

Desktop Review of SNAs in the West Coast Region

Contract Report No. 7468

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1.0 Introduction

The proposed Te Tai o Poutini Plan (TTPP; combined District Plan for the Buller, Grey, and Westland District Councils) was notified in mid-2022. Four submitters opposed the extent and presence of Significant Natural Areas (SNA) on their land. To assist them making a decision, the Commissioners have requested the advice of qualified, professional ecologist be provided, that will determine whether or not (and to what extent) consequences of the relief sought on the integrity of the SNA. Wildland Consultants Ltd (Wildlands) was chosen to provide this advice, and this report provides the outcomes of evaluating SNAs.

2.0 Project Scope

To consider the five following SNAs:

- Mt Buckley (Johnston property; DOC-004).
- Mt Davy (BLA-P002).
- Three SNAs (PUN-043, PUN-044 and PUN-W034) on the Barrytown Flats.

The objectives for the project are to determine:

- Whether or not the Mt Buckley, Mt Davy, and Barrytown Flats SNAs, as they exist, meet the criteria for SNAs, as set out in in Appendix 1 of the West Coast Regional Policy Statement (WCRPS) or in Appendix 1 of the National Policy Statement for Indigenous Biodiversity (NPS-IB).
- Whether the extent of each SNA is properly identified, based on the two sets of criteria.
- Whether or not, and to what extent, the SNAs would be compromised by withdrawing the submitters' properties or state coal reserves from the SNA.
- And in the case of the Johnston property (Mt Buckley), whether or not a field assessment would be required.

3.0 Methods

The SNA reports were reviewed. Recent aerial imagery was viewed to facilitate assessments. New information from Mt Davy was considered when assessing potential boundary changes to this SNA, including desktop searches of fauna records within and in close proximity to the SNA in resources such as the Global Biodiversity Information Facility (GBIF). Changes to the threat status of taxa was also reviewed.

4.0 Additional Information

4.1 Mt Davy

Better knowledge of ecological values in the Mt Davy SNA is available than was available for the original assessment of this site (Harding 2017) for lizards, roroa/great spotted kiwi (*Apteryx maxima*), and invertebrates, which is summarised below.

4.1.1 Lizards

It is now known that the Mt Davy site hold good habitats for forest gecko (*Mokopiriraukau granulatus*) which has an At Risk-Declining threat status (all lizard threat statuses as per Hitchmough *et al.* 2021). The rockland, upper montane scrub, upper montane low forest provide excellent lizard habitat for the forest gecko and West Coast green gecko (*Naultinus tuberculatus*; Threatened-Nationally Vulnerable). Red tussock grassland would provide good habitat for West Coast green gecko and skinks, either Newman's speckled skink (*Oligosoma newmani*; At Risk-Declining) or northern grass skink (*Oligosoma polychroma*; Not Threatened). Also, a speckled skink taxon could be present in damp non-forest habitats, any of the following taxa could be present:

O. aff infrapunctatum "Hokitika" - Threatened – Nationally Critical.

O. aff infrapunctatum "Westport" – Data Deficient.

O. aff infrapunctatum "Alborn" - Threatened – Nationally Critical.

O. aff infrapunctatum – a new unknown Clade yet to be determined.

The tall forests at lower elevation are not such good habitats for lizards, probably because pest animal densities are higher.

4.1.2 Roroa

Roroa are likely distributed throughout the Mt Davy SNA and outside it where the vegetation is undisturbed, especially at higher elevation. The Paparoa Range population is dense and important, one of four remaining areas where roroa are still maintaining large populations (Toy *et al.* 2021)

4.1.3 Invertebrates

Several notable invertebrates are likely to be present in the Mt Davy SNA in addition to *Powelliphanta gagei* (Threatened – Nationally Critical; Walker *et al.* 2022). Leaf-veined slugs (Athoracophoridae) are likely to be present in forest and scrub; this taxon is poorly known and many species are nationally At-Risk or Threatened. Helms stag beetle (*Geodorcus helmsi*; protected under Schedule 7 of the 1953 Wildlife Act) is highly likely to be present in forest, scrub, and red tussockland. Ground beetles in general have a high likelihood in most habitats within the Mt Davy SNA. Carnivorous land snails in the Rhytididae are highly likely to be in the upper montane forest and scrub. The cluster fly *Pollenia atricoma* (At Risk – Naturally Uncommon; Andrew *et al.* 2012) could be present lower montane forest or upper montane scrub. The stiletto fly (*Megathereva albopilosa*) may possibly inhabit rockland at the site. The habitat requirements of the latter two species are poorly known.

