CHB Hearing Stream 6

15 November 2022

Mark & Lucy Lowry s35.001

Supporting documents

- Expert witness -Taikura Station Ecological Report- Annabel Beattie HBRC
- Manaaki Whenua - Species identification report
- Supplementary Email from expert witness (Annabel Beattie) with further recommendations.
- Layman's evidence - Email from Jared Leonard- November 2022
- CHB SNA review recording form – G Kessels/ J Cheyne - Jan/Feb 2020
- Extract from Section 42A SNA mapping report – CHB DC Tiffany/Gray -2022
- Submission in relation to SNA 434 – AgFirst - August 2021

HAWKE'S BAY
REGIONAL COUNCIL
TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

MEMO

To:	Mark and Lucy Lowry (Taikura Station)
From:	Annabel Beattie
Date:	31 October 2022
Subject:	**TAIKURA STATION ECOLOGICAL ASSESSMENT**
CC:	Victoria Anstis

Two areas on Taikura Station have been identified as Significant Natural Areas (SNAs) in the Central Hawkes Bay Proposed District Plan. Mark and Lucy Lowry, the landowners at Taikura, requested an ecological assessment of these areas. This assessment is able to be submitted as expert evidence, as part of their submission S35 to be heard in November 2022.

The two SNAs identified on Taikura Station are SNA-434 and SNA-424. The boundaries of SNA-434 have already been modified in response to previous submissions acknowledging the incorporation of pasture. The current proposed SNA extent is outlined below:

Mark & Lucy Lowry – S35.001

Figure 1: Taikura Station SNAs (Gray & Morgan, 2022)

SNA-434

SNA-434 has been identified as a significant area of rush-sedgeland with the criteria of:

- Under-represented habitat in region and New Zealand
- Threatened environment (wetland)
- Potential habitat for threatened biodiversity

The site was visited by Annabel Beattie (Terrestrial Ecologist) on Friday 28 October 2022, and 4.8ha of SNA-434 (Figure 2) was assessed using wetland delineation protocols. The area is largely dominated by exotic grasses and herbs, with widespread rushland. The dominant rush was tentatively identified as the native species *Juncus australis* (subject to confirmation from Manaaki Whenua- Landcare Research). The area is currently being grazed by sheep. Following the last particularly wet winter, and drainage modifications on a neighbouring property, Mark said this area is wetter than normal, and that in the past it has been successfully cropped and had balage cut off.

Figure 2: area of SNA-434 assessed on Friday 28 October 2022. Vegetation plot locations are shown in red

Methodology

SNA-434 was assessed with wetland delineation protocols to determine its wetland status. The protocols used are outlined in the New Zealand Wetland Delineation Protocols (MfE, 2020) and summarised in Figure 3. This method uses multiple tests to determine wetland status, relying on the wetland plant indicator statuses assigned in Clarkson et al (2021). The first is the rapid test, where a determination is based on the area having all dominant species across all strata being rated as obligate wetland (OBL) and/or facultative wetland (FACW) species. Further quantitative tests are performed to provide greater evidence, which was especially important in this case where standing water was not present. These tests use sampled data from vegetation plots. The second test is the dominance test, which confirms a plot as wetland habitat if vegetation sampled exceeds 50% cover of wetland species (OBL,

FACW or facultative (FAC)). The third test is the prevalence test which uses an algorithm to weight species covers scores based on their wetland indicator status.

Two vegetation plots (2 x 2m) were established in order to undertake these tests with the locations shown in Figure 2. The eastern plot was established in an area described by Mark as wetter, and the western plot in an area described as drier. Soil pits were dug at each plot to look for indicators of hydric soils, such as red-grey mottling. Photographs of the plots and soil profiles are shown in Figures 4 and 5.

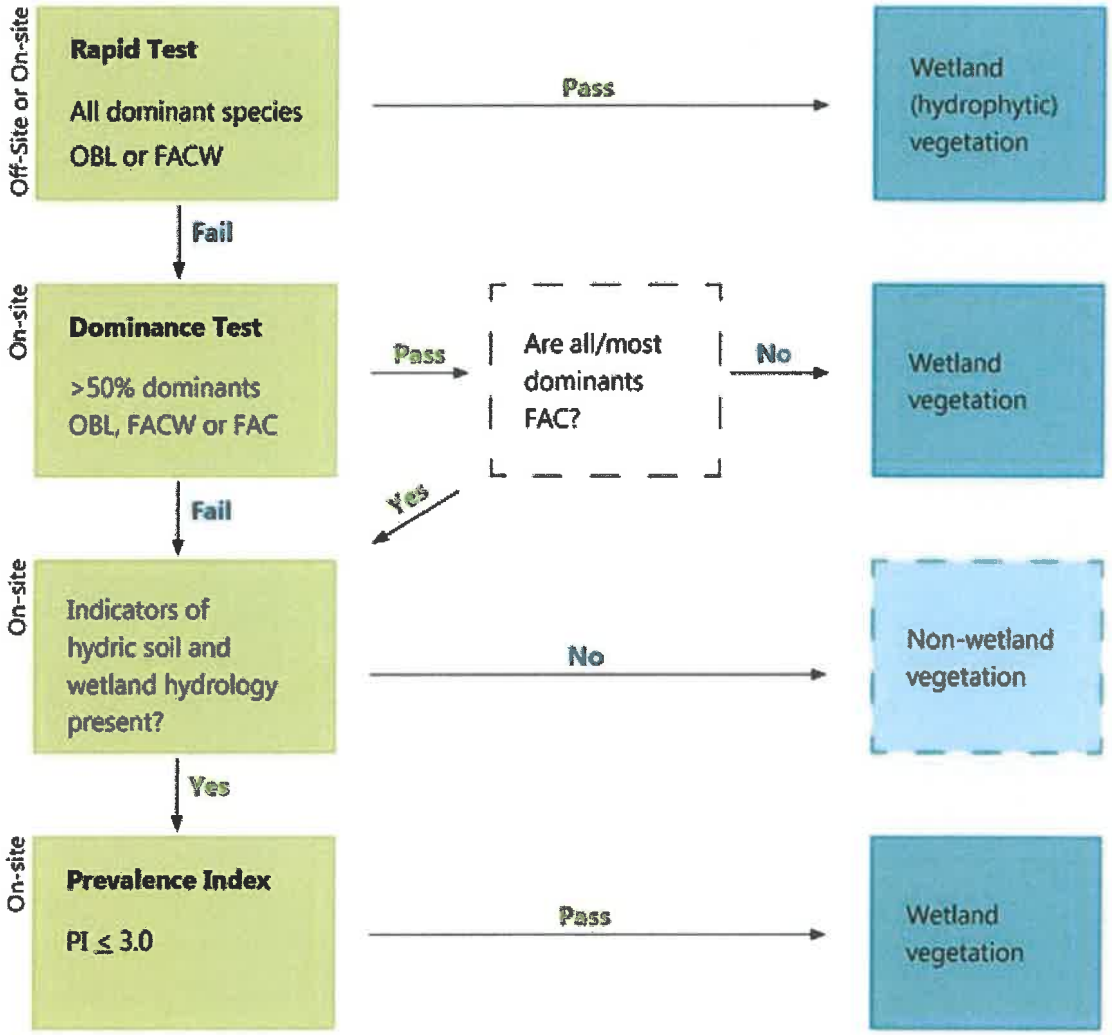

Figure 3: Flow chart of steps for hydrophytic (wetland) vegetation determination. Wetland indicator status abbreviations: FAC = facultative; FACW = facultative wetland; OBL = obligate wetland (from MfE, 2020)

Results

The vegetation at both plots (Figures 4 and 5) was assessed under the wetland delineation protocols as outlined above and the results summarised in Table 1.

