

Technical Advice -Avifauna by Dr Leigh Bull

Date	1 September 2025
To	Ellie Watson, Environmental Manager – South Island Renewables, Genesis Energy
From	Dr Leigh Bull, BlueGreen Ecology Ltd
Project advice provided for	Tekapo Power Scheme – Applications for Replacement Resource Consents
Documents referred to	1. BlueGreen Ecology (2025). Tekapo Power Scheme Re-consenting: Assessment of Ecological Effects - Avifauna. Report prepared for Genesis Energy Ltd. 2. Statement of Evidence of Rachel Katherine McClellan – Freshwater birds, dated 25 August 2025. 3. Statement of evidence of Kathryn Jane McArthur – Aquatic Ecology and Water Quality, dated 22 August 2025. 4. Comments by the Royal Forest and Bird Protection Society of New Zealand, dated 25 August 2025. 5. CRC Appendix 6: Technical Advice – Avifauna Jean Jack, dated 21 August 2025.
Qualifications	I hold the qualifications of Bachelor of Science (BSc, Zoology), Master of Science with Honours (MSc, Ecology) and Doctor of Philosophy (PhD, Ecology) from Victoria University of Wellington. My area of specialisation is ornithology, the study of birds. In the 18 years that I have worked as an ecological consultant, I have gained extensive experience assessing the impact of developments on braided river birds 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), Manapouri Lake Control Improvements Project (Waiau River), Lake Coleridge (Wilberforce and Harper Rivers), 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 (Kaipara Harbour).
Code of Conduct	As an expert witness I have read, and I am familiar with, the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023. This memorandum has been prepared in compliance with that Code. In particular, unless I state otherwise, this response 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.
Signature	

Summary of key matters

I have reviewed the evidence prepared by Dr McClellan (Forest & Bird) and Dr Jack (ECan) and provide a summary below on key matters as I understand them to be.

I have also reviewed the four flow options identified by Ms McArthur in her evidence (paragraph 95), and in my opinion the IBEP programme as proposed will deliver the ecological outcomes required for avifauna.

1. Wetlands

In Dr Jack's opinion (paragraph 2), is that my avifauna assessment provided "a comprehensive description of avifauna values". However, Dr McClellan writes (paragraph 16) that the wetlands were not described and that it is possible that some provide habitat for the Nationally Critical Australasian bittern.

As outlined in Section 2.2 of my assessment, I undertook a reconnaissance site visit on 15-16 January 2019, which included driving the length of both the Tekapo Canal and Takapō River (including Paterson's Ponds), recording the habitat types present. Further to that, on 2 September 2019 I undertook a helicopter flight along the entire length of the Takapō River and around the perimeter of Lake Takapō to again identify potential habitat.

Patterson's Ponds were the only wetlands identified that I considered would provide habitat for species such as bittern, and as such these were included in the subsequent surveys that were conducted (refer to Appendix 2 of the avifauna assessment). Native species detected there included black-fronted tern, pied shag, grey teal and NZ scaup (refer to Table 6 of assessment). Bittern were not recorded at this location, and there are no records of this species at that location in the eBird database.

2. Effects management hierarchy and Kahu Ora Programme

A matter raised by both Dr McClellan and Dr Jack is that the effects management hierarchy (avoid, remedy, mitigate, offset) has not been applied to the TPS, rather, the Kahu Ora programme is proffered as compensation.

As noted in the Kahu Ora strategy itself:

"Kahu Ora is a compensation agreement and does not seek to directly mitigate the impact of the consent-related works within the catchment. Rather, it seeks to use the compensatory fund to target management of cultural and biodiversity values to sites where related values can be best protected within the catchment."

Dr McClellan provides her opinion on the proposed management actions for the Kahu Ora programme, questioning the likely success of some of these. In response, as outlined in the Kahu Ora strategy"

"Kahu Ora is managed by DOC with the support of Te Rūnanga o Arowhenua, Te Rūnanga o Moeraki, Te Rūnanga o Waihao alongside Meridian and Genesis, ensuring that cultural values and mahinga kai aspirations are integrated with ecological outcomes. All actions have been prioritised through a robust qualitative assessment of values, pressures, feasibility, and cost-effectiveness."

Dr Jack writes (paragraph 8) that “*Greater effort than is currently occurring will be required to reverse avifauna population declines*”. I agree with this and note that Kahu Ora programme will be funded by an annual \$2.3 million (CPI-adjusted), which is significant increase on what is currently received through Project River Recovery.

3. *Consent conditions*

Both Dr McClellan and Dr Jack recommended more specificity in the consent conditions regarding outcome monitoring for avifauna with regards to the IBEP / Kahu Ora programme.

As outlined in the Kahu Ora strategy:

“A strong monitoring and research framework underpins the programme, enabling responsive, evidence-based management.”

“All Kahu Ora work is expected to have an associated outcome plan, and this will link the work to wider Departmental processes, such as monitoring standards and reporting, and provide transparency in how this work relates to other activities that DOC undertakes within its wider remit.”

Furthermore, each of the Zone Plans within the Kahu Ora strategy has specified outcome monitoring of the actions within each zone. It is my opinion that this is an appropriate approach and as such consider that the proposed consent conditions do not need to be updated.

Conclusions

I have reviewed the evidence prepared by Dr McClellan (Forest & Bird) and Dr Jack (ECan) and my assessment of effects on avifauna still stands. Furthermore, it is my opinion that the Kahu Ora Programme will provide greater benefits to avifauna within the Tekapō catchment than are currently received under Project River Recovery.