Before the Fast-track Panel

Under: Fast-track Approvals Act 2024

In the matter of: FTAA-2511-1150 – Bream Bay Sand Extraction Project

Statement of advice: Dr Tony Beauchamp

Shorebirds and Tara iti

Department of Conservation staff

25 May 2026

Introduction

1. My full name is Antony Julian Beauchamp.

Instruction

2. I have been requested to provide expert advice on behalf of the Department of Conservation (DOC) on the Bream Bay Sand Extraction Project Fast-track application.

Qualification and Experience

3. I have a PhD in Zoology. I have 24 years' experience as a staff member in Whangārei as a Conservancy Advisory Scientist and the Technical Advisor for DOC. I have provided services to the tara iti programme, including operational management of the wild nesting population. I am a member of the Tara iti Recovery Group and the Tara iti Science Advisory Group.

4. I have been a member of Birds New Zealand since 1979, and the regional recorder for Birds New Zealand in Whangārei over the past 10 years. I have published papers on birds including the use by waders in Whangārei Harbour and Ruakaka Estuary[1], and management of tara iti at Waipu[2].

5. I was a witness for the Department in a previous sand mining application by the applicant at Pākiri, and a member of the Mātauranga Māori Advisory Group set up under conditions for the temporary offshore consent.

6. My role in this project to date has included review of both draft and substantive application documents.

7. I have a good understanding of the shorebirds and tara iti use and presence in Bream Bay and the coastline south to Pākiri, and their use of the Kaipara Harbour in Northland.

[1] Beauchamp, A.J.; Parrish, G.R. 2007. Wader and royal spoonbill (*Platalea regia*) use of roosts in Whangarei harbour and Ruakaka Estuary, Northland. Notornis 54: 83-91.
[2] Ismar, S.M.H; Trinski, T.; Beauchamp, T. et al. 2014 Foraging ecology and choice of feeding habitat in the New Zealand fairy tern *Sternula nereis davisae*. *Bird Conservation International* 24: 72-87.

Code of conduct

8. Whilst it is acknowledged this is not an Environment Court Proceeding, I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023. I have complied with the Code of Conduct in the preparation of this advice. Unless I state otherwise, this advice is within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

Scope of advice and expert opinion

9. My expert advice relates to the following:

    i. Adequacy of the Applicant's assessment of shorebirds and tara iti.

    ii. Adequacy of the Applicant's assessment of effects on tara iti and shorebirds with specific reference to any effects that are understated.

    iii. Adequacy of the Applicant's proposed mitigation and management measures.

    iv. Alternative mitigation or management approaches, where appropriate, including my recommended or preferred measures where these differ from those proposed by the Applicant.

    v. Comments on conditions.

Material Considered

10. In preparing this advice I have reviewed the following documents as part of the substantive application:

    i. Attachment 8- Te Akau Bream Bay sand extraction; Coastal Process assessment E. Beetham (Tonkin and Taylor)

    ii. Attachment 8A – Te Akau Bream Bay sand extraction; Coastal Process assessment O. Rogers (DML survey report Appendix B Tonkin & Taylor)

    iii. Attachment 13. Assessment of Seabirds and shorebirds effects David Thompson (NIWA)

iv. Attachment 19. Assessment of navigational safety effects- B. Goodchild (NRC)

v. Attachment 26. Recommended Resource Consent Conditions.

vi. Attachment 29: Environmental Management Monitoring Plan

vii. Attachment 33. Oil spill contingency plan

viii. Expert evidence on coastal processes of Samuel Morgan prepared for DOC in relation to this Fast-track application.

11. I have undertaken many site visits to Bream Bay beaches and the Waipu and Ruakaka estuaries over 34 years.

Summary

12. McCallum Bros Ltd are seeking resource consent to mine with a suction dredge on the vessel *William Fraser* 150,000 cubic metres of sand from a rectangular 15.4 km^2 area of seabed per annum, increasing to 250,000 cubic meters after 3 years if conditions are met. This mining will lower the sand surface over the 35-year duration of the permit. The sand extraction vessel will travel at less than 10 knots to and from this area and 1.5-2.5 knots when extracting sand. Most of the proposed time for dredging is during daylight and will last for less than 3.5 hours a day between 12:00 and 20:00.

