

**IN THE ENVIRONMENT COURT OF NEW ZEALAND
AUCKLAND REGISTRY**

**I TE KŌTI TAIAO O AOTEAROA
TĀMAKI MAKAUROA ROHE**

IN THE MATTER of the Resource Management Act 1991

AND of an appeal under clause 14 of Schedule 1 of the Act

BETWEEN **BAY OF ISLANDS MARITIME PARK INCORPORATED**
CEP SERVICES MATAUWHI LIMITED
**MANGAWHAI HARBOUR RESTORATION SOCIETY
INCORPORATED**
**ROYAL FOREST AND BIRD PROTECTION SOCIETY
OF NEW ZEALAND INCORPORATED**

Appellants

AND **NORTHLAND REGIONAL COUNCIL**
Respondent

VINCENT CARLYLE KERR REBUTTAL EVIDENCE
MARINE ECOLOGIST
TOPIC 15: MANGROVE REMOVAL
31 July 2020

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Introduction

1. My name is Vincent Carlyle Kerr. My qualifications and experience are set out in my evidence in chief, dated 26 June 2020.

Code of conduct

2. I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2014 and agree to comply with it. The contents of this statement 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 in this statement.

Scope of evidence

3. This statement responds to the evidence provided by:
 - a. Ms Lisette Collins, for CEP Services Matauwhi Limited., dated 13 July; and
 - b. Ms Juliane Chetham, for Patuharaekeke Te Iwi Trust Board (**Patuharaekeke**), dated 8 July.
4. This statement is structured as follows:
 - a. Ms Lisette Collins:
 - i. Clarification of the mapping processes used in producing the SEA layers;
 - ii. Comment on applying the criteria for Ecological Significance;
 - iii. Clarification of the treatment of bird species in the mapping processes; and
 - iv. Comment on the Ms Collins' recommendation to reclassify seventeen sites of High Natural Character in the Bay of islands and elsewhere in Northland.
 - b. Ms Juliane Chetham:
 - i. Endorsement of the cultural context of Mangrove ecology provided by Patuharaekeke.

SEA Mapping Process

5. In paragraphs 7 to 11 of her executive summary, Ms Collins summarises the three studies she used to assess the ecological significance of

seventeen mapped sites of 'High Natural Character' in Northland. Ms Collins concludes that the Appendix 5 criteria for ecological significance in the Regional Policy Statement for Northland (**RPS**) were not applied properly or consistently, and as a result, some areas with significant ecological values had not been correctly identified.

6. With the exception of the Uruti Bay area (which I address specifically below), I disagree with the conclusions drawn by Ms Collins. However, I would like to commend Ms Collins for the very useful summary of information and the challenges to the mapping process.
7. Throughout her evidence, Ms Collins makes the case for a range of terrestrial ecological values in the seventeen areas investigated. I take no issue and have no problems with any of the information presented. Ms Collins specifically points to values that score highly in Criterion 3 – "Diversity and pattern" and Criterion 4 – "Ecological context". Ms Collins primarily focuses on the terrestrial components of the system and values. For example, she argues that because of the presence of the sequence of good riparian cover and bush regeneration, saltmarsh and mangrove that the marine ecological values should be scored high ranking.
8. I do not agree with Ms Collins' view. In my work undertaking a Significant Ecological Marine Mapping Resource for Northland Regional Council (which is detailed in my evidence in chief), we found that while in many cases in Northland these terrestrial ecological values did lead to a high ranking, in some cases they did not.
9. The challenge of undertaking an assessment of marine ecological values is in understanding marine ecological context. When undertaking my assessment, I asked the following questions when I looked at the scoring to put the process in a marine context.
 - a. Are the marine components of the ecological sequence in question good examples of their type, degraded and of significance size?
 - b. What are the catchment values, riparian cover, wetlands and presence of active restoration activity and support by the community?

