

Landscape Character Unit 2 Description

LCU 2 comprises the southern third of the Stockton Plateau and is bounded by Webb Stream in the north, the coastal ridgeline south of Mt Frederick in the west and the steep scarp of the Waimangaroa River Gorge in the south and the Waimangaroa River valley / headwaters in the east. LCU 2 covers an area of approximately 1198 ha / 11 km² being approximately 5km long in a north south direction and 3km in an east west direction.

LCU 2 generally slopes south, over a distance of approximately 5km, from a high point at 1053 masl in the northwest corner to 600 masl at the confluence of Waimangaroa Stream and Cedar Creek. The unit is generally characterised by extensive areas of exposed sandstone rock pavement with obvious drainage patterns. LCU 2 is deeply incised by a number of streams including Billo and Deep stream in the south, L75 Stream in the north, which flow east or southeast. The Mt Frederick Fault, which runs north south through LCU 2 has resulted in a distinctive scarp feature named Rata Ridge. Two other inferred fault lines have been identified traversing LCU 2 in an east - west direction coinciding with the abrupt escarpments of Deep and Webb streams. As a result, deeply incised streams and steep rock bluffs are a feature of the unit.

The most common and abundant vegetation type in LCU 2 is the *Chionochloa juncea* grassland associated with sandstone erosion pavement. The Wildlands report⁴¹ states that this significant species grassland occurs on peaty and infertile soils overlying sandstone, mostly on gentle topography and is the most widespread vegetation type mainly above 600m. Typical associates are stunted manuka, yellow silver pine, wire rush, tangle fern, *Carpha alpina*, *Celmisia dubia* and *Dracophyllum politum*. On well drained stony or rocky sites, *Chionochloa australis*, *Raoulia grandiflora* and *Mitrasacme novae-zealandiae* are usually present (refer Map 26, Page 77). Boulderfield shrubland was also identified by aerial photo in the upper Deep Stream catchment and is dominated by *Chionochloa juncea* grassland rather than shrubland⁴².

High elevation beech is confined to the upper river gullies immediately south of Mt Frederick with some leatherwood scrub present. Silver beech is identified at the Billo Stream headwaters. Southern rata-mountain beech forest is present along steeply incised gullies and the Rata Ridge scarp face. A very limited area of Southern rata-broadleaved forest is identified at head of Waimangaroa River Gorge at the southern extent of LCU 2. Manuka shrubland and forest is also present on the periphery of the sandstone erosion pavement. The rimu/mountain beech/southern rata forest is present on shallower slopes and mainly concentrated close to the eastern boundary of LCU 2 within the Waimangaroa River valley.

Within LCU 2 the sandstone erosion pavements are the most widespread of the historically rare ecosystems although only those with less than 20% vegetation cover were mapped as these are most likely to represent the original distribution of these ecosystems. Well-vegetated sandstone landforms are likely to have supported forest in the past. The best and most extensive example of sandstone erosion pavement occurs within LCU 2 above 700masl to the northeast of Deep Stream. Also identified as an historically rare ecosystem are the boulderfields of acidic rock, which were noted above, as being found in the upper catchment of Deep Stream (refer Map 27, Page 78 *Historically Rare Habitat and Significant Species Distribution*).

The majority of LCU 2 encompasses a large and relatively undisturbed area (1198 ha) of coal measures. While there is no obvious land use or human intervention apparent within this LCU underground mining for coal has occurred historically. Past underground mining activity was mainly confined to the southern boundary between the head of the Waimangaroa River Gorge along the scarp edge up to the high point at 866 masl and the headwaters of Billo Stream. The various named mines are shown on Map 24, Page 75, and include the Taipo, Deep Creek and Kiwi mines.

Of note is the extent of DOC stewardship land within the Waimangaroa–Granity Conservation Area that lies over the bulk of LCU 2, and which captures a large extent of the sandstone erosion pavement. The balance of LCU2 is unallocated Crown Land. Currently BT Mining Limited hold an Exploration Permit over the DOC stewardship land and a mining permit over the unallocated Crown Land.



