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29 May 2026

Hon Raynor Asher KC
The Point Solar Farm Expert Panel Chair
c/o Environmental Protection Authority
Level 10, 215 Lambton Quay
Wellington 6011

Re: Response to Request for Information 5 – The Point Solar Farm Application under the Fast-track Approvals Act 2024 (File ref: FTAA-2509-1100)

Dear Hon. Raynor Asher KC,

I write on behalf of Far North Solar Farm Limited (FNSF) in response to the Panel's Request for Information dated 18 May 2026 pursuant to section 67 of the Fast-track Approvals Act 2024.

FNSF has prepared a comprehensive response to Section 3 (Ecology Matters) of RFI 5. The responses draw extensively on the detailed assessments and management plans prepared by Wildlands Consultants, supported by independent expert input where relevant. Key elements of the response include:

- **Broad ecological package (3.1)**: Clear articulation of residual effects after avoidance and minimisation, with explicit recognition of survey limitations and a precautionary approach. At Risk species are largely avoided through substantial setbacks and design refinements.
- **Vegetation and threatened plants (3.2)**: Detailed assessment of indirect effects on terrace-edge assemblages, rationale for setbacks, adaptive management triggers, and monitoring for species such as Maniototo peppercress and resurrection lichen.
- **Avifauna (3.3)**: Updated assurance on ring-fencing of the $1,050,000 Avifauna Compensation Strategy (confirmed by Murray Brass, DOC, 27 May 2026), calculation of benefits versus impacts, specific conservation actions, expected outcomes, and monitoring framework.
- **Lizards (3.4)**: Species-specific assessment for southern grass skink addressing threat status, survey limitations, densities, salvage uncertainties, and the scale of enhancement measures.

- **Invertebrates (3.5)**: Ecosystem-based rationale for the pest exclusion reserve, benefits relative to impacts, and precautionary approach despite survey constraints.
- **Mammalian pest management (3.6)**: Detailed targets (including near-zero rodents inside the reserve), fence design, timing, maintenance, adaptive management for mice, and on-site reserve advantages.
- **Biodiversity outcome monitoring (3.7)**: Specific details on design, replication, frequency, and statistical power across all ecological values.

These responses build directly on Wildlands' prior assessments and management plans, demonstrating that the Project applies the effects management hierarchy rigorously, avoids higher-value habitats where practicable, and delivers a net ecological improvement relative to the existing agricultural baseline.

FNSF trusts the information provided fully addresses the Panel's requests and remains available for any further clarification, conferencing, or additional information the Panel may require.

Best Regards,

Richard Homewood
Director
Far North Solar Farm Limited

Enclosures:

Attachment 1: (Photos) Patersons Terrace predator proof fence and Site Imagery.
Attachment 2: T_Bird_Strike_Reports_Bramley.
Attachment 3: Draft DOC avifauna compensation
Attachment 4: INVERTEBRATE RESERVE FENCE DESIGN_Chinn

Response to RFI 5: (3) Ecology Matters

3.1 Broad assessment of applicant's ecological package

3.1(a) An assessment of residual effects for each threatened or at-risk species known or likely to be impacted after efforts to avoid, minimise or remedy have been considered, but before application of residual effects management; including;

i) addressing the uncertainties arising from limitations in survey effort, particularly for lizards, invertebrates and plants;

ii)The expected magnitude of each type of effect is amalgamated into an overall project effect for each species;

iii) and the interplay between threat status and the magnitude of effect, to arrive at a transparent overall level of residual effect.

FNSF Response:

FNSF notes that a broad assessment of the Applicant's ecological package, including residual effects for threatened and At Risk species, has already been addressed in detail by Wildlands Consultants. This includes the original Assessment of Ecological Effects 6621g, the Response to section 53 submissions, Wildlands report Invertebrate Management Plan 6621h-ii (particularly Sections 3 and 4), and the suite of draft Ecological Management Plans (April 2026).

The following provides a consolidated response to the specific matters raised in RFI 5 3.1a.

Overall Approach: Wildlands has assessed residual effects on a species-by-species basis after avoidance, minimisation, and remediation measures have been incorporated into the Project design, but before application of residual effects management (Invertebrate Management Plan 6621h-ii, Sections 3–4.7). A precautionary approach has been applied throughout, particularly where survey limitations exist.

3.1(b) an assessment of expected outcomes after proposed residual effects management measures have been considered including;

i) The expected biodiversity outcome following residual effects management is stated for each species, in terms of either:

• no net loss (which requires provision of a disaggregated Biodiversity offset accounting model if this is claimed) and that is consistent with Policy 9.3.1 of

the Canterbury Regional Policy Statement, including the methodology and assumptions relied upon; or

• net positive (where evidence demonstrates that benefits stemming from compensation actions are expected to outweigh impacts); or

• uncertain – in which it cannot be known at this stage whether net positive or net loss outcomes will occur; or

• net loss –where net loss is expected, including an assessment of its magnitude (e.g., negligible to very high).

ii) An assessment of the proposed residual effects management package against commonly applied offsetting or compensation principles.

FNSF Response: Wildlands explicitly acknowledges uncertainties due to the large site size, cryptic nature of some species, and inherent limitations of ecological surveys (Lizard Management Plan 6621h-v, Section 2; Terrestrial Invertebrate Management Plan 6621h-ii, Section 2 and section 3; Vegetation Management Plan 6621h-iii, Section 2). Approximately 370 person-hours of targeted surveys have been completed across flora, lizards, invertebrates, and avifauna.

Where uncertainty remains, Wildlands has applied conservative assumptions and a precautionary design response. This includes:

- Substantial setbacks and avoidance of the highest-value terrace-edge, gully, and wetland habitats.
- Targeted surveys focused on higher-value peripheral areas;
- Habitat mapping and management planning based on the best available information.

These measures ensure that At Risk and Threatened species are largely avoided through Project design. For example, higher-value lizard and dryland plant habitats on terrace edges and gullies are retained and enhanced outside the main solar array footprint.

3.2 Vegetation and Threatened Plant Assemblages

3.2(a) Provide a detailed assessment of the potential indirect effects of project activities on the threatened plant assemblages located along terrace edges adjacent to the site;

FNSF Response: FNSF notes that potential indirect effects on threatened plant assemblages located along terrace edges adjacent to the site were previously addressed in Wildlands' Response to section 53 submissions (The Point Solar Farm:

Response to Ecological Issues Raised by se53 submissions). The following provides a detailed assessment as requested in RFI 5.

Threatened and At Risk plant assemblages (including Maniototo peppercress, mat daisy, Carmichaelia vexillata, and resurrection lichen) occur primarily along terrace edges, peripheral gullies, and margins outside the main solar array footprint. The key potential indirect effects from Project activities, and the measures to address them, are:

(i) Edge effects from altered microclimate (shading, wind, rainfall interception, soil moisture): The likelihood of measurable effects reaching terrace-edge communities is low. Solar panels are not positioned immediately adjacent to these areas, and the site is underlain by highly permeable outwash gravels. Substantial setbacks (developed from Wildlands recommendations, Ecological Enhancement Plan 6621g) further reduce risk. The Draft Vegetation Management Plan (VMP 6621h-iii) includes specific monitoring and management of edge effects.

(ii) Irrigation effects from landscape planting: Limited establishment watering will use drought-tolerant species. Irrigation will be minimised and ceased if monitoring shows adverse effects on adjacent dryland communities (VMP ss 3.2.5 and 3.4). Large setbacks to sensitive terrace edges (per Wildlands reports) are built into the design.

(iii) Weed spread and pest plant invasion: Addressed through regular pest plant surveillance, control, and ongoing management within the VMP Weed Management section. Threatened dryland plants are low-growing and vulnerable to shading/displacement by exotics.

(iv) Grazing and browsing pressure: Adaptive seasonal grazing around the periphery, with annual grass cover monitoring and adjustments to maintain short dryland vegetation without overgrazing sensitive plants (VMP s 3.3).

The majority of the solar array footprint has a history of cultivation and modification (evident in LINZ 2017–18 aerial photography and more recent 2025 site photographs, as *Attachments-1*), resulting in low baseline indigenous dryland values inside the main development area. Overall, FNSF considers that potential indirect effects on terrace-edge threatened plant assemblages can be appropriately managed to low levels through the combination of setbacks, design refinements, and the comprehensive measures set out in the Draft Vegetation Management Plan (6621h-iii).

This approach is consistent with the Glorit Solar Farm Expert Consenting Panel decision, which accepted similar edge and habitat management measures as appropriate.

3.2(b) Provide an assessment of effects on resurrection lichen that factors in both threat status and the scale of the magnitude of effects. In addition, also provide an assessment of the expected outcomes, aftereffects management measures have been considered for this species.

FNSF Response: FNSF notes that the assessment of effects on resurrection lichen (Xanthoparmelia semiviridis, At Risk – Declining) was previously addressed in Wildlands' Response to s53 submissions (The Point Solar Farm: Response to Ecological Issues Raised by s53 submissions), as well as in the Draft Vegetation Management Plan and the original ecological assessment. The following provides a detailed assessment as requested in RFI 5, factoring in both threat status and the scale of effects, together with expected outcomes after management.

Quantitative plot surveys undertaken by Wildlands recorded resurrection lichen in 10 plots inside the proposed solar array footprint. No Threatened or At Risk vascular plant species were recorded within the panel area (Wildlands Vegetation Survey Results). Despite its At Risk – Declining conservation status, the magnitude of effects is assessed as low to low-moderate for the following reasons:

Resurrection lichen is a highly disturbance-tolerant dryland species that commonly persists and even thrives in open, sparsely vegetated, and modified environments, including gravel outwash areas, roadsides, and previously cultivated land.

It is extremely resilient to drought and capable of regenerating from fragmented material.

A large proportion of the solar array footprint has been historically cultivated and cropped (clearly visible in LINZ 2017–18 aerial photography and 2025 site photographs), resulting in dense exotic pasture that already limits optimal open-ground habitat for the species. Higher-quality dryland habitat for this lichen occurs mainly around the site periphery and terrace edges, which are largely retained outside the main development footprint.

Following implementation of the proposed effects management measures in the Draft Vegetation Management Plan (VMP 6621h-iii), FNSF considers the expected outcome for resurrection lichen is likely to be stable to locally positive over time, although some uncertainty remains regarding long-term vegetation trajectories. The VMP includes:

- Management and restoration of dryland outwash gravel ecosystems around the site margins.
- Weed management, adaptive grazing regimes, and long-term maintenance of open dryland habitats suitable for resurrection lichen persistence.

