

BEFORE THE WESTERN BAY OF PLENTY DISTRICT COUNCIL

IN THE MATTER OF of the Resource Management Act 1991

AND of a resource consent application by Glen Isla Protection
Society Inc.

UNDER section 88 of the Resource Management Act 1991 for the
activities associated with the construction and use of a
coastal protection structure

STATEMENT OF EVIDENCE BY LEIGH BULL

25 JULY 2025

1. EXECUTIVE SUMMARY

- 1.1 The Glen Isla Protection Society (**GIPS**) has applied for resource consents to construct coastal erosion protection, on the dunes immediately south of Three Mile Creek mouth, Waihi Beach.
- 1.2 The creek mouth and beach provide foraging and roosting habitat for a number of coastal shorebirds. In addition, Northern NZ dotterel have been recorded breeding (unsuccessfully) at this location on two occasions (2021/22 and 2022/23 breeding seasons).
- 1.3 As such, the design, construction method and reinstatement works associated with the proposed coastal erosion protection at Glen Isla Place seeks to avoid both direct and indirect impacts on avifauna, including northern NZ dotterel.
- 1.4 This has been achieved through the avoidance of permanent habitat loss, and the inclusion of consent conditions to ensure implementation of appropriate mitigation measures should construction occur during the breeding season (noting the intent is to undertake works outside the breeding season).
- 1.5 I note that two wall alignment options are put forward:
 - 1.5.1 One presented in the original application which was some 5 m seaward of the private property boundary and 13 m wide; and
 - 1.5.2 A new alternative option which is set 1.5m seaward of the private property boundaries at the southern end.
- 1.6 I consider the effects of either wall alignment option to be the same on avifauna.

2. QUALIFICATION AND RELEVANT EXPERIENCE

- 2.1 My full name is Dr Leigh Sandra Bull, and I am a Director at BlueGreen Ecology Limited (**BlueGreen**).

- 2.2 I hold the qualifications of Bachelor of Science (Zoology), Master of Science with Honours (Ecology) and PhD (Ecology) from Victoria University of Wellington. My area of specialisation is ornithology, the study of birds.
- 2.3 After completing my PhD in 2003, I worked for the Department of Conservation (**DOC**) in the Biodiversity Recovery Unit as a Species Protection Officer and later as a Senior Technical Support Officer in the Marine Conservation Unit.
- 2.4 In 2005, I was awarded a French Ministry of Research post-doctorate fellowship at the Université Paris Sud XI. After completing my post-doctorate, I contracted to the National Institute of Water and Atmospheric Research Limited (**NIWA**) to undertake seabird field investigations on Antipodes Island.
- 2.5 I joined Boffa Miskell Ltd (**BML**) in 2007 where I worked on a variety of projects investigating the potential impact of developments on avifauna. In 2023 I established BlueGreen where I have continued to undertake ecological impact assessments.
- 2.6 In the 18 years that I have worked as an ecological consultant, I have gained extensive experience assessing the impact of developments on shorebirds in both their riverine and coastal environments. Of relevance to the current project is my experience on the following projects: Waitaki Power Scheme Reconsenting (Waitaki catchment braided rivers), Tekapo Power Scheme Reconsenting (Tekapo catchment), Manapouri Lake Control Improvements Project (Waiau River), East West Link Road (Mangere Inlet), Northport Expansion (Whangarei Harbour), Te Arai / Tara Iti coastal developments (Te Arai and Mangawhai), Puhoi to Warkworth and Warkworth to Wellsford roads.
- 2.7 My professional memberships include:
- 2.7.1 The Environment Institute of Australia and New Zealand; and
- 2.7.2 The New Zealand Ornithological Society.

- 2.8 I served in a voluntary role as the Editor of Notornis, the Ornithological Society of New Zealand's peer-reviewed scientific journal, from 2016 to 2018.
- 2.9 I currently serve in a voluntary role as a subject matter expert to the Shorebirds Trust¹, a registered charitable trust that invests in scientific research, and funds and co-ordinates conservation efforts aimed to improve coastal biodiversity.

