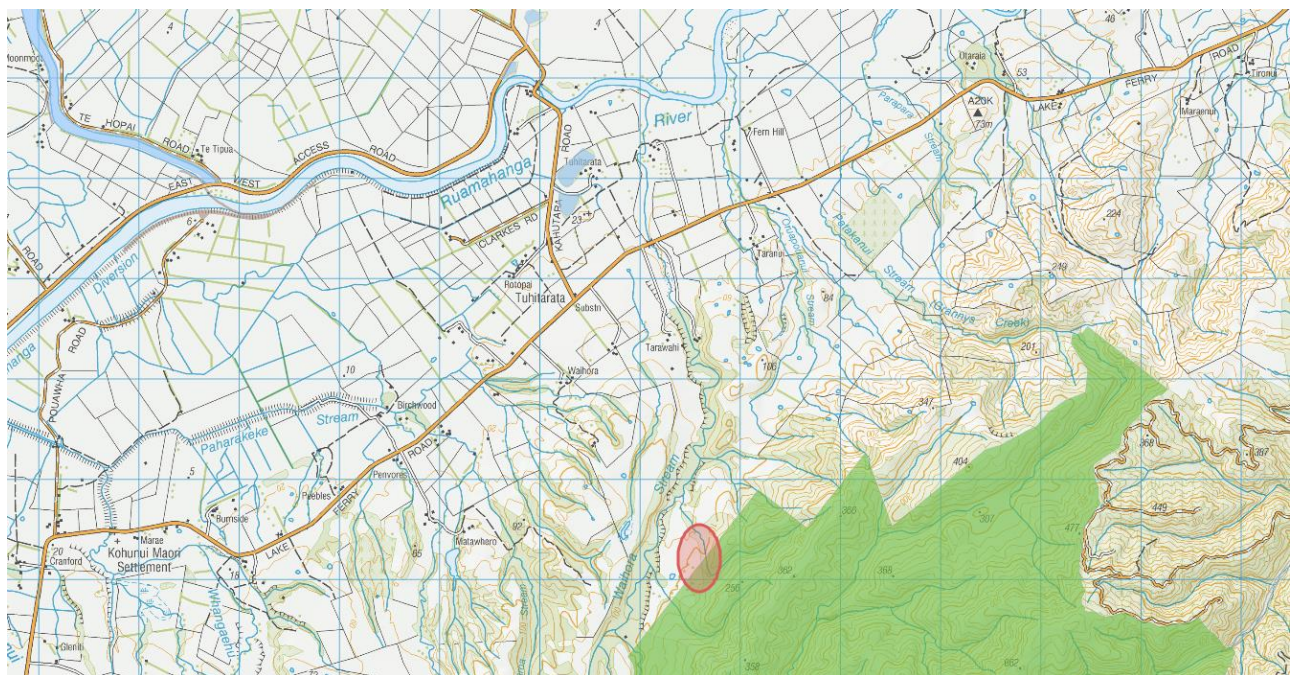


Conservation values assessment of proposed exchange parcels: Aorangi Forest Park, 1787 Lake Ferry Road, 24th February 2022

