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Environmental Consultants

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National Policy Statement for Indigenous Biodiversity: Review of Significant Natural Area Criteria

For Beef + Lamb NZ

PREPARED BY:
Matt Highway and Charlotte Wright

PREPARED FOR:
Beef + Lamb NZ

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1. Introduction

Element Environmental has been commissioned to review the Criteria for the Assessment of Significant Natural Areas (SNAs) under the National Policy Statement for Indigenous Biodiversity (NPSIB), Exposure Draft. This report summarises the outcomes of that review.

2. SNA Criteria

2.1. Significance Criteria

Original Submission - Para108 and 109

A set of criteria were developed for the Collaborative Group, by a respected ecologist (Mike Harding) with some additional ecological input. Those criteria (which we generally support) were ecologically based, provided attributes with useful qualifiers to avoid ambiguity, and did not result in the capture of vegetation and habitats that had low ecological value. The original criteria have been reworded several times through development of the NPSIB to the point that the proposed SNA criteria bear little resemblance to the original, and remove important ecological context, thresholds, and qualifiers.

Exposure Draft

- There are very few qualifiers, and the criteria are still ambiguous.
- Some of the criteria will lead to the capture of sites with very low ecological value, for example as a buffer or an area which representative indigenous species use as a habitat.
- The criteria still do not include thresholds.
- Relies heavily on subjective ecologist assessments.

Original Submission – Para 112 and 113.

As an example, if exotic forest/scrub provides a link for long tailed bats foraging between two areas of indigenous forest, the exotic vegetation technically meets Ecological Context attributes for providing a link between important habitats and for providing critical habitat (feeding) for indigenous fauna. While an ecologist might question the validity (and value) of such an assessment, technically this assessment is completely correct based on the draft NPSIB as currently drafted.

Exposure Draft Point 4: Habitat that supports significant indigenous fauna. There would be very few habitats where 'typical indigenous fauna' will not either move through, feed in, live in and reproduce in NZ. Unless significant indigenous fauna is defined or listed, applying this criterion will mean nearly all habitats will become an SNA. A suggestion could be that point 4 needs to be removed or so that it just relates to "at risk species".

Some examples that would trigger an SNA include:

- long tailed bats foraging between two areas of indigenous forest.
- Long tailed bats reproducing in exotic trees.
- Kiwi moving between habitat using exotic pine forest.
- Native birds living in feeding on exotic trees on farmland.
- Kāhu predating within exotic farmland.

Original Submission – Para 114.

The Government's "Protecting our Places" (Ministry for the Environment (MFE) and Department of Conservation (DOC), 2007a; MFE and DOC, 2007b) identified four national priorities for biodiversity protection as follows:

- To protect indigenous vegetation associated with land environments (defined by Land Environments of New Zealand at Level IV) that have 20% or less remaining in indigenous cover;
- To protect indigenous vegetation associated with sand dunes and wetlands; ecosystem types that have become uncommon due to human activity;
- To protect indigenous vegetation associated with "originally rare" terrestrial ecosystem types not already covered by priorities 1 and 2; and

- To protect habitats of acutely and chronically threatened indigenous species.

Exposure Draft: Rarity and distinctiveness criterion (d) covers this 20% remaining in indigenous cover. "indigenous vegetation that has been reduced to less than 20% of its pre-human state".

There are three major issues with this criterion:

1. 20% remaining indigenous cover will likely be a catch all trigger for nearly all indigenous vegetation in any ecological districts that are not dominated by conservation land. The way the criterion is written it would appear that nearly all ecosystems, regardless of size or condition, particularly in primary production areas will become an SNA.
2. It is unlikely that councils could measure indigenous vegetation types per ecological district and understand and communicate prehuman indigenous vegetation cover.
    a. This requires the identification and accounting of all indigenous vegetation types in every ecological district.
    b. It also requires an understanding of the vegetation cover in each ecosystem type for each ecological district AND provide a comparative assessment of that cover against a pre-human vegetation state.
3. There are no size criteria to apply to an SNA. So, a single tree or extremely small wetland could trigger a piece of land being identified as an SNA.

Original Submission – Para 115 and 116.

These criteria have been extrapolated upon in the NPSIB to the point where the original intention of the Governments "Protecting our Places" national priorities, and the criteria as developed by Mike Harding (with other expert ecological input) for the Collaborative Group, have been lost. There appear to be little of these criteria remaining in the NPSIB, or where it remains changes have been made to the text that makes the wording less precise, and more open to interpretation. As such we propose that the original wording as proposed by Harding et al, with inclusion of thresholds as operative within the Horizons One Plan, be applied in determining whether or not a habitat is significant.