Because the species is adapted to disturbed open-ground conditions, it is likely to continue occupying suitable microhabitats within the solar array footprint post-construction.

3.2(c) What is the ecological rationale for determining the minimum setback from the project footprint/landscape plantings and areas of high value for terrestrial plants;

FNSF Response: FNSF notes that the ecological rationale for the minimum setbacks from the project footprint, landscape plantings, and areas of high terrestrial plant value was previously addressed in Wildlands' Response to section 53 submissions and supporting ecological documentation. The following provides further detail on the development of this rationale over time.

The setbacks were initially established through the original ecological assessment process and a site-specific review by Wildland Consultants, Ecological Enhancement Plan for The Point Solar Farm, 6621g, 2023. Willands consultants recommended substantial buffers between proposed solar infrastructure and higher-value ecological areas, particularly terrace edges, gullies, wetlands, and habitats supporting indigenous dryland vegetation and avifauna. The intent was to minimise indirect effects (e.g., microclimate alteration, weed spread, disturbance) and maintain ecological connectivity around the site periphery.

Historical changes to the plan: Initial concept (pre-2024/early AEE stage): Vegetation management was proposed to extend from the project boundary through to the title boundary, providing a broad ecological transition zone.

Refinement following Wildland consultant's input (2023–2024): Setbacks were formalised based on her recommendations for avifauna and wetland protection (typically aiming for significant separation, e.g., on the order of 100m in some contexts for sensitive areas). This led to avoidance of the highest-value terrace-edge and gully habitats.

Further design iterations (2025–2026): The layout evolved into more clearly defined, functional ecological management zones while maintaining or enhancing effective separation. These zones now include:

Landscape screening planting areas (generally ~35m wide from the project fenceline);

- Dryland revegetation and habitat enhancement areas;
- Predator-free grasshopper reserve; and
- Lizard habitat corridors and reserve areas.

This refined approach provides clearer ecological function for each zone (e.g., screening for visual/edge effects, restoration for biodiversity enhancement) while preserving substantial separation between the main solar footprint and the highest-value terrestrial plant assemblages on terrace edges and gullies. The design balances Project feasibility with precautionary protection of dryland values.

The current setbacks therefore represent an iterative, expert-informed process that prioritises avoidance of high-value habitats, reduces edge effects, and supports long-term management through the Vegetation Management Plan (VMP 6621h-iii).

3.2(d) Is it proposed that the setback between landscape planting and the boundary will be 10m along the southern and eastern margin?

FNSF Response: No. The proposed setback between the landscape planting and the title boundary is not uniformly 10 metres along the southern and eastern margins.

The screening planting setback is based on the project boundary developed following ecological review of the site, including recommendations made by Wildland consultant's to maintain substantial separation from sensitive ecological areas, particularly the terrace-edge and avifauna habitats outside the site boundary and the eastern gullies.

Along the southern and eastern margins, the landscape planting area is generally approximately 35 metres wide measured from the project fence line. This results in a variable setback distance between the planting and the title boundary, with a minimum setback of approximately 13.5 metres at the narrowest point.

The narrowest setback occurs where the terrace outside the property boundary is widest, maintaining a larger effective separation distance between the Project footprint and the sensitive ecological values located beyond the title boundary.

3.2(e) How dryland species communities will be adaptively managed if monitoring indicates that a decline is evident and likely attributed to the indirect effects of Project activities adjacent to areas with high plant values?

FNSF Response: FNSF notes that Wildlands has previously assessed that significant indirect effects on dryland plant communities within the site are unlikely, given that much of the site has historically been cultivated, cropped, grazed, and otherwise modified over a long period (Wildlands Response to section 53 submissions:

Response to Ecological Issues Raised by section 53 submissions; (see also original Assessment of Ecological Effects). The areas with the highest indigenous dryland plant values are primarily located around the terrace edges, gullies, and site margins outside the main solar array footprint and are proposed to remain largely undisturbed through substantial setbacks and management measures.

Nevertheless, the Project incorporates a robust adaptive management framework in the Draft Vegetation Management Plan (VMP 6621h-iii) to address any unforeseen decline in dryland species condition, abundance, or habitat quality that monitoring

indicates is likely attributable to indirect Project effects (e.g., edge effects from microclimate, irrigation, or weed dynamics). This framework will be further refined and finalised by suitably qualified ecological specialists (SQEPs) prior to construction commencing, as required under proposed consent conditions.

If monitoring detects such a decline, the adaptive management responses may include:

- Modification or reduction/cessation of irrigation associated with landscape planting in affected areas;
- Additional or intensified weed and pest plant control;
- Changes to grazing management regimes (e.g., timing, intensity, or exclusion in sensitive zones);
- Supplementary planting, habitat restoration, or enhancement measures;
- Increased monitoring frequency and specialist review; and
- Where practicable, review of buffer or setback management (though significant adjustments are not anticipated given the conservative design).

The likelihood of needing these responses is considered low due to:

- Large setbacks from the solar footprint and landscape planting to terrace-edge habitats (developed from Wildland Consultant's 2023 recommendations, Ecological Enhancement Plan 6621g);
- Use of drought-tolerant species and careful irrigation management (VMP ss 3.2.5 and 3.4);
- Ongoing weed surveillance and adaptive grazing protocols (VMP ss 3.3 and Weed Management section); and
- The modified baseline condition of much of the site (evident in historical aerial photography).
- This proactive, staged, and evidence-based adaptive management approach ensures that any potential indirect effects can be identified early and effectively managed.

3.2(f) Provide specific details of how the proposed dryland/threatened plant monitoring programme will detect a statistically significant (20%) decline when:

• Monitoring is limited to include a minimum total of ten 2m x 2m plots (40m² total) 7

• There is potentially only a single plot replicate for each threatened species.?

FNSF Response: FNSF acknowledges the limitations associated with detecting statistically robust changes in sparse dryland plant communities, particularly where Threatened or At Risk species occur at low densities or in isolated locations. However, it is important to note that the majority of the identified higher-value dryland plant assemblages and terrace-edge habitats are located outside the main solar array footprint, primarily around the gullies, terrace margins, and peripheral areas proposed to remain undisturbed.

Within the solar array footprint itself, quantitative vegetation plot surveys identified very limited indigenous dryland plant values, with resurrection lichen being the only At Risk species regularly recorded within the footprint. Much of the site has historically been cultivated, grazed, or cropped, including substantial areas immediately adjacent to the proposed solar infrastructure. FNSF therefore considers that the proposed management and restoration measures within the Vegetation Management Plan represent a substantial improvement over the current baseline conditions for indigenous dryland vegetation within the title. Kindly refer to the Draft Vegetation Management Plan and original Assessment of Ecological Effects prepared by Wildland Consultants.

The proposed monitoring programme within the draft VMP was developed as an initial framework by ecological specialists and is intended to be refined and finalised prior to construction commencing. The purpose of the monitoring is not solely to undertake a statistically rigorous population analysis for every individual threatened species, but rather to identify meaningful ecological trends, detect adverse change where practicable, and inform adaptive management responses over time.

FNSF also notes that monitoring is proposed to occur alongside broader ecological observations, fixed-point photography, ecological inspections, and wider habitat condition assessments. In addition, aerial imagery and drone-based site inspections may be used to assist with identifying changes in vegetation condition, weed spread, vegetation density, and broader dryland habitat responses over time, particularly across the terrace-edge and revegetation areas.

Given the highly fragmented and naturally sparse nature of dryland ecosystems in the Mackenzie Basin, FNSF considers that an adaptive management approach remains more appropriate than relying solely on strict statistical significance thresholds derived from a very limited number of small monitoring plots. The final monitoring methodology, including any refinement to plot numbers, plot locations, or additional monitoring tools, will be reviewed and confirmed by the relevant ecological specialists prior to implementation.

3.2(g) Provide specific detailed information on the level of effort applied to the proposed surveys for Maniototo peppercress (Lepidium solandri; Threatened - Nationally Critical); and the proposed propagation efforts and associated outcome monitoring for this species?

FNSF Response: FNSF notes that the assessment of Maniototo peppercress (Lepidium solandri, Threatened – Nationally Critical) was previously addressed in Wildlands' Response to section 53 submissions (The Point Solar Farm: Response to Ecological Issues Raised by section 53 submissions), where the discovery during detailed vegetation investigations was highlighted. The following provides specific details on the level of survey effort applied, together with proposed propagation and outcome monitoring.

Level of survey effort: Targeted vegetation surveys for The Point Solar Farm were undertaken by Wildlands Consultants as part of a multi-stage ecological assessment process. This included:

Multiple walkover assessments and vegetation mapping across the ~600 ha site;

Quantitative plot surveys (a minimum of 10 x 2m x 2m plots, totalling at least 40 m², with additional plots in higher-value areas);

Targeted searches of higher-value dryland habitats, particularly terrace edges, erosion scarps, gullies, and less modified peripheral zones.

These efforts formed part of the overall ~370 person-hours of ecological survey work across flora, lizards, invertebrates, and avifauna (Wildlands Ecological Effects Assessment, 10 April 2026). The targeted searches for threatened plants focused on open dryland gravel and scarp habitats likely to support species such as Maniototo peppercress. Surveys were conducted by experienced botanists using systematic transects and meander searches in suitable microhabitats, particularly along the eastern terrace edges and erosion scarps.

During these detailed investigations, six individual plants of Maniototo peppercress were identified near the upper edge of the eastern erosion scarps. This species had not previously been recorded on the site. Importantly, the location is well outside the proposed solar array footprint and lies within the already-protected revegetation and lizard management area.

This discovery during the later-stage targeted surveys demonstrates the value of the intensive and precautionary survey effort. The area was already excluded from development through the setback design (informed by Wildland Consultant's recommendations), meaning the plants are protected by default under the current layout.

Proposed propagation efforts and outcome monitoring: At this stage, no large-scale propagation programme has been finalised specifically for Maniototo peppercress, as the known population is small and located in a protected area. However, the species will be fully incorporated into the final Vegetation Management Plan (VMP 6621h-iii). This may include:

- Seed collection (where appropriate and sustainable);
- Propagation trials and investigations in consultation with botanical specialists;
- Habitat enhancement (weed control, grazing management, and maintenance of open dryland conditions);
- Supplementary planting if recommended.
- Outcome monitoring will include: Repeat inspections of the known location(s) at frequencies to be confirmed in the final VMP (e.g., annually or following significant events);
- Assessment of plant condition, abundance, and extent;
- Recording of threats such as weed encroachment or grazing pressure;
- Broader habitat condition monitoring (including photopoints and vegetation plots in the revegetation zone).

