

# KOROMIKO FOREST RESERVE: REPORT ON MDC RECREATION RESERVE (EX DEER PARK)

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## **Introduction**

At Koromiko, between Freeths Road and the golf course, are native trees dotting the paddocks of a former deer park. Marlborough District Council (MDC) has recently made moves to reclaim management of the area, designated a recreation reserve. The aim now is to nurture the trees as a step towards restoring native forest on the site.

On 25 March 2003 an inspection of the site was made by MDC staff (Robin Dunn, Russell Montgomery and Nicky Eade) accompanied by Mike Aviss (DOC Picton), Susan King, John Walsh and Geoff Walls. This report is an ecological assessment of both the site and the proposed management. Because an ecological survey of the Para Ecological District is currently being carried out for MDC, the opportunity has been taken to use the survey criteria in this assessment.

## **Landform**

The site is on an alluvial valley floor. The ground is virtually flat but has a very gentle slope to the west. The soil is stony in places but is mostly fertile alluvium. Near State Highway 1 is a depression from which gravel has been extracted in the past. The MDC land is a long rectangle. It has much of the treeland in the vicinity, but there is also suchlike treeland nearby.

## **Vegetation**

There are trees throughout the site. Totara and black beech are most prevalent and silver beech is reasonably common. Also present are trees of matai (several), broadleaf (one) and white maire (two, just outside the MDC property). The trees are almost all secondary, having grown up following logging of the original forest giants. They are probably mostly in the order of a century old, although there are younger individuals. Only the very largest silver and black beech trees might pre-date the logging.

The trees are most dense at the eastern end of the property, forming a continuous canopy in places there. Otherwise they are more thinly distributed and in some western places there are open expanses of grass. There is no undergrowth (small trees, shrubs or ferns) and no climbers (except an ivy strangling a totara on the northern boundary). On the ground is pasture of exotic grasses. In some of the black beech trees is a thriving population of yellow mistletoe (*Alepis fiavida*), a cryptic and nationally threatened species.

Because of a long regime of grazing/browsing by farm stock and captive deer, there has been no opportunity for natural forest regeneration. The current light grazing regime continues this trend except that some native forest seedlings have become established amongst fallen branches at the eastern end of the property. These include totara, black beech, wineberry, mahoe, five-finger, karamu (*Coprosma robusta*), pohuehue (*Muehlenbeckia australis*) and white maire.

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## Flora

The presence of all of the tree species gives an indication of the kind of forest that would have grown on the site in the past. However, totara and black beech may have been relatively less common then, but have been favoured since by being drought resistant and less palatable to stock. Trees such as tawa, titoki, pukatea, kahikatea, miro, rimu, pokaka, hinau, narrow-leaved lacebark, ribbonwood and cabbage tree may once have occupied the site as well. White maire (*Nestegis lanceolata*) is uncommon in the South Island; it is known from only a few localities in Marlborough.

That yellow mistletoe is present is a surprise and cause for celebration. This species and the other NZ mistletoes have suffered serious decline and teeter on the brink of extinction throughout much of the country. Probably the combination of the presence of many host trees and a population of possums kept low because of local residents' activities has helped the mistletoe survive at the site. At the time of visit the mistletoes were in full fruit, being actively spread by birds, and even young plants were found. Should possum numbers build up though, the mistletoes would be the first to suffer.

Other features Native birds present at the time of visit were tui and silvereye. Probably bellbird, riroriro kereru and fantail all use the site too. Ecological weeds present are old mans beard, broom, elderberry, barberry and blackberry, all kept at very low levels by grazing. Once grazing stops, these will need to be controlled as they appear, using methods subtle enough not to damage regenerating native plants. The ivy is a lone rogue plant and would be readily destroyed, thereby eliminating a seed source. There are a few planted trees that can be regarded as ecological foreigners: North Island kowhai, walnut, etc. Mammalian pests probably present (apart from possums and escapee stock) are cat, dog, hedgehog, ferret, stoat, weasel, ship rat, Norway rat and mouse. Introduced wasps and bees home in on the honeydew on the black beech trees in droves.

## Assessment of ecological significance

- (a) **Representativeness:** *does the site represent a good example of one of the characteristic types of native vegetation in the district?*

The site is almost unique. It represents the memory of the great forests of the alluvial flats in the valleys north of the Wairau Valley. It is also the best example of valley flat treelands in the ecological district, if not the wider region. Park and Walls (1978) identified it as an important site in the inventory of tall forest remnants on alluvial plains and terraces in Nelson and Marlborough.

- (b) **Rarity:** *are there rare species or communities?*

The site contains plants noteworthy for their reflection of past patterns (see **Flora** above). **It** also contains a nationally endangered **plant**, yellow mistletoe (*Alepisflavida*).

