

**BEFORE THE PROPOSED MARLBOROUGH ENVIRONMENT PLAN HEARINGS PANEL
AT BLENHEIM**

UNDER the Resource Management Act 1991
(the Act)

IN THE MATTER of a change to Marlborough's policy
statement and plans under the First
Schedule to the Act

**SUBMISSIONS ON BEHALF OF THE MARINE FARMING ASSOCIATION INC AND
AQUACULTURE NEW ZEALAND LIMITED ON TOPIC 6: INDIGENOUS BIODIVERSITY
Dated this 5th day of February 2018**

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MAY IT PLEASE THE PANEL:

1. The Marine Farming Association Incorporated (MFA) and Aquaculture New Zealand Limited (AQNZ) are grateful to the Marlborough District Council (Council) for the ongoing work in respect of the aquaculture provisions. They are grateful for the Panel for allowing extended time to present these submissions.
2. The aquaculture industry seeks greater certainty. The proposed Marlborough Environment Plan (MEP) defines the issues we, as a community, face. The industry's suggestions seek to provide tools to help resolve these issues.
3. The approach the industry has adopted in respect of the indigenous biodiversity provisions is based on the approach taken in Bay of Plenty, Northland and Auckland. The advantage of adopting that approach in Marlborough is that those provisions have been through a full Environment Court process. The key provisions on indigenous biodiversity were the subject of a High Court decision on 12 December 2017.¹ The provisions have been subject to scrutiny by major environmental organisations, such as Forest and Bird. There is fundamental agreement around many of the provisions upon which the aquaculture industry relies.
4. A key aspect of the Bay of Plenty, Northland and Auckland Plans is the express recognition of existing aquaculture as part of the environment.²
5. This submission relates back to the submissions I made in respect of Topics 1 and 3: marine farming is part of the culture and environment of the Sounds. The regulation of marine farming should be similar to the regulation of farming on land. All forms of existing farming are part of the Sounds environment and should be regulated accordingly.³
6. The strength of the marine farming industry submission is derived from the people and communities which it serves. In the first hearing block you

¹ *Royal Forest and Bird Protection Society Incorporated v Bay of Plenty Regional Council* [2017] NZHC 3080.

² Proposed Bay of Plenty Regional Coastal Environment Plan Policy NH 4A(a); and Regional Policy Statement for Northland (May 2016) at Policy 4.4.3(3)(c). In the case of Auckland, the relevant policy is F2.15.3(3) and specific notation in respect of relevant overlay areas.

³ See *Man O'War Ltd v Auckland Council* [2017] NZHC 3217 (20 December 2017).

heard from a number of industry participants. You heard about the evolution in management of fisheries resources by the Tangata Whenua from Tom Norton. You heard of inter-generational family businesses from Simon Pooley and Nick Hearn. Those witnesses recounted the enthusiasm, value and sense of community made possible by the marine farming industry. You heard the raw facts and figures from Peter Clough, which underlines the importance of aquaculture to the economy of Marlborough and New Zealand. You heard about the environmental initiatives the industry is adopting and about the industry's understanding that it can create value from acting in an environmentally appropriate way.⁴ Environmental performance is no longer about regulatory compliance: it is about brand performance. For a large number of industry employees, the Sounds is where they live, work and play.

7. The key messages from the aquaculture industry are that:
 - (a) the MEP should do more than pose problems: it should help to enable solutions;
 - (b) Northland, Bay of Plenty and Auckland have a robust set of planning provisions. There is no need for Marlborough to reinvent the wheel; and
 - (c) existing aquaculture is part of the environment.
8. Chapter 8 of the MEP, with the MFA's and AQNZ's submissions shown in mark up, is attached as Appendix A to these submissions. The industry has proposed some minor amendments to the wording of some policies as a result of discussions with expert witnesses, all of which are within the scope of its original submissions. These amendments are highlighted in yellow in Appendix A.
9. With that introduction I will address the Chapter 8 provisions point by point.

⁴ Evidence of Jonathan Large, Rebecca Clarkson and Mark Gillard.

Missing annotation

10. Chapter 8 is missing the codes identifying the provisions as RPS, C, R and/or D. The industry submits that the entire chapter should be coded as RPS / C / R / D.

Objective 8.1

11. The industry's submission was to focus the objective on areas of significant indigenous biodiversity.⁵ The complaint, which the s 42A Officer appears to have accepted, is that the objective might be misinterpreted as an absolute protection.
12. The industry maintains its submission that focus ought to be on areas of significant indigenous biodiversity. You will hear from Dr Dave Taylor of the Cawthron Institute. He considers that objective 8.1 as notified is impracticable, and that an increased focus would better align with the Government's priorities to protect rare and threatened indigenous biodiversity.⁶
13. However, if the Panel is minded to accept the alternative suggested by the Reporting Officer (that the focus should be on protecting the 'values' of remaining indigenous biodiversity),⁷ some of his reasoning needs to be included in the commentary so that the objective is not misinterpreted in the future. The following excerpt from the s 42A Report might usefully be inserted into the commentary:⁸

'[P]rotection' in this context is not intended to be an absolute protection, in that it does not seek to ensure that every part of Marlborough's remaining indigenous vegetation remains un-disturbed. ... [I]ndigenous biodiversity is [to be] managed in such a way that its value and integrity is protected. ... [S]ome removal of indigenous vegetation [, flora and fauna] will occur in order to provide for the communities' social, economic, cultural, or environmental wellbeing.

⁵⁵ Port Marlborough (433.35), Trustpower (1201.77) and Federated Farmers (425.121) made similar submissions.

⁶ Statement of Evidence of Dr David Ian Taylor (18 December 2017) at [10].

⁷ Andrew MacLennan, Section 42A Hearings Report (20 November 2017) at 15.

⁸ MacLennan at 14.

Policy 8.1.1 and Appendix 3 Significance Criteria

14. The industry submits that policy 8.1.1 is problematic because:
- (a) it goes further than the protection contemplated by s 6(c) of the Act and policy 11 of the New Zealand Coastal Policy Statement 2010 (NZCPS), which may have the effect of undermining the protection of areas of true significance; and
 - (b) it would allow lay persons to attempt to identify sites using those criteria. That outcome would be inconsistent with the protocol developed by Council.

Significance

15. Mr Maclennan is correct when he states at page 84 of his s 42A Report that the assessment criteria in policy 8.1.1 and Appendix 3 of the MEP will classify a large spectrum of indigenous biodiversity within Marlborough as significant. He goes on to state:⁹

“Some of these areas that meet the significance criteria will have very high biodiversity values which would be considered irreplaceable. However, other areas will be able to be replicated ...”

16. The leading decision on the word “significant” (as it is found in s 6(c) of the Act)¹⁰ can be found in *West Coast Regional Council v Friends of Sheriff Swamp Incorporated*.¹¹ At paragraph [66] the Court identifies a dictionary definition of “significant” as “sufficiently great or important; to be worthy of attention.” It is a relative term.
17. Having said that, the inclusion of a site as “significant” is not a high bar. In *Minister of Conservation v Western Bay of Plenty District Council* the Court

⁹ At 84.

¹⁰ In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance: ... the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna ...

¹¹ *West Coast Regional Council v Friends of Sheriff Swamp Incorporated* (2011) 16 ELRNZ 530.

held it was inappropriate to exclude moderate sites which were still considered to warrant protection by expert ecologists.¹²

18. Because significance is a relative term, not all of a types of habitat will be identified as significant.¹³

19. I submit that Dr Ulrich is wrong when he says:¹⁴

11 of the twelve criteria in Policy 11 of the NZCPS that give effect to protecting indigenous biodiversity in the coastal environment are non-specific about whether they apply at a national or regional scale. In reality they apply at the regional level.

All of the matters in NZCPS policy 11(a) are on a national scale, and the matters in policy 11(b) exist independently of scale. There is no need for a regionally significant site to be treated in the same way as a nationally significant site.

20. The problem with identifying large areas of Marlborough as significant is that in practical terms it will dilute effort. Inevitably the policy will be implemented in a way which enables development, but that implementation will mean that those sites which deserve complete protection will lose that protection. As *Forest & Bird Protection Society v Bay of Plenty Regional Council*¹⁵ makes clear, once an area is identified as significant, the directive policies in the relevant plan must be given effect to. In that case, regionally significant infrastructure could not be allowed to develop if it failed to avoid effects on indigenous biodiversity. Consequently, it is important to define what is significant in a clear and focused way.

21. The industry submits that the significance criteria in the Regional Policy Statement for Northland¹⁶ offers a more objective basis against which to

¹² *Minister of Conservation v Western Bay of Plenty District Council* EnvC Auckland A71/2001, 3 August 2001 at [31] and [35]; see also *Mighty River Power Limited v Waikato Regional Council* EnvC Auckland A146/2001, 4 December 2001.

¹³ *Friends of Sheriff Swamp* at [69].

¹⁴ Hamill and Ulrich at [68].

¹⁵ *Forest & Bird Protection Society v Bay of Plenty Regional Council* [2017] NZHC 3080 (12 December 2017).

¹⁶ Regional Policy Statement for Northland (May 2016) at Appendix 5, pp 175 – 178. A copy is included at Appendix B.

assess significance, which aligns more closely with the intent of the Act and the NZCPS. Policy 8.1.1 and Appendix 3 should be amended to align with that approach. This reasoning is supported by Dr Taylor.¹⁷

22. How these criteria should be applied (if at all) in the case of highly mobile species such as marine mammals and seabirds is a difficult issue.¹⁸ This was foreshadowed by Shona Myers in her evidence in respect of Topics 1 and 3:¹⁹

A mitigation hierarchy approach is important to ensure that adverse effects on significant ecological areas and habitats of threatened species are avoided. However, there is the need for a wider strategic planning approach which addresses ecosystem resilience and function. The functioning of ecosystems and species need to be managed across the landscape and ocean. **There may be situations where managing species and effects at individual sites or within portions of ecosystems will not provide a long-term solution (e.g. identifying what is needed for the persistence of migratory marine mammals and sea birds).** [Emphasis added].

23. I will return to this point below.

The role of experts

24. The identification of significant sites is a process that should be undertaken by experts. This is the intention behind the *Ecologically Significant Marine Sites in Marlborough* report²⁰ (the Council and Department of Conservation report that underpins the identification of significant marine sites) (“Davidson 2011 report”). The authors of that report acknowledged that regular updates would be required. They developed a protocol for assessing significance at new and existing sites, and for record keeping, selecting experts and publishing of updated reports.²¹ Northland also limits the determination of significance to experts.²²

¹⁷ Taylor at [11].

¹⁸ Taylor at [12].

¹⁹ Statement of Evidence of Shona Claire Myers (8 November 2017) at [28].

²⁰ Davidson R. J.; Duffy C.A.J.; Gaze P.; Baxter, A.; DuFresne S.; Courtney S.; Hamill P. 2011. *Ecologically significant marine sites in Marlborough, New Zealand*. Co-ordinated by Davidson Environmental Limited for Marlborough District Council and Department of Conservation.

²¹ Davidson, R. J.; Duffy, C. A. J.; Gaze, P.; Baxter, A. S.; DuFresene, S.; Courtney, S.; Hamill, P. 2013. *Ecologically significant marine sites in Marlborough: protocol for receiving and assessing new sites and*

25. Anyone can identify a candidate site, and compile or collect the minimum required level of information. However, an expert must determine whether the site is in fact significant. The process is shown in Figure 1:²³

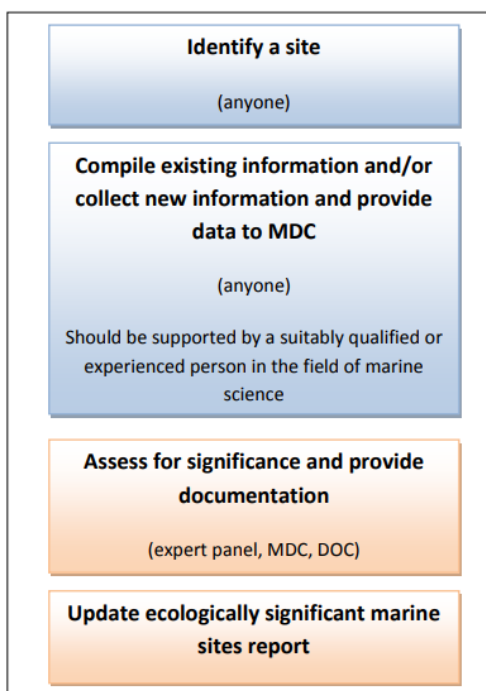


Figure 1. Series of events leading to an updated ecologically significant marine sites report.

26. The MFA and AQNZ submit that the language in policy 8.1.1 and Appendix 3 implies that anyone can assert that a site is significant. This expectation is reflected in the submissions of Kenepuru and Central Sounds Residents Association²⁴ and Queen Charlotte Sound Residents Association.²⁵
27. We note Dr Ulrich and Mr Hamill’s joint recommendation that the Panel grant the aquaculture industry’s request to add a note to the explanation of the criteria in Appendix 3 that reads “The ecological criteria are intended to

reassessing existing sites. Prepared by Davidson Environmental Limited for Marlborough District Council and Department of Conservation. Survey and monitoring report no. 768, at 4. A copy is available here:

<https://www.marlborough.govt.nz/repository/libraries/id:1w1mps0ir17q9sgxanf9/hierarchy/Documents/Environment/Coastal/Significant%20Marine%20Sites/ProtocolForAssessingSignificanceNewExistingSites.pdf>.