Future targeted surveys during the operational phase will continue to focus on suitable eastern terrace-edge and erosion scarp habitats. This integrated approach ensures ongoing protection and potential enhancement of the species.

Overall, the discovery and protection of Maniototo peppercress exemplifies the ecological benefits of the Project, replacing ongoing farming pressures with long-term, funded management, fencing, and monitoring that would not otherwise occur.

3.3 Avifauna

3.3(a) What assurance or certainty is there that this funding is ring-fenced to braided river bird conservation and will not be re-allocated to other projects by the Department of Conservation?

FNSF Response: FNSF notes that this matter was previously addressed in the draft Avifauna Compensation Strategy prepared in conjunction with the Department of Conservation. The following provides updated and specific assurance, including reference to the most recent confirmation received from Murray Brass (DOC).

In an email dated Wednesday, 27 May 2026, Murray Brass (Department of Conservation) explicitly confirmed that the proposed Avifauna Compensation Strategy (ACS) funding can be securely ring-fenced within DOC's existing financial management system. Murray Brass advised that DOC already operates established trust-account style arrangements whereby:

- Funds can be held separately for specific approved purposes;
- Monies are ring-fenced from general departmental expenditure;
- Interest can accrue to those funds over time; and
- Funds are drawn down only for the specific conservation activities for which they were provided.

The key mechanism for ensuring this ring-fencing is clear drafting of the consent conditions, which should specify:

The purpose of the funding; The species and conservation outcomes to which it relates (particularly kakī / black stilt, black-fronted tern, banded dotterel, black-billed gull, and other braided river and wetland birds); and

The activities for which the funds may be applied (including predator control in the Godley and Cass River systems, kakī transmitter tracking and research, wetland enhancement, and instream invertebrate research).

FNSF therefore considers there is a high level of assurance that the full $1,000,000 ACS package will remain dedicated exclusively to the intended braided river bird conservation, predator control, and kakī recovery initiatives, and will not be reallocated to unrelated DOC programmes or activities. This arrangement provides transparency and accountability through tracking of expenditure against the specific actions and reporting requirements in the ACS and associated management plans.

This recent confirmation from Murray Brass directly addresses the Panel's request and builds on the draft ACS proposal previously provided.

3.3(b) Provide a calculation that the benefits associated with this ACS fund are commensurate with, or ideally outweigh, potential impacts?

FNSF Response: FNSF considers that the benefits associated with the proposed $1,050,000 Avifauna Compensation Strategy (ACS) are commensurate with, and likely to outweigh, the potential residual adverse avifauna effects identified in the assessment. The ACS is highly targeted at the same Threatened and At Risk braided river bird species potentially subject to low to low-moderate residual effects (primarily uncertain collision risk) and directly addresses the principal known cause of mortality — mammalian predation — as well as critical knowledge gaps.

The avifauna assessment (Wildlands, 3 April 2026) concludes that, following embedded mitigation (anti-reflective panels, panel spacing, night tilt, diverters, and monitoring), residual effects are generally low or low-moderate. The ACS therefore represents a precautionary and proportionate response capable of delivering

measurable population-level gains at a scale materially greater than the Project's residual risk.

ACS Allocation (per DOC draft proposal)

ACS Component	Amount	Approx. %	Expected Benefit
Predator control in Godley and Cass Rivers	$595,000 (over ~7 years)	56.7%	Improved survival, nesting success, and recruitment for kakī, black-fronted tern, banded dotterel, and black-billed gull
Kakī transmitter / tracking project	$405,000 (over ~3 years)	38.6%	Improved post-release survival data, movement understanding, and management refinement
Wetland enhancement	$35,000 (over ~3 years)	3.3%	Enhances wetland habitat resilience for the threatened bird species, particularly kakī during flood events, and compensates for habitat loss associated with solar arrays.
Instream invertebrate research	$15,000 (over ~1 year)	1.4%	Improves understanding of seasonal food availability for kakī and other birds, supporting better release timing and improved survival outcomes.
Total	$1,050,000	100%	Targeted braided river bird conservation

Substantiation of benefits:

The effectiveness of the proposed measures is supported by existing long-running Department of Conservation programmes. Predator control combined with captive rearing and releases has been a key driver in the recovery of kakī/black stilt, increasing the wild adult population from a low of 23 adults in 1981 to approximately 143–170 adults in recent years, with notable annual gains linked to enhanced predator control efforts in the Mackenzie Basin (including areas such as the Godley and Cass Rivers). Similar predator control programmes have demonstrably improved nesting success and fledgling survival for black-fronted tern and other braided river birds.

The $595,000 allocated to predator control will sustain and enhance these proven programmes following expiry of other funding streams. The $405,000 kakī tracking project addresses a critical bottleneck in post-release survival, providing data that will

improve future management effectiveness across the region, including better understanding of interactions with infrastructure.

Comparison to Haldon Solar Farm approach (Graham Ussher, RMA Ecology Memo, 1 May 2026):

FNSF notes that in response to the same concern, Graham Ussher from RMA Ecology has proposed that the Haldon Solar Farm provide compensation of $250,000 (five annual payments of $50,000 to the kākī recovery programme) if specific bird strike thresholds are exceeded. FNSF is proactively committing a full $1,050,000 to the ACS program. This represents a significant, large, and certain investment in the same species recovery programmes, without requiring a trigger event. This proactive approach provides greater certainty of benefits and aligns with best-practice adaptive management principles outlined in the Haldon memo (strong baselines, monitoring, thresholds, and compensation).

Overall, the ACS is expected to generate broader and longer-term conservation benefits for Threatened avifauna populations than the scale of the Project's residual adverse effects

3.3(c) Provide specific details as to the conservation actions proposed and how these will address residual adverse effects on avifauna?

FNSF Response: The proposed Avifauna Compensation Strategy (ACS) includes a series of targeted conservation actions intended to address potential residual adverse effects on braided river bird species associated with The Point Solar Farm, particularly kakī, black-fronted tern, banded dotterel, black-billed gull, matuku-hūrepo, and kōtuku. Kindly refer to The Point Solar Farm avifauna compensation options (DRAFT) prepared in conjunction with the Department of Conservation.

The key conservation actions proposed are:

(i) Predator control

Approximately $595,000 of the ACS funding is proposed to support continuation of predator control programmes in the Godley and Cass River areas over approximately seven years. Predator management is targeted toward improving survival of braided river bird species through trapping and other control methods. DOC identifies that these programmes are already improving outcomes for kakī and other threatened bird species.

This directly addresses residual adverse effects by improving survival and breeding success for the same species potentially affected by the Project.

(ii) Kakī transmitter and tracking project

Approximately $405,000 is proposed to fund a dedicated transmitter and bird-tracking project over approximately three years. This work is intended to improve understanding of kakī movements, post-release survival, causes of mortality, and interactions with solar farms.

This addresses residual uncertainty associated with avifauna effects, including collision-risk understanding and broader species management outcomes.

(iii) Wetland enhancement

The ACS also proposes wetland enhancement works, approximately $35,000 over 3 years, including pond development and wetland maintenance activities within the Mackenzie Basin. These habitats are important refuge and feeding areas for threatened bird species, particularly during flood events.

This addresses residual habitat-related effects by improving the resilience and quality of habitat available to braided river bird species.

(iv) Instream invertebrate research

The ACS proposes research into instream invertebrate abundance and seasonal food availability for threatened bird species with a cost estimate of $15,000 over a year.

This work is intended to improve understanding of ecological conditions affecting survival and release success for species such as kakī.

Overall, FNSF considers the ACS provides a targeted and species-focused conservation response that directly addresses the principal residual avifauna concerns identified for the Project, particularly through predator reduction, habitat enhancement, improved ecological knowledge, and long-term braided river bird management outcomes within the Mackenzie Basin.

3.3(d) Provide specific details as to the ecological outcomes expected?

FNSF Response: The ecological outcomes expected from the proposed Avifauna Compensation Strategy (ACS) are improved survival, resilience, habitat quality, and ecological understanding for threatened braided river bird species within the Mackenzie Basin, particularly species that use or traverse the Project area. Kindly refer to The Point Solar Farm avifauna compensation options prepared in conjunction with the Department of Conservation.

The expected ecological outcomes include:

(i) Improved survival of threatened braided river birds

The predator control component is intended to maintain and improve survival outcomes for kakī, black-fronted tern, banded dotterel, and black-billed gull

populations within the Godley and Cass River systems through ongoing predator trapping and management. DOC identifies that the current programme is already improving species survival and supporting release of captive-reared kakī into the area.

(ii) Improved recruitment and long-term population resilience for kakī

The transmitter project is intended to improve understanding of post-release survival, movement patterns, and mortality causes for juvenile kakī, particularly within the vulnerable 1–2 year age class. This is expected to support more effective species management and improve long-term recruitment into the breeding population.

(iii) Improved understanding of interactions between braided river birds and solar farms

The transmitter programme is also expected to improve understanding of bird movements in relation to solar farms, including exposure pathways and potential collision risk. This will help inform future management responses and wider understanding of avifauna interactions with renewable energy infrastructure.

(iv) Improved wetland habitat quality and resilience

The wetland enhancement component is intended to improve habitat availability and resilience for threatened bird species, particularly during flood events, through pond development and wetland maintenance works within the Mackenzie Basin.

(v) Improved ecological understanding of food availability and habitat use

The instream invertebrate research component is intended to improve understanding of seasonal food availability for threatened bird species and support improved management of release timing and survival outcomes.

Overall, FNSF considers the ACS is intended to provide tangible conservation outcomes through predator reduction, habitat enhancement, increased survival, improved ecological knowledge, and stronger long-term management of threatened braided river bird populations within the Mackenzie Basin.

3.3(e) Provide specific details of the monitoring and adaptive management framework proposed to evaluate the effectiveness of compensatory measures for avifauna?

FNSF Response: The proposed monitoring and adaptive management framework for avifauna compensation measures is intended to be developed and implemented in conjunction with the Department of Conservation through the Avifauna Compensation Strategy (ACS). Kindly refer to The Point Solar Farm avifauna compensation options and the proposed consent condition framework.