Table 1: Plants recorded, wetland rating and summary of wetland assessment tests (* = introduced plant, ✓ = meets criteria of wetland, X = does not meet criteria of wetland. Please note several species are subject to confirmation from Manaaki Whenua- Landcare Research).

Species name	Common name	Wetland rating	Percentage cover (%)	
			Plot 1	Plot 2
**Agrostis capillaris*	Browntop	FACU		5
**Agrostis stolonifera*	Creeping bent	FACW	20	
**Bellis perennis*	Daisy	FACU		<1
**Cirsium arvense*	Californian thistle	FACU		<1
Eleocharis acuta	Sharp spike sedge	OBL	5	
**Holcus lanatus*	Yorkshire fog	FAC	30	30
**Hypochaeris glabra*				<1
**Hypochaeris radicata*		FACU	5	<1
Juncus australis		FACW	25	40
**Lythrum hyssopifolia*	Loosestrife	FACW	5	
**Medicago lupulina*	Black medick			<1
**Bellardia viscosa*	Tarweed	FAC		<1
**Plantago lanceolata*	Narrow-leaved plantain	FACU	<1	5
**Prunella vulgaris*	Self-heal	FACU	<1	
**Ranunculus repens*	Creeping buttercup	FAC	<1	<1
**Sonchus oleraceus*	Sow thistle	FAC		<1
**Trifolium repens*	White clover	FACU	5	20
Wetland assessment tests				
Rapid test			X	X
Dominance test			✓(75%)	✓(70%) (includes FAC)
Prevalence test			✓(2.47)	✓(2.95)
Presence of hydric soils			X	X

Note: the Dominance Test threshold is met if more than 50% of the dominants from all strata are OBL, FACW or FAC (ie: the plant community is considered hydrophytic, but if all/most dominants are FAC hydric soil and wetland hydrology indicators are considered).

Plot 1 is confirmed as wetland vegetation, while Plot 2 is not because most of the dominant species are not OBL or FACW and there are no indicators of hydric soil or wetland hydrology. Although the native *J. australis* (subject to confirmation) is present in the western area, it is not a dominant species and the area is not considered wetland vegetation. I therefore agree with the designation of this area as SNA, but recommend the boundaries are amended so only wetland vegetation is incorporated. The criteria used for determining SNAs (Kessels, 2020) were applied to this area assuming it was all indigenous wetland vegetation. This area needs to be reassessed against the SNA determination criteria as several (eg: Criterion 6 (distinctiveness) are likely to no longer apply. I walked the assessed area tracking my path and taking photos using ArcGIS FieldMaps and have included a suggested revised polygon for this area below. This polygon also includes localised areas of indigenous wetland vegetation that were not captured in the vegetation plots, notably *Typha orientalis* reedland and *Schoenoplectus tabernaemontani* sedgeland.

Figure 4: Plot 1 and associated soil

Figure 5: Plot 2 and associated soil. Rushes are present but ground cover dominated by exotic herbs

Figure 6: suggested revised area of indigenous wetland vegetation

It should also be noted that the exposure draft for the National Policy Statement for Indigenous Biodiversity (NPS-IB) excludes wetlands from SNA designation, as they are considered better protected at the regional level under the National Policy Statement for Freshwater Management and the National Environmental Standard for Freshwater. The NPS-IB exposure draft was released after the Proposed District Plan was notified, but I suggest this matter is considered during the hearings.

SNA-424

Figure 7: oioi rushland in backdunes

I also briefly visited the dune area on Taikura Station, which was included as part of the extensive SNA-424. The area has been grazed historically, and there are numerous pasture species present, as well as extensive *Ammophila arenaria* (marram) grassland on the foredunes. There are several large pockets of indigenous vegetation, notably *Apodasmia similis* (oioi) rushland and *Ficinia nodosa* (wiwi) sedgeland. Several pest plant species were spotted, including pink ragwort (*Senecio glastifolius*). Dune ecosystems have been identified as naturally uncommon ecosystems (Wiser et al, 2013) and therefore meet Criterion 5 (Rarity- Ecosystems) amongst other SNA determination criteria.

I also recommend the implications of SNA designation are better articulated to the Lowrys and other affected landowners. Taikura Station has clearly been managed in a way that has allowed indigenous species to remain present, and the Lowrys are undertaking multiple activities (wetland restoration, rat control, pest plant control) to protect these species. The coastal zone is the most sheltered, and only flat, part of their form and is crucial to its ongoing success. They need more certainty that their existing use is guaranteed, as articulated in the Section 42 report that "Council recognises there is a need to balance protecting and enhancing the District's indigenous biodiversity while allowing for rural landowners to farm their land effectively and efficiently."

Annabel Beattie
Terrestrial Ecologist
Integrated Catchment Management Group
Phone: 835 9200
Cell: 027 284 5725
Email: annabel.beattie@hbrc.govt.nz

Signature

References

Central Hawke's Bay District Council. 2021. Central Hawke's Bay Proposed District Plan. Accessed from https://eplan.chbdc.govt.nz/draft/#Rules/0/0/0/0/0 on 30 October 2022.

Clarkson BR, Fitzgerald NB, Champion PD, Forester L, Rance BD. 2021. New Zealand wetland plant list 2021. Manaaki Whenua - Landcare Research contract report LC3975 for Hawke's Bay Regional Council.

Gray T, & Morgan S. 2022. Proposed Central Hawke's Bay District Plan Officer's Report: Natural Environment – SNA Mapping. Central Hawkes Bay District Council Officer's Report for Independent Hearing Commissioners.

Kessels, G. 2020. Central Hawkes Bay District Council: District Plan Significant Natural Area Review- May 2020. Bluewattle Ecology, Hamilton.