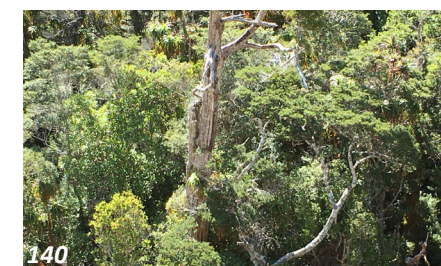
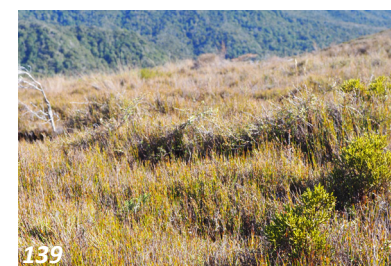
Photograph 128 : Rata Ridge

Photograph 129 : Boulder Feature rocks

Photograph 130 : T 35 Stream

⁴¹ Wildlands Consultants Ltd. (2010) Mapping of Vegetation and Habitats on the Stockton and Denniston Plateaux. Contract Report 2334. Department of Conservation.

⁴² *ibid.* Page 4 at 4.12



Photograph 131 : LCU 2 looking north

Photograph 132 : LCU 2 looking north

Photograph 133 : LCU 2 looking west

Photograph 134 : LCU 2 looking east to LCU 3

Photograph 135 : LCU 2 looking south-east

Photograph 136 : Typical vegetation within LCU 2

Photograph 137 : LCU 2 incised creek (Deep Storm)

Photograph 138 : LCU 2 looking south

Photograph 139 : Typical vegetation within LCU 2

Photograph 140 : Forest vegetation within LCU 2

Photograph 141 : Rock bluff features within LCU 2

LCU 2 Landscape Values

Biophysical Values

The unique geology and geomorphology of LCU 2 interspersed with high quality Tertiary coal measures contributes to very high biophysical values. A notable feature is the Mt Frederick Fault escarpment, which is named Rata Ridge. This fault scarp is associated with Southern rata-mountain beech forest.

Landform within LCU 2 appears unmodified and its natural drainage patterns seem intact. The plateau landform remains highly legible. The streams are deeply incised into the sandstone erosion pavement and, in being characterised by steep, well-vegetated gullies and rock bluffs, they are highly natural in character.

LCU 2 has extensive areas of exposed sandstone erosion pavement, which is recognised as a historically rare habitat⁴³. The erosion pavement is associated with *Chionochloa juncea* vegetation, which is a significant species. A confined area of acidic boulderfield is also identified as a historically rare habitat at the headwaters of Deep Stream.

Perceptual Values

LCU 2 is well-contained and visually separated despite the extensive mining activity on Denniston Plateau and within the adjoining LCU 1. LCU 2 is a pronounced planar landform defined by the surrounding mountain and gorge landforms with a high degree of legibility. LCU 2 is also a very distinctive, and memorable landscape associated with an exposed sandstone erosion pavement, strongly coherent with obvious patterns of drainage and vegetation. LCU 2's taller forest vegetation is typically associated with gullies with low stature vegetation located on and around the rock pavement.

A unique sense of place conveyed by the intact and unique landform and vegetation is also emphasised by the transient values conveyed by exposure to the highly changeable and dramatic weather systems. LCU 2 is also remote in the sense of an elevated, enclosed catchment separated from the inhabited coastal plains by the surrounding steep mountains and not readily accessible to the general public because access across the incised gullies is difficult. LCU 2 is however visible at a distance of 1 km from the northern edge of Denniston Plateau, from the pylon tracks across the Mt William Range and at a distance of over 3 km from Myra's Track up to the Mt William summit at 1062 masl. LCU 2 displays an overall high aesthetic value, albeit as an 'austere' aesthetic due to the predominance of sandstone erosion pavement, low stature vegetation and exposure to all weather conditions.

Associative Values

Mining is a key component of the cultural identity of the locality and is strongly connected to the historic heritage of the Buller plateaux and the West Coast in general. LCU2 is near mining to the north (within LCU1) and south (on Denniston plateau). The mining and exploration permits indicate that associative values are high (refer Map 28, Page 79).



Photograph 142 : Upper slopes of LCU 2

Photograph 143 : LCU 2 looking south

Photograph 144 : Rata Ridge feature within LCU 2

⁴³ Wildlands Consultants Ltd. (2010) Mapping of Vegetation and Habitats on the Stockton and Denniston Plateaux. Contract Report 2334. Department of Conservation.

