

BEFORE THE KAPITI COAST DISTRICT COUNCIL

UNDER the Resource Management Act 1991

AND

IN THE MATTER OF the Kapiti Coast District Council Proposed
District Plan

**STATEMENT OF EVIDENCE OF GRAEME LA COCK
FOR THE DIRECTOR-GENERAL OF CONSERVATION**

Chapter 4 Coastal Environment – Ecology

Submitter 202

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Introduction

1. My full name is Graeme Dennis La Cock.
2. I have been employed as a Technical Advisor Ecology with the Department of Conservation for the past four years. Previously I was a Technical Support Officer (Flora) in the Tongariro Whanganui Taranaki Conservancy of the Department of Conservation for 15 years. Before working for the Department I worked in South Africa for 10 years as a scientist for a conservation agency, and for four years as a technician with an ornithological institute, concentrating on seabird research.
3. I have a BSc, BSc Honours and MSc from Rhodes University, South Africa. I have been involved with dune management in South Africa and for the Department of Conservation, and have published in the field. I was the Department's representative on the Coastal Dune Vegetation Network (CDVN) management committee, and am a trustee of the Dune Restoration Trust of New Zealand, which superseded the CDVN.
4. I have authored or co-authored 19 publications in peer-reviewed scientific journals.
5. I presented evidence on dunes for the Horizons One Plan, and was an expert witness in Environment Court mediation and in council hearings on proposed plan changes for the Horowhenua District Council. I have also provided technical advice on resource consent applications, including in dune habitats, and provided dune management advice to council, defence force and Departmental staff.
6. Besides dune related evidence I have presented evidence on regional pest management strategies and indigenous logging.
7. In my Technical Support roles I have been involved in research and management of dunes in the Foxton Ecological District as well as other dune systems around the country. The Kapiti Coast dunes form part of the Foxton Ecological District.

8. I have provided comment to the Department on aspects of the Kapiti Coast District Plan, including ecological sites and priority areas for restoration. I attended a rural environment pre-hearing meeting, and the coastal overview presentation on 13 July 2016.
9. I also commented on areas that I considered should be included within a Coastal Dominance Line which was provided to the Kapiti Coast District Council.
10. I have been asked to provide evidence on areas within the Kapiti Coast District that in my opinion contain a characteristic of the coastal environment as set out in Policy 1 of the New Zealand Coastal Policy Statement 2010 (NZCPS), or Policy 4 of the Greater Wellington Regional Council Regional Policy Statement (RPS), but that are outside the coastal environment line recommended by Frances Lojkin in the s42A Report: Part B Chapter 4 Coastal Environment and shown in Appendix 5.
11. I have read the Environment Court's Code of Conduct for Expert Witnesses and I agree to comply with it. My qualifications as an expert are set out above. Other than those matters identified within my evidence as being from other experts, I confirm that the issues addressed in this brief of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

Extent and characteristics of the coastal environment

12. In identifying areas of the coastal environment within the Kapiti Coast District that fall outside of the coastal environment line recommended in the s42A Report, I have applied the matters set out in Policy 1 of the NZCPS and Policy 4 of the RPS.

NZCPS

Policy 1 – Extent and characteristics of the coastal environment

- (1) Recognise that the extent and characteristics of the coastal environment vary from region to region and locality to locality; and the issues that arise may have different effects in different localities.

- (2) Recognise that the coastal environment includes:
- (a) the coastal marine area;
 - (b) islands within the coastal marine area;
 - (c) areas where coastal processes, influences or qualities are significant, including coastal lakes, lagoons, tidal estuaries, saltmarshes, coastal wetlands, and the margins of these;
 - (d) areas at risk from coastal hazards;
 - (e) coastal vegetation and the habitat of indigenous coastal species including migratory birds;
 - (f) elements and features that contribute to the natural character, landscape, visual qualities or amenity values;
 - (g) items of cultural and historic heritage in the coastal marine area or on the coast;
 - (h) inter-related coastal marine and terrestrial systems, including the intertidal zone; and
 - (i) physical resources and built facilities, including infrastructure, that have modified the coastal environment.

