Land Information New Zealand
Toitū te whenua

Crown Pastoral Land Tenure Review

Lease name : EREWHON

Lease number : PC 142

Conservation Resources Report – Part 2

As part of the process of Tenure Review, advice on significant inherent values within the pastoral lease is provided by Department of Conservation officials in the form of a Conservation Resources Report. This report is the result of outdoor survey and inspection. It is a key piece of information for the development of a preliminary consultation document.

Sep 14

2.6.4 Problem Animals

Red deer, Himalayan thar, chamois, European rabbit, brown hare and brushtail possum were observed on the pastoral lease. The pastoral lease lies within the South Rakaia-Upper Rangitata Management Unit of the Himalayan Thar Control Plan, for which the management goal is the protection of conservation values by thar population control. These introduced herbivores browse native vegetation, exacerbating the effects caused by sheep and cattle. Possum damage to mountain totara was observed on the pastoral lease. Hares and rabbits also have a role in supporting predator populations because they are primary prey for some introduced predators such as feral cats and ferrets, (Norbury, *et al*. 1998). Other wild animal species likely to be present on the pastoral lease are feral cat, hedgehog, mustelids (ferret, stoat and weasel) and rodents (house mouse and Norway rat). These predators include native birds and lizards in their diets and pose a significant threat to invertebrates, especially the larger, flightless species.

2.7 HISTORIC

2.7.1 European Heritage Values

Lease History

The present Erewhon pastoral lease evolved from three separate runs. In 1861, R Morten and L Stace acquired Run 396 and Run 397, comprising 4,000 ha between the Clyde and Lawrence rivers and land west of Clyde River. In 1864, Stace sold his half share to CJ Bell who named the place Forest Hill. Morten and Bell ran cattle only, which proved unsuccessful, and around 1872 they abandoned the pastoral lease. About 1878, George McRae, a former head shepherd at Mesopotamia, took up the two runs. He found it hard to make ends meet and pay the rent, so continued to muster for his neighbours. Norman Macfarlane, the manager of Mesopotamia, advised McRae not to pay his rent but to be at the Land Office on rent day so that if anybody applied for the country he could forestall them. McRae was in the Land Office on a rent day and therefore able to apply for Run 384; a run that Thomas Potts' agents had allowed to be abandoned. This 4,000 ha block lay east of the Lawrence River. This was the making of Stronechrubie, which McRae now called his holding.

When the lease expired on the Forks Block (Run 397) in 1890, this land was incorporated into Mesopotamia. McRae was granted as compensation Run 374 from Hakatere, which included the Jumped Up Downs. In 1890/91, McRae moved from his homestead in the Lawrence valley to a new homestead at Jumped up Downs. George McRae and his wife, as occupants of the most remote and difficult of the Rangitata runs, suffered many set-backs including the loss of most sheep in the big snow of 1889 and financial losses due to unreliable stock agents.

In 1892, McRae sold Stronechrubie (now amalgamated and redefined as Run 112, totalling 6,880 ha) to Donald Knight, who in turn sold it to George McMillan of Mesopotamia about 1900. McMillan worked both stations until he died in 1903, at which time the executors sold both stations to George Gerard. When the lease ran out on the Forks Block in 1911, it was taken out of Mesopotamia and returned to Stronechrubie. At this time Stronechrubie was put up for ballot and won by Mary Anderson acting for her brother, Alexander Anderson, to whom it was transferred when he reached twenty one years of age in 1914.

Sidney Pawson acquired the lease in 1915. Pawson who had previously managed Winterslow, Mount Somers and Mesopotamia was a reader of Samuel Butler and changed the name of the run to Erewhon although it continued to be known to high country folk as 'scrubie' for many years. Pawson also claimed that he was inspired to change the name after finding an old stencil plate marked 'EREWHON' when extending the woolshed (Beckett, 1978). Pawson built a number of huts on the pastoral lease. Of these only Broadleaf Hut survives.

The lease then transferred to Douglas Wright in 1927, Thomas S Johnstone and his son in 1929 and then Arthur Urquhart in 1943. Arthur retained the lease until 1969 when his

son Colin took over the management after Arthur moved to Mount Potts Station. Colin then became lessee of Erewhon and Mount Potts with his brother Alisdair in 1979. In 1995, Erewhon was sold to Don and Trish Stewart, ending a 52 year occupation by the Urquhart family; the longest continuous occupation of the lease since its beginning. The current lessee, Colin Drummond, acquired the pastoral lease in 1998.

Erewhon has also been the base from which early surveying and exploration of the Rangitata headwaters and mountains was carried out. The first major topographical survey of the area was carried out by G.H.M McClure in 1888. He received hospitality and provisions from the McRaes and named Mt McRae after them. In 1910 J.R. Dennistoun spent a month exploring the mountains in the head of the Rangitata during which he, Jack Clarke and Lawrence Earle made the first ascent of D'Archiac. His party stayed at the homestead and also McRaes old homestead which Dennistoun described as 'a tumble-down old building' and the 'highest hut up the Clyde' (Dennistoun, 1999).

Historic Sites

Historic research has indicated a number of archaeological/historic sites located on both the 'backcountry' and 'front country' parts of the lease.

McRae's Homestead site

McRae built a homestead at Jumped Up Downs when he secured that part of the pastoral lease in 1890. The homestead consisted of two buildings side by side and which, over the years, have had rooms added. A 1910 photo in *The Mountains of Erewhon,* (Beckett, 1978) clearly shows two gable ends on the homestead plus out-buildings. A 1935 picture shows the homestead more or less in its current form with a hipped roof and different chimneys of concrete and brick, and the veranda extended with an extra room to the north. Colin Urquhart (*pers. comm.*) believes Johnstone (1929-1943) had also made some extensions; these would have been between 1929 and 1935, before the photo was taken. The book, *The Mountains, The Bush & The Sea* (Pascoe, 1950), also has a photo of the front of the homestead in its current form.

Beckett records: *In 1891 McRae employed a half cast Maori, named Perry and renowned as a great shearer, to build the first two rooms of the present homestead. We learn from a later owner Alex Anderson* (1911-1915) *that: "This homestead when I took over was an old cob and thatched hut, so I brought up a man called Peter Gowrdie from Ashburton to see what he could do with it. The material was back loaded from Mt Somers by the Mesopotamia waggoner, a man named Charles Dunstan, and Gowrdie with his men rebuilt the place".*

Some original parts of the homestead are visible, showing mud and stud construction with interior horizontal boards. It appears that the front three rooms formed the original McRae homestead. The whole homestead except the front facade has vertical corrugated iron exterior cladding but, without removal of fabric, it is not possible to determine how much of the mud and stud construction remains. The front façade under the veranda has vertical board and batten cladding with horizontal corrugated iron above the windows.

An extract from NZ Merino Stud Breeders website on Freda Urquhart describes living at Erewhon in the homestead:

Life on Erewhon lacked many conveniences but Freda believed herself to be very lucky and described herself as "very contented". The old house was clad in corrugated iron and consisted of four cob rooms with adzed doorways and assorted other additions including a kitchen, another bedroom, a bathroom and a veranda.

There was running water but no electricity so all the cooking was done on the coal range. Washing was done in a copper. Candles and kerosene lanterns were used for lighting. The wetback on the coal range provided hot water over the sink and to the bath for the weekly bath. In due course a power plant was installed."