3. INVOLVEMENT IN THE PROJECT

- 3.1 My involvement in the project began in February 2024 when I was engaged by the Glen Isla Protection Society ('GIPS') to attend a project shaping workshop to provide expert avifauna advice regarding the potential impacts of various designs for measures to provide coastal erosion protection in front of the Glen Isla Place properties.
- 3.2 I subsequently reviewed the Ecological Assessment² that was prepared by Dr Keesing, and advised on subsequent responses to Section 92 requests and proposed consent conditions pertaining to avifauna matters.
- 3.3 I undertook a site visit on 11 March 2025, during which I walked the beach / dune in front of the Glen Isla Place properties, as well as Brighton Reserve and Island View Reserve.
- 3.4 During my site visit, I spoke with Mrs Mel O'Sullivan, owner and long-time permanent resident of 12 Glen Isla Place (who I understand has since sold and relocated from that address). Mrs O'Sullivan has previously been part of the Dotterel Watch group and showed me the location where the dotterels nested in the 2022/23 breeding season.

4. CODE OF CONDUCT STATEMENT

- 4.1 Although this is not an Environment Court hearing, I confirm that I have read the 'Code of Conduct for Expert Witnesses' contained in the Environment

¹ <https://www.shorebirdstrust.org.nz/about-us>

² BlueGreen Ecology (2024). Glen Isla Place Coastal Protection: Ecological Assessment. Report prepared for Glen Isla Protection Society Incorporated, dated 19 August 2024.

Court Consolidated Practice Note 2023. I agree to comply with this Code of Conduct. In particular, unless I state otherwise, this evidence is within my sphere of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

- 4.2 I am a Certified Environmental Practitioner (Ecology Specialist) with the Environment Institute of Australia and New Zealand and am bound by the Institute's code of ethics.

5. SCOPE OF MY EVIDENCE

- 5.1 My statement of evidence relates to avifauna species and habitat that could potentially be affected by the coastal protection structure proposed by GIPS.
- 5.2 In preparing this statement of evidence, I confirm that I have read the following documents:
- 5.2.1 *Coastal Protection Project Glen Isla Dune, Waihi Beach: Construction Methodology Statement*. Report prepared by Davis Coastal Consultants, dated November 2024.
 - 5.2.2 *Coastal Protection Structure for Glen Isla Protection Society: Engineering Design Report*. Prepared by Davis Coastal Consultants, dated October 2024.
 - 5.2.3 *Glen Isla Place Coastal Protection: Ecological Assessment*. Prepared by BlueGreen Ecology Ltd, dated August 2024.
 - 5.2.4 Statement of evidence of Dr Vaughan Keesing.
 - 5.2.5 Statement of evidence of Mr Craig Davis.
 - 5.2.6 Submissions from the following parties: Dot Watch Waihi Beach, Tauranga Branch Royal Forest & Bird Protection Society, Department of Conservation.

5.2.7 Council's s42A Recommending Report and Attachment 13 (Ecological Effects Review³).

5.3 In my evidence I will:

- 5.3.1 Identify the coastal avifauna species that the project site potentially provides, or is known to provide, habitat for;
- 5.3.2 Assess the potential effects of the project on avifauna;
- 5.3.3 Comment on avifauna issues raised by submitters;
- 5.3.4 Respond to the Council Officers' Report in relation to avifauna matters; and
- 5.3.5 Provide my conclusions.

6. AVIFAUNA

6.1 Most avifauna species have the following habitat needs:

- 6.1.1 Roosting habitat - When birds roost, they go somewhere to rest or sleep. These sites may be used for varying lengths of time by individual birds, from minutes to hours, and birds are free to leave these habitats at any time. This habitat may be the same or different to that used for nesting.
- 6.1.2 Foraging habitat – A location or resource from which birds obtain food. Birds are free to leave these habitats at any time
- 6.1.3 Nesting habitat – A nest site is the physical location of the nest. Over the breeding season this will contain eggs and chicks. Breeding birds have an ongoing association with the nesting

³ Wildland Consultants (2025). Updated Review of Ecological Effects and Submissions for a Proposed Seawall at Glen Isla Place, Waihi Beach. Wildland Consultants Contract Report No. 7408c. Prepared for Western BOP District Council. 19pp.

habitat throughout the breeding season as they incubate the eggs and generally feed the young until they fledge.

- 6.2 In general, coastal stream mouths on sandy beaches provide foraging, roosting and / or breeding (above mean high water spring (**MHWS**)) habitat for wader and shorebirds. The table below (taken from the Ecological Assessment) provides a list of species for which the coastal margin adjacent to the project site may provide potential habitat throughout the year.