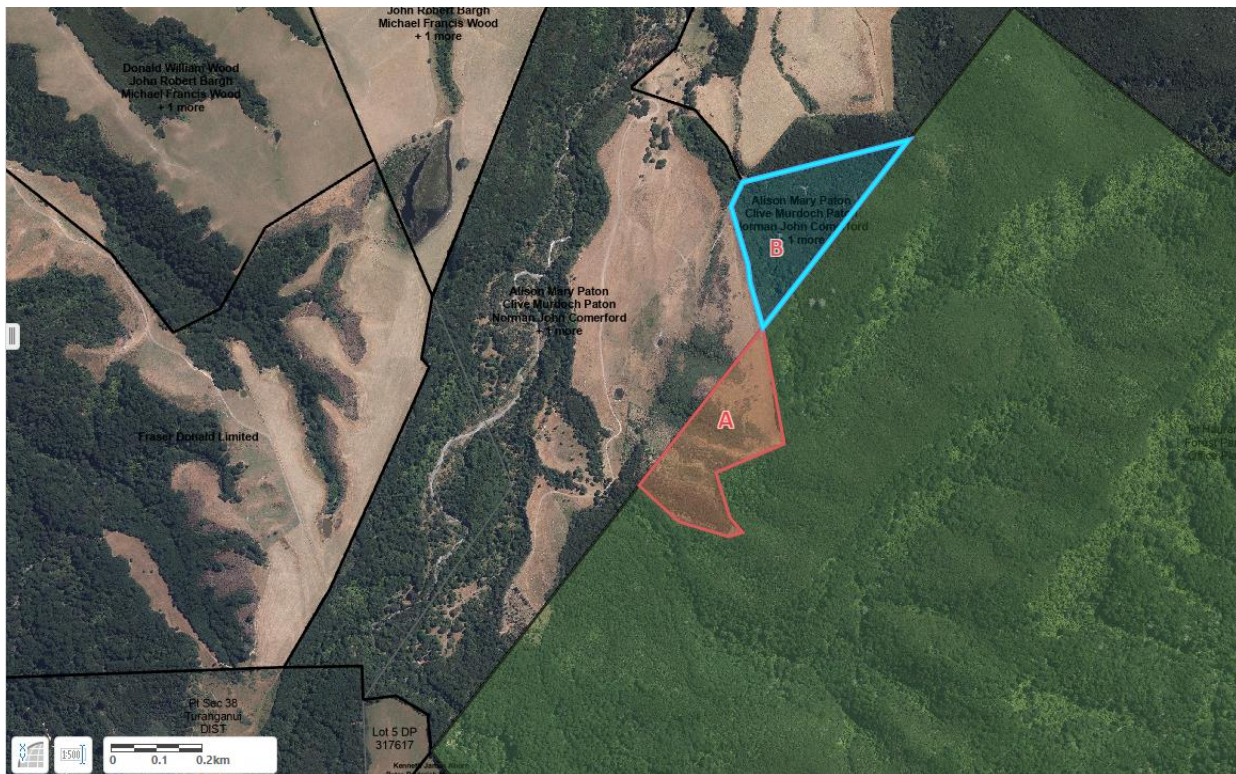
DOC, Masterton District Office

Introduction

On 24th February 2022 a DOC biodiversity ranger from Masterton office visited a property at 1787 Lake Ferry Road, which adjoins Aorangi Forest Park. The purpose of the visit was to assess conservation values on two parcels of land identified for a proposed exchange in 2004 between a private landowner (represented onsite by Clive Paton) and the Crown/DOC. This led to an agreement in 2007 between HMQ and Ata Rangi Limited (directors: Clive Paton and Phyllis Pattie) to exchange respective 6.7ha parcels, subject to statutory processes being followed. While on site the ranger inspected a parcel of Public Conservation Land which is currently under a long-term grazing permit to Clive Paton, and inspected a similar-sized parcel of land which is owned by Clive Paton et al (Paton land), situated immediately north the PCL. This report describes the conservation values that were observed and recorded on each of the two parcels.



Map 1: General location of the proposed land exchange and site visit, 1787 Lake Ferry Road.



Map 2: Relative positions of A: Public Conservation Land (Aorangi Forest Park) which is currently leased to Clive Paton (boundaries are approximate) proposed to have 80% of its status revoked, and B: Private land proposed to be exchanged for parcel A.

Part Aorangi Forest Park: 6.4020ha (“Section 1 Aorangi Forest Park”)

This is Public Conservation Land identified as parcel A in Map 2 above. Note that the boundaries depicted on Map 2 are approximate. A survey scheme plan for this parcel was produced by Tomlinson & Carruthers Surveyors Ltd, June 2004.

On 24th Feb the ranger walked across the upper slopes of Section 1 and took photos from 4 photo points. GPS tracks, waypoints and photographs are all provided in Appendix 1. Prior to this, the ranger met with Clive Paton and they drove along a vehicle track to the west of the parcel, stopping at several points to discuss the parcel and the changes that have occurred there since 2004, including his programme of tree planting at the south end of Section 1.