4.2 Threat status changes

Since the SNA reports were written there have been several threat classification changes. Notably, members of the Myrtaceae, whose threat rankings were raised on a precautionary basis before myrtle rust (*Austropuccinia psidii*) arrived in Aotearoa. Now that myrtle rust has arrived and its consequences are somewhat better understood, some Myrtaceae have reverted to Not Threatened while susceptible species have had their threat statuses raised. In PUN-043 northern rātā (*Metrosideros robusta*) had a threat status of Not Threatened in 2007, but is currently At Risk-Declining (de Lange *et al.* 2024). Two indigenous herbs in the Mt Davy SNA, the sundew *Drosera pygmaea* and *Euphrasia wettsteiniana*, were both classified as Threatened – Nationally Vulnerable, but are now At Risk-Naturally Uncommon and At Risk-Declining respectively (Table 1; de Lange *et al.* 2024).

Table 1 – Species that have changed threat classifications since the SNA surveys.

Species	Common Name	Threat Status in 2007	Threat Status in 2024
<i>Metrosideros robusta</i>	Northern rātā	Not Threatened	At Risk-Declining
<i>Drosera pygmaea</i>	Sundew	Threatened-Nationally Vulnerable	At Risk-Naturally Uncommon
<i>Euphrasia wettsteiniana</i>		Threatened-Nationally Vulnerable	At Risk-Declining

5.0 Assessment of Significant Natural Areas

5.1 Significance

5.1.1 Mt Davy SNA

The Mt Davy SNA met the majority of criteria in both criteria sets (Tables 2 and 3), which befits a large SNA with considerable habitat diversity, and multiple populations of Threatened and At-Risk indigenous species. The SNA boundaries have been drawn to include as much of these as possible, while avoiding currently disturbed areas, though some slivers of mining activity occur in the SNA. Significant values are distributed widely inside the boundary, but are mainly at higher elevation.

5.1.2 PUN-043

The Barrytown Flats SNA PUN-043 mainly comprises public conservation land, but includes some private land in the southern part. It comprises dune forest and wetland with forest on dune ridges and harakeke (*Phormium tenax*)-dominated wetland in dune hollows. This SNA meets several of the criteria in both criteria sets (Tables 2 and 3). These lowland habitats are important seasonally for food resources for indigenous fauna such as kereru (*Hemiphaga novaeelandiae*) and tui (*Prosthemadera novaeelandiae*). The private land contains dune forest which should be included in the SNA, as it comprises a diverse, productive, and endangered dune forest ecosystem. Part of the area identified as SNA by Boffa Miskell (2007a) contains hump and hollow landforms which are vegetated in a pasture with rushes (*Juncus* spp.) and wetlands in some of the hollows, and does not contain significant values. This area has been appropriately excluded from the SNA during further processing done in 2013 by Grey District Council.

5.1.3 PUN-044

The PUN-044 SNA is located to the south of PUN-043 and entirely comprises private land. It has similar landforms to PUN-043 with forest on dune ridges and wetlands in dune hollows. A track runs through it and drainage has been modified. Kahikatea (*Dacrycarpus dacrydioides*) dominates on ridges and harakeke wetlands in dune swales. There are areas of low-stature with abundant tree ferns in between the wetland and forest remnants in the southern part of the SNA. The SNA boundary could be redrawn to exclude the track. The westernmost area is focused on low stature sedgeland that would be habitat for matuku hurepo/Australasian bittern (*Botaurus poiciloptilus*). The southern boundary of the larger polygon excludes harakeke wetlands and forest.

5.1.4 PUN-W034

The PUN-W034 comprises two coastal lagoons between Devery Creek and Collins Creek. The old SNA boundary and the more recent boundary retained a mixed scrub between the two lagoons. This area

has been removed since the PUN-WO34 report, and now the proposed SNA outline cuts closer to lagoons themselves. The lagoon margins provide a variety of wetlands, which provide habitat for a diverse range of water birds including five that are Threatened or At Risk (Table 2). Lagoons in New Zealand have threat status of endangered (Holdaway *et al.* 2012).

Table 2 – Wetland birds recorded in PUN-WO-34.