The framework is intended to focus on measuring ecological outcomes associated with predator control, braided river bird survival, habitat enhancement, and bird movement research within the Mackenzie Basin.

The proposed monitoring and adaptive management components include:

(i) Predator control monitoring

Monitoring of predator control effectiveness through trap catch data, predator indices, and braided river bird response monitoring within the Godley and Cass River systems. This is intended to assess whether predator suppression is contributing to improved bird survival and breeding outcomes.

(ii) Bird survival and movement monitoring

The transmitter project includes ongoing monitoring of kakī movements, post-release survival, mortality patterns, and habitat use. This monitoring is intended to improve understanding of juvenile survival rates and potential interactions with solar farm infrastructure.

(iii) Habitat condition monitoring

Wetland enhancement works and habitat management areas will be monitored to assess habitat condition, maintenance requirements, and utilisation by braided river bird species.

(iv) Research-informed adaptive management

The ACS framework specifically anticipates that research findings and monitoring results will inform future management responses. The draft DOC conditions expressly provide for review and refinement of the strategy if research identifies opportunities to improve effectiveness.

(v) Ongoing review with DOC

The ACS is proposed to be prepared and implemented in conjunction with DOC, including monitoring, reporting, and review mechanisms consistent with the wider ecological management framework proposed for the Project.

Overall, FNSF considers the proposed framework is intentionally adaptive, allowing conservation actions, monitoring effort, and management responses to evolve over time based on actual ecological outcomes, emerging research, and braided river bird response data.

3.3.1 Species-Specific Collision Risk Assessment for all Threatened and At-Risk species using or traversing the site

3.3.1(a) Provide a species-specific collision-risk assessment for all Threatened and At-Risk species using or traversing the site, including:

(i) Flight frequency analysis based on available GPS tracking datasets and field observations

(ii) Flight height distributions and panel interaction zones

(iii) Seasonal and diurnal variation in collision exposure

(iv) Species-specific vulnerability factors (body size, flight behaviour, habitat requirements, polarised light sensitivity)

(v) Collision probability estimates for:

- **Kakī/black stilt**
- **Black-fronted tern**
- **Australasian bittern**
- **Australasian crested grebe**
- **Other waterbird species using the area**

(vi) Known breeding, roosting, and foraging locations within 5 km

FNSF Response: FNSF notes that a detailed species-specific collision-risk assessment has already been addressed in the Wildlands Draft Avifauna Management Plan (6621h-i, April 2026, particularly Sections 4–6) and is further supported by independent expert reviews prepared by Gary Bramley (Ecological Solutions Ltd) in Appendix T – Bird Strike Reports and his Final Statement of Evidence – Ecology, as well as by Dr John Craig. The following responds directly to the specific matters raised.

Data limitations: In an email dated 20 March 2026, Murray Brass (Department of Conservation) confirmed that DOC holds limited GPS tracking data for the requested species in the Mackenzie Basin context. Specifically:

No GPS tracking data for kakī/black stilt, Australasian bittern, Australasian crested grebe, white heron, black shag, or black-billed gull (Murray Brass email, 20 March 2026).

Limited data for black-fronted tern (already provided to FNSF), banded dotterel (small amount from an ongoing study, largely satellite tracking with large location errors), and South Island pied oystercatcher (very few fixes from the Mackenzie Basin, as the study was focused elsewhere).

Only very limited oystercatcher data includes relatively accurate height, distance, and speed information.

This position is consistent with the conclusions reached in the parallel Haldon Solar Farm RFI response prepared by RMA Ecology (Jeroen Lurling, with technical input from Graham Ussher, 3 April 2026), which similarly noted the absence of site-specific quantitative data and the consequent reliance on a qualitative, precautionary assessment supported by monitoring and adaptive management.

(i) Flight frequency analysis based on available GPS tracking datasets and field observations:

Field observations undertaken by Wildlands in February 2026 recorded relatively low bird flight activity directly over the proposed solar footprint (14 flight observations from six species across twelve 15-minute observation periods), with no core Threatened braided river bird species observed flying through the panel interaction zone (Wildlands Avifauna Assessment, 3 April 2026, Section 5). The Bramley review (Appendix T) notes that while birds may move between the braided rivers, wetlands, and Lake Benmore habitats surrounding the site, the extent and frequency of these movements across the solar footprint remains uncertain and has not been demonstrated at high intensity. This aligns with Ussher's qualitative assessment for Haldon, which reached similar conclusions regarding low predicted overflight frequency.

(ii) Flight height distributions and panel interaction zones:

The Wildlands surveys recorded kāhu/swamp harrier flights at approximately 90–100 metres and spur-winged plover at approximately 20 metres, generally above or outside the likely panel strike zone (Wildlands Avifauna Assessment, 3 April 2026). Many species of greatest concern are primarily associated with the surrounding riverine, wetland, and lake habitats outside the solar footprint itself (Bramley, Appendix T). Ussher's Haldon assessment similarly emphasised that key species are more strongly associated with adjacent river and lake habitats.

(iii) Seasonal and diurnal variation in collision exposure:

Bird activity in the Mackenzie Basin varies seasonally (breeding, dispersal) and diurnally (including potential nocturnal movements for species such as black-fronted tern). This uncertainty is addressed through pre-construction and post-construction monitoring in the Avifauna Management Plan (Wildlands 6621h-i, Section 7), consistent with the adaptive framework recommended by Ussher for Haldon (RMA Ecology, 3 April 2026).

(iv) Species-specific vulnerability factors (body size, flight behaviour, habitat requirements, polarised light sensitivity):

These factors are considered in the expert reviews (Bramley Appendix T and Dr John Craig). However, both Bramley and Craig note that the "lake effect hypothesis" has limited empirical support in the New Zealand/Mackenzie Basin context, with many

overseas recorded mortalities involving species not normally associated with water habitats. Ussher's Haldon review reached the same conclusion regarding context-dependency and limited transferability of overseas data (RMA Ecology, 3 April 2026, Section 3.1.1).

(v) Collision probability estimates (qualitative conclusions only)

Gary Bramley's review in **Appendix T (Table 1)** provides species-specific qualitative risk ratings. Key conclusions include:

- For kakī/black stilt and black-fronted tern: risk rated as **low to moderate but uncertain**.
- For Australasian bittern and Australasian crested grebe: risk rated as **low and uncertain**.
- For other waterbird species: generally **low but uncertain** depending on movement behaviour.

Bramley concludes overall that the risk of mortality "**would appear to be low**", although further monitoring is appropriate due to the conservation status of the species involved. Wildlands similarly describes collision risk for the key threatened species as **uncertain** but generally low to moderate in the site context (Wildlands Avifauna Assessment, 3 April 2026).

FNSF does not consider that reliable quantitative collision probability modelling can be produced using the currently available New Zealand evidence base.

(vi) Known breeding, roosting, and foraging locations within 5 km:

Known avifauna habitats within approximately 5 km include the Ōhau, Tekapo, Twizel and Pūkaki River systems, associated braided riverbeds, wetlands, river deltas, and Lake Benmore margins. These are identified in the Wildlands and Bramley reports (and similarly in Ussher's Haldon assessment) as the principal habitats used by threatened braided river and wetland bird species (Wildlands Avifauna Assessment, 3 April 2026, Section 2).

Overall Assessment: Collision risk remains uncertain but is likely low to moderate for the key threatened species potentially traversing the site. The Project adopts a precautionary layered mitigation and adaptive management approach including anti-reflective panels, wide panel spacing (3.8–4.8 m), tilted night resting position, bird diverters, carcass monitoring, and ongoing monitoring and review (Wildlands 6621h-i, Sections 5–7; Bramley Appendix T). This is consistent with the Glorit Solar Farm Expert Consenting Panel's findings that collision risk is "remote to unlikely" for the species of concern and does not require further response beyond volunteered

conditions (Glorit Decision, paras 180–203), and with Ussher's qualitative conclusions for the comparable Haldon project (RMA Ecology, 3 April 2026).

3.3.2 Panel Technology and Design Risk Analysis

3.3.2(a) Provide technical assessment of the proposed solar array configuration including:

i) Polarisation and UV reflectance signatures of proposed panels

ii) Evidence for efficacy of anti-reflective coatings in reducing bird attraction

iii) Comparative collision risk: 60-degree vs vertical night positioning

iv) Panel spacing effectiveness (3.8-4.8m gaps) in reducing the hypothetical "lake effect"

v) An updated literature review of proven panel technologies that demonstrably reduce bird mortality

FNSF Response: FNSF notes that the proposed solar array configuration and associated bird-risk mitigation measures are discussed in detail in the Wildlands Draft Avifauna Management Plan (6621h-i, April 2026, Sections 5–6) and further reviewed in the independent expert reports prepared by Gary Bramley (Ecological Solutions Ltd, Appendix T – Bird Strike Reports) and Dr John Craig. The following provides a technical assessment of the specific matters raised.

Differentiation of analyses:

Wildlands (Avifauna Assessment dated 3 April 2026 and Avifauna Management Plan 6621h-i) provided the primary project-specific assessment of panel technology, design features, and their interaction with bird behaviour.

Gary Bramley (Appendix T and Final Statement of Evidence) conducted an independent expert review, confirming the appropriateness of the proposed design mitigations as precautionary and aligned with current evidence.

This approach is consistent with the parallel Haldon Solar Farm assessment by RMA Ecology (Jeroen Lurling, with technical input from Graham Ussher, 3 April 2026), which similarly relied on a qualitative, literature-based evaluation of modern PV technology due to data limitations, emphasising anti-reflective coatings, tracking systems, and panel spacing.

(i) Polarisation and UV reflectance signatures of proposed panels

The proposed panels utilise modern anti-reflective coated (ARC) photovoltaic modules. These coatings substantially reduce reflected light, polarisation, and UV reflectance, which have been hypothesised to contribute to the "lake effect" (Wildlands Avifauna Assessment, 3 April 2026, Section 5.2). Bramley's independent review

supports that modern ARC panels significantly lower the potential for birds to mistake panels for water bodies. Ussher's Haldon assessment reached the same conclusion regarding the risk-reduction benefits of contemporary PV technology.