Landscape Character Unit 3 Description

LCU 3 comprises the north-south trending shallow dished Waimangaroa River valley, which is located along the eastern edge of the Stockton Plateau, bounded by the Mt William Range to the east, Webb Stream to the north, LCU 2 to the west and Burnett Stream and Burnett Face to the south at the head of the Waimangaroa Gorge. LCU 3 covers 494.71 ha / 4.94 km² being approximately 7 km long in a north south direction and 1 km in an east west direction, sloping gently south to 500 masl from a high point at 600 masl in the north (*refer Map 23, Page 61*).

The headwaters of the Waimangaroa River arise at the confluence of Webb and Ernest streams and flow south, fed by various tributaries including L75 Stream, Wilson and Cedar creeks, Deep Stream, Gomorrah Creek and Hut Stream before heading west and discharging into the Waimangaroa River Gorge. The valley aligns with the Mt William Fault.

The valley is characterised by its relatively dense forest cover in contrast to the extensive exposed rock pavement within the adjoining LCU 2 (*refer Map 26, Page 77*). The most common vegetation type in LCU 3 is Rimu/ Mountain beech/Southern rata forest particularly over the lower north facing slopes interspersed by areas of Southern rata/Mountain beech dominant forest on the valley floor. Areas of manuka forest and shrubland are apparent in areas that have been disturbed by human activities and exotic weed species are also present. Small, localised areas of *Chionochloa juncea* grassland are found throughout the clearings and small patches of red tussock fern exist at the confluence of the L75 Stream and Waimangaroa River.

A very limited area of Southern rata-broadleaved forest occurs at the head of Waimangaroa River Gorge close to the boundary at the southern extent of LCU 2.

Human modification is apparent within this LCU and is mainly concentrated at the southern end of LCU 3. The extent of modification includes the Cedar Creek Road access from Denniston Plateau via Burnetts Face, which extends approximately 4 km north as a rough 4 WD track and three infrastructure corridors comprising pylons and power transmission lines. These corridors head northwards along the river valley before heading east and traversing the Mt William Range north of the Cedar Creek Saddle. At least three disused mines are located with access off Cedar Creek Road along with various artefacts and debris associated with historic mining. Of note is Burning Mine, which is identified by the plumes of smoke from underground fires.

LCU 3 is unallocated Crown Land and currently BT Mining Limited hold a Mining Permit over the entire LCU (*refer Map 28, Page 79*). LCU 3 is inaccessible from its northern end, being constrained by the steep topography and the incised stream beds, although the Cypress Mine footprint indicates that excavation will extend to within approximately 500 m of the LCU 1A / LCU 3 boundary. LCU 3 is however readily accessible from the Denniston Plateau via Burnetts Face Road and Cedar Creek Road and acts as the connecting/ bridging landform between Denniston Plateau and LCU 1.

Views over the river valley are limited to the northern edge of the Denniston Plateau at the end of Burnetts Face Road where an expansive view up the valley may be seen.



Photograph 145 : LCU 3 Looking north

Photograph 146 : LCU 3 Looking east from LCU 2

Photograph 147 : LCU 3 Looking south from LCU 1



Photograph 148 : LCU 3 valley landform

Photograph 149 : Forested valley - LCU 3

Photograph 150 : Cypress Stream - Happy Valley.

Photograph 151 : Cedar Creek Road within LCU 3

Photograph 152 : Forest within LCU 3

Photograph 153 : Historic mine site within LCU 3

Photograph 154 : Waimangaroa River alongside Cedar Creek Road

Photograph 155 : Waimangaroa River

Photograph 156 : Waimangaroa River

LCU 3 Landscape Values

Biophysical Values

The LCU 3 is characterised by a shallow, dished, landform with a largely intact forest cover. The Waimangaroa River is a predominant feature and a natural water course that expresses high legibility and natural character. LCU 3 is mostly unmodified with natural drainage patterns that are integral to the landform. The LCU's various tributary streams are characterised by steep, well vegetated gullies and rock bluffs in places.

Land use is related to power transmission corridors and roading with three historic underground mines present in discrete locations towards the southern end of this LCU.