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Wiser SK, Buxton RP, Clarkson BR, Hoare RJB, Holdaway RJ, Richardson SJ, Smale MC, West C & Williams PA. 2013. New Zealand's naturally uncommon ecosystems. In Dymond JR ed. Ecosystem services in New Zealand- conditions and trends. Manaaki Whenua Press, Lincoln, New Zealand. Pp. 49-61.

Manaaki Whenua
Landcare Research

Annabel Beattie
Terrestrial Ecologist
Hawke's Bay Regional Council
159 Dalton Street
Napier 4110

4 November 2022

Dear Annabel

Plant ID Ref.: 2022/0124 - 2022/0125

Thank you for sending your plant specimens from wetland area (largely dominated by exotic grasses and herbs) in a backdune area near Porangahau (Southern Hawke's Bay) to us for confirmation/identification. They have been identified as follows.

2022/0124 Plot 1 (Eleocharis acuta ?)
We can confirm that one specimen in the sample is

***Eleocharis acuta* R.Br.**

family: Cyperaceae
Biostatus: New Zealand (Political Region): Wild, **Indigenous** (Non-endemic)
Treatment Article: Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Indigenous Tracheophyta: Monocotyledones except Gramineae.
Vernacular: **Club rush (English), Sharp spike sedge (English)**

Flora of New Zealand Vol. II:
Description:
Rhizome woody, 1–2 mm. diam. Culms (1.5)–5–50–(90) cm. × (0.5)–1–2–(2.5) mm. diam., us. crowded in distant tufts, ± erect, terete, striated; lower sheath dark red with an oblique orifice, upper sheath paler, closely appressed to culm, orifice us. truncate or rarely slightly oblique, with dark thickened edge and distinct mucro at back. Spikelet 5–25 × 2–5 mm., cylindrical, acute at tip. Glumes ∞, basal 2 sterile, shorter, broader and paler than rest, upper glumes ovate-lanceolate with hyaline tips. Hypog. bristles (6)–7–(8), some =, some > nut. Stamens 3. Style 3-fid. Nut c. 1.5 × 1 mm., obovoid, biconvex or plano-convex, pale brown, smooth or faintly reticulate; the small persistent style-base triangular, compressed, white or very pale brown.

Distribution: K., N., S., St., Ch.

Habitat: Damp swampy ground, and on stream and lake margins; sea level to 1,100 m. altitude.
Type locality: Tasmanian. Type: BM. Recorded also from Australia and Norfolk Id.

Note: A very polymorphic sp. Many specimens are intermediate between small wiry plants typical of salt marshes and lake edges, and the larger plants which are more widespread.

There is a second species in the sample:
It a species of ***Machaerina*** but we are unable to identify the species due to the quality of the material.

2022/0125 Plot 2 (Juncus australis ?)
This sample also contain 2 different species.
The large clump (majority of material) is

***Ficinia nodosa* (Rottb.) Goetgh., Muasya & D.A.Simpson**

family: Cyperaceae
Place of Publication: Muasya, A.M.; Simpson, D.A.; Goetghebeur, P. 2000: New Combinations in Trichophorum, Scirpoides, and Ficinia. Novon 10(2): 132-133. Publication Page: 133
Biostatus: New Zealand (Political Region): Wild, **Indigenous** but Non-endemic

Manaaki Whenua
Landcare Research

Maori: Wiwi
Vernacular: Knobby clubrush (English), knotted sedge (English), Leafless sedge (English)
Turf rush (English)
Nomenclatural Status: The basionym of this name is *Scirpus nodosus* Rottb.

Flora of New Zealand Vol. III:
Rhizome short. Stems rush-like, densely crowded, rigid, terete, often ± compressed, to 90 cm high. Leaves reduced to red-brown basal sheaths. Inflorescence a single hemispherical head, of numerous small densely crowded red-brown spikelets with a short terete pungent bract.
K., N., S., St., Ch. Usually coastal. (Austral circumpolar sp.)

The two larger *Juncus* culms in the sample are to immature to do s species ID and we can only say that they are ***Juncus* sp.**

Best wishes,
Ines Schoenberger
Plant Identification Service
Email address: PlantInfo@landcareresearch.co.nz

Lochie MacGillivray

From: L & M Lowry <taikura@farmside.co.nz>
Sent: Wednesday, 9 November 2022 4:48 pm
To: Lochie MacGillivray
Subject: FW: 2 samples from wetland in backdune near Porangahau
Attachments: Beattie_2 plants from wetland in backdune near Porangahau.docx

Hi Lochie,

FYI - please see email from Annabel received today.

Cheers,
Lucy

From: Annabel Beattie <Annabel.Beattie@hbrc.govt.nz>
Sent: Wednesday, 9 November 2022 3:48 p.m.
To: L & M Lowry <taikura@farmside.co.nz>
Subject: FW: 2 samples from wetland in backdune near Porangahau

Kia ora Mark and Lucy

Sorry for the delay in getting this to you, attached are the results from the specimens I collected from your property. The IDs from the herbarium affect the results I sent you last week- reflecting on them and looking back at my photos I think some of what I identified as *Juncus australis* in the plots may have in fact been *Ficinia nodosa*, which has an indicator status of FACU. This may influence the wetland delineation results. The other specimens (*Eleocharis acuta, Juncus sp., Machaerina sp.*) are all native wetland plants (with indicator statuses of either OBL or FACW), so their cover relative to other species would influence the wetland delineation.

Given that I misidentified a few of these plants, and I only had time to do 2 plots, it would potentially be beneficial to do a more extensive survey for increased certainty of wetland extent. Although this is likely to be dynamic in any case due to the influence of wet winters and so on! I will not have capacity to do this before the new year, but understand the time pressure you are under! There are a few other Ecologists I could recommend if you are interested in engaging someone else? Please let me know if so and I can send their contact details.

Vic may have talked to you already, but I should have mentioned too that some areas on your property were mapped as Priority Ecosystem sites that potentially would be eligible for funding towards work achieving Biodiversity outcomes (eg: fencing, pest plant control). Our Priority Ecosystem programme is voluntary and non-regulatory, but if you are interested in anything along these lines and want more information please let me know 😊.

Please let me know if you have any more questions! Hope all goes well for you with the hearing next week.