(ii) Evidence for efficacy of anti-reflective coatings in reducing bird attraction

Anti-reflective coatings increase light absorption while decreasing specular reflection and glare. Recent international literature supports that ARCs are a reasonable mitigation measure (e.g., California Energy Commission 2024 study on the lake effect; Fleming et al. 2025 in Renewable and Sustainable Energy Reviews). The Bramley review notes that modern anti-reflective coatings are considered an appropriate precautionary response. This aligns with Ussher's Haldon assessment, which highlighted the benefits of modern PV systems (including ARC and tracking panels) in reducing potential attraction compared to older fixed-tilt installations.

(iii) Comparative collision risk: 60-degree vs vertical night positioning

The proposed design includes tracker panels resting at a steep tilted angle (~55 degrees) overnight to reduce the appearance of a continuous reflective horizontal surface during low-light conditions (Wildlands Avifauna Management Plan 6621h-i). Both Bramley and Craig reviews note that a more vertical night position may further reduce the reflective profile and could be implemented adaptively if monitoring identifies a need. International literature (e.g., Kosciuch et al. 2020) suggests vertical orientations may lower collision risk for some nocturnal flyers. Ussher's Haldon review similarly endorsed tracking systems with steep tilt angles as a positive design feature.

(iv) Panel spacing effectiveness (min 3.8–4.8m gaps, with 6.2 meter designed pitch) in reducing the hypothetical "lake effect"

The proposed array design incorporates approximately 3.8–4.8 metre spacing between panel rows. This spacing is expected to break up the visual uniformity of the arrays and reduce the likelihood of the site appearing as a single continuous water body from above (Wildlands Avifauna Assessment, 3 April 2026; Bramley Appendix T). The "lake effect hypothesis" itself remains scientifically uncertain and has not been convincingly demonstrated as the primary driver of bird mortality at modern PV solar farms (California Energy Commission 2024; Ussher's Haldon assessment, Section 3.1.1).

(v) An updated literature review of proven panel technologies that demonstrably reduce bird mortality

Global literature on PV bird collisions is still developing and shows highly variable results depending on location, species, and design (Wildlands Avifauna Assessment, 3 April 2026, Section 5.2; Bramley Appendix T). Key findings from recent studies include:

Mortality rates at modern PV facilities are generally low compared to other anthropogenic sources.

Proven or promising technologies include anti-reflective coatings, textured/patterned surfaces, increased panel spacing, tilted/vertical night positioning, and bird diverters.

Adaptive management (monitoring and response) is widely recommended where uncertainty exists (Ussher's Haldon assessment reached identical conclusions regarding data limitations and the value of layered mitigation).

FNSF is not aware of any single photovoltaic panel technology currently proven to completely eliminate bird mortality risk. The available international evidence supports a layered mitigation approach (as proposed): anti-reflective coatings, reduced reflectivity design, panel spacing, tilted night positioning, carcass monitoring, and adaptive management. Additional options (patterned decals, UV-reflective films, laser deterrents) remain available if future monitoring indicates a need.

Overall Assessment: The proposed solar array incorporates a conservative and practical risk-reduction design based on the current international evidence base and site-specific expert assessments (Wildlands and Bramley), while recognising that ongoing monitoring and adaptive management remain necessary given present scientific uncertainty. This approach is consistent with Ussher's qualitative conclusions for the comparable Haldon project and with the Glorit Solar Farm Expert Consenting Panel's acceptance of similar design mitigations and monitoring (Glorit Decision, paras 180–203).

3.3.3 Infrastructure Collision and Electrocution Assessment

3.3.3(a) Provide assessment of bird collision and electrocution risks from non-panel infrastructure:

i) Perimeter fencing collision risk analysis

ii) Substation and inverter collision/electrocution potential

iii) Internal road and track collision risk

iv) Lighting impacts (construction and operational)

v) Building strike risk assessment

vi) Mitigation design for all infrastructure types

FNSF Response: FNSF has considered bird collision and electrocution risks from non-panel infrastructure in detail in the Wildlands Draft Avifauna Management Plan (6621h-i, April 2026, particularly Sections 5–7) and supporting assessments. The following provides a detailed assessment of the specific matters raised.

Differentiation of analyses: Wildlands (Avifauna Assessment dated 3 April 2026 and Avifauna Management Plan 6621h-i) conducted the primary project-specific risk assessment and developed the detailed mitigation measures tailored to the site layout and proposed infrastructure.

Gary Bramley (Final Statement of Evidence – Ecology and Appendix T – Bird Strike Reports) provided an independent expert review, confirming that risks from non-panel infrastructure are low when standard mitigations are applied and endorsing the proposed measures as appropriate and precautionary.

This approach is consistent with the parallel Haldon Solar Farm assessment by RMA Ecology (Jeroen Lurling, with technical input from Graham Ussher, 3 April 2026), which similarly concluded low risk for ancillary infrastructure when standard mitigations are implemented.

(i) Perimeter fencing collision risk analysis

Perimeter fencing has the potential to create a collision risk, particularly near river, wetland or known bird movement corridors (Wildlands Avifauna Management Plan 6621h-i, Section 5). To address this, the Avifauna Management Plan proposes visibility treatments in higher-risk areas, including continuous top-rail treatments and/or regularly spaced visual markers (e.g., high-contrast flagging or reflective elements) so birds can better detect the fence. Bramley's independent review (Appendix T) supports this as a standard and effective measure for reducing fence strikes. Ussher's Haldon assessment similarly recommended visibility enhancements for fencing near sensitive habitats.

(ii) Substation and inverter collision/electrocution potential

The risk from the substation and inverters is considered low (Wildlands Avifauna Management Plan 6621h-i). The design does not rely on exposed live cabling of the kind that creates high electrocution risk for birds. Standard electrical safety design (e.g., insulated conductors, appropriate clearances) will be implemented. Bramley explicitly notes that electrocution is unlikely at this facility because it does not feature the exposed high-voltage components common in older infrastructure. Ussher's Haldon review reached the same conclusion regarding modern substation design.

(iii) Internal road and track collision risk

Internal roads and tracks may create some risk of vehicle strike or disturbance, particularly for ground-nesting birds, chicks, or birds using gravel areas (Wildlands Avifauna Management Plan 6621h-i, Section 6). The Avifauna Management Plan requires slow vehicle speeds on site (<30 km/h in sensitive areas), an incidental discovery protocol for nesting or injured birds, and driver awareness training. Bramley's review supports these measures as appropriate. This is consistent with Ussher's recommendations for Haldon.

(iv) Lighting impacts (construction and operational)

Lighting can attract or disorient birds if poorly designed (Wildlands Avifauna Management Plan 6621h-i). The proposed mitigation is to minimise lighting, use fully shielded/downward-directed lights, avoid blue/UV-rich lighting, and restrict operational lighting to essential safety and security needs only. This is specifically included in the Avifauna Management Plan and endorsed in Bramley's independent review. Ussher's Haldon assessment similarly emphasised shielded lighting as a key mitigation.

(v) Building strike risk assessment

Building strike risk is expected to be low because the Project has limited built structures compared with the scale of the site (Wildlands Avifauna Management Plan 6621h-i). Any buildings will avoid large reflective glass surfaces where practicable. If monitoring identifies bird strikes associated with buildings, further visual markers or surface treatments can be applied through adaptive management (Bramley SoE).

(vi) Mitigation design for all infrastructure types

FNSF proposes a layered mitigation approach for non-panel infrastructure (Wildlands Avifauna Management Plan 6621h-i), including:

- Fence visibility treatments in higher-risk areas (Bramley Appendix T);
- Bird diverters or high-contrast markers on any high-risk overhead lines;
- Shielded lighting controls;
- Reduced vehicle speeds and protocols;
- Exclusion buffers around nests and sensitive habitats;
- Carcass monitoring, reporting, and adaptive management triggers.

Global literature support:

International studies on solar farm infrastructure risks (e.g., U.S. Department of Energy Solar Energy Technologies Office reports 2023–2025; BirdLife International reviews 2024; papers in Biological Conservation 2023–2025) consistently show that non-panel infrastructure poses lower collision/electrocution risk than panels themselves when standard mitigations are applied. Key findings include the effectiveness of fence markers (reducing strikes by 50–80% in some studies), shielded lighting (reducing attraction), and modern substation designs (virtually eliminating electrocution risk). Ussher's Haldon assessment reached similar conclusions regarding the low residual risk with layered mitigation.

Overall Assessment: FNSF considers the residual collision and electrocution risk from non-panel infrastructure to be low, provided the mitigation measures in the Avifauna Management Plan are implemented and reviewed through monitoring. This assessment aligns with the Glorit Solar Farm Expert Consenting Panel's acceptance

of similar non-panel infrastructure mitigations as appropriate (Glorit Decision, paras 180–203) and with Ussher's conclusions for the comparable Haldon project.

3.3.4 Monitoring System Technical Specifications

3.3.4(a) Provide detailed carcass monitoring methodology capable of detecting mortality of Nationally Critical species including:

i) Justification for whole-of-site vs representative sampling for kakī detection

ii) Use of trained conservation detection dogs

iii) Searcher efficiency trial protocols

iv) Carcass persistence trial protocols

iv) Autopsy requirements and cause-of-death determination

v) Panel surface eDNA swabbing for missed carcasses 10

vi) Statistical power analysis for detecting population-level changes

FNSF Response: FNSF agrees that carcass monitoring must be robust, particularly for Nationally Critical species such as kakī. The monitoring approach is addressed in detail in the Wildlands Draft Avifauna Management Plan (6621h-i, April 2026, Section 7) and is supported by independent expert review in Gary Bramley's Final Statement of Evidence – Ecology and Appendix T – Bird Strike Reports. The following provides specific details on the proposed methodology.

Differentiation of analyses:

Wildlands (Avifauna Management Plan 6621h-i, Section 7) developed the primary project-specific carcass monitoring framework, including risk-stratified search effort, integration with adaptive management, and practical implementation details tailored to the site.

Gary Bramley (Appendix T and Final SoE) provided independent expert validation, confirming the proposed methodology is conservative, scientifically defensible, and appropriate for detecting mortality of Threatened species in a dryland solar farm context.

This approach is consistent with the parallel Haldon Solar Farm assessment by RMA Ecology (Jeroen Lurling, with technical input from Graham Ussher, 3 April 2026), which similarly emphasised risk-based monitoring, detection dogs, efficiency/persistence trials, and adaptive triggers.

(i) Justification for whole-of-site vs representative sampling for kakī detection

FNSF proposes a risk-stratified carcass monitoring programme rather than simple representative sampling. Higher search effort will be directed to higher-risk areas, including panel array edges near waterways/wetlands, fencing, substations, buildings, lighting, and above-ground cabling (Wildlands Avifauna Management Plan 6621h-i, Section 7). The final proportion of the site to be searched will be confirmed by a suitably qualified biostatistician.