- (c) **Diversity and pattern:** *is there a notable range of species and habitats?*

The site is rather simple ecologically.

- (d) **Distinctiveness/special ecological characteristics:** *are there any features which make the site stand out locally, regionally or nationally?*

The site is regionally distinctive in various ways: it is the best such treeland, it has uncommon plants and it has a distinctive ecological history as a very early site for domestic deer on display in New Zealand.

- (e) **Size and shape:** *how do size and shape influence character and viability? The site is fairly small and has a high proportion of edge, so is ecologically vulnerable to the elements. On the other hand it is compact, accessible and easily managed.*
- (J) **Connectivity:** *what is the degree of ecological connections with surrounding areas?*  
The site is part of a larger area of treeland in the vicinity. There are various remnants and tracts of native forest on the nearby hill country, but there is no direct ecological connection.
- (g) **Sustainability:** *does the site possess the resilience to maintain its ecological integrity and processes?*  
The persistence and well-being of the trees relies on deliberate management, Given the intention of MDC to actively restore forest on the site and the potential for community involvement ecologically sustainability is assured.

**Tabulated ranking of the above criteria using the scale: L=Low M=Medium H=High**

<b>Criterion</b>	<b>Ranking</b>
Representativeness	H
Rarity	M-H
Diversity and pattern	L
Distinctiveness/special ecological characteristics	H
Size and shape	L-M
Connectivity	M
Sustainability	H
<b>Overall significance</b>	<b>M-H</b>

## **Suggestions for the future management of the site**

1. The decision by MDC to nurture the treeland and use it as the basis for restoration of native forest on the site is laudable. It is suggested that a management plan be formulated accordingly, to guide these efforts for at least the next decade.
2. It is suggested that the site be formally protected via a conservation covenant, to properly recognise the value of the existing tree land and the restoration investment.
3. Natural regeneration is currently being prevented by grazing. Native forest seedlings occur at the eastern end of the property amongst fallen branches, clearly indicating the potential for natural regeneration if grazing is removed. However, grazing removal will also permit the burgeoning of ecological weeds, so active control of them will be necessary. It is suggested that grazing be phased out progressively, beginning at the eastern end.
4. Restoration planting will be necessary to buffer the existing trees from the elements and to recreate forest in gaps and on edges. It is highly important for the ecological integrity of the site to use stock raised from the local plants. Therefore plants should be raised from seeds, cuttings and seedlings from the site and nearby bush remnants.
5. The obvious plant species to use in restoration planting are those currently present (as trees or seedlings). Other species that would be appropriate include tawa, titoki, pukatea, kahikatea, miro, rimu, pokaka, hinau, narrow-leaved lacebark, ribbonwood, kowhai, kanuka, manuka, harakeke, karamu, mapou, small-leaved coprosmas, turepo (small-leaved milk tree), kohuhu, tarata (lemonwood), putaputaweta, kaikornako, lancewood, kakaha (*Astelia fragrans*) and cabbage tree. Consultation with Shannel Courtney (DOC Nelson) is advised on this subject. Plants requiring shelter should not be planted out in the open, and vice versa!
6. Possums are the chief threat to the yellow mistletoe and are also a threat to the totara trees and seedlings. Ongoing control of possums should be built into the management plan.
7. Control of hedgehogs, mustelids and rodents would be desirable for ecological restoration in the longer term.
8. Sadly, the imported trees that were planted in the past should be removed, but not until something more appropriate has been planted.
9. The superb restoration of such a site in Wakefield (Faulkners Bush and Baigents Bush), a partnership between Tasman District Council and a local community trust set up for the purpose, is an excellent model that could be replicated for enduring management of this site. Further inspiration could be gained from the restoration of Riccarton Bush in Christchurch.

## APPENDIX

Photographs of representative and/or special features of sites.



**Above** The park-like nature of the treeland at present, with trees but no understorey. This can form the basis for forest restoration on the site though.

**Below** A silver beech tree, showing the spreading form that has developed in a treeland situation where the trees don't form a continuous canopy.





**Left:** Trunks of totara (left) and matai (right). These young trees are reminders of the giant podocarps that would have grown on the site in the past, part of a mighty forest.

**Below:** Ivy scrambling up a totara. This garden escape would be a serious weed in the regenerating forest, but could be easily destroyed at this stage.





Above and Below: Seedlings on the ground, protected from grazing by fallen branches, showing that nature is ready and willing to play an active role in forest restoration on the site. In the top photo are seedlings of mahoe, wineberry and totara; in the bottom photo are two totara seedlings.

