

**BEFORE THE INDEPENDENT HEARING PANEL APPOINTED TO
MAKE RECOMMENDATIONS ON PROPOSED PORIRUA DISTRICT PLAN AT WELLINGTON**

IN THE MATTER of the Resource Management Act 1991
(the Act)

AND

IN THE MATTER of a hearing by the Porirua City Council
on 29 October to 15 November 2021

**SUPPLEMENTARY STATEMENT OF EVIDENCE OF NICHOLAS PAUL GOLDWATER FOR
THE PORIRUA CITY COUNCIL**

21 December 2021

Introduction

1. My name is Nicholas Goldwater. My qualifications and experience are outlined in my evidence in chief (EiC) dated 1 September 2021.
2. This statement of evidence responds to the questions raised in the Minute 9 (Hearing Stream 2 Follow Up) issued by the hearing panel. I will address each question as they relate to ecology and SNAs.

Response to questions provided in Minute 9 document

1. *Is Mr Leblanc correct in identifying an inconsistency between Mr Goldwater's Schedule referencing SNAs as supporting bellbirds as a scarce bird species (and therefore in turn satisfying the RPS rarity criterion) compared to the statement he quotes from Wildlands Methodology Report (at page 19) saying that bellbirds are not threatened and that their localised distribution is increasing in abundance? If so, what are the consequences for the SNAs identified as significant on this basis?*

Response: Bellbird has a national threat ranking of 'Not Threatened'¹, although it is uncommon in parts of the North Island, particularly from Waikato northwards². Due to concerted predator control efforts around Wellington region, bellbird numbers are likely to be rising, and their status of 'regionally scarce'³ may well change in the future. However, it is also likely that they are absent or present in very low numbers in some parts of the region.

I think it is unlikely that any SNAs in the Porirua District would have been identified as significant solely on the presence of regionally scarce species such as bellbirds, although even if this was the case, such sites would still meet the criterion (b) for Rarity below:

*Rarity: the ecosystem or habitat has biological or physical features that are **scarce** or threatened in a local, regional or national context. This can include individual species, rare and distinctive biological communities and physical features that are unusual or rare.*

At any rate, the SNA to which Mr Leblanc is referring to already meets one other criterion for significance (Ecological Context), so I suggest that the presence/absence of bellbirds is a moot point.

¹ Robertson *et al.* (2017).

² <https://www.nzbirdsonline.org.nz/species/bellbird>

³ McArthur N. Flux I. and Harvey, A. 2021: State and trends in the diversity, abundance and distribution of birds in Wellington City. Client report prepared for Greater Wellington Regional Council, Wellington.

2. *Is Mr Harpham correct when he suggests that indigenous biodiversity in the Greater Wellington urban area generally and Porirua District in particular is increasing?*

Response: The answer really depends on the baseline – or year - from which one would measure increases in indigenous biodiversity. I suggest that Mr Harpham is referring to changes that have taken place within the past five to six decades, particularly in terms of the regeneration of mahoe and kanuka-dominant forests and scrub across former farmland. The fact that an area of forest or scrub comprises secondary vegetation does not preclude it from meeting significance criteria in Policy 23 of the RPS.

Vegetation cover is only one measure of biodiversity. Holistically, indigenous biodiversity includes plants, bird, lizards, bats, invertebrates, fungi, lichens, and even microbial organisms in the soil. The steady growth of urbanisation in Porirua has resulted in the loss and fragmentation of indigenous habitats, including regenerating habitats such as kānuka forest. With an increase in residential areas comes an increase in mammalian predators such as cats and rats, species that have undoubtedly been implicated in the decline of species of indigenous birds, lizards, bats, and even invertebrates such as wētā.

In conclusion, while it could be argued that there has been an increase in indigenous vegetation cover over the past several decades, it is not necessarily true that the species living in these habitats have increased in number, with the exception of more common bush bird species such as tui, grey warbler, and fantail.

What is the reasoning for Mr Goldwater rejecting Mr Harpham’s suggestion that there is sufficient kanuka both in protected areas and outside those areas that the presence of kanuka does not meet the RPS Policy 23 representativeness criterion?

Response: That would largely come down to what Mr Harpham describes as “sufficient”. Based on analysis of the recent Land Cover Database (LCDB v5.0, 2020) produced by Landcare Research (refer to Figure 1, Appendix 1), it is evident that vegetation classified as ‘Manuka and/or Kanuka’ is present only in scattered small to moderate-sized remnants in Porirua District, many of which occur on Acutely Threatened Land Environments (i.e., less than 10% indigenous cover left) and have no formal protection. Approximately 2% (c.17 hectares) of ‘Manuka and/or Kanuka’ in the Porirua District is within protected areas such as reserves administered by the Department of Conservation and Porirua City Council (refer to Figure 1). This firmly contradicts Mr Harpham’s suggestion that there is “sufficient” kanuka within protected areas. Furthermore, I do not agree with his assertion

that there is “sufficient” kanuka outside of protected areas, given that the LCDB layer indicates only 785 hectares of ‘Manuka and/or Kanuka’ remain in the District. I would also note that there is nothing in Policy 23 around “sufficient” being a test.

I would also add that, based on my recent observations together with inspection of new aerial imagery, it is apparent that in the absence of regulation remaining areas of kanuka forest in Porirua District are currently at risk of clearance and fragmentation due to urban development, and this is particularly evident in suburbs such as Whitby.

3. *If SNA 138 is expanded to provide a corridor along the Onepoto Stream, what width is the minimum required to provide the desired ecological connection between elements of the SNA.*

Response: The relevant submission requests that the extent of SNA134 be amended to include all of the Onepoto Stream and connects with the wetland habitats within SNA138. There is an obvious hydrological link between the two SNAs and, as such, I am supportive of amending the SNA boundary to formalise the linkage or corridor (see Appendix 4). A buffer of ten metres on each side of the stream is the suggested minimum. Once the plants have established, the buffer should become self-sustaining and provide resilience against weed invasion as well as shading and filtration functions. Such a buffer would help reinforce the linkage between more disparate parts of SNA138.

Based on the change described above, I suggest incorporating the larger part of SNA134 into SNA138 and renaming it ‘Whitireia Spring Wetland and Te Onepoto Catchment’ (refer to Appendix 4). The smaller area of SNA134 to the east should be combined with SNA135 as ‘Whitireia Park Seral Forest’, after which SNA134 can be removed as a site number. SNA135 and the eastern SNA134 remnant are already contiguous via gorse shrubland and regenerating indigenous vegetation, and will become one overall large forested indigenous remnant over the next 10 to 20 years.

4. *Having heard the statement of Ms Blake, does Mr Goldwater have any further comment about the potential effects of noise and vibration from the Willowbank quarry on the flora and fauna of nearby SNAs? Can a map please be provided identifying the location and distance between that quarry and the nearest SNAs?*

Response: Given that Ms Blake’s observations are anecdotal, it is difficult to link putative declines in birdlife with quarrying activity in the absence of baseline data and subsequent annual monitoring. This could be done through five-minute bird counts being carried out at

various points within SNA160, together with using devices such as tracking tunnels and chew cards to quantify the abundance of predator species.

5. *What is the size of SNA165 as recommended by Mr Goldwater, and what would the effect of that size if the area not notified as an SNA were excluded? If the end result is less than 0.5ha, should that SNA be deleted in order to be consistent with the Wildlands' methodology?*

Response: For purposes of clarification, SNA165 consists of two disparate remnants, the northern one of which includes the wetland. The northern part of the SNA originally covered 2,612 m² and was subsequently revised to 1,225 m² following the July 2021 site visit. While the minimum area of forest or scrub to be considered a representative ecological site is 0.5 hectare as per the SNA methodology⁴, it was agreed that wetlands should not have an area limit but must contain 50% of more indigenous vegetation and/or water. The wetland at the subject property contains more than 50% indigenous vegetation and therefore meets the Rarity criterion of Policy 23.

Mr McDonnell has advised that there is no scope for the northern extension (up the narrow gully), so the original boundary will need to be retained for this part of the SNA. Given this site has little relevance to the southern remnant of SNA165, I suggest that a new number and name is assigned to it.

6. *What are Mr Goldwater's comments on the merits of planting exotic species to provide food for indigenous birds? If there is merit, what species would be appropriate to specify in that regard?*

Response: Indigenous birds such as tui, bellbird, kereru and silvereye commonly utilise exotic plant species for food sources, including banksia, bottlebrush (*Callistemon* spp.), tree lucerne, loquat, guava, ornamental cherry, privet, monkey apple, and eucalyptus. While there may be merit in planting such species in gardens and parks, I do not support planting them in SNAs due to the propensity of some species to become invasive, particularly shade-tolerant species such as loquat, privet, ornamental cherry, and monkey apple.

⁴ Methodology prepared by Wildland Consultants Ltd and Kessels Ecology Ltd (2015).

APPENDIX 1

Indicative distribution of kanuka/manuka forest and scrub in relation to protected areas within the Porirua District.

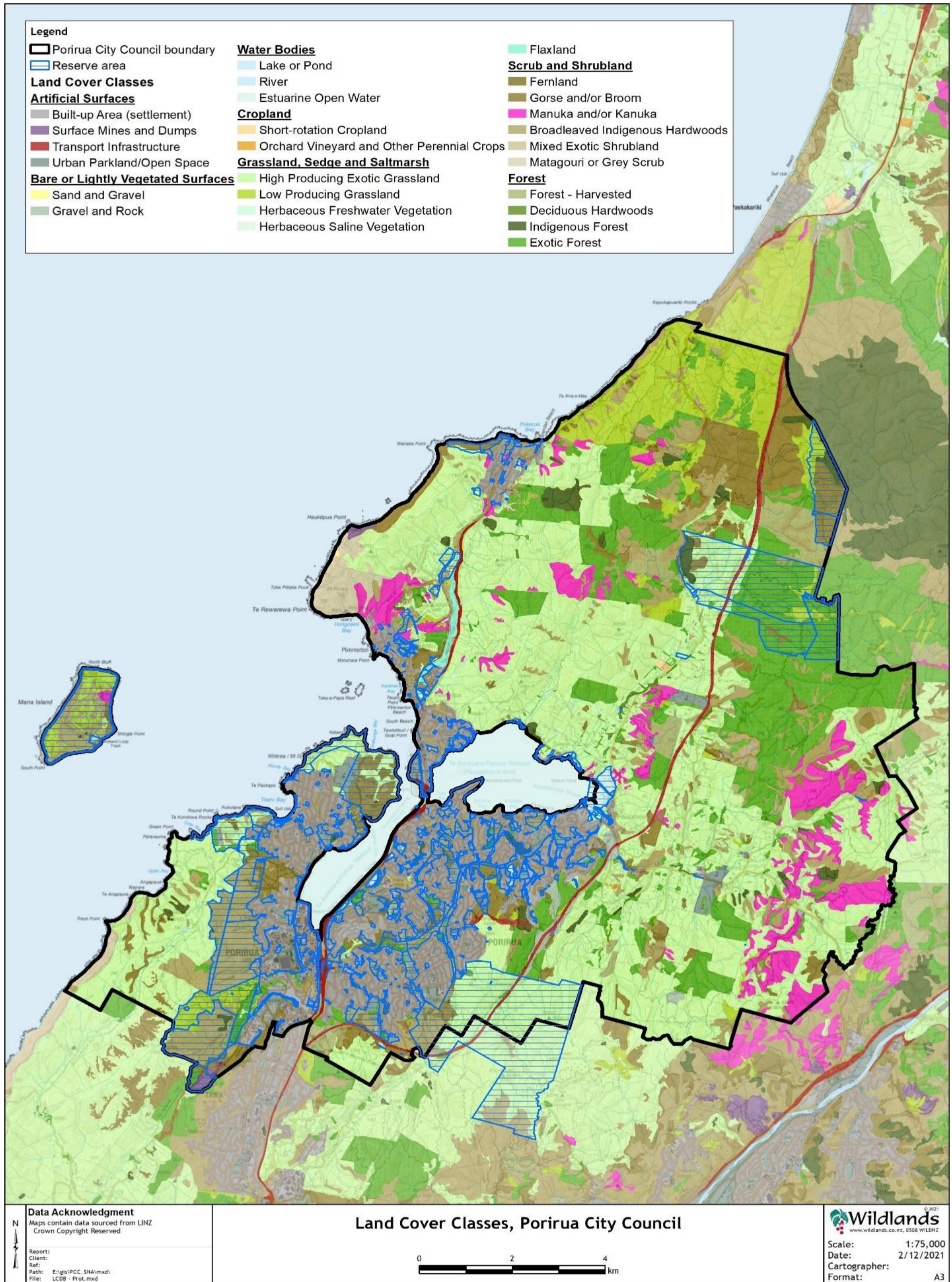


Figure 1. Indicative areas dominated by kanuka and manuka are coloured in pink. Protected areas are denoted by blue lines. Source: LCDB_v5.0 (2020).