13. The Bream Bay sand mining application area is situated 4.98 km from the beach at Bream Bay (Attachment 8 Tonkin & Taylor, Beetham), and 6.25 km from Waipu and 5.0 km from Ruakaka estuaries, where there are breeding shorebirds and tara iti (Attachment 13, NIWA, Thompson).

14. Ruakaka Estuary is a very important spring high tide roosting site for all the c. 3500 Whangārei Harbour bar-tailed godwits (*Limosa lapponica*) and c. 380 red knots (*Calidris canutus*) and is an important post-roosting foraging site for red knot. The number of knot using the harbour has declined by over 90% over the past 15 years, which is likely due to the loss of estuaries in its migration route overseas.

15. Tara iti (*Sternula nereis davisae*) is the rarest breeding seabird in New Zealand, with the highest threat status (Threatened - Nationally Critical). Tara iti have defended estuarine foraging territories and nest in scrapes in man-made shelled

sites at Waipu. In future the Department is likely to develop shelled areas to encourage more tara iti breeding at Waipu and to return breeding to Ruakaka Estuary because current restoration of the population means that more breeding sites are required. Tara iti are plunge feeders in shallow estuaries and on the coastal margin.

16. Variable oystercatchers (*Haemotopus unicolour*) and northern New Zealand dotterels (*Anarhynchus obscurus aquilonius*) nest along the Bream Bay coastline, and both estuaries are wintering sites for dotterels. They nest at or above the high tide zone and forage on the coastline and in the estuaries.

17. The proposed sand extraction site is 100 m inside the anchorage of ships that are waiting to enter Whangārei Harbour. The proposed inner margin for sand extraction is approximately 20-21 m deep.

Key Issues

General

Clarification of application information on shorebirds and tara iti.

18. The applicant's avifauna expert, Dr Thompson (Attachment 13, including Table 4-4), has assessed the risk to tara iti is in the mid-low category for collision impacts, oil spills, and loss or terrestrial breeding habitat. However, he considers the loss of a breeding tara iti would have major consequences to the population due to its small size. The risk of the loss of terrestrial breeding habitat, exclusion from sea habitat, changes in prey abundance/availability, interaction with the sand extraction vessel, fuel/oil spill, airborne noise and underwater noise for 10 species of shorebird including; wrybill (ngutu pare), northern New Zealand dotterel (tūturiwhatu), red knot (huahou), banded dotterel (pohowera), South Island pied oystercatcher (tōrea), eastern bar-tailed godwit (kuaka), variable oystercatcher (tōrea pango), royal spoonbill (kōtuku ngutupapa), pied stilt (poaka), spur-winged plover, and turnstone, are assessed as zero to low by Dr Thompson.

19. Collision impacts are not expected for tara iti because the vessel only travels near the site at less than 10 knots (Condition 25 a) and is ≥4.7 km offshore.

20. Oil spills are considered unlikely because of the speed and manoeuvrability of the vessel, the presence of two staff on the bridge of the vessel during operations, the

physical design of the vessel and the use of organic lubricants. The applicant notes that no oil related issues have been recorded in past operations.

21. Dr Thompson, relying on the statement of E. Beetham (Attachment 8, Tonkin & Taylor), concluded that no effect on shoreline coastal processes is expected because the placement of the outer depth of closure is sufficient to isolate sand transfer to the region that affects the shoreline.