This statement is still correct. In fact, due to the reduced detail of the criteria, many statements have become more ambiguous. **B+LNZ submission paragraph 116** raises the point that the original set of criteria was better than what has been proposed here.

2.2. Representativeness

Original Submission – 117.

The current draft NPSIB directs the assessor to consider commonplace indigenous vegetation and habitat, and includes degraded systems and areas / features that are typical of what remains, not of a pre-1840 (pre-European) state, or a reference state (i.e., the best of what remains).This leads the assessment to find features typical of the new (today's) condition, which is a reflection of the levels of modification and young nature of many systems, as representative. That is, they are typical of themselves, they are their own reference. This is a considerable lowering of the bar and it becomes common (or easy) to consider modified assemblages as being representative of the typical modified state – i.e. the criteria will be met most of the time.

The exposure draft in A (2), has changed in favour of the Beef + Lamb NZ submission. It notes representativeness that "It is not restricted to the best or most representative examples, and it is not a measure of how well that indigenous vegetation or habitat is protected elsewhere in the ecological district".

Original Submission – 118:

The EIANZ Guidelines has thresholds that mean the reference is the best of the remaining rather than pristine or common indigenous fauna.

Representativeness outlined in the **exposure draft A (2),** also includes degraded indigenous vegetation that is typical, which widens SNA representativeness criteria significantly.

Also **A (6) (b),** considerers representativeness to retain a moderate range of species expected in that habitat type and ecological district. Moderate is an ambiguous term, and it would require an understanding of an ecological district in enough detail to provide an assessment of the species composition against other similar habitats and then undertake a species richness assessment.

2.3. Diversity and Pattern Criterion

Original Submission – 119.

We submit that species diversity is a redundant attribute, as it is fully addressed by the representativeness criteria, as representative vegetation or habitats will have the appropriate species or community diversity.

The exposure draft in B (2). The submission point above is still valid. **Note however** this is unlikely to fundamentally change in the criteria document as we could assume as species diversity will be a key ecological principle for an SNA to be assessed against.

Original Submission – 120 – 124:

Ecotones and ecological gradients. This is a key point in the SNA submission and is still an issue in **(5) (b).** The exposure draft attribute here includes the presence of indigenous ecotones, complete or partial gradients or sequences. As all indigenous communities will contain gradients, sequences and ecotones, this simple statement could mean most of the landscape with indigenous vegetation becomes an SNA.

There is no mention of thresholds or criteria to assess the subjective 'ecotone' against. It appears the purpose of including ecotones as an attribute, is so that an SNA can be assessed against its ability to support biological diversity. Biological diversity is covered under other criteria, so if preservation of an ecotone is to support biological diversity, then "pattern" - **B (3)** and the attribute **(5) (b)** should be able to be removed.

In the **exposure draft (5) (a)** – The term 'moderate diversity' has been used, which is ambiguous and deviates away from the key term for SNAs which is 'significant'. How can we class a natural area as significant with 'moderate' diversity?

2.4. Rarity and Distinctiveness Criterion

There have been some changes to this criterion in the exposure draft.

Original Submission – 125 – 129:

C (6) (d) has shifted from:

- Indigenous vegetation that has been reduced to less than 30 per cent of its former extent in the ecological district, region, or land environment:
- Indigenous vegetation that has been reduced to less than 20 per cent of its pre-human extent in the ecological district, region, or land environment:

This change is somewhat of a nod in the direction of the Harding et al report as it picks up on the 20% vegetation cover. Fundamentally however it does not pick up on any level of significance that this criterion was designed to be applied to, namely 'threatened' or 'at risk' populations.

Applying this criterion will mean that 20% will be a catch all threshold that will capture nearly all indigenous vegetation in any ecological districts. Particularly those that are not dominated by conservation land. Meaning that it is likely that any indigenous vegetation in primary producing areas will become SNAs.

Original Submission – 130:

Items (g) and (i) have no foundation as significance criteria – "the presence of 'special ecological or scientific feature' or as a type location does not make the feature ecologically significant.

This statement still applies and is a succinct way to describe the problems with these two attributes. **(6) (f) and (6) (h)** are both human centric terms that will not support a measure of ecological significance.

Original Submission – 131.

Also, it is highly debatable that the type locality (item f) has any ecological relevance, it is simply the place where the species was first encountered by a scientist and collected as the reference specimen so has cultural/scientific value only. This attribute might be included as one aspect of a "special scientific feature" but has no basis for ecological significance in itself and does not contribute to achieving any of the NPSIB objectives.