Section 1 is situated on a North-west facing toe-slope, which is drained by an undulating gully and ridge system. None of the gullies contain significant watercourses (see photograph 3 below). All of Section 1 has previously been cleared of native vegetation. The gullies support some natural regeneration of totara and other native species, but most regeneration is occurring in the lower reaches of the gullies, on the adjoining private land.

The northern and central portions of Section 1 (comprising approximately 80% of the parcel or 5.2 ha) are dominated by gorse and exotic pasture grasses. The gorse is mostly under 2 metres tall, but infestations are dense and extensive. Paton has undertaken gorse control in the past but has reduced the effort in recent years. The gorse is not a conservation problem in this context, as there is strong evidence that native trees (including totara) are able to regenerate through the gorse tier in this landscape.

The southern 20% of Section 1 (about 1.25 ha) has been densely planted in eucalypts, with an intention of using the area for carbon credit farming. As the eucalypts have gained height, they have progressively been under-planted with NZ native species including totara, rata, cabbage tree and flax. While the eucalypts would now be in the order of 15m tall, the totara, rata etc. are currently small trees, up to several metres tall. The area has improved in terms of biomass and native tree cover since 2004 due to planting activities, as opposed to natural regeneration. Conservation values are currently low to moderate, although the trajectory from 2004 to now has been one of improvement, and the outlook for the future is for increasing native cover, at least in the understorey. This 20% parcel will be excluded from the proposed revocation land.

North of the eucalypt plantation there are several naturally regenerating young totara trees (around 5-6 m tall) which have emerged from the gorse within the last two decades (e.g. refer to Appendix 1, photo point 3, view North) but these trees are relatively few, small and isolated i.e. insufficient to qualify as botanically important *per se*.

In summary, there were very low conservation values observed on that part of Section 1 to be revoked: the 80% area (5.2 ha) described as comprising exotic pasture and gorse.

Note: the 20% area (1.25 ha) will be excluded from the proposed revocation area 'A' within Section 1.

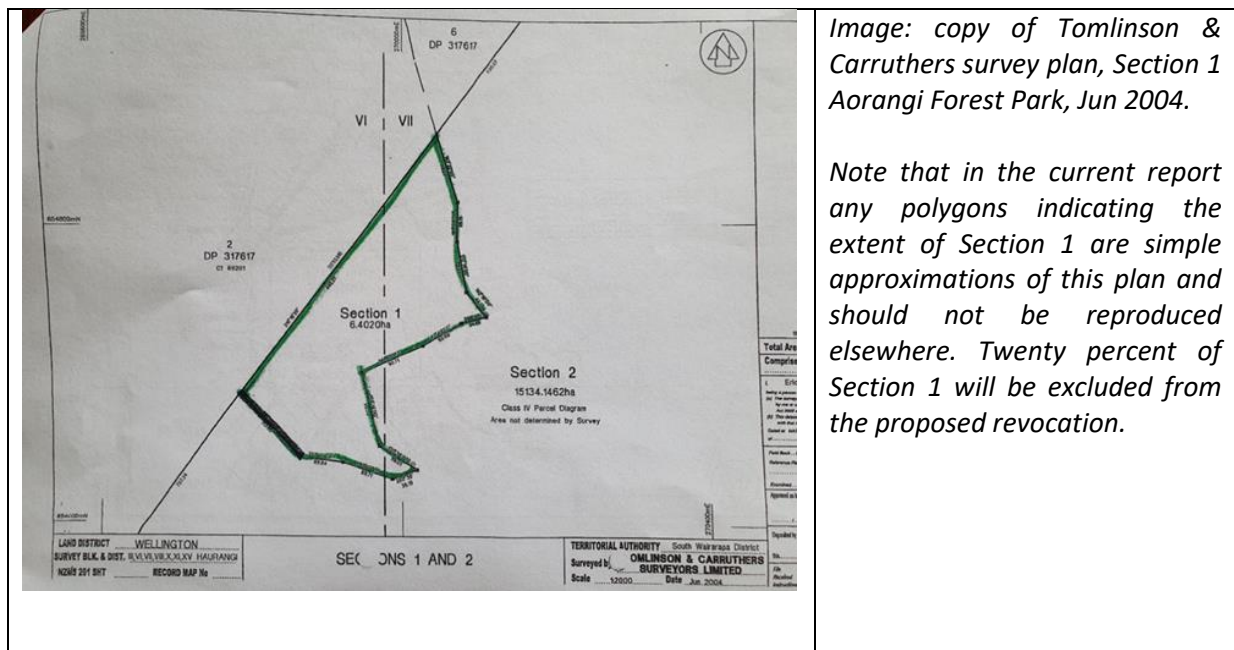




Photo 1:

View of Section 1 (northern – central portion)

The stand of totara visible in the foreground is situated on private land.