Tara iti and shorebird values

22. Tara iti is a small tern of c.70 g. Tara iti is New Zealand's rarest breeding bird with a threat status of Threatened - Nationally Critical and the qualifiers Conservation dependent, Climate impact, Conservation research needed, Recruitment failure and Range restricted (Robertson *et al.* 2021)[3]. Their core habitat includes the estuaries between Waipu and Pākiri and the Kaipara Harbour (Fig.1).
23. The tara iti population in March 2026 was 55 birds comprising 40 adults (18 females, 22 adult males), 9 pre-breeding second-year birds (3 females & 1 male & 4 unknown sex) and 11 first-year birds. Twenty-two of the adult birds are members of recent breeding pairs, and four are members of pairs that were present on breeding sites but were not recorded laying in 2025-2026. The oldest birds are a 21-year-old breeding male, and 17-year-old paired male. The rest of the population are 13 years or younger. The adult breeding population has not increased substantially over the past 20 years.
24. Tara iti females can pair and lay at 2 years old, but they are often 3 years old before they breed successfully. Modelling has not found a significant relationship between age and laying (Lee et al. 2024)[4].
25. Population modelling using the population composition in 2021-22 (11 females, 7 immature females and 2 juvenile females) has shown that the factor driving population persistence (to 50 years) are changes to adult survivorship. However as adult survivorship is currently high at 86% per annum, there is limited room to improve population persistence by altering that parameter alone. However, any factor reducing adult survivorship by increased loss of adults would drive the population towards extinction.

[3] Robertson, H.A.; Baird K.A.; Elliott, G.P.; Hitchmough, R.A.; McArthur N.J, Makan T.D.; Miskelly, C.M.; O'Donnell, C.F.J.; Sagar, P.M.; Scofield, R.P.; Taylor G.A. Michel, P. 2021. Conservation status of birds in Aotearoa New Zealand, 2021. Department of Conservation.
[4] Lee, F,; Whitelock, N.; Perry, G. 2025. Tara iti (*Sternula nereis davisae*) nest habitat modelling and population viability. Report prepared for the Department of Conservation. Cawthron report 4048