Kind regards, Annabel

HAWKES BAY REGIONAL COUNCIL
TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

Annabel Beattie
Terrestrial Ecologist
06 835 9200 | 027 284 5725
Hawke's Bay Regional Council | Te Kaunihera ā-rohe o Te Matau a Māui
159 Dalton Street, Napier 4110 | hbrc.govt.nz
Enhancing Our Environment Together | Te Whakapakari Tahi I Tō Tātau Taiao

From: Ines Schonberger <Schonbergerl@landcareresearch.co.nz>
Sent: Friday, 4 November 2022 8:31 AM
To: Annabel Beattie <Annabel.Beattie@hbrc.govt.nz>
Subject: 2 samples from wetland in backdune near Porangahau

Dear Annabel

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Best wishes
Ines

Ines Schönberger – Herbarium Manager
Allan Herbarium and Plant Identification Service
Manaaki Whenua – Landcare Research
74 Gerald Street - reception
54 Gerald Street, Lincoln 7608 (physical address for deliveries)
P.O. Box 69040, Lincoln 7640
T +64 3 321 9797 | **M** +64 27 411 0203
www.landcareresearch.co.nz

Manaaki Whenua
Landcare Research

Lochie MacGillivray

From: L & M Lowry <taikura@farmside.co.nz>
Sent: Sunday, 13 November 2022 7:16 pm
To: Lochie MacGillivray
Subject: FW: Crop paddock Taikura

From: Jared Leonard <jaredleonard@hotmail.com>
Sent: Sunday, 13 November 2022 4:28 p.m.
To: taikura@farmside.co.nz
Subject: Crop paddock Taikura

To whom it may concern,

I undertook some work for Mark and Lucy Lowry at their Taikura property in the autumn of 2011.
The work involved working up some paddocks close to the house that were in a pasja crop that had been used for fattening lambs.
I disced the paddocks and was surprised to see the quality of the soil there as I had always assumed it would be sand , but what I found was some pretty strong soils. Then I power-harrowed and sowed down into rye grass while also pulling a truck tyred roller.
The feed back I received was the grass struck quickly and they got some valuable grazing out of it for a number of years and as a part of a cropping rotation, it enabled them to have high quality feed that was very handy to their main facilities and load outs .

Yours sincerely Jared Leonard

Central Hawkes Bay
Significant Natural Area Assessment
Landowner Feedback/Ground Truthing Phase: 2019
SNA REVIEW RECORDING FORM

Visit Date	SNA Site No.	Owner (name and contact details)
29-1-2020	SNA51	**Mark Lowry, 1376 Blackhead Road, Porangahau**
Valuation:	1094018600	
Landowner Contact log & feedback (reference & attach as required)		John Cheyne, and Gerry Kessels met briefly with Mark Lowry who provided directions to the site. Site also assessed from aerial photographs.

Step A Summary of Existing Data from Database

SNA Site No	Desktop Ecological Description of SNA			
SNA51				
Grid ref.:		**Existing Ranking**		**Protection Status**
Ecosystems Type(s)	**Coastal vegetation and estuary/river mouth**			
Bioveg Description				
Bioclimatic Zone				
Significant Flora				
Significant Fauna				
Significance Ranking & Justification	Yes	**Criteria 3 and 5 met** ?		
key Landowner comments from open day and/or response form	Landowner did not provide comment or attend public meeting.			

Step B Review Assessment

VEGETATION, HABITAT & FAUNA VALUES OBSERVED

Boundary Alignment Notes:
Initial SNA boundary followed the current District Plan boundary for Areas of Significant Nature Conservation Value (Site no. 51, maps 9 and 43, RAP 22 Eastern Hawke's Bay Ecological District). The proposed SNA boundary encompasses a smaller area which includes the main wetlands and coastal foredune.

Vegetation Type(s), plant species observed & dominant canopy composition(s)
The wetlands have been partly drained but are dominated by raupo, sedges, and rushes. Some wetlands hold permanent water and some are ephemeral.
The main foredune along the coast is fenced and is dominated by native sand dune plants.

Fauna & Habitat Type(s) Observed (including freshwater & potential habitats):
Diverse habitats provided by sand dunes, and wetlands. The sand dunes will support a range of lizard species and native invertebrates. The wetlands on the adjacent properties support a population of the 'critically threatened' Bittern which will use the wetlands on this property.

Landowner feedback during site visit:
The landowner did not agree with SNA's being mapped on pasture land

Habitat Condition Assessment

Indicator	Rating	Estimate (Tick appropriate level)		Notes Species etc
Stock & Wild Animals	1	☐	Abundant fresh signs (droppings, major tracks and hoof prints) Stock heard or seen throughout area.	Sheep and cattle in unfenced areas.
	2	✓	Common fresh sign but sometimes scattered. Occasional stock heard or seen, confined to scattered areas on edge.	
	3	☐	Sign uncommon. Sign is often old. Only near edges.	
	4	☐	No damage.	
Canopy condition	1	☐	Very sparse foliage, many large holes, dieback>20%.	Wetlands dominated by raupo, sedges, and rushes. Sand dune supports normal type of vegetation.
	2	☐	Foliage sparse in some areas, canopy holes uncommon. Some dieback.	
	3	✓	Foliage mostly dense, only occasional sparse areas, canopy holes rare, very occasional dieback.	
	4	☐	Abundant dense foliage over whole canopy, no canopy holes or dieback.	
Mid Tier	1	☐	No browse palatable species 45cm-1.35m. Understorey bare.	Native vegetation in good condition where stock have no access.
	2	☐	Very few browse palatable species 45cm-1.35m. Scattered seedlings of less palatable species.	
	3	✓	Moderate browse palatable species 45cm-1.35m. Other species relatively abundant.	
	4	☐	Abundant browse palatable species and other species present.	
Ground Cover	1	✓	Bare soil, rock, >20% of forest floor. Ground vegetation (ferns, moss, seedlings etc <45cm tall) absent of uncommon. Leaf litter on remainder of forest floor.	Sand dune naturally has exposed sand.
	2	☐	Scattered bare soil & rock. Ground vegetation<20%. Leaf litter on remainder of forest floor.	
	3	☐	Bare soil, rock absent or very uncommon. Ground vegetation 25%-50%. Leaf litter on remainder of forest floor.	
	4	☐	No bare soil or rock, or eroding soil. Ground vegetation, abundant, 50%-100%. Leaf letter on remainder.	
Vine weeds	1	☐	Very common, >50% canopy cover.	
	2	☐	Common, 10%50% canopy cover.	
	3	☐	Occasional, up to 10% canopy cover.	
	4	✓	None present.	
Ground cover weeds	1	☐	Very common, cover >50% ground area.	Some exotic grasses present.
	2	✓	Common, 10%-50% ground area.	
	3	☐	Occasional, up to 10% ground area.	
	4	☐	None present.	
Canopy Shrub/Tree Weeds	1	☐	Very common, <50% understorey or canopy cover.	Occasional lupin and pampas.
	2	☐	Common, 10%-50% understorey or canopy cover.	
	3	✓	Occasional, up to 10% understorey or canopy cover.	
	4	☐	None present.	