APPENDIX 2

Schedule of submitter-requested site visits conducted in November-December 2021 (following the Stream 2 Hearing) and ecologists' recommendations regarding SNA boundaries for each of the properties visited.

SNA No.	Street address	Property ID	Submitter(s)	Field Inspection Date	Vegetation Types Surveyed at Property	Significance Assessments	Ecologists' Actions and Recommendations
SNA027	153b Rawhiti Road, Pukerua Bay	Lot 2 DP 51486	Grant Abdee	NA	<p>1. Māhoe-dominant forest with frequent kānuka and occasional kohekohe, ngaio, karaka, tarata, and houpara. Kawakawa is common in the understory with frequent hangehange, shining spleenwort.</p>	<p>General comments: The vegetation at the property forms part of a narrow strip of indigenous broadleaved forest and treeland that bounds SH1 and the railway. The SNA meets the following significance criteria:</p> <p>Criterion RPS23A – Representativeness: Broadleaved species forest is representative of a current indigenous vegetation type that is poorly represented in the Porirua District.</p> <p>Criterion RPS23B – Rarity: Supports one At Risk plant (puha; <i>Sonchus kirkii</i>), one At Risk reptile species (barking gecko) and one regionally scarce bird species (bellbird). Contains indigenous vegetation on Acutely Threatened and Chronically Threatened land environments.</p> <p>Criterion RPS23D – Ecological context: Significant for enhancing forest connectivity inland from Pukerua Bay, and for buffering first- and second-order reaches of the Taupo Stream.</p> <p>However, the width of the strip of SNA overlapping the property boundary is less than 5 m; therefore, this area of the SNA has been removed from the property.</p>	<p>Action: The SNA boundary has been amended to align with the property boundary, given that the extent of overlapping vegetation occurs within five metres of the property boundary.</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP requires amendment as a result of the site visit.</p>
SNA029	434 State Highway 1, Pukerua Bay	Lot 1 DP 507444	Andrew Tierney	24 November 2021	<p>1. Māhoe-kohekohe forest with tawa, rewarewa, tītoki, with kahikatea, tōtara and pukatea in the gullies.</p> <p>2. Macrocarpa/mown exotic grass treeland.</p> <p>3. Garden.</p>	<p>General comments: Much of the indigenous forest in SNA029 is protected by a QEII covenant (5-07-763). The retained area of SNA on the property meets the following criteria:</p> <p>Criterion RPS23A - Representativeness. Representative of the current (regenerating) state of Singers and Rogers (2014) vegetation type 'MF6 - Kohekohe, Tawa' forest, of which <20% is left and 10% is protected in the Porirua District.</p> <p>Criterion RPS23B - Rarity. Contains indigenous vegetation on an 'Acutely Threatened' land environment.</p> <p>Criterion RPS23C - Diversity. High floristic diversity that includes podocarp and broadleaf species representative of later successional stages.</p>	<p>Action: Areas of vegetation dominated by exotic species (Vegetation Types 2 & 3) have been removed from the SNA where it overlaps with this property.</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP does not require amendment as a result of the site visit.</p>
SNA038	5 Moana Road, Plimmerton	Lot 19 DP 2093	Donald Mather	9 December 2021	<p>1. Kohekohe-māhoe/kawakawa-hangehange-rangiora-karaka forest, with kānuka (<i>Kunzea robusta</i>; in canopy), <i>Hoheria populnea</i>, pohuehue, and huruhuruwhenua. Several exotic plant species present, including stinking iris, elaeagnus, <i>Oxalis</i> sp., English ivy, brush wattle, and Sumatran fleabane.</p>	<p>General comments: The boundary of the SNA was checked while on-site and appears to be accurate (that is, it does not include gardened areas). The SNA meets the following significance criteria:</p> <p>Criterion RPS23A - Representativeness. Representative of the current (regenerating) state of Singers and Rogers (2014) vegetation type 'MF6 - Kohekohe, Tawa' forest, of which <20% is left and 10% is protected in the Porirua District.</p> <p>Criterion RPS23B - Rarity. Supports one regionally scarce bird species (bellbird) and two At Risk reptile species (ngahere gecko and barking gecko). Contains indigenous vegetation on a Category 1</p>	<p>Action: No changes to SNA197 boundary are recommended where it overlaps with this property.</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP does not require amendment as a result of the site visit.</p>

SNA No.	Street address	Property ID	Submitter(s)	Field Inspection Date	Vegetation Types Surveyed at Property	Significance Assessments	Ecologists' Actions and Recommendations
						<p>threatened land environment.</p> <p>Criterion RPS23D - Ecological Context. Provides stepping stone habitats for birds which enhances connectivity around Plimmerton.</p>	
SNA047	10a The Track, Plimmerton	Lot 1 DP 86437	Paul and Julia Botha	30 November 2021	<ol style="list-style-type: none"> (Pine)-(Lawsons cypress) / māhoe kānuka forest. Māhoe-kānuka forest. Māhoe-kānuka scrub. Eucalyptus forest. Mown grassland. Citrus orchard / rank exotic grass. Karamū shrubland in a seepage. The groundcover is dominated by onion weed, nasturtium, tradescantia, <i>Juncus effusus</i>, and <i>Lotus pedunculata</i>. Mixed indigenous scrub containing planted <i>Griselinia littoralis</i>, korokio, akeake and naturally recolonised māhoe, taupata, and karamū. Harakeke-raupō-<i>Carex flaxland</i>. 	<p>General comments: The significance criteria for SNA047 as a whole largely relate to the wetland feature (Taupo Swamp South) that is contiguous with terrestrial vegetation on the property. The retained area of SNA on the property meets the following criteria:</p> <p>Criterion RPS23A – Representativeness:</p> <p>Wetland ecosystems are no longer commonplace and poorly represented nationally and in the Wellington Region. Indigenous broadleaved forest containing a substantial amount of kānuka in the canopy is representative of a current ecosystem type that is now poorly represented in Porirua City.</p> <p>Criterion RPS23C - Diversity: Supports a natural diversity of wetland flora, and native forest and scrub associations. Contains a transition zone between wetland and dryland forest and scrub communities.</p> <p>Criterion RPS23D – Ecological context: Buffers a catchment that into the retained area of Taupo swamp in SNA047.</p>	<p>Action: The boundaries of SNA047 have been refined around the vehicle track.</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP does not require amendment as a result of the site visit.</p>
SNA058	7 Pendeen Place, Camborne	Lot 9 DP 70109	Ian and Noeline Fowler	2 December 2021	<ol style="list-style-type: none"> Kānuka forest up to 10m tall with occasional mānuka in the canopy. Invaded by jasmine (<i>Jasminum polyanthum</i>) in places. Casuarina/māhoe forest. Indigenous-exotic scrub managed as a perennial garden border. Includes cultivars of indigenous species such as <i>Veronica</i> spp., purple akeake, and variegated <i>kōhūhū</i>, non-local indigenous species such as <i>karo</i> and exotic species such as <i>agapanthus</i>. 	<p>General comments: The vegetation at the property comprises part of an ecologically significant area of coastal forest with kānuka, māhoe, and ngaio prominent in the canopy. The SNA meets the following significance criteria:</p> <p>Criterion RPS23A – Representativeness: Kānuka forest and scrub are representative of current vegetation types, which are rare and poorly protected in the Porirua District (less than 20% protected).</p> <p>Criterion RPS23B – Rarity: One 'At Risk - Declining lizard' species reported (barking gecko). Contains indigenous vegetation on Acutely Threatened land environments (less than 10% indigenous vegetation remaining).</p> <p>Criterion RPS23D – Ecological context: Provides an important coastal buffer and forms part of an extensive wildlife corridor along the Pauatahanui Inlet.</p>	<p>Action: The boundaries of SNA058 have been refined to exclude Vegetation Types 2 and 3.</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP requires amendment as a result of the site visit.</p>
SNA076	6 Lodestar Lane, Whitby	Lot 2738 DP 302748	Frances McNamara	1 December 2021	<ol style="list-style-type: none"> Kānuka forest c.5-6 metres in height dominates most of the SNA on the property. 	<p>General comments: The vegetation at the property comprises a largely intact area of kānuka forest that is part of a local network of small but ecologically significant bush remnants. Sub-canopy and understorey species are relatively sparse in drier, northern parts of the site, while indigenous broadleaved shrub and vine species are locally common in small, damp gullies to the south. The</p>	<p>Action: No further changes have been made to the boundary of SNA076 where it overlaps with this property.</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP does not require amendment as a result of the site visit.</p>

SNA No.	Street address	Property ID	Submitter(s)	Field Inspection Date	Vegetation Types Surveyed at Property	Significance Assessments	Ecologists' Actions and Recommendations
						<p>SNA meets the following significance criteria:</p> <p>Criterion RPS23A – Representativeness: Kānuka forest and scrub are representative of current vegetation types, which are rare and poorly protected in the Porirua District (less than 20% protected).</p> <p>Criterion RPS23B – Rarity: One 'At Risk - Declining lizard' species reported (barking gecko). Contains indigenous vegetation on Acutely Threatened land environments (less than 10% indigenous vegetation remaining).</p> <p>Criterion RPS23D – Ecological context: Provides stepping stone habitats for birds which enhances connectivity between forest patches in the area.</p>	
SNA084	68 Exploration Way, Whitby	Lot 8 DP 519099	David and Sheryn Harpham (Progeni Ltd)	2 December 2021	<ol style="list-style-type: none"> 1. Kānuka-mānuka-māhoe-ponga forest at various stages of regeneration. 2. Kānuka scrub c.8 metres tall with a mixed indigenous broadleaved species understorey including māhoe, whauwhaupaku, hangehange, kōhūhū, horoeka, wharariki, ponga, mamaku, kanono, māpou, tarata, rangiora, koromiko, karamū, and <i>Pseudopanax crassifolius</i> x <i>P. arboreus</i>. 3. (Eucalyptus)/kānuka/hangehange-red mapou treeland. 4. Eucalyptus/kānuka/hangehange-red mapou forest. 5. Kānuka treeland. 	<p>General comments: Contains areas of advanced regenerating kānuka-dominant forest and scrub on lowland hills, with a moderate diversity of indigenous species in the understorey. Some sizeable areas of vegetation have recently been cleared or in the south and east of the property. The areas of SNA 084 on this property that have been retained meet the following criteria:</p> <p>Criterion RPS23A – Representativeness: Kānuka-mānuka forest and scrub are representative of current vegetation types, which are rare and poorly protected in the Porirua District (less than 20% protected).</p> <p>Criterion RPS23D – Ecological context: Provides stepping stone habitats for birds which enhances connectivity between eastern Porirua and Whitby.</p>	<p>Action: The boundary of the SNA has been amended to exclude (i) areas of indigenous vegetation that have recently been cleared or heavily modified (including Vegetation Type 5) and (ii) areas of indigenous vegetation that the landowner plans to clear in the near future (and has consent to do so). Areas of Vegetation Type 4 were removed from the SNA084 where it falls on this property as a result of the pre-hearing site visit on 30 July 2021.</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP does not require amendment as a result of the site visit.</p>
SNA085	32 Latitude Close, Whitby	Lot 1882 DP 49190	Kevin Brian Higgins	1 December 2021	<ol style="list-style-type: none"> 1. Tawa-kānuka forest with kahikatea, mataī, tītoki, kohekohe, and tōtara. Canopy height is variable, ranging from c.3 metres tall to c.8-10 metres tall. Kawakawa is common in the understorey, and ground cover includes <i>Carex uncinata</i>, karaka seedlings, huruhuruwhenua, and piupiu. 	<p>General comments: An area of advanced regenerating forest that includes some large trees. While the area on this property is managed as a garden, and contains footpaths, it is relatively weed-free and several areas support characteristic forest understorey and groundcover layers. Contains two garden sheds, a semi-permanent deck, and compost bins. The location of permanent decking was checked while on the property and found to lie outside the area delineated as SNA. However, the SNA boundary was found to be within 3 metres of residential buildings and permanent decking in places. The retained area of SNA meets the following significance criteria:</p> <p>Criterion RPS23A – Representativeness: The Tawa-kānuka-podocarp forest is representative of Singers and Rogers (2014) original vegetation cover type 'MF6 - Kohekohe, Tawa' forest, of which <20% is left and 10% is protected in the Porirua District.</p> <p>Criterion RPS23C - Diversity. High floristic diversity, including floral species representative of later successional stages.</p>	<p>Action: The boundary of the SNA has been amended to exclude an area cleared for caravan parking, and to add a three-metre setback from the house and permanent decks.</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP requires amendment as a result of the site visit.</p>

