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**CAWTHRON MARLBOROUGH  
ENVIRONMENT  
AWARDS**  
2015



## JUDGES' REPORT

### FORESTRY

### MANUKA ISLAND TRUST

<b>INTERVIEWED</b>	Murray Turbitt and Philip Woodward of Merrill and Ring
<b>DATE</b>	19 December 2014
<b>JUDGES</b>	Chas Perry, Paul Williams, Penny Wardle

#### INTRODUCTION

**Area:** 2411ha

**Terrain:** flat to rolling, altitude 300-760m

**Rainfall:** about 2000mm

**Soil type:** mostly poorly drained low fertility glacial moraine

**Special features:** Indigenous vegetation, conservation covenants, rare fernbird habitat, historic cob accommodation house



## SUMMARY

Manuka Island is a 2411ha forest accessed off SH63 by Wash Bridge. There are 1920 planted ha with 1725ha in radiata pine and 195ha in Douglas fir. The forest is registered with the Emissions Trading Scheme and trees are up to 20 years old.

The Manuka Island Trust purchased this reverted marginal farmland for forestry development in 1993. Forest & Bird objected to the purchase as this was the single largest surviving tract of lowland native vegetation in the Wairau Valley, a habitat for close-to-extinct fernbirds and a rare coral mistletoe which grows on manuka.

The Manuka Island Trust responded to these concerns by selling 327ha to the Department of Conservation as a fernbird reserve. Two conservation covenants were negotiated with DOC as part of the resource consent process to establish forestry on the site.

Merrill and Ring NZ Ltd manages this easy-topography forest for its owners with the main objective of growing a high-value crop of intensively managed radiata pine and Douglas fir.

However, what stood out was the enthusiasm for Manuka Island as much more than a production forest. Murray and Phil are dedicated to balanced management which values biodiversity, landscape, historic and recreation along with production. The American owners support this approach and make regular visits to the property which they enjoy for recreational and aesthetic reasons along with its business potential.

## ENVIRONMENTAL IMPACTS

### Soil Impacts

The forest was established on flat and rolling topography which will allow for low impact and easy harvesting with minimal new earthworks. Approximately 70% of the forest will be suitable for ground-based mechanised logging systems that should minimise environmental disturbance.

During the forest's development, use of a gravity roller in steep country and rolling and ripping in easy terrain enabled avoidance of riparian areas.

Boron was applied after soil testing confirmed deficiency.

Existing roads were used.

Every culvert is regularly checked to avoid blowouts and erosion of water tables.

Douglas fir is grown on steeper slopes, taking longer to reach a harvestable size than pines. They are less susceptible to windthrow and snow damage and the longer rotation lessens erosion risk

Mapping has been used to plan development and match ongoing management with land capability.

### Water Impacts

Wide (20m-100m) riparian strips have been left undisturbed/unplanted along permanently flowing streams.

In partnership with neighbouring company Nelson Forests, bridges have been built where the main access road crosses streams.

End hauling was used to remove material when upgrading an existing road for use by Nelson Forests during their harvest operations, rather than side-casting (placing it over the side).

Sediment traps at culvert entries minimise potential for blockages and sediment being carried into waterways.

Gorse and broom were removed as discovered, using targeted spraying to minimise chemical use.

## Waste Management

The owners brought in specialised machinery – a small mechanical harvester and forwarder - from Canterbury to production thin more than half of the radiata area to 350 and 500 stems per hectare as a clearwood crop. Income from chipping and small export logs covered production costs including upgrading the road. This avoided the waste of potentially productive wood and the cost of thinning to waste.

Flat to rolling topography made this operation possible and will also facilitate harvesting with minimal new earthworks required.

In hindsight, it would have been preferable to have established the forest with wider spacing between rows and narrower spacing within rows for easier production thinning.

## Efficiency

Existing roads have been upgraded.

Instead of being thinned to waste, the forest was production-thinned and the timber used for pulp and lower grade timber.

The main road through the forest is shared with Nelson Forests which paid for an upgrade in return for access during harvesting. The arrangement has significantly reduced transport costs, diesel emissions and risks to Northbank Rd users. Since March 2014, 30 truck movements/day have been diverted off the Northbank Rd and this will continue until the end of 2015.

Targeted spraying of weeds minimises herbicide use.



## BIODIVERSITY

### Indigenous Biodiversity

Two areas are protected by Department of Conservation covenants. The Garden Covenant on the banks of the Goulter River consists of river terrace and hill country with a tall kanuka forest canopy and scrub hardwood understory. The Boulder Creek Covenant is on the lower slopes of Star Hill, protecting regenerating beech and kanuka forest.