"It was a wonderful thing but I had to manage the load. The powerhouse was located a quarter of a mile from our house so when the water supply got short in the creek we needed to make a quick dash up there and turn off the generator to let the water build up." The plant generated DC current so anything with a motor had to be converted from AC to DC. This couldn't be done for a fridge so Freda continued to use a drum in a hole in the side of the hill to keep her butter cool.

The remains of the concrete cool store are still visible on the side of the hill at the rear of the homestead. While the coal range is still present its chimney has collapsed. The homestead was empty when inspected in 1989 (Ian Hill, *pers. comm.*) and had not been lived in for some years at that time, but was well cared for. Since then, the homestead has lost portions of its roofing iron exposing the interior to the elements and the double-sided brick chimney has collapsed. There is a considerable amount of discarded chattels in the building. If weatherproofed and cleaned out the building may survive for many years.

There are two out-buildings, both clad in corrugated iron. These comprise a washhouse, woodshed and a dairy/storeroom with a lean-to garage attached at the rear. At the rear of the homestead, along the toe of the hill, there is a river-boulder wall and a bulldozed track leading north. The area between has been a garden.

As the homestead has been allowed to deteriorate over the years, a considerable amount of historic fabric has been lost. There is enough archaeological evidence remaining to establish the construction method of the pre-1900 homestead. Sites such as this, which provide an insight into early high country colonial life, have significant historic and archaeological value. While the site is protected under the archaeological provisions of the Historic Places Act 1993, the construction is significant and further recording before the building decays could provide more information.

<u>Ice Rink</u>

An ice rink, estimated to be 25 x 20 m, was bulldozed out of the ground up to a metre deep by Arthur Urquhart in the early 1950s. A water race was dug from a spring up the gully to the north to supply the rink with water. There is a post, rail and corrugated iron fence along most of the north side of the rink. The rink has become overgrown and there are now trees growing in it. Despite this, the formation is clearly visible. Colin

Urquhart said it provided skating in the winter and a muddy swimming pool in the summer.

The rink has moderate historic value and may well have been the start of Arthur's venture into recreation and tourism. Around 1957 he acquired the Mt Potts lease and in the 1964 developed a ski field and Erewhon Park. The rink area is threatened by current vegetation growth.

Married Shepherd's Cottage

This weatherboard cottage was built in the 1940s during the time of Arthur Urquhart. It has had several additions and been modernized since then. The internal lining of the original portion is apparently straw sandwich board, which would have provided insulation in this extreme climate. The cottage is well maintained and is currently used for casual accommodation. Two weatherboard garages of similar form to the original portion of the cottage and presumably constructed at the same time, are located nearby. The original portion of the building is reported to have interesting and possibly rare insulation, and has moderate historic value.

Woolshed, Jumped up Downs

The original woolshed, incorporating stables, workshop and a lean-to tractor shed, was burnt down just prior to shearing in 1943, soon after Arthur Urquhart took over the lease. The existing shed was built in three weeks by a team of 23 men, to enable shearing to take place on the pastoral lease. It is an L-shaped, five-stand, timber-framed, unlined, weatherboard shed with a later addition at the south end. It is reasonably conventional and functional. While it is a five-stand shed, there are only four shearing machines at the board; the fifth stand and catching pen would accommodate blade shearing. As all early shearing was done with blades it is likely that the machines were installed after the new hydroelectric power scheme was commissioned in 1988. The wool room, containing wool table, fleece bins, wool press and bale storage area, are at the northwest end of the shed. There is a central race running the length of the shed on the north-south axis in the sheep holding area. This race has doors at each end and also contains a foot trough. The woolshed is in good condition and still in use. The woolshed has moderate historic values.

Woolshed, Forks Block

After three wet summers when Arthur Urquhart could not get his sheep across the Clyde River to the home shed, he constructed an emergency woolshed and yards on the true right (west) side of the river in 1952. The woolshed is a three-stand 10 x 7 m timber-framed shed clad in corrugated iron. The corrugated iron and possibly some of the piles (a few are charred) came from the woolshed that burnt down at Jumped Up Downs.

The shed is basic with three catching pens and two associated holding pens. The catching and holding pens have boards for flooring, rather than conventional grating. As the shed is built on a slope there is some cover for sheep under the south end of the building. The wool room is modest with two fleece bins and the remains of a small wool table. A portable dagging plant occupies one of the stands. There are no counting-out pens and it would appear that the shed has not been used in recent times.

Arthur Urquhart transported the shearers and rouseabouts across the river each day on horseback. Wool bales were taken across the river by tractor and trailer. Below the shed is a hut on a trailer chassis with 16 inch wheels and a set of basic yards which contain a drafting race and foot trough. The hut and yards are located on UCL outside the pastoral lease. The woolshed is a small conventional shed and has low historic values.

Shearers' Quarters

The shearers' quarters, located near the stables, is reputed to be the oldest farm building in the complex apart from the old homestead. Being away from the first woolshed they survived the fire. The building is timber-framed, lined, clad in polite (indicating that the building has been re-clad) and has a corrugated iron roof. Following the fire, a portion of the building was converted to a workshop but was still able to accommodate shearers. The building is currently being returned to accommodation and is being modified and relined with plywood. A small garage/store shed with a concrete floor is attached at the southern end, though this is possibly an addition. While the quarters may be the second oldest building on the pastoral lease, it has limited historic value but is possibly an archaeological site. It has protection under the archaeological provisions of the Historic Places Act 1993 if the building dates from the 19th century.

Hut Site

A 20 acre section, (notated with the numbers, 8178) on SO Plan 4572, surveyed by GHM McClure and dated Jan 1889, identifies a paddock and a hut site. Through an overlay of the SO on to a modern aerial photo it is possible to identify the location of the hut and the paddock on the ground. The field inspection revealed that a hay barn (now derelict) had been built and there is a shelterbelt and stumps from an earlier shelterbelt in the vicinity of the hut. The paddock in front of the hay barn has also been cultivated. Apart from a few cherry trees there is no evidence of any occupation. Cultivation, planting and tractor movements over many years in the vicinity of the hay barn have probably obscured evidence of the hut or other occupation, though there could be subsurface deposits.

It cannot be established as to who built or lived at the site. However, it is an archaeological site and further investigation may reveal the extent of any occupation. The site requires archaeological investigation to determine if any fabric remains that will be protected under the archaeological provisions of the Historic Places Act 1993.

Stables

The existing stables were built in either the late 1940s or early 1950s to replace the stables that were burnt down along with the woolshed. They have similar architectural characteristics to the woolshed, married shepherd's cottage and powerhouse, with wooden frames, weatherboards and a corrugated iron roof. One side of the stables is divided into stalls, with cobble stone floor and a loose box used as a tack room. The other side provides for the storage of feed and other items, which in older stables would have been in the loft. Chaff stored in the room can be tipped directly into the feed boxes without having to go near the horses. The stables are in good condition and still in use.

Hydro Power Scheme

In 1950/51 Arthur Urquhart established a small direct-current hydro power scheme diverting water from a small stream east of the homestead (south of AA6Q) through a penstock to a powerhouse. The water drove a Pelton wheel attached to a Metropolitan-Vickers Electric Company 230 volt DC generator. The workings are almost complete with the penstock line coming down the hill to the powerhouse, Pelton wheel and generator. The powerhouse is a 3.76 x 3.76 m timber-framed weatherboard building with a door in the south wall and a six-pane window in the north wall. There is a concrete tail race 8.5 m long between the Pelton wheel and a nearby creek.

