## Before the Fast-track Panel

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| Under: | The Fast-track Approvals Act 2024 |
| In the matter of: | Haldon Solar [FTA-2508-1097]– Fast-track application |


**Statement of advice** Warren Chinn

Terrestrial Invertebrate Ecology

Technical Advisor, Department of Conservation


Date: 13th July 2026


Department of Conservation
Te Papa Atawhai

Te Kāwanatanga o Aotearoa
New Zealand Government

**Introduction**

1. My full name is Warren Guy Hill Chinn.

**Instruction**

2. I am providing expert advice on behalf of the Department of Conservation (DOC) on the Haldon Solar [FTA-2508-1097]– Fast-track application.

2. My advice addresses the **draft conditions** that are relevant to indigenous invertebrate values.

2. I have provided previous written advice, headed “Terrestrial invertebrate values present on land proposed for a solar farm by Lodestone Energy Ltd. at Haldon Station, Mackenzie Basin” dated 24 November 2025, which has been provided to the Panel. I have also contributed to DOC’s s53 comments dated 2 February 2026, and DOC’s response to RFI Number 4 dated 29 April 2026.

**Qualification and Experience**

2. My qualifications, position and role in this process remain as set out in my previous reports to the Panel.

**Code of conduct**

2. 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.

**Material Considered**

2. In addition to the material considered previously (as set out in my previous reports) I have reviewed Appendix A to the Draft Decision: draft Mackenzie District Council tracked conditions dated 26th June 2026.

**Comments**

3. Lodestone Energy Limited have proposed a 320ha solar farm on Haldon Station, at the head of Lake Benmore, Mackenzie Basin. The surface of the land proposed for the solar farm currently supports at least four species of threatened invertebrate including (but not limited to);

    a) *Sigaus robustus* (Nationally Endangered)

    b) *Hemiandrus fabella* (Nationally Endangered)

    c) *Sigaus minutus* (Nationally Vulnerable)

    d) Phaulacridium otagoense (Declining)

4. These orthoptera were identified on the proposed solar farm site by the applicant’s ecological consultant, SLR during their December 2025 invertebrate survey (SLR 2025).

5. SLR have proposed translocating individuals of the threatened invertebrates into a fenced 180ha pest-proof Compensation Area, following an ecological restoration program (including predator and weed control), Figure 1.

Figure 1. Threatened invertebrate Compensation Area (orange delta) and Pukaki River floodplain Restoration Area (within red-lined polygon on left (western) side of Compensation Area). Source; Attachment 4, Mackenzie District Council Conditions (Appendix-A-Draft-Mackenzie-District-Council-tracked-conditions invert.pdf).

6. There is no reliable evidence that predation is the key threat to invertebrate populations at the solar farm site or Compensation Area. Given that the threatened invertebrate species are currently present, and have persisted in this locality, provision of further (replacement – high quality) habitat would likely be more beneficial for invertebrate populations than the proposed provision of fencing, that has questionable ecological value. Further, evidence shows that it is extremely difficult to exclude mice through fencing despite best efforts.
7. The Haldon property includes an additional 169ha of old (dry) Pukaki/Takapo river floodplain, adjacent to the proposed Compensation Area. The upstream/northern part of this floodplain surface supports grassland and shrubland, dominated by exotic species, notably sweet brier. Removal of that exotic vegetation, to create an open stonefield surface, would provide suitable habitat for invertebrates, including the threatened grasshopper *Sigaus robustus*. It would also provide suitable habitat for avifauna that presently utilise the solar farm habitat, notably banded dotterel (at risk; declining).
8. There is merit in this idea, especially if the grasshopper population can increase at a natural rate in conjunction with predator (hedgehog) control. On-going weed control will be important within the restored floodplain and compensation areas.
9. The southern/downstream part of this area supports areas of wetland vegetation. The extent of the area suitable for restoration (and protection) as invertebrate habitat would need to be defined by field survey. The extent of the suitable invertebrate habitat appears (from aerial images) to comprise approximately two-thirds of the floodplain area.

If so, the total area of protected invertebrate habitat would be approximately 280ha, which is substantial from an invertebrate aspect.

10. Uncertainties with the proposal include survival of translocated invertebrates and the subsequent persistence and any increase of their populations, at the recipient sites. Monitoring of invertebrate populations would be necessary to determine the success (or otherwise) of translocation, and of the ongoing persistence and health of invertebrate populations at the Restoration and Compensation areas.
11. There are past examples of successfully shifting and establishing *Sigaus robustus* and Sigaus minutus grasshoppers in suitable refugia. The Twizel DOC office have information on several reserves and trials adjacent to the Kāki aviaries. For details of these trials, I suggest contacting Dr Tara Murray and Jennifer Schori (both at DOC).

**Reference**

SLR 2025. Terrestrial Invertebrate Assessment Haldon Solar Farm. Lodestone Energy Limited Auckland. Unpublished client report SLR Project No. 875.016840.00001. 20 January 2025. Revision 1.0. 39pp.