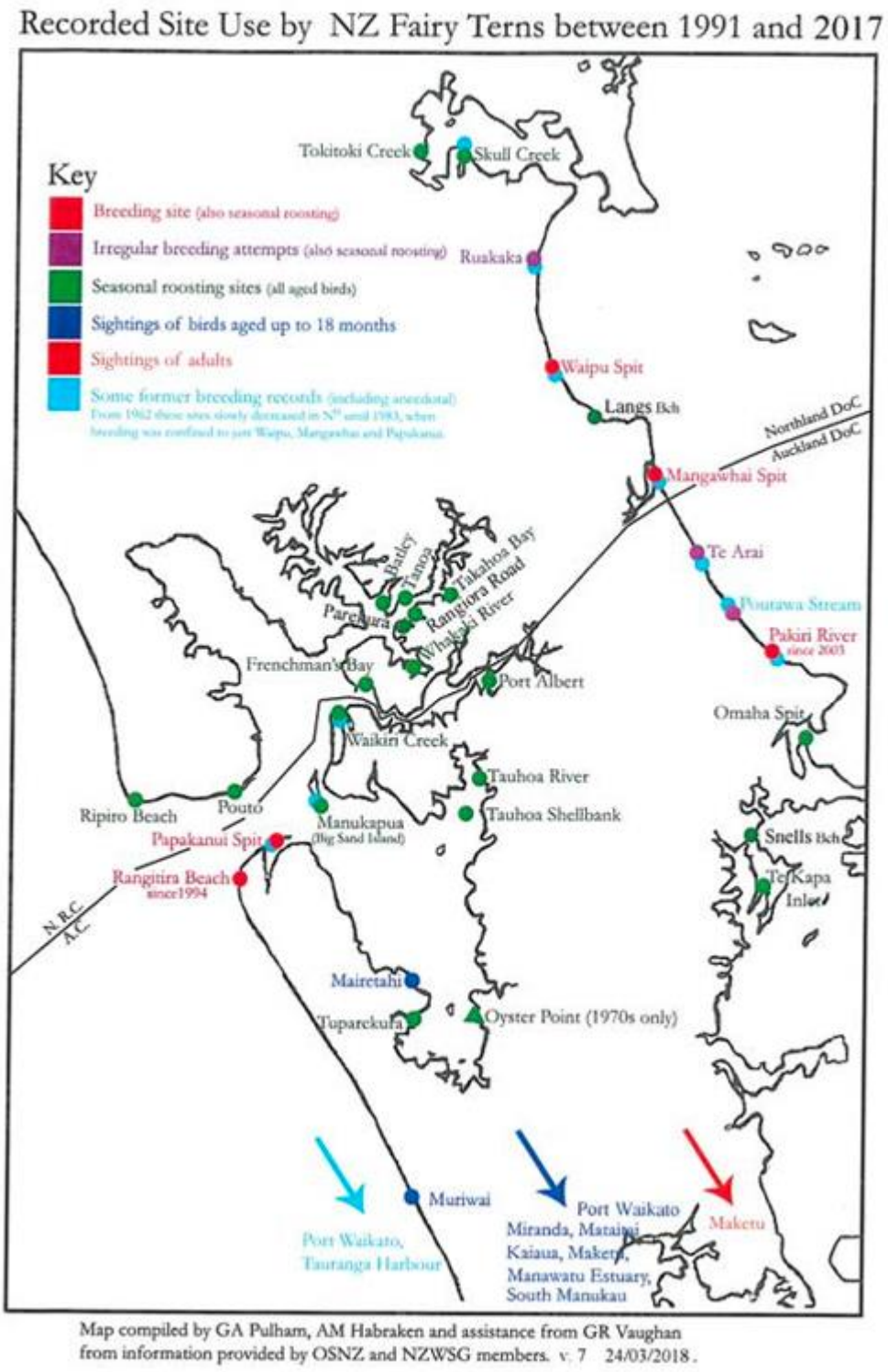

Fig. 1. Location of tara iti nesting (red dot), recent roosting (blue dot) and freshwater foraging lakes (green dot) mentioned in the text.

26. Instead, the management strategy that DOC is following is to assess if they can enhance population size by collecting eggs from first clutches of tara iti at a time that enables these pairs to lay again and raise a second clutch of similar size in situ. This strategy can only work for the benefit of tara iti if the donating adults are not detrimentally affected by the increased resources required for laying these

eggs, and the survival of the captive reared young matches or exceeds those of wild reared birds when they reach adulthood (2 years) and that they pair and breed. In 2024-2025 all the six donating pairs laid a second clutch of the same or higher number of eggs to the collected clutch. The current demographic profile should result in 10% of the adults reaching 20 years old.

27. Successful breeding is currently limited to between October and February at five sites: Waipu sandspit, Mangawhai sandspit, Te Ārai River mouth, Pākiri River mouth and Papakanui sandspit (Fig. 1). Tara iti males defend a part of an estuary which is used for female conditioning before laying, exclusive feeding during the breeding season and when fledglings first leave their natal areas between 25-32 days old.
28. In the pre-breeding season (June-September) adult and groups of first year tara iti are often seen on the east coast, but during the mid to latter part of the breeding season the non-breeding component of the population returns to the Kaipara Harbour. Breeding birds that lose clutches also return to the Kaipara Harbour to regain condition for laying a second clutch (Baird et al. 2013) which is generally laid 10-14 days later.

Core habitat

29. The number of core breeding sites for tara iti has changed over time as habitat has been created and lost. In the 1960s, tara iti were recorded breeding at Poutawa and flying from the Tomorata lake complex during the breeding season (Bell 1964)[5]. The Poutawa sites were lost when pines were established over the dunes. The tara iti population and other waders used the wet process clay discharge delta at Portland for breeding attempts in 1951 (Munro 1972)[6]. Ruakaka sandspit and estuary was being used for breeding until 1957. There are also some previous breeding sites in the Kaipara Harbour at Manukapua and Waikiri Creek (Figure 1). Current core habitats include breeding sites and overwintering sites. The existing core breeding habitats are the Waipu, Mangawhai and Papakanui sandspits and estuaries, and the Pākiri River and Te Ārai Stream mouths.
30. The seabird and shorebird assessment (Attachment 13, NIWA, Thompson 2025,) correctly identifies the key risks to tara iti. However, it does not discuss the importance of the Waipu and Ruakaka estuaries in increasing the number of pairs and resilience of the population. Tara iti use Waipu Estuary as a current breeding site and potential habitat at Ruakaka Estuary will be modified by DOC to

[5] Bell, B.D. 1963. Coastal Survey Pakiri to Marsden Point. Wildlife Service files DOC-6749568

[6] Munro, M. 1971. Birds of Whangarei Harbour. *Notornis 18*: 202-206

encourage breeding there shortly. The retention of tara iti is completely dependent on maintaining and increasing the number of breeding sites. Breeding sites are rare because tara iti require both a defendable nest site and estuary foraging site. This restricts the number of pairs that can be in any estuary.

