New Zealand currency compared with other countries
- Global and country-specific economic growth factors strongly influence the demand for wood products for uses such as building and housing, furniture and fittings, concrete formwork and boxing, packaging or other industrial fibre usage
- Biological risk exists, although New Zealand has to date shown a commitment to research and border control to mitigate this
- Climatic risk, including wind and drought. Insurance can partially mitigate this risk, and good establishment and silvicultural practices will reduce it
- Fire risk – most forest owners insure against this
- Financial risk due to changes in taxation policy, in the financial circumstances of other investors, and in the length of rotation because of market factors.

The legal environment for forestry investment

The most important pieces of legislation relating to the involvement of consultants, advisors or promoters of forestry investment products are the:

- Financial Markets Conduct Act 2013
- Anti-Money Laundering and Countering Financing of Terrorism Act 2009.

Financial Markets Conduct Act 2013 (FMC Act)

This Act regulates offers of ‘financial products’, which include four discrete categories – equity securities, debt securities, managed investment products and derivatives. It ensures protections are in place, including prescriptive disclosure requirements, to support fair, efficient and transparent financial markets. Certain disclosure obligations will apply if an offer is a ‘regulated offer’ of financial products, essentially arising where the offer involves retail investors.

The FMC Act also implements fair dealing rules for financial products and services, which apply to both retail and wholesale clients. The Act creates registration and governing document requirements for regulated offers of debt securities and managed investment schemes, and creates a licensing regime for managers of registered managed investment schemes.

With the contributory nature of forestry investment and the longer-term horizon from planting of seedlings until harvest of the tree crop, on average around 26–28 years, the most suitable structure for affordable forestry investment at the retail level is a limited partnership. This has the benefits of limited liability which a company has, but unlike a company (other than a smaller look-through company), losses can be deducted against other income and are not trapped in the company. It also enables funding by calls to be made from investors, typically on an annual basis to meet the ongoing silviculture costs.

Limited partnerships fall into the category of managed investment schemes under the FMC Act. Therefore, if a forestry managed investment scheme is offered to retail investors it will need to be registered on what is known as the Disclose Register and is subject to disclosure and governance requirements under the FMC Act. The manager of the scheme must be licensed and an independent statutory supervisor (trustee) must be appointed.

Unless one of the exemptions in the FMC Act applies, an offer of financial products in a forestry managed investment scheme to retail investors requires a Product Disclosure Statement (PDS). A PDS provides a potential investor with essential information to help them decide whether to invest in a financial product. It uses clear language to explain the product and how it works, and provides information about the business that is offering it. Importantly, it will give an investor an understanding of the risks and returns and the fees and charges involved in the investment.

Information on a registered forestry managed investment scheme will also be publicly available on the Disclose Register website, which will include audited financial statements, governing documents of the scheme and how the scheme is managed (e.g. there is a requirement for a Statement of Investment Performance and Objectives). The financial service providers must keep this information up-to-date while they continue

