BEFORE THE HEARING PANEL

Under	**the Resource Management Act 1991**
And	
In the matter of	**the Proposed Kaipara District Plan**, **Ecosystems and Indigenous Biodiversity chapter**
By	Kaipara District Council

Evidence of Ilse Corkery

(Effects Management)

For the Director-General of Conservation / Tumuaki Ahurei

Submitter Number: 304

Dated: 22 May 2026

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Introduction

1. My full name is Ilse Corkery.

2. I have been asked by the Director-General of Conservation (DG) to provide ecological/technical evidence demonstrating that a robust effects management hierarchy represents the most appropriate and effective approach to meeting obligations under the Resource Management Act 1991 (RMA), and for giving effect to the proposed objectives and policies within the Ecosystems and Indigenous Biodiversity Chapter of the Proposed Kaipara District Plan.

Qualifications and experience

3. I am employed by the Department of Conservation (DOC), as a Senior Science Advisor, based in Whangarei. I have worked for DOC since July 2018. Before that I worked for RaptorLIFE in Ireland as a Senior Project Scientist, researcher at University College Cork investigating the impacts of plantation forestry on native bird species, and lecturer in Biodiversity Management at NorthTec, where I taught courses such as “New Zealand Conservation,” “Conservation Management,” and “Environmental Management.”

4. I have experience in providing expert guidance on resource consents, regional and district planning processes, and other statutory frameworks. In this capacity, I review ecological assessments, conservation strategies, and mitigation measures for fauna, ensuring alignment with both statutory requirements and best-practice conservation outcomes and have presented expert evidence at both council hearings and the Environment Court.

5. My qualifications are a BSc (Hons) in Zoology from University College Cork, Ireland (2006), and a PhD in Ecology from Victoria University of Wellington (2012).

6. Currently, I am involved in the development of an innovative biodiversity offsetting and compensation tool, which is an accounting model and user

interface designed to address global challenges in biodiversity loss. This project has already resulted in two published manuscripts, with another underway and has sparked critical dialogue around the standards and effectiveness of biodiversity offsetting practices in Aotearoa.

7. I have previously provided evidence on district plans including Waikato District Plan, Waikato Regional Plan Change, Hamilton City Council Peacocke Structure Plan. I have also provided evidence on effects management for developments such as Dome Valley, Waihi North Mine by Oceania Gold and Glorit Solar Farm by Transpower.

Code of Conduct

8. While this is a council hearing, I confirm that I have read the code of conduct for expert witnesses as contained in clause 9 of the Environment Court's Practice Note 2023 (the Code). I have complied with the Code when preparing my written statement of evidence.

9. For the avoidance of doubt, in providing this evidence as an expert witness in accordance with the Code, I acknowledge that I have an overriding duty to impartially assist the Panel on matters within my area of expertise. The views expressed are my own expert views, and I do not speak on the DG's behalf.

10. The data, information, facts and assumptions I have considered in forming my opinions are set out in my evidence to follow. The reasons for the opinions expressed are also set out in the evidence to follow. This includes, where relevant:

    a. why other alternative interpretations of data are not supported;

    b. any qualification if my evidence may be incomplete or inaccurate without such qualification;

    c. any knowledge gaps and the potential implication of the knowledge gap;

    d. if my opinion is not firm or concluded because of insufficient research or date or for any other reason; and

e. an assessment of the level of confidence and the likelihood of any outcomes specified in my conclusion.

11. Unless I state otherwise, this evidence is within my sphere of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Scope of evidence

12. I have been asked to provide evidence in relation to the proposed Kaipara District Council Plan Ecosystems and Indigenous Biodiversity Chapter and the DG's submission (304) and further submission (FS45).

13. My evidence addresses effects management.

Material Considered

14. In preparing my evidence I have relied on the evidence of Mr Ronan Whitelock, Dr Tony Beauchamp and Dr Andrew Townsend.

