Appendix H – Della Bennet - Avifauna

Before the Fast-track Panel

Under:	The Fast-track Approvals Act 2024
In the matter of:	Beachland South Development, Auckland

Statement of

Dr Della Bennet

Associate Principal Ecologist - Avifauna

Independent Consultant

20 October 2026

Introduction

1. My full name is Dr Della Gaye Bennet.

Instruction

2. I am providing expert advice on behalf of the Department of Conservation on the Beachlands South Development – Fast-track application in relation to avifauna.

Qualifications and Experience

3. I am an Associate Principal Ecologist – Avifauna and Ecology Team Leader with Wildland Consultants Limited (Wildlands). I have been working for Wildlands since early 2020. My qualifications include:
    i. PhD in Biological Science, University of Canterbury (2018).
    ii. Postgraduate Diploma with Distinction in Biological Science, University of Canterbury (2014).
    iii. Bachelor of Science in Biological Science (Ecological Endorsement), University of Canterbury (2013).
4. Prior to working at Wildlands, I had undertaken avifauna work throughout the South Island, including surveys and monitoring, mist-netting and bird banding, and the monitoring of threatened species. Previous roles of relevance include:
    i. Laboratory/Field Trip Demonstrator and Field Researcher, University of Canterbury, Christchurch (2015-2019).
    ii. Wildlife Control Officer, Christchurch International Airport Ltd, Christchurch.
5. I am a member of the Ornithological Society of New Zealand (OSNZ)/Birds New Zealand and the Royal Society of New Zealand (Royal Society Te Apārangi).
6. I have considerable experience assessing ecological effects, recommending mitigation measures, and providing evidence in Council and Environment Court hearings.
    i. I have assessed the ecological effects and recommended mitigation measures for many proposed developments. These include residential developments on braided river birds, a new multilane motorway on river, forest, and wetland birds, an open ocean salmon farm on coastal and oceanic birds, a port development on kororā/blue penguins (*Eudyptula minor*, At Risk – Declining) and tarāpunga/red-billed gulls (*Chroicocephalus novaehollandiae scopulinus*, At Risk – Declining), and a proposed mussel farm extension on a kawau pāteketeke/king shag (*Leucocarbo carunculatus*, Threatened – Nationally Endangered) colony.
    ii. I provided evidence on the potential effects on avifauna of the proposed Longford bridge shared pathway (footbridge and cycleway) across the Matāura River, Gore, a proposed mussel farm expansion in Pelorus Sound, the establishment of a mussel spat farm in Whitianga, the Port of Tauranga Stella Passage development, and the establishment of a wind farm at Omamari in Northland.

7. Recently, I undertook 14 bird strike risk assessments for temporary and permanent stormwater retention basins and wetlands located close to the Christchurch International Airport, assessed the presence of braided river birds prior to gravel extraction (Waimakariri, Kōwhai, and Rakaia Rivers) and water extraction (Rakaia, Waimakariri, and Waiau Rivers), and provided effective evaluation, mitigation and offsetting for the loss of coastal shorebird habitat in the Waikato.

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 assessment 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 will address the following matters:
    i. Methodology used for data collection.
    ii. Results from field surveys and desktop assessments.
    iii. Avifauna behaviour and potential site use.
    iv. Assessment of effects for terrestrial, wetland, and coastal avifauna.
    v. Management measures proposed.
    vi. Proposed consent conditions.

Sources

10. In preparing this advice I have reviewed:
    i. Attachment 0B - Beachlands South Fast-track Approval Substantive Application: Assessment of Environmental Effects and Statutory Analysis (Barker & Associates Limited 2026).
    ii. Attachment 0C - Draft Proposed Conditions: Beachland South Fast Track Application.
    iii. Attachment 12 - Beachlands South Fast Track Ecological Impact Assessment (Viridis 2026a).
    iv. Attachment 12, Appendix J - Beachlands South Fast Track Biodiversity Management Plan (Viridis 2026b).
    v. Attachment 12, Appendix K - Beachlands South Fast Track Fauna Management Plan (Viridis 2026c).
    vi. Attachment 13B - BSLP Fast Track Application: Marine Ecological Impact Assessment (Tonkin & Taylor 2026a).
    vii. Attachment 13D - Marine Ecological Effects Assessment: Beachlands South (Tonkin & Taylor 2022a).

viii. Attachment 13B, Appendix G - BSLP Fast Track Application: Coastal Birds Management Plan – Indicative Draft (Tonkin & Taylor 2026b).