Species	Common Name	Threat Status
<i>Ardea alba modesta</i>	Kotuku; white heron	Threatened – Nationally Critical
<i>Botaurus poiciloptus</i>	Matuku-hūrepo	Threatened – Nationally Critical
<i>Microcarbo melanoleuccos brevirostris</i>	Kawaupaka; little shag	At Risk-Relict
<i>Phalacrocorax carbo</i>	<i>Māpunga’ black shag</i>	At Risk-Relict
<i>Platylea regia</i>	Kotuku ngutupapa	AT Risk – Naturally Uncommon

The PUN-WO34 has significant value for rarity and ecological context, specifically fauna habitat under the WCRPS, (Tables 3 and 4).

5.1.5 Mt Buckley

Mt Buckley SNA has significant value for representativeness, rarity, and ecological context and would meet several criteria in both the WCRPS and NPSIB criteria sets (Tables 3 and 4)

5.2 SNA Boundaries

The Mt Davy SNA report (Harding 2017) describes an earlier 2007 SNA report that was never implemented in a planning sense, so the 2017 assessment was intended to resolve the issue. The 2017 report drew the SNA boundary to exclude areas of mining activity, but did not take into account future mining activities on state coal reserves. The existing SNA overlaps slightly with existing mining activity.

The western low elevation lobes of the Mt Davy SNA that coincide with the state coal reserves could be removed (Figure 1), although it comprises roroa habitat. The main values of the SNA are at high elevation. Also, the SNA boundary should be modified in two locations to remove areas of existing mining activity from it.

The upper part of the Mt Davy SNA that coincides with the eastern state coal reserve should be maintained as SNA, as there are multiple ecological values concentrated at higher elevation and these would not be effectively protected if the SNA boundary was redrawn to exclude the state coal reserves in this part of the site. The upper state coal reserve incorporates rockland, forest, short forest, and low stature vegetation on ridges. If this area was excluded from the SNA it would disrupt it severely and fail to protect significant habitat for roroa and *Powelliphanta gagei* and lizards. It would also (if mined) disrupt connectivity along the Paparoa ridge and result in extensive edge habitat within the remaining SNA. This combination of effects would not protect the existing values.

Table 3 – Assessment of Significant Natural Areas (SNAs) against West Coast Regional Policy Statement (WCRPS) criteria.

WCRPS Significance Criteria	Mt Davey	PUN 043	PUN 044	PUN WO34	Mt Buckley
Representativeness					
a) Typical vegetation or habitat	Met	Met	Met	Met	Met
b) Large example	Met	Not Met	Met	Not met	Met
Rarity/Distinctiveness					
a) Reduced to <20%	Not Met	Met	Met	Met	Not met
b) Species threat status	Met	Met	Met	Met	Not met
c) Distribution Limits	Met	Not Met	Not Met	Not met	Met
d) Distinctive, restricted or rare	Not Met	Not Met	Not Met	Not met	Met
Diversity and Pattern					
a) High Diversity	Met	Met	Met	Not Met	Met
Ecological Context					
a) Ecological linkage, network, or buffer	Met	Met	Met	Met	Met
b) Fauna habitat	Met	Met	Met	Met	Met

Table 4 – Assessment of Significant Natural Areas (SNAs) against National Policy Statement for Indigenous Biodiversity (NPS-IB) criteria.

WCRPS Significance Criteria	Mt Davey	PUN 043	PUN 044	PUN WO34	Mt Buckley
Representativeness					
a) Typical vegetation	Met	Met	Met	Met	Met
b) Fauna assemblage	Met	Not Met	Not Met	Met	Not met
Rarity/Distinctiveness					
c) Uncommon vegetation	Not Met	Met	Met	Met	Met
d) Distribution Limits	Met	Not Met	Not Met	Not met	Not met
d) Reduced to <20%	Not Met	Met	Met	Met	Not Mex
e) Naturally Uncommon Ecosystems	Met	Met	Met	Met	Not met
f) Type locality	Not Met	Not Met	Not Met	Not met	Not met
g) Distinctiveness	Not Met	Met	Met	Not met	Met
h) Special feature	Not Met	Not Met	Not Met	Not met	Met
Diversity and Pattern					
i) Moderate diversity	Met	Met	Met	Met	Met
j) Gradients	Met	Met	Met	Met	Met
Ecological Context					
k) Moderate size and compact shape	Met	Met	Met	Met	Met
l) Well buffered	Met	Not Met	Not Met	Not met	Not met
o) Important buffer	Met	Met	Met	Not met	Not met
m) Natural functioning	Met	Met	Met	Met	Met