Section 1 includes the grass and gorse visible in centre of photo.

Native forest upslope is not included in Section 1.



Photo 2:

View of Section 1 (southern portion)

A canopy of immature eucalypts can be seen below the skyline ridge: these plantings dominate the southern 20% of Section 1.

A sparse row of younger eucalypts can be seen in the middle-distance, surrounded by gorse, although most of the row seen from this angle is located on low-altitude private land.

Eucalypts are under-planted with native species including totara (post 2004).



Photo 3:

GPS ref E1791298 N5421975

Watercourse draining Section 1. This location is on Paton land, approx. 125m downstream from the PCL boundary.

There are no significant streams of 3m or more within Section 1.

Lot 6 DP 317617

This is parcel B identified in Map 2 above, being 6.74 hectares owned by Clive Paton and business partners. It is being offered to DOC in exchange for 80% of Section 1 as discussed above.

On 24th Feb the ranger walked into the centre of Lot 6, to assess the conservation values in this parcel. Lot 6 has a similar aspect to Section 1, facing north-west. It has a small watercourse (e.g. see photo for Site G) but unlike Section 1, this parcel is dominated by native (kanuka) forest.

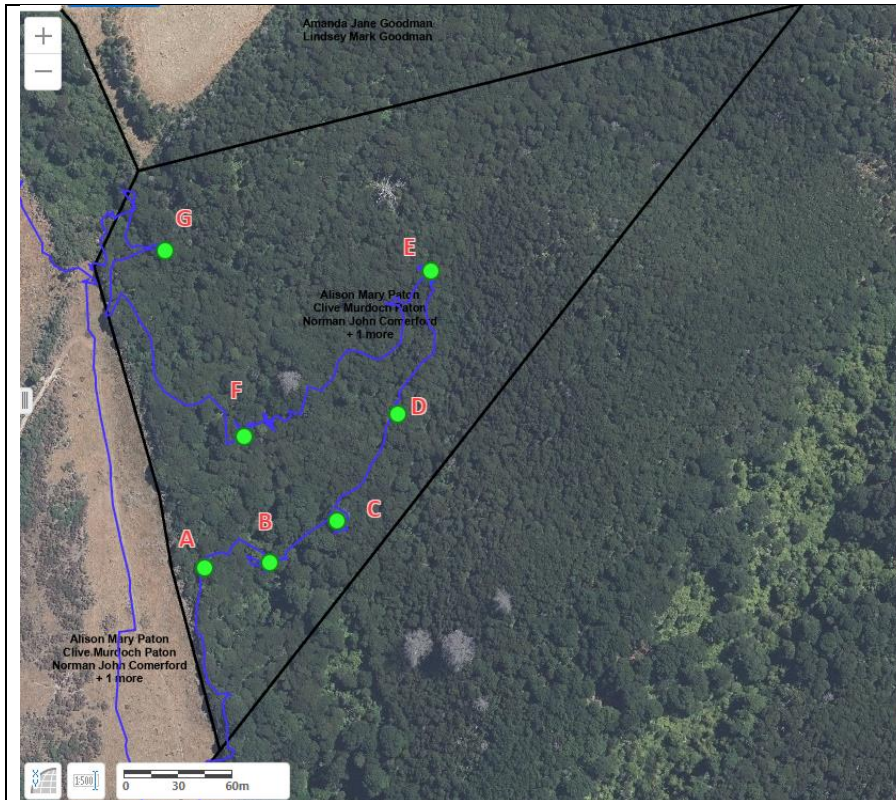
The forest covering Lot 6 has a contiguous canopy around 15 metres high. It is secondary forest mostly composed of kanuka, but there is a minor component of black beech which replaces the kanuka canopy in places.