The system provided little more than lighting. However, it was sufficient for his wife Freda to be able to use a vacuum cleaner or a washing machine. If the water supply ran short a quarter-mile dash was made to the powerhouse to shut it down to let the water build up. The scheme became redundant when a new AC hydro power scheme was installed in 1987 and commissioned in 1988. This latter scheme in Caroline Stream was put in by Colin Urquhart and is still operating today.

Like the old homestead, the powerhouse has corrugated iron missing from the roof and the equipment is open to the weather. However, the building is well-made and sound and, if made weather proof, would last for many years. The power scheme has moderate to high historic values, as it is a good example of a simple DC unit with most of its equipment intact. There is a similar hydro scheme at the Mt Harper Ice Rink and a larger scheme at Sawyers Stream in Aoraki/Mount Cook National Park. Neither of these schemes has a complete range of equipment.

River Protection Works and Water Supply

Over the years there have been river protection works by way of stop banks, groynes and 44-gallon drums tied together. The most significant of these are the groynes at the south end of the Jumped Up Downs. In 1948, the Catchment Board built for £6,000 a shingle groyne about a mile long to protect the land east of the Jumped Up Downs, Rabbit Hill and the Mt Potts Station flats. The groyne was parallel with the Clyde River but was unsuccessful. The present groynes were built by Arthur Urquhart at a later date.

At the north (Clyde River) end of the gully between the homestead and the Clyde River there are three sets of 44 gallon drums. These were installed by Arthur Urquhart to protect the water supply spring, as the area was a sand pit and only about 1.8 m above the river (Colin Urquhart, *pers. comm.*). The drums had trees planted in them but few have survived.

Hermitage Hut area (Lawrence Valley)

This area appears to have been a long established camp from which most of the Lawrence was mustered (Beckett, 1978). The earliest hut was built of stone sourced from the toe of an old rock fall immediately behind it. This hut may have been known as Totara Hut and was built well before the end of the 19th century. The stone hut had a thatched roof which caught fire during a tussock burn in McRae's time. It was then abandoned and McRae had a timber hut built closer to the river by a man named Perry. This hut was known as Hermitage Hut because of its remoteness. There is a hut shown in this location in McClure's 1889 Topo 4G. It is not clear whether this is Totara Hut

(stone) or McRae's first Hermitage Hut. The first Hermitage Hut was washed away about 1930. The present Hermitage Hut was built in 1931 by T.S. Johnstone Jnr and Chris Grieve from materials salvaged from the old hut and one which had been built by Pawson at Shingly Creek (Beckett, 1978). There is also evidence of an old concrete fireplace and discarded rubbish (cans and bottles) scattered through the base of the rock fall.

There is also another structure marked on McClure's Topo 4G on the true left of the Lawrence on a tussock flat approximately half a kilometre below the lease boundary. This area was flown over by helicopter but no visual evidence was noted.

Hermitage Hut

Hermitage Hut sits against the rock fall five metres east of the stone ruin at the toe of the hill slope. Its core is the original hut which is 5m by 5m with a gable roof of corrugated iron and walls clad in flat iron. It has a typical timber framed, corrugated iron chimney and several windows including an old four pane window in the west wall. A more recent, partly closed in, verandah has been added to the front (north side) and a shipping container with its own lean-to shelter has been placed along the back of the hut. There is some pencilled graffiti on the iron on the west end of the hut. These are names of musterers, mostly dating from the 1970s. The hut was locked at the time of the survey so the interior was not able to be inspected closely. The interior has been lined with pinex and ivory board. It has a good sized concrete fireplace in the east wall and six bunks around the north and west walls. It also has a sink bench and table. The hut is in sound condition and as far as could be ascertained much of the original 1931 fabric remains.

Stone ruin (Totara Hut)

This appears as a roughly rectangular pile of rock measuring ten metres by five metres and up to almost one metre high. There is an original section of stonework remaining at the southwest corner; the remainder is reduced to rubble. It is probably the earliest evidence of a hut on Erewhon, apart from McRae's Old Homestead site, and almost certainly dates from the period when this section was part of Hakatere.

Shingly Creek Yards, Dip and Hut sites

McClure's topographic map 3G shows yards and a dip pond just upstream of Shingly Creek. Frank Pawson also built a hut, which he called Lawrence Hut, in this vicinity sometime between 1915 and 1920. This hut was eroded by the river and, as mentioned above, its materials were salvaged to build the present Hermitage Hut in 1931 (Beckett, 1978). It seems that consolidated tussock covered river flats in the Lawrence have largely disappeared over the past 100 years. The dip site has also been a casualty of this erosion. Its location on McClure's map now places it about 100m out into the Lawrence riverbed. Despite a concentrated search of this area no other evidence of the dip or Pawson's Lawrence Hut was found.

The Shingly Creek Yards were sited on the northeast side of the large fan at the mouth of Shingly Stream. Inspection of this site found only three old timber fence posts lying scattered amongst the tussock. There is no other evidence to indicate the size or configuration of the yards.

J H Caton's Homestead Site

As described above John Henry Caton was one of the first to take up land on what became Mesopotamia and also first to take up Run 384 (4000ha), which ran from above the Jumped Up Downs up the true left of the Clyde and the Lawrence. Caton took up this run in July 1860. He established a hut or homestead on the south side of the junction of the Lawrence and Clyde opposite the later site of McRae's old homestead. Acland (1975) states that this homestead was abandoned early on and was later washed away through erosion by the Lawrence. Today the Lawrence riverbed cuts hard into the steep hill slope where this homestead is likely to have been located. It is difficult to conceive that there may have once been flats sufficiently consolidated to site a homestead. Today the only possible hut site is in a clump of beech on top of an elevated terrace approximately half a kilometre upstream from the mouth of the Lawrence River. This was inspected and evidence was found of a hut or camp site (below).

Hut/Camp Site at Mouth of the Lawrence

This site is on a small terrace perched on the top of a steep 20m high slope above the river. It is currently sheltered by beech trees. There are three large stones placed in the centre of a 4m by 5m area that appears to have been deliberately flattened. There is also an old fence running across the end of the terrace. The most likely explanation is that this is an old camp or hut site. There is no reference in the maps or literature to any hut in this area other than Caton's Homestead. A search of the surrounding area revealed no other obvious evidence or clues to this site other than an old whiskey bottle. This was found half-buried at one end of the terrace. It was machine made and therefore dates from the 20th century.

McRaes Hut

This hut is situated on the on the true right of the Lawrence approximately 400m from its mouth. It was built in 1965 by AA Urquart to replace McRae's Old Homestead after it had burned down. It was built to provide accommodation to hunting parties following Urquart's venturing into guided hunting.

It has a steeply pitched gable roof clad in corrugated iron while the walls are vertical boards with large half round battens. The hut faces southeast and has three multi-pane windows along the front and one in the western end. It has three rooms: a shower room at the western end; a bunk room at the eastern end; and a living room/kitchen in the middle with a sink bench, Atlas wood stove and a table. The hut is lined with pinex and has chipboard on the floor. There are four bunks in the bunkroom. In general the hut appears sound although the lining and floor have suffered through wear and tear. This is the most recent hut of the three huts assessed in this report.

