

BEFORE THE HEARING PANEL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of Proposed Plan Change 5 to the Operative Hamilton
City District Plan

**STATEMENT OF EVIDENCE OF GERARDUS HENRICUS ANTHONIUS KESSELS
(ECOLOGY)**

Dated 2 September 2022

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INTRODUCTION

1. My full name is Gerardus (**Gerry**) Henricus Anthonius Kessels.
2. I hold a Bachelor of Science degree majoring in zoology (completed in 1988) and a Master of Resource and Environmental Planning (1st class honours, on wetland ecology - completed in 1999), both from Massey University. I am an accredited Independent Hearings Commissioner certified by the Ministry for the Environment and Local Government New Zealand.
3. I have 32 years' experience in the fields of ecology and resource management planning. I have been the managing director and principal ecologist of Kessels & Associates Limited since 1999 (trading as Kessels Ecology until 2018, and now trading as Bluewattle Ecology 2019-2022).
4. Prior to this, I held the following roles:
 - a) My initial role was with the Department of Conservation (**DOC**) as a Conservation Officer at Mount Bruce Wildlife Reserve and then as a Conservation Officer – Protected Species with the Waikato Conservancy.
 - b) From the end of 1994 until the end of 1999 I worked for the Hamilton and Napier offices of Works Consultancy Services/Opus International Consultants as an ecologist.
 - c) I was employed as a Principal Ecologist for Tonkin and Taylor Limited for 16 months in 2018/2019.
5. I am a member of the New Zealand Ecological Society, the Ornithological Society of New Zealand, the Waikato Botanical Society, and an affiliate member of the New Zealand Planning Institute. I am certified with 'Bat Competency' by DOC as being suitably qualified to undertake and analyse

data for bioacoustic surveys (using acoustic bat monitors (**ABM**)), identify long-tailed bat roosts and capture and handle long-tailed bats.

6. I am a generalist ecologist with experience in assessing the conservation significance of natural habitats, assessing the ecological effects associated with infrastructure, policy development relating to the potential ecological implications of land use and biodiversity offsetting. I have a broad background of relevant experience in threatened species management, ecosystem monitoring/evaluation and conservation management.
7. I have been surveying, assessing and managing indigenous flora and fauna and their habitats since 1990, including:
 - a) Undertaking threatened species captive breeding management and research;
 - b) Assisting with onshore and offshore island pest control programmes;
 - c) Assisting with the monitoring and active management of a number of threatened species, such as kakapo, North Island kokako, kiwi and long-tailed bats; and
 - d) Ecological impact assessments, and restoration and management plans.
8. I have also undertaken ecological impact assessments and assisted with policy development pertaining to indigenous flora and fauna and their habitats and biodiversity under the Resource Management Act 1991 (**RMA**) for a wide variety of development and biodiversity enhancement projects. I have undertaken this work for various organisations including Waka Kotahi, DOC, territorial authorities, rural landowners, rural and residential subdivision companies, non-profit conservation organisations and infrastructure companies.

9. I have been involved in assessing significant natural areas (**SNAs**) and assisting in biodiversity policy and regulation analysis/development for territorial authorities, primarily under the provisions of section 6(c) and sections 30 and 31 of the RMA. Local and regional authorities that I have assisted in this process since 1993 include: Hauraki District Council; Franklin District Council; Papakura District Council; Ruapehu District Council; Waikato Regional Council (**WRC**); Auckland Regional Council; Auckland City Council; Auckland Council; Kapiti Coast District Council; Waipa District Council; Waitomo District Council; Waikato District Council; Central Hawkes Bay District Council; Thames-Coromandel District Council and Hamilton City Council (**HCC** or **Council**).
10. More recently I have provided independent advice and been involved in specialist workshops to the Ministry of the Environment and DOC on the development of the National Policy Statement for Indigenous Biodiversity (**NPS-IB**) at the request of the Associate Minister for the Environment (Hon. James Shaw). I have authored several reports for WRC, district councils and central government with regard to section 6(c) matters of the RMA, including peer review of the 2002 and 2019 WRC guidelines for determining ecological significance and the Local Government NZ “Action Bio-Community” initiative¹.
11. I have been involved in the development and application of ecological offsetting and compensation measures for private developers, large energy generation providers, district councils and Local Government NZ. In 2010 I was part of the specialist team which provided input into the development of the DOC biodiversity offsetting guidelines². I am a co-author of the NZ