Greater Wellington Regional Council Regional Policy Statement

Policy 4: Identifying the landward extent of the coastal environment – district plans

District plans shall include policies and/or rules to identify the landward extent of the coastal environment using the following criteria:

- (a) any area or landform dominated by coastal vegetation or habitat;
- (b) any landform affected by active coastal processes, excluding tsunami;
- (c) any landscapes or features, including coastal escarpments, that contribute to the natural character, visual quality or amenity value of the coast; and
- (d) any site, structure, place or area of historic heritage value adjacent to, or connected with, the coastal marine area, which derives its heritage value from a coastal location.

Areas within the Kapiti Coast District that have coastal environment characteristics outside of the coastal environment line recommended in the s42A Report

13. In my view, there are a number of areas within the Kapiti District that meet one or more of the characteristics of coastal environment in Policy 1 of the NZCPS, or Policy 4 of the RPS as set out below.
14. In order to provide evidence on areas within the Kapiti Coast District that in my opinion contain a characteristic of the coastal environment, I consider that the Protected Natural Areas Programme report produced for the Foxton Ecological District (Ravine 1992) provides the best overview available.

15. The Protected Natural Areas Programme was initiated by the New Zealand Government in 1983 as a means of protecting representative examples of the indigenous ecosystems of New Zealand.
16. To provide a framework for assessing this natural diversity, the country was subdivided into 268 Ecological Districts and 85 Ecological Regions (McEwen 1987). Each Ecological District has a distinctive pattern of climate, geology, landforms and biological features. Adjacent districts with closely related characteristics form Ecological Regions. The Ecological district is still considered to be the most appropriate scale for conducting Protected Natural Areas Programme surveys, as it provides an appropriate context to assess the significance of a site.
17. The Protected Natural Areas Programme uses standardised scientific field survey and analysis to identify areas of particular importance and which are deemed worthy of added protection. These areas are referred to as Recommended Areas for Protection (RAPs). They represent the very best sites in an Ecological District that are not currently conserved. Selection of RAPs was based on applying seven selection criteria that are widely used in evaluating nature conservation values (Myers *et al.* 1987). The criteria are: representativeness; diversity; special features; viability; naturalness; threats; and buffering. The current DOC guidelines for assessing significant ecological values (Davis *et al.* 2016) use a similar set of criteria.
18. In my opinion, the RAPs and Ecological Sites (Schedule 3.1 of PDP) I refer to in my evidence demonstrate that there are areas within the Kapiti District outside the Coastal Environment Line recommended in the s42A Report that contain characteristics of the coastal environment.
19. The Foxton Ecological District forms part of the Manawatu Ecological Region. It is defined as the strip of western North Island sand country between Paekakariki in the south and Mokoia near Hawera in the north. It is further defined as being dominated by sand dunes of varying shapes and ages, and having dune-related

landforms such as dune lakes and swamps, damp dune flats, coastal sand spits and tidal streams and rivers. The report also refers to remnants of native vegetation. This is the most extensive sand dune system in New Zealand (Ravine 1992).

20. The physiographic character of the Foxton Ecological District is based on a dynamic sand dune system. The three main sources of sand are greywacke from the Ruahine Ranges, volcanic sediment from Egmont and the Central Plateau, and sediment from the Wanganui Basin. These sediments are carried to the coast, then blown inland by the prevailing winds, forming an extensive network of dunes.
21. From Paekakariki to Te Horo the inland boundary of the Foxton Ecological District is roughly aligned with SH1, after which it is closer to the coast, before once again aligning with SH1 after Otaki (Appendix 1 – map of Foxton Ecological District boundaries (From Ravine 1992)).
22. This inland boundary of the Foxton Ecological District appears to be very similar to the “Extent of Coastal Environment” line used in the D series of maps of the notified Proposed Kapiti Coast District Plan (PDP). This line encompassed all of the Salt Zone and Duneland ecodomains, most of the Lowland Alluvial Terrace ecodomain, and some of the Lowland Hills (Appendix 2 – Map 09D Natural Features from PDP).
23. Within the Kapiti Coast area of the Foxton Ecological District there are nine Priority 1 RAPs and four Priority 2 RAPs (Appendix 3 – map of RAPs in Kapiti Coast District (from Ravine 1992)). A comparison of maps showed that, of these, only four occur inside the Coastal Environment Line recommended in the s42A Report. The rest are all outside the line, but on coastal habitat typical of the Foxton Ecological District. They are all within the PDP Coastal Environment Line.
24. An approximate breakdown by habitat of the 9 RAPs outside the Coastal Environment Line recommended in the s42A Report is: one treeland on foredune, one dune lake within a dune hollow, surrounded by parabolic dunes;