Step C Ranking & Boundary Assessment

Significance Ranking Assessment Chart:

Criteria	Criteria Met [Y/N]	Justification
CRITERION 1 Protection Status: It is indigenous vegetation or habitat for indigenous fauna that is currently, or is recommended to be, set aside by statute or covenant or by the Nature Heritage Fund, or Ngā Whenua Rāhui committees, or the Queen Elizabeth the Second National Trust Board of Directors, specifically for the protection of biodiversity, and meets at least one of criteria 2-6.	No	
CRITERION 2 Representativeness: • It is vegetation or habitat of indigenous fauna that is highly typical or characteristic of the indigenous biodiversity in an Ecological District, or Ecological Region, or nationally. OR • It is habitat that forms part of an ecological sequence, that is either not common in the Hawkes Bay region or an Ecological District, or is an exceptional, representative example of its type. OR • It is habitat that supports atypical suite of indigenous fauna and that is characteristic of the habitat type an Ecological District.	Yes	Important part of Porangahau sand dune – wetland complex.
CRITERION 3 Diversity and Pattern: It is an area of indigenous vegetation or habitat of high diversity (for its type) that forms ecotones, gradients, or sequences which is either not common in the Hawkes Bay region, or an Ecological District.	Yes	Important part of Porangahau sand dune – wetland complex.
CRITERION 4 Rarity – Species: It is vegetation or habitat that is currently habitat for indigenous species or associations of indigenous species that are: o classed as nationally threatened or at risk, or o endemic to the Hawkes Bay region, or o at the limit of their natural range. o	Yes	Wetland habitat highly suitable for the critically threatened Bittern which has been recorded regularly on the adjacent property in similar habitat.
CRITERION 5 Rarity - Ecosystems: It is indigenous vegetation or habitat that is, and prior to human settlement was, nationally uncommon such as geothermal, chenier plain, or karst ecosystems, hydrothermal vents or cold seeps, as defined by Wiser et al. (2013)[1].	No	
CRITERION 6 Distinctiveness: • It is indigenous vegetation, habitat or ecosystem type that is under-represented (30% or less of its known or likely original extent remaining) in an Ecological District, or Ecological Region, or nationally. OR	Yes	Less than 2% freshwater wetlands remain in Hawke's Bay.

[1] Wiser SK, Buxton RP, Clarkson BR, Hoare RJB, Holdaway RJ, Richardson SJ, Smale MC, West C, Williams PA 2013. New Zealand's naturally uncommon ecosystems. In Dymond JR ed. Ecosystem services in New Zealand – conditions and trends. Manaaki Whenua Press, Lincoln, New Zealand. Pp. 49–61.
https://www.landcareresearch.co.nz/publications/factsheets/rare-ecosystems

Criteria	Criteria Met [Y/N]	Justification
• It is wetland, sand dune or estuarine or a distinctive assemblage or community of indigenous species habitat for indigenous plant communities and/or indigenous fauna communities (excluding exotic rush/pasture communities) that has not been created and subsequently maintained for or in connection with: o waste treatment; o wastewater renovation; o hydro electric power lakes; o water storage for irrigation; or o water supply storage.		
CRITERION 7 Ecological Context: It is an area of indigenous vegetation or naturally occurring habitat that: • moderate to large, well buffered and is a compact shape, in the context of the ecological district, and which contains all or almost all indigenous species typical of that habitat type. OR • is critical to the self sustainability of an indigenous species within a catchment of the Hawkes Bay region, or within the coastal marine area. In this context "critical" means essential for a specific component of the life cycle and includes breeding and spawning grounds, juvenile nursery areas, important feeding areas and migratory and dispersal pathways of an indigenous species. This includes areas that maintain connectivity between habitats. OR • is a site that provides a full or partial buffer to, or link between, other important habitats or significant natural area(s) and/or is important for the natural functioning of a freshwater or coastal/marine system.	Yes	Known habitat for critically threatened bittern.

Notes for use of Significance Ranking Assessment Chart:

- CRITERIA for YES or NO: This attribute will be empty for sites where no SNA criteria are 'Yes' or 'No'.
- CRITERIA for LIKELY: Attribute Likely to be met at the site. This attribute will be for sites where no SNA criteria are 'Likely'.
- CRITERIA for INDETERMINATE: Attribute for which it could not yet be determined if they are known or likely to be met at a site. This attribute will be empty for sites where no SNA criteria are 'Indeterminate'.
- CRITERIA for determining a significant wetland: **Dominance Test**: Presence of more than 50% of indigenous wetland species cover.

Confidence Level	Definition
High	High level of confidence in assessment. Ecological information about the site is: · Comprehensive · Reliable · Applicable and/or recent · Site specific Sites with a high confidence rating include: · Relatively large, well-studied, protected areas. · Protected areas that are well known as habitats for threatened species · Unprotected sites that have been identified as recommended areas for protection in a protected natural areas survey. · Other sites that have been the subject of fauna and/or flora surveys and the information is comprehensive, reliable, recent and site-specific. Sites with a high confidence level have a low requirement for field survey.
Medium	Moderate level of confidence in assessment. Ecological information about the site is: · Relatively comprehensive · Reliable · Not entirely applicable/ recent · More likely to be general than site-specific, e.g. the information applies to a larger tract of indigenous vegetation, of which the site is a relatively small part. Sites with a moderate confidence rating include: · Sites where the assessment is based on ecological information that does not meet all of the criteria for a high confidence level. · Sites that are contiguous with a site that has a high confidence level, and information about the contiguous site is assumed to be applicable to the site that is being assessed. · Sites that have been assessed as nationally or regionally significant on the basis of a record of a single species (such as kereru) without meeting other criteria for national or regional significance. · Sites for which incomplete ecological information exists, and for which targeted surveys may result in records of threatened species. Sites with a medium confidence level have a requirement for field survey.
Low	Low level of confidence in the assessment. Ecological information about the site is not available or is: · Not comprehensive · Unreliable · Out-dated · General Sites with a low confidence rating include: · Very small protected sites e.g. marginal strips. · Unprotected sites within ecological districts where a protected natural areas survey has not been undertaken. · Sites that have met criteria for national significance, solely on the basis of a record of a species (e.g. kiwi, kokako) that is probably extinct at the site. Sites with a low confidence level have a high requirement for field survey.

Boundary Change Description & Justification:
Initial SNA boundary followed the current District Plan boundary for Areas of Significant Nature Conservation Value (Site no. 51, maps 9 and 43, RAP 22 Eastern Hawke's Bay Ecological District). The proposed SNA boundary encompasses a smaller area which includes the main wetlands and coastal foredune.

Conservation Management Recommendations – if any:
This SNA is a significant part of the larger Porangahau 'regionally outstanding waterbody' identified in a recent HBRC report. Maintenance of stock proof fences and maintenance of wetland water levels is important.