SNA No.	Street address	Property ID	Submitter(s)	Field Inspection Date	Vegetation Types Surveyed at Property	Significance Assessments	Ecologists' Actions and Recommendations
						Criterion RPS23D - Ecological Context. The area of SNA retained on the property provides important connectivity and buffering to areas of SNA on the adjacent properties. The SNA provides stepping stone habitats for birds, and provides a locally important seed source for tawa, kahikatea, mataī, tītoki, kohekohe, and tōtara.	
SNA088	64 Exploration Way, Whitby	Lot 1777 DP 58749	John Sharp	2 December 2021	<ol style="list-style-type: none"> Kānuka scrub c.8 metres tall with a mixed indigenous broadleaved species understorey including māhoe, whauwhaupaku, hangehange, kōhūhū, horoeka, wharariki, ponga, mamaku, kanono, māpou, tarata, rangiora, koromiko, karamū, and <i>Pseudopanax crassifolius</i> x <i>P. arboreus</i>. Exotic shrubland with an understorey of exotic grass. 	<p>General comments: An area of advanced regenerating kānuka-dominant forest and scrub on lowland hills, with a moderate diversity of indigenous species in the understorey. Some areas of vegetation have recently been cleared. The retained area of SNA on this property meets the following significance criteria:</p> <p>Criterion RPS23A – Representativeness: Kānuka-mānuka forest and scrub are representative of current vegetation types, which are rare and poorly protected in the Porirua District (less than 20% protected).</p> <p>Criterion RPS23B – Rarity: One 'At Risk - Declining lizard' species reported (barking gecko) and bellbird (regionally scarce).</p> <p>Criterion RPS23D – Ecological context: Provides stepping stone habitats for birds which enhances connectivity between eastern Porirua and Whitby.</p>	<p>Action: The boundary of the SNA has been amended to exclude (i) areas of indigenous vegetation that have recently been cleared and (ii) areas of indigenous vegetation that the landowner plans to clear in the near future (and has consent to do so).</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP does not require amendment as a result of the site visit.</p>
SNA100	3 Abbey Way, Whitby	Lot 2 DP 460364	Juan Qu	30 November 2021	<ol style="list-style-type: none"> Kānuka treeland. Karamū/exotic grass shrubland. 	<p>General comments: Most of the property comprises karamū/exotic grass shrubland with <50% of coverage by indigenous vegetation. Very small areas of kānuka treeland are present on the property perimeter where it borders areas of SNA on adjacent properties. The vegetation on this property is therefore not considered to meet any of the SNA criteria.</p>	<p>Action: The SNA boundary has been adjusted to exclude this property.</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP requires amendment as a result of the site visit.</p>
SNA102	3A Solway Place, Papakowhai	Pt Lot 1 DP 81437	Graeme Walker (Samantha Montgomery Ltd)	1 December 2021	<ol style="list-style-type: none"> Kānuka (<i>Kunzea robusta</i>) forest with māhoe, hangehange, and rangiora. Māhoe scrub with hurhuruwhenua, blackberry, Japanese honeysuckle, whauwhaupaku, and <i>Metrosideros perforata</i>. Māhoe-broom shrubland with cherry, <i>Coprosma robusta</i> x <i>propinqua</i> hybrids, and Japanese honeysuckle. Bracken fernland with gorse, blackberry, and māhoe. Blackberry vineland. Cherry / mahoe forest with kōhūhū and Japanese honeysuckle. 	<p>General comments: The vegetation at the property comprises a relatively large area of the northernmost extent of SNA102. The SNA meets the following significance criteria:</p> <p>Criterion RPS23A – Representativeness: Kānuka forest and scrub are representative of current vegetation types, which are rare and poorly protected in Porirua City (<20% protected).</p> <p>Criterion RPS23D – Ecological context: Strongly enhances connectivity along Papakowhai escarpment and into Ascot Park suburb, and protects against erosion on steep slopes.</p>	<p>Action: The SNA boundary has been adjusted to remove areas of vegetation that are dominated by exotic plant species (Vegetation Types 3, 5-6), or at a very early successional stage (Vegetation Type 4).</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP requires amendment as a result of the site visit.</p>
SNA165	129B Flightys Road,	Lot 12 DP 86453	Steven Kovacs	24 November 2021	<ol style="list-style-type: none"> Māhoe forest and scrub Carex geminata sedgeland 	<p>General comments: The vegetation at the property comprises a minor component of the SNA, with the largest remnant located a few hundred metres to the</p>	<p>Action: The SNA boundary has been amended to exclude the area of wetland added to the SNA prior to the hearing. Given this site</p>

SNA No.	Street address	Property ID	Submitter(s)	Field Inspection Date	Vegetation Types Surveyed at Property	Significance Assessments	Ecologists' Actions and Recommendations
	Judgeford, RD1				3. Isoplepis prolifer-Juncus sarophorus sedgeland	<p>south. The vegetation comprises a good quality freshwater wetland partially buffered by mahoe forest and scrub. It is likely that construction of the pond in the centre of the site resulted in the formation of upstream wetland vegetation; however, induced wetlands are still considered to be 'natural' under the definition of natural wetland under the National Policy Statement for Freshwater Management (NPS-FM).</p> <p>The original SNA assessment states that the SNA contains a representative example of kānuka forest, which is rare and poorly protected in the Porirua District, and therefore meets Criterion RPS23A – Representativeness. However, there is no kānuka forest at the subject property – only māhoe forest, which is not an uncommon vegetation type in the Porirua District.</p> <p>The original SNA assessment also states that the SNA meets Criterion RPS23D – Ecological context as the “site plays a significant connectivity role in the fragmented lowland zone and includes an area protected by the PCC covenant”. I consider the small size of the site would preclude it from meeting this particular criterion.</p> <p>The site, however, contains indigenous wetland habitat, and it therefore meets the Criterion RPS23B – Rarity, given that wetlands are nationally rare (<10% of their original extent remains) and have been much reduced in extent in the Wellington region.</p>	<p>has little relevance to the southern remnant of SNA165, it is suggested that a new SNA number and name is assigned to it.</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP does not require amendment as a result of the site visit.</p>
SNA176	930 Moonshine Road, Judgeford	Lot 4 DP 89653, Section 25A Block X Paekakariki SD, Section 42 Block X Paekakariki SD, Lot 1 DP 26025, Lot 2 DP 89653, Lot 3 DP 89653, Lot 1 DP 88807, Section 49 Block X Paekakariki SD, Lot 1 DP 89653, Section 6 SO 304443, Section 7 SO 304443, Section 9 SO 304443	Mark Lyle Phillips	9 December 2021 (viewed from adjacent public road because site access not granted)	<ol style="list-style-type: none"> Tawa-rewarewa forest. Māhoe-putaputawētā scrub. Mānuka-tauhinu/exotic grass shrubland. 	<p>General comments: The vegetation types described in the preceding column are indicative and inferred from a mixture of aerial imagery, the original SNA description, and vegetation types visible from Moonshine Road. The retained area of SNA meets the following significance criteria:</p> <p>Criterion RPS23A – Representativeness: Tawa-rewarewa forest is representative of Singers and Rogers (2014) original vegetation cover type 'MF6 - Kohekohe, Tawa' forest, of which <20% is left and 10% is protected in the Porirua District.</p> <p>Criterion RPS23C - Diversity. High floristic diversity, including floral species representative of later successional stages.</p> <p>Criterion RPS23D - Ecological Context. This relatively large tract of forest is likely to enhance connectivity among the scattered forest remnants around Moonshine Road.</p>	<p>Action: Historical imagery from 1995 to 2010 was used to identify areas of vegetation that were younger than 25 years. With the exception of an area of Vegetation Type 2 that buffers the tawa-rewarewa forest, these areas have been excluded from SNA 176 where it lies on this property.</p> <p>Schedule 8 'Urban Environment Allotments' of the PDP does not require amendment as a result of the site visit.</p>
SNA179	1071 Moonshine Road, Judgeford	Part Section 103 Pauatahanui AG RES, Section 22A Block X Paekakariki SD, Part Section 38	Mark Lyle Phillips	9 December 2021 (viewed from adjacent public road because site access not granted)	<ol style="list-style-type: none"> Tawa-kohekohe forest with emergent pukatea and rewarewa. Māhoe scrub. Tauhinu-mānuka/exotic grass 	<p>General comments: The vegetation types described in the preceding column are indicative and inferred from a mixture of aerial imagery, the original SNA description, and vegetation types visible from Moonshine Road. The retained area of SNA meets</p>	<p>Action: Aerial imagery from 1995 to 2021 was used to identify areas of recent clearance (these appear to be typified by Vegetation Type 3). These areas have been excluded from SNA 179 where they lie on this property.</p>

SNA No.	Street address	Property ID	Submitter(s)	Field Inspection Date	Vegetation Types Surveyed at Property	Significance Assessments	Ecologists' Actions and Recommendations
		Pauatahanui AG RES, Part Section 103 Pauatahanui AG RES, Part Section 38 Pauatahanui AG RES, Lot 1 DP 27592, Part Section 103 Pauatahanui AG RES		granted)	shrubland.	the following significance criteria: Criterion RPS23A – Representativeness: Tawa-kohekohe forest is representative of Singers and Rogers (2014) original vegetation cover type 'MF6 - Kohekohe, Tawa' forest, of which <20% is left and 10% is protected in the Porirua District. Criterion RPS23C - Diversity. High floristic diversity, including floral species representative of later successional stages. Criterion RPS23D - Ecological Context. This relatively large tract of forest is likely to enhance connectivity among the scattered forest remnants around Moonshine Road.	Schedule 8 'Urban Environment Allotments' of the PDP does not require amendment as a result of the site visit.
SNA181	1071 Moonshine Road, Judgeford	Part Section 103 Pauatahanui AG RES, Section 22A Block X Paekakariki SD, Part Section 38 Pauatahanui AG RES, Part Section 103 Pauatahanui AG RES, Part Section 38 Pauatahanui AG RES, Lot 1 DP 27592, Part Section 103 Pauatahanui AG RES	Mark Lyle Phillips	9 December 2021 (viewed from adjacent public road because site access not granted)	1. Exotic grassland with scattered shrubs.	General comments: The vegetation types described in the preceding column are indicative and inferred from a mixture of aerial imagery, the original SNA description, and vegetation types visible from Moonshine Road. Indigenous vegetation has been largely cleared from the SNA where it falls on this property therefore, it no longer meets any of the RPS23 criteria for ecological significance.	Action: All areas of SNA181 where it overlaps with this property has been cleared for pasture, therefore all areas of this SNA have been removed from this property.
SNA215	1079 Paekakariki Hill Road, RD1, Paekakariki Hill	Lot 2 DP 63994	Andrea and Karl Simonlehner	30 November 2021	2. Māhoe-tī kōuka forest with planted purple akeake, tōtara, kahikatea, kauri, and English oak. Plantings done in 1999-2000. 3. Māhoe forest with a sparse understorey. Huruhuruwhenua, Asplenium bulbiferum, and Hedycarya arborea are present. This forest type contains canopy trees of a uniform height (c.8 metres) . 4. Māhoe forest with rewarewa, hangehange, blackberry, whekī, Parablechnum procerum, rangiora, Carex uncinata, Asplenium polyodon, and kiwikipi. This forest type contains canopy trees of more uneven height (c.4-6 metres) than Vegetation Type 2. 5. Radiata pine/māhoe forest. Found in places where the canopy of plantation forest is encroaching on areas within the SNA.	General comments: The areas of SNA viewed on the property comprise a mosaic of naturally regenerating and planted indigenous and exotic-dominant forest types. Some of the indigenous species that have been planted are garden cultivars (purple akeake) or are not native to the Wellington region (kauri). The retained areas of SNA on the property meets the following significance criteria: Criterion RPS23A - Representativeness. Representative of the current (regenerating) state of Singers and Rogers (2014) vegetation type 'MF6 - Kohekohe, Tawa' forest, of which <20% is left and 10% is protected in the Porirua District. Criterion RPS23C - Diversity. High floristic diversity includes floral species representative of later successional stages. Note that Vegetation Type 2 is not considered to meet this criterion. Criterion RPS23D - Ecological Context. Part of a large forest area which enhances connectivity between coastal and inland sites within the Horokiri catchment.	Action: The SNA boundary has been adjusted to remove areas of vegetation that are dominated by exotic plant species (Vegetation Types 4-7). Indigenous-dominated vegetation types that contain plant species that would not naturally occur without human intervention (in this case, purple akeake, English oak, and kauri in Vegetation Type 1) have been retained in the SNA where the cover of naturally occurring species is greater than 50%. While Vegetation Type 2 is not considered to meet Criterion RPS23C, it does meet Criteria RPS23A and RPS23D, warranting its continued inclusion in SNA215. Schedule 8 'Urban Environment Allotments' of the PDP does not require amendment as a result of the site visit.