11. To inform this review, I undertook a three-hour site visit on 6 October 2026 to assess the site and available habitats.

Executive Summary

12. I have reviewed the provided reports and consider that there are informational gaps and limitations in data collection and assessment of effects on avifauna, including cumulative effects, as well as proposed management measures. As such, I am of the view that, without further information and additional assessment by the applicant, the effects of the proposal on avifauna cannot be fully assessed, and the currently proposed mitigation measures are inadequate.

13. The terrestrial survey effort was extremely limited, and no list of bird species was provided in the desktop assessments. There is also no assessment of the likelihood of species to occur on-site. To this end, I am of the view that the application may not fully consider the potential risks to some bird species.

14. Many statements around the potential site use of species require additions or amendments, and an assessment of the potential for shag species to roost or nest on-site should be undertaken.

15. There are several gaps in the recommendations around pre-works surveys, buffer distances, and incidental discovery protocols as management measures. There is an overall lack of consideration of ground-nesting birds and protected exotic species when discussing these measures. Recommended buffer distances are inconsistent throughout the documents and are insufficient to prevent disturbance to nesting birds. The incidental discovery protocol refers only to tūturiwhatu/northern New Zealand dotterel (*Charadrius obscurus aquilonius*, Threatened – Nationally Increasing) but should apply to all protected species.

16. The potential for increased predation is not always fully considered. It is unclear how the proposed predator control measures will reduce domestic cat predation and whether a ban on pet cats in coastal properties will be implemented or not.

17. Cumulative effects do not appear to be assessed, despite it being explicitly stated that they have been taken into account.

18. I have also reviewed the draft Fauna Management Plan supplied with the application (Attachment 12, Appendix K), and the Coastal Bird Management Plan (Attachment 13B, Appendix G) and consider that several amendments are necessary to this Plan to ensure that effects on avifauna are appropriately managed. The steps that should be taken if an indigenous bird is found injured or dead require additional detail in some areas, and the recommendation of transporting an injured bird in a cloth bag is not best practice.

19. The measures for preventing tūturiwhatu/northern New Zealand dotterel from nesting on-site requires further information in several areas, and the use of machinery disturbance to prevent them from nesting is not best practice.

20. I consider that further discussion with the applicant on the abovementioned matters is warranted, with the purpose of filling information gaps and narrowing potential areas of disagreement. Additional changes to conditions and/or new conditions may be proposed based on the outcome of discussions and further information provided. Further changes may also be proposed to the draft Management Plans.

Key Issues

Data Collection Methodology

21. The terrestrial avifauna survey (Section 2.2.2 of the Ecological Impact Assessment) comprised seven five-minute bird counts (5MBCs) undertaken in April 2026. Much of the habitat was not surveyed, including large areas of open grassland. Given the size of the site, I consider that 35 minutes of on-site surveys across a small spatial area, representing a small portion of the site, is insufficient to fully evaluate the use of the site as a whole by avifauna. Furthermore, it is noted that the survey was conducted outside of the breeding season, so it cannot be used to assess the use of the site by nesting avifauna. An assessment should be undertaken during the breeding season to determine species present on-site, whether they are actively nesting or could potentially nest there. Without this information, the effects of avifauna and the appropriateness of the required mitigation measures cannot be fully evaluated.