²² Regional Policy Statement for Northland (May 2016), at Note (i), Appendix 5, p 175.

²³ Davidson et. al (2013) at 5.

²⁴ 868.26.

²⁵ 504.030.

be applied by suitably qualified and experienced ecologists in their field of expertise.”²⁶

28. The criteria in policy 8.1.1 and Appendix 3 apply to terrestrial, wetland and marine environments. Dr Ulrich recognises that “the criteria for assessing significance in *coastal environments* are slightly different to terrestrial and wetland environments.”²⁷ As a result, the MEP provisions do not reflect the most recent 2015 amendments²⁸ to the significance criteria in the Davidson 2011 report. In particular, “pattern” is no longer part of the Davidson criteria, and “sustainability” has been added at 8.1.1(g). This complexity further emphasises the importance of the identification of significant sites being undertaken by suitably qualified experts.

Policy 8.1.2

29. The industry supports policy 8.1.2 to the extent that it agrees significant sites should be identified in the MEP. However, for the reasons outlined above, the significance criteria for Northland should be adopted, and the MEP should make it clear that the identification of significant sites is a matter for experts.
30. Mr Maclennan was right to acknowledge that the identification of additional marine sites is a process that occurs outside of the MEP. We agree that a full Schedule 1 process would need to be undertaken before any new sites are included in the MEP in the future.²⁹

Policy 8.1.3

31. The industry’s submission supports the thrust of the policy, but wishes to extend it to supporting adaptive management techniques in order to manage risk. The policy, as drafted, seeks to increase the amount of

²⁶ Hamill and Ulrich at [65], first bullet point, and at [69].

²⁷ Hamill and Ulrich at [46].

²⁸ Davidson, R. J.; Baxter, A. S.; Duffy, C. A. J.; Gaze, P.; du Fresne, S.; Courtney, S.; Brosnan, B. 2015. Reassessment of selected significant marine sites (2014-2015) and evaluation of protection requirements for significant sites with benthic values. Prepared by Davidson Environmental Limited for Marlborough District Council and Department of Conservation. Survey and monitoring report no. 824, at pp 9-11. A copy is available at

https://www.marlborough.govt.nz/repository/libraries/id:1w1mps0ir17q9sgxanf9/hierarchy/Documents/Environment/Coastal/Significant%20Marine%20Sites/26112015_Item_6_Expert_Panel_Assessment_of_2014-15_monitoring_site_categorisation_and_buffers.PDF

²⁹ Maclennan at 22 and 24.

knowledge (which we support) and to use that information to manage environmental effects (which we also support). The industry's submission suggests a tool by which that information might be used, and that is to have conditions of consent that require consent-holders to adapt their operation in response to that information.³⁰ Detailing a technique which would enable that information to be used is helpful.

32. Dr Taylor recognises that "The absence of good information is routine in the marine environment."³¹ He supports the use of adaptive management as a way of managing risk where we have incomplete information, because it "has dual benefits of being precautionary and increasing the amount to knowledge we have about our marine environment."³² Adaptive management can be a useful way of encouraging long-term monitoring, which can build on baseline information to identify patterns of change.

Protecting and enhancing indigenous biodiversity: Policies 8.2.1 – 8.2.13

33. A number of positive changes have been recommended in the Officer's Report in respect of policies 8.2.1 to 8.2.13. I make two points:
- (a) Where a policy is intended to apply only to the terrestrial environment, the policy should say so.
 - (b) If a policy relates to the allocation of public funds, then again the policy should say so. Consequently, policy 8.2.4 should read "priority for funding will be given to the re-establishment of indigenous biodiversity in Marlborough's lowland environments".

³⁰ This model has already been implemented for a number of Marlborough consents. See, for example, the conditions of consent for salmon farms granted by the Board of Inquiry: U140294, U140295 and U140296.

³¹ Taylor evidence at [13].

³² Taylor evidence at [14].

Managing effects of subdivision use and development on indigenous biodiversity:

Policies 8.3.1 – 8.3.7

Policies 8.3.1 – 8.3.2

34. The core of the industry’s submission is what the industry proposes to be policies 8.3.1 to 8.3.2C. These policies have been borrowed from Northland and Bay of Plenty (with the addition of provisions from Auckland).³³
35. In essence, the amended policies clearly set out what needs to be protected and how that protection is going to occur. The s 42A Officer considers that the industry’s approach gives effect to the NZCPS.³⁴ In our view, it better reflects the cascading approach to protection in policy 11.³⁵
36. New policy 8.3.2B provides clear direction:
- (a) We know from *NZ King Salmon* that minor or transitory effects may not be adverse.³⁶ New policy 8.3.2B(a) sets that out.
 - (b) We know that there has been no objection to provisions in the Proposed Bay of Plenty Regional Coastal Environment Plan enabling existing activities to continue, including existing aquaculture activities.³⁷ Those provisions have been carried through into the latest version of the proposed Plan.³⁸
 - (c) The irreversibility of an effect is a relevant criterion for determining whether an adverse effect is significant in Appendix 4, Volume 3 of the MEP. This is consistent with the principles of sustainable management in s 5(2), because inter-generational issues may not (or are less likely to) arise where an effect is reversible.

³³ Regional Policy Statement for Northland (May 2016) at Policies 4.4.1 and 4.6.1(3); Proposed Bay of Plenty Regional Coastal Environment Plan at Policies NH 4 – NH 11; and Auckland Unitary Plan Policy E15.3(2), (9) and (10), and D9.3(1)(a).

³⁴ Maclennan at 57.

³⁵ The industry’s proposed new policy 8.3.1(b) is premised on adopting the significance criteria in Northland, which has a nationally significant focus, in place of notified MEP Appendix 3.

³⁶ *Environmental Defence Society v New Zealand King Salmon Company Limited* [2014] NZSC 38 at [145].

³⁷ *Royal Forest and Bird Protection Society Incorporated v Bay of Plenty Regional Council* [2017] NZHC 3080.

³⁸ Policies NH 4A(a) and NH 5(a)(iv), as at 28 April 2017.

- (d) Other provisions in the MEP encourage restoration and enhancement.³⁹ The provisions suggested by the industry clearly set out that, in determining whether or not adverse effects have been avoided, it is appropriate to take into account restoration or enhancement. As the Supreme Court states, some activities may have a positive effect on natural character.⁴⁰ In our submission, the same might be true for effects on indigenous biodiversity.
 - (e) Reference to technical operational requirements at new policy 8.3.2B(f) has been qualified to take into account the concerns of Dr Taylor.⁴¹ This change is highlighted in yellow in the marked up version of Chapter 8, attached as Appendix A.
37. The advantage of these provisions is that they have all been debated and battle-tested through to the High Court. It seems to me that adopting a set of provisions that have been subject to that scrutiny makes more sense than starting again. Mr Maclennan has not discussed these proposed policies in any detail, instead addressing them as part of the industry's submission on policy 8.3.5.⁴²
38. Policies 8.3.1 and 8.3.2 as notified adopt a stricter approach than NZCPS policy 11. As already noted, this has the effect of watering down the protection of truly significant sites. If the Panel is minded to retain those provisions, we submit that Mr Maclennan has made a number of recommendations that go some way to addressing our concerns, in particular:
- (a) removing the reference to sites not identified as significant under policy 8.1.1 from policy 8.3.1(c),⁴³ which extended the protection afforded by NZCPS policy 11(b) to all areas, habitats and ecosystems; and

³⁹ See, for example, MEP Objective 8.2, and policies 8.2.3, 8.2.12, and 8.2.13.

⁴⁰ NZKS at [145].

⁴¹ Taylor Evidence at [17].

⁴² Maclennan at 43 – 44.

⁴³ Maclennan at 56 – 57, and 61.

- (b) amending policy 8.3.2. While we think we understand Mr MacLennan’s intent, it would be better if the policy read “(b) manage indigenous biodiversity values in areas that have not been assessed as significant in terms of 8.1.1.”

Policy 8.3.5

39. The s 42A Officer aptly describes the list in policy 8.3.5 as “more suited to assessment matters or matters of discretion for a resource consent application” and notes that it does not include any direction as to how the list of matters should be used in the context of Policies 8.3.1 and 8.3.2.⁴⁴ While Dr Taylor views this as a useful starting point, he shares the industry’s concern that the policy invites a check-box exercise.⁴⁵
40. We submit that this detailed provision is out of place in Volume 1 of the MEP and should be deleted.

Policy 8.3.7

41. The MFA and AQNZ oppose the Department of Conservation’s submission to broaden the scope of policy 8.3.7, so that all activities that disturb the seabed must be avoided in ecologically significant marine sites, rather than only excluding fishing techniques that result in the disturbance of the seabed.⁴⁶
42. The s 42A Officer recommends policy 8.3.7 is widened to require avoidance of activities that disturb the seabed. He recommends that rule 16.7.5 is amended to prohibit anchoring in Category A sites and the relevant buffer zone, as listed in a new Appendix.⁴⁷
43. “Anchoring” is defined in the MEP as “the securing of a vessel, raft, aircraft or floating structure by means of an anchor.”⁴⁸ “Structure” has the same meaning as in s 2 of the Act, which includes any raft.⁴⁹ “Raft” includes “platforms that provide buoyancy support for the surfaces on which fish or

⁴⁴ MacLennan at 44.

⁴⁵ Taylor Evidence at [19].

⁴⁶ MFA/AQNZ further submission point 82.

⁴⁷ MacLennan at 75 – 76.

⁴⁸ MEP Chapter 25, p 25-2.

⁴⁹ MEP Chapter 25, p 25-25 and s 2 Resource Management Act 1991.

marine vegetation are cultivated or for any cage or other device used to contain or restrain fish or marine vegetation.”⁵⁰ Therefore, proposed rule 16.7.5(a) will prohibit the anchor blocks of marine farms located within a Category A ESMS.

44. The threshold for justifying a prohibited activity rule is high:⁵¹

Given that a prohibited activity status is a very onerous activity status, I consider that there must be clear evidence that a potential activity will have a detrimental effect on the a ESMS in order to warrant a prohibited activity status. As such, I consider that only activities that warrant the prohibited activity status are; dredging, bottom trawling, and anchoring. I consider that this amendment will provide more certainty as to the activities that are prohibited within these areas. In addition, this activity based rule would ensure that only the activities that pose a threat to the specific ESMS are prohibited.

45. The effects of marine farming will be addressed as part of the MEP aquaculture provisions. A general prohibited activity rule should not preempt the outcome of that process. Consequently, we submit that the MEP should include a general notation (as part of 8.3.7, rule 16.7.5, or in the Category A ESMS Appendix) as follows:

Policy 8.3.7 and Rule 16.7.5 do not apply to marine farms consented as at 9 June 2016 (or applied for before that date).

46. There is precedent for this approach elsewhere in the MEP. Chapter 13, Volume 1 specifically notes that the chapter does not contain provisions managing marine farming. Alternatively, marine farming could be excluded from the definition of anchoring.
47. The MFA and AQNZ support the s 42A Officer’s recommendation to limit the prohibition to dredging and bottom trawling in Category B ESMS.

⁵⁰ Section 2 Resource Management Act 1991.

⁵¹ Maclennan at 70.

Offsetting and risk: Policy 8.3.8

48. The essential idea with offsetting is that you enable development at the same time as the offset occurs, resulting (ideally) in a net benefit for indigenous biodiversity.
49. The first point to make is that the design of an offset is context specific. Providing a fixed set of criteria might serve to straightjacket a proposal which is, nevertheless, acceptable.⁵² The industry has made some amendments to the alternative proposed in its original submission, in light of feedback from Dr Taylor. These changes are highlighted in yellow in Appendix A.
50. Ultimately policy 8.3.8 now proposed, and policy 8.3.8 recommended by the Reporting Officer are similar. The industry's wording refers to "values", which is consistent with what is recommended by the s 42A Report in respect of Objective 8.1. Other than being slightly more flexible, the industry's policy 8.3.8(7) seeks defined targets that are capable of being objectively managed and publicly reported on. Where the offset is not delivering on the targets an adaptive management approach is taken to enable the offset programme to be revised, so that practicable steps can be taken to ensure the target is met.⁵³ A new policy has been proposed which would allow for adaptive management in appropriate cases.⁵⁴ This is particularly relevant in the coastal marine area, where incomplete information is the norm. This policy is intended to be a tool to be applied in appropriate cases.⁵⁵

Maps 1 - 16

51. The MFA and AQNZ do not object to the mapping of these sites *per se*. However, for reasons addressed elsewhere in these submissions, the

⁵² This is reflected in Dr Taylor's concerns at [21]-[22] of his evidence.

⁵³ Dr Taylor at [24].

⁵⁴ Refer policy 8.3.9 in Appendix A.

⁵⁵ Adaptive management conditions are already used in Marlborough. See for example consents U140294, U140295 and U140296 granted to The New Zealand King Salmon Co. Limited by the Board of Inquiry; Wakatu Incorporation's consent U000361 for an offshore mussel farm southwest of D'Urville Island; and Clifford Bay Marine Farms Ltd's consent U991634. *Crest Energy Kaipara Limited v Northland Regional Council* [2011] NZEnvC26 is an example of a consent allowing staged adaptive management elsewhere in New Zealand.

mapping lacks consistency with the policies and significance criteria, and the intended outcome is unclear.