Totara is abundant, but most totara trees are too young to form part of the canopy at this stage. It is expected that this species will grow to dominate and form a taller canopy in future decades. Young rewarewa is also abundant in places, and is this species is beginning to appear in the canopy now. Rewarewa is expected to become emergent above the kanuka canopy in the future.

Rimu, miro, matai and kahikatea are all present in Lot 6, but not abundant. No large specimens were seen, but there are several of these podocarps which are already tall enough to have entered the 15m canopy, and which in due course will rise above the kanuka tier. Tawa is also present as seedlings but is not abundant.

Common understory plants include dense groves of ponga / silver fern, *Leucopogon fasciculatus* (mingimingi), various species of divaricating Coprosma (e.g. *ramnoides*, *rigida*) and heketara (*Olearia rani*). Mahoe is abundant, but heavily browsed in most places. Kawakawa, marbleleaf, and pigeonwood are present but are less common. A maire (considered to be black maire) was found, being approximately 5m tall, and a similar sized *Raukaua simplex* was also observed.

Several large pine trees have been dealt with as conservation weeds within this parcel and on adjacent PCL, and the dead trees are large enough to be easily seen in aerial imagery (see Map 3). One large pine is still in leaf, despite being previously ring-barked (see photo for site C).



Map 3: Lot 6 DP 317617

Route walked 24th February 2022 and locations of photos taken



Site A

E1791608 N5422283

Interior of forest near the western boundary of Lot 6.

Kanuka stems with an understory of silver fern *Cyathia dealbata*.

In the foreground, foliage of a young totara partially obscures the trunk of a black beech.



Site B, Photo 1

E1791645 N 5422286

Gully floor. Mahoe, Kawakawa and silver fern grow beneath black beech. Tawa seedlings are present nearby.



Site B, Photo 2

E1791645 N 5422286

Gully side. Small-leaved Coprosma grow beneath black beech and kanuka.



Site C

E1791683 N5422309

Exotic pine – ringbarked but not completely dead.

Kanuka forest with browsed understory is typical of much of the parcel.



Site D

E1791717 N5422368

Nestegis sp. (likely N. lanceolata white maire). Heavily browsed.



Site E

E1791735 N5422449

Nestiegis cunnunghamii
(black maire)?



Site F

E1791631 N5422356

Gully floor.

Canopy of kanuka and kahikatea above rewarewa, silver fern, kawakawa and Leucopogon fasciculatus (mingimingi).



Site G

E1791587 N5422460

Gully floor.

Steep banks support various ferns and herbaceous native plants.

On the gully floor 15-20 metre Black Beech, miro and totara occur within a more widespread kanuka canopy.

Comparison of conservation values

Section 1 Aorangi Forest Park supports a mixture of exotic pasture and gorse (around 80%) and a mixture of exotic and native plantings (around 20%). There are very few naturally occurring native plants on this parcel, and natural regeneration of woody species is limited to several young totara, cabbage trees and mahoe emerging from the gorse.

The only significant conservation values comprise plantings since 2004 in the 20% part which is not included in the proposed revocation area.

This 80% parcel has very low conservation values.