15. I have read the following:

a. National Policy Statement on Indigenous Biodiversity (NPS-IB);

b. The Northland RPS;

c. The Ecosystems and Biodiversity chapter of the proposed Kaipara District Plan (pKDP);

d. Summaries of the section 42A report; and

e. the DG's submissions.

Introduction

16. The DG's submission seeks amendments to the Proposed Kaipara District Plan to ensure that it adopts a clear and robust framework for managing adverse effects, consistent with the most up-to-date national direction in the National Policy Statement for Indigenous Biodiversity 2023, Amended December 2025 (NPS-IB).

17. The purpose of this evidence is to provide expert opinion on the management of adverse effects on indigenous biodiversity, with a particular focus on the application of the effects management hierarchy and the treatment of residual effects arising from proposed development.

Use of NPS-IB wording and the effects management hierarchy

18. The NPS-IB provides the most recent, directive, and nationally consistent framework for managing adverse effects on indigenous biodiversity. As a higher-order national instrument, it reflects current scientific understanding, policy intent, and legislative direction under the RMA reform context.

19. While the Northland Regional Policy Statement 2016 (RPS) contains provisions relating to biodiversity protection, it pre-dates the NPS-IB by 7 years (or 9 years with the 2025 amendment version) and does not incorporate the same level of specificity, structure, or definitional clarity, particularly in relation to offsetting, compensation, and the full effects management hierarchy.

20. In my view, reliance on the RPS alone (as suggested in the s42A report, e.g. paras 122, 123, and 129) introduces a material risk that the District Plan will:

    a. apply an incomplete or simplified version of the effects management hierarchy;

    b. lack clear thresholds for when offsetting or compensation is appropriate; and

    c. fail to give full effect to current national direction, particularly in relation to managing residual effects.

21. This is evident in the s42A report writer's conclusion that incorporating the NPS-IB hierarchy would "add unnecessary complexity" (para 129). I disagree with that conclusion. The additional detail in the NPS-IB does not create unnecessary complexity; rather, it provides essential clarity and discipline in decision-making. Without it, there is a greater risk that:

a. steps in the hierarchy are applied inconsistently or out of sequence;

b. offsetting is used prematurely; and

c. significant adverse effects are not appropriately avoided.

The necessity for a clear and complete effects management hierarchy

22. The NPS-IB sets out a well-defined effects management hierarchy that explicitly applies both within and outside Significant Natural Areas (SNA). Clause 3.16 illustrates that broader application. This directly contradicts the implication in the s42A report that the hierarchy is primarily linked to SNA provisions. And my evidence clearly demonstrates an improved approach using this hierarchy.

23. Incorporating this hierarchy into the proposed District Plan is critical to ensuring that:

    a. avoidance is prioritised, particularly for significant biodiversity values;

    b. minimisation and remediation are meaningfully implemented; and

    c. offsetting and compensation are clearly framed as last-resort measures.

24. In contrast to Mr Townsend's conclusion that while the two documents differ in their approach to determining ecological significance, the results will be similar, see (Mr Townsend evidence, Appendix A), in my opinion the RPS provisions for effects management, while directionally similar, do not provide the same explicit sequencing, thresholds, or supporting definitions, particularly in relation to:

    a. what constitutes a residual adverse effect;

    b. when offsetting is appropriate or inappropriate;

    c. when compensation is appropriate or inappropriate; and

    d. the distinction between offsetting and compensation (see below Table 1.).