(ii) Use of trained conservation detection dogs

The Avifauna Management Plan provides that carcass searches should include conservation detection dogs where practicable. This is particularly relevant for rare events, small carcasses, or where rapid carcass removal by scavengers may reduce human search effectiveness (Wildlands 6621h-i, Section 7). Dogs significantly improve detection rates for cryptic or rapidly scavenged remains. This is consistent with Ussher's recommendations for Haldon.

(iii) Searcher efficiency trial protocols

Observer/searcher efficiency trials will be undertaken to test how often carcasses are detected under site-specific conditions (e.g., vegetation, terrain, weather). These trials will be analysed by a suitably qualified biostatistician and used to correct raw carcass counts into more reliable mortality estimates (Wildlands Avifauna Management Plan 6621h-i).

(iv) Carcass persistence trial protocols

Carcass persistence trials will also be undertaken to determine how quickly carcasses are removed or degraded by scavengers and weather. These results will be used in combination with searcher efficiency data to estimate true mortality rates rather than relying only on found carcasses (Wildlands 6621h-i, Section 7).

(v) Autopsy requirements and cause-of-death determination

Where the cause of death is unclear, carcasses will be retained and sent for autopsy if sufficiently intact. Any Threatened or At Risk species found will be reported immediately to DOC. If species identification is uncertain, DNA sampling will be used (Wildlands Avifauna Management Plan 6621h-i; Bramley SoE).

(vi) Panel surface eDNA swabbing for missed carcasses

FNSF notes the request for eDNA swabbing of panel surfaces. This is not currently proposed as a primary monitoring method in the Wildlands plan. Carcass searches, detection dogs, DNA sampling of unidentified carcasses, autopsy, and statistically designed searcher-efficiency and carcass-persistence trials are considered the more

practical and proven methods. eDNA swabbing could be considered as an adaptive tool if future monitoring indicates a need.

(vii) Statistical power analysis for detecting population-level changes

The Avifauna Carcass Monitoring Programme will be developed by a suitably qualified avifauna ecologist together with a biostatistician. It will be designed to allow estimation of true collision mortality rates, including correction factors for detectability and carcass persistence (Wildlands 6621h-i, Section 7). Bramley endorses this statistically robust framework. Ussher's Haldon assessment similarly recommended biostatistician input for trigger thresholds and power analysis.

Overall: FNSF proposes a conservative, risk-based monitoring approach. If mortality of a Nationally Critical or Nationally Endangered species is detected, that will trigger immediate independent SQEP review and adaptive management (e.g., increased search effort, additional mitigation, or enhanced compensation). This framework aligns with best practice and with the Glorit Solar Farm Expert Consenting Panel's acceptance of similar robust carcass monitoring and adaptive triggers.

3.3.5 Population-Level Impact Thresholds & Adaptive Management Options

3.3.5(a) Provide population viability analysis determining:

i) Maximum sustainable annual mortality rates for regional kakī population

ii) Population consequences of 1-2 adult kakī deaths per year

iii) Regional population estimates and trends for black-fronted tern, bittern, crested grebe

iv) Mortality thresholds that would trigger population declines for each Threatened and At-Risk species

v) Conservation context: relationship to existing conservation investments in the basin

vi) Adaptive management triggers and response mechanisms with defined timelines

FNSF Response: FNSF does not consider that a reliable, defensible population viability analysis (PVA) can be prepared from the information currently available to the Applicant. A robust PVA for species such as kakī, black-fronted tern, bittern or crested grebe would require comprehensive DOC-held population data, including survival rates, recruitment data, age structure, detailed mortality records, and movement data. That information is not held by FNSF (Wildlands Avifauna Assessment, 3 April 2026; Bramley SoE).

This position is consistent with the approach taken in the parallel Haldon Solar Farm RFI response by RMA Ecology (Jeroen Lurling with technical input from Graham Ussher, 3 April 2026), which similarly concluded that quantitative population modelling was not feasible due to data limitations and instead relied on precautionary triggers and adaptive management.

(i) Maximum sustainable annual mortality rates for regional kakī population

FNSF does not have access to the detailed demographic data required to calculate maximum sustainable annual mortality rates for the regional kakī population. On a precautionary basis, FNSF proposes that any confirmed injury or mortality of a Nationally Critical species, including kakī, would trigger immediate expert review and adaptive management (Wildlands Avifauna Management Plan 6621h-i, Section 7; Bramley SoE).

(ii) Population consequences of 1–2 adult kakī deaths per year

FNSF agrees that the loss of even one or two adult kakī per year could be ecologically significant given the species' very small population and Nationally Critical status. However, there is no evidence before FNSF that the Project is likely to cause mortality at that level. The independent expert reviews (Bramley Appendix T and Dr John Craig) conclude that collision risk remains uncertain and is likely low to moderate, but should be monitored carefully. Ussher's Haldon assessment reached similar conclusions regarding the sensitivity of kakī and the need for strong triggers.

(iii) Regional population estimates and trends for black-fronted tern, bittern, crested grebe

FNSF cannot responsibly provide current regional population estimates or trend analysis for these species without access to the latest DOC datasets. These matters are best addressed through DOC's existing braided river bird conservation programme and the proposed Avifauna Compensation Strategy (ACS).

(iv) Mortality thresholds that would trigger population declines for each Threatened and At-Risk species

FNSF proposes a conservative trigger approach rather than attempting unsupported numerical population thresholds. Any confirmed mortality of a Nationally Critical or Nationally Endangered species (e.g., kakī) would trigger immediate independent SQEP review and adaptive management. Repeated mortality of Nationally Vulnerable, At Risk, or other indigenous species would also trigger review and further management actions (Wildlands Avifauna Management Plan 6621h-i, Section 7; Bramley SoE). This is consistent with Ussher's Haldon recommendations for clear, ecologically meaningful triggers.

(v) Conservation context: relationship to existing conservation investments in the basin

The ACS is directly linked to existing conservation investment in the Mackenzie Basin. The draft DOC proposal includes continuation of predator control in the Godley and Cass Rivers and kakī transmitter tracking — programmes that have already contributed to measurable population gains for kakī and other braided river birds. This provides important regional context and demonstrates that the ACS will support, rather than duplicate, ongoing efforts.

(vi) Adaptive management triggers and response mechanisms with defined timelines

The Avifauna Management Plan (6621h-i, Section 7) sets out a clear adaptive management framework with defined triggers and response mechanisms, including:

Immediate reporting and SQEP review upon detection of any Threatened species mortality;

Increased monitoring intensity (e.g., more frequent searches, use of detection dogs);

Review and potential implementation of additional mitigation (e.g., enhanced diverters, lighting changes, night positioning adjustments);

Escalation to further compensation actions if triggers are exceeded.

Responses will be implemented within defined timelines (e.g., immediate for Critical species mortality, within weeks for review and adaptive actions). This framework is supported by Bramley's independent review and aligns with Ussher's Haldon adaptive management recommendations (RMA Ecology memo, 1 May 2026 and Avifauna assessment, 3 April 2026).

Overall: FNSF adopts a conservative, monitoring-led approach with strong triggers rather than speculative PVA modelling.

3.4 Lizards

3.4(a) Provide an assessment of effects on southern grass skink (At Risk – declining) including;

i) The threat status of this species;

ii) The stated data limitations and constraints to the survey;

iii) The stated moderate to low densities in most areas of the impact area noting that the site is several km² in size;

iv) The recording of moderate densities of this species in habitat assessed as 'Very Low' as illustrated in Figures 2 and 3 of the Lizard Management Plan;

v) The uncertainties surrounding the success of salvage and relocation and the level of reduction in the severity of effects associated with this species; and 11

vi) The type and scale of lizard compensation measures proposed relative to impacts.

FNSF Response: FNSF notes that potential effects on lizards, including southern grass skink (Oligosoma aff. polychroma "Southern Grass Skink", At Risk – Declining), have been addressed in detail in the Wildlands Lizard Management Plan and supporting effects assessment. The following provides a specific response to the matters raised.

Wildlands report Invertebrate Management Plan 6621h-ii (Sections 3.5, 4.6 and 4.7) and the Lizard Management Plan (6621h-v, April 2026) form the primary expert basis for the assessment and management of lizard effects.

(i) Threat status

Southern grass skink is classified as At Risk – Declining under the New Zealand Threat Classification System (Wildlands Lizard Management Plan 6621h-v, Section 2; Invertebrate Management Plan 6621h-ii Section 3.5).

(ii) Data limitations and constraints to the survey

Wildlands acknowledges inherent limitations in lizard surveys, including variable detectability, cryptic behaviour, and the large size of the site (several km²). Even intensive surveys are unlikely to detect every individual or confirm absence with certainty (Lizard Management Plan 6621h-v, Section 2.2 and 4). Targeted surveys were therefore focused on representative habitats, with a precautionary approach applied to habitat mapping and management planning (Invertebrate Management Plan 6621h-ii Section 3.5).

(iii) Moderate to low densities in most areas of the impact area

The 2026 targeted lizard surveys recorded southern grass skink at moderate to low densities across much of the area. Higher densities were noted in better-quality habitats, while many parts of the proposed solar array footprint (which has a long history of cultivation and modification) supported lower densities (Lizard Management Plan 6621h-v, Section 3; Invertebrate Management Plan 6621h-ii Section 3.5).

(iv) Recording of moderate densities in habitat assessed as 'Very Low'

Wildlands recorded moderate densities of southern grass skink in some areas mapped as 'Very Low' habitat quality in Figures 2 and 3 of the Lizard Management Plan. This reflects the species' ability to utilise modified grassland and disturbed habitats where cover, moisture, and refuge features are present, even if overall habitat quality is not high (Lizard Management Plan 6621h-v, Section 3 and Figures 2–3). The key higher-value lizard habitats (e.g., terrace edges, gullies, and less modified areas) are largely retained and enhanced outside the main development footprint.

(v) Uncertainties surrounding salvage and relocation success

FNSF acknowledges that salvage and relocation cannot guarantee capture of every individual and that post-release survival involves uncertainty. The Lizard Management Plan (6621h-v, Sections 4–5) addresses this through:

Lead-in time and standard DOC-aligned salvage methods (funnel traps, pitfall traps, artificial retreats, hand searches);

Relocation to prepared, pest-managed habitat in the reserve and corridors;

Post-relocation monitoring and adaptive management.