Step D Review & Database Checklist & Audit Log

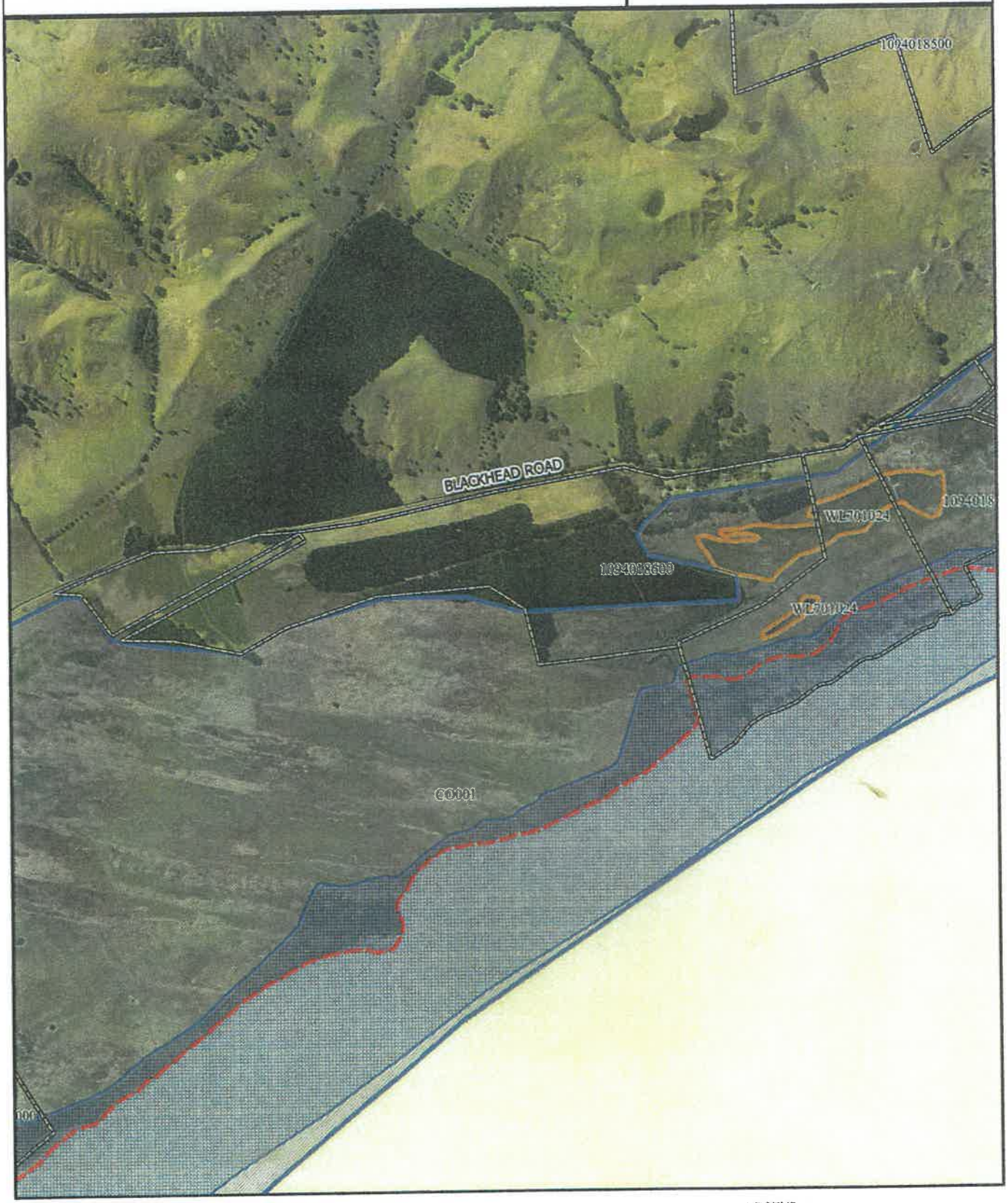
Technical peer review signoff & comments:

G Kessels, Lead Ecologist, agrees with amendments to the SNA to a smaller area which reflects use by wetland birds, especially bittern and which reflects areas dominated by indigenous species in wetland or coastal ecosystems

DISCLAIMER:
CHB District Council has made information available under Section 10 to 18 (inclusive) of the Local Government Official Information and Meetings Act 1987 ONLY. This plan may contain errors or omissions or may not have the spatial accuracy required for some purposes. Council accepts no responsibility for the precise location of services (including land information) shown on this plan. There may be other information relating to the area shown on this map which is unknown to the Council. Please consult COUNCIL if you have any queries. No person should rely on any information without seeking appropriate independent and professional advice. The information provided does not constitute a Land Information Memorandum or any similar document. Care must be taken when reading this plan as any location of boundaries may not coincide with aerial photography. For exact spatial location of legal boundaries consult a Registered Surveyor.

NOTE:
The location of Council Services shown on this map are approximate and for planning purposes only. For exact location, marked on the ground, please contact CHBDC on 06 857 8060 and Council will arrange for all known services to be marked on the ground as soon as possible.

Database, CROWN COPYRIGHT Cadastral information derived from Land Information New Zealand (LINZ) LandonLine Cadastral RESERVED and Department of Conservation (DOC) Nga Whenua Rahui data



Not to Scale

Areas recommended for landscape protection and Significant Natural Areas

Valuation No.1094018600

2019-04-09

LEGEND

- Nga Whenua Rahui Areas
- Council Areas
- DOC Public Conservation Areas
- Significant Natural Areas
- Braided Rivers
- Wetland Areas
- Coastal Areas
- Nga Whenua Rahui Areas
- Landscape Areas

Roads
- Metalled
- Sealed
- Unmetalled

Property Boundaries
- Railways

N W E S

(S35.001) Mark and Lucy Lowry

5.3.13 Council's ecologist has provided the following assessment in response to this submission in Appendix C. The key points of his analysis is that a large portion of the Pōrangahau foreshore was mapped in the Operative Plan as ASNCV. The SNA review for the PDP allowed for the groundtruthing and reassessment of this area which has allowed the mapping of this SNA to be more focused on the natural features that meet the Ecological Significance Determination Criteria.

5.3.14 It is a regionally outstanding natural feature for its size, complexity and diversity. It has a high ecological ranking that warranted a more comprehensive review than other SNAs. At the inception of the Operative Plan this area had been identified by DOC as a RAP.

5.3.15 While the property has extensive irregularly shaped freshwater wetland complex Council's ecologist states:

"However, on reflection, I agree with the AgFirst report that some of the pasture dominated ephemeral wetlands do require review and amendment. In some of the wetlands the vegetation largely comprises of pasture and exotic species, and while likely to be classified as 'natural wetlands' under the NPS-FW

definition, are unlikely to meet the threshold of Criterion 6 of the Ecological Significance Determination Criteria" (paragraph 21.5 of Appendix C).