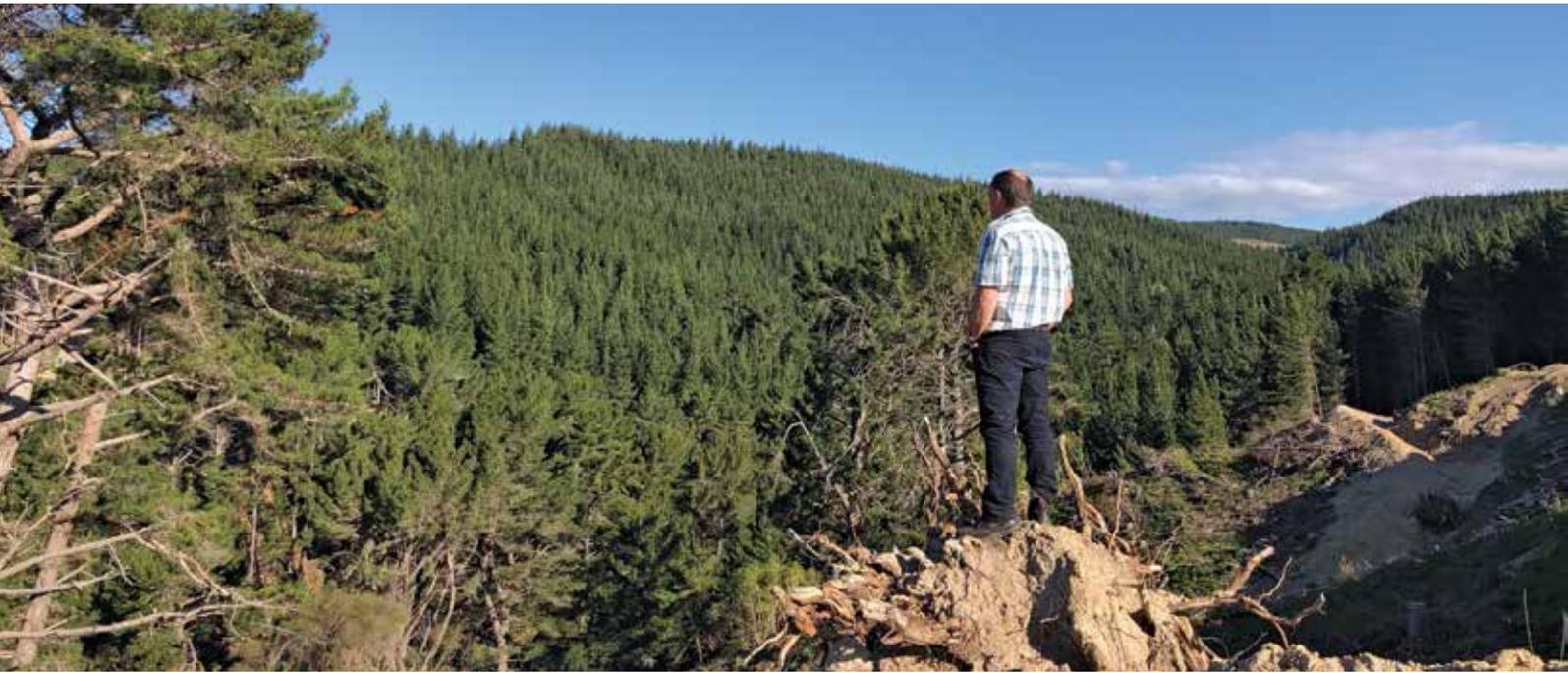


Figure 2: Author Bert Hughes views a Forest Enterprises investment in the Wairarapa region. Photo courtesy of Erica Kinder

to offer the financial products, so investors can check online for the latest scheme and product details.

This Act applies to a ‘financial adviser service’, which includes giving financial advice, and providing an investment planning service or a discretionary investment management service. The Act regulates financial advisers by requiring providers of financial adviser services or broking services to be registered or, in certain cases, authorised by the Financial Markets Authority.

There are general conduct requirements on financial advisers, such as an obligation to exercise care, diligence and skill when performing services. The Act requires disclosure by financial advisers and brokers to retail clients, ensuring that clients can make informed decisions about whether to use the financial adviser and whether to follow the advice. There are also competency requirements on certain financial advisers who deal with retail clients, so they must have the experience, expertise and integrity to match a person to a financial product that best meets that person’s needs and risk profile.

Anti-Money Laundering and Countering Financing of Terrorism Act 2009 (AML/CFT Act)

This Act imposes obligations on reporting entities, which includes offerors of forestry investments and managers of forestry investment schemes. Reporting entities must have in place procedures and processes to detect, deter, manage and mitigate money laundering and the financing of terrorism.