SNA No.	Street address	Property ID	Submitter(s)	Field Inspection Date	Vegetation Types Surveyed at Property	Significance Assessments	Ecologists' Actions and Recommendations
					<ul style="list-style-type: none"> 6. Mixed exotic conifer/māhoe scrub. 7. Macrocarpa/māhoe forest. 8. Macrocarpa-Lawson's cypress/māhoe forest. 		

APPENDIX 3

Schedule of amendments to Schedule 8 'Urban Environment Allotments' of the PDP required as a result of submitter-requested site visits and desktop surveys conducted in November and December 2021.

Recommended insertions are underlined, and recommended deletions are denoted in ~~strikethrough~~ font.

SNA	Address	Legal description	Recommended action
SNA027	153b Rawhiti Road, Pukerua Bay	Lot 2 DP 51486	Remove property from Schedule 8.
SNA058	7 Pendeen Place, Camborne	Lot 9 DP 70109	Amend description to: A group of no fewer than 45 <u>10</u> trees is located in the northeastern third and along the eastern boundary of the property. The stand comprises the following indigenous species: kānuka (<i>Kunzea robusta</i>) and māhoe (<i>Melicytus ramiflorus</i>).
SNA085	32 Latitude Close, Whitby	Lot 1882 DP 49190	Amend description to: A group of no fewer than 25 <u>15</u> trees is located in the eastern third and along the southern boundary of the property. The stand comprises the following indigenous species: kānuka (<i>Kunzea robusta</i>), māhoe (Melicytus ramiflorus), kohekohe (<i>Dysoxylum spectabile</i>), mataī (<i>Prumnopitys taxifolia</i>), tītoki (<i>Alectryon excelsus</i>), kahikatea (<i>Dacrycarpus dacrydioides</i>), tōtara (<i>Podocarpus totara</i>), and tawa (<i>Beilschmiedia tawa</i>).
SNA100	3 Abbey Way, Whitby	Lot 2 DP 460364	Remove property from Schedule 8.

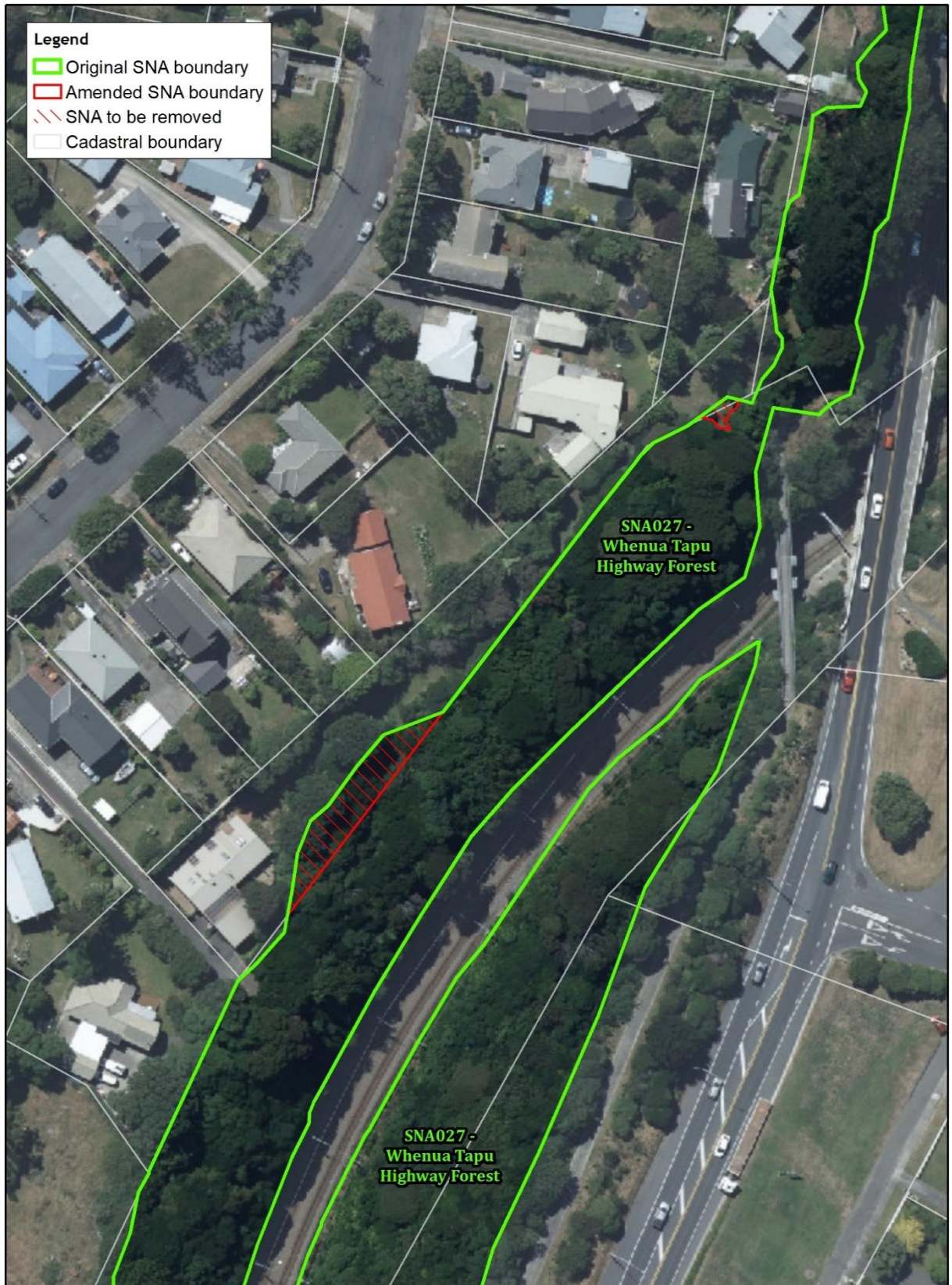
APPENDIX 4

Maps illustrating boundary adjustments made in December 2021 as a result of submitter-requested site visits following the hearing⁵

List of figures by SNA number and submitter name:

1. SNA027 - Grant Abdee
2. SNA029 – Andrew Tierney
3. SNA047 - Paul and Julia Botha
4. SNA058 – Ian and Noeline Fowler
5. SNA084 - David and Sheryn Harpham (Progeni Ltd)
6. SNA085 – Kevin Higgins
7. SNA088 – John Sharp
8. SNA100 - Juan Qu
9. SNA102 - Graeme Walker (Samantha Montgomery Ltd)
10. SNA134 - Robyn Smith
11. SNA138 - Robyn Smith
12. SNA165 – Steven Kovacs
13. SNA176 – Mark Lyle Phillips
14. SNA179 - Mark Lyle Phillips
15. SNA181 - Mark Lyle Phillips
16. SNA215 – Andrea and Karl Simonlehner

⁵ Changes made to SNA134 and SNA138 were made using desktop analysis.



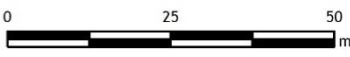
- Legend**
- █ Original SNA boundary
 - █ Amended SNA boundary
 - ▨ SNA to be removed
 - Cadastral boundary

Data Acknowledgment

Map contains data sourced from LINZ
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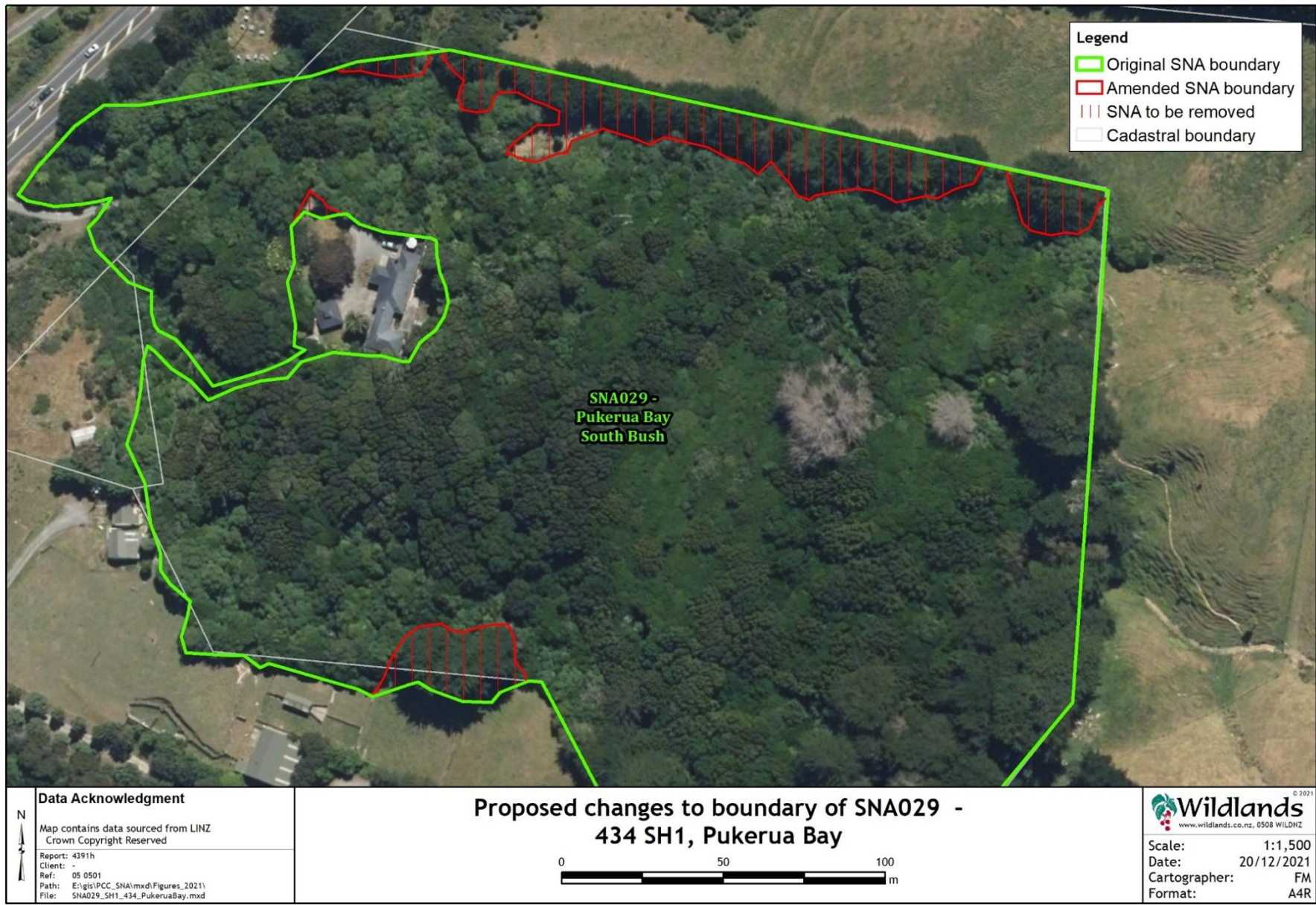
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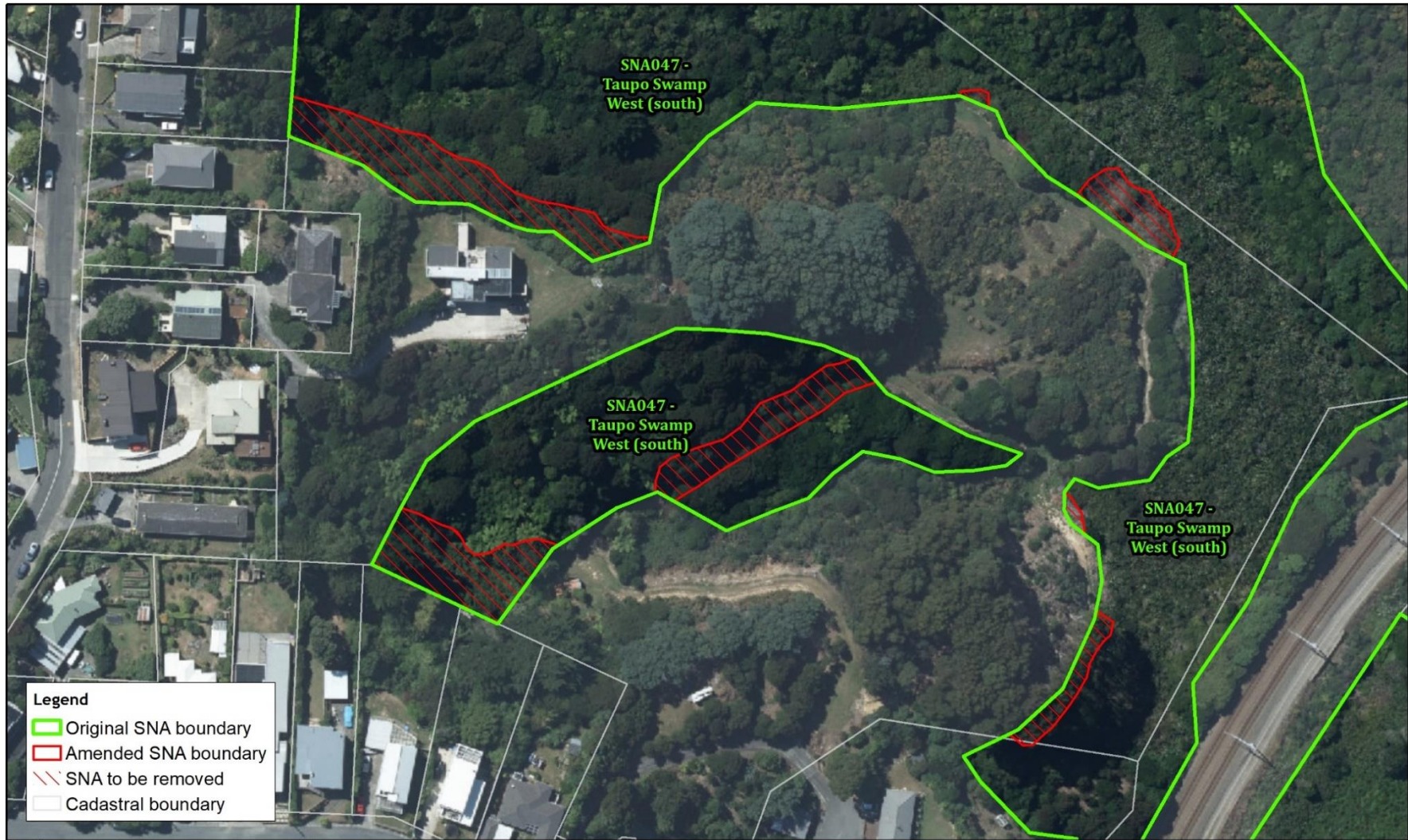
**Proposed changes to boundary of
 SNA027 - 153b Rawhiti Road**