52. The MFA holds consent for marine farms within or adjacent to a number of significant sites. We submit:⁵⁶

- (a) The potential adverse effects of marine farms on elephant fish spawning areas are minor and can be adequately mitigated using adaptive management if need be⁵⁷ (site 3.8, Maps 3, 4 and 8). A new policy allowing for adaptive management should be added, as discussed above.
- (b) The MEP should expressly recognise that marine farms do not adversely affect the gannet colony at the Waimaru Peninsula (site 3.13, Map 9).⁵⁸
- (c) The MEP should expressly recognise that the spat catching site in Clova Bay does not adversely affect the estuarine fringe and subtidal habitat inshore of the farm (site 3.14, Map 9).⁵⁹
- (d) We agree with the s 42A Officer's recommendation to exclude the port zone extending from the Havelock Marina around Cullen's Point from site 3.20, Map 12.⁶⁰ The effect of the Map 12 (as notified) and rule 16.13.16 is to require all boats using the channel to have a resource consent to take coastal water.

⁵⁶ Refer submission points 414-418 original MFA submission.

⁵⁷ *Clearwater Mussels Ltd v Marlborough District Council* [2016] NZEnvC21 at [151]-[157].

⁵⁸ Refer Bailey, K.W., Blenheim Dive Centre Commercial Limited "Underwater observation of benthic organisms and material beneath marine licensed mussel farms: Waihinau MF234, Fitzroy MF181, Te Puraka MF184, Wainui Lic118" May 2004 at pages 7-9 and 11. A copy is available at pages 54-71 within the "Application" document located at <https://www.marlborough.govt.nz/services/property-files-online?searchType=Resource+Consent+Number&resourceConsentNumber=U050158&vi ewing=U050158>.

⁵⁹ Refer Davidson, R.J. (2014). "Ecological report for the proposed renewal of mussel spat catching site 8553 located in Clova Bay, Pelorus Sound." Prepared by Davidson Environmental Ltd for Marine Farming Association. Survey and monitoring report no. 798. A copy is available at <https://www.marlborough.govt.nz/services/property-files-online?searchType=Resource+Consent+Number&resourceConsentNumber=U140566&vi ewing=U140566>.

⁶⁰ Hamill and Ulrich at [182] and [185].

(e) The MEP should expressly recognise that marine farms do not adversely affect the red algae bed in Cutters Bay (site 6.3, Map 14).⁶¹

53. The s 42A Reporting Officers did not make recommendations in respect of several these specific requests, as each relied on the other 42A Report to address the point.⁶²

Whales and Dolphins: Maps 17 and 18

54. It is not clear what purpose the marine mammal maps serve in the context of the MEP. Maps 17 and 18 are excluded from the definition of Ecologically Significant Marine Site.⁶³ Nevertheless, as they are based on the mapping in Davidson 2011,⁶⁴ presumably they will meet the significance criteria in policy 8.1.1 and Appendix 3.⁶⁵ As a result, a strict avoidance approach will apply to these entire areas under policy 8.3.2(a).

55. There are a number of problems with the mapping. It is based on out of date information,⁶⁶ is unclear and does not reflect how marine mammals use the Marlborough Sounds. Drs Simon Childerhouse and Deanna Clement discuss these issues in more detail in their evidence. They consider that the context and nature of a specific development/activity are more relevant than discrete lines on a map, “which are rarely relevant in achieving conservation or management goals unless they target species specific sensitivities.”⁶⁷

56. Drs Clement and Childerhouse contend that the various assessment criteria currently in use do not deal well with marine mammals because:⁶⁸

⁶¹ Refer Davidson, R.J. and Davidson, J.M. (1994). “Description of the microbenthic community from a proposed spat holding area in Whangatoetoe Bay, Port Underwood, Marlborough Sounds” Prepared by Davidson Environmental Ltd for New Zealand Marine Farming Association. Survey and monitoring report no. 19. A copy is available at pages 10-23 of the “Section 53 Application (Offsite)” document at <https://www.marlborough.govt.nz/services/property-files-online?searchType=Resource+Consent+Number&resourceConsentNumber=MPE178&viewing=MPE178&viewing=MPE178M&viewing=MPE178WP>.

⁶² MacLennan at 21; and (for example) Hamill and Ulrich at [159], [172], and [201].

⁶³ MEP Volume 2, p 25-7.

⁶⁴ Davidson (2011) at 111 and 121.

⁶⁵ In addition, the Legend on both maps refers to Ecologically Significant Marine Sites.

⁶⁶ Joint Statement of Evidence of Dr Deanna Marie Clement and Dr Simon John Childerhouse (18 December 2017) at [22]-[24].

⁶⁷ Clement and Childerhouse at [55].

⁶⁸ Clement and Childerhouse at [50].

[M]arine mammals are long-lived (i.e. 20-40 years), generally have large home ranges (10s to 1,000s of kilometres), can be highly variable from year to year and can use several areas for the same or differing aspects of their life dynamics (e.g. feeding, breeding, resting, migrating). In addition, the distribution of marine mammals in New Zealand waters is likely to be currently changing due to climate change effects and will continue to do so in the future.

57. Their expert evidence is called in response to the criticisms of the s 42A Reporting Officer that evidence or information was not provided in support of the submissions of the MFA, AQNZ and various individual marine farmers.

Whales

58. The MFA and AQNZ, along with a number of individual marine farmers, submit that Queen Charlotte Sound and Tory Channel should not be included in the mapped area on Map 17.
59. Drs Childerhouse and Clement agree that these Inner Sounds regions should not be included as part of the whale migratory corridor.⁶⁹ They explain that “No whale species is regularly found within the Inner Sounds” and “there is no evidence that any whale species are breeding, feeding or resting in the Inner Sounds.”⁷⁰
60. They assume that lines on the map have been drawn arbitrarily from sighting data, and that the presence of an occasional individual in these areas has meant these areas are equated to significant habitat in the MEP.⁷¹ They are critical of this approach, which has also been taken in Northland,⁷² because in their opinion “this broad-scale application of ‘significant’ areas in this case diminishes any areas that may actually be important or significant to these species and others.”⁷³

⁶⁹ Clement and Childerhouse at [37].

⁷⁰ Clement and Childerhouse at [34]-[36].

⁷¹ Clement and Childerhouse at [35] and [36].

⁷² Note that while the aquaculture industry broadly supports the approach taken in Northland, including the significance criteria, it agrees with Drs Clement, Childerhouse and Taylor that application of these criteria to marine mammals and seabirds may be inappropriate.

⁷³ Clement and Childerhouse at [38]-[40].

Dolphins

61. Drs Clement and Childerhouse consider Map 17 is based on out of date information on dusky and Hector's dolphins. The map does not account for bottlenose dolphins, common dolphins or killer whales.⁷⁴
62. Admiralty Bay (site 2.17, Map 18) is an important winter feeding area for dusky dolphins, where they employ cooperative feeding strategies. Despite being one of the most heavily studied areas, marine mammal experts have been unable to agree on the extent of this important habitat.⁷⁵ In our submission, this important habitat does not equate to nationally significant habitat in terms of NZCPS Policy 11(a).⁷⁶ Admiralty Bay caters for only 6 – 9% of the Kaikoura population of dusky dolphins,⁷⁷ or approximately 2 – 4% of the wider New Zealand population of some 30,000 dusky dolphins.⁷⁸ Consequently, a strict avoidance policy is not justified in terms of area 2.17.

Decision Requested

63. Marine mammals are notoriously difficult to monitor and map. A strategic approach is needed, and it is the role of the MEP to provide that strategic direction. It is inefficient and ineffective for maps to be included with no further direction, then to leave effects on marine mammals to be managed on a consent by consent basis.
64. The answer is not simply to map broader areas, as this risks diminishing the protection afforded to truly important areas.
65. We request that:
 - (a) Maps 17 and 18 are deleted from the MEP. Any future developments will have to consider if marine mammals may occur within the

⁷⁴ Clement and Childerhouse evidence at [41]-[49].

⁷⁵ Clement and Childerhouse evidence at [42(a)].

⁷⁶ Indeed, the Environment Court noted that the site was significant in terms of s 6(c) of the Act, rather than in terms of NZCPS policy 11(a) (so far as dolphins are concerned): *Friends of Nelson Haven and Tasman Bay Inc v The Marlborough District Council* [2016] NZEnvC 151 at [68].

⁷⁷ Markowitz TM, Harlin AD, Wursig B, McFadden CJ 2004. Dusky dolphin foraging habitat: overlap with a aquaculture in New Zealand. *Aquatic Conservation: Marine and Freshwater Ecosystems* 14: 133-149.

⁷⁸ Harlin AD, Markowitz T, Baker CS, Würsig B, Honeycutt RL 2003. Genetic structure, diversity, and historical demography of New Zealand's dusky dolphin (*Lagenorhynchus obscurus*). *Journal of Mammalogy* 84(2):702–717.

proposed site and will have to assess potential effects on a case-by-case basis. This option is consistent with the *status quo*;⁷⁹ or

- (b) Revise the maps with the input of an independent technical working group, using the best available information to show where specific species occur within the Sounds. Use of the term 'significant' should be avoided, as should hard boundaries on maps;⁸⁰ and
- (c) If the maps are retained, a strict avoidance approach should not be applied in respect of these sites (for example, Maps 17 and 18 should be expressly excluded from the ambit of policy 8.1.1 and Appendix 3).

Seabirds

- 66. Many of the difficulties associated with mapping the spatial extent of marine mammal areas also arise in the context of seabirds.
- 67. We oppose the request by Friends of Nelson Haven to amend the Appendix 3 significance criteria to specifically recognise important bird feeding areas.⁸¹ Our preferred approach to Appendix 3 has been discussed. In the alternative, we agree with Dr Ulrich's view that any amendment to the significance criteria must be endorsed by the Expert Panel.⁸² Such an addition to the criteria would change the focus from discreet benthic communities of importance to broad areas in which effects do not need to be as tightly constrained.
- 68. We agree with Dr Ulrich that:⁸³

[I]n the text of their submission Friends of Nelson Haven and Tasman Bay have mentioned the need to provide protection for feeding habitat for the threatened NZ King Shag (*Leucocarbo carunculatus*) but have not sought specific relief in this regard.

If Friends' submission can be interpreted as seeking to include seabird feeding areas as an Ecologically Significant Marine Site, then we assert that

⁷⁹ Clement and Childerhouse at [57(a)].

⁸⁰ Clement and Childerhouse at [57(b)].

⁸¹ Friends' submission 716.96 and 716.212.

⁸² Hamill and Ulrich at [64], bullet point two; and [72], bullet point two.

⁸³ Hamill and Ulrich at [64], bullet point two.

that aspect of submission point 716.93 was not validly made. No specific amendments to the maps are proposed.⁸⁴

69. If Friends' submission was validly made, we oppose that part of 716.93, because:
- (a) the submitter's own publications suggest that the conservation management priorities for the king shag are:
 - (i) protecting breeding grounds and ensuring that boats do not approach those colonies closer than 100 metres during the breeding season;
 - (ii) minimising seabird bycatch;
 - (iii) introducing pest quarantine measures to protect king shag breeding colonies; and
 - (iv) establishing king shags at new colony sites;
 - (b) the proposal has not been assessed through the protocol used to identify the ecologically significant marine sites in Marlborough.
 - (c) feeding areas are diffuse. The present state of knowledge does not lend itself to use of broad areas as a decision-making tool.

Cumulative effects

70. We oppose the submissions which seek to add a new policy addressing cumulative effects to chapter 8.⁸⁵ We agree with the recommendation of the s 42A Officer that an assessment of the cumulative effects of marine farming should be addressed in the MEP aquaculture provisions.⁸⁶ An assessment of cumulative effects is a strategic exercise that needs to be

⁸⁴ We are not aware of any submission proposing specific mapping in respect of bird feeding areas. We note that paragraph 32 of Forest & Bird's submission was not accepted by the Council as a valid submission.

⁸⁵ Keneperu and Central Sounds Residents Association Inc 868.36 and Clova Bay Residents Association 152.3.

⁸⁶ MacLennan at 44-45.

undertaken on a broad scale. It is not appropriate for individual marine farmers to endeavor to address this broader issue on a consent by consent basis.



Quentin AM Davies/Amanda L Hills/Savannah D Carter

Solicitors for the MFA and AQNZ

5 February 2018

APPENDIX A

8. Indigenous Biodiversity

Commented [AH1]: MFA submission point 99 (annotate chapter RPS / C / R / D).
426.113

Introduction

New Zealand's biodiversity gives our country a unique character and is internationally important. A large proportion of our species are endemic to New Zealand and if they become extinct they are lost to the world. About 90 percent of New Zealand insects, 80 percent of trees, ferns and flowering plants, 25 percent of bird species, all 60 reptile species, four frog species and two species of bat are endemic.

New Zealand's biodiversity has helped shape our national identity, with our distinctive flora and fauna contributing to our sense of belonging. The koru and kiwi are internationally recognised. Biodiversity also provides social and economic benefits through recreational opportunities, tourism, research, education, provision of ecosystem services and natural resources for primary industry and customary and medical uses.