When the property was purchased it included a rare fern bird colony on the lower reaches of Eves Stream catchment. The Trust sold this land to DOC to preserve the habitat, including a right-of-way over Trust land to reach the area and DOC land in the Red Hills.

Five Significant Natural Areas have been identified by Marlborough District Council including a wetland with a narrow fringe of native vegetation. These have been left unmodified but not formally protected.

Wide native riparian strips have been left along permanently flowing streams.

The forest has its own quarry which avoids weeds being spread by gravel and rock brought in from elsewhere. Staff are mindful of weeds being spread on machinery.

A fringe of native vegetation backed by Douglas fir has been left around a pond and wetland identified as a Significant Natural Area.

### **Non Indigenous Biodiversity**

A fruit orchard has been left standing, although untended, at the old homestead.

Amenity plantings add variety at the entrance to the forest and along roadsides.

Douglas fir has been included in plantings along with radiata pine because of its superior ability to withstand snow, its slower rotation suits more sensitive sites, compatibility with the landscape and its potential as an alternative timber.

Other potential timber species have been trialled.

### **Weed, Pest and Disease Control**

The Trust cooperates with requests for access by the Animal Health Board for pest control targeting possums, stoats, ferrets and wild cats. It helps the Department of Conservation with goat control and wilding pine removal by providing access and also radios to communicate with logging trucks.

Gorse and broom are pretty much under control, which is unusual for the area. Any minor outbreaks are rapidly eliminated. Murray says there is no old man's beard.

There is potential for Douglas fir to spread on to conservation land and self-sown seedlings were seen alongside the main forestry road. Recognising the potential for spread, pines have been planted along a ridgetop edge of the Mt Richmond Forest Park on the forest's western boundary, to capture any Douglas fir seed blown in that direction.

## **COMMUNITY VALUES/RESPONSIBILITY/SUSTAINABILITY**

### **Strategies Benefiting Communities, Workers and Family**

Manuka Island Forest is owned by a relatively small family company, reflected in its community and environmental approach to management.

Health and safety systems are in place including auditing health and safety of contractors.

The Trust agreed to sell land to DOC as a habitat for endangered native fernbirds. It also provides public access to the fernbird area and DOC land beyond.

At the request of Nelson Forests Ltd, the Trust has allowed use of their road to cart logs from the upper Northbank of the Wairau River to the Manuka Island entrance at Wash Bridge on SH63. In return, Nelson Forests upgraded and maintains the road, building a temporary bridge across the Goulter River and permanent bridges over Wairau tributaries which will become the Trust's property.

The Trust issues permits to hunters when the road is not being used by logging trucks, subject to fire risk. Mountain-bikers, trampers, motorcycle and car rallies, rock and mineral fossickers, trout fishermen and sight-seers have been granted access permission. With the opening of a Goulter-Northbank circuit, this has become increasingly popular.

Farmers have been given permission to use the road to deliver stock, fertiliser, lime and hay, rather than the public Northbank road.

When members of the public use the road, they are often loaned company radios to communicate with trucks for safety reasons.

A beekeeper keeps hives on the property. The owners happily accepted his offer to restore the historic Manuka Island cob homestead, previously travellers' accommodation, in return for staying there when working in the area and as a retreat. Volunteers, including overseas travellers, have helped with the restoration.

The forestry road diverts away from the homestead to minimise the risk of vandalism and damage from vibration caused by trucks.

### Education

Merrill & Ring have shared their experiences with using specialist thinning machinery, new to the region, at an industry field day and via a youtube video [www.youtube.com/watch?v=ld\\_YCcZCq6s](http://www.youtube.com/watch?v=ld_YCcZCq6s)

### Landscape

Amenity plantings add variety at the entrance to the forest and along roadsides.

A fruit orchard has been left standing at the old homestead.

Douglas fir has been included in plantings along with radiata pine.

An attractive native understorey has grown up under the production forest although this will be damaged during harvesting.

Native riparian margins add to a distinct forest landscape.

Slower growing Douglas fir on boundaries close to the public road will screen harvest of radiata pine from public view.



### SUGGESTIONS

- Offer to host a Forest & Bird field trip here, in cooperation with DOC. This would demonstrate how a production forest can integrate conservation, landscape and recreation values in the right location with good management.
- Carry out the plan of pulling back Douglas fir from the wetland/pond after felling, allowing a larger native fringe to develop to provide a more natural look.
- Monitor the spread of wilding trees from the site and develop a strategy for dealing with this issue.