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Scale: 1:1,000
 Date: 2/12/2021
 Cartographer: FM
 Format: A4





Legend

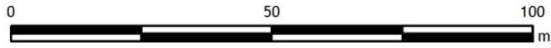
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- █ Amended SNA boundary
- ▨ SNA to be removed
- ▭ Cadastral boundary

Data Acknowledgment

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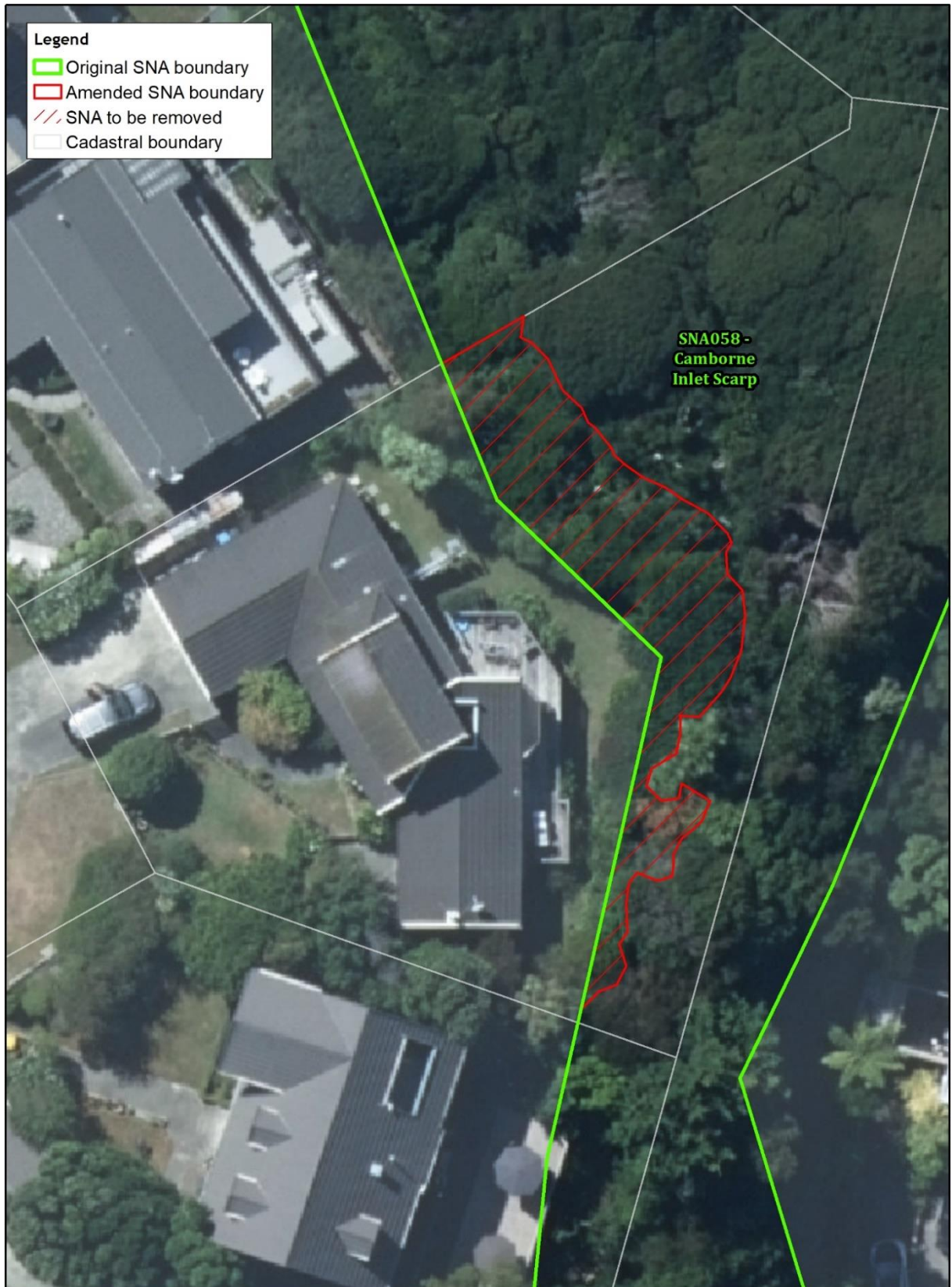
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**Proposed changes to boundary of SNA047 -
 10a The Track, Plimmerton**



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Scale: 1:1,250
 Date: 16/12/2021
 Cartographer: FM
 Format: A4R



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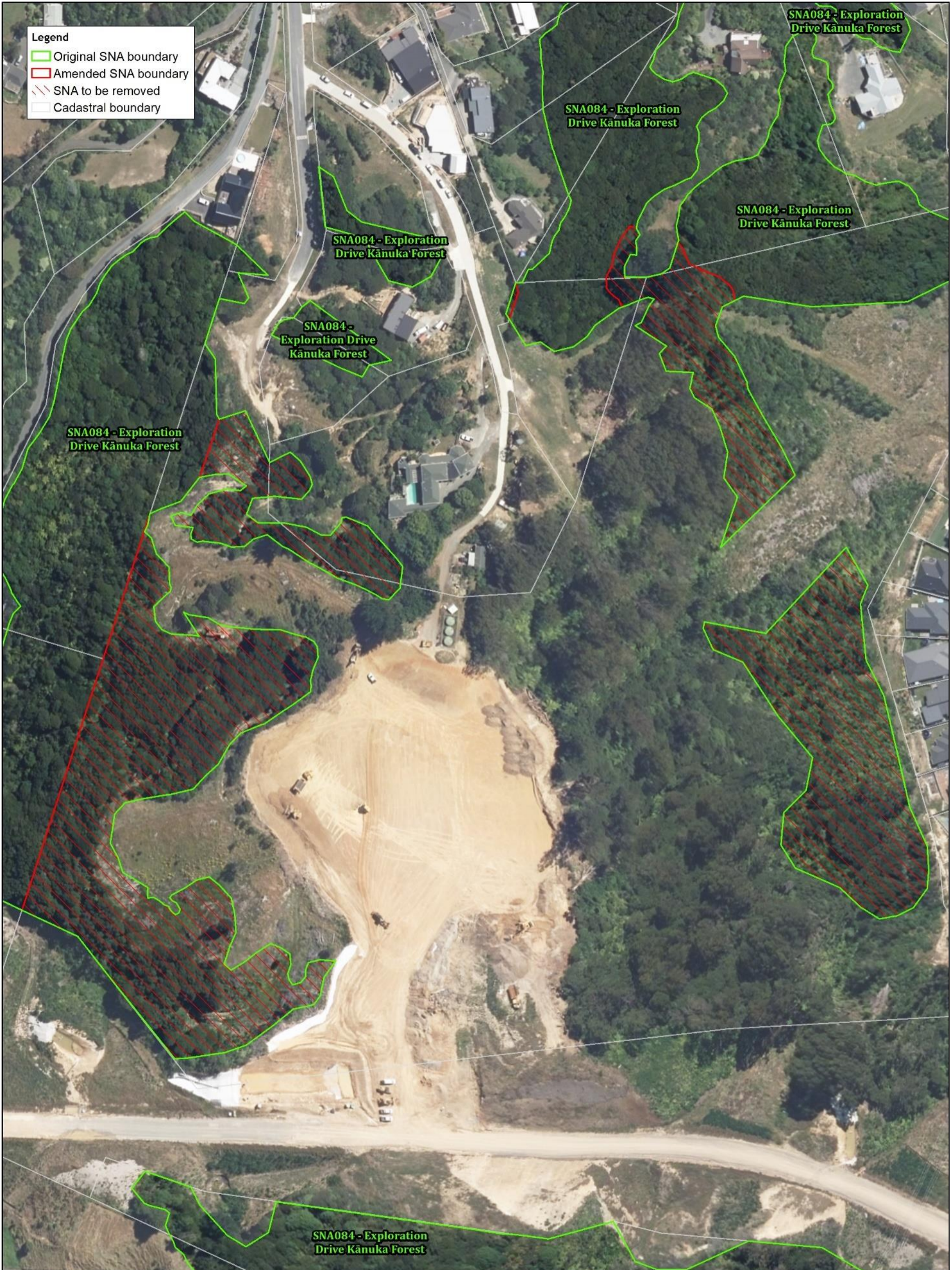
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File: SNA058_PendeeenPL_7.mxd

Proposed changes to boundary of SNA058 - 7 Pendeeen Place, Camborne

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Scale: 1:250
Date: 20/12/2021
Cartographer: FM
Format: A4