One of the key obligations of the AML/CFT Act requires reporting entities to verify the identity of their clients prior to entering into a transaction. This process, known under the Act as customer due diligence, involves verification of identity (date of birth and address), which

needs to be confirmed by acceptable documents such as a driver’s licence or passport and documents showing an address. If an investor is a trust, the reporting entity will also need information about the people associated with it, such as trustees and beneficiaries. They may also need to ask the client about the nature and purpose of the investment. Information confirming the source of funds for a transaction may also be necessary to meet the legal requirements.

Forestry investment structures

The main types of investment structures for forestry projects, with key features, are summarised below.

Individual ownership

This is where an individual owns the land and forest, and has direct control over the physical and financial aspects of the investment. The current taxation regime allows the individual to deduct most forestry development expenditure against income from any source.

Unincorporated forestry joint ventures

Joint ventures come in a variety of formats, but in New Zealand forestry they most frequently refer to the situation where one party contributes the land and another the investment funds. The Forestry Rights Registration Act 1983 provides a relatively simple mechanism for registration of an agreement between an investor and a landowner against the land title. Through the use of this mechanism expensive survey costs can be avoided. The agreement between the parties should be carefully drafted to try and cover all matters that could arise over a 30-year rotation.

The most common situation in joint venture agreements in New Zealand is to establish at the outset

the provision for sharing of income in proportion to each party's planned contribution. The current taxation regime allows each party to deduct most of its forestry development costs against income from any source. As a forestry joint venture is usually a private investment agreement between parties, and not a regulated offer, a PDS under the FMC Act is not required.

The Forestry Rights Registration Act can also be used as a mechanism for separation of the ownership of land from the ownership of the trees for an existing forest. It is possible for a landowner to grant itself a forestry right for trees growing on its own land and then sell the land without tax being payable on the trees retained.

Ordinary and limited partnerships

Before the Limited Partnerships Act 2008 was passed, ordinary partnerships were the most common mechanism for forestry investment involving grouping of investment from a number of individuals. Partnerships, under the current taxation regime, allow each party to deduct most of its forestry development costs against income from any source. Partners are, however, personally liable for the future liabilities of the venture and this is why limited partnerships are now the preferred structure.

The attraction of limited partnerships for investors and investment managers lies in the tax treatment and flexibility of limited partnerships when compared to other corporate structures such as companies and trusts. A limited partnership is transparent for New Zealand tax purposes and the limited partnership itself is not taxed. Instead, the limited partners themselves are treated as carrying on the taxable activity and are taxed according to their own tax attributes and in relation to their proportionate share of the limited partnership's income. As a forestry limited partnership incurs forest establishment and development expenditure, subject to some limits, those losses can flow through to the limited partners and can be offset against their other income.

Every limited partnership must be formed with a general partner which is responsible for the management of the limited partnership. The general partner is in effect the agent of the limited partnership for the purposes of its business. The general partner is jointly and severally liable with the limited partnership for the limited partnership's unpaid debts and liabilities.

A limited partner's liability is limited to the amount that they have agreed to contribute to the capital of the limited partnership. In exchange for that protection, the Limited Partnerships Act 2008 provides that a limited partner must not take part in the management of the limited partnership. If a limited partner does so then the limited partner may be liable to the same extent as a general partner for debts and liabilities incurred while they were taking part in the management.

Limited partnerships that are managed investment schemes and which offer shares to retail investors are

subject to the regulatory and disclosure regime in the FMC Act.

Companies

Companies are not generally a popular choice for aggregating individual investment monies for forestry, as the tax deductibility rests with the company rather than the individual shareholders. Companies have the advantage of removing personal liability from the individual investors and can be a mechanism for relatively easy transfer of interests during the growing cycle.

Look-through companies allow the pass through of tax losses, much like a partnership, and could be considered where only a small number of shareholders are required. There must be five or fewer shareholders to elect to be a look-through company.