31. The Department has done a lot of work to shore up safe breeding sites (Wiles et al. 2026)[8] and move them from the immediate high tide zone; however, these are on dunes associated with estuaries. The Department aims to grow the tara iti population, and over the past four years has been collecting eggs for captive rearing and encouraging renesting. Tara iti breed from their second or third year. Three years ago, the Department figured out how to release captive reared tara iti, and we are expecting to have increasing numbers of breeding pairs (up to 14 in 2026-2027). We need sites for these new pairs to breed and are preparing for building new nest sites at Waipu and Ruakaka estuaries.

Other shorebird values

32. Variable oystercatchers and northern New Zealand dotterels have nesting pairs that extend along the Bream Bay coastline, and within both estuaries. Bream Bay has approximately 8% and 2.5% of the variable oystercatcher and northern New Zealand dotterel population, respectively (Reigen & Sagar 2020)[7].
33. The areas used by variable oystercatchers for breeding include sites from just above the high tide zone to those in the foredunes. Pairs feed on the shoreline and bring their young to the shoreline to forage. Northern New Zealand dotterels nest in the same regions of the beach and foredunes as variable oystercatchers but their young tend to be found in the vegetated dunes. The two estuaries are the wintering sites for most of the Bream Bay birds.
34. Ruakaka Estuary is a very important spring high tide roosting site for all the c. 3500 Whangārei Harbour bar-tailed godwits and c. 380 red knots and is an important post roosting foraging site for knots. In summer Whangārei Harbour is the 8th most important harbour nationally by numbers for godwit and 5th by numbers for knot. The number of knots using the harbour has declined by over 90% due most likely to the loss of estuaries to reclamations along its migration route overseas (Reigen & Sagar)[7].

S53 Matters specific advice

Tara iti collision with the *William Fraser*

[7] Reigen, A.C; Sagar, P.M 2020. Distribution and numbers of waders in New Zealand, 2005–2019. *Notornis 67*:591-634.

35. Dr Thompson (NIWA, Attachment 13) considers that the potential for tara iti to impact with the William Fraser is minor. I agree with that conclusion. Recent GPS monitoring of first year tara iti confirms that tara iti are a predominantly coastal species even during nocturnal flight and are not expected to be foraging as far out to sea as the proposed sand extraction activity. Tara iti would be capable of avoiding a ship travelling at less than 10 knots.

Oil spill impacts on tara iti

36. Dr Thompson (Attachment 13, NIWA) points out that there has not been an oil spill incident previously, and that the *William Fraser* has been built to reduce the risk of accidental spillage. However, the history of oil spills or groundings are only indicative and not deterministic of future risk.
37. I agree that the likelihood of an impact from catastrophic failure of the *William Fraser* or any other ship may be remote, the overall effect of a spill could be "**major**" for tara iti (see Table 4-4 in Thompson Attachment 6.).
38. The Department has put considerable effort into creating tara iti nesting sites away from high water springs. It also deactivates potential nesting sites at high risk of coastal inundation each season[8]. However, the tara iti population remains at risk from oil spills in Bream Bay because they are site faithful in the breeding season and feed in both estuarine and near shore seawater. The areas around tara iti breeding sites could be hazed[9] to try to move the adult tara iti from the estuary but hazing would not be possible over the larger areas they use in Bream Bay. It has not been demonstrated that oil booms can successfully be implemented at Waipu or Ruakaka River mouths to prevent oil entering the estuaries.
39. Tara iti are extremely difficult to capture outside of the period where they are restricted to the nest (c. 30 days). The staff in the tara iti programme cannot predict the presence of non-breeding birds in the Bream Bay area, and there can be a considerable presence. For example, in October 2025 all eight of the previous season's sub adults were present at Waipu Estuary together.
40. Dr Thompson (NIWA, Attachment 13) appears to rely on the applicant having an oil spill contingency plan signed off by Maritime New Zealand, but there is no indication in the current plan about what equipment the *William Fraser* must carry to deal with onboard spills.