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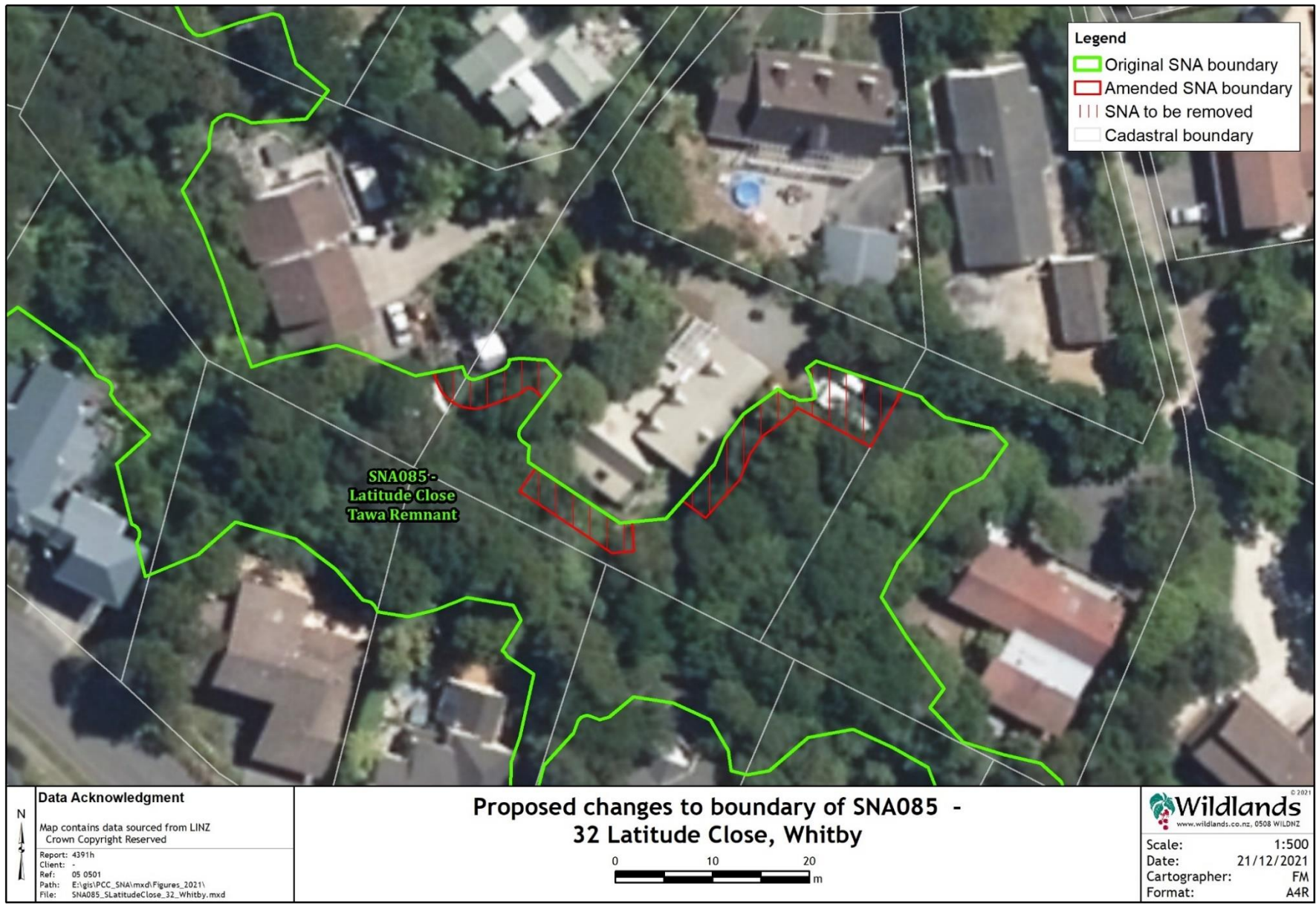
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 File: SNA084_ExplorationWay_68_Whitby.mxd

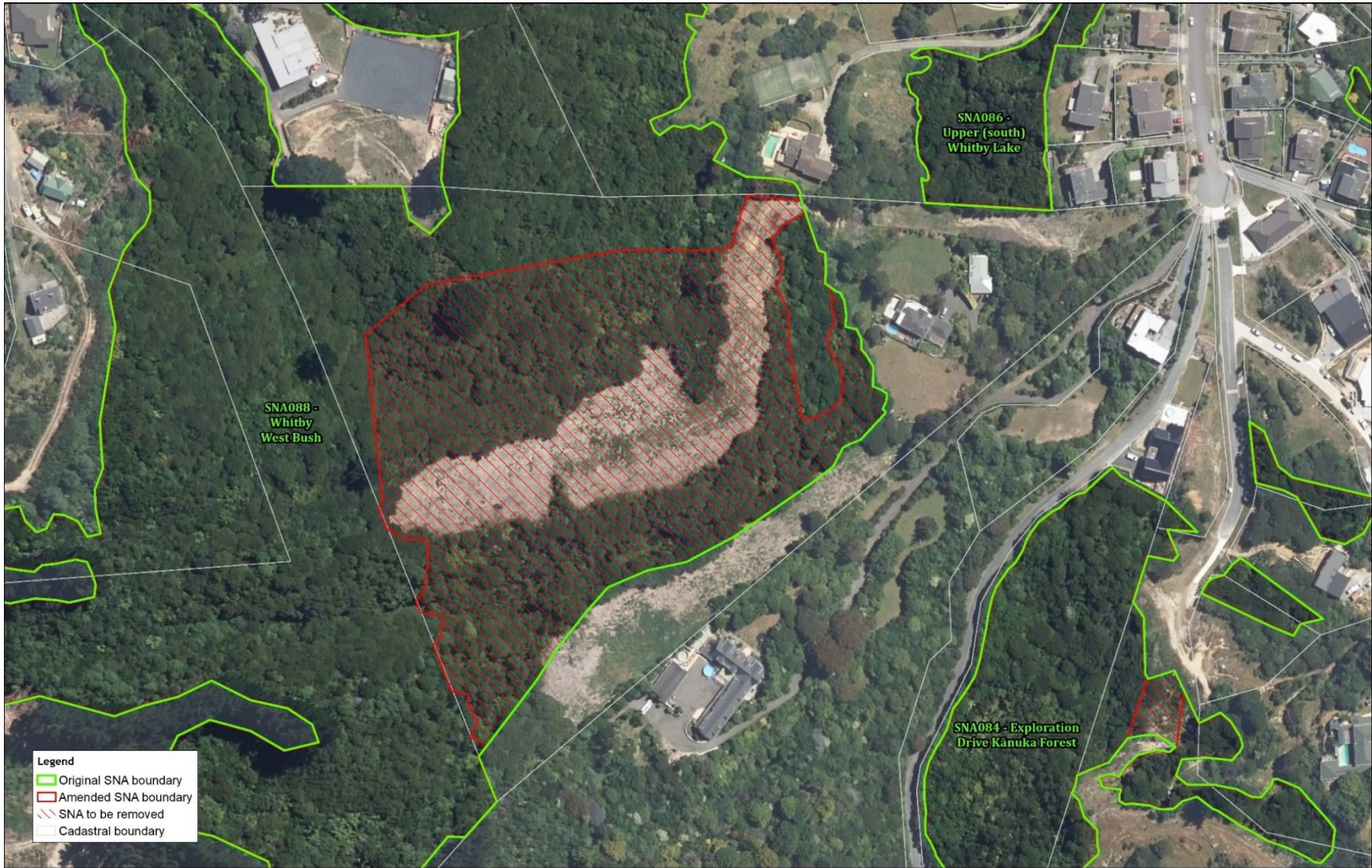
**Proposed changes to boundary of SNA084 -
 68 Exploration Way, Whitby**

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Scale: 1:1,550
 Date: 20/12/2021
 Cartographer: FM
 Format: A3





Legend

- Original SNA boundary
- Amended SNA boundary
- SNA to be removed
- Cadastral boundary

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 File: SNA088_ExplorationWay_64_Whitby.mxd

Proposed changes to boundary of SNA088 - 64 Exploration Way, Whitby



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Scale: 1:1,500
 Date: 16/12/2021
 Cartographer: FM
 Format: A3R



- Legend**
- Original SNA boundary
 - Amended SNA boundary
 - SNA to be removed
 - Cadastral boundary

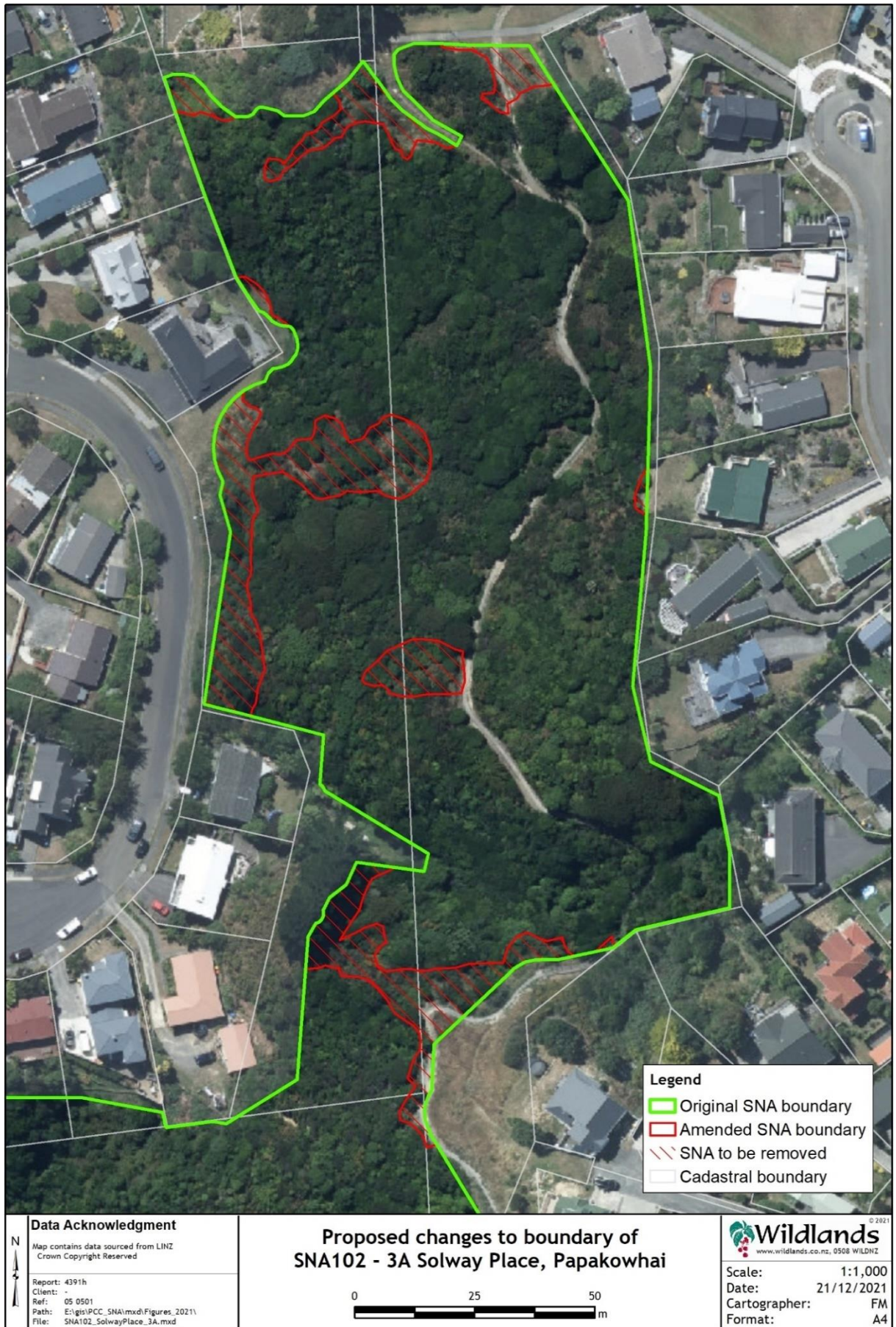
**SNA100 - Omapere
Street Reserve**

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File: SNA100_AbbeyWay_3_Whitby.mxd	

**Proposed changes to boundary of
SNA100 - 3 Abbey Way, Whitby**

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Date:	16/12/2021
Cartographer:	FM
Format:	A4



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**Proposed changes to boundary of
 SNA102 - 3A Solway Place, Papakowhai**