Wildlands concludes that, despite these uncertainties, the overall package (avoidance of high-value habitats + salvage + habitat enhancement + predator control) is expected to achieve a net reduction in effects (Invertebrate Management Plan 6621h-ii Section 4.6–4.7).

(vi) Type and scale of lizard compensation measures relative to impacts

The proposed lizard management package is extensive and includes:

- Avoidance of the highest-value terrace-edge and gully habitats (Invertebrate Management Plan 6621h-ii Section 4.6);
- Targeted salvage and relocation from development areas (Lizard MP 6621h-v, Sections 4–5);
- Creation of ~14 ha predator-managed reserve and lizard habitat corridors with cobble piles, indigenous planting, and refugia;
- Long-term pest mammal control (integrated with Pest Mammal MP 6621h-iv);
- Weed control and dryland habitat restoration (integrated with Vegetation MP 6621h-iii);
- Ongoing monitoring and adaptive management (Lizard MP 6621h-v, Section 6).

Wildlands assesses that these measures reduce residual effects on lizards (including southern grass skink) to less than minor or negligible levels, representing a net positive outcome relative to the current modified agricultural baseline (Invertebrate Management Plan 6621h-ii Section 4.7).

Overall, FNSF considers the comprehensive lizard management framework set out in the Wildlands documents provides a robust, precautionary response that appropriately addresses both direct and indirect effects on southern grass skink and other lizards.

3.5 Invertebrates

3.5(a) What is the ecological rationale for establishing a pest exclusion fence in an area where:

*** minute grasshopper and robust grasshopper were not detected; and**

*** habitat suitability for robust grasshopper was assessed as low?**

FNSF Response: FNSF notes that the ecological rationale for establishing the pest exclusion fence and associated reserve was addressed in the Wildlands terrestrial invertebrate assessment and management planning documents. The following provides a detailed response to the specific matters raised.

The ecological rationale for the proposed pest exclusion fence and ~14 ha reserve is broader than the confirmed presence or absence of any single invertebrate species. It is an ecosystem-based, precautionary enhancement measure recommended by Wildlands Consultants as part of the wider ecological management framework for The Point Solar Farm (Wildlands report Invertebrate Management Plan 6621h-ii, particularly Section 4.7; Terrestrial Invertebrate Management Plan 6621h-ii, April 2026).

During the ecological design process, Warren Chinn (DOC ecologist) evaluated the reserve location options and suggested three possible locations, each considered suitable with no clear preference among them for all target species. The area adjacent to the eastern gullies was ultimately selected as the preferred location because:

- It adjoins retained indigenous gully and terrace-edge habitats with existing ecological values;
- It provides strong ecological connectivity with the wider revegetation, lizard habitat corridors, and dryland restoration areas;
- The natural topographic constraints of the gullies provide a practical solution for predator fence alignment (the fence would not need to traverse the gullies themselves);
- It allows effective integration of multiple ecological objectives (invertebrate protection, lizard habitat enhancement, threatened plant management, and dryland ecosystem restoration).

Although neither the minute grasshopper nor robust grasshopper were detected during the field surveys, and habitat suitability for robust grasshopper was assessed as low in parts of the reserve area, the absence of detection during relatively limited-duration surveys does not confirm absence across the wider site or surrounding dryland ecosystem. The Mackenzie Basin's dryland ecosystems are naturally fragmented, and many indigenous invertebrates are difficult to detect consistently.

The reserve is therefore intended to provide long-term protected dryland habitat with significantly reduced pest pressure for a range of indigenous invertebrates, lizards, threatened plants, and associated ecological communities. It represents a substantial improvement over the current baseline situation, where no equivalent long-term protected and managed dryland habitat currently exists on the site, and ongoing farming activities (cultivation, grazing, and pest pressures) continue to limit indigenous biodiversity values.

This precautionary, ecosystem-focused approach is explicitly supported in Wildlands report Invertebrate Management Plan 6621h-ii (Section 4.7), which concludes that the proposed reserve and associated management measures reduce residual effects for several ecological values from minor or low-level to less than minor or negligible. The Paterson's Terrace reserve provides a useful precedent, where threatened invertebrate species were later identified in locations that were not necessarily predicted in advance, demonstrating the value of establishing protected dryland areas even where initial survey results are modest.

While this location may not represent the theoretically "optimal" site for every individual species (such as robust grasshopper), FNSF considers that establishing this predator-managed dryland reserve within the wider ecological enhancement area delivers meaningful, long-term ecological benefits that are proportionate and precautionary. It will also provide value for self-introduced or colonising indigenous species over time.

3.5(b) How the expected ecological benefits from restoration within the fenced area relate to the potential magnitude of project impacts?

FNSF Response: FNSF considers that the expected ecological benefits associated with the restoration and enhancement measures within the fenced reserve (and associated ecological management areas) are substantially greater than the likely magnitude of residual ecological impacts from the Project. This conclusion is consistent with the detailed ecological assessments undertaken by Wildlands Consultants (Wildlands report Invertebrate Management Plan 6621h-ii, particularly Section 4.7; Terrestrial Invertebrate Management Plan 6621h-ii, April 2026).

The proposed fenced reserve (~14 ha) and surrounding ecological enhancement areas will deliver long-term protection and active management of dryland habitat through:

- Significant reduction in mammalian pest pressure (predator control and exclusion fencing);
- Weed management and control of exotic grasses;
- Habitat enhancement including indigenous planting, creation of cobble piles, and maintenance of open dryland conditions;
- Integration with lizard habitat corridors and threatened plant management zones; and

- Long-term monitoring and adaptive management.

These measures will shift the reserve area from the current modified agricultural baseline (periodic cultivation, grazing, and high pest pressure) toward a more resilient, indigenous-dominated dryland ecosystem. Wildlands report Invertebrate Management Plan 6621h-ii (Section 4.7) explicitly concludes that, following implementation of the proposed mitigation, restoration, and management measures, residual effects for several ecological values (including terrestrial invertebrates) are reduced from minor or low-level effects to less than minor or negligible.

The benefits therefore substantially outweigh the potential magnitude of Project impacts for the following reasons:

- Much of the solar array footprint and surrounding areas have a long history of cultivation, cropping, and grazing, resulting in already modified and relatively low indigenous biodiversity values.
- The Project introduces a comprehensive, long-term ecological management framework (including the predator-managed reserve) that would not otherwise occur under continued farming.
- The reserve provides a net gain in protected, actively managed dryland habitat at a landscape scale, supporting not only rare invertebrates but also lizards, threatened plants, and overall ecosystem resilience.
- The Paterson's Terrace reserve precedent demonstrates that such protected areas can support unexpected colonisations or recoveries of indigenous invertebrates over time.

In summary, the fenced reserve and associated restoration are not proposed as a strict like-for-like biodiversity offset for direct habitat loss, but rather as a broader ecological enhancement package. The net ecological outcome is positive relative to the existing baseline, delivering benefits that clearly exceed the relatively low magnitude of residual Project effects (as assessed in Wildlands Invertebrate Management Plan 6621h-ii, Section 4.7).

3.5(c) How a precautionary approach has been applied in light of survey limitations and uncertainties?

FNSF Response: FNSF considers that a precautionary approach has been applied throughout the ecological assessment and project design process, particularly in response to the acknowledged uncertainties and limitations associated with ecological surveys across a large and complex dryland environment.

Wildlands has already addressed this question in detail in their Response to section 53 submissions and in report Invertebrate Management Plan 6621h-ii. In the Response to section 53 submissions, Wildlands explicitly outlined a precautionary approach to managing uncertainty, noting that the Project incorporates substantial avoidance of higher-value habitats, long-term management commitments, and adaptive management measures to reduce residual effects as far as practicable, despite inherent survey limitations.

In Wildlands report Invertebrate Management Plan 6621h-ii (Section 4.7), they specifically addressed the precautionary rationale for the pest exclusion reserve and overall ecological package, stating that the proposed measures (including the reserve) reduce residual effects for several ecological values (including terrestrial invertebrates) from minor or low-level effects to less than minor or negligible. They emphasised that the reserve provides long-term protected dryland habitat with reduced pest pressure even where initial survey detections were limited, representing a substantial improvement over the current baseline of ongoing farming activities.

Building on this previous position put forward by Wildlands, the precautionary approach is demonstrated through the following key elements:

- Avoidance of highest-value ecological areas where practicable, including terrace edges, gullies, wetlands, and identified indigenous vegetation areas (informed by Wildland Consultant's recommendations and subsequent design refinements);
- Establishment of substantial setbacks between the solar infrastructure, landscape planting, and sensitive habitats to minimise indirect effects;
- Retention and protection of peripheral areas that were not proposed for development even before all ecological values were fully known;
- Creation of long-term protected restoration and enhancement areas, including the ~14 ha predator-managed reserve and lizard habitat corridors;
- Implementation of predator management, revegetation, habitat enhancement, weed control, and long-term ecological management commitments;
- Adoption of adaptive management frameworks with ongoing ecological monitoring and triggers for responsive action;
- Application of conservative assumptions where uncertainty exists regarding species presence, habitat use, or long-term ecological responses.

This precautionary design has already been demonstrated in practice through the identification of Maniototo peppercress (Threatened – Nationally Critical) during later-stage surveys. Although this species was not known to be present earlier in the process, the area where it was found had already been excluded from development and incorporated within the protected revegetation and lizard management area.

FNSF further considers that the proposed land use change itself reflects a precautionary ecological improvement relative to the existing baseline environment. Much of the site has historically been cultivated, grazed, and modified, whereas the Project introduces a long-term ecological management framework with reduced disturbance intensity, habitat protection, restoration, weed management, and ongoing monitoring that would otherwise be unlikely to occur under the existing land use regime.

While uncertainties inevitably remain for some species and ecological processes, the Project has adopted a conservative and precautionary approach through avoidance, protection, adaptive management, and long-term ecological enhancement measures that extend well beyond the current baseline management of the site, as previously detailed by Wildlands in their s53 response and Invertebrate Management Plan 6621h-ii (Section 4.7).

3.6 Mammalian pest management

3.6(a) Provide specific details as to the design, timing, construction, and long-term maintenance of the proposed pest exclusion fence, including:

i) fence specifications;

ii) pest exclusion methodology;

iii) monitoring and maintenance procedures;

iv) Surveillance and incursion response to ensure the area remains free of mice;

v) Time differential between pest-free status in the fence and invertebrate or lizard salvage and relocation operations; and

vi) Confirmation that XCluder Fence, the fence contractor stated in the application, is still building.