[8] Wiles, A.; Makan, T.; Wilson, A. 2026. Terning the tide: habitat enhancement in coastal environments for protection of New Zealand fairy tern/tara iti. (*Sternula nereis davisae*) nests. *Notornis 73*: 83-92.
[9] Actions to deter use of a site by birds. Chilvers, B.L. 2024. Techniques for hazing and deterring birds during an oil spill. *Marine Pollution Bulletin 201* (2024) 116276

Oil spill impacts on other shorebirds

41. Dr Thompson (NIWA, Attachment 13) suggests that shorebirds would be safer than seabirds if there was a spill based on evidence collected about the lack of impact on shorebirds from the Rena oil spill event. However, this is not necessarily so, as 60 northern New Zealand dotterels (half the Bay of Plenty population) were captured and held in aviaries for 1-3 months during the Rena beach clean-up event[10] to prevent them getting covered in oil. During the breeding season (August – March) local New Zealand dotterels and variable oystercatchers would be very vulnerable to oil spills, as pairs take their chicks to the sea margin and forage in shallow water.

Depth of closure impacts on shorebird and tara iti habitat

42. I have seen a draft assessment of coastal process impacts of the sand extraction proposal prepared by Sam Morgan. His assessment is that there could be a small amount of sediment movement across the depth of closure[11]. However, the extraction depth is outside of the outer depth of closure so impacts on the upper shoreline and dry beach are expected to be low[12]. Nonetheless, if sand extraction did result in substantial erosion of the foredunes or changes to the estuaries this could be a high impact for tara iti.

Conditions

43. Condition 33 requires the William Fraser to always have an oil spill contingency plan approved by Maritime New Zealand. Currently, there is no requirement to notify the Department of Conservation if there was an oil spill. Given the precarious status of tara iti it is important that the department knows about impending issues that could be of major consequence to avifauna as early as possible so it can act to reduce impacts on tara iti and other shorebirds.
44. Condition 43 proposes financial support for the Bream Bay Beach Profile survey. Sam Morgan supports the monitoring of the volume and distribution of sand on the foredunes and beach of Bream Bay but by drone[13] and by the applicant[14]. He considers that any impact on the dry beach from the sand mining would take

[10] Chilvers, B.L.; McClelland, P.J. 2023. Lessons Learned for Pre-Emptive Capture Management as a Tool for Wildlife Conservation during Oil Spills and Eradication Events. *Animals 2023*, 13, 833. https://doi.org/10.3390/ani13050833

[11] Statement of Sam Morgan paragraph 46

[12] Statement of Sam Morgan paragraph 51

[13] Statement of Sam Morgan paragraph 83

[14] Statement of Sam Morgan paragraph 83

decades to detect[15]. In my opinion any beach monitoring must be responsive and should be directed at the impacts on threatened wildlife habitat.

Additional conditions

45. Sam Morgan also recommends methods and triggers to alter the area of the operation, or stop the sand mining operation if necessary, based on lowering the shoreface at the bathymetric control sites[16].
46. I support monitoring the control areas, with stop and review triggers, as this would provide assurance that long-term potential impacts of the sand extraction at Bream Bay are managed at place, and that impacts due to sand extraction on shorebirds are minimised.

Conclusions / Recommendation

47. There is no evidence that tara iti are likely to come into a collision with the *William Fraser*, but there are concerns that increased shipping activity increases the oil spill risk to Bream Bay shorebirds and tara iti.
48. The proposed conditions refer to an active oil spill contingency plan approved by Maritime New Zealand. In my opinion, that plan does not spell out what can be done to address the consequences of a spill on tara iti and other shorebirds and relies on unspecified third parties to notify the Department about spills. A condition is required to ensure that the Department of Conservation is notified of any spill as soon as possible so it can consider its response.
49. In my view the proposed monitoring and triggers for reassessment of the sand mining at site by Sam Morgan would provide further assurance that tara iti and shorebird dry beach habitat will not be impacted.
50. The provisions proposed by the applicant for monitoring the beach are minimal, do not lead to any action or response on behalf of the applicant and would be detected too late to prevent damage to the coastline and its use as a breeding site and habitat for shorebirds.

[15] Statement of Sam Morgan paragraph 63
[16] Statement of Sam Morgan paragraph 76 & 79