McRaes Old Homestead site and associated features

This was sited on a small rise on the western side of the point at the Clyde Lawrence confluence, marked by a small patch of beech forest. It was the original homestead site for Forest Hill, later Stronechrubie, and is presumed to date from the time of Bell (1860s). The old homestead stood here in an increasingly dilapidated condition until it was accidentally burned in 1965. It is described as being of cob but photos suggest that part at least was likely wattle and daub or mud and stud, and the longest surviving half

was clad in vertical board and batten. It achieved note as being one of the more remote high country farmsteads and is mostly associated with George McRae and his wife who lived here from 1878 until building a new homestead at Jumped Up Downs in 1891. A number of cadets and farm workers were also accommodated here at this time. The only photos show the old house but there were other buildings and presumably a woolshed. The 1889 topographical map shows at least two buildings here with associated yards and a large fenced paddock up the hill behind the house with Trig P at its centre (McClure, Topo 3G, 1889). There had been exotic plantings around the homestead including four mature *Pinus radiata* trees and bitter cherries (Beckett, 1978). There is now a fairly recent concrete and stone fireplace here close to the old house site.

McRae's Old Homestead

Despite the history of this site and that the house remained until 1965, there is now little obvious evidence that it was there. The most prominent indicator is the stand of four tall pine trees standing out above the surrounding fringe of beech trees. The site is mostly in grass and extends across the limited area of flat land to the beech forest. Towards the back of the clearing the remains of an old concrete fireplace give the only clue as to the original location of the house. There is some old corrugated iron and two weathered pieces of sawn timber. Archaeologically the only features noted in the long grass were a shallow ditch or trench running across the clearing between the old and modern concrete fireplaces, a stone mound on the eastern side of the ditch where it drops down to the river flat and two depressions approximately a metre in diameter just below the stone mound. These may be old rubbish pits. Under the beech trees several small cherry seedlings were noted and an old section of fence with five wires and split timber posts. This fence ran north and appears to correlate with a section behind the house shown on McClure's 1889 map. Despite the difficulty in defining features at this site it is likely that other archaeological evidence remains.

Trig P

This is a McClure trig and is situated on a knoll on the hill directly above and north of McRae's Homestead site. It is a pipe trig with earth mound. The wooden beacon has collapsed but the timber lies next to the trig. The trig is of some historical interest through association with the surveyor GHM McClure (1859-1947) and the initial topographic survey of this district.

Broadleaf Hut

This hut on the true right of the Clyde began life on the opposite side further upstream on Maiden's Flat. It was probably originally built during Pawson's tenure (1915-1927). It was moved to its present location near Broadleaf Creek in 1926 by Turner, Pawson's manager. It was found that a hut was more use here during the muster on the Cloudy Peak Range than the east side of the upper Clyde which could be mustered from McRae's Old Homestead.

The hut measures 3.5m by 4.4m and sits in a small natural terrace on the hill slope in line of an old rock fall about 30m above the river flats. Immediately to the south of the hut is a 6m by 4m terrace which may have had another building in the past or be a camp site. The hut has single room with a door in the east wall and no windows. It has a gable roof clad in flattened 44 gallon drums. The original wall cladding is 200mm x

25mm rimu boards over 75mm by 50mm rimu framing. However the cladding on the east, north and west walls has gone and been replaced with corrugated iron. It has a poured concrete floor and the interior has been roughly lined with construction ply. The concrete fireplace is in the south end and has a folded corrugated iron chimney. The hut is in a fairly dilapidated state but still reasonably weather proof. Colin Drummond has placed a shipping container along the west wall to store horse gear. 44 gallon drum dog kennels are scattered through a small stand of very old totara and broadleaf to the south of the hut.

Havelock Hut Site

This is situated on the true left of the Havelock at the back of the river flat under a rock bluff. The site is marked by a clump of willow and alder trees. This was an old hut (perhaps another of Pawson's) which, according to a pencil annotation on an undated topographic map, was abandoned in 1956. The hut site is still identifiable through several old wooden hut piles, pieces of its concrete fireplace and cast-iron stove, and scattered pieces of weathered timber. The area the hut occupied is approximately 4m by 9m. There is a more modern stock camp set up among the trees against the bluff which has a large concrete fireplace, corrugated iron shelter and a shipping container for storage. There is also a modern set of yards with draughting race. There are also remnants of an older original split post fence just south of the hut site.

Hut/Camp Site

This site was found near the mouth of the stream a kilometre southeast of the mouth of Cloudy Stream where a bulldozed track leaves the river flat. It is situated on a shallow intermediate terrace on the toe of a large fan amongst mature matagouri bushes. It comprises several sheets of corrugated iron, timber (tongue and groove and 75mm by 50mm rimu) and an old blue enamel pot scattered around an old stone fireplace with standards either side to support a billy hanger. The site is very confined, the terrace is barely 4m deep, and seems unlikely to have accommodated a hut. The timber had vestiges of red paint on it. It is possible that this camp had used material salvaged from the old Forks Hut which is known to have been painted red, to form a shelter. Large matagouri growing next to the fireplace indicate that this site is over 50 years old. There are two old T iron fence posts on the top of the fan 60m northeast of this camp site.

Forks Hut

This hut was situated at the mouth of a small stream in the Havelock about two and a half kilometres upstream of the junction with the Clyde. It is shown in Topo 25G. It was built 1915 and was painted red. According to Beckett (1978) it was rebuilt on an elevated site three kilometres upstream. No other evidence for this re-building of the hut has been found. The approximate location of the original Forks Hut was carefully searched but no evidence of it was found.

Sites of Maori Origin

There are no recorded archaeological sites relating to Maori occupation or use of the land in or adjacent to Erewhon pastoral lease and none were identified during this survey.

Historic Resources Significance

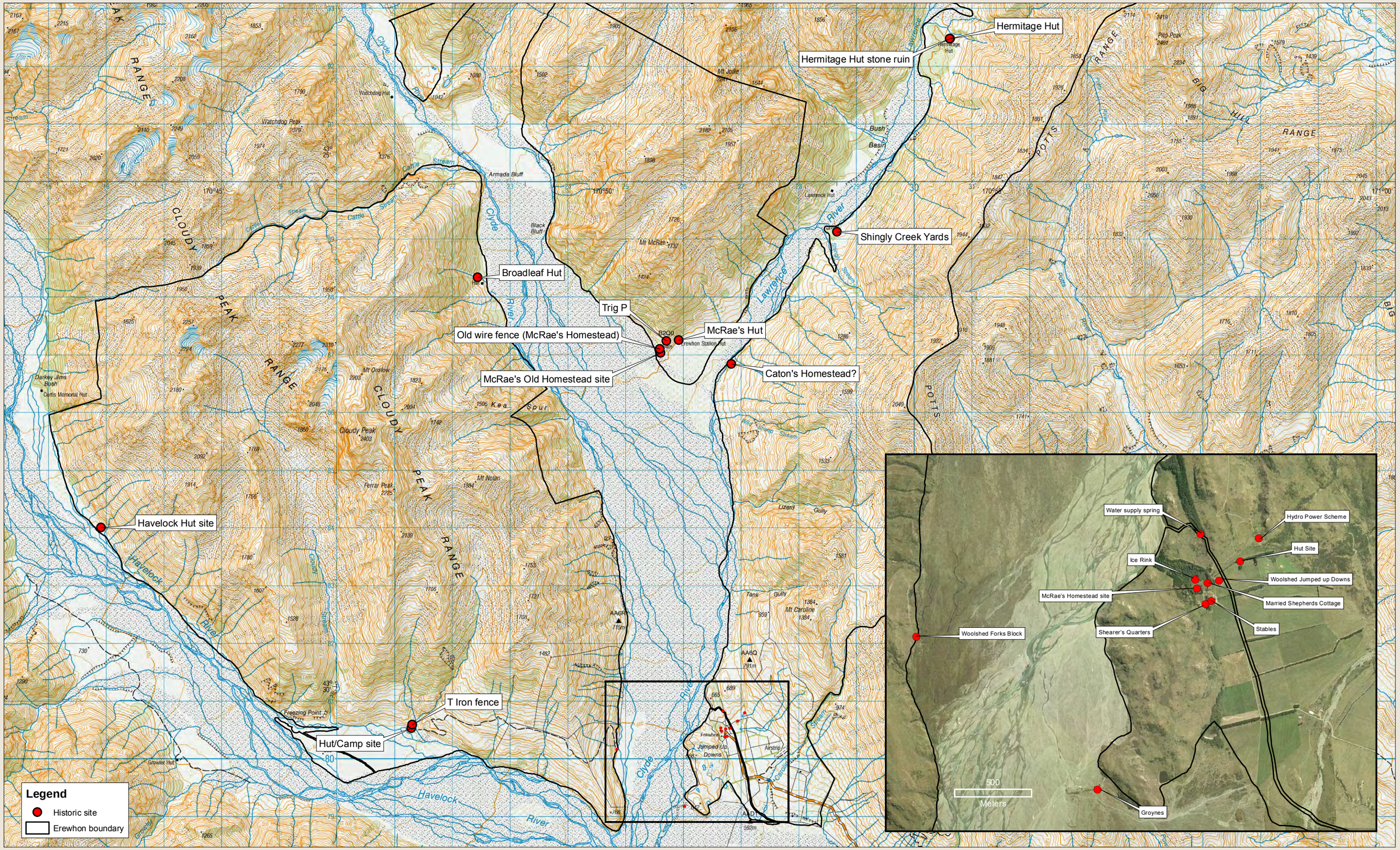
The significance of the historic resources are derived from guidelines developed by the Department of Conservation in 2009. Applicable historic resources value guidelines are stated below with an explanation as to how the values fit the guideline.