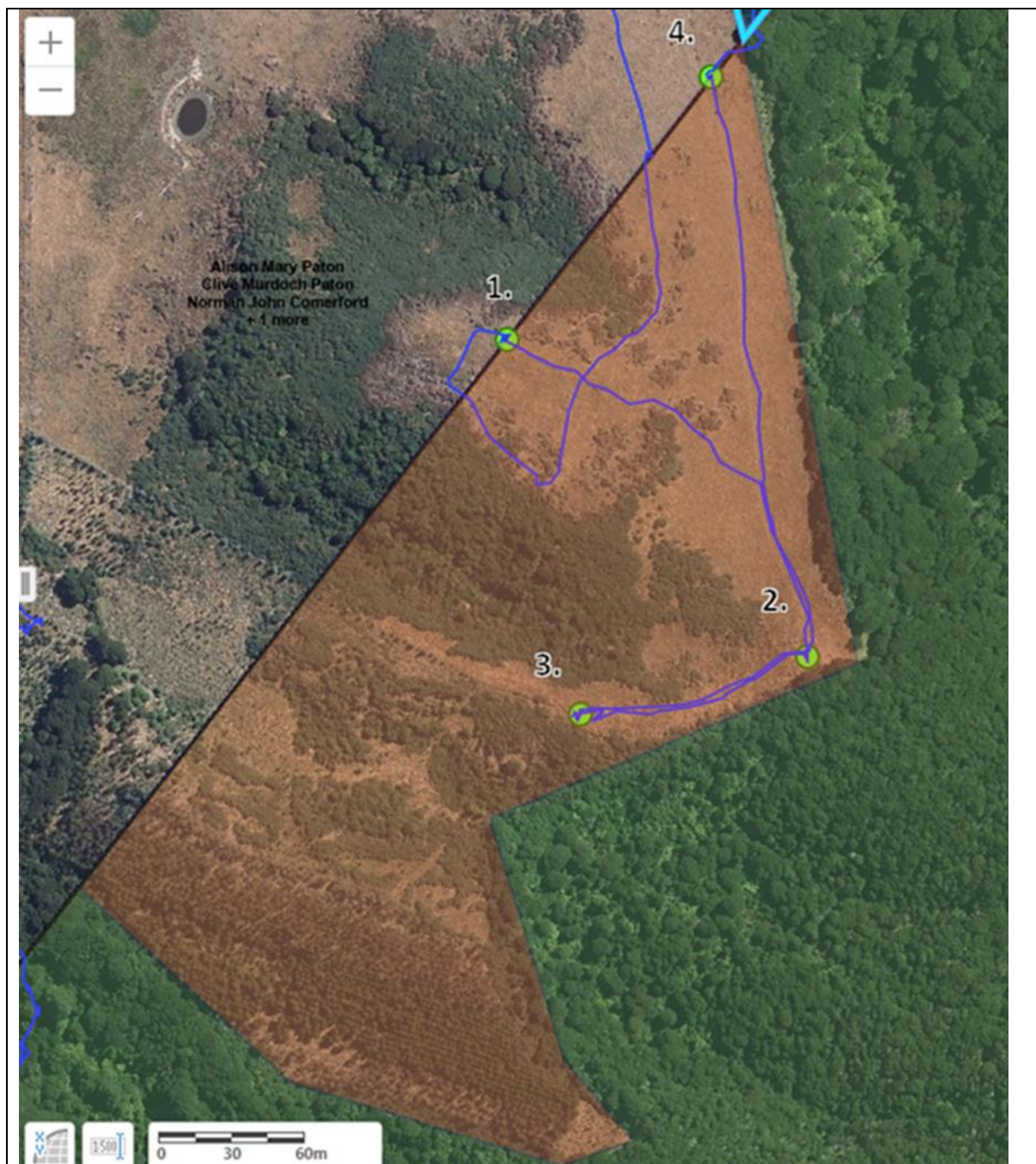
Lot 6 DP 317617 supports a continuous stand of second-growth native (kanuka) forest. Although this is a common forest type in the vicinity of Aorangi Forest Park, the native vegetation cover is continuous, and this forest can be expected to develop into taller and more increasingly diverse podocarp-hardwood forest in due course. It has high conservation values.

Given time and minimal intervention, both parcels could develop into mature native forest, however Lot 6 is already well advanced in this process, whereas Section 1 (the 80%) has barely begun.

Lot 6 currently has much higher conservation values than Section 1.

Lot 6 would make a useful addition to Aorangi Forest Park.

Appendix 1: "Section 1 Aorangi Forest Park" - Photo Points and associated Photographs, 24th February 2022