¹ Kessels, G. (2004). Action Bio—Community Common Ground Local In Search Of The Right Mix An investigation of tools for biodiversity management. Kessels & Associates Ltd for Local Government NZ

² “Guidance on biodiversity offsetting in New Zealand”; <https://www.doc.govt.nz/about-us/our-policies-and-plans/guidance-on-biodiversity-offsetting/>

Local Government report: 'Biodiversity Offsetting in New Zealand – Guidance for Local Government Decision Makers.'³

MY INVOLVEMENT IN THIS PROJECT

12. I have undertaken many ecological surveys, assessments and provided technical advice and reviews for HCC throughout my professional career, including the following examples:
- a) I was principal review ecologist retained by HCC for the HCC designation and WRC consenting phase for Southern Links arterial roading project. I presented evidence and assisted Council in the preparation of recommended consent conditions as part of staff's section 42A report;
 - b) I have undertaken ecological assessments, mitigation and monitoring of several large and small residential subdivisions in Hamilton, including Somerset and St James Park;
 - c) I have reviewed the ecological aspects of the Ruakura Development Plan on behalf of HCC during the consenting phase;
 - d) I was retained by HCC to assist with ecology aspects of policy and rule development and responses to submitters for the Operative Hamilton District Plan;
 - e) I have project managed, peer reviewed, and been involved in numerous bat surveys throughout Hamilton (and the North Island

³ Maseyk, F., G. Ussher, G. Kessels, M. Christensen, M. Brown (nee Doole). (2018). Local government guidance for Biodiversity Offsetting under the Resource Management Act. Prepared for the Biodiversity Working Group on behalf of the BioManagers Group.; <https://www.lgnz.co.nz/assets/Uploads/7215efb76d/Biodiversity-offsetting-under-the-resource-management-act-full-document-....pdf>

generally), as well as project managing two city-wide bat surveys on behalf of Project Echo, DOC, HCC, and WRC⁴; and

- f) I was part of the HCC team of ecologists providing recommendations and evidence for the 'Amberfield' subdivision consent application within the Peacocke Structure Plan area (**PSPA**)⁵, and subsequently peer reviewed the various ecological management plans related to this subdivision on behalf of HCC.
13. I originally provided ecological advice to HCC for the Peacocke Structure Plan in 2009. More recently (2018-2022) in conjunction with Dr Baber, Dr Mueller and Dr Davidson-Watts, I have provided technical reports to HCC presenting methods, analysis and recommendations for long-tailed bats and their habitats, ecological effects management guidelines, and a process to assess and protect SNAs for proposed Plan Change 5 (**PC5**).
14. During this period I have working closely with the Council team to provide advice on ecological and section 6(c) matters. I have attended a number of meetings and workshops with key stakeholders, including expert ecologists and planners from DOC and WRC where we presented and discussed, in some detail, the methodologies and outcomes of the technical ecology reports, such as mapping of SNAs, and biodiversity offsetting and compensation approaches.

CODE OF CONDUCT

15. I have read the Environment Court Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2014 and agree to comply with it. I confirm that the opinions expressed in this statement are

⁴ For example Le Roux D.S. and Le Roux N.S. 2012: Hamilton City Bat Survey 2011-2012. Report prepared by Kessels & Associates Ltd for Project Echo (project partners: Waikato Regional Council, The University of Waikato, Hamilton City Council, Department of Conservation, Waikato Tree Trust). 22 pp.

⁵ *Weston Lea Limited v Hamilton City Council* NZEnvC 189.

within my area of expertise except where I state that I have relied on the evidence of other persons. I have not omitted to consider materials or facts known to me that might alter or detract from the opinions I have expressed.

SCOPE OF EVIDENCE

16. My evidence, presented on behalf of HCC as proponent of PC5, summarises the key aspects of the following technical ecological report:
- a) PSPA Long-tailed Bat report - Appendix J to the PC5 Assessment of Environmental Effects (**AEE**) (**LTBR**)⁶;
 - b) PSPA Preliminary Assessment of Ecological Effects report – Appendix K to the PC5 AEE (**PAEER**)⁷;
 - c) PSPA Assessment of Ecological Significance report – Appendix L to the PC5 AEE (**AESR**)⁸; and
 - d) Plan Change 5 Technical Ecology Report (**TER**) dated 31 August 2022 which is appended to my evidence as **Attachment 1**.
17. In addition, I expand on matters pertaining to the process leading to the development of the core aspects of the ecological recommendations in these reports, particularly section 6(c), and to a lesser extent sections 6(a) and 7(d), of the RMA, as they relate to the updated PC5 provisions.