SPECIES		NZ THREAT CLASSIFICATION
Variable oystercatcher	<i>Haematopus unicolor</i>	At Risk - Declining
Red-billed gull	<i>Larus novaehollandiae scopulinus</i>	At Risk - Declining
White-fronted tern	<i>Sterna striata</i>	At Risk - Declining
Banded dotterel	<i>Charadrius bicinctus bicinctus</i>	At Risk - Declining
Northern NZ dotterel	<i>Charadrius obscurus aquilonius</i>	Threatened – Nationally Increasing
Black-backed gull	<i>Larus dominicanus</i>	Not Threatened
White-faced heron	<i>Egretta novaehollandiae</i>	Not Threatened
Pied stilt	<i>Himantopus h. leucocephalus</i>	Not Threatened
Paradise shelduck	<i>Tadorna variegata</i>	Not Threatened
Spur-winged plover	<i>Vanellus miles novaehollandiae</i>	Not Threatened

- 6.3 Northern New Zealand dotterel is the only species that has been reported breeding adjacent to the project site. Nesting habitat for this species generally occurs on low, flat areas devoid of vegetation, where the nest is a simple scrape in the substrate, sometimes sparsely lined. When mobile, chicks generally seek cover under drift wood or vegetation if required.
- 6.4 Previously, a single pair of Northern New Zealand dotterel have been recorded breeding at the Three Mile Creek mouth on two occasions (2021/22 and 2022/23 breeding seasons). The approximate location of the nest site is shown in Figure 1 below, and a photo provided in Figure 2 .
- 6.5 Chicks have not fledged in either season, with the latest attempt in 2022/23 failing due to the nest being washed away by the storms of Cyclones Hale and Gabrielle. Furthermore, I understand based on my discussion with Mrs O'Sullivan while on site, that dotterel have not bred at this location in the subsequent two breeding seasons (2023/24 and 2024/25).



Figure 1. Vegetation community map of the site. Approximate location of dotterel nest demarcated by red cross (X)



Figure 2. Photo of dotterel nest habitat by Three Mile Creek mouth. Note spinifex foredune which will be avoided by works.

6.6 New Zealand dotterel eggs and chicks, like many coastal shorebirds, are vulnerable to a number of threats, including mammalian and avian predators, disturbance from human activities on beaches, loss of nests to big tides, and loss or degradation of habitat from development. A number of such threats exist on Waihi beach.

7. POTENTIAL EFFECTS

7.1 As I understand it, two potential wall alignment options are now being put forward:

7.1.1 One presented in the original application which was some 5 m seaward of the private property boundary and 13 m wide (Figure 3); and

7.1.2 A new alternative option which is set 1.5m seaward of the private property boundaries at the southern end (Figure 4).

7.2 In both cases, the north alignment remains the same.



Figure 3: Construction footprint and location of original alignment, 5m from southern property boundaries (Source: Davis Coastal Consultants)

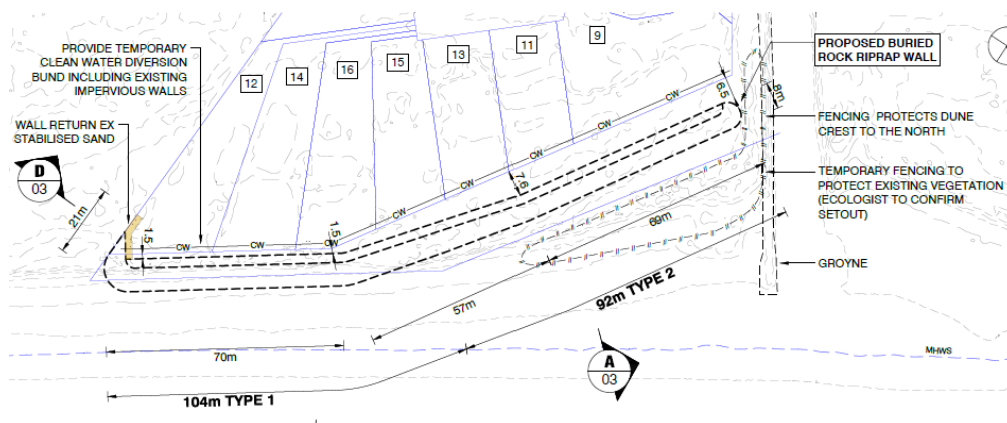


Figure 4: Construction footprint and location of alternative alignment, 1.5 m from southern property boundaries (Source: Davis Coastal Consultants)

7.3 Potential effects on coastal avifauna of the proposal (both alignments) that were considered, both during the project shaping and effects assessment, include the following:

- 7.3.1 Permanent loss of habitat (foraging, roosting or breeding);
- 7.3.2 Construction disturbance; and
- 7.3.3 Mortalities and / or injuries due to construction activities.