Trading trusts

A trading trust is usually a discretionary trust that carries on active business and the trustee of the trust is usually (but not always) a company. They are usually structured to limit the ability for trustees to be indemnified from the trust's fund. Trading trusts can be used to own forests and their main advantage is in the flexibility of distributing income or capital to beneficiaries. However, losses incurred through tax deductibility remain in the trust and cannot be directly passed on to beneficiaries.

Separation of roles in forestry investment

There are normally at least five main parties in any larger forestry project. To avoid conflicts of interest and adequate monitoring and accountability there is a need to clearly distinguish between the roles of these parties. Combining more than one role in one body can undermine the ability of the investors to control the investment. The five main parties are:

1. Promoters

The promoters take an initial risk to facilitate projects. Their rewards in terms of success fees ('preliminary fees', 'issue expenses', 'promoter's fees', 'brokerage' etc) should be carefully analysed. Some prefer to also take a 'free' share of the project and a commission on final revenue. Carefully compare the total remuneration package of the promoter with other forestry investments on offer.

2. Investors

Unless investors are participants in a managed scheme registered under the FMC Act, these should be structured to have a separate management committee or directorate with investor representation, to ensure that the forest is being managed in their long-term interests.

3. Managers

Normally managers are initially appointed by the promoters to organise operational work in accordance with a forest management plan.

Remuneration is usually by way of a percentage charge on forest inputs, plus separate fixed charges for accounting and administration. Powers to replace the managers, where necessary, should rest with the investors rather than the promoter.

4. Consultants/Auditors

Investors should ensure that there is provision in the investment structure for independent advice and audit of both forestry management and financial reporting.

5. Supervisor

Where an offer of financial products is made under the FMC Act, a Supervisor (normally a trustee company) is required to act in the interests of the investors and ensure that the offer contained in the PDS and governing documents is adhered to.

Location and site conditions

Most of the produce from forests in New Zealand will be exported in one form or another. The two location factors that will have the greatest impact on profitability are: a) proximity to a deep-water port; and b) proximity to a market for domestic sawlogs. Physical access for harvesting needs to be considered carefully, because in difficult topography forest roading costs can take a high percentage of harvesting revenue and in extreme cases render harvesting unprofitable.

For site conditions, consideration needs to be given to:

- **Topography** – steep and difficult topography will reduce the profitability of a forestry investment, mainly through the higher roading and harvesting costs incurred
- **Soils** – check that the depth and fertility are similar to other good forest areas in the locality. Ensure that adequate allowance has been made for swamps, stony soils, highly mineralised soil and other poor soil types. Roading costs are highly correlated to soil types as forest roading requires large quantities of sufficiently hard rock to construct adequate pavements for forest roads. Where rock is not available locally, substantial costs arise from transporting material for use as pavement base course or traction surface. Certain soil types require higher levels of construction cost from practices, such as end hauling unsuitable material to dump sites, stabilising unconsolidated fills and controlling storm water flows. A prudent investor should get specific advice from a person skilled in civil engineering about erosion susceptibility, roading costs and risks, and best practice guidelines on specific sites
- **Rainfall** – the normal minimum annual rainfall for optimum growth is 800 mm p.a. Where rainfall is between 600 and 800 mm p.a., check that the forecast yields reflect the lower availability of rain



Figure 3: Fire lookout on Barnicoat Range, Richmond Hills, Nelson

- **Altitude and temperature** – radiata pine grows faster and produces stronger wood in the warmer and lower altitude parts of New Zealand
- **Other climatic factors** – check for wind exposure, snow and erosion potential. Radiata pine should not be planted as a commercial crop in areas subject to risk of significant or extended snowfall
- **Weed cover** – difficult weeds such as gorse and broom can substantially increase establishment and tending costs, and directly affect profitability.

Growth and yield considerations

Tree growth is related to the site factors discussed above, to the genetic quality of the growing stock and to the forest management regime applied.