10. In all the cases that Ms Collins has put forward (with the exception of the Uruti Bay case), the marine values associated with these catchments were degraded with sedimentation. In these areas the marine component which formed the connectivity to the salt marsh (edge community) and freshwater systems, were mangrove forests.
11. In assessing the mangrove component, I looked at the size of the habitat, the general health evidenced by the canopy cover and presence of mature trees in the community. The marine context of scoring the connectivity and ecological function with adjoining terrestrial components is that in order to reach the highly significant scoring the mangrove component had to satisfy a general description of ecological significance as summarised in Sec 9. Ecological connectivity implies that each component of an ecological sequence is healthy and functioning. In each cases mentioned above I concluded that the areas were not highly ranked and therefore did not meet the criteria for significance.
12. As referred to in my evidence in chief, there are two documents which outline how the above approach for mapping marine Significant Ecological Areas was derived and applied.

Application of the Marine Ecological Significance Area criteria

13. I would like to clarify two further points relating to the application of the criteria for ecological significance.
14. In paragraph 13 of her evidence, Ms Collins refers to the Appendix 5 criteria for ecological significance set out in the RPS and states that 'the criteria are absolute and without degree'.
15. I accept that it is the intention of the criteria to include all significant examples of the ecological values in question. However, I need to point out that in ecology, factors including complexity, diversity, connectivity, productivity and scale are important. In any mapping system that is adopted to represent natural values a decision has to be made as to the scale that the assessment and mapping will apply to.
16. My second point relates to scale. We are talking about a regional system of mapping for all of Northland which includes the greatest diversity of estuaries in the country. The expert group involved in the mapping

exercise discussed a number of scenarios of small to large estuaries and sediment affected to pristine and arrived at the current mapping approach. This is not intended to be the last word on the issue of scale in terms of applying these criteria, however it is a starting point.

Treatment of bird species in the ecological area mapping process

17. The evidence of Ms Collins states that bird values are left out of the marine significant Ecological area assessments. This is correct. As explained in the supporting documents to the SEA mapping system and in my evidence in chief, during the mapping process the experts decided that the bird values mapping and the marine ecological areas should be divided. This decision was not based on an ecological argument – it was essentially a preferred approach from a planning and policy perspective.
18. The reason for this was due to issues around the difference in spatial extent and information coverage between the bird values and other marine values, and the dispersed and widespread nature of the bird values. It was considered at the time that this division of information layers would afford more planning flexibility.

Proposed re-classification of 17 mapped areas as ecologically significant

19. In her evidence, Ms Collins recommends that 17 areas should be re-considered for inclusion as marine Significant Ecological Areas and/or Significant Bird Areas.
20. In Ms Collins report, Uruti Bay was assessed as a marine significant area. I believe the reason for our difference in opinion on this is due to the more comprehensive information available to Ms Collins, which was not available during the initial assessment I undertook. The small scale of this area in relation to the Northland region-wide process is also a factor.
21. Where the marine values can be shown to exist in association with outstanding catchment values, the case has been made for a high score. In my opinion, on re-evaluating the mangrove area and tidal flats at Uruti Bay (based on the information in Ms Collin's report), a high score is warranted despite the small size of the habitat in question. I note, however, that this is an issue for an upcoming hearing topic, not the detail of the mangrove removal provisions.

22. As noted above, I would not recommend re-classification of the other 16 areas as high scoring marine significant areas. My assessment has not changed from the original scoring on these sites. In all cases, while there are arguably important terrestrial values and elements of terrestrial natural character, there are not high marine values in these sites supporting full ecological sequences with the marine area.

Mangrove ecology and the matuaranga of Patuharakeke

23. I would like to briefly acknowledge the importance of the evidence presented by Ms Juliane Chetham on behalf of Patuharekeke. These proceedings are examining complex planning issues and the associated science. As we do this I support paying special attention to the knowledge Patuharekeke is offering about the importance of mangroves to the family of species which live in our estuaries and their role in ecology. The knowledge system of Patuharekeke (matauranga and tikanga) is based on hundreds of years of observation. These observations of how nature works over centuries of time is what western science is missing in most cases.

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Vincent Carlyle Kerr

31 July 2020