The Resource Management Act 1991 (RMA) requires the Council to recognise and provide for as a matter of national importance the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna (Section 6(c)). The protection of these values, whether on land, in freshwater or coastal environments, also helps to achieve other matters of national importance, including landscape and natural character values and historic heritage. However, biodiversity values are also important components of amenity, kaitiakitanga, quality of the environment and ecosystem values, matters to which regard shall be had in terms of Section 7 of the RMA. For this reason there are important links between the provisions of this chapter and others in the Marlborough Environment Plan (MEP).

In addition, there are specific roles and functions in relation to protecting significant natural areas and habitats and maintaining indigenous biological diversity. These functions enable the Council to:

- establish, implement and review objectives, policies and methods for maintaining indigenous biological diversity [Section 30(1)(ga)]; and
- control any actual or potential effects of the use, development or protection of land for the purpose of maintaining indigenous biological diversity [Section 31(1)(b)(iii)].

Marlborough's central location within New Zealand and its varied landforms, climate and rich human history combine to form an interesting and diverse area. The District has a range of important and unusual natural features, native plants and animals, a number of which are at their southern or northern limits of distribution. Part of south Marlborough has been identified as one of five areas of high biodiversity concentration within New Zealand.

Importantly, Marlborough's tangata whenua iwi have a significant interest in the protection, management and restoration of indigenous biodiversity, having developed relationships based on whakapapa, mahinga kai and kaitiakitanga developed over centuries of occupation, close interaction and use of natural resources. Whakapapa provides the links or connections between people and all things, including plants and animals. Mahinga kai is based on the sustainable gathering of food and resources, the places where they are gathered, the resources themselves and the passing on of knowledge about these resources. Kaitiakitanga is a responsibility to ensure that the mauri of natural resources is healthy and strong and that the life supporting capacity of these ecosystems is preserved.

Although the focus of the RMA is on indigenous biodiversity, it is important to recognise that some parts of Marlborough have been modified as a result of a variety of land uses over many years. As has occurred throughout New Zealand, Marlborough's natural environment has been highly modified from that which would have existed prior to human arrival. This has resulted in a range of non-indigenous species, which have in their own right made a significant contribution to amenity values in both urban and rural environments as well as to the character and economy of Marlborough. This is recognised in other chapters of the MEP. However, it is important to acknowledge that the remaining areas of indigenous biodiversity still contribute significantly to Marlborough's heritage values.

Issue 8A – A reduction in the extent and condition of indigenous biodiversity in Marlborough.

Despite the original diversity and uniqueness of Marlborough's biodiversity and natural areas, human activities have been particularly severe on Marlborough's sensitive landscape and ecosystems, especially in the terrestrial and freshwater ecosystems of lowland south Marlborough. A continuation of past trends will result in further loss of or deterioration in the condition of Marlborough's indigenous biological heritage. For Marlborough's tangata whenua iwi, this will impact on the mauri of natural resources.

Terrestrial and freshwater environments

Centuries of fire have created the present pattern of small, isolated remnants of natural vegetation. The dry climate and easy contours of most of this land have meant that fires were very effective in clearing vegetation. Very few original areas of native forest remain in south Marlborough – most are secondary vegetation that has regenerated after the earliest fires. Further intensive clearance of shrub and tussock subsequently removed most of the remaining vegetation.

North Marlborough has a moister climate and steeper terrain than south Marlborough and has been less modified by human arrival. A significant amount of original forest cover remains and vigorous native regeneration is well underway on land that was cleared for pastoral farming from 1850 to 1940.

High populations of exotic wild animals and introduced plants have become well established in Marlborough because of the favourable climate, terrain and land-use. These introduced species have added further pressure on natural habitats. As a result of habitat loss and competition and predation from introduced animals, the original indigenous animals have also largely disappeared; only a few of these species remain in isolated remnant habitats. These habitats are often too small and too far from other sites in the locality to support significant and sustainable populations of native species, including birds, invertebrates and lizards.

The ecology of ground water is a relatively new area of investigation. Aquifers are now known to provide a habitat that can support a subterranean ecosystem. Species of crustaceans have adapted and evolved to live and complete their entire lifecycle underground. It is possible that these species may have a role in maintaining underground water quality. To date, little is known of the distribution of densities or even what species are present in our groundwater aquifers.

Many of the small streams and waterways on the Wairau Plain, including the largest river in Marlborough, the Wairau River, have been straightened, diverted and channelled over the last 150 years in order to control flooding and enable increased agricultural production. Native riparian or riverside vegetation has been largely replaced by exotic willows and shrubs. These modifications have resulted in the loss of native fish species that rely on native invertebrates falling onto the water for food.

With intensification of lowland land-use, particularly for viticulture, the demand for water for irrigation purposes has been significant. In the naturally dry landscape of these lowland areas,

Commented [MJ2]: MFA submission point 79. 426.091

Oppose Friends of Nelson Haven 716.93
MFA/AQNZ further submission 72.

Oppose Kenepuru and Central Sounds 868.36 and Clova Bay 152.3
MFA/AQNZ further submission 73.

taking or diverting water from surface and groundwater sources can result in the loss of habitat as headwaters of spring-fed streams recede or waterways dry up altogether. The increasing use of dams to capture and store water also has the potential to have both negative (e.g. preventing fish passage) and positive effects (e.g. creation of new habitat) on natural areas and biodiversity.

Wetlands

The term wetland covers habitats where the land is covered in or wetted by water for most (but not necessarily all) of the time. Wetlands occur in areas where surface water collects or where groundwater seeps to the surface. They include swamps, bogs, coastal wetlands, lakes and some river edges.

Wetlands are highly productive environments that can support a diverse range of plants and animals (birds, fish, insects and micro-organisms). They support processes that provide environmental services such as water storage and flood control, nutrient removal, erosion control and water table maintenance. Wetland areas have always been highly valued by Māori as they provide a rich source of traditional resources like food (fish and birds), flax and medicinal plants. Wetlands therefore represent a significant part of Marlborough's natural heritage.

Between 1920 and 1980, most of New Zealand's wetlands were drained for pastoral land use. This has resulted in an approximately 85% reduction in wetland areas and many remaining wetlands are still under pressure from land development. Many remaining wetlands are small and their natural character and habitat quality have been degraded by partial drainage, damage by farm animals and weed invasion. Lowland wetlands have been worst affected and in some cases are still at risk.

The systematic draining of Marlborough's wetlands over the last 150 years has had a profound impact on aquatic ecosystems, especially in the lowland areas of the Wairau Plain. Less than one percent of the Wairau Plain wetlands that existed before Europeans arrived in New Zealand still exist. In addition, the taking of groundwater or surfacewater can affect the habitat and flow regimes of wetlands.

Marine environments

Marlborough supports a wide variety of marine habitats, ranging from exposed rocky shores to sheltered sandy bays. The coast is affected by a wide variety of physical and biological processes including tidal currents, wave energy, water clarity, substratum and temperature. Marlborough's geographic location influences these processes and as a result, our marine environment is one of the most interesting of any coastal areas in New Zealand, supporting a high diversity of species. Furthermore, Marlborough is an important part of the migratory route for several large marine mammals, including humpback and southern right whales. Other marine mammals live in Marlborough's marine environment, including the nationally endangered Hector's dolphin, which resides in Cloudy-Clifford Bays and Queen Charlotte Sound. Species such as dusky dolphins and orca regularly visit the Marlborough Sounds, while bottlenose dolphins are found here during most of the year.

Marlborough's marine environment supports a significant diversity of sea birds, most of which rely on the area for breeding, raising young or for feeding. Of particular note is the king shag, which is endemic to the Marlborough Sounds.

Tidal wetlands, although mostly small and widely spread throughout Marlborough, form an important network for mobile species of wetland bird. Larger estuaries do exist, including those at Whangarae (Croisilles Harbour), Havelock, Kaiuma and Wairau Lagoons. These larger estuaries provide habitat and feeding areas for a wide variety of fish, invertebrates and birds.

The condition and state of marine biodiversity can be affected by land or water based activities. Adverse impacts can arise from sedimentation, contamination and habitat disturbance. Effects

[QAD-247198-151-1067-V4](#)

[QAD-247198-151-1067-V2:MAJ](#)

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can be temporary, but in particular circumstances can result in permanent loss or damage. Long term or cumulative smaller scale, localised effects from impacts such as contamination and physical disturbance can also have significant effects on the functioning of marine systems. Many activities, such as recreational swimming, do not affect or have an impact on marine biodiversity; however, other activities, including shipping (especially large and/or fast ships), reclamations or other coastal structures, marine farming and physical disturbance from certain fishing techniques can affect marine biodiversity.

There are also a variety of marine organisms that can be introduced by transport into our marine environment by ships (including the discharge of ballast water), oil rigs, barges and other boat. Regardless of whether or not these pest organisms are exotic, there is the potential for displacement of native species if the introduced organisms are not kept to a minimum. This could otherwise have a significant impact on Marlborough's indigenous biodiversity.

Despite the extensive length and physical size of Marlborough's coastline, many marine habitats and species are fragile and vulnerable to impact. The increasing use of the coastal environment for recreational, cultural and commercial activities leads to a corresponding increase in the potential for adverse effects on marine biodiversity. Unfortunately, it is difficult to determine all of the significant marine values due to the size of the area and difficulties associated with surveying subtidal marine areas, although techniques for assessing marine biodiversity are constantly improving and evolving.

Objective 8.1 – Marlborough's remaining areas of significant indigenous biodiversity in terrestrial, freshwater and coastal environments is protected.

As there has been considerable loss of indigenous biodiversity in Marlborough, it is important that remaining areas are protected and that their condition is maintained and improved where opportunities arise. Protection in this context should be considered in a broad sense and may include legal protection as well as fencing, active pest control, regulation and improved land management practices. The inclusion of this objective helps to achieve the National Policy Statement for Freshwater Management 2014 (NPSFM), where for both water quantity and quality reasons the protection of the significant values of wetlands is required. This objective also helps to achieve the New Zealand Coastal Policy Statement 2010 (NZCPS) where there is specific direction to protect biological diversity in the coastal environment.

This objective also helps to protect indigenous biodiversity as an important component of Marlborough's natural heritage and gives recognition to central government's 'statement of national priorities' for protecting rare and threatened indigenous biodiversity on private land (June 2007). These priorities are:

National Priority 1:

To protect indigenous vegetation associated with land environments that have 20 percent or less remaining in indigenous cover.

National Priority 2:

To protect indigenous vegetation associated with sand dunes and wetlands; ecosystem types that have become uncommon due to human activity.

National Priority 3:

To protect indigenous vegetation associated with 'originally rare' terrestrial ecosystem types not already covered by priorities 1 and 2.

National Priority 4:

To protect habitats of threatened and declining indigenous species.

Matters of national importance in Section 6(a) and 6(c) of the RMA require the Council to recognise and provide for the preservation of the natural character of the coastal environment, wetlands, lakes, rivers and their margins, and the protection of areas of significant indigenous

Commented [MJ3]: MFA submission point 80
426.092

vegetation and significant habitats of indigenous fauna. These matters help to protect biodiversity as important components of Marlborough's natural heritage.

Objective 8.2 – An increase in area/extent of Marlborough's indigenous biodiversity and restoration or improvement in the condition of areas that have been degraded.

While protection of remaining areas of indigenous biodiversity is important, so too is the restoration and re-establishment of some of what has been lost or degraded. Restoration means the active intervention and management of degraded biotic communities, landforms and landscapes to enhance biological character, ecological and physical processes. If restoration and re-establishment does not occur then indigenous biodiversity will remain seriously threatened and be vulnerable to further decline, especially in lowland southern Marlborough.

Given the important roles that wetlands can play and as many wetlands in Marlborough are in poor condition, it is important to improve their extent and condition. The creation of new wetlands will also help to increase the overall size and stock of wetland habitat in Marlborough.

It is acknowledged that in some hill country areas extensive natural regeneration has occurred and this has already helped to increase the extent of Marlborough's indigenous biodiversity. Although there is a natural ability of many species to regenerate given the right circumstances, some species cannot as they are too few in number, sometimes down to single individuals. In many cases, the propagation and replanting of plants is needed to establish a centre from which natural regeneration is possible.

Identification of sites, areas and habitats with significant indigenous biodiversity value

Policy 8.1.1 – When assessing whether wetlands, marine or terrestrial ecosystems, habitats and areas have significant indigenous biodiversity value, the following criteria set out in [Appendix 3A](#) will be used:

- (a) ~~representativeness;~~
- (b) ~~rarity;~~
- (c) ~~diversity and pattern;~~
- (d) ~~distinctiveness;~~
- (e) ~~size and shape;~~
- (f) ~~connectivity/ecological context;~~
- (g) ~~sustainability; and~~
- ~~adjacent catchment modifications.~~

~~(h) [\[Relief sought: Adopt approach taken in the proposed Regional Policy Statement for Northland \(May 2016\) at Appendix 5, pages 175 – 178.\]](#)~~

~~For a site to be considered significant, one of the first four criteria (representativeness, rarity, diversity and pattern or distinctiveness/special ecological characteristics) must rank medium or high.~~

~~To determine whether a site is significant for the purposes of Section 6(c) of the RMA, an assessment needs to be made by the Council or others against consistently applied criteria. The criteria identified in this policy (further explained in Appendix 3), have been used by the Council previously to identify and encourage opportunities for the conservation of natural features on private land in Marlborough and will enable assessments to be made in the future where none have occurred to date. The same criteria have also been used in identifying wetlands of~~

Commented [MJ4]: Conditional support - MFA submission point 81 426.093

Commented [MJ5]: MFA submission point 82 426.094

Oppose Queen Charlotte Residents Association 504.30, Kenepuru and Central Sounds Residents Association 868.26, Marlborough Environment Centre 1193.129 MFA/AQNZ further submission 74.