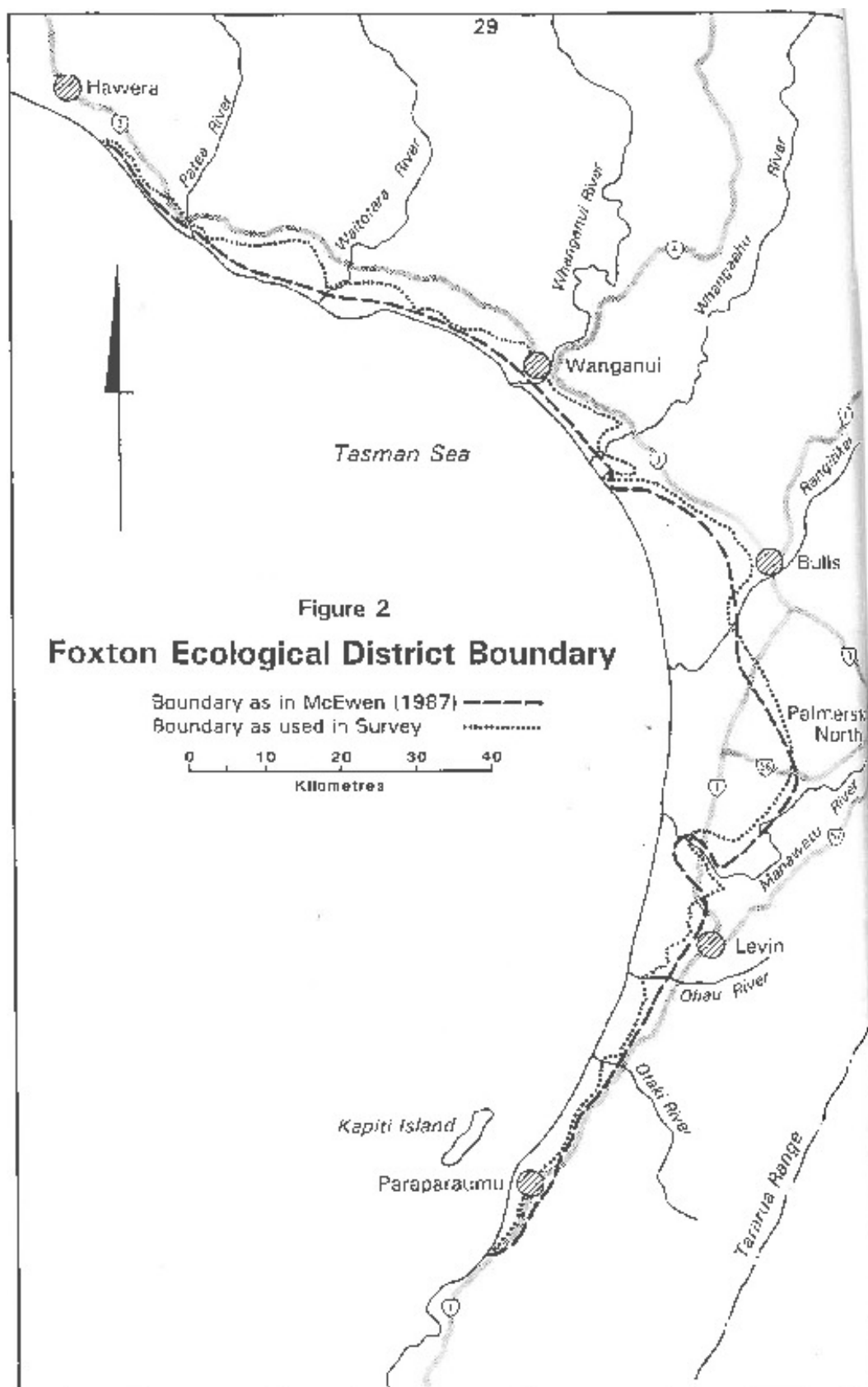
two forests on sand plains and sand ridges, of which one forest occurs on both sand formations; one forest on a parabolic dune; one swamp and forest associated with parabolic dunes, dune hollows and swales; one swamp on a sand plain; and two dune lakes where parabolic dunes have overtopped an older dune system or dammed runoff.