Table 1: Comparison of NPS-IB and RPS-Northland Effects Management Approach

Topic	NPS-IB (2023)	Regional Policy Statement (RPS) for Northland
Effects management – definition/framework	**Location:** Definitions section 1.6. Hierarchy: avoid → minimise → remedy → offset → compensate; if not possible → avoid activity. **Implication:** Strong avoidance-first framework supports no net loss.	No definition of effects management hierarchy. Framework for *sustainable management*: includes "avoiding, remedying, or mitigating….". **Location:** Section 1.2. **Implication:** Less directive → potentially weaker protection, more residual loss risk.
Effects management – implementation guidance	**Location:** Appendix 3 Requirement to demonstrate sequenced progression through hierarchy. **Implication:** Consistent and ecologically robust outcomes.	**Location:** Distributed throughout Avoid, remedy or mitigate adverse effects …so they are no more than minor … No strict sequencing; discretionary balancing. **Implication:** Variable outcomes, cumulative effects risk.
Offsetting – definition	**Location:** Definitions section 1.6. Includes "measurable, part of mitigation hierarchy, delivers net gain". **Implication:** Enables structured net gain approach.	**Location:** Glossary. Includes "measurable, to counter residual adverse effects". **Implication:** Does not ensure no net loss or net gain occurs.

Topic	NPS-IB (2023)	Regional Policy Statement (RPS) for Northland
Offsetting – implementation guidance	**Location:** Appendix 3 11 principles apply to offsets. **Implication:** Improves likelihood of biodiversity equivalence or gain.	**Location:** Glossary 9 principles listed – does not include transparency, scientific rigour or tangata whenua and stakeholder participation. **Implication:** No safeguards for quality or equivalence of offsets.
Compensation – definition	**Location:** Definitions section 1.6. Defined as conservation outcome after all mitigation hierarchy steps have been sequentially applied. **Implication:** Acknowledges limits but retains structured response.	**Location:** Glossary. Defined as measurable outcomes resulting from actions designed to provide new positive effects to counter residual adverse effects. **Implication:** No guidance about its placement within, and dependency on, the hierarchy
Compensation – implementation guidance	**Location:** Appendix 4. 13 principles listed Last resort; if inappropriate → activity avoided. **Implication:** Creates hard bottom line for biodiversity protection.	**Location:** Glossary. 8 principles listed. Does not discuss where may not be appropriate. **Implication:** Residual effects may be accepted without clear limits.

25. This lack of clarity with the RPS approach creates implementation risk at the district level, where decisions on individual resource consent applications are made. In practice, this can lead to incremental biodiversity loss, even where policies appear to align broadly with higher-level intent.

26. A theoretical example of the practical implications of this uncertainty arises in the context of wetland loss affecting threatened species such as the Australasian bittern (*Botaurus poiciloptilus*, matuku hūrepo), a Nationally

Critical[1], species of regional concern (see Dr. Beauchamp, evidence paragraph 39).

27. For instance, a resource consent application may seek to drain or infill a substantial portion of a wetland that provides known bittern breeding habitat. While some avoidance and mitigation measures may be proposed, such as retaining a small remnant area, undertaking works outside the breeding season, and implementing predator control, these would not address the fundamental loss of habitat extent, connectivity, and ecological function.

28. In the absence of clear direction on what constitutes a residual adverse effect, decision-makers may accept that remaining effects are “minor to moderate”, even where most of the functional habitat for a threatened species is removed. Similarly, without explicit thresholds identifying when offsetting is inappropriate, biodiversity offsetting may be proposed and accepted, for example through restoration of a different wetland elsewhere. However, such measures may not be like-for-like, may involve significant time lags before ecological values are realised, and may not support the affected bittern population.

29. Where the distinction between offsetting and compensation is not clearly defined, these measures may be treated as offsets despite not maintaining ecological equivalence. The result is that the local breeding population may be lost or significantly reduced, with replacement gains uncertain or delayed.

30. This illustrates how, in the absence of a clear and enforceable effects management hierarchy with defined thresholds and limits, individual resource consent decisions can collectively result in incremental loss of significant indigenous biodiversity, even where the overall policy framework appears to broadly align with higher-level direction.

[1] Robertson, H.A., Baird, K.A., Elliott, G., Hitchmough, R., McArthur, N., Makan, T., Miskelly, C., O'Donnell, C.F., Sagar, P.M., Scofield, R.P. and Michel, P., 2021. *Conservation status of birds in Aotearoa New Zealand, 2021*. Wellington, New Zealand: Department of Conservation, Te Papa Atawhai.