Oppose Forest & Bird 715.96 MFA/AQNZ further submission 75

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significance in Marlborough and in identifying areas in the coastal marine area with significant indigenous biodiversity value.

~~Policy 8.1.2 – Sites in the coastal marine area and natural wetlands assessed as having significant indigenous biodiversity value will be specifically identified in the Marlborough Environment Plan.~~

~~Significant wetlands have been identified in the MEP because these small and fragmented areas are all that remain of the once vast areas of wetland that covered lowland Marlborough. It is important to ensure the values of the significant wetlands are protected. Areas that meet the RMA's definition of a wetland but do not have significant values in terms of the criteria in Policy 8.1.1 have not been identified in the MEP and therefore are not subject to wetland rules.~~

~~Areas or habitats assessed as having significant ecological values within the coastal marine area have been specifically identified in the MEP and are referred to as 'ecologically significant marine sites'. This is because the coastal marine area is comprised of resources in public ownership, with the Council having a more direct role in managing these resources including in relation to areas with significant biodiversity value in terms of Section 6(c) of the RMA. Regulation and education will be the Council's main approach in protecting marine biodiversity.~~

~~[Relief sought: Adopt approach taken in the proposed Regional Policy Statement for Northland (May 2016) at Appendix 5, pages 175 – 178.]~~

~~Policy 8.1.3 – Having adequate information on the state of biodiversity in terrestrial, freshwater and coastal environments in Marlborough to enable decision makers to assess the impact on biodiversity values from various activities and uses. Recognise that increased information is an intrinsic good. Where there is uncertainty and real risk of a significant adverse effect, use adaptive management techniques to address that risk.~~

Survey work on private land through programmes run by the Council and Department of Conservation has provided an overview of biodiversity in Marlborough. However, while many landowners have had their land surveyed as part of these programmes, not all land has been surveyed. Having adequate information about biodiversity values of waterbodies is equally important for decision makers when assessing the impacts of various activities and uses within waterbodies, as well as activities and uses on adjoining land.

For the coastal marine area, the Council has undertaken a review of published and unpublished reports to provide an overview of Marlborough's marine biodiversity. This information is available to the public but it is acknowledged that there are significant gaps in our knowledge. The Council will undertake surveys to improve knowledge of biodiversity patterns and condition.

Continuing to add to the knowledge of the extent, condition and use of biodiversity in Marlborough will be important in assisting decision making on resource consent or plan change applications, as well as for general awareness of the state of Marlborough's environment.

~~[Add to commentary the importance of It is important for the Council to partnering with industry to increase knowledge.]~~

Protecting and enhancing indigenous biodiversity

Policy 8.2.1 – A variety of means will be used to assist in the protection and enhancement of areas and habitats with indigenous biodiversity value, including partnerships, support and liaison with resource users, landowners, regulation, pest management, legal protection, education and the provision of information and guidelines.

A variety of methods are necessary to achieve the protection and enhancement of areas and habitats with indigenous biodiversity value. Sometimes, simply fencing an area is the most effective means of protection and in this case, it is the Council's role to support landowners (including financially). In other cases, it may be appropriate that regulation is used. It is important to acknowledge, however that rules on their own do not protect important areas. The Council can

Commented [MJ6]: Marine Farming submission point 83
426.095

Oppose Oliver 921.2
MFA/AQNZ further submission point 76.

Commented [MJ7]: MFA submission point 84.
426.096

Oppose Clova Bay 152.10
MFA/AQNZ further submission point 77.

Commented [MJ8]: MFA submission point 84.
426.096

Commented [MJ9]:
MFA submission point 85
426.097

Oppose Kenepuru and Central Sounds 868.28
MFA/AQNZ further submission point 78.
Oppose Clova Bay Residents 152.9.
MFA/AQNZ further submission point 79 (NB. Incorrect ref to 8.1.3)

also take an active role in enhancement activities, again through supporting landowners with education, the provision of information and guidelines and through working in partnerships.

Policy 8.2.2 – Use a voluntary partnership approach with resource users and landowners as the primary means for achieving the protection of areas of significant indigenous biodiversity on private land, except for areas that are wetlands. Encourage and promote the protection, restoration and re-establishment of areas of indigenous biodiversity.

Commented [MJ10]: MFA submission point 86. 426.098.

Since 2000, the Council has undertaken a programme to identify and protect significant natural areas and indigenous biodiversity on private land in Marlborough. The Council has worked on the principle of a partnership approach, with landowners to achieve improvements in the protection of remaining significant natural areas. The rate of participation in this programme reflects the fact that most landowners want to protect unique ecosystems and species where they occur on their properties. The programme includes support through a landowner assistance programme operating alongside the field survey work. The programme is funded by the Council, central government's biodiversity fund and landowners. This approach has allowed for property-based surveys to be carried out in cooperation with landowners.

The exception for wetlands reflects that these significant sites will be subject to a regulatory regime. This helps give effect to the NPSFM, where for both water quality and quantity purposes the significant values of wetlands are to be protected (Objective A2(b) and Objective B4). This approach also assists in recognising and providing for the preservation of natural character of wetlands as required by Section 6(a) of the RMA.

Policy 8.2.3 – Priority will be given to the protection, maintenance and restoration of terrestrial habitats, ecosystems and areas that have significant indigenous biodiversity values, particularly those that are legally protected.

Commented [MJ11]: Or delete the policy MFA submission point 87 496.102

Those ecosystems, habitats and areas assessed as having significant indigenous biodiversity value are to be given priority in terms of their protection, maintenance and restoration. This policy recognises that a targeted approach to indigenous biodiversity is appropriate given that resources to assist landowners are limited. If the Council has to make decisions about which sites should be supported financially for protection works, those sites that have been legally protected through mechanisms such as covenants will be prioritised for funding support.

This policy also gives recognition to central government's 'statement of national priorities' for protecting rare and threatened indigenous biodiversity on private land as set out in Objective 8.1. These priorities will potentially have a significant influence on the Council's future policy and programmes. A significant area of lowland Marlborough (i.e. the Wairau and Awatere Plains) and coastal south Marlborough will fall under Priority 1. A number of specific areas will fall into Priorities 2 and 3, for example wetlands, the stony beach ridges at Rarangi and the coastal limestone cliffs. In terms of Priority 4 habitats, in Marlborough bird species such as the New Zealand falcon, weka and rifleman and plant species such as pīngao, *Muehlenbeckia astonii* and native broom species are either acutely or chronically threatened.

Policy 8.2.3A – Work with marine resource users and develop partnerships to protect, maintain and restore significant marine habitats.

Commented [MJ12]: MFA submission point 88. 426.103

Policy 8.2.4 – Priority will be given to the re-establishment of indigenous biodiversity in Marlborough's lowland environments.

Commented [MJ13]: Oppose Friends of Nelson Haven 716.102 MFA/AQNZ further submission point 80

In Marlborough's lowland environments (the Wairau and Awatere Plains) some ecosystem types are extremely depleted and have been fragmented over time. In these areas fully functioning ecosystems are not common as many native bush birds and insects are present in low numbers (for instance, very few tui can be found in south Marlborough). Lack of habitat caused by lack of fauna prevents natural functions such as seed dispersal and pollination, meaning that without active intervention by humans, some sites are, or will become unviable in the long term. Although there are challenges in natural regeneration and assisted revegetation, it is important that efforts are made to re-establish indigenous biodiversity in these areas, particularly as there is little public

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conservation land in south Marlborough. This policy will also help to address central government's national priorities for protecting indigenous vegetation on private land.

Policy 8.2.5 – Encourage the legal protection of terrestrial sites with significant indigenous biodiversity value through covenanting.

An important aspect of covenanting is that it is voluntary. To assist with the implementation of Policy 8.2.2, the Council will actively work with landowners to register covenants over sites with significant indigenous biodiversity value, resulting in important sites being protected in perpetuity. Covenants, such as those available under the Queen Elizabeth II National Trust, mean that land ownership and management of land remains with the landowner, but ongoing advice and support can be received for the site covenanted.

Policy 8.2.6 – Where areas of significant indigenous biodiversity value are known to exist in riparian margins of rivers, lakes or in the margins of a significant wetland, consideration will be given to acquiring or setting aside these areas to help protect their values.

Land along the margins of rivers, lakes and significant wetlands may have significant natural value and serve as important habitats. There is strong emphasis given to the enhancement of these areas under Section 6 of the RMA. Esplanade reserves or esplanade strips can be taken for the purposes set out in Section 229 of the RMA, including where this will contribute to the protection of conservation values. The reason for this policy therefore is to signal that where areas of significant indigenous biodiversity value occur in riparian margins, then land may be taken or set aside upon subdivision, or as a financial contribution on activities not requiring subdivision consent. The Council may also negotiate with landowners outside of these more formal processes if the values are significant enough to warrant protection.

Policy 8.2.7 – A strategic approach to the containment/eradication of undesirable animals and plants that impact on indigenous biodiversity values will be developed and maintained in partnership with MPI and affected industries and communities.

The wide range of pest species present in Marlborough, their location, characteristics and spread, means that a range of responses is necessary to deal with them and protect indigenous biodiversity. This can occur through rules in the Council's regional pest management plan, national pest management strategies, provision of information and advice to landowners, consent holders and the public, biological and physical control, monitoring and surveillance and at times, direct funding to landowners to help protect significant sites from pests. It is important to acknowledge that landowners (including statutory organisations) have a significant responsibility for controlling and managing pest animals and plants.

Often the resources required (technologically or financially) to effectively manage pests with physical control methods across the entire District are not available. The most effective and efficient approach will be to target pests at sites of high ecological value where they can be realistically managed to protect particular values or areas. This approach will rely on strong partnerships with landowners.

To date the Council has had limited involvement or experience in dealing with pests in the coastal marine area, but what work has been done has focussed on managing pests for economic reasons, especially for the marine farming industry in the Marlborough Sounds. Part of the Council's strategic approach for the coastal marine area has seen the establishment of a collaborative partnership to help build capability and put in place a framework to manage future biosecurity threats.

~~**Policy 8.2.8 – Where monitoring of ecosystems, habitats and areas with significant indigenous biodiversity value shows that there is a loss of or deterioration in condition of these sites, then the Marlborough District Council will review the approach to protection.**~~

~~Ongoing monitoring of the condition of sites with significant indigenous biodiversity value will be necessary to determine if the methods in the MEP are helping to improve the overall condition of~~

Commented [MJ14]: Or delete policy 8.2.5.
MFA submission point 89
426.105

Oppose Clova Bay Residents Association 152.4 and Central Sounds Residents Association 868.35
MFA/AQNZ further submission point 81

Commented [MJ15]: Comment
MFA submission point 90
426.106

Commented [AH16]: MFA submission point 91.
426.107

significant indigenous biodiversity in Marlborough. Where state of the environment monitoring shows a loss of or deterioration in the condition of significant sites as a result of the voluntary approach to protection, then the Council will review the voluntary approach to determine whether increased use of regulation should be pursued. Any changes to the MEP as a result of this review would only occur through the First Schedule process of the RMA.

Policy 8.2.9 – ~~Maintain, enhance or restore ecosystems, habitats and areas of indigenous biodiversity even where these are not identified as significant in terms of the criteria in Policy 8.1.1, but are important for:~~

- ~~(a) the continued functioning of ecological processes;~~
- ~~(a) providing connections within or corridors between habitats of indigenous flora and fauna;~~
- ~~(a) cultural purposes;~~
- ~~(a) providing buffers or filters between land uses and wetlands, lakes or rivers and the coastal marine area;~~
- ~~(a) botanical, wildlife, fishery and amenity values;~~
- ~~(a) biological and genetic diversity; and~~
- ~~(a) water quality, levels and flows.~~

This policy identifies a range of factors that are important for the overall functioning of ecological processes. However, it is important to recognise that not all areas with indigenous biodiversity value will be considered significant. Nonetheless, these areas still add to the overall sustainable management purpose of the RMA, particularly when having regard to the following Section 7 matters of the RMA:

- ~~(c) The maintenance and enhancement of amenity values.~~
- ~~(d) Intrinsic values of ecosystems.~~
- ~~(f) Maintenance and enhancement of the quality of the environment.~~
- ~~(g) Any finite characteristics of natural and physical resources.~~

Policy 8.2.10 – ~~Promote to the general public and landowners the importance of protecting and maintaining indigenous biodiversity because of its intrinsic, conservation, social, economic, scientific, cultural, heritage and educational worth and for its contribution to natural character.~~

Increasing awareness about the unique and diverse biodiversity of Marlborough is important. The policy recognises contributions towards protecting and maintaining biodiversity will see the Council continuing to work closely with the community. This approach has been fundamental to improving biodiversity to date, because to protect biodiversity on private land, the Council relies heavily on voluntary participation and proactive protection activity from landowners. Within the coastal environment this role is particularly important as the resources comprised in the coastal marine area are in public ownership. Coupled with imperatives in the RMA requiring the preservation of the natural character of the coastal environment, wetlands, lakes and rivers, the Council recognises that informing the public about Marlborough's biodiversity is essential in helping to protect the values identified in the policy.