⁶ Peacocke Structure Plan Assessment of Environmental Effects - Appendix J, Peacocke Structure Area Plan Change Long-tailed bat report, 4Sight 4 June 2021.

⁷ Peacocke Structure Plan Assessment of Environmental Effects - Appendix K, Preliminary Assessment of Ecological Effects, Tonkin+Taylor, July 2021.

⁸ Peacocke Structure Plan Assessment of Environmental Effects - Appendix L, Peacocke Structure Plan Area: Ecological Significance Assessment, Tonkin+Taylor, July 2021

18. While I am conversant, and suitably qualified and experienced on the other ecological aspects of PC5 and ecological matters raised by submitters, I rely on the detailed analysis in the technical reports listed above and the evidence of Dr Mueller and Dr Baber to address these matters. I am in agreement with their evidence in this regard.

EXECUTIVE SUMMARY

19. The natural values of the PSPA were assessed using best practice guidelines to assess ecological significance using the Waikato Regional Policy Statement (**WRPS**) criteria for determining significance of indigenous biodiversity set out in Table 11-1 of the WRPS. If an area meets one or more of these eleven criteria it is considered to be ecologically significant. These identified areas now collectively include habitats of significant indigenous fauna, as well as significant indigenous vegetation and significant wetlands. These areas have been mapped as SNAs in PC5.
20. The Significant Bat Habitat Areas (**SBHAs**) mapped in PC5, given effect by the Natural Open Space Zone (**NOSZ**) and the relevant provisions of PC5 are central to achieving a linking network between the identified SNAs, particularly of the Mangakōtukutuku Gully, its tributaries, the Waikato River, other significant indigenous fauna habitats within HCC, and in the surrounding districts of Waipa and Waikato.
21. While parts of the SBHAs and the overarching area may not exhibit any obvious ecological values at present, they are essential to protecting the SNAs by providing space for restoration and recreation of habitats required to maintain and enhance biodiversity values in the PSPA as the area is urbanised. Criterion 11 of Table 11-1 the WRPS criteria⁹ provides a

⁹ "It is an area of indigenous vegetation or habitat for indigenous species (which habitat is either naturally occurring or has been established as a mitigation measure) that forms, either on its own or in combination with other similar areas, an ecological buffer, linkage or corridor and which is necessary to protect any site identified as significant under criteria 1-10 from

pathway to recognise and incorporate the SBHAs, the Bat Habitat Buffers and the 5 m development setback as described in the LTBR.

22. These areas have been applied in PC5 for protecting indigenous fauna habitats and corridors, particularly (but not exclusively) for long-tailed bats.
23. Subject to the updated proposed provisions being amended in line with the recommended changes set out in the TER, and further elaborated in my evidence below and that of Dr Mueller and Dr Baber, I am supportive of PC5 as it relates to ecological matters.

TECHNICAL REPORTS

24. The focus of my evidence is on how PC5 gives effect to section 6(c) of the RMA. The LTBR, the AESR and the TER detail the methodology, analysis and recommendations pertaining to SNAs and other mechanisms, which when combined, provide protection of significant indigenous vegetation and significant habitats of indigenous fauna with the PSPA.
25. The ecological significance assessment methodology and outcomes are detailed more fully in the AESR, and summarised in the TER. The analysis has identified a large increase in extent and area of ecologically significant habitats compared to those identified as SNAs in the Operative District Plan. The natural values of the PSPA were assessed using best practice guidelines to assess ecological significance using the WRPS criteria for determining significance of indigenous biodiversity set out in Table 11-1 of the WRPS, including application of best practice guidelines and qualifying threshold criteria as detailed in the AESR. If an area meets one or more of these eleven criteria it is considered to be ecologically significant. These identified areas now collectively include habitats of significant indigenous

external adverse effects.” Operative Waikato Regional Policy Statement - Te Tauaki Kaupapahere Te-Rohe O Waikato.

fauna, as well as significant indigenous vegetation and significant wetlands. These areas have been mapped as SNAs in PC5¹⁰.