Human (cultural and historical) values

25. Sites that have a strong association with particular historical events, whether or not the remaining fabric is intact, deserve protection.

- The Jumped Up Downs have an association with early descriptions of the high country (Samuel Butler's writings) and early occupation (Erewhon pastoral lease). A number of historic sites (buildings) are located at Erewhon pastoral lease beside the Jumped Up Downs.

- The pastoral lease contains historic sites that are important relics of early occupation and use of the high country: McRae's Jumped Up Downs homestead site, Hermitage Hut and stone ruin; McRae's Hut; and McRae's Old Homestead site.



Erewhon Station - Historic sites

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Geospatial Services

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Department of Conservation
Te Papa Atawhai

New Zealand Government

29 Jul 2014

2.8 PUBLIC RECREATION

2.8.1 Physical Characteristics

Most parts of Erewhon pastoral lease lie within the 'remote' recreation opportunity class, with a small 'front country' part of the pastoral lease around the homestead in the 'pastoral' recreation opportunity class, in the Recreation Strategy for Canterbury Conservancy (Department of Conservation, 1994). Within the pastoral lease, two main recreation settings can be described.

High Mountains
This recreation setting covers the high altitude country on the Cloudy Peak, Jollie and Potts ranges. The area is contiguous with the high mountain ranges of the central Southern Alps and has similar physical characteristics for recreation. It comprises extensive areas of steep broken rock, with sparse vegetation on upper slopes and denser tussock and scrub on subalpine slopes especially in the northwest. Range crests are snow-covered for long periods and lower slopes snow-covered during the winter months. Recreation access to this mountainous area is mostly via the open riverbeds adjacent to the pastoral lease.

Front Country
This recreation setting covers the lower altitude parts of the pastoral lease along the Clyde and Havelock rivers, and includes the small areas of river flats and downs within the pastoral lease. It comprises gentler country around the homestead and on the Jumped Up Downs. It is also the most modified part of the pastoral lease, with areas of pasture and numerous cultivated paddocks and shelterbelts. It is, however, the most accessible part of the pastoral lease, bisected by Hakatere Potts Road and criss-crossed by numerous well-formed farm tracks. The main vehicle access route to the Havelock and Clyde valleys passes through the area. Historic sites, including McRae's Jumped Up Downs homestead, are present within this recreation setting.

2.8.2 Legal Access

Roads

Hakatere Potts Road bisects and provides legal access to the southeast corner of the pastoral lease. Unformed legal roads provide access, though not marked or practical, through the pastoral lease between and Rangitata and Clyde rivers in the vicinity of the homestead, and across a portion of river flats in the Havelock valley. Access is available adjacent to the pastoral lease on Crown (UCL) land in the beds of the Rangitata, Havelock, Clyde and Lawrence rivers.

Adjoining Public Conservation Land

Access to more remote parts of the pastoral lease is available from Rangitata/Rakaia Head Waters Conservation Area to the north and Hakatere Conservation Park to the east.

Marginal Strips

No existing marginal strips appear to be present along streams within the pastoral lease boundary. A small section of marginal strip exists adjacent to the true left bank of the Clyde River north of the homestead and abutting the legal road. This marginal strip is outside the pastoral lease.

2.8.3 Activities

The most important recreation use of the pastoral lease, in terms of visitor numbers, is probably scenery appreciation. Parts of Erewhon pastoral lease, notably the Jumped Up Downs and Cloudy Peak Range, are clearly visible from parts of the upper Rangitata valley. The lower-altitude southeast corner of the pastoral lease provides access for picnicking, sight-seeing and fishing. Vehicle and foot routes for tramping, climbing and hunting in the Lawrence, Clyde and Havelock valleys pass through this part of the pastoral lease. This use has increased in recent years, following filming of scenes for the popular Lord of the Rings films at locations near the pastoral lease.

Recreation use of other parts of the pastoral lease is probably mostly incidental to use of the valley floor (UCL) and public conservation lands in the valley heads. This use is predominantly by hunters, and to a lesser extent climbing and tramping parties. Access for these activities is frequently by four-wheel-drive vehicle along the valley floors or by helicopter. The higher-altitude parts of the pastoral lease (notably the Cloudy Peak Range and Potts Range) provide opportunities for back-country recreation such as tramping, climbing and nature study. Cloudy Peak provides rock climbing opportunities.

Recreation Significance

The significance of the recreation values are derived from guidelines developed by the Department of Conservation in 2009. Applicable recreation value guidelines are stated below with an explanation as to how the values fit the guideline.

71. Public access to sites of significant inherent value deserves protection unless there are powerful reasons for not having public access.

- The area provides access to the Potts Range, Jollie Range and Cloudy Peak Range as well as numerous streams and gullies from the Havelock, Clyde and Lawrence rivers.

77. The margins of lakes and rivers should preferably be returned to full Crown ownership.

- The boundaries of this part of the pastoral lease are the margins of the main rivers: Havelock, Clyde and Lawrence. Retention of these margins in full Crown ownership is essential for practical foot access along the rivers and to public conservation land at the valley heads.

Ecosystem Services

Ecosystem services are the non intrinsic social or economic benefits to people and society provided by functioning indigenous ecosystems. Examples are water and soil conservation, water yield, water purification, natural hazard mitigation and carbon storage (amenity values being covered under recreation or landscape). These are inherent values, being attributes of the land and its natural resources. If the land is managed in an ecological sustainable way, these benefits will be retained and enhanced. New Zealand's response to global climate change includes reducing greenhouse gas emissions and maximising CO_2 storage. Growing plants extract CO_2 from the air and store it in their tissues. If plants are not burnt or grazed, the carbon remains sequestered either in the woody parts of plants or in the soil.