5.3.16 Mr Kessels also notes that to justify meeting Criterion 4 (Rarity – species) he used historical and anecdotal evidence of the regular usage of the exotic dominated ephemeral wetland by Bittern from DOC and the professional opinion of John Cheyne (local ecologist and consultant for groundtruthing). He also stated that to validate regular usage in the absence of existing data would require site-specific fauna surveys. It is important to note, as recorded in the groundtruthing report, that this site meets several other criterion that lend it to being a SNA, such as Criterion 6 (distinctiveness), criterion 3 (diversity and pattern), and criterion 2 (representativeness). To meet the criteria to be considered a SNA policy ECO-P1 states that at least one criteria needs to be met. Whether or not the site can meet criterion 4 does not influence the status of this site as a SNA.

5.3.17 I agree with Mr Kessels assessment and his recommendation to remove areas of pasture dominated ephemeral wetland as shown in the maps provided in his memo in Appendix C. Therefore, I recommend that submission S35.001 be accepted in part.

5.3.18 The groundtruthing report for this site can be provided on request.

21. Mark & Lucy Lowry – S35.001

21.1. The submitter disputes the SNA designation for SNAs 434 and 51. The submitter provides a technical review of the property by AgFirst Pastoral in support of the submission.

21.2. It is important to note that the Operative District Plan has mapped a large portion of the Pōrangahau foreshore, dune and farmed back dunes as an Area of Significant Nature Conservation Value (ASNCV), including large portions of farmland. The SNA review for the Proposed District Plan has involved ground truthing, and reassessment and mapping of this SNA to focus on those remaining features which exhibit natural values that meet the Proposed Plans' Ecological Significance Determination Criteria by myself and an experienced and qualified wetland ecologist – Mr John Cheyne. Mr Cheyne, in a report on the locality to Council states the follow reason for its inclusion:

* Now identified as SNA 424

21.3. "The Porangahau - Parimahu complex is a large mosaic of estuary, saltmarsh, sand dunes, freshwater wetlands and small streams. It has been formed by the Porangahau River and coastal processes over a very long period of time. It is 14 kms long, approximately 1500 hectares and is spread over 8 main properties. It is bordered by the Pacific Ocean on the east and Hunter and Blackhead Roads on the west, and extends from Beach Road north to Blackhead Point. It is a regionally outstanding natural area for its size, complexity and diversity (Department of Conservation (DOC) Protected Natural Area report for the Eastern Hawkes Bay Ecological District 1993). When the current CHBDC District Plan was prepared in 2003 the Porangahau RAP 22 was included as an Area of Significant Nature Conservation Value (ASNCV) area along with other Central Hawkes Bay RAP's identified by DOC. The inclusion of the Porangahau RAP 22 in the current District Plan (effective since 2003) means it presently has a measure of statutory protection and the inclusion of it in the new proposed draft District Plan builds on this.... The Porangahau - Parimahu SNA is the largest SNA in Central Hawkes Bay and coupled with its very high ecological ranking, warranted a more comprehensive review than other SNA's. It was also important to hear landowner's views on what was being proposed."

21.4. The property has an extensive irregularly shaped freshwater wetland complex comprising both permanent and ephemeral sections, many areas of which are likely to be able to be classified as natural wetlands as defined in the National Policy Statement – Freshwater (NPS-FW). During our ground-truthing visit to the submitter's property on 29 January 2020 we observed that the foredunes of estuary had been fenced off from stock for some years and this has enabled the riparian vegetation to recover like other adjacent properties. In terms of wetland areas, we observed several wet areas where indigenous wetland species dominated the wetlands - the descriptions and photos in the AgFirst report do not include these dune or wetland areas. In addition, the wetland areas on this property had already been highlighted as such by the Hawkes Bay Regional Council; the wetland GIS dataset from the regional council having been used as one of the base layers for the Proposed District Plan SNA review.

21.5. However, on reflection, I agree with the AgFirst report that some of the pasture dominated ephemeral wetlands do require review and amendment. In some of the wetlands the vegetation largely comprises of pasture and exotic species, and while likely to be classified as 'natural wetlands' under the NPS-FW definition, are unlikely to meet the threshold of Criterion 6 of the Ecological Significance Determination Criteria.

21.6. In developing the SNA delineation on this property, I used historical and anecdotal evidence of regular usage of the exotic dominated ephemeral wetland by bittern from Department of Conservation delineated Pōrangahau - Parimahu report, and the professional opinion of John Cheyne, to justify the areas meeting Criterion 4 (Rarity – Species). However, I acknowledge that I have no specific or recent evidence of regular usage of the wetlands on this property by at risk or threatened indigenous fauna at this point in time. To validate regular usage for SNAs in the absence of existing data would require extensive and site-specific fauna surveys.

21.7. Therefore, in the absence of site-specific data and on the basis of the further information provided in the AgFirst report, I recommend that the areas shown on the map below can be removed from the planning maps as SNAs

Proposed Central Hawke's Bay District Plan

Submission in relation to Significant Natural Area 434

M & L Lowry

Taikura Stn

1376 Blackhead Road

August 2021

Lochie MacGillivray | phone 068727070| Mobile 0274486501

Email; lochie.macgillivray@agfirst.co.nz

AgFirst Pastoral (HB) Ltd

PO Box 1261, Hastings

Contents

General Aim and Purpose of this Report

The Central Hawke's Bay (CHB) District Council have prepared a proposed district plan.

The purpose, function and contents of the proposed plan is directed towards achieving the purpose of the RMA (defined by Part 2), which is 'to promote the sustainable management of natural and physical resources' (section 5).

Once approved the CHB District Plan would control the way land is used, developed, and protected. It seeks to manage natural and physical resources that are important in the district and to ensure that environmental qualities and values are safeguarded for future generations to enjoy. The rules included in the District Plan will set out the activities that can be done as of right (permitted activities) and the activities that will need a resource consent for.

The proposed plan has a schedule of valued natural environments that the CHB believes wider community wishes to safeguard and in doing so it will meet its requirements under the RMA.

The CHB has called for submissions on its proposed plan, which need to be lodged prior to 5 pm Friday 6th of August 2012

This report supports a submission opposing the proposed schedule of Significant Natural Area and in particular to it is opposed to **SNA 434.**

Parts of SNA 434 lie with in the farmed boundaries of the submitters, Mark and Lucy Lowry and the impact of this SNA would have a significant detrimental impact on their farming operations.

The submission is that all the prosed SNA 434 area is not spatially a Significant Natural Area and that the methodology in assessing the proposed area was flawed.

The submission opposes the SNA 434 on the grounds that area proposed is in breach of the stated CHB district plan's objective, which is to have a balance of protecting the district's indigenous biodiversity while allowing for rural landowners to farm their land effectively and efficiently.