26. The SBHAs mapped in PC5, given effect to by the NOSZ and the relevant provisions of PC5 are central to achieving a linking network between the identified SNAs, particularly of the Mangakōtukutuku Gully, its tributaries, the Waikato River, other significant indigenous fauna habitats within Hamilton City, and in the surrounding districts of Waipa¹¹ and Waikato¹².
27. While parts of the SBHAs may not exhibit any obvious ecological values at present they are essential to protecting the SNAs by providing space for restoration and recreation of habitats required to maintain and enhance biodiversity values in the PSPA as the area is urbanised. Criterion 11 of Table 11-1 the WRPS criteria¹³ provides a pathway to recognise and incorporate the SBHAs, the Bat Habitat Buffers and the 5 m development setback as described in the LTBR and AESR. These areas have been applied in PC5 for protecting indigenous fauna habitats and corridors, particularly (but not exclusively) for long-tailed bats in our recommendations to HCC. The scientific justification of these areas, their widths and locations is discussed in more detail in the LTBR and the AESR.
28. In particular, Section 4.2 of the LTBR provides rationale for the SBHAs (bat corridors) and the Bat Habitat Buffers (buffers to high value bat habitats). In summary high value bat buffers and bat corridors will retain connectivity

¹⁰ Note that ground truthing has not been undertaken as part of the AESR, however, best available data and literature has been used to determine these areas.

¹¹ Deichmann, B., & Kessels, G. 2013. Significant Natural Areas of the Waipa district: Terrestrial and wetland ecosystems (Waikato Regional Council Technical Report TR 2013/16). Prepared by Kessels & Associates Ltd for Waikato Regional Council.

¹² Van der Zwan, W., Kessels, G., Deichmann, B., Purcell, A. 2017. Significant natural areas of the Waikato District: terrestrial and wetland ecosystems. Waikato Regional Council Technical Report 2017/36, Kessels Ecology for Waikato Regional Council, Hamilton.

¹³ "It is an area of indigenous vegetation or habitat for indigenous species (which habitat is either naturally occurring or has been established as a mitigation measure) that forms, either on its own or in combination with other similar areas, an ecological buffer, linkage or corridor and which is necessary to protect any site identified as significant under criteria 1-10 from external adverse effects." Operative Waikato Regional Policy Statement - Te Tauaki Kaupapahere Te-Rohe O Waikato.

and over time create core habitat for bats in the PSPA. In terms of buffer and corridor habitat, for both enhancement of existing or recreation of new habitat areas, the most important general principle is that wide swathes of land are required to be set aside as bat habitat in order to retain a permeable and functioning landscape for long-tailed bats. Dark buffer zones may be used for hard and soft amenity use and landscaping, provided that this use does not compromise the functioning and maintenance of the high value bat habitat it protects.

29. In terms of determining buffer and corridor widths for long-tailed bats, studies in Hamilton show that without any bespoke design measures a minimum width of 100 m appears to be an optimum width to retain use of gully systems in Hamilton by long-tailed bats (Le Roux and Le Roux 2012). Nonetheless, in Sandford Park and Hammond Park (both adjacent to the PSPA, bats continue to use the vegetation in these areas for roosting and foraging, even when only 20-50 m from the nearest houses. The structural characteristics of the vegetation in these areas are important for the bat's ability to use them. Ideally, the vegetation within these areas is mature and dense (and comprise of either exotic or native trees and shrubs), and there is an inter-laced network of mature corridors of trees, with open grass parkland, wetlands or low shrubland 'glades' interspersed between. With bespoke planting design and artificial lighting control measures (as discussed in section 4.2.2 of the LTBR), a corridor width of 50 m is considered to be adequate (shown to be 50 m with 5 m building setback on either side, in Figures 7 and 8 of the LTBR).
30. Buffer widths are dependent on the adjacent land use, including lighting controls and topography. A minimum width of 20 m from the edge of high value habitats, including buffer planting devoid of large infrastructure, such as buildings and roads would likely be effective at maturity. A further set back of 5 m from the edge of this buffer to buildings is also recommended, giving a total effective buffer width of 25 m. For communal bat roosts a

minimum buffer of 50 m is appropriate and reflects the current situation at Sandford Park. A buffer of 25 m is likely to be appropriate for non-communal bat roosts (section 4.2.1 LTBR).