Policy 8.2.11 – ~~Promote corridors of indigenous vegetation along waterbodies to allow the establishment of native ecosystems and to provide wildlife habitat and linkages to other fragmented bush or wetland remnants.~~

Riparian areas are the interface between land and water resources and provide important habitat for unique flora and fauna, including swamp nettle and whitebait spawning sites. Vegetation within the riparian area also contributes to freshwater habitat through the provision of refuge and the input of food and shade. For example, many native fish species are dependent on native

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Commented [AH17]: MFA submission point 92. 426.108

Commented [AH18]: MFA submission points 86 and 93. 426.099.

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terrestrial insects as a food source and these insects are often only found in indigenous riparian vegetation. Promoting ecological corridors on both public and private land therefore plays an important part in protecting ecosystems and maintaining and enhancing the quality and diversity of remaining natural areas.

The opportunity already exists to improve biodiversity on Council-owned land along a number of waterways on the Wairau Plain, as well as alongside rivers in other catchments (e.g. Wakamarina, Rai, Onamalutu and Pelorus), despite these riparian areas being maintained for flood hazard mitigation. These river margins may not presently have particular value for biodiversity, but they could have in future with enhancement work such as the removal of plant pests and planting with native species.

Policy 8.2.12 – Encourage and support private landowners, community groups and others in their efforts to protect, restore or re-establish areas of indigenous biodiversity.

Not all of the responses to protecting, restoring or re-establishing indigenous biodiversity need to be achieved through the RMA or by regulation. For example, voluntary agreements can be put in place by various groups to protect species or habitats. There are also provisions in other statutes that can be used by various agencies to protect particular values and these may extend to also protecting important biodiversity values, e.g. the Marine Reserves Act 1971. The Council has also established programmes to assist landowners and community groups to protect and restore natural areas and ecosystems. This includes financial assistance to landowners willing to protect ecologically important areas on their properties.

Policy 8.2.13 – When re-establishment or restoration of indigenous vegetation and habitat is undertaken, preference should be given to the use of native species of local genetic stock.

Plants within the same species can adapt to local conditions to become genetically separate (and sometimes physically distinctive). Local plants are therefore well adapted and are best used for propagation, as they provide the best chance of survival and good growth within the District. These plants also protect genetic diversity within local populations and prevent the character of local ecosystems from being swamped by imported varieties from other areas. Therefore, where feasible, seed should be collected from within a catchment or ecological district as close as possible to the specific site of a planting project.

Managing effects of subdivision, use and development on indigenous biodiversity

New Policy 8.3.1 – Manage the effects of subdivision, use or development in the coastal environment by: ~~In the coastal environment, avoid adverse effects, and outside the coastal environment avoid, remedy or mitigate adverse effects of subdivision, use and development so they are no more than minor on:~~

- (a) ~~avoiding adverse effects where the areas, habitats or ecosystems are those set out in Policy 11(a) of the New Zealand Coastal Policy Statement 2010; indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists;~~
- (b) ~~avoiding adverse effects where the areas, habitats or ecosystems are mapped as significant wetlands or ecologically significant marine sites in the Marlborough Environment Plan; or Areas of indigenous vegetation and habitats of indigenous fauna, that are significant using the assessment criteria in Appendix 3; and~~
- (c) ~~avoiding significant adverse effects and avoiding, remedying or mitigating other adverse effects where the areas, habitats or ecosystems are those set out in Policy 11(b) of the New Zealand Coastal Policy Statement 2010 or are not identified as significant in terms of Policy 8.1.1 of the Marlborough Environment Plan Areas set aside for full or partial protection of indigenous biodiversity under other legislation.~~

Commented [AH20]: MFA submission points 86 and 95. 426.101.

Commented [MJ21]: MFA submission point 96 426.109-110

Policy 11 of the New Zealand Coastal Policy Statement 2010 (NZCPS) defines a range of priorities so that indigenous biodiversity in the coastal environment is protected. Policy 8.3.1 of the MEP reflects the priority approach of the NZCPS to subdivision, use and development activities within the coastal environment.

~~New Policy 8.3.2 – Where subdivision, use or development requires resource consent, the adverse effects on areas, habitats or ecosystems with indigenous biodiversity value shall be: In the coastal environment, avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of subdivision, use and development on:~~

- ~~(a) avoided where it is a significant site in the context of Policy 8.1.1; Areas of predominantly indigenous vegetation; and~~
- ~~(b) avoided, remedied or mitigated where indigenous biodiversity values have not been assessed as being significant in terms of Policy 8.1.1. Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes; and~~
- ~~(c) Indigenous ecosystems and habitats that are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, intertidal zones, rocky reef systems, coastal and headwater streams, floodplains, margins of the coastal marine area and freshwater bodies, spawning and nursery areas and saltmarsh.~~

~~New Policy 8.3.2A – Outside the coastal environment, and where Policy 8.3.1 does not apply, avoid, remedy or mitigate adverse effects of subdivision, use and development so they are not significant on any of the following:~~

- ~~(a) Areas of predominantly indigenous vegetation;~~
- ~~(b) Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes; and~~
- ~~(c) Indigenous ecosystems and habitats that are particularly vulnerable to modification, including wetlands, headwater streams, floodplains and margins of freshwater bodies, spawning and nursery areas.~~

~~New Policy 8.3.2B – For the purposes of Policies 8.3.1, 8.3.2 and 8.3.2A, when considering whether there are any adverse effects and/or any significant adverse effects:~~

- ~~(a) Recognise that a minor or transitory effect may not be an adverse effect;~~
- ~~(b) Recognise that many areas contain ongoing use and development that:~~
 - ~~(i) Were present when the area was identified as high or outstanding or have subsequently been lawfully established;~~
 - ~~(ii) May be dynamic, diverse or seasonal;~~
- ~~(c) Recognise that where the effects are or may be irreversible, then they are likely to be more than minor;~~
- ~~(d) Recognise that there may be more than minor cumulative effects from minor or transitory effects;~~
- ~~(e) Have regard to any restoration and enhancement of the area and species listed in Policies 8.3.1 and 8.3.2; and~~
- ~~(f) Have regard to any technical or operational requirements, but only where all reasonable steps have first been taken to avoid effects.~~

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Policy 8.3.2C – For the purpose of policy 8.3.2A, if adverse effects cannot be reasonably avoided, remedied or mitigated, then it may be appropriate to consider the next steps in the mitigation hierarchy, i.e. biodiversity offsetting, followed by environmental biodiversity compensation as set out in Policy 8.3.8

~~This policy sets up a hierarchy for decision makers to use when assessing the effects of subdivision, use or development activities on areas, habitats or ecosystems with indigenous biodiversity value. For those sites identified as being significant in terms of Policy 8.1.1, it is important that adverse effects are avoided. This recognises that there are few significant sites remaining on private land, especially in southern Marlborough. Where sites have not been identified as significant through Policy 8.1.1, decision makers can also consider remediation or mitigation options to address adverse effects.~~

Policy 8.3.3 – Control vegetation clearance activities to retain ecosystems, habitats and areas with indigenous biodiversity value.

Although the Council has adopted an approach of voluntary partnerships with private landowners to identify and protect areas of significant indigenous biodiversity, it is important there is a "backstop" measure in place to control activities that involve the removal of indigenous vegetation. The difference in approach recognises that rules in themselves will not improve the overall condition of significant natural areas; only by working with landowners can that occur. However, control through both permitted activity rules (with conditions) and discretionary activity rules for vegetation clearance is also necessary to assist in minimising the loss of ecosystems, habitats and areas with indigenous biodiversity value. It is important to note that there may be some circumstances where the clearance of indigenous vegetation will be excluded from rules, such as that which occurs under plantation forestry or on existing roads. The policy will also contribute to achieving outcomes for the protection of outstanding natural features and landscapes and the maintenance of high amenity areas (see Chapter 7 - Landscape, Volume 1 of the MEP).

Policy 8.3.4 – Improve the management of drainage channel maintenance activities to mitigate the adverse effects from these activities on the habitats of indigenous freshwater species.

The Council operates and maintains a historic network of drainage channels on the Wairau Plain. This network reduces groundwater levels and improves the productive potential of the rural land resource. Some of the drainage channels are modified rivers, while others are artificial watercourses. The drainage channels often provide habitat to indigenous freshwater fauna, including eel (tuna) and other freshwater fish and kōura. These species are a source of mahinga kai to Marlborough's tangata whenua iwi and contribute to Marlborough's overall biodiversity.

The maintenance of the drainage network involves the control and/or removal of aquatic plants, wetland plants and accumulated sediment from the bed of the channels that would otherwise reduce the efficiency of water flow and increase water levels. Such maintenance can adversely affect aquatic animals within the channel, either through direct removal or a reduction of habitat. While it is difficult to completely avoid the adverse effects of drainage channel maintenance on aquatic biodiversity, it is possible, using good environmental practice guidelines, to mitigate the nature and degree of effect from maintenance activities.

Policy 8.3.5 – In the context of Policy 8.3.1 and Policy 8.3.2, adverse effects to be avoided or otherwise remedied or mitigated may include:

- ~~(a) fragmentation of or a reduction in the size and extent of indigenous ecosystems and habitats;~~
- ~~(a) fragmentation or disruption of connections or buffer zones between and around ecosystems or habitats;~~
- ~~(a) changes that result in increased threats from pests (both plant and animal) on indigenous biodiversity and ecosystems;~~
- ~~(a) the loss of a rare or threatened species or its habitat;~~
- ~~(a) loss or degradation of wetlands, dune systems or coastal forests;~~

Commented [MJ22]: This approach is similar to the Regional Policy Statement for Northland (May 2016), Policy 4.4.1. A similar approach has been taken in the Bay of Plenty Regional Coastal Plan at Policies NH 4 – NH 11; and in the AUP Regional Policy Statement at Chapter E15.3(2), (9) and (10) and D9.3(1)(a). Policy 8.3.2B(b) and (e) are based on Northland Policy 4.6.1(3). Policy 8.3.2B(f) adopts the approach in BOP Policy NH 11(b).

Commented [MJ23]: MFA submission point 97 426.111

Oppose Clova Bay Residents Association 152.4 and Kenepuru and Central Sounds 868.35
MFA/AQNZ further submission point 81.

- ~~(a) loss of mauri or taonga species;~~
- ~~(a) impacts on habitats important as breeding, nursery or feeding areas, including for birds;~~
- ~~(a) impacts on habitats for fish spawning or the obstruction of the migration of fish species;~~
- ~~(a) impacts on any marine mammal sanctuary, marine mammal migration route or breeding, feeding or haul-out area;~~
- ~~(a) a reduction in the abundance or natural diversity of indigenous vegetation and habitats of indigenous fauna;~~
- ~~(a) loss of ecosystem services;~~
- ~~(a) effects that contribute to a cumulative loss or degradation of habitats and ecosystems;~~
- ~~(a) loss of or damage to ecological mosaics, sequences, processes or integrity;~~
- ~~(a) effects on the functioning of estuaries, coastal wetlands and their margins;~~
- ~~(a) downstream effects on significant wetlands, rivers, streams and lakes from hydrological changes higher up the catchment;~~
- ~~(a) natural flows altered to such an extent that it affects the life-supporting capacity of waterbodies;~~
- ~~(a) a modification of the viability or value of indigenous vegetation and habitats of indigenous fauna as a result of the use or development of other land, freshwater or coastal resources;~~
- ~~(a) a reduction in the value of the historical, cultural and spiritual association with significant indigenous biodiversity held by Marlborough's tangata whenua iwi;~~
- ~~(a) a reduction in the value of the historical, cultural and spiritual association with significant indigenous biodiversity held by the wider community; and~~
- ~~(a) the destruction of or significant reduction in educational, scientific, amenity, historical, cultural, landscape or natural character values.~~

~~The policy identifies a range of adverse effects that may result from subdivision, use and development, and which may need to be avoided to protect indigenous biodiversity values. The effects can occur in terrestrial, freshwater or coastal environments or be specific to one environment. Therefore in determining whether these adverse effects may occur and potentially affect indigenous biodiversity values, a case-by-case assessment will be necessary. Depending on the environment within which the subdivision, use or development is to take place and the particular values associated with the site and degree of effect likely to result from the proposed activity, a determination can be made as to whether the effects should be avoided in terms of Policies 8.3.1 and 8.3.2 or can otherwise be remedied or mitigated.~~

Policy 8.3.6 – Where taking or diversion of water from waterbodies is proposed, water levels and flows shall remain at levels that protect the natural functioning of those waterbodies.

This policy sets an environmental bottom line to protect biodiversity values in waterbodies (including in streams that are spring fed) where the taking of water is proposed. Regard will be had to the policy in establishing environmental flow and level limits and when considering resource consent applications where no such regime has been established. This policy recognises that all waterbodies are important and that protecting the natural functioning of these environments will at least maintain biodiversity values. In some cases, prohibited activity rules have been applied to protect the values of waterbodies.

Policy 8.3.7 – Within an identified ecologically significant marine site fishing activities using techniques that disturb the seabed must be avoided.