The PUN SNA reports (Boffa Miskell 2006, 2007a) contained two versions of SNA boundaries. The earlier ones were from an earlier scoping study, and the SNA reports determined SNA values and re-drew the boundaries so as to contain the significant values. Further processing of the two PUN SNA boundaries was done in 2013 by Grey District Council. The aerial photography available today is superior to that available in 2013, which might be the cause of any errors in the boundary amendment. The boundary changes have appropriately excluded an area of humped and hollowed landform from PUN-043, but the new boundary is misaligned in various places and includes slivers of pasture. These slivers are identified in Figure 2, and could be removed from the SNA area. The same is true of PUN-044, which divides a single polygon in the SNA report into three separate polygons. One of the polygons includes a wetland area that was excluded in the SNA report. Also, the north-eastern boundary of the larger polygon is misaligned with the indigenous vegetation and includes rough pasture. This aspect requires amendment, and Figure 3 suggests a basis for doing so.

5.3 Evaluation of relief sought

PUN-043 and PUN-044 are significant partly because they represent indigenous vegetation types that have been strongly reduced locally. While the areas on public land would remain significant if the areas on private land were excluded, they would not provide as much habitat and if the vegetation on private land was cleared, be less well buffered. Therefore, the areas of private land within these SNAs should remain included in the SNAs. Figures 2 and 3, show minor corrections to exclude slivers of pasture.

PUN-WO34 has little buffering now that the mixed scrub has been lost. Wider buffers in places would be beneficial, especially in coastal sand dunes, which are dynamic systems. But there is no scope to make SNAs bigger. Therefore, it should retain existing boundaries (Figure 4).

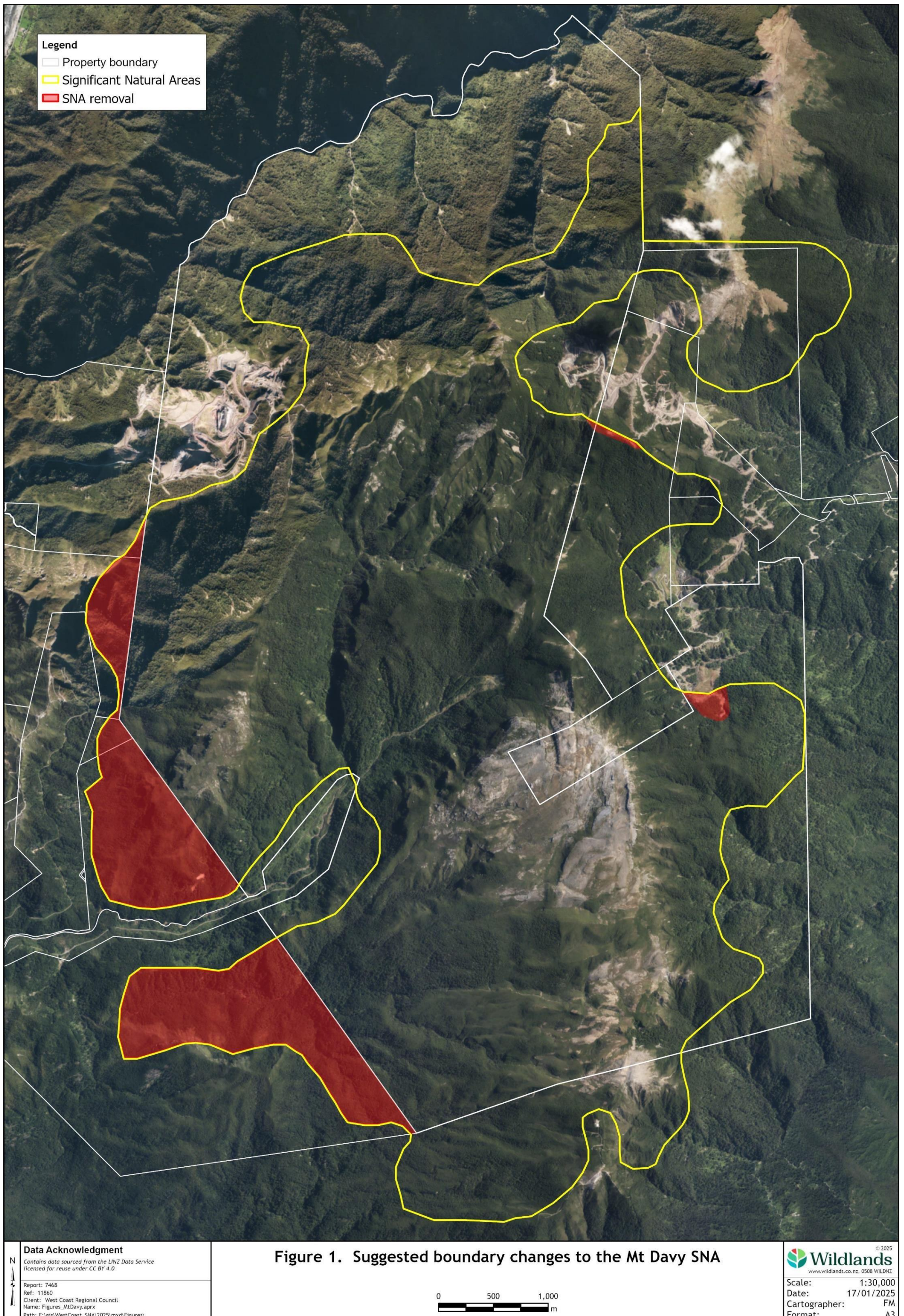
At the Mt Davy SNA, the state coal reserves overlap the SNA in two areas: the western low elevation boundary and along the eastern ridge north of Mt Davy. In the west, the state coal reserves cover three lobes of the SNA. These lobes capture the lower part of an elevation gradient with beech-podocarp forest and at higher elevation, upper montane low forest. Roroa will be distributed through these forests. If these lobes were removed from the SNA, it would truncate the altitudinal gradient and remove protection for habitats for roroa and possibly lizards, but the remaining SNA would still hold most of the significant values including plentiful habitat for roroa and high-quality habitats for lizards. A suggested boundary is in Figure 1.