A range of growth and log out-turn models has been developed by the industry which apply to different stages of growth and to different geographical regions and different silvicultural options. Project growth and yield assumptions should be supported by verifiable growth model runs and log grade out-turn runs. The quality of such modelling is dependent on the use of appropriate input data and assumptions. Yield projections should also take into account potential losses from wind, soil erosion, mortality and animal damage. Advice from an independent consultant on growth and yield assumptions should be sought if an investor has any concerns about the applicability of assumptions made for the project.

Optimal rotation lengths will typically be in the range of 25–33 years, and total projected merchantable clearfell volumes should typically be in the range of 450–750 m³ per stocked hectare. Rotation length has been reducing historically, particularly in periods of high log price, where investors take opportunities to crystallise relatively high log price into returns. Rotation length is generally determined by modelling the most biologically productive regime in terms of

volume and future crop sales cashflows, then assessing that productivity against the investor's preference for risk and returns by use of discounted cashflow analysis. This process is quite sensitive to the choice of discount rate due to complexity in quantifying risk, and the opportunity cost inherent in any investment choice given normal capital constraints. Sales revenues rise as the crop grows older and larger, but the present value of the sales revenues is reduced by the cost of waiting longer periods to receive those returns.

Forest management plan – revenue and costs

Cashflow forecast and costs

The forest management plan for an investment project should include a cashflow analysis setting out the annual operations and costs through the duration of the growing of the forest crop. Projected costs and returns should be expressed in current day dollars to remove the effects of inflation. The nominal value of investment cashflows means the revenue or cost is measured or projected in terms of actual prices that exist at the time. The real value refers to the same return after it has been adjusted for inflation. There are certain rules governing accounting for inflation in investments that are governed by the FMC Act which may not be consistent with practices in non-regulated forest cashflow models where the effects of inflation are also set out.

Costs should be realistic for the work envisaged and take into account direct operational costs, field supervision, management and other overheads. Contingencies should be provided to cover unexpected costs such as dealing with tree toppling and additional weed control, nutrient deficiency or anti-fungal spraying. The schedule of the pruning and thinning operations should set out the target pruned height for each pruning lift and the target stockings for thinning operations.

Most forestry costs are expressed on a per hectare basis, which allows comparisons to be made with other past and planned forestry investment opportunities in the area. The costs of set-up, promotion, audit, commission, consultant reports and legal advice will be associated with most forestry investment ventures. These costs will vary widely depending on the size of the project and the investment structure. Again, prospective investors should compare these costs carefully with other past and planned forestry investment opportunities.

Revenue

Projected revenue returns should reflect what is currently being achieved for the respective log grades. As mentioned, projected log grade out-turns should be supported by expert system modelling runs with experience-based adjustments. The schedule of projected log grade out-turns should be consistent with the silvicultural management proposed for the crop.

Generally, forestry investment projects are evaluated on a single rotation basis with a residual land value at the end of the rotation if the project involves land purchase. Most commonly, the residual land value will be assumed to equate to the purchase value or the value adopted for the beginning of the project.

Forestry land values are generally stable for long periods and intermittently increase at unknown time intervals. Poor-quality land may lose value and high-quality land usually gains value. Some existing forest land class areas may have no cashflow or tree crop return (e.g. land in high snowfall risk areas, high erosion susceptibility or high environmental sensitivity). Land value plays a part in the returns to forest investments, but is generally of lower specific return than the crop return, unless the land can be sold to a higher or better use at the end of the investment period.

The land should be described for characteristics that have direct impacts on site productivity and operating costs. Factors affecting productivity will have a substantial impact on value and risk as the volumes of log products by grade are the major driver of revenues. These factors are mostly related to soil type, rainfall, wind speed and wind run, and average or extremes of temperature.

Factors affecting operational cost are climate, location, aspect, slope, soil stability and underlying rock type. These factors affect travel cost, transport cost, machine configuration requirements for harvest and roading, and risk of adverse events from erosion susceptibility, flooding, windstorm or fire risk. It has become increasingly apparent to informed investors that risk in forest schemes is highly correlated to land quality. Steep, remote, inaccessible land has additional risks arising from health and safety compliance management due to the nature of the terrain, as well as greatly increased environmental risk on steep or erodible soil types.