7.4 I note that northern New Zealand dotterel was the only species for which I found nesting records at the Three Mile Creek mouth. However, the following assessment would hold true for other shorebird species (e.g. variable oystercatcher) should they be found to nest there in the future due to similarities in behaviours, as well as nesting, roosting and foraging habitat requirements.

Permanent habitat loss

7.5 As noted previously, coastal stream mouths on sandy beaches provide foraging, roosting and / or breeding (above mean high water spring (**MHWS**)) habitat for wader and shorebirds. Areas of foraging, roosting and breeding (refer to Figure 1 and Figure 2 above) avifauna habitat have been identified,

and the Project design (refer to Figure 3 and Figure 4 above) has sought to avoid these areas. The area under the Project footprint does not provide foraging, roosting and / or breeding habitat for wading or shorebirds. As such, the proposed design will not result in any permanent habitat loss for avifauna, including northern New Zealand dotterel or other shorebirds.

- 7.6 In fact, following the completion of construction at the northern end, replanting the area behind the existing northern spinifex foredune with native dune vegetation will provide higher quality habitat for northern New Zealand dotterel chicks than the existing exotic vegetation.

Construction disturbance

- 7.7 Disturbance activities can occur during construction (e.g. noise, vibration and plant movement). Disturbance to avifauna may result in displacement, decreased feeding rates, and unattended nests (leading to incubation failure and increased opportunities for predators), energy and time cost.

- 7.8 Potential effects of construction disturbance on nesting birds will be avoided through:

7.8.1 Undertaking construction outside of the breeding season⁴ where possible; and

7.8.2 If construction works occur during the breeding season, an Avifauna Management Plan will be prepared which will include pre-work surveys and the implementation of mitigation measures if birds are found to be nesting.

- 7.9 Such mitigation measures may include an exclusion zone around any nesting birds, whereby construction works cannot be undertaken. Based on my experience, conditions of this sort are an appropriate and effective way to ensure construction activities avoid any disturbance effect.

⁴ Breeding season is broadly considered to be between 01 August and 31 March, and the non-breeding season between 1 April and 31 July.

- 7.10 Given the short-term nature of the proposed works, the potential effects on roosting and foraging birds will be negligible given their mobile nature and the presence of foraging and roosting habitat elsewhere along Waihi beach.

Mortalities and / or injuries

- 7.11 The mobile nature of most avifauna species means that the potential for direct mortalities or injuries associated with construction activities are likely to be confined to birds that may be breeding within the Project footprint.
- 7.12 As such, the potential for mortalities and / or injuries to nesting birds will be avoided through the following measures:
- 7.12.1 Undertaking construction outside of the breeding season where possible; and
 - 7.12.2 If construction works occur during the breeding season, an Avifauna Management Plan will be prepared which will include pre-work surveys and the implementation of mitigation measures if birds are found to be nesting.
- 7.13 Such mitigation measures may include an exclusion zone around any nesting birds, whereby construction works cannot be undertaken. Based on my experience, conditions of this sort are an appropriate and effective way to ensure construction activities avoid any injuries or mortalities.

8. RESPONSE TO MATTERS RAISED THROUGH SUBMISSIONS

- 8.1 I have reviewed the submissions received by the Council on the application which raise issues within my area of expertise.
- 8.2 The concerns raised by submitters⁵ in regard to avifauna can be broadly grouped into the following matters, each of which are addressed below:

⁵ E.g. Dot Watch Waihi Beach (Submitter #15), Forest & Bird (#18), Department of Conservation (#24)

- 8.2.1 The proposal will result in significant adverse effects on birds, primarily dotterels, which use the Glen Isla Dunes and wider coastal environment for breeding and nesting.
- 8.2.2 The site visit which informed the Ecology Assessment occurred outside of breeding season and therefore, did not appropriately capture the significance of the area to coastal species primarily dotterels and failed to properly assess impacts.
- 8.2.3 Lack of recognition of the importance of the foredune area as a dotterel breeding ground, and in turn, the impacts of construction on this habitat and the species.

Significant Adverse Effects on birds

8.3 As outlined in Section 7 of my evidence, the proposal will not result in adverse effects on avifauna, including dotterel, due to the following:

- 8.3.1 Habitat loss will be limited to the defined construction area, which does not include any of the habitat of potential nesting value to the dotterels
- 8.3.2 Effects within the defined construction area will be limited to the period of construction.
- 8.3.3 The completed construction will result in the replanting of the area behind the existing northern spinifex foredune with native dune vegetation, which will provide higher quality habitat for northern New Zealand dotterel chicks than the existing exotic vegetation.
- 8.3.4 Undertaking construction activities during the non-breeding season if possible.
- 8.3.5 If construction activities occur during the breeding season, a pre-work survey must be undertaken so that appropriate mitigation

measures can be implemented to avoid disturbance, mortality and / or injury to nesting birds.