25. All of these are in areas where coastal processes, influences and qualities are significant and that contain coastal vegetation in terms of clauses (2)(c) and (e) of Policy 1 of the NZCPS.
26. Similarly, Schedule 3.1 Ecological Sites of the PDP included 62 Ecological sites that occur within the Coastal Environment as mapped in the PDP, but that do not occur within the coastal environment recommended in the s42A Report, which has 11 (McKay 2016). Other features identified within the Coastal Environment of the PDP included several Outstanding Natural Landscapes and many Dominant Ridgelines (e.g. Appendix 2).
27. Eight Outstanding Natural Features and Landscape Areas and Special Amenity Landscapes occur within the Coastal Environment line recommended in the s42A Report, compared to 14 in the PDP Coastal Environment (Kydd-Smith 2016).
28. As with the RAPs, these sites are all either features that occur because of coastal processes, e.g. Dominant Ridgelines and dune lakes, or occur on habitat that occurs because of coastal processes, e.g. sand plains, parabolic dunes.
29. In my opinion it is evident that a range of sites within the originally identified Coastal Environment, and within the boundaries of the Foxton Ecological District, contain one or more of the characteristics of the coastal environment in Policy 1 of the NZCPS, particularly clauses 2c, 2e and 2f.
30. These sites also contain one or more of the characteristics of the coastal environment in Policy 4 of the RPS, particularly clauses 4a, 4b, and 4c.
31. Finally, I note that I provided advice to the Department on additional areas to include in a proposed revised coastal dominance line to be included in the

proposed plan. The additional areas I recommended are clearly dominated by coastal processes. Most of the changes I recommended have been incorporated in the coastal environment line recommended in the s42A report. In my opinion, this should be a coastal dominance line, not coastal environment line. As set out above, there are other areas within the Kapiti Coast District which contain one or more of the characteristics of the coastal environment in terms of Policy 1 of the NZCPS and Policy 4 of the RPS.

References

- Davis, M.; Head, N.J.; Myers, S.H.; Moore, S.H. 2016 Department of Conservation guidelines for assessing significant ecological values. *Science for Conservation 327*. Department of Conservation, Wellington.
- Kydd-Smith, J. 2016. Coastal overview – Chapter 3: Natural environment – general, landscapes and earthwork provisions. *Proposed District Plan (PDP) – Coastal Overview Presentation*.
- McEwen, K.D. (Ed) 1987. Ecological regions and districts of New Zealand. *New Zealand Biological Resources Centre publication 5*. Department of Conservation, Wellington.
- McKay, P. 2016. Coastal overview – Chapter 3: Natural environment – ecological sites and indigenous vegetation. *Proposed District Plan (PDP) – Coastal Overview Presentation*.
- Myers, S.C.; Park, G.N.; Overmars, F.B. 1987. A guidebook for the rapid ecological survey of protected areas. *New Zealand Biological Resources Centre publication 6*. Department of Conservation, Wellington.
- Ravine, D.A. 1992. Foxton Ecological District: Survey report for the Protected Natural Areas Programme. *New Zealand Protected Natural Areas Programme No. 19*. Department of Conservation, Wanganui.



Appendix 2. Map 09D. An example to show domains, natural features and the coastal environment line (from PDP).