The Birchfield Coal Mines land to the east of the Mt Davy SNA is largely avoided by the SNA except for a sliver of SNA land that occurs on private land. It would be clear of SNA if the western lobes of the SNA were removed where they coincide with the western state coal reserves.

Mt Buckley SNA has reduced in size to take out tracks (Figure 5). The tracks will not bar dispersal in birds and bats. Some limitations do remain in the respect of lizards and invertebrates. Lizards and flightless invertebrates will have to crawl across them. The tracks are to maintain infrastructure and seldom used. There is indigenous vegetation in the corridor so the lizards and flightless invertebrates will not have far to travel.

5.4 Mount Buckley field survey requirements

The SNA report (Boffa Miskell 2007b) on Mt Buckley included no field work and was based on two reports, one in 1989, the second in 2002. Nevertheless, the SNA report changed the boundary, reducing its size. This may have been done to align the SNA boundary with cadastral boundaries. But questions around the boundary need to be resolved with field work. For example, the SNA report notes the importance of mataī (*Prumnopitys taxifolia*) and poataniwha (*Melicope simplex*) and these cannot be distinguished in aerial imagery. The information of Mt Buckley is dated, so further field work could





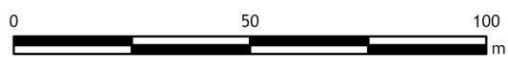
Legend

- Property boundary
- Significant Natural Areas
- SNA removal

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Report: 7468
Ref: 11860
Client: West Coast Regional Council
Name: Figures_PUN043.aprx
Path: E:\gis\WestCoast_SNA\2025\mxd\Figures\

Figure 2. Suggested boundary changes to PUN-043 SNA



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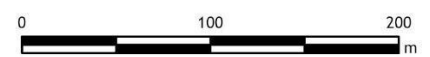
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Figure 3. Suggested boundary changes to PUN-044 SNA



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Cartographer: FM
Format: A3R