Tenure review can assist in increasing carbon storage by removing grazing pressure, allowing shrublands and indigenous forests to expand and tussock grasslands to increase in stature. Ungrazed tussock grasslands also deliver high water yield benefits compared with an exotic pasture or forest land cover. Increased vegetation cover and stature also increases catchment stability. Indigenous vegetation alongside lakes and waterways will help to trap nutrients that might otherwise contribute to the eutrophication of lakes.

The lease backcountry lands make up part of the headwaters of the Lawrence, Clyde and Havelock river catchments which feed into the Rangitata River. Protection of these backcountry areas will provide ecosystem services benefits for downstream users through the protection of water quality, water yield and will make a significant contribution to the sequestration of atmospheric carbon.

Ecosystem Services Significance

The significance of the ecosystem services values are derived from guidelines developed by the Department of Conservation in 2009. Applicable ecosystem services value guidelines are stated below.

Ecosystem services

100. Other ecosystem services that are in the national interest, such as the carbon sequestration, water yield, and catchment stability potential of the high country, deserves protection.

- Protection of backcountry areas from grazing and disturbance will permit extensive natural regeneration of woody species, which will make a significant contribution to the sequestration of atmospheric carbon.
- Removal of grazing animals from the backcountry will assist in the protection and maintenance of water quality and yield in the headwater tributaries of a river which is protected by a National Water Conservation Order and is an important source of water for agriculture on the Canterbury Plains.
- Protection of the backcountry areas in conjunction with adjoining existing conservation areas will create a larger reserve, increasing diversity, improving the ecological integrity and overall conservation values of the wider protected area.

PART 3 OTHER RELEVANT MATTERS AND PLANS

3.1 DISTRICT PLANS

Erewhon pastoral lease lies solely within Ashburton District. The Ashburton District Plan was made partially operative in 2013. None of the outstanding appeals effect the Rural C zone rules significantly.

The pastoral lease is wholly within land zoned as Rural C within the plan. The Rural C or High Country Zone, as defined in the plan includes all foothill and mountain ranges through to the Main Divide, the Heron Basin, up the Rakaia River from Little River, the Ashburton River (Hakatere) from the Stour River (Matakou) confluence, and the Rangitata River upstream from the lower end of its gorge. It is generally northwest of a line which varies between 450m and 500m above sea level.

The Rural C Zone is dominated by land under Crown tenure, either as public conservation land administered by the Department of Conservation or as pastoral lease runs administered by the Commissioner of Crown Lands. The zone is characterised by conservation areas, or by large extensive pastoral farming blocks. The zone continues to provide for extensive pastoral farming, as well as providing opportunities for recreation, tree planting, and tourism. Within the Rural C Zone there are many sites of spiritual and cultural value to the Takata Whenua.

Anticipated Environmental results for the zone include:

- Maintenance of the landscape values in the High Country, including its spaciousness, expressive landforms, extensive tussock and grass cover, and views and panoramas.
- Protection of the District's outstanding landscapes and areas which have significant nature conservation value.
- Protection of habitat for birdlife and fish which occurs on beds and margins of rivers, lakes and wetlands.
- Efficient accessibility to all properties without interfering with the safe and efficient functioning of adjacent roads.
- Protection of Kati Huirapa relationship to its waahi tapu and waahi toaka areas.
- A level of spaciousness and openness in rural areas which enables the undertaking of a wide range of rural land uses and land management practices without increasing the potential for loss of amenity or conflict between activities.

Areas of Significance

Erewhon pastoral lease and adjoining land contains a number of areas or sites of significant nature conservation or landscape value as identified in the District plan.

1. Site 48 Upper Rangitata River (Group 1) – J35 300 564, J36 669 144. (Havelock, Clyde, Lawrence and Upper Rangitata River beds.). An extensive area of braided riverbed which is relatively weed free and provides a habitat for several endangered braided riverbed bird species.
2. Site 33 Upper Lawrence (Group 1) – J35 430 569 – A catchment facing the Lawrence River containing the best example of mountain totara forests in the district along with vegetation sequences.
3. Site 34 Hermitage Boulderfield (Group 1) – J35 404 538 - Unique vegetation community and rare plants associated with old stable rock fall.
4. Site 35 Lizard Gully (Group 1) – J35 389 462 – Includes only example of Myrsine divaricata forest in the district.
5. Site 37 Erewhon Beech remnants (Group 1) – J35 383 424 – representative beech forest remnants
6. Site 36 Cloudy Peaks (Group 1) – J35 334 443 – represents altitudinal, (river to peak) aspect and climate gradients in the western part of the district.

Outstanding and Significant Landscapes

The whole of the Erewhon pastoral lease is either classified as an area of Outstanding (highest rank) or Significant (second rank) landscape values.

Areas of Outstanding landscape value include:

1. The 'front country' parts of the pastoral lease around the homestead.
2. The Clyde River including the bed and land on the true right and left banks, covering approximately all of the pastoral lease on the true left of the Clyde, below the confluence with the Lawrence River and upstream to approximately Armada Bluff. Land on the true right includes the Erewhon survey area on that side of the river and approximately 2km from the riverbank.
3. The Lawrence River including the bed and land on the true right and left banks in an arc between the Lawrence and Clyde rivers, including Mt McRae.

The remainder of the pastoral lease is identified as an area of significant landscape value.

Geoconservation Areas and Sites

Erewhon pastoral lease contains three sites that are listed in the Geoconservation Areas and Sites schedule within the District Plan. The three sites are;

1 Mount Potts Triassic Flora and Fauna, Lizard Gully which contains rich Triassic macro flora and macrofauna including brachiopods, ammonoides and bivalves.
2 Mount Potts Triassic Plant Beds, Tank Gully which contains well preserved fossil plant beds within weathered exposures of greywacke.
3 Jumped Up Downs. Unusual landform created by the overriding of two joining glaciers, one pushing down the Clyde valley to join the Havelock glacier. A good example of ice sculptured terrain.

Policies and Rules

There are a large number of policies associated with the Objectives in the Plan associated with identified landscape areas with conservation values. The plan also establishes site and zone standards which set thresholds of effects not to be exceeded. Activities are considered within a framework of permitted, controlled, restricted discretionary, discretionary, non complying or prohibited activites.

3.2 CONSERVATION MANAGEMENT STRATEGIES

Erewhon pastoral lease is within the Rangitata Unit of the Canterbury Conservation Management Strategy (DOC, 2000). Relevant objectives for this unit are listed as:

- To use effective and efficient means to protect a representative range of indigenous biodiversity.
- To protect and enhance the viability of priority threatened species populations and their habitats.
- To reduce the impact of wild animals, particularly tahr, on native plant communities by managing them at specified density levels.
- To investigate wilderness status and if agreed by Minister of Conservation, gazette a wilderness area for the upper catchments of the Havelock, Lawrence, Clyde and Rakaia rivers to protect their wilderness values.
- To investigate conservation park status for areas managed by the Conservancy in the upper Rangitata/Rakaia and if agreed by the Minister, gazette a Conservation Park.