31. While ecologists do not completely understand how long-tailed bats are able to persist in highly modified and largely exotic landscapes of southern Hamilton, my view is that we cannot miss facilitating opportunities to allow long-tailed bats to remain in this locality, as well as protect and restore other biodiversity values, as urbanisation expands into the PSPA (e.g. Wallace and Clarkson 2019; Norton et al., 2016; Clarkson et al 2007)¹⁴. The evidence shows that the mapped SNAs and SBHAs of PC5, while often currently dominated by exotic vegetation, are nonetheless important habitats for a range of native fauna species, as well as supporting remnant wetlands and indigenous forests (see the LTBR and AESR for example).
32. As outlined in the LTBR and AESR, where we have not assigned areas as high value habitat for bats, essentially the remaining areas of the PSPA (aside from human-made structures such as building and roads), are likely to provide 'low' or 'moderate' value habitats for bats. Protecting and providing provisions for the restoration and recreation of higher quality habitats in the SBHAs and Bat Habitats Buffers (incorporated within the NOSZ of PC5), gives effect to criterion 11 of the WRPS.
33. International literature is supportive of this approach. Urban environments are subject to extensive modification of environmental gradients, which has led to novel urban ecosystems requiring unique

¹⁴ Wallace, K. J., & Clarkson, B. D. (2019). Urban forest restoration ecology: a review from Hamilton, New Zealand. *Journal of the Royal Society of New Zealand*. doi:10.1080/03036758.2019.1637352;

Norton, D. A., Young, L. M., Byrom, A. E., Clarkson, B. D., O', P., Lyver, B., Mcglone, M. S., & Waipara, N. W. (2016). How do we restore New Zealand's biological heritage by 2050? *Ecological Management & Restoration*, 17(3), 170–179.

Clarkson, B. D., Wehi, P. M., & Brabyn, L. K. (2007). A spatial analysis of indigenous cover patterns and implications for ecological restoration in urban centres, New Zealand. *Urban Ecosystems*, 10(4), 441-457. doi:10.1007/s11252-007-0035-6

approaches to protection and restoration of them (Klaus & Kiehl, 2021)¹⁵. Cities have historically been the terrestrial environments most drastically altered from their natural states (Kellert, 2016; Richardson & Butler, 2022)¹⁶. Although cities cover approximately 3% of the Earth's land surface, they are often centred around biodiversity hotspots, leading to exacerbated biodiversity losses (Kowarik, 2011)¹⁷.

34. Hamilton City is no different. Within Hamilton City, 99.9% of land environments are referred to as 'Threatened Environments' at a national level¹⁸, with the majority (84.7%) identified as "Less than 10% of indigenous cover remaining with no legal protection" (Montemezzani, 2022)¹⁹.
35. Despite these losses, cities are a vital avenue to ameliorate ecological resilience and restoration goals because of the collective efforts and ambitions of highly populated societies (Ahern, 2016)²⁰.
36. Providing opportunities for ecological restoration will maintain and bring back native fauna species (see section 4.1 of the LTBR). Successful and ongoing restoration initiatives by a number of private landowners and community groups within the PSPA, and by others (including HCC and developers) in Hamilton City generally, exponentially increase the rate of biodiversity gains both spatially and temporally. In my experience community engagement is central to achieving biodiversity gains, and

¹⁵ Klaus, V. H., & Kiehl, K. (2021). A conceptual framework for urban ecological restoration and rehabilitation. *Basic and Applied Ecology*, 52, 82–94.

¹⁶ Kellert, S. (2016). Biophilic urbanism: the potential to transform. *Smart and Sustainable Built Environment*, 5(1).; Richardson, M., & Butler, C. W. (2021). Nature connectedness and biophilic design. *Building Research & Information*, 50(1-2), 36-42.

¹⁷ Kowarik, I. (2011). Novel urban ecosystems, biodiversity, and conservation. *Environmental Pollution*, 159(8–9), 1974–1983.

¹⁸ The Threatened Environment Classification 2012 combines Land Environments of New Zealand (LENZ; Leathwick et al., 2002), the land cover classes of the fourth Land Cover Database (LCDBv4.0) and the protected areas network, identifying legally protected areas for the purpose of natural heritage protection.

¹⁹ Montemezzani, W. (2022). Significant Natural Areas of Hamilton City District: Terrestrial and Wetland Ecosystems. 4Sight Consulting for Hamilton City Council.

²⁰ Ahern, J. (2016). Novel urban ecosystems: Concepts, definitions and a strategy to support urban sustainability and resilience. *Landscape Architecture Frontiers*, 4(1).

while suitable plan provisions are a vital part of the mix in our tool-box, these can only best be achieved by supporting and incentivising the community by means outside of the RMA framework.

37. Wallace and Clarkson (2019) state that: “restoring to a minimum of 10% indigenous ecosystem cover in a city is a necessary target for maintaining a healthy level of native biodiversity. Secondly, forming a step-wise restoration plan with well-timed and comprehensive steps is important for efficient, sustainable project progression. Finally, we emphasised why creating and maintaining partner engagement is more important than ever when working in urban settings achieving at least 10-% biodiversity”. These are the core principles determining urban restoration success.
38. The approach taken in PC5 to protect and restore natural areas, combined with a range of biodiversity restoration initiatives by HCC and WRC outside of the district plan framework, are striving to meet these core principles. The wider strategies, funding and other initiatives for biodiversity protection and restoration being implemented by HCC are discussed in the evidence of Mr Sirl.