22. Desktop reviews were stated to have been undertaken in the Ecological Impact Assessment, Marine Ecological Impact Assessment, and the Marine Ecological Effects Assessment. The date ranges and geographic area searched are unclear, and no lists of the avifauna species detected during the desktop assessments has been provided. Therefore, only limited information is provided about the species seen in the surrounding area that may occur on-site. Limited data in this respect means that it is difficult to determine whether the effects assessment and proposed mitigation measures are appropriate to minimise effects on avifauna.

23. Section 4.4 of the Marine Ecological Impact Assessment specifies that no kororā/northern blue penguins (*Eudyptula minor iredalei*, At Risk – Declining) were identified on iNaturalist within the project Zone of Interest (ZOI). It does not appear that eBird was searched. eBird is a large database with over 100 million avifauna records and will contain records of kororā/northern blue penguins that are not present on iNaturalist, allowing for a more thorough assessment of their likelihood of occurrence in the area.

24. Six rounds of coastal avifauna surveys were undertaken between March and May 2021, as discussed in Section 2.1.4 of the Marine Ecological Effects Assessment. These surveys were conducted outside of the avifauna breeding season, and most were outside the main period in which migratory shorebirds are present (Arctic migrants begin migration in early March). This means they cannot be used to assess the use of the site by nesting birds or fully assess site use by migratory avifauna. The specific survey points and acoustic recording device (ARD) deployment locations have not been provided, so it is not possible to determine if these covered an appropriate spatial distribution.

25. Section 4.8.2 of the Marine Ecological Effects Assessment states that coastal bird surveys were conducted in February and March 2021, but Section 2.1.4 states that surveys were completed between March and May 2021. It is not clear which is correct – this should be clarified.

26. Figure 4.15 of the Marine Ecological Effects Assessment shows that red-billed gulls were observed on-site, but the abundance and site use of this species is not included in-text with that of other Threatened and At Risk species. This information should be added to assist in determining whether the effects assessment and proposed mitigation measures are appropriate.

27. Additional avifauna monitoring is proposed in Section 5.3 of the Coastal Bird Management Plan to occur annually from year one to five, and then five-yearly thereafter. The specific monitoring methodology in this section should be included, including a map of the areas to be surveyed. Without this information, I cannot determine whether the proposed monitoring is appropriate to determine effects on avifauna from the proposed development.

Results

28. Table C1 in Appendix C of the Ecological Impact Assessment provides a list of all avifauna observed within or adjacent to the site during terrestrial and coastal avifauna surveys. It would be useful if this table included an evaluation of the likelihood of each species using the site, as it is currently unclear which species were observed on- or off-site. It would also be helpful if the table was amended to include species detected during the desktop assessment (as discussed in Point 19 above). Without this information, it is not possible to determine the level of effect for different species and the appropriateness of the proposed mitigation measures.

29. The Ecological Impact Assessment does not discuss the potential for shag species to use trees overhanging the on-site ponds for roosting or nesting. The assessment should be updated to include this information. Without it, the level of effect and appropriateness of the proposed mitigation measures cannot be fully assessed.

30. Section 4.4 of the Marine Ecological Impact Assessment states that "*gulls, shags, terns, penguins and gannets feed close to shorelines of the mainland and inner and outer Gulf islands, close to where they breed*". It should be noted that these species do not always feed close to their breeding colonies, particularly during the non-breeding season, and could utilise habitat adjacent to the site. As discussed in Point 26 above, shags may utilise on-site habitat, foraging in ponds and roosting or nesting in trees, which is not currently addressed.

Assessment of Effects

31. Section 2.1.4.2. of the Marine Ecological Effects Assessment states that "*assessment of effects for avifauna which are found in multiple habitat types are assessed as per the following habitats in which they most commonly use (or were identified using during surveys)".* Effects should be assessed for species across all habitats that they may use. Some species may use multiple habitats for foraging or

nesting and may, therefore, be affected differently or to a higher degree than is currently considered.