Perceptual Values

LCU 3 is well contained, and physically separated from LCU 1 and 2 and the Denniston Plateau by the topography, the steep scarp face of the Waimangaroa Gorge and the surrounding Mt William Range. Although not overly distinctive or memorable a high natural character mainly relates to the Waimangaroa River course and forest vegetation there are several noteworthy features associated with the LCU 3.

Overall LCU 3 is strongly coherent mainly due to the contiguous area of forest that extends downwards from the Mt William Range and across the river valley. The valley is sheltered by the forest cover and so is less exposed to the changeable weather conditions and dramatic transient values that are associated with more exposed areas of the plateau. LCU 3 is visible at 1 km from the northern edge of Denniston Plateau, from the pylon tracks across the Mt William Range and at over 3 km from Myra's Track up to the Mt William summit at 1062 masl. Overall, LCU 3 displays a moderate to high aesthetic value due to the visual and physical coherency of the forest cover and valley landform which is most appreciated at a distance.

Associative Values

Mining is a key component of the cultural identity of the locality and LCU 3 contains historic underground mines strongly associated to the heritage of the Buller plateaux and West Coast in general (*refer Map 21, Page 55*).



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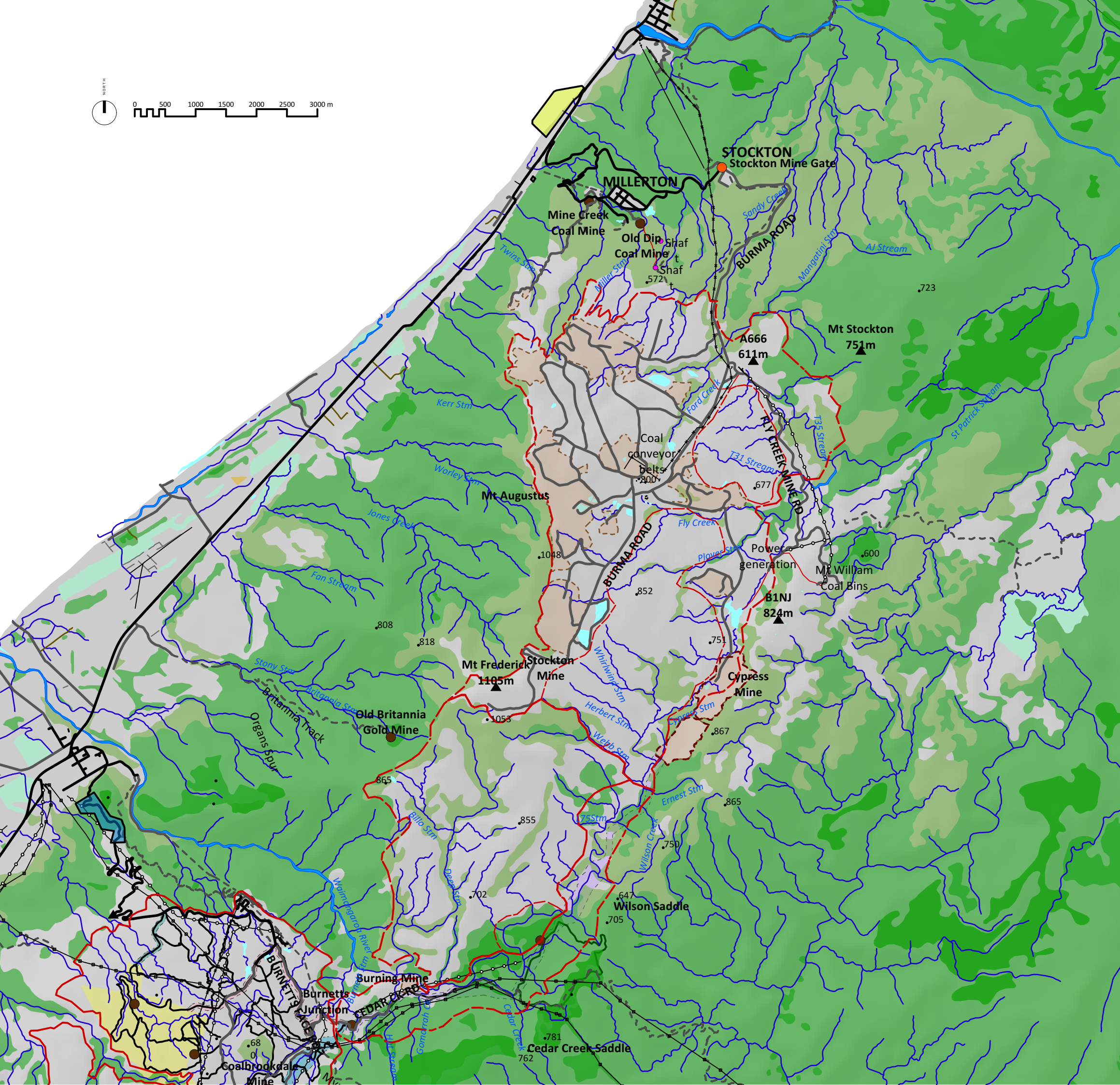
Photograph 157 : Burning Mine