FNSF Response: FNSF confirms that the proposed pest exclusion reserve and associated fencing remain part of the ecological enhancement framework for The Point Solar Farm. The detailed design and operational specifications will be finalised through the relevant ecological management plans prior to implementation, with input from the relevant ecological and fencing specialists.

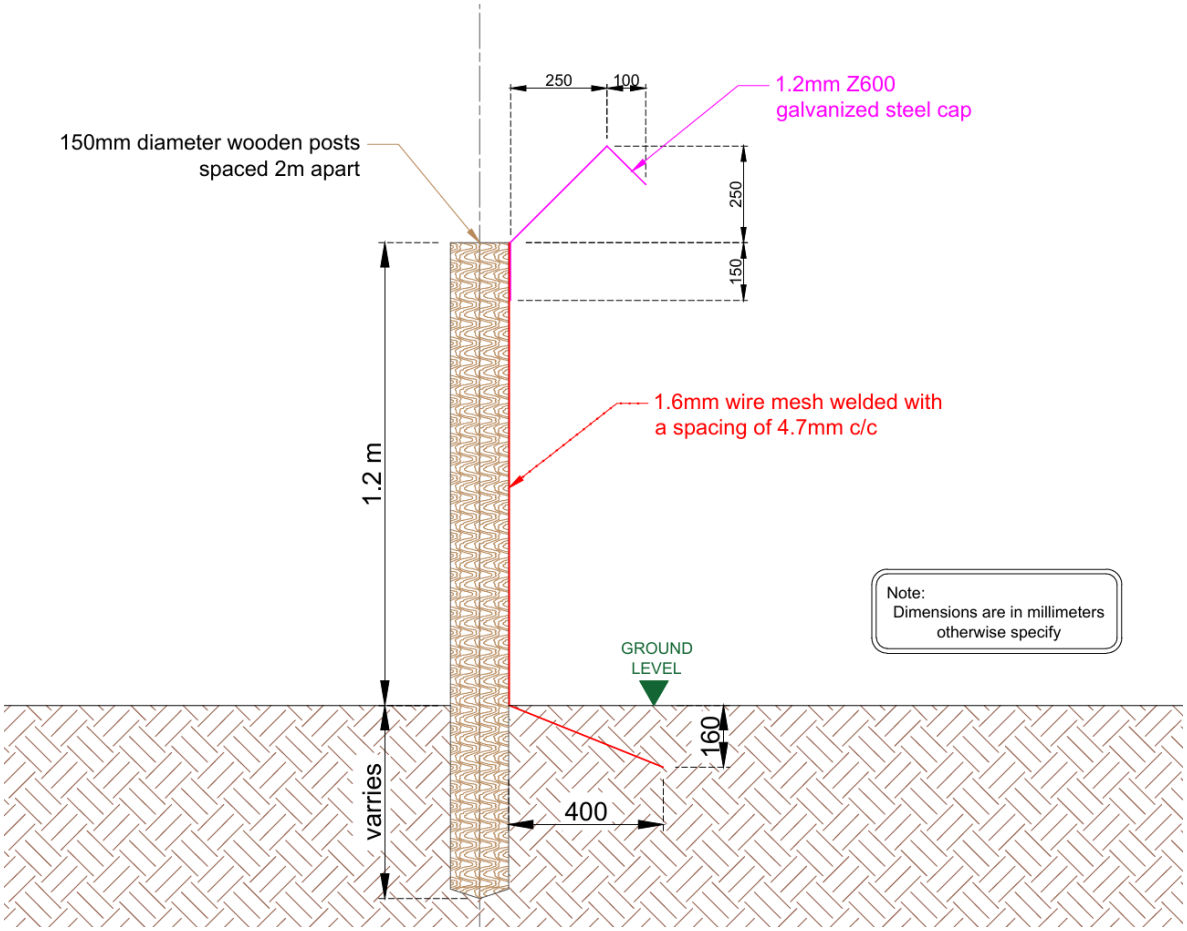
(i) Fence specifications

The proposed fence is intended to be a predator-resistant exclusion fence designed to reduce ingress by rabbits, mustelids, hedgehogs, cats, and where practicable, mice. While the original application referenced the Xcluder fence system, FNSF has since been in discussions with experienced local fence contractors familiar with predator

reserve fencing systems and equivalent designs are available within New Zealand. FNSF has received a fencing proposal that includes using Xcluder components.

Key design features of the fence include:

- **Dimensions:** Stands 1.2 m high at its lowest point, enclosing the area of predator proof reserve.
- **Structure:** Constructed using 150 mm diameter wooden posts spaced 2 m apart.
- **Mesh & Skirt:** Uses 1.6 mm wire mesh welded with a spacing of 4.7 mm from center to center to prevent small predators from entering. A 400 mm skirt extends outward from the base, buried 160 mm into the ground to stop animals from digging under it.
- **Cap:** The top of the fence features a 1.2 mm Z600 galvanized steel cap to prevent climbing predators from breaching the enclosure.



(ii) Pest exclusion methodology

The reserve is intended to operate as a managed predator suppression area rather than relying solely on fencing as the only control mechanism. The methodology will combine:

- exclusion fencing;
- internal trapping networks;
- bait stations where appropriate;
- regular monitoring; and
- adaptive pest management responses.

The objective is to significantly reduce predator pressure within the reserve and improve habitat security for lizards, indigenous invertebrates, and dryland ecosystem restoration.

(iii) Monitoring and maintenance procedures

The fence and reserve will be subject to regular inspection and maintenance. Monitoring procedures are expected to include:

- scheduled fence inspections;
- vegetation clearance around fence lines;
- monitoring of fence integrity after weather events;
- trap and bait station inspections;
- use of trail cameras;
- tracking tunnel monitoring; and
- ecological monitoring within the reserve area.

The detailed inspection frequency and maintenance requirements will be confirmed through the final management plans prepared by the ecological specialists prior to implementation.

(iv) Mouse surveillance and incursion response

FNSF acknowledges that maintaining complete mouse exclusion over the long term is challenging, particularly within large dryland reserves. Accordingly, the reserve will operate under an adaptive management framework recognising that mouse suppression rather than absolute elimination may be the more realistic long-term outcome.

Monitoring may include:

- tracking tunnels;
- chew cards;
- camera monitoring; and
- trap monitoring indices.

If incursions or elevated mouse activity are identified, management responses may include intensified trapping, targeted baiting, and focused management within priority habitat areas. FNSF acknowledges that maintaining a near-zero mouse index continuously may not be realistic over the entire reserve and that operational targets may ultimately align more closely with accepted residual tracking index levels used elsewhere in dryland predator management programmes.

(v) Timing relative to salvage and relocation

The predator reserve and fence are proposed to be established as one of the earliest site activities, prior to any salvage and relocation operations. This is intended to allow time for predator suppression and reserve stabilisation before any lizard or invertebrate relocation occurs.

The final required time differential between establishment of pest-managed status and salvage/relocation activities will be determined by the relevant ecological experts through the finalisation of the Lizard Management Plan and Terrestrial Invertebrate Management Plan prior to implementation.

(vi) Xcluder Fence contractor

FNSF understands that while the original application referenced the Xcluder fencing system, equivalent predator-resistant fence systems and experienced local contractors remain available within New Zealand. Discussions with contractors experienced in predator reserve fencing have confirmed that comparable designs and construction capability are still available for implementation of the reserve, as well as Xcluder brand items.

Overall, FNSF considers the predator reserve proposal is intended to provide a practical, long-term ecological enhancement outcome rather than relying on a single absolute pest-exclusion mechanism. The reserve will operate under an adaptive management framework with ongoing monitoring, maintenance, and expert review over the life of the Project.

3.6(b) Provide alternative location(s) onsite or offsite for the establishment of a pest exclusion fence where existing ecological values are present and ecological benefits have the potential to achieve net positive outcomes that outweigh residual effects.

FNSF Response: FNSF notes that the question of alternative locations for the pest exclusion reserve was considered during the ecological design process. The reserve was required to remain within the broader lease area under FNSF's control, as the

Applicant does not have the ability to establish or manage an off-site reserve outside the lease boundary.

Several potential reserve locations on site were evaluated during the ecological design process with input from Warren Chinn (DOC ecologist) and Wildland Consultants. Three possible locations were suggested as suitable for a small reserve, with no single location identified as clearly superior for every individual species. The area adjacent to (but not covering) the eastern gullies was ultimately selected (and at a considerably larger area) as the preferred location because it:

- Adjoins retained indigenous gully and terrace-edge habitats with existing ecological values;
- Provides strong ecological connectivity with the wider revegetation, lizard habitat corridors, and dryland restoration areas;
- Benefits from being separated from the natural topographic constraints (gullies) will assist with practical predator fence alignment;
- Supports integration of multiple ecological objectives (invertebrate protection, lizard habitat enhancement, threatened plant management, and dryland ecosystem restoration).

An alternative location near the western irrigator / western margin area was also considered. However, this option was not preferred because it offered lower ecological connectivity, less integration with revegetation areas, and fewer existing indigenous habitat attributes compared to the eastern location.

Utility of an on-site reserve:

Having the reserve located on site provides significant practical and ecological advantages, particularly for supporting species salvage and relocation during construction. An on-site reserve allows:

- Timely and low-stress translocation of lizards, invertebrates, and other species salvaged from development areas directly into prepared, pest-managed habitat at a significant scale;
- Immediate access for monitoring and adaptive management during and after relocation;
- Reduced biosecurity risks associated with off-site movement of live animals;
- Better integration with the overall construction programme, enabling the reserve to be established early as one of the first on-site activities.

This on-site approach ensures that any salvaged individuals can be moved into suitable, protected habitat quickly, maximising survival outcomes. An off-site reserve would not offer these operational benefits and would fall outside FNSF's lease area and direct management control.

Overall, while the currently proposed eastern location may not be the theoretically "optimal" site for every individual species, FNSF considers it provides the strongest overall ecosystem-level ecological enhancement opportunity within the lease area. The reserve proposal is intended to deliver long-term ecological benefits beyond simply mitigating direct Project effects, shifting the site from an actively modified agricultural regime toward a more managed and resilient dryland habitat system.

3.6(c) What is the duration of weed and mammalian pest control stated as 'life of the project