Some fishing activities use techniques that result in disturbance of the seabed. Depending where this occurs, there is the potential for adverse effects on marine biodiversity. The policy seeks to specifically avoid the use of these techniques to ensure areas identified as having significant biodiversity value in the coastal marine area are protected. This will help to give effect to Policy 11 of the NZCPS.

Commented [MJ24]: Oppose Department of Conservation 479.93
MFA/AQNZ further submission point 82

~~Policy 8.3.8 – With the exception of areas with significant indigenous biodiversity value, where indigenous biodiversity values will be adversely affected through land use or other activities, a biodiversity offset can be considered to mitigate residual adverse effects. Where a biodiversity offset is proposed, the following criteria will apply:~~

- ~~(b) the offset will only compensate for residual adverse effects that cannot otherwise be avoided, remedied or mitigated;~~
- ~~(c) the residual adverse effects on biodiversity are capable of being offset and will be fully compensated by the offset to ensure no net loss of biodiversity;~~
- ~~(d) where the area to be offset is identified as a national priority for protection under Objective 8.1, the offset must deliver a net gain for biodiversity;~~
- ~~(e) there is a strong likelihood that the offsets will be achieved in perpetuity;~~
- ~~(f) where the offset involves the ongoing protection of a separate site, it will deliver no net loss and preferably a net gain for indigenous biodiversity protection; and~~
- ~~(g) offsets should re-establish or protect the same type of ecosystem or habitat that is adversely affected, unless an alternative ecosystem or habitat will provide a net gain for indigenous biodiversity.~~

Commented [AH25]: Oppose Kenepuru and Central Sounds 868.38
MFA/AQNZ further submission point 83.

~~Biodiversity offsets are the final step in a hierarchical process in which adverse effects on indigenous biodiversity are first avoided, then remedied, and finally mitigated. Only after these approaches have been exhausted is it appropriate to consider biodiversity offsets to deal with unavoidable residual adverse effects. Policy 8.3.8 makes clear that biodiversity offsets should not be considered in areas that have been assessed as having significant biodiversity value and where adverse effects on these values are to be avoided.~~

~~The goal of a biodiversity offset is to achieve no net loss and preferably a net gain of biodiversity with respect to species composition, habitat structure and ecosystem functions. It is therefore important that offsets are appropriate compensation. There is a preference for the re-establishment or protection of the same type of ecosystem or habitat to avoid the difficulty of assessing relative values of different ecosystems or habitats of different species. Trade-offs involving different species will not always adequately compensate for the loss of the originally threatened species. However, the policy does recognise that where significant indigenous biodiversity benefits can be achieved, the protection of other habitats may be appropriate.~~

~~There will be cases where the indigenous biodiversity at risk is so significant that it should not be significantly modified or destroyed under any circumstances (other than when necessary for avoiding risks to human condition and safety). There are also situations where residual effects cannot be fully compensated because the biodiversity is highly vulnerable or irreplaceable; for example, where the vegetation or habitat is so rare or reduced that there are few or no opportunities to deliver an offset. In such cases, offsetting cannot be considered as a means of environmental compensation for adverse effects.~~

~~There also needs to be certainty that the proposed offsets will occur. Offset measures such as indigenous planting will take a long time to establish and become useful in a biodiversity role. There should be an overall improvement in indigenous biodiversity as a result of the project and its biodiversity offsets.~~

Policy 8.3.89

~~Risk of an effect occurring will be considered appropriate if one or more or a combination of the following criteria can be met:~~

- ~~a. The effects of an activity are likely to be reversible;~~
- ~~b. Adverse effects are likely to be reversible before they reach a significant level;~~

~~c. The normal state of the environment can be adequately defined.~~

~~When a biodiversity offset is proposed, the following criteria will apply factors will be considered:~~

- ~~(1) Restoration, enhancement and protection actions will only be considered a biodiversity offset where it is used to offset the significant residual effects of activities after the adverse effects have been avoided, remedied or mitigated.~~
- ~~(1a) Offsetting should not be applied to justify impacts on vulnerable or irreplaceable biodiversity.~~
- ~~(2) Restoration, enhancement and protection actions undertaken as a biodiversity offset are demonstrably additional to what otherwise would occur, including that they are additional to any avoidance, remediation or mitigation undertaken in relation to the adverse effects of the activity.~~
- ~~(3) Offset actions should be undertaken close to the location of development, where this will result in the best ecological outcome.~~
- ~~(4) The values to be lost through the activity to which the offset applies are counterbalanced by the proposed offsetting activity, which is at least commensurate with the adverse effects on indigenous biodiversity. Where possible the overall result should be no net loss, and preferably a net gain in ecological values.~~
- ~~(5) The offset is applied so that the ecological values being achieved through the offset are the same or similar to those being lost.~~
- ~~(6) The delay between the loss of biodiversity through development and the gain or maturation of ecological outcomes is to be minimised.~~
- ~~(7) The offset must have defined targets, which are capable of being objectively measured. The benefits of the offset need to be measured and regularly publically reported on. Where the offset is not delivering on the targets the offset program must be able to be revised so that all practical steps are taken to ensure that the targets (and, where appropriate any compensation for not meeting the target) are met.~~

Policy 8.3.9

~~The rRisk of an effect occurring will be considered appropriate if one or more or a combination of the following criteria can be met in light of the following:~~

- ~~(a) Whether Tthe effects of an activity are likely to be reversible at all;~~
- ~~(b) Could sufficient controls can be put in place so that Aadverse effects are likely to be reversible before they reach a significant level;~~
- ~~(c) Whether Tthe normal state of the environment can be adequately defined;~~
- ~~(d) Could tThe development could occur on a staged basis; and/or~~
- ~~(e) TheDoes the temporal and spatial scale does not impact on the full range of the species or relevant habitat or area.~~

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Commented [MJ26]: Taken from Chapter M, Appendix 8, Proposed AUP Independent Hearing Panel's recommendations.
MFA submission point 98
426.112

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Commented [MJ27]: MFA submission point 98
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Oppose Kenepuru and Central Sounds 868.38
MFA/AQNZ further submission point 83

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[Note: See EIANZ Guidelines for Ecological Impact Assessment 2015.](#)

Methods of implementation

The methods listed below are to be implemented by the Council unless otherwise specified.

8.M.1 Regional rules

Resource consent will be required to modify waterbodies and for any activity that would result in the draining or modification of a wetland (excluding artificially created ponds). The term 'modification' applies in the context of a physical change to the waterbody or in terms of alteration to flow (including the taking of water). Regard must be had to the values of waterbodies identified in Appendix 5.

Permitted activity rules will enable some activities to be carried out in wetlands and rivers where there is no more than minor adverse effect. These rules will specify certain standards that have to be met for the activity to remain as permitted. In some cases where significant wetlands have been least modified by humans, prohibited activity rules have been applied to ensure the values of the significant wetlands are maintained.

Where appropriate, regional rules will enable pest management activity for biodiversity outcomes.

Fishing activities using techniques or methods that disturb the seabed in the areas identified as an ecologically significant marine site will be prohibited. Resource consent is required for most uses or activities within the coastal marine area and an assessment of the effects of the activity on indigenous biodiversity will be undertaken, including whether there are any significant biodiversity values.

8.M.2 District rules

Resource consent will be required for land disturbance or vegetation clearance activities where certain species or habitats with indigenous biodiversity value are to be modified.

8.M.3 Marlborough's Significant Natural Areas Programme

The Council's Marlborough Significant Natural Areas programme involves the collection of information about natural ecosystems on private land, with the aim of working with landowners to help protect significant sites. An ecological survey is undertaken with property reports prepared that summarise the ecological values found and suggest management options to ensure their long term survival.

The Department of Conservation has also identified significant sites on private land through its Protected Natural Areas survey programme. There is no duplication in effort as the Council and Department programmes have surveyed different areas of Marlborough.

Although a good proportion of private land in Marlborough has been surveyed, some landowners have not allowed the Council onto their property, therefore the programme of identifying sites is incomplete and ongoing. If a landowner changes their mind or a property changes ownership and a new landowner wishes to have their property surveyed, then the Council will undertake the survey work.

8.M.4 Identification of areas with significant biodiversity value

Identification of the values of various waterbodies within Marlborough is included in Appendix 5. The natural and human use values include ecological, habitat, recreational and natural character values.

The Council has also identified in the resource management plan significant wetlands and ecologically significant marine sites. [With regard to ecologically significant marine sites, a further survey is required in some cases to confirm the boundary or value of a site. Once this occurs, the Council will update the planning maps to reflect the outcomes of ongoing surveys.](#)

Commented [MJ28]: MFA submission point 100
426.114

Commented [MJ29]: Consequential amendments to the following sections may be required:
MFA submission point 101
426.115.

Commented [MJ30]: Support Department of Conservation
479.97
MFA/AQNZ further submission point 85

8.M.5 Monitoring

The Council has gathered a significant amount of information about indigenous biodiversity in Marlborough through the Significant Natural Areas programme. The Council has established a monitoring programme that will be ongoing to determine if support programmes are helping to improve the overall condition of indigenous biodiversity in Marlborough.

The Council will establish baseline monitoring programmes that provide a benchmark for determining the ongoing condition of habitats, ecosystems and areas that have significant indigenous biodiversity values. Where appropriate, the Council will also require resource consent holders to monitor the effects of their activity on marine biodiversity.

The Council is aware that its knowledge on areas with biodiversity value is incomplete and is therefore committed to carrying out and supporting research, and undertaking state of the environment monitoring to gain a better understanding of Marlborough's biodiversity.

8.M.6 Support

The Council will support, including financially, the protection and/or restoration of areas with biodiversity value in the following ways:

- *through the established landowner assistance programme, which provides both practical and financial help with work such as pest and weed control and fencing;*
- *by the waiving of resource consent application fees for activities that would assist in the protection of significant areas;*
- *through the annual planning process, consider granting reductions in rating for properties where sites are protected through conservation covenants;*
- *from funding made available by central government for the protection of areas of significant indigenous vegetation and habitats of indigenous fauna;*
- *by prioritising available funds for significant sites where sites are subject to protective covenants;*
- *through appropriate investigations to improve our understanding of the nature and state of indigenous biodiversity in Marlborough; and*
- *through supporting initiatives developed by community and industry groups to promote protection and restoration of indigenous biodiversity.*

8.M.7 Information

Increasing the knowledge and understanding of landowners and the public of the occurrence of significant areas of ecological value not only leads to greater appreciation of those values, but can motivate voluntary action to maintain and enhance indigenous biodiversity. The type of information already available or to be provided includes:

- *information to individual landowners through the 'Marlborough Significant Natural Areas' programme and the Department of Conservation 'Protected Natural Areas' survey programme on sites of significant indigenous biodiversity on private land, on the issues affecting the sites and suggestions for future management of the sites;*
- *based on knowledge through the survey programmes, a summary overview of significant natural areas in south and north Marlborough;*
- *newsletters for the public about the achievements being made on private land to protect and/or enhance biodiversity in Marlborough;*
- *web-based information on Marlborough's indigenous biodiversity, the various programmes of support available and guidelines on various issues;*
- *on specific issues affecting indigenous biodiversity through groups such as the Sounds Advisory Group;*

- *through maintenance of a database that records studies of marine areas undertaken by a variety of science providers. (This database is available on the Council's website.) The studies undertaken include those for resource consent applications or other scientific investigation, e.g. those undertaken on dusky dolphins in Admiralty Bay;*
- *encouraging the implementation of regimes such as voluntary retirement of land from farming, Queen Elizabeth II National Trust and other covenants, the establishment of reserves and voluntary restoration to achieve the protection of areas of significance;*
- *state of the environment reporting on the extent and condition of Marlborough's biodiversity; and.*
- *fact sheets on effective methods to control undesirable plants and animals and opportunities for private land to be covenanted.*

8.M.8 Guidelines

Guidelines have already been developed by the Council and other agencies for a range of aspects concerning biodiversity, including:

- *to help interested landowners identify and clarify both production and ecological values on private property and develop practical and specific management strategies to balance these;*
- *which species are suitable for planting in south Marlborough, including for different areas and ecosystems. The guide (produced in conjunction with the Department of Conservation) provides advice and information for small and larger scale plantings and restoration projects;*
- *approaching marine mammals from land, sea and air and on minimising acoustic disturbance to mammals from seismic survey operations (both produced by the Department of Conservation);*
- *the benefits of and how to eco-source plants for restoration projects; and*
- *for the restoration/creation of wetlands.*

The Council will prepare guidelines to assist developers on options available for enhancing indigenous biodiversity.

The Council will investigate and document best practice guidelines to assist when planning for and undertaking drainage channel maintenance activities. The practices will vary between drainage channels, depending on the circumstances. Marlborough's tangata whenua iwi and others with an interest in aquatic biodiversity will be provided the opportunity to assist in the development of the guidelines.

As the need arises, the Council will develop further guidelines in an endeavour to enhance overall biodiversity in Marlborough.