Some land currently in commercial forestry is unfit for purpose and the increase in risk, coupled with a focus on directors' liability, is resulting in such land being retired from prudent commercial use. High-quality forests with good management have considerably less risk than average or poor-quality forests and this is of major importance to the prospective forest investor. Forests with high operational costs or risks should have relatively lower land value, all else staying the same.

Financial performance of a forestry project

Cashflow projections for forest investments should match the forest management planned events as the costs and revenues arise from the application of the plan. The forest plan should describe the planting and tending operations in detail as these operations are intended to add value to the tree crop or reduce risk. Events such as pruning and thinning are major cost items and need to have clear value and quality outcomes planned to justify the investment expense incurred.

Forest cashflows typically are expenditure of capital for land, annual expenses of management, rates, insurance, maintenance, security and periodic expenses of tending and mapping, stand records or measurement events. Income cashflows are normally at the end of the investment as harvesting occurs over several years followed by a land sale to close out the investment. Investment promoters normally plan for revenue to recover costs from the promotions and marketing process.

The projected financial performance of a forestry project will generally be expressed as the internal rate of return (IRR). The IRR of an investment is defined as that discount rate where the discounted costs and revenues sum to zero. Put another way, it is the maximum projected rate of interest (before inflation) than an investor could afford to pay on a loan to fund the whole investment and break even at the end.

Provided that all costs and returns are expressed in current day dollars, and costs and returns move similarly with inflation, then the IRR is a real rate (i.e. the rate which is expected to be achieved over and above inflation).

IRRs can be expressed as pre-tax or post-tax. For simplicity, because future taxation policy is uncertain, and because different individuals have different tax liabilities, pre-tax IRRs are most commonly used as the benchmark for comparison purposes. A well set-out PDS should allow an investor to adjust, or sensitivity test, the calculated IRR under differing assumptions or circumstances. IRRs are particularly sensitive to:

- Log prices

- Log yields by grade
- Total log volumes
- Costs such as harvesting and road construction.

A forestry investment should be well described to investors with quality mapping and land descriptions, systematic crop or stand records, a forest and land management plan extending for the entire investment period, and detailed cashflow projections. Professionally managed investments should include an annual audit of the financial and physical assets of the scheme, as well as comprehensive annual accounts and reporting.

Acknowledgements

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Conclusion

Forests create value through natural growth and reward the patient investor with many benefits. We can improve our forest's value with proper management and care. Society benefits from the gains in water quality, biodiversity and habitats that develop in our forests over time. Forest products are sustainable and often aspirational and contribute to many areas, including the housing sector.

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Appeal for Funds

The NZIF Foundation was established in 2011 to support forestry education, research and training through the provision of grants, scholarships and prizes, promoting the acquisition, development and dissemination of forestry-related knowledge and information, and other activities.

The Foundation's capital has come from donations by the NZ Institute of Forestry and NZIF members. With this, the Board has been able to offer three student scholarships and a travel award each year. It has also offered prizes for student poster competitions at NZIF conferences.

To make a real difference to New Zealand forestry, including being able to offer more and bigger

scholarships and grants, the Board needs to grow the Foundation's funds. Consequently it is appealing for donations, large and small, from individuals, companies and organisations.

The Board will consider donations tagged for a specific purpose that meets the charitable requirements of the trust deed. A recent example has seen funds raised to create an award in memory of Jon Dey who was known to many in New Zealand forestry.

The Foundation is a registered charity (CC47691) and donations to it are eligible for tax credits.

To make a donation, to discuss proposals for a targeted award or for further information, please email foundation@nzif.org.nz or phone +64 4 974 8421.

Please help us to support NZ forestry education, research and training