Map 3: Tracks and photopoints 24th February 2022, Section 1 Aorangi Forest Park



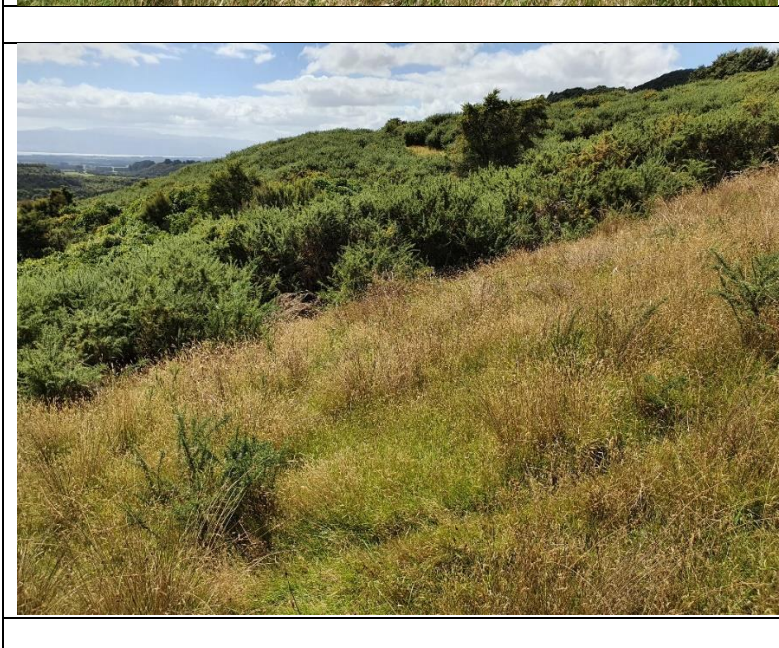
Photopoint 1. E1791519 N5422055 – views along the midslope boundary

Photopoint 2. E1791643 N5421923 – views downslope

Photopoint 3. E1791549 N5421899 – views across slope NE and SW

Photopoint 4. E1791603 N5422164 – view towards native forest

	<p>Photopoint 1 - view to North “Section 1 Aorangi Forest Park”</p> <p>Northern portion of Section 1, looking along boundary between private land (left side of frame) and Section 1 (right side of frame).</p> <p>This part of Section 1 is dominated by exotic grasses, and some gorse.</p>
	<p>Photopoint 1 - view to South “Section 1 Aorangi Forest Park”</p> <p>Central portion of Section 1, looking along boundary between private land (right side of frame) and Section 1 (left side of frame).</p> <p>This part of Section 1 is dominated by exotic grasses, with dense gorse infestations occurring further south.</p>
	<p>Photopoint 2 - view to North “Section 1 Aorangi Forest Park”</p> <p>Upper slope of Section 1 dominated by pasture grass.</p> <p>Bush edge is not included in Section 1. (refer to Tomlinson & Carruthers survey plan for an indication of how the boundary excludes bush-edge from Section 1)</p>

	<p>Photopoint 2 - view downslope "Section 1 Aorangi Forest Park"</p> <p>Central portion of Section 1, looking down towards private land below. Dominated by exotic pasture and low gorse.</p>
	<p>Photopoint 2 – view to Southwest "Section 1 Aorangi Forest Park"</p> <p>Section 1 dominated by exotic pasture grasses and gorse.</p> <p>Eucalypts at the southern end of Section 1 can be seen in the background, to be excluded from the revocation area.</p>
	<p>Photopoint 3 - view to North "Section 1 Aorangi Forest Park"</p> <p>Area dominated by 1-2m tall gorse, with areas of exotic pasture grass. Several totara can be seen emerging from the gorse.</p> <p>There has been regeneration of totara in gullies on the toe-slope over the last 15-20 years, mostly in gullies on the lower slope (privately owned land). In 2004 this area was predominantly grassland, and regeneration was significantly less advanced.</p>



Photopoint 3 - view to South
 “Section 1 Aorangi Forest Park”

Area dominated by gorse, with immature eucalypt plantings 75-100 metres distant.

Cabbage trees can be seen regenerating amongst the gorse.

In 2004 this area (including Eucalypt-planted area) was predominantly exotic grassland.



Photopoint 4 - view to Northeast

View along unfenced property boundary: Left-hand side of frame is Paton land. Right-hand side of frame is Public Conservation Land.

Paton land (Left-hand side of photo). Pasture grass in foreground will continue to be held as Paton land. Bush is on separate title (parcel B map 2) which is being offered to DOC in exchange for Section 1

PCL (right-hand side of photo)
 Pasture grass in foreground is on Section 1. Bush is a different parcel, and will continue to be held as part of Aorangi Forest Park.