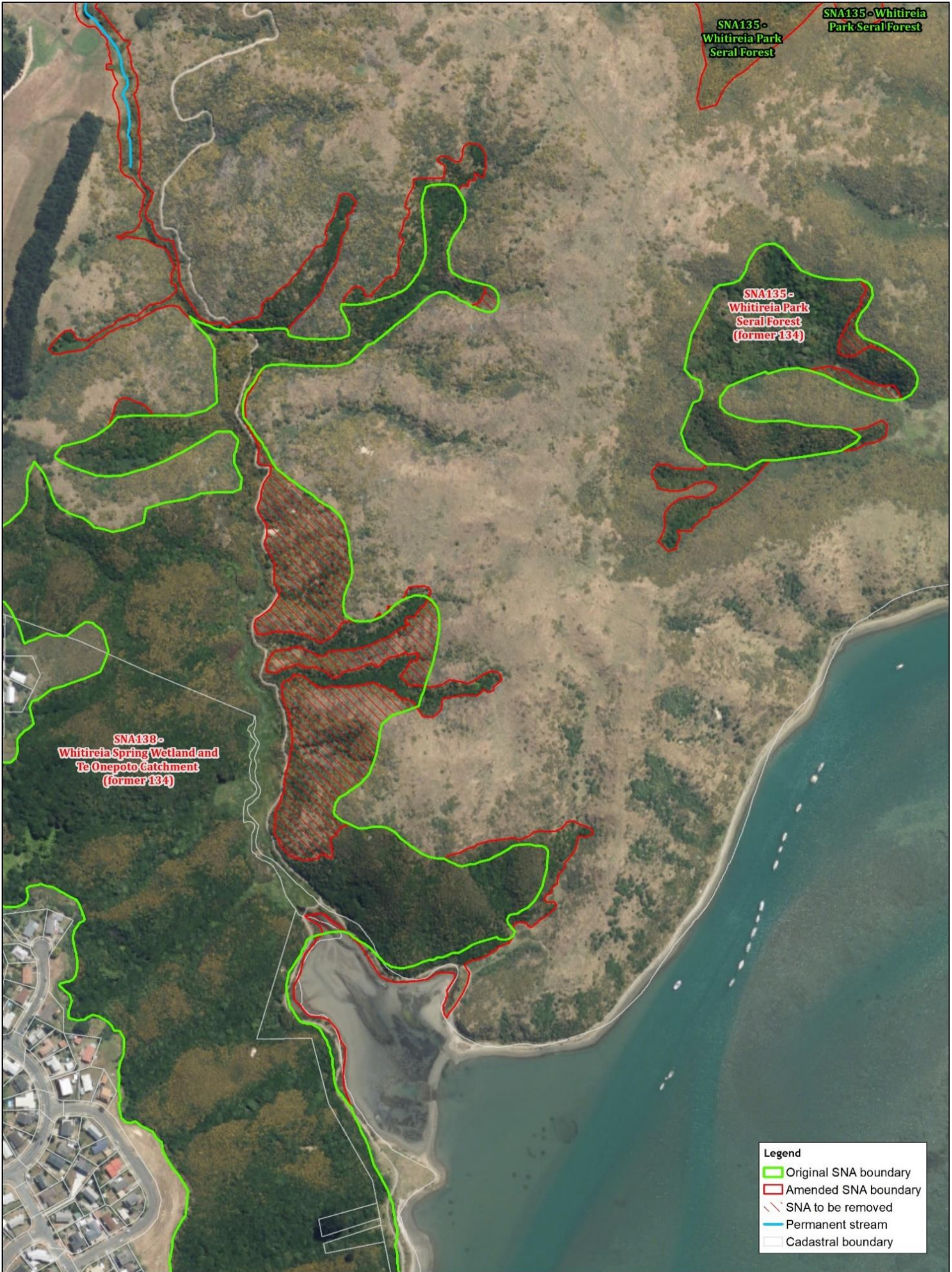


Legend

- Original SNA boundary
- Amended SNA boundary
- SNA to be removed
- Cadastral boundary

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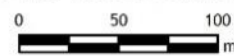
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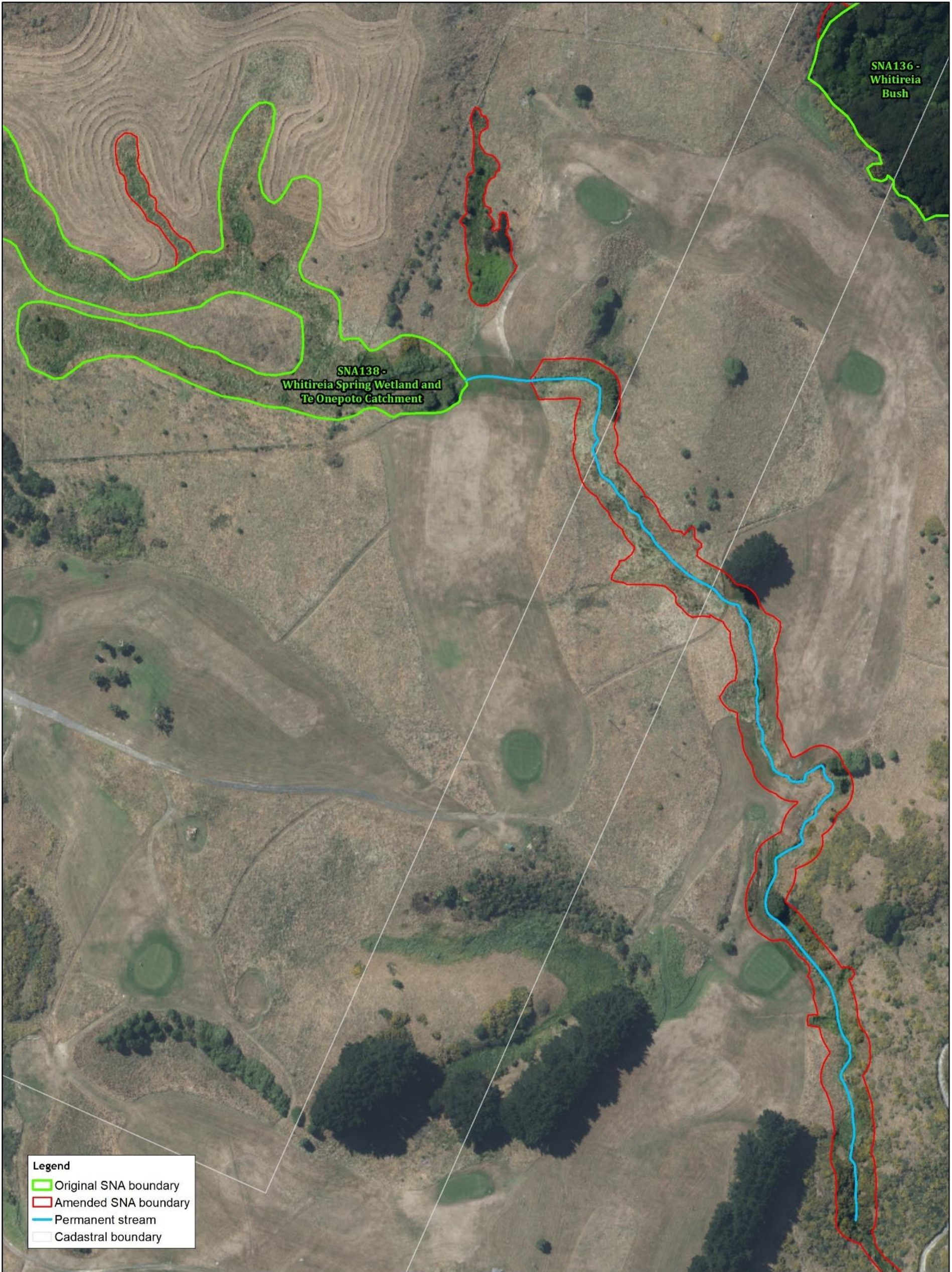
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**Proposed changes to the boundaries of
 SNA134 and SNA138**



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 Date: 20/12/2021
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 Format: A3



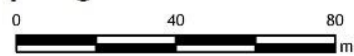
Legend

- Original SNA boundary
- Amended SNA boundary
- Permanent stream
- Cadastral boundary

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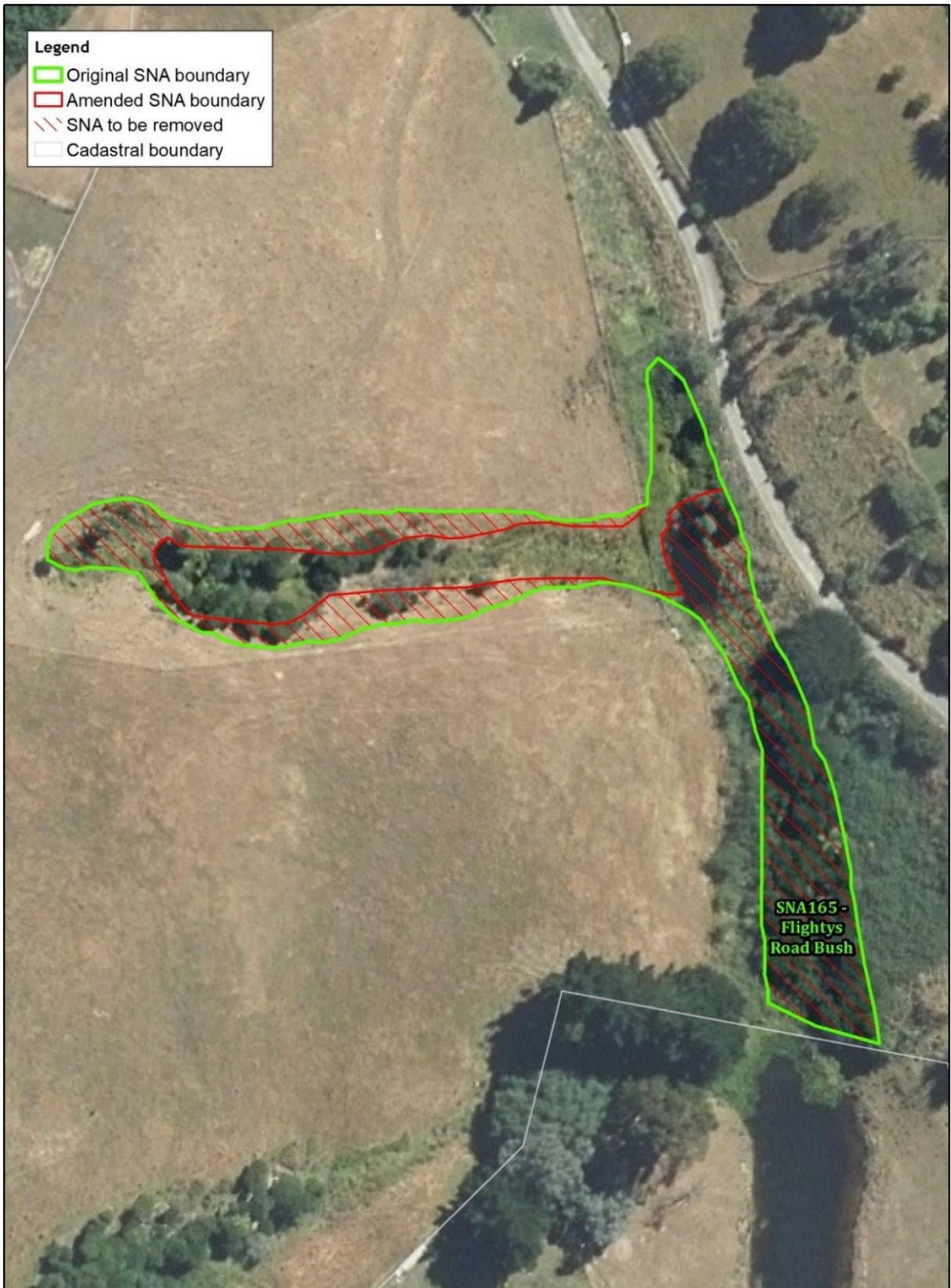
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 File: SNA138_Whitireia Park and Peninsula.mxd

**Proposed changes to boundary of
 SNA138 - Whitireia Spring Wetland and Te Onepoto Catchment**



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Scale: 1:1,750
 Date: 17/12/2021
 Cartographer: FM
 Format: A3



Legend

- Original SNA boundary
- Amended SNA boundary
- SNA to be removed
- Cadastral boundary