This is now item **C (6) (g).** The B + L NZ comment still applies. This is a human centric approach that does not support any measure of ecological significance.

In addition:

- **C (6) (b)** The term indigenous vegetation or species that is uncommon within an ecological district is subjective and does not necessarily make it significant. Again, the species may not occur due to environmental gradients, making it uncommon but not particularly special.
- **C (6) (c)** A species at or near its distributional limit does not make that species 'significant' nor does it make the area that it was encountered 'significant'. Environmental gradients will determine these limits and the ecotone where these gradients exist could be very large. For example, species that occur commonly in high altitude in the Southern Alps may have a distributional limit the length of that mountain range. This is not only outside of any significance criteria but challenging to implement due the vast ecotone that that distributional limit presents.
- **C (6) (e)** There are 72 different types of naturally uncommon ecosystems. Some of these categories include seepage wetlands and ephemeral wetlands, both of which occur 'commonly' across New Zealand farmland. For this to be implemented a minimum SNA size will be needed.
- **C (6) (g)** Requires the subjective term of 'distinctive' to be understood and applied.
- **C (6) (1),** Also there has been a language change which mentions indigenous 'taxa' rather than 'species'. In this context they are fundamentally the same and common language would be helpful.

2.5. Ecological Context

Original Submission – 132:

Ecological context, as historically taught, had the meaning of 'the situation within which something exists, and that can help explain its presence and form'. During the development of criteria for significance for the NPSIB, this criterion has been reduced to the consideration of buffering, connectivity, provision of critical habitat, and provision of natural functions. It needs to revert to the ecological meaning.

Exposure draft D (1). The definition has not changed. So, this point is still highly relevant.

Original Submission – 133:

Being a buffer, if this is the only attribute that is scored, is not sufficient in and of itself to determine that a habitat is significant. It is unclear if this is relative to the significance of the ecosystem being buffered or an absolute/standalone value. If buffering is a standalone value, then exotic vegetation that provides buffering to an indigenous feature could meet this criterion and therefore be considered an SNA.

Exposure draft – Yes buffering is a standalone criterion in the exposure draft. This point remains valid, and buffering should be removed as a criterion. The amount of buffering an area has should not increase its significance, it will merely reduce the risk to that ecosystem from edge effect.

Again, there is a use of subjective language that is common throughout the criteria in appendix 1. This includes 'well buffered' in point **D (3) (b).** In order to understand if an area is 'well buffered' a relativity assessment of buffering of that SNA against all other SNAs in an ecological district will need to be made.

Original Submission – 134:

We submit that item (f) is superfluous. The habitat types listed as being "critical" simply refer, in effect, to habitat of an indigenous species which is provided for in both A4 b) and B5 a) and C6 a). The only other relevant aspect of habitat for fauna besides feeding, breeding, refuge and rest is migration or transit which will principally be via waterways or air, neither of which are covered by the NPSIB (except in consideration of climate change).

In the exposure draft both D (3) (e) and (f) have been removed.

Additionally:

- **D (3) (a)** – "moderate size" and 'compact shape" are used. This is subjective but the intent is to recognise that larger and more compact SNAs will have less edge effect and be more resilient. These points however seem superfluous in the scheme of the other assessment criteria.
- **D (3) (b)** – "well buffered' is used. This term is too subjective. Also, how would councils or ecologists understand the relatively of buffering for all SNAs in an ecological district?
- **D (3) (c)** – 'partial buffer' is used. How can that be defined and assessed appropriately? Vegetation as a link between habitats makes some sense, but partial buffer does not.

2.6. Key points

- Ecologist reporting
    - We expect there will be capability issues for ecologists tasked with assessment and reporting. The number of ecologists sufficiently specialised to undertake this work is limited.
    - The definition of an Ecologist is not defined
- Ecological terms that are not defined and are subjective
    - Ecological integrity
    - Ecosystem integrity is defined in the literature as: the system's capacity to maintain structure and ecosystem functions using processes and elements characteristic for its ecoregion (Dorren et al., 2004).
    - How many ecologists could make this assessment?
    - Typical indigenous fauna
- The criteria are not well aligned with the recommendations of the Biodiversity Collaborative Group
- Static state
    - Ecosystems by their very nature change. This is not accounted for in the NPSIB.
- Size
    - No size criteria. A 1 x 1 m wetland could be captured, as well as a single tree.
- Thresholds
    - Are extremely low and do not align with the word significant. It appears that all native vegetation will become an SNA as well as much of the exotic vegetation. Given the criteria, most areas whether they have native or exotic vegetation can be justified as an SNA, through a buffer, corridor, degraded but representative examples and critically triggering habitat that is less than 30% prehuman.