The submission also is opposed to SNA 434 in that the designation of a SNA is not consistent with other nearby and similar landforms and vegetation cover, which has no such designation.

Submitters Background and Property

The submitters are Mark and Lucy Lowry who have been farming in the district for 19 years.

The farm property is in three titles totalling 691.29 ha and is run as a sheep and beef property.

The farm is located at 1376 Blackhead Road and lies to both the west and the east of this road.

The titles with the proposed SNA 434 are on the eastern (sideward) side of the Blackhead Road and are deemed essential for the farming activity as they are the only lands that are suitable for finishing stock due to its contour, water table and climate. Without proper and full farming access to this land the farms overall viability as a sheep and beef farm would need to be reassessed.

Of the total 691 ha, 84 ha are on the eastern side of the road (12% of the land area) and of this 20.4ha is prosed as SNA 434.

Areas of Concern about SNA 434

434 SNA Spatial Area

The areas defined as SNA 434 are opposed.

The SNA has two defined areas UID WL701024 and SNA51.

WL701024

WL701024 covers land described as a Marsh and covers 8.3 ha. The SNA describes the land as Rush-sedgeland (as a WL701024t 1 October 2020) with a medium confidence of accuracy. The SNA notes that this area represents an under-represented habitat in region and NZ, with a threatened environment (wetland), and the potential habitat for threatened biodiversity including for the North Island Fernbird and Australasian Bittern.

SNA51

SNA51 covers some sand dunes close to the hightide mark within the title boundary and this is calculated at 12.1 ha. The SNA describes this as Coastal vegetation and estuary river mouth and the site remains significant due to habitat for at risk and threatened indigenous birds, and fish. It has a high degree is confidence.

The submitters wish to present a series of aerial images and photographic evidence which illustrates the errors made in designating the proposed SNA 434 on their titled land.

The first image is the satellite image used when mapping the SNA and it shows the SNA within the title. Note the SNA is clipped to the Lowry titles only.

Image 1: 2019 Aerial image

However if older images are used (and not just after a heavy rain) then it is clear that the proposed SNA areas are not all Natural Areas, and are in fact pasture lands.

Image 2: 2015 Aerial Image

Image 3: 2013 Aerial Image, showing the cropping done on this prosed SNA

Image 4: Aerial Image 2010

Image 5: Location of Photographs taken 4 August 2021

The above image shows the location of a series of photographs taken on the 4th August 2021 illustrating the present vegetative cover. These photographs are shown below;

Photograph 1

Photograph 2

Photograph 3

Photograph 4

Photograph 6

Photograph 7

Photograph 10

Discussion of Satellite Images and photographs

The Aerial image in the 2019 year was after some good rainfall and the water tables were full. This gives an unusual impression of the normal status of the pastureland. This status is better represented in the satellite images of 2015, 2013 and 2011. In these images it is clearly observable that the areas prosed as Significant Natural Areas, are not natural and are in fact cultivated pastureland with some natural rush reversion in 2019. Again, this is reinforced in the photographs taken two days before submission closure.

In these photographs it is readily observable that some land designated as Rush Sedgeland is improved and established pasture, and part of a normal pasture renewal programme. This important pastureland is not a Marshland.

The area that is permanent wetland and not in grazing pastures is depicted in an image below

Image 6: permanent wetlands and rushes and SNA areas

This image also highlights the submitters more accurate definition of the dune features, which was described in the SNA51 definition. Note there is no natural water, and the type of grazed species in this area is due to the management of this area being lax rather than intensive. This aligns with the proposed plan ECO-P7 which aims to recognise landowners' stewardship and current land management practises. The management of this parcel outside of the green zones above does not fit the definitions of a SNA and should remain under the current stewardship.

The submitters are keen observers of the land and its aspects. There has been no sighted Bitterns or Fernbirds on the property in the 19 years they have lived there. It is also unlikely that they would inhabit this area given the typical vegetation status is that of improved pasture.

How could the Proposers get it so wrong?

The clear incorrect placement of the SNA boundaries might in part be explained by two factors.

1) There was a farm visit by representatives (Gerry Kessels and John Cheyne) in February 2020, but it was not under any description a detailed inspection. They met with Mark Lowry, and he drove them to a southern part of his farm where he showed them the wetland development he was doing (which is as it turns out is in the neighbour's title). They took some photographs of this wetland but did not inspect any other part of the farm. This is also evidenced in the description of moderate confidence in the SNA, if it had been inspected the confidence would have been higher. It is highly probable that the dunes were also not peaked (any visit must have been via the beach), and as such no real aspect was observed. Possibly the opinions were previous assumptions without a detailed analysis. No transect or plant species analysis occurred.
2) Due to the above, a desk top exercise was done, creating polygons where there was an assumption of water and vegetation cover differences.

The Farming Importance of the Land designated as SNA

In hill country pastoral farming, a balance of land types is important to enable livestock production to be optimised. Without a balance of good finishing land, a farmer is generally forced to sell stock in store condition and suffer lower financial returns. The better contoured land that the Lowry's farm on the eastern side of the Blackhead Road is likewise vital to their farming operation. Gross margins achieved on this land is often two to three times that achieved off the harder hill country. The importance of this land will only increase due to the drench resistance issues becoming apparent in the industry and locally. The ability of the Lowry's to finish and develop flexible policies will be dependant on having farming access to most of the 8ha in the SNA WL701024. Like wise the ability to graze parts of SNA51 at critical and strategic times will make the difference to the farm's resilience.

Removing all this SNA land from the Lowry stewardship is contrary to ECO-P7 and Council's stated need to allow for rural landowners to farm their land effectively and efficiently.

Removing all this SNA will affect this farm current sheep and beef farm viability with no immediate effect on the local biodiversity.

The designation of this land as SNA is not consistent

There are other areas with vegetation covers with a higher rush- sedge population then the Lowry SNA and close by (within 1.4 kms). Yet these areas are not designated SNA. Some of the owners of land parcels with a prosed SNA objected early in the process and after brief discussions (in at least one case, one phone call) the proposed SNA was removed. This is a major inconsistency, and it penalises the Lowry property by them seemingly not being faster out of the blocks due to other farming and family distractions.

Submission Summary

- The SNA boundaries are incorrect. The areas were not inspected properly, and the boundary lines drawn for the SNA was a desk top exercise resulting in historical (and evidenced) pastoral land being included in the SNA polygons.
- Consequently, these areas in the proposed SNA are not significant natural areas.

- In the proposed SNA the council is not recognising the high level of stewardship of the submitters, nor is it recognising the significance of the pastoral land caught in the SNA areas to the overall farming operation.

- The council is displaying inconsistencies in the designations of the SNA and the result of this it is unfairly penalising the Lowry farming operation.

- That being said, the submitters would be prepared allocate some land for permanent wetland and dunes.