Offsetting and compensation – need for clear definitions and limits

31. A key strength of the NPS-IB is that it provides clear, operational definitions of biodiversity offsetting and compensation, including their purpose and limitations. These distinctions are critical.

32. Offsetting is intended to address residual adverse effects that remain after all practicable steps in the hierarchy have been taken, and only where those effects can be appropriately counterbalanced. Offsetting is not intended to enable development to proceed where significant adverse effects could reasonably be avoided.

33. Compensation, by contrast, is explicitly recognised as a less certain and less preferred measure, to be used where offsetting is not possible. Treating these as interchangeable, can occur under more general RPS-style wording, undermining the integrity of the hierarchy.

34. Without adopting the NPS-IB definitions and structure, there is a real risk that:

    a. offsetting is applied to impacts that should have been avoided;

    b. offsetting and compensation are used without clear limits; and

    c. outcomes fall short of maintaining indigenous biodiversity.

Maintenance of biodiversity and "no overall loss"

35. The s42A report suggests that "no net loss" (or "no overall loss") is not appropriate to include at the district level, on the basis that it is a national concept (Appendix D, para 157 discussion).

36. I do not agree with this interpretation. The concept of maintaining indigenous biodiversity, as articulated in the NPS-IB, cannot be achieved solely through a national-level balancing approach.

37. If applied in that way, it would theoretically allow for localised biodiversity loss within districts such as Kaipara, provided gains occur elsewhere nationally. This outcome would be inconsistent with:

    a. the purpose of district plans; and

b. the intent of the NPS-IB to maintain biodiversity in situ and across all spatial scales (see Mr Whitelock evidence, paragraph 45).

38. Incorporating “no overall loss” (or equivalent maintenance language) at the district level as proposed by Mr Whitelock in ECO-02 is therefore necessary to ensure that biodiversity loss is not displaced geographically, and that local ecological values are properly safeguarded.

39. The NPS-IB establishes a set of clear principles (Appendix 3) that must be met for biodiversity offsetting to be considered appropriate, with a strong emphasis on maintaining or improving ecological outcomes relative to the existing environment. Central to these is the principle of net gain, which requires that an offset delivers a measurable improvement in indigenous biodiversity outcomes above the baseline state that would have existed without the offset. This goes beyond simply replacing what is lost; it requires that any residual adverse effects are more than counterbalanced, resulting in an overall positive biodiversity outcome that reflects ecological integrity, species composition, habitat condition, and long-term functionality.

40. Closely linked to this is the requirement for ecological equivalence, often described as achieving “like-for-like or better” outcomes. Offsets are expected to relate to the same type of ecosystem, habitat, or species values that are affected, and to reflect the attributes of the existing environment. This ensures that net gain corresponds to genuine ecological improvement. For example, the loss of a rare wetland supporting a threatened species cannot be appropriately addressed through restoration of a more common habitat elsewhere. Offsets must also address time lags, uncertainty, and risk of failure, which may necessitate greater gains to ensure outcomes are achieved in practice, particularly where ecological values are difficult or slow to re-establish.

41. Taken together, these principles establish a high threshold for biodiversity offsetting under the NPS-IB, ensuring it is applied in a constrained and ecologically robust manner. This framework requires that any offset delivers demonstrable and enduring benefits, maintains or enhances the

specific biodiversity values affected, and properly accounts for risk and temporal delays.

Conclusion

42. In summary, I consider that the proposed Kaipara District Plan should:

    a. directly incorporate the wording and structure of the NPS-IB, rather than relying primarily on the Northland RPS;

    b. include the full effects management hierarchy, with explicit sequencing and application;

    c. adopt clear definitions and limits for biodiversity offsetting and compensation; and

    d. reflect the requirement to maintain indigenous biodiversity, including at the district scale.

43. These changes would provide greater certainty, improve implementation, and ensure that the Kaipara District Plan gives proper effect to the most up-to-date national policy direction, while reducing the risk of incremental biodiversity loss over time.

Ilse Corkery

DATED this 22 day of May 2026