3.3 NEW ZEALAND BIODIVERSITY STRATEGY

The New Zealand Government is a signatory to the Convention on Biological Diversity. In February 2000, Government released the New Zealand Biodiversity Strategy. This strategy is a blueprint for managing the country's diversity of species and habitats. It sets a number of goals to achieve this aim. Of particular relevance to tenure review is Goal 3, which states:

- *Maintain and restore a full range of remaining natural habitats and ecosystems to a healthy functioning state, enhance critically scarce habitats, and sustain the more modified systems in production and urban environments, and do what is necessary to:*
- *Maintain and restore viable populations of all indigenous species across their natural range and maintain their genetic diversity.*

3.4 PROTECTING OUR PLACES

In April 2007 the Ministry for the Environment produced a new policy document titled 'Protecting Our Places' which was jointly launched by the Minister of Conservation and the Minister for the Environment. This publication introduces four national priorities for protecting rare and threatened native biodiversity on private land. The national priorities identify the types of ecosystems and habitats most in need of protection.

The policy statement supports the government's pledge to maintain and preserve New Zealand's natural heritage. This began in 1992 when New Zealand signed the United Nations Convention on Biodiversity; followed in 2000 with the release of the New Zealand Biodiversity Strategy.

The four national priorities for biodiversity protection are listed below. They are based on the most up to date scientific research available.

National Priority 1:
To protect indigenous vegetation associated with land environments, (defined by Land Environments of New Zealand at Level IV), that have 20 percent or less remaining in indigenous cover.

National Priority 2:
To protect indigenous vegetation associated with sand dunes and wetlands; ecosystem types that have become uncommon due to human activity.

National Priority 3:
To protect indigenous vegetation associated with 'originally rare' terrestrial ecosystem types not already covered by priorities 1 and 2.

National Priority 4:
To protect habitats of acutely and chronically threatened indigenous species.

PART 4 ATTACHMENTS

4.1 ADDITIONAL INFORMATION

4.1.1 Scientific Names of Species

Plant Species Cited by Common Name in Text

Indigenous species names are as published in the New Zealand Indigenous Vascular Plant Checklist (de Lange and Rolfe, 2010). Maori names are included for taonga species listed in Schedule 97 of the Ngai Tahu Claims Settlement Act 1998. Naturalised species are indicated by an asterisk (*).

Common name	Scientific name
alder*	*Alnus glutinosa*
aniseed	*Anisotome aromatica*
bidibid	*Acaena saccaticupula*
blue bidibid	*Acaena caesiiglauca*
blue tussock	*Poa colensoi*
blue wheatgrass	*Elymus solandri*
bog pine	*Halocarpus bidwillii*
bog rush	*Schoenus pauciflorus*
bracken	*Pteridium esculentum*
bristle tussock	*Rytidosperma setifolium*
broadleaf/kapuka	*Griselinia littoralis*
broom*	*Cytisus scoparius*
browntop*	*Agrostis capillaris*
bush lawyer	*Rubus cissoides*
bush lily	*Astelia fragrans*
bush snowberry	*Gaultheria antipoda*
Californian thistle*	*Cirsium arvense*
catsear*	*Hypochoeris radicata*
celery pine	*Phyllocladus alpinus*
cherry*	*Prunus avium*
Chewings fescue	*Festuca rubra*
cocksfoot*	*Dactylis glomerata*
columbine*	*Aquilegia vulgaris*
comb sedge	*Oreobolus pectinatus*
common shield fern	*Polystichum richardii*
cotton daisy/tikumu	*Celmisia spectabilis*
cottonwood	*Ozothamnus leptophyllus*
crack willow*	*Salix fragilis*

creeping pohuehue ..... *Muehlenbeckia axillaris*
daphne ..... *Pimelea prostrata*
Deptford pink* ..... *Dianthus armeria*
Douglas fir* ..... *Pseudotsuga menziesii*
dwarf heath ..... *Acrothamnus colensoi*
dwarf mistletoe ..... *Kothalsella clavata*
dwarf snowberry ..... *Gaultheria depressa*
elderberry* ..... *Sambucus nigra*
everlasting daisy ..... *Anaphalioides bellidioides*
false speargrass ..... *Celmisia lyallii*
false tamarisk* ..... *Myricaria germanica*
feathery tutu ..... *Coriaria angustissima*
fescue tussock ..... *Festuca novae-zelandiae*
flowering currant* ..... *Ribes sanguineum*
giant buttercup ..... *Ranunculus lyallii*
giant speargrass/taramea ..... *Aciphylla scott-thomsonii*
golden speargrass/taramea ..... *Aciphylla aurea*
gorse* ..... *Ulex europaeus*
grassland buttercup ..... *Ranunculus multiscapus*
grassland daisy ..... *Celmisia gracilenta*
grassland orchid ..... *Microtis unifolia*
grey willow* ..... *Salix cinerea*
Haast's carrot ..... *Anisotome haastii*
hairy buttercup ..... *Ranunculus foliosus*
hairy pennywort ..... *Hydrocotyle moschata*
harebell ..... *Wahlenbergia albomarginata*
hawksbeard* ..... *Crepis capillaris*
horehound* ..... *Marrubium vulgare*
hound's tongue fern ..... *Microsorum pustulatum*
inaka ..... *Dracophyllum longifolium*
jointed rush* ..... *Juncus articulatus*
king devil hawkweed* ..... *Pilosella piloselloides* subsp. *praealta*
kohuhu ..... *Pittosporum tenuifolium*
korokio ..... *Corokia cotoneaster*
koromiko ..... *Hebe salicifolia*
kowhai ..... *Sophora microphylla*
lancewood ..... *Pseudopanax crassifolius*
lawyer ..... *Rubus schmidelioides*
leather-leaf fern ..... *Pyrrosia eleagnifolia*
little hard fern ..... *Blechnum penna-marina*
manuka ..... *Leptocarpus scoparium*
matagouri ..... *Discaria toumatou*
mat coprosma ..... *Coprosma atropurpurea*
mat daisies ..... *Raoulia* spp.
mingimingi ..... *Coprosma propinqua*
mountain beech ..... *Fuscospora cliffortioides*
mountain clubmoss ..... *Lycopodium fastigiatum*
mountain flax/whaririki ..... *Phormium cookianum*

mountain kiokio ..... *Blechnum montanum*
mountain ribbonwood/houhi ..... *Hoheria lyallii*
mountain totara ..... *Podocarpus cunninghamii*
mountain wineberry ..... *Aristotelia fruticosa*
mouse-ear chickweed* ..... *Cerastium fontanum*
mouse-ear hawkweed* ..... *Pilosella officinarum*
narrow-leaved plantain* ..... *Plantago lanceolata*
narrow-leaved snow-tussock ..... *Chionochloa rigida*
native bindweed ..... *Calystegia tuguriorum*
native broom ..... *Carmichaelia australis*
native jasmine ..... *Parsonsia capsularis*
native violet ..... *Viola cunninghamii*
necklace fern ..... *Asplenium flabellifolium*
onion orchid ..... *Prasophyllum colensoi*
patotara ..... *Leucopogon fraseri*
pennywort ..... *Hydrocotyle novae-zelandiae*
plume grass ..... *Dichelachne crinita*
pohuehue ..... *Muehlenbeckia australis*
porcupine shrub ..... *Melicytus alpinus*
prickly mingimingi ..... *Cyathodes juniperina*
prickly shield fern ..... *Polystichum vestitum*
prostrate kowhai ..... *Sophora prostrata*
pukio ..... *Carex secta*
purging flax* ..... *Linum catharticum*
rautahi ..... *Carex coriacea*
red clover* ..... *Trifolium pratense*
red pondweed ..... *Potamogeton cheesemanii*
red tussock ..... *Chionochloa rubra*
red woodrush ..... *Luzula rufa*
rowan* ..... *Sorbus aucuparia*
Russell lupin* ..... *Lupinus polyphyllus*
ryegrass* ..... *Lolium perenne*
scabweed ..... *Raoulia australis*
Scotch thistle* ..... *Cirsium vulgare*
scrub pohuehue ..... *Muehlenbeckia complexa*
selfheal* ..... *Prunella vulgaris*
sheep's sorrel* ..... *Rumex acetosella*
silver birch* ..... *Betula pendula*
silver tussock/wi ..... *Poa cita*
slim snow-tussock ..... *Chionochloa macra*
snowberry ..... *Gaultheria depressa*
snow hollow grass ..... *Chionochloa oreophila*
snow totara ..... *Podocarpus nivalis*
snow tussock ..... *Chionochloa* sp.
spineless bidibid ..... *Acaena inermis*
suckling clover* ..... *Trifolium dubium*
sundew ..... *Drosera arcturi*
sun orchid ..... *Thelymitra longifolia*