Photograph 158 : Historic mine site

Photograph 159 : Historic mine site

Photograph 160 : Cedar Creek Road

Photograph 161 : Historic artefacts



LEGEND

- DISUSED MINE LOCATIONS
- ACTIVE MINE LOCATIONS
- MOUNTAIN PEAKS
- HIGH POINTS
- CONTOURS
- PARCEL BOUNDARIES
- ROADS (SEALED)
- ROADS (METALLED)
- 4WD ROADS (LINZ)
- 4WD ROADS (NZTOPO50)
- WALKING/BIKING TRACKS
- POWERLINES WITH PYLONS
- POWERLINES
- AERIAL ROPEWAY REMAINS
- PIPELINES
- RIVERS
- PONDS/LAKES
- SWAMP
- NATIVE VEGETATION COVER
- SCRUB VEGETATION COVER
- EXOTIC VEGETATION COVER
- STOCKTON PLATEAU

MAP 24

STOCKTON PLATEAU ACTIVE MINES

LEGEND

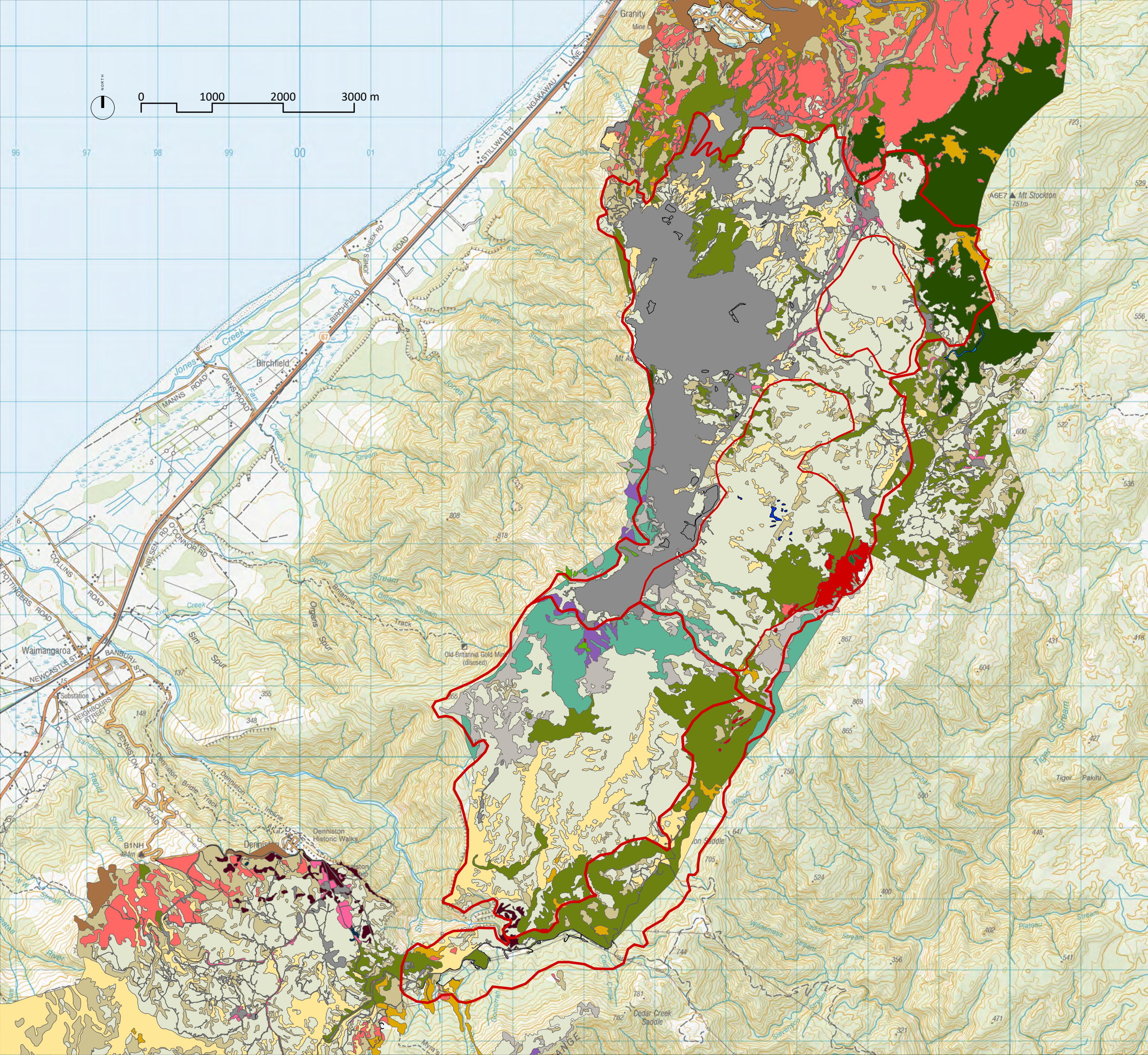
- STOCKTON PLATEAU
- RIVERS
- WETLANDS SCHEDULE 1
- WETLANDS SCHEDULE 2

SOURCE: LINZ/WCRC GIS DATA

Schedule 2 identifies wetlands that either are, or likely to be, ecologically significant. A wetland in Schedule 2 is considered to be significant if it meets any one of the ecological criteria in Schedule 3. Wetlands identified in Schedule 2 require an assessment using ecological criteria on Schedule 3 during any resource consent process.

MAP 25
STOCKTON PLATEAU
RIVER ENVIRONMENT
AND SIGNIFICANT