8.M.9 Regional Pest Management Plan for Marlborough

The Regional Pest Management Plan for Marlborough (prepared under the Biosecurity Act 1993) classifies a range of plant and animal species as pests because they cause or have the potential to cause significant adverse effects on Marlborough's economy and/or environment. Individual pests are placed in one of three categories. The management regime, which includes rules for each pest, applies mostly to terrestrial environments but does include aquatic plant and animal pests. The plan also lists plant and animal species that pose potential threats to ecological values in Marlborough. These species do not have a specific regime for control because they do not pass the required cost benefit tests set out in the Biosecurity Act. However, control of these pests will likely be based on a 'site led' approach, targeted to sites with significant ecological value where the reduction of a range of pests would be effective in protecting those values.

8.M.10 Works

The Council will undertake planting of riparian margins with indigenous species on land owned or administered by the Council where appropriate.

8.M.11 Partnership/Liaison

The Council works closely with the Queen Elizabeth II National Trust, an independent organisation that assists landowners to formally protect their land through a covenant on the property title. The Council also works closely with the Department of Conservation in providing information for landowners and the public in general and in on-the-ground work to assist in enhancing biodiversity in Marlborough.

Focussed projects to enhance indigenous biodiversity are supported and promoted by the Council. This can include projects such as landcare groups set up to restore areas such as the Grovetown Lagoon and Rarangi foreshore, working with nurseries to ensure locally-sourced native plants are available for restoration projects, establishing the Tui to Town project to entice native birds across the Wairau Plain from the Northbank forests and working with resident groups on local projects.

Through its role in biosecurity the Council also acts in a liaison capacity with the Ministry for Primary Industries (MPI) Biosecurity New Zealand in the management of a range of undesirable animals and plants. Equally important in the control and management of pest animals and plants is the partnership role between the Council and private landowners and between the Council and Department of Conservation/Land Information New Zealand with respect to Crown land.

The Council has a partnership role with the Minister of Conservation in managing Marlborough's coastal marine area. The Minister is responsible for approving regional coastal plans and also administers the NZCPS. For this reason, maintaining a strong partnership with the Department of Conservation through its area and local offices will be very important in looking after Marlborough's marine biodiversity.

The Council has entered a collaborative partnership with Top of the South councils (Tasman, Marlborough and Nelson), MPI Biosecurity New Zealand, marine farming industries and iwi to help build capability and put in place a framework to manage future marine biosecurity threats. The Department of Conservation will also be involved in the consideration of biosecurity threats where these may affect marine biodiversity.

Many residents, resident groups and other community based groups have an interest in how Marlborough's coastal marine areas are to be managed into the future. Maintaining a strong relationship with these individuals and groups will help to achieve the outcomes sought for maintaining marine biodiversity. This will extend to supporting community initiatives and advocating to government departments to set up protected marine areas and working with industry groups to promote sustainable use of marine resources.

8.M.12 Acquisition of land

The Council may consider acquiring sites with outstanding ecological values where land purchase is the only means available for protection of the values and that land is available for purchase. The Council will also encourage other agencies to do this.

Anticipated environmental results and monitoring effectiveness

The following table identifies the anticipated environmental results of the indigenous biodiversity provisions of the MEP. The anticipated environmental results are ten year targets, unless otherwise specified. For each anticipated environmental result, a series of indicators will be used to monitor the effectiveness of the indigenous biodiversity provisions.

Anticipated environmental result	Monitoring effectiveness
<p>8.AER.1</p> <p>An increase in the number and extent of ecosystems, habitats and areas with indigenous biodiversity value that are formally protected or covenanted (where practicable).</p>	<p>There is an increase in the area of land covered in indigenous vegetation (including in riparian margins) in those parts of Marlborough defined as acutely or chronically threatened in the Threatened Environment Classification (National Priority One in "Statement of National Priorities for Protecting Rare and Threatened Biodiversity on Private Land).</p> <p>The number of sites with significant indigenous biodiversity value under formal protection by either a landowner agreement with the Council or a Queen Elizabeth II National Trust covenant or similar has increased.</p> <p>There is an increase in the number of marine protected areas.</p>
<p>8.AER.2</p> <p>Maintenance and enhancement of the condition of ecosystems, habitats and areas with indigenous biodiversity value.</p>	<p>Monitoring of sites identified through the Significant Natural Areas programme shows an improvement in the values of those sites.</p> <p>Baseline monitoring programmes established in 2010 for a representative sample of terrestrial, river and wetland and in 2014/15 for ecologically significant marine site shows no loss of those values over the life of the MEP.</p> <p>There is no increase in the extent or distribution of known aquatic pest species identified as declared pests in the Regional Pest Management Plan for Marlborough.</p>
<p>8.AER.3</p> <p>There is no loss in wetland area.</p>	<p>Measured against a baseline monitoring programme established for wetlands in 2010, there is no loss in the overall area of wetlands in Marlborough.</p>
<p>8.AER.4</p> <p>Widespread community involvement in looking after Marlborough's indigenous biodiversity.</p>	<p>Continuation of community involvement in projects and initiatives such as 'Tui to Town,' Grovetown Lagoon restoration, landcare groups, planting of riparian areas, etc.</p> <p>The number of landowners protecting private land with indigenous biodiversity values (through formal protection or active management) increases.</p> <p>A voluntary partnership approach with landowners continues to be the primary means of protecting terrestrial areas of significant indigenous biodiversity.</p>

Commented [MJ31]: Oppose Pinder 578.24, Guardians of the Sounds 752.24 and Sea Shepherd 1146.24 MFA/AQNZ further submission point 84.

Anticipated environmental result	Monitoring effectiveness
<p>8.AER.5</p> <p>An increase in knowledge of Marlborough's indigenous biodiversity.</p>	<p>Use of scheduled criteria to identify ecosystems, habitats or areas present with significant indigenous biodiversity value through resource consent applications or where future survey work may be undertaken.</p> <p>The number of private properties over which ecological assessments to determine if there are ecosystems, habitats or areas present with significant indigenous biodiversity value, increases (albeit at a low level) as the active SNA survey has been completed. Any increase in properties surveyed is most likely to arise through resource consent processes.</p> <p>Knowledge and understanding of indigenous biodiversity in Marlborough's coastal marine area is enhanced through maintenance of the marine database of information and from supporting research in areas where little is known about marine biodiversity.</p>

[Appendix 5 Regional Policy Statement for Northland \(see separate attachment\).](#)

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Appendix B

(From Appendix 5 Regional Policy Statement for Northland)

Areas of significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial, freshwater and marine environments

An area of indigenous vegetation or habitat(s) of indigenous fauna is significant if it meets one or more of the following criteria:

Note:

- i) *These criteria are intended to be applied by suitably qualified and experienced ecologists.*
- ii) *The meaning of underlined italicised terms are described in '[Appendix 5 Definition](#)'.*

1. Representativeness

- (a) Regardless of its size, the ecological site is largely indigenous vegetation or habitat of indigenous fauna that is representative, typical or characteristic of the natural diversity at the relevant and recognised ecological classification and scale to which the ecological site belongs:
 - i. If the ecological site comprises largely indigenous vegetation types; and
 - ii. Is typical of what would have existed circa 1840; or
 - iii. Is represented by faunal assemblages in most of the guilds expected for the habitat type; or
- (b) The ecological site
 - i. Is a large example of indigenous vegetation or habitat of indigenous fauna, or
 - ii. Contains a combination of landform and indigenous vegetation and habitat of indigenous fauna that is considered to be a good example of its type at the relevant and recognised ecological classification and scale.

2. Rarity / distinctiveness

- (a) The ecological site comprises indigenous ecosystems or indigenous vegetation types that:
 - i. Are either Acutely or Chronically Threatened¹ land environments associated with LENZ Level²); or
 - ii. Excluding wetlands, are now less than 20% of their original extent; or

¹ Guide for Users of the Threatened Environment Classification, August 2007, Authors: Walker S, Cieraad E, Grove P, Lloyd K, Myers S, Park T, Porteous T, for Landcare Research New Zealand Ltd.

² Landcare Research in Land Environments New Zealand (LENZ)

- iii. Excluding *man made wetlands*, are examples of the wetland classes³ that either otherwise trigger Appendix 5 criteria or exceed any of the following area thresholds⁴ (boundaries defined by Landcare delineation tool⁵);
 - (a) Saltmarsh greater than 0.5 hectare in area; or
 - (b) Shallow water (lake margins and rivers) greater than 0.5 hectare in area; or
 - (c) Swamp greater than 0.4 hectare in area; or
 - (d) Bog greater than 0.2 hectare in area; or
 - (e) Wet Heathlands greater than 0.2 hectare in area; or
 - (f) Marsh; Fen; Ephemeral wetlands or Seepage / flush greater than 0.05 hectares in area.
- (b) Indigenous vegetation or habitat of indigenous fauna that supports one or more indigenous taxa that are threatened, at risk, data deficient or uncommon, either nationally or at the relevant ecological scale.
- (c) The *ecological site* contains indigenous vegetation or an indigenous taxon that is:
 - i. Endemic to the Northland-Auckland region; or
 - ii. At its distributional limit within the Northland region;
- (d) The *ecological site* contains indigenous vegetation or an association of indigenous taxa that:
 - i. Is distinctive of a restricted occurrence; or
 - ii. Is part of an ecological unit that occurs on an originally rare ecosystem⁶; or
 - iii. Is an indigenous ecosystem and vegetation type that is naturally rare or has developed as a result of an unusual environmental factor(s) that occur or are likely to occur in Northland; or

³ Johnson P., Gerbeaux P. 2004. Wetland types in New Zealand. Department of Conservation

⁴ The area thresholds for wetlands types in these criteria have been developed by ecologists to act as a trigger to identify indigenous wetlands, which due to their scale alone are likely to have significant biodiversity value above this size threshold. Wetlands of a smaller size may also be considered significant if other criteria are met (such as the presence of threatened species).

⁵ Landcare Research, March 2014. A vegetation tool for wetland delineation in New Zealand http://www.landcareresearch.co.nz/___data/assets/pdf_file/0003/71949/vegetation_tool_wetland_delineation.pdf

⁶ New Zealand's historically rare terrestrial ecosystems set in a physical and physiognomic framework Peter A. Williams, Susan Wisser, Bev Clarkson and Margaret C. Stanley December 2007, Landcare Research (Williams et al 2007).

Landcare Research hold a database of naturally rare (also known as 'originally or historically rare' or 'naturally uncommon') ecosystems and this excludes permanently wet areas of water bodies and below mean high water springs: <http://newzealandecology.org/nzje/2829.pdf>. On request Landcare Research can confirm where these ecosystems are known to be present.

- iv. Is an example of nationally or regionally rare habitat as recognised in the New Zealand Marine Protected Areas Policy.

3. Diversity and pattern

- (a) Indigenous vegetation or habitat of indigenous fauna that contains a high diversity of:
 - i. Indigenous ecosystem or habitat types; or
 - ii. Indigenous taxa;
- (b) Changes in taxon composition reflecting the existence of diverse natural features or ecological gradients; or
- (c) Intact ecological sequences.

4. Ecological context

- (a) Indigenous vegetation or habitat of indigenous fauna is present that provides or contributes to an important ecological linkage or network, or provides an important buffering function; or
- (b) The *ecological site* plays an important hydrological, biological or ecological role in the natural functioning of riverine, lacustrine, palustine, esturine, plutonic (including karst), geothermal or marine system; or
- (c) The *ecological site* is an important habitat for critical life history stages of indigenous fauna including breeding / spawning, roosting, nesting, resting, feeding, moulting, refugia or migration staging point (as used seasonally, temporarily or permanently).

Appendix 5 Definitions

Ecological site: the area under assessment comprising one or more ecological units. Ecological sites are comparable with each other at relevant and recognised scales within the landscape. Current ecological classification systems include the ecological districts framework, freshwater biogeographical units and LENZ, and are expected to evolve in terrestrial, freshwater and marine environments as new information and technology develops.

Ecological unit: Any combination of indigenous vegetation types (or suite of interrelated types) plus the landform they occur on. The Ecological Unit may include exotic vegetation types where they support indigenous fauna.

Manmade wetlands: These are wetlands developed deliberately by artificial means or have been constructed on sites where:

- (a) Wetlands have not occurred naturally previously; and
- (b) The current vegetation cover cannot be delineated as indigenous wetland; or
- (c) Man made wetlands have been previously constructed legally.

Manmade wetlands do not include *induced wetlands*; *reverted wetlands* or wetlands created for conservation purposes for example as a requirement of resource consent.

Examples of manmade wetlands include wetlands created and subsequently maintained principally for or in connection with:

- (a) Effluent treatment and disposal systems; or
- (b) Stormwater management; or
- (c) Water storage; or
- (d) Other artificial wetlands and water bodies including or open drainage channels (that have been legally established) such as those in drainage schemes).

These may contain emergent indigenous vegetation such as mangroves, rushes and sedges.

Induced wetlands: These are wetlands that have formed naturally on ecological sites where wetlands did not previously exist, as a result of human activities such as construction of roads, railways, bunds etc. While such wetlands have not been constructed for a specific purpose, they can be considered to be artificial in many cases given they arise through physical alteration of hydrology through mechanical human modification.

However these should be assessed on their ecological merits i.e. are not excluded from any Appendix 5 significance criteria.

Reverted wetlands: Where a wetland reverts over time (e.g. stock exclusion allows a wetland to revert to a previous wetland state). In this instance, the wetland has not been purposefully constructed by mechanical change to hydrological conditions. Indigenous wetlands of this sort should be treated as natural wetlands and not excluded from any Appendix 5 significance criteria.