**SNA165 -
Flightys
Road Bush**

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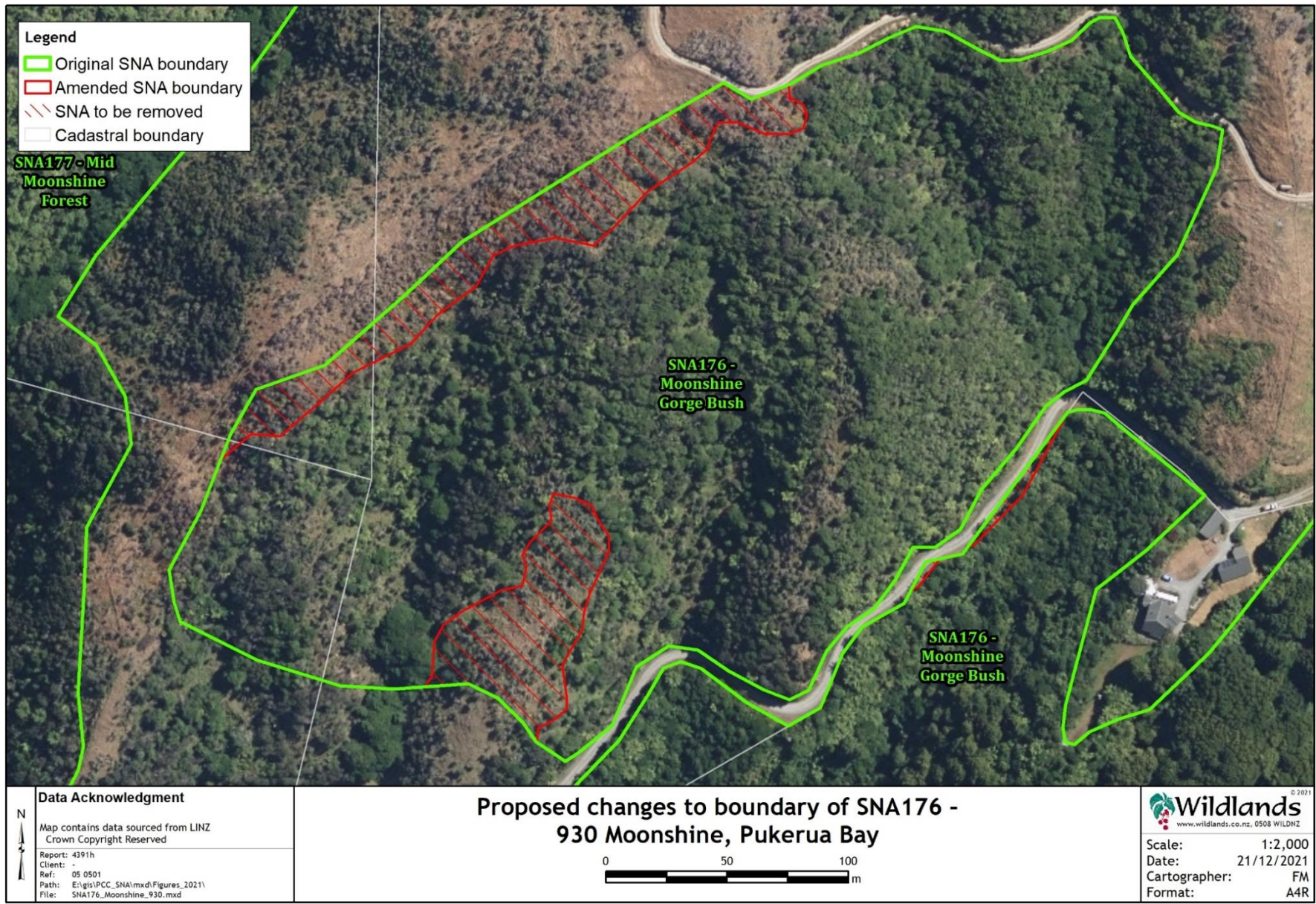
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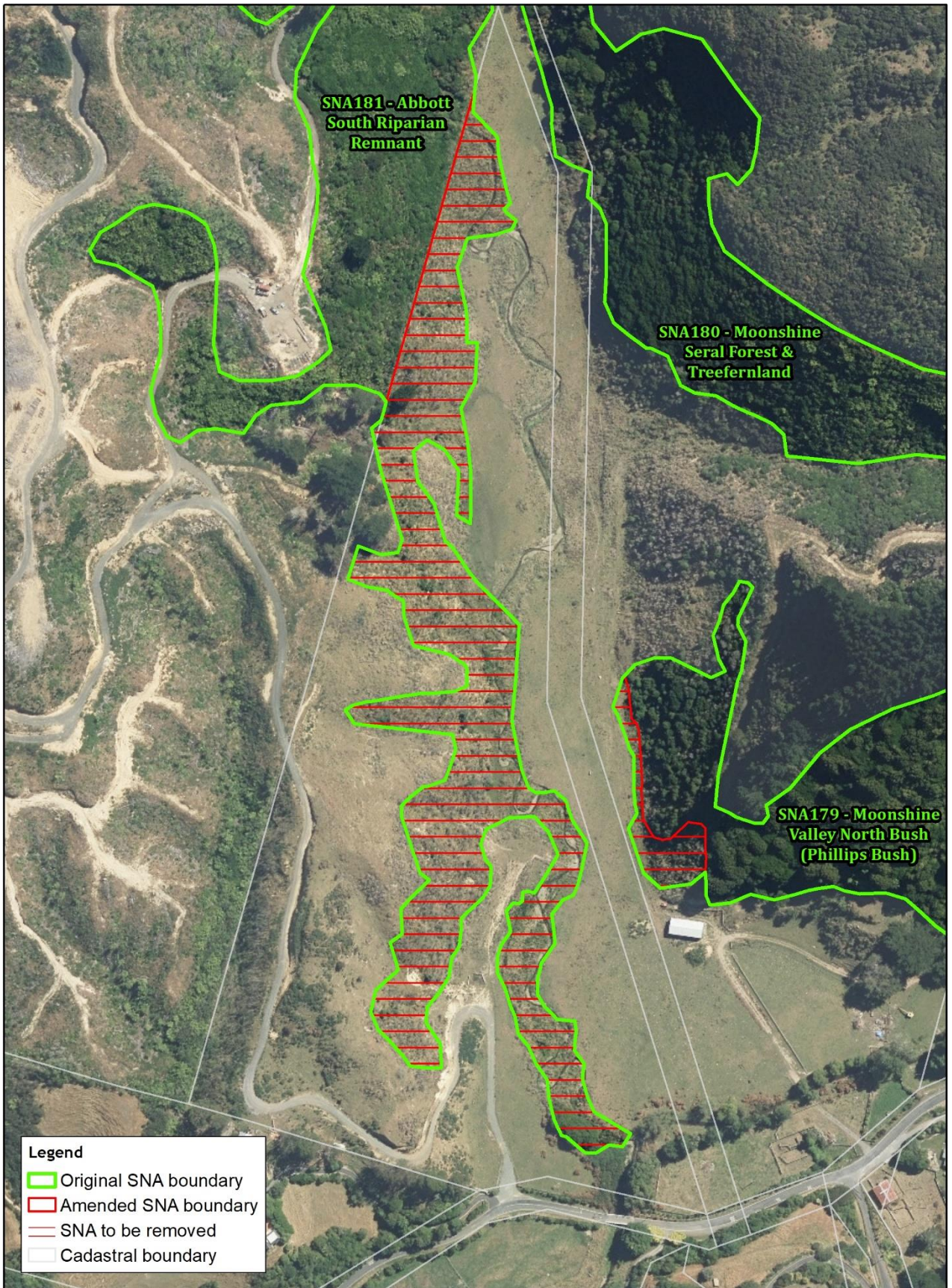
**Proposed changes to boundary of
SNA165 - 129b Flightys Road,
Judgeford**

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Scale: 1:800
Date: 20/12/2021
Cartographer: FM
Format: A4





Legend

- Original SNA boundary
- Amended SNA boundary
- SNA to be removed
- Cadastral boundary

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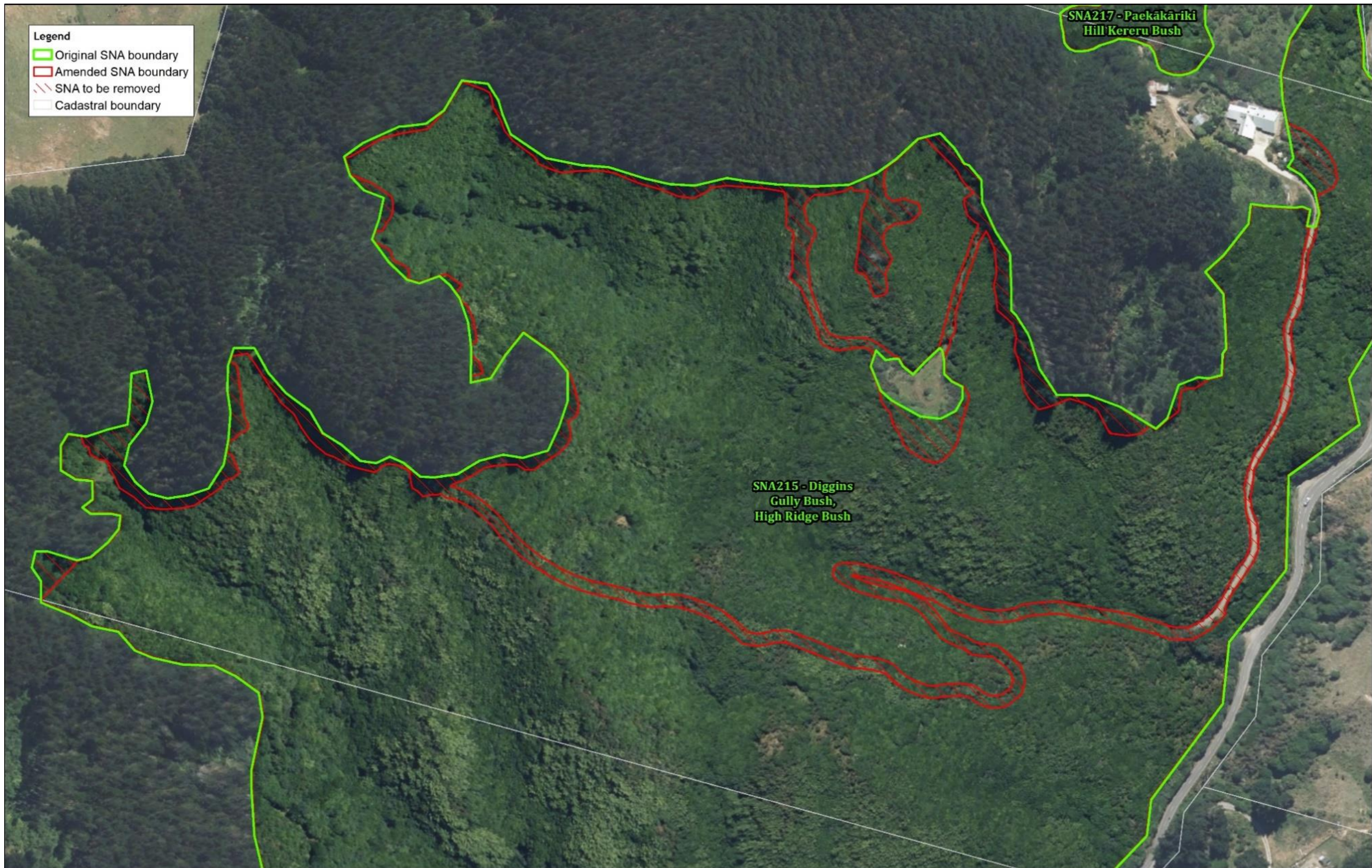
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Proposed changes to boundaries of SNA179 and SNA181 - Moonshine Road, Judgeford

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Scale: 1:3,000
 Date: 21/12/2021
 Cartographer: FM
 Format: A4



Legend

- █ Original SNA boundary
- █ Amended SNA boundary
- ▨ SNA to be removed
- Cadastral boundary

SNA215 - Diggins
Gully Bush,
High Ridge Bush

SNA217 - Paekakariki
Hill Kereru Bush

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File: SNA215 PaekakarikiHillRd 1079.mxd

Proposed changes to boundary of SNA215 - 1079 Paekakariki Hill Road, Paekakariki



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Date: 21/12/2021
Cartographer: FM
Format: A3R