WETLANDS





LEGEND

- STOCKTON PLATEAU
- LANDSCAPE CHARACTER UNITS
- MANUKA WIRE RUSH PAKIHI RUSH TANGLE FERN
- BOULDERFIELD SHRUBLAND
- CHIONOCHLOA FLAVESCENS GRASSLAND
- CHIONOCHLOA JUNCEA GRASSLAND
- HERB FERN
- HIGH ELEVATION BEECH FOREST
- LEATHERWOOD SCRUB
- MANUKA FOREST
- MANUKA SHRUBLAND
- MIXED BEECH FOREST
- MOUNTAIN BEECH PAHAUTEA FOREST
- RED TUSSOCK FERN
- RIMU HARD BEECH FOREST
- RIMU/MOUNTAIN BEECH SOUTHERN RATA FOREST
- SILVER BEECH MOUNTAIN BEECH FOREST
- SOUTHERN RATA BROADLEAVED FOREST
- SOUTHERN RATA BROADLEAVED LOW FOREST
- SOUTHERN RATA MOUNTAIN BEECH FOREST
- VEGETATION WITH A SIGNIFICANT EXOTIC COMPONENT
- WETLAND SHALLOW TARN COMPLEXES
- NON VEGETATED RIVERBED
- CLEARED VEGETATION

SOURCE: - BATHURST RESOURCES LTD GIS DATA - JULY 2019

MAP 26
STOCKTON PLATEAU
VEGETATION MAP

LEGEND

- DENNISTON PLATEAU
- LANDSCAPE CHARACTER UNITS
- SEEPAGE
- HISTORICALLY RARE -
BOULDERFIELDS OF ACIDIC
ROCKS
- HISTORICALLY RARE -
SANDSTONE EROSION
PAVEMENT
- TARNs
- SIGNIFICANT SPECIES -
CHIONOCLOA JUNCEA
DISTRIBUTION

SOURCE: WILDLAND CONSULTANTS GIS DATA

MAP 27
STOCKTON PLATEAU
HISTORICALLY
RARE HABITAT &
SIGNIFICANT SPECIES
DISTRIBUTION