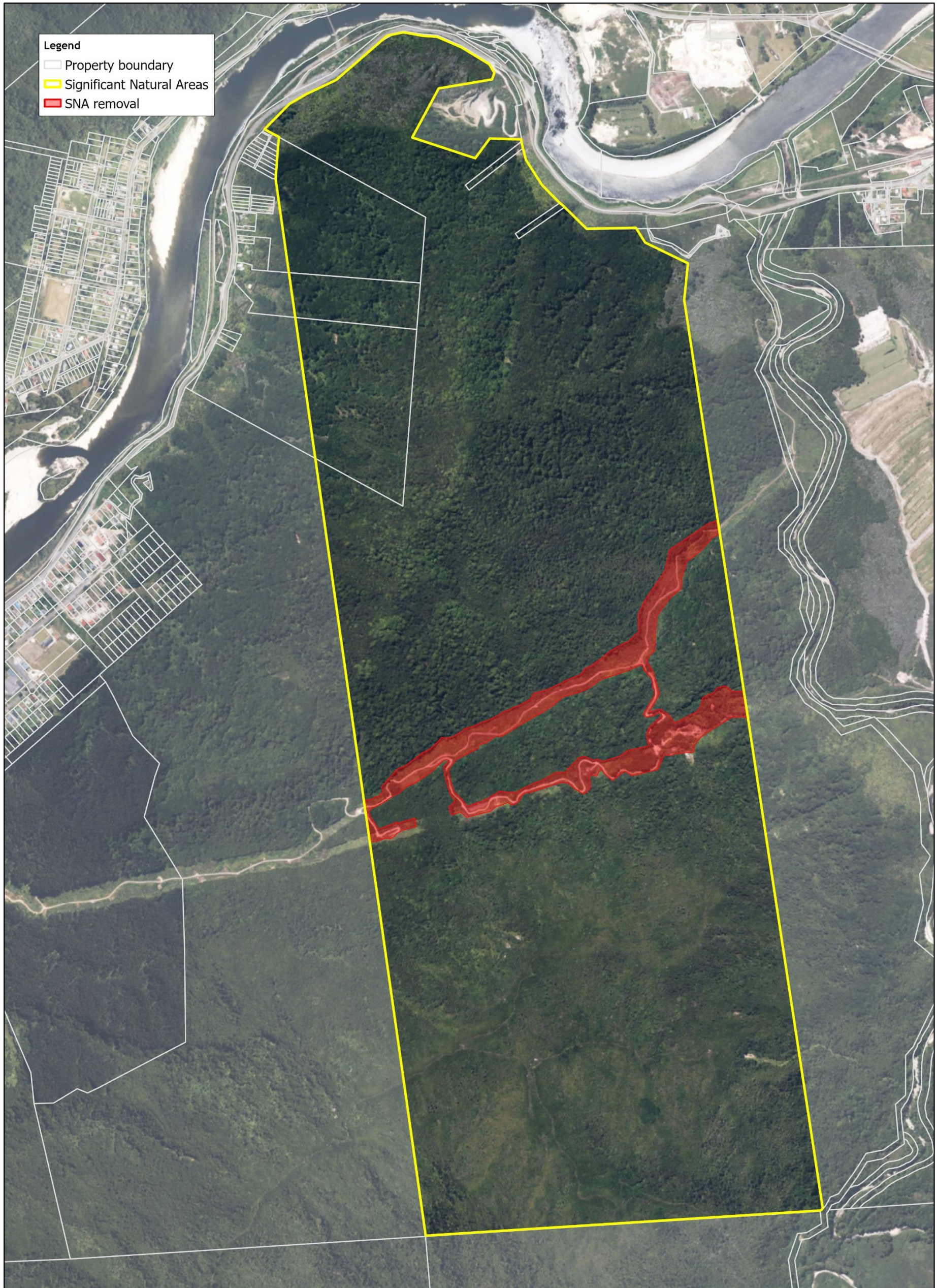
Legend
□ Property boundary
■ Significant Natural Areas

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Figure 4. Retain boundaries of PUN-WO34



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Cartographer: LW
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Legend
Property boundary
Significant Natural Areas
SNA removal

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Figure 5. Suggested changes to the Mt Buckley SNA



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update the values of the site. This should include auto-detectors to verify if long-tailed bats (*Chalinolobus tuberculatus*) are present. Long-tailed bats have the highest threat classification of Threatened – Nationally Critical (O’Donnell *et al.* 2023).

The cost of a field survey of Mt Buckley, assuming Christchurch Wildlands staff undertook it, would be approximately \$6,240 + \$770 disbursements plus GST¹.

6.0 Conclusions

The five SNAs contain significant values when assessed against the WCRPS criteria or the NPS-IB criteria. The Barrytown flats SNAs should be maintained as SNAs as they represent strongly reduced habitat types. Minor boundary adjustment is required to remove slivers of pasture and to better align with indigenous vegetation and habitats. The Mt Davy SNA boundary could be changed so that it doesn’t coincide with state coal reserves in the west, but the eastern area of state coal reserves intersects with multiple significant values, and the SNA boundary should be maintained in this area. The Mt Buckley SNA warrants a field visit to determine its boundaries, and a cost estimate has been given for this.

Acknowledgments

Lois Easton (WCRC) is thanked for providing information on changes to SNA boundaries since the SNA reports were published. Jo Armstrong (WCRC) is thanked for project liaison.

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¹ Pricing liable to change after three months.

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