

Comments on Draft Avifauna Management Plan for the Point Solar Farm at Twizel, Canterbury (February 2026)

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Overall, the draft Avian Management Plan is light on important detail and does not reflect the draft Avifauna Conditions (18 Feb 2026) particularly well.

Re Section 6.0 Potential effects on avifauna

1. I agree with the list of potential effects.

Re Management of effects Sections 7.1 – 7.5

I agree these actions make sense.

Re Section 7.6 Reduce the risk of impact trauma (bird strike)

2. This section of the management plan is very brief and provides no assurances that the proposed mitigations would be effective.
3. I remain concerned that the 3 mitigation techniques proposed sound like they may mitigate some risk but (a) I am unaware of anyone globally that has tested the assumptions behind their use; (b) they should be viewed as experimental and their 'effectiveness' monitored closely.
4. For example, I am unaware of any evidence that a 3.8 – 4.8 metre gap between rows of panels breaks the profile in a way that birds would respond to.
5. I understand from my reading that the usual anti-reflective coatings are designed to increase the efficiency of light capture of the panel and/or make them less reflective to human vision, not to make them less attractive to birds.
6. Research indicates these coatings can reduce the degree to which panels polarise light by up to 12 percent (Szaz et al. 2016; Fritz et al. 2020), which could play a role in limiting the exposure of birds to polarised light pollution (Horváth et al. 2009). However, in general, light polarised off panels is far stronger than natural water reflection anyway, so could act as a 'super-stimulus to birds. Whether the anti-reflective coatings being used for this development minimise collision risk is untested and should be measured (a Condition needed?). In addition, it is unclear whether birds colliding with infrastructure are even responding to the polarised light reflected by the panels – because birds have very different vision to humans, they may be responding to other wavelengths reflected off panels (e.g., uv spectra).
7. Given that much bird mortality at solar farms overseas is associated with security fences, wiring, transmission lines and lighting (e.g., Smallwood 2022), the management plan should also include measures to address this risk. For example:

- a. Using appropriate insulators and having no bare wiring, to reduce electrocution risk.
- b. Minimising lighting at night, to reduce potential attractiveness to night-flying waterbirds.
- c. Putting all wiring and cables underground.
- d. Lower heights of security fences to minimise collisions.

Re Section 7.13 Post construction bird monitoring

8. This section is exceptionally light on detail and requires much greater detail to assure me that monitoring would be adequate.
9. A statistically rigorous carcass monitoring programme is necessary to determine if bird collision occur as predicted and the magnitude of potential effects on bird populations.
10. This is clearly stipulated in the new draft Conditions.
11. Carcass monitoring needs to be designed *a priori* by suitably qualified biometricians. For example, Hamlin et al. (2026) for the proposed Haldon Solar farm have done this analysis with suitably qualified biometricians before consent is approved.
12. In addition, monitoring MUST include suitable observer efficiency trials (to determine observer biases) and carcass persistence trials (to measure how long a carcass remains on site before being scavenged and removed or decomposes or otherwise breaks down to be unrecognisable. Using the results of such trials allows application of a realistic correction factor to indicate how many additional collisions were missed.
13. While this requirements is now stipulated in new draft Conditions, it should be described in more detail in the AMP.
14. The monitoring should continue for the life of the solar farm – which also should be stipulated in Conditions.
15. This is because, when dealing with very rare species, collisions would, by definition, also be very rare and may not be detected over shorter monitoring frames. However, rare events for rare species are still likely to impact population viability.
16. The avian plan is ambiguous here – recommending just 3 years of monitoring I Section 7.13.2 but for the life of the farm in Table 2.
17. In addition, monitoring should include a regime of swabbing of panels for eDNA on ‘feather spots’, as birds regularly collide with panels but are no longer present (e.g., have been scavenged, or flown or walked off site injured), leaving no other sign that

they had collided and resulting in underestimates of collision rates (Gruppi et al 2023; Harrigan et al. 2023, 2024).

18. Section 7.13.3 states that independent review will be triggered by a Suitably Qualified Avian Expert (SQAE) if injury or death in threatened species occurs. This section of the plan is somewhat vague. Trigger conditions need to be explicit in Conditions, along with how 'independent' is defined. It is unclear who such a review would be directed at – the consenting authority? DOC should be involved in any review that involves collisions of Absolutely Protected Wildlife.

References

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