32. Throughout the Marine Ecological Impact Assessment, the Marine Ecological Effects Assessment, and the Coastal Birds Management Plan, it is stated that increased disturbance will occur from people, pets, and pest animals. It should also be specified that increased predation from pets and pest animals, could cause injury or mortality to adult birds, chicks, and eggs. The inclusion of these statements would provide important context for the need for additional information around measures to mitigate disturbance and predation to avifauna from cats and dogs, as discussed in Points 45, 46, and 48.

33. Section 5.2.4.2 of the Marine Ecological Effects Assessment states that "*…each effect can appear negligible in nature, however this assessment takes into account the cumulative impact of these effects on coastal avifauna values".* However, I am unable to find reference to a cumulative effects assessment in this document, and it does not appear that they have been assessed.

34. The effects levels assigned to avifauna in the Marine Ecological Effects Assessment are extremely broad. For example, the residual effects assigned for waders range from 'very low' to 'high'. It would be more suitable to select the highest level of effect for each grouping, rather than use such a broad range which makes it challenging to determine what the likely level of effect will be.

35. Section 8.16.3 of the Assessment of Environmental Effects and Statutory Analysis discusses the use of observers to watch for kororā/northern blue penguins during piling and stop works if they enter the piling safe zones. It is considered that additional information should be provided on the amount of noise that piling is expected to produce and how this was used to determine the size of the safe zones. Seasonal limitations have been considered unnecessary, however, kororā/northern blue penguins remain offshore during the non-breeding season (March – June) and expand their foraging range. This information is highly relevant to when piling works would be preferable. Piling would be best undertaken during the non-breeding season, when kororā/northern blue penguins are less likely to be present in the area surrounding the site.

36. Figure 10 in the Assessment of Environmental Effects and Statutory Analysis shows a planned coastal reserve area between the estuary and the development. It should be clarified how wide this reserve will be, and how far the development will be set back from the estuary, as this will assist with determining the extent of effects on shorebirds from disturbance associated with the development.

37. Throughout the ecological management plans and ecological impact assessments, there is insufficient consideration of the potential use of the site ground-nesting species, such as pūkeko (*Porphyrio melanotus*, Not Threatened). The application has often disregarded the need for pre-works surveys for such species. When nesting, these birds are protected under the Wildlife Act 1953, meaning it is an offence to disturb, damage, or destroy their nests or eggs, or to kill or injure adults or

young. The use of grassed or open areas for nesting by this species needs to be clearly reflected in the effects assessment and the proposed mitigation measures such as pre-works surveys and setback distances.

38. The requirements for nest checks and buffer distances refer only to indigenous species (Threatened, At Risk, or Not Threatened). It should be clearly specified throughout all relevant documents that nest checks and buffer distances are also required for protected exotic species, because it is an offence under the Wildlife Act 1953 to disturb or destroy any protected species or their nests. Alternatively, a Wildlife Act permit would be required if these requirements cannot be met.

39. I have also reviewed the Fauna Management Plan (Appendix K of the EcIA), and make the following observations. Section 5.3.2 of the Fauna Management Plan states that "*where no nesting behaviour or activity is observed, the vegetation may be cleared within 24 hours of the survey being completed. If clearance does not occur within 24 hours, the area must be surveyed again to verify the absence of nesting behaviour prior to clearance*". It should be clearly stated that this also applies for earthworks in open areas, as birds may nest in these areas even once vegetation has been cleared.

40. The buffer distances for active nests are inconsistent throughout the documents, do not account for protected exotic species, and are too low to sufficiently reduce disturbance to nesting birds. For example, the Ecological Impact Assessment specifies buffer distances of 10 metres from tree nests, 20 metres from At Risk/Threatened species nesting by pond vegetation, and 10 metres from Not Threatened species nesting by pond vegetation. The Fauna Management Plan mentions a buffer distance of 50 metres for tūturiwhatu/northern New Zealand dotterel. Buffer distances of 100 metres from all protected nesting birds should be implemented, unless a lower setback is approved on a case-by-case basis by a suitably qualified ecologist. I consider that 100 metres is a best-practice buffer distance to minimise disturbance to nesting birds; this is informed by research on birds nesting in open areas[1]. Furthermore, this is a standard setback that is often recommended by Environment Canterbury and DOC.