Timing of Ecology Assessment

- 8.4 While the site visit was undertaken outside the breeding season, this assessment acknowledges that northern New Zealand dotterel have bred adjacent to Three Mile Creek mouth (refer to Figure 1).
- 8.5 I understand from my discussion with Mrs O’Sullivan, that dotterels have not bred at this location during the last two breeding seasons (2023/24 or 2024/25). As such, had I undertaken a survey during that time, the results would have shown no breeding taking place.
- 8.6 Rather, I have taken a conservative approach whereby I have assumed that it is possible for dotterels to breed there, and hence the avoidance of direct impacts of the project in this area.
- 8.7 As such, undertaking a site visit during the breeding season would not have changed my assessment or advice in regard to the project design.

Dotterel habitat value

- 8.8 Section 3.2 of the Ecological Assessment² stated “*The terrestrial vegetation at the Project site does not provide habitat for any ‘Threatened’ or ‘At Risk’ avifauna species.*” The reference to the Project site in that statement relates to the footprint of the proposed coastal structure (as shown in Figure 1 in the assessment, and replicated below as Figure 5), which does not include the spinifex foredune.



Figure 5: Location of proposed coastal protection structure at Glen Isla Place, Waihi Beach.

- 8.9 The northern spinifex foredune is considered to be of High ecological value and has been avoided, and it is this area that may be used by dotterel chicks should birds breed there. As noted previously, dotterel chicks seek shelter in dune vegetation such as pingao and spinifex, rather than the dense scrubby vegetation that is present in the Project footprint.
- 8.10 Furthermore, as noted above, areas of dune disturbed by the construction works will be replanted in native vegetation species, thereby improving the dune habitat quality.
- 8.11 In summary, my assessment and conclusions in respect to the impact on birds (both direct and indirect) as a result of the proposed coastal erosion protection at Glen Isla Place have not changed following my reading and consideration of the submissions.

9. RESPONSE TO COUNCIL RECOMMENDING REPORT MATTERS AND CONDITIONS

- 9.1 In their conclusions of ecological effects, the reporting officer writes (paragraph 176 of the S42A report), *“I am of the opinion that the ecological effects can be adequately mitigated through the conditions of consent to ensure the effects will be less than minor”*.

9.2 With regards to avifauna, the proposed Regional Council consent condition, requiring the preparation and implementation of an Avifauna Management Plan (AMP) is appropriate to ensure the avoidance of potential effects relating to construction disturbance, as well as mortalities and / or injuries of nesting birds.

9.3 However, I recommend several amendments (refer to underlined text below) to the proposed condition to make to *Threatened* and *At Risk* species, as well as the protection of the eggs and hatchlings as follows:

6.1	a)	If the vegetation clearance and earthworks are to be undertaken between 1 August and 31 March (inclusive of both dates), the consent holder must submit an Avifauna Management Plan (AMP) to the Bay of Plenty Regional Council for certification ten working days prior to commencement of any works between 1 August and 31 March (inclusive of both dates). Certification is for the purpose of confirming the requirements of clause (b) are met;
	b)	The AMP must be prepared by a suitably qualified and experienced ecologist and must include as a minimum: 1. The results of a pre-work <u>Threatened and At Risk</u> bird nest inspection of the works site and surrounding area (as deemed necessary by the ecologist), and the vehicle access route where it is located within sand dunes and the foreshore; and 2. Measures to be implemented to avoid adverse effects on <u>Threatened and At Risk</u> nesting birds, including: i. <u>Measures to protect any nest sites until eggs have hatched.</u> ii. <u>Measures to protect any hatchlings until they have fledged and left the site, including measures to protect mobile but non-flying juveniles.</u>
	c)	The consent holder must implement the most recent AMP certified in accordance with clause (a), prior to the commencement of vegetation clearance and earthworks.

10. CONCLUSIONS

- 10.1 The design (for both potential southern alignments), construction method and reinstatement works associated with the proposed coastal erosion protection at Glen Isla Place has sought to avoid both direct and indirect impacts on avifauna, including northern NZ dotterel.
- 10.2 My assessment and conclusions in respect to the impact on birds have not changed following my reading and consideration of the submissions, nor the S42A report (and ecological review³).
- 10.3 The adoption of the proposed consent condition providing for the AMP is appropriate and will further ensure the avoidance of impacts on avifauna, particularly if construction activities occur during the breeding season.