RESPONSE TO SUBMISSIONS

39. A full summary of the collective review and responses of Dr Mueller, Dr Baber and myself of the submissions to PC5 relating to ecological matters are contained within section 6 and Appendix 1 of the TER. In this section I expand my response to what I consider to be critical submission points pertaining to section 6(c) RMA matters. Further responses are provided in the TER and in the evidence of Dr Mueller and Dr Baber.
40. At the time of preparing this evidence I have not concluded addressing the outcomes of my site visits to several properties undertaken in August 2022. I will provide short supplementary evidence in relation to several specific

submissions requesting alterations of the SNAs, SBHAs, the NOSZ and Bat Habitat Buffers at the hearing.

41. There have been a number of submissions relating to the application and location of the SNAs, SBHAs and the NOSZ²¹. As discussed in paragraphs 24-38 above, I consider that these areas have sound scientific basis to be applied and are suitably located. Notwithstanding this, as agreed to in conferencing, I am open to consideration of minor alterations and amendments provided the original spatial extent and functional attributes of the areas are maintained in doing so. My supplementary evidence will address several of these specific submissions in this regard.
42. The Director-General of Conservation has made a number of specific submission points to which the combined response of Dr Mueller, Dr Baber and myself are contained in section 6 and Appendix 1 of the TER. Mapping of low and moderate significant habitats for bats in PC5 is not the best approach to dealing with these habitats for long-tailed bats in my opinion. We have suggested a different approach which is detailed in the TER and summarised in the evidence of Dr Baber. In my view, this approach achieves the same objective of protecting significant habitat of indigenous fauna, is consistent with the provisions of the draft NPS-IB and addresses the issue of how to deal with incomplete and emerging scientific knowledge within the constraints of the RMA framework.
43. WRC's submission requests a new policy as part of the Natural Environment policies to "Preserve the natural character of the Mangakōtukutuku Gully and Waikato River margins and protect it from inappropriate development. Where natural character has been compromised utilise opportunities to restore and enhance it."

²¹ For example (Jones Lands – Sub 13, Northview – Sub 14, Tilehurst Living-, Findlay – Sub 17, Williams Ltd – Sub 21), Broadwater-Sub 23, Transpower-Sub 21, Glenview Club – Sub 1).

44. The PSPA contains a multitude of inter-related significant indigenous vegetation communities and significant habitats of indigenous fauna with intrinsic ecological values²². In the TER we have recommended that this amendment from WRC be adopted, as the use of natural character provisions in the RMA is a good policy tool to identify and address potential effects of urbanisation on the Waikato River, its margins and connected gully systems with multiple, inter-linking abiotic and biotic values, as well as amenity and landscape values. The proposed amendment also reinforces the approach of PC5 in relation to section 7(d) RMA in having particular regard to the intrinsic values of ecosystems.
45. I note that Mr Graham, in his Landscape Architectural Technical Report dated 31 August 2022, also supports inclusion of a new policy to cover natural character.

UPDATED PC5 PROVISIONS

46. I am generally supportive of the changes to notified plan change provisions in the updated set of PC5 provisions relating to ecology. The critical recommendations relating to protecting significant indigenous vegetation and habitats of indigenous fauna in the LTBR and AESR have been adopted.
47. Further amendments are suggested by Dr Baber, Dr Mueller and myself as detailed in the TER and in their statements of evidence. I am supportive of these recommendations and recognise that a multiple agency approach is necessary, and that not all solutions sit within the district plan framework.
48. As signalled, based on my recent site visits there may be some further minor amendments to the location and boundaries of SNAs, SBHAs and the NOSZ, which will be addressed at the hearing.

²²"intrinsic values, in relation to ecosystems, means those aspects of ecosystems and their constituent parts which have value in their own right, including— (a) their biological and genetic diversity; and (b) the essential characteristics that determine an ecosystem's integrity, form, functioning, and resilience." Part 1, RMA.

CONCLUSION

49. Subject to the updated proposed provisions being amended in line with the recommended changes set out in the TER, and further elaborated in my evidence above, I am supportive of PC5 as it relates to ecological matters.

GHA (Gerry) Kessels

2 September 2022

ATTACHMENT 1