sweet brier* ..... *Rosa rubiginosa*
sweet vernal* ..... *Anthoxanthum odoratum*
thousand-leaved fern ..... *Hypolepis millefolium*
three-finger ..... *Pseudopanax colensoi*
toatoa ..... *Haloragis erecta*
tree daisy ..... *Olearia avicenniifolia*
turpentine shrub ..... *Dracophyllum uniflorum*
tussock hawkweed* ..... *Hieracium lepidulum*
tutu ..... *Coriaria sarmentosa*
vegetable sheep ..... *Raoulia eximia*
wall lettuce* ..... *Mycelis muralis*
weeping mapou ..... *Myrsine divaricata*
white clover* ..... *Trifolium repens*
white fuzzweed ..... *Vittadinia australis*
willow* ..... *Salix* sp.
wire moss ..... *Polytrichum juniperinum*
woollyhead ..... *Craspedia* aff. *minor*
woolly moss ..... *Racomitrium pruinosum*
woolly mullein* ..... *Verbascum thapsus*
yellowwood ..... *Coprosma linariifolia*
Yorkshire fog* ..... *Holcus lanatus*

Animal Species Cited by Common Name in Text

Species names follow King (1990) for mammals, the New Zealand Recognized Bird Names list (compiled by C.J.R. Robertson and D.G. Medway for the Ornithological Society of New Zealand Inc.) for bird names, and McDowall (2000) for fish. Maori names are included for taonga species listed in Schedule 97 of the Ngai Tahu Claims Settlement Act 1998. Naturalised species are indicated by an asterisk (*).

Common name ..... Scientific name

alpine galaxias ..... *Galaxias paucispondylus*
Atlantic salmon* .....
Australasian bittern ..... *Botaurus poiciloptilis*
Australian coot ..... *Fulica atra australis*
Australian magpie* ..... *Gymnorhina tibicen*
banded dotterel ..... *Charadrius bicinctus bicinctus*
bellbird ..... *Anthornis melanura melanura*
black-billed gull ..... *Larus bulleri*
blackbird* ..... *Turdus merula*
black flounder ..... *Rhombosolea retiaria*
black-fronted tern ..... *Sterna albostriata*
black shag/koau ..... *Phalacrocorax carbo novaehollandiae*
blue duck/kowhiowhio ..... *Hymenolaimus malacorhynchos*
bluegill bully ..... *Gobiomorphus hubbsi*
brook char* ..... *Salvelinus fontinalis*
brown hare* ..... *Lepus europaeus occidentalis*

brown trout*.....*Salmo trutta*
brushtail possum*.....*Trichosurus vulpecula*
California quail*.....*Callipepla californica brunnescens*
Canada goose*.....*Branta Canadensis maxima*
Canterbury galaxias.....*Galaxias vulgaris*
Caspian tern.....*Sterna caspia*
Central Canterbury spotted skink.....*Oligosoma* aff. *lineoocellatum* "central Canterbury"
chaffinch*.....*Fringilla coelebs*
chamois*.....*Rupicapra rupicapra rupicapra*
Chinook salmon*.....*Oncorhynchus tshawytscha*
common bully.....*Gobiomorphus cotidianus*
common skink Clade 4.....*Oligosoma* aff. *polychroma* Clade 4
dunnock*.....*Prunella modularis*
eastern falcon/karearea.....*Falco novaeseelandiae*
European rabbit*.....*Oryctolagus cuniculus cuniculus*
feral cat* (house cat).....*Felis catus*
ferret*.....*Mustela furo*
giant bully.....*Galaxias gobioides*
goldfinch*.....*Carduelis carduelis*
greenfinch*.....*Carduelis chloris*
grey duck/parera.....*Anas superciliosa superciliosa*
grey teal/tete.....*Anas gracilis*
grey warbler/riroriro.....*Gerygone igata*
hedgehog*.....*Erinaceus europaeus occidentalis*
Himalayan tahr*.....*Hemitragus jemlahicus*
house mouse*.....*Mus musculus*
inanga.....*Galaxias maculatus*
kea.....*Nestor notabilis*
koaro.....*Galaxias brevipinnis*
lamprey.....*Geotria australis*
longfin eel/tuna.....*Anguilla dieffenbachii*
McCann's skink.....*Oligosoma maccanni*
mallard*.....*Anas platyrhynchos platyrhynchos*
marsh crake.....*Porzana pusilla affinis*
mountain stone weta.....*Hemideina maori*
New Zealand pied oystercatcher.....*Haematopus ostralegus finschi*
New Zealand pipit/pihoihoi.....*Anthus novaeseelandiae novaeseelandiae*
New Zealand scaup.....*Aythya novaeseelandiae*
New Zealand shoveler/kuruwhengu *Anas rhynchotis variegata*
Norway rat*.....*Rattus norvegicus*
paradise shelduck/putakitaki.....*Tadorna variegata*
perch*.....*Perca fluviatilis*
pied stilt/poaka.....*Himantopus himantopus leucocephalus*
rainbow trout*.....*Oncorhynchus mykiss*
Rangitata skink.....*Oligosoma* aff. *longipes* "Rangitata"
red deer*.....*Cervus elaphus scoticus*
redpoll*.....*Carduelis flammea*
rock wren.....*Xenicus gilviventris*

scree skink.....*Oligosoma waimatense*
shortfin eel.....*Anguilla australis*
silvereye.....*Zosterops lateralis lateralis*
skylark*.....*Alauda arvensis*
song thrush*.....*Turdus philomelos*
Southern Alps gecko.....*Woodworthia* "Southern Alps"
southern black-backed gull/karoro ...*Larus dominicanus dominicanus*
southern long-toed skink.....*Oligosoma* aff. *longipes* "southern"
South Island fantail.....*Rhipidura fuliginosa fuliginosa*
South Island rifleman/titipounamu ...*Acanthisitta chloris chloris*
spur-winged plover.....*Vanellus miles novaehollandiae*
starling*.....*Sturnus vulgaris*
stoat*.....*Mustela erminea*
Stokell's smelt.....*Stokellia anisodon*
swamp harrier/kahu.....*Circus approximans*
torrentfish/piripiripohatu.....*Cheimarrichthys fosteri*
upland bully.....*Gobiomorphus breviceps*
upland longjaw galaxias.....*Galaxias prognathus*
weasel*.....*Mustela nivalis vulgaris*
welcome swallow.....*Hirundo tahitica neoxena*
white-faced heron.....*Ardea novaehollandiae novaehollandiae*
wrybill.....*Anarhynchus frontalis*
yellow-breasted tomtit.....*Petroica macrocephala macrocephala*
yellowhammer*.....*Emberiza cintrenella*

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