41. In Table 1 of the Fauna Management Plan, the key requirement of the accidental injury or mortality to lizards, bats and birds is to *"stop works in the immediate area if safe to do so and follow the relevant accidental discovery, injury or mortality procedures…".* This wording should be strengthened, so it states that works must always stop as soon as it is safe to do so.

42. Section 5.2 of the Fauna Management Plan states that "*adult birds are highly mobile and expected to move to nearby unaffected habitat once disturbance commences. Nesting birds and chicks that have not fledged are unable to move away. Therefore, managing effects on birds require mitigation through monitoring for nests, signs of nesting activity and displays of breeding behaviour."* While adult birds can be highly

[1] Safavian, S. (2022). The effect of anthropogenic disturbance on braided river birds in New Zealand (PhD thesis, University of Canterbury).

mobile and flee from disturbance, thereby avoiding mortality, disturbance can have other implications. These can include increased energy expenditure, reduced breeding success resulting from elevated stress levels, and effects on any nests that birds are disturbed from, including nest abandonment, increased predation risk, and increased risk of adverse temperatures (too hot or too cold) affecting eggs or chicks. Therefore, effects management actions to reduce disturbance to adults, such as minimising on-site noise where possible, should be implemented.

43. Section 5.2 of the Fauna Management Plan states that "*to mitigate the effects of direct mortality and indirect disturbance on breeding and nesting birds and their eggs, the following protocol will apply to tree and shrub clearance and any vegetation clearance within 10 m of ponds or wetlands".* This should be amended to require the protocol regarding bird surveys and management to also apply to earthworks in open and grassed areas, because birds may also nest in these habitats. The 10-metre distance specified above, and referenced throughout the documents, is insufficient to minimise disturbance to nesting birds. Nest checks should be required for any works occurring within 100 metres of ponds or wetlands to ensure that disturbance to birds nesting in these areas is minimised; research indicates that a 100 metre setback distance should minimise disturbance to ground-nesting birds[1].

44. Section 5.4 of the Fauna Management Plan details steps to be taken if an indigenous bird is found injured or dead, but it should also require that any injured exotic birds should be taken to a vet. The option to use a cloth bag to transport an injured bird should be removed, because this can increase stress levels and lead to further injury; any injured birds should be transported in a box. It should be specified that the carrying box must be cool, dark, and lined with material, to ensure that birds do not become stressed, overheat, or further injure themselves. The time, date, and location of the injury/mortality should be recorded.

45. Table 5 in the Fauna Management Plan describes several options to deter tūturiwhatu/northern New Zealand dotterel from nesting on-site. The approximate height of grass required to deter tūturiwhatu/northern New Zealand dotterel from nesting should be specified. It should be stated that silt fences must reach the ground at the bottom with no gaps to ensure that birds cannot see under the fence. One deterrence method included in the table is to run machinery on-site. I do not consider this best practice, because it can negatively affect other fauna species; other deterrence methods listed in Table 5 should be prioritised over this.

46. Section 5.5.2 of the Fauna Management Plan describes measures to be followed if tūturiwhatu/northern New Zealand dotterel eggs are found incidentally in the construction zone. It should be specified that this incidental discovery protocol applies to nests of all birds protected under the Wildlife Act 1953. The proposed buffer distance of 50 metres is insufficient and should be increased to 100 metres, unless a lower setback is approved on a case-by-case basis by a suitably qualified ecologist. The incidental discovery protocol should specify that the date, time, and location of the nest discovery should be recorded, and a photograph taken of the nest or adult birds, if possible, without creating disturbance, to aid with identification.

47. I have also reviewed the Marine Ecological Effects Assessment. I note that Section 5.1.1 of the Marine Ecological Effects Assessment states that one proposed management measure is "*a ban on cats in coastal properties to minimise the risk of predation on coastal birds while nesting or roosting"*, but Section 4.7 of the Biodiversity Management Plan specifies that "*as restrictions on cat ownership are not proposed as part of the subdivision, control methods should minimise the risk of capturing or harming owned domestic cats*". It should be clarified whether restrictions on cat ownership are proposed and, if not, how elevated domestic cat numbers in the area will be appropriately managed to avoid increased predation risk. This includes in the context of the proposed shellbank enhancement, which could promote increased numbers of roosting and breeding shorebirds adjacent to the site.

48. Section 6.2.4 of the Assessment of Environmental Effects and Statutory Analysis shows an escarpment pathway overlooking the estuary, but it is not specified how far this will be set back from the estuary. The Coastal Birds Management Plan should clarify whether the requirement for dogs to be leashed applies to this pathway to minimise the risk of dogs leaving the path and disturbing birds in the estuary. Dogs are agile and can easily move up and down the escarpment to access the estuary in several places, so I consider that dogs should be leashed in this area.

49. In Section 5.1.2 of the Coastal Birds Management Plan, it is specified that "*all mangrove clearance to be undertaken within the period 1 March to 31 July to avoid peak bird breeding season. If mangrove clearance cannot be undertaken within this period, a suitably qualified ecologist shall determine whether any Threatened or At-Risk nesting birds are likely to be displaced by the removal of mangroves at that time and in that location*". The wording should specifically state that a pre-works survey is required for any mangrove clearance during the breeding season to determine whether any nesting birds or chicks are present.

50. Section 5.2.2.6 of the Coastal Birds Management Plan discusses cat control on-site, including live trapping and the use of automatic traps with microchip sensors. While these methods will assist in controlling feral cats on-site, they will not address the increased predation that could occur from domestic cats, given the *c.*2,000 dwellings on-site. It should be clarified what measures are planned to address this, including whether a ban on cats is proposed, as mentioned in the Marine Ecological Effects Assessment.

Management Plans and Consent Conditions

51. It is noted that my advice above also suggests several amendments and clarifications to the draft Management Plans included in the application documentation. These changes should also be reflected in consent conditions, where appropriate.

52. Further amendments may be recommended based on further information provided by the applicant and/or discussions with the applicant.

53. I have also reviewed the draft conditions of consent as proposed in Attachment 0B of the application documentation, and my comments are set out below.

54. Condition 88 states that "*vegetation removal within the CMA must be undertaken outside the main native bird breeding season (September to January inclusive) except where a suitably qualified ecologist has confirmed to the Consent Holder in writing that vegetation is clear of any native nesting birds, eggs, or chicks".* The timeframe for the breeding season should be extended to include February, and this condition should encompass the nests of all protected birds, regardless of whether they are indigenous or exotic.

55. The exclusion zones specified in Condition 89 do not consider all protected avifauna species and are insufficient to minimise disturbance to nesting avifauna. The condition should be amended to include Threatened, At Risk, and other protected species, and should include a 100-metre minimum exclusion zone, unless reduced by a suitably qualified ecologist on a case-by-case basis.

56. The conditions do not appear to specify the need for pre-works surveys and exclusion distances for species outside the Coastal Management Area (CMA). The conditions should be amended, or new conditions added, to reflect that pre-works surveys are required for all vegetation clearance and earthworks within the avifauna breeding season, and that exclusion distances from nests apply to all nests discovered outside of the CMA.

57. The conditions do not currently specify the timeframe within which works must start within following a pre-works survey for nesting birds. They should be amended to reflect Section 5.3.2 of the Fauna Management Plan, stating that vegetation clearance must commence within 24 hours of a pre-works survey being undertaken. As stated in Point 35 above, this should also be adjusted to reflect earthworks in areas of open ground, as birds may nest within these areas if works cease for an extended period.

Further information & Next Steps

58. The assessment above has identified a number of areas where further information and assessment is required to be undertaken by the applicant. I consider that further discussion with the applicant is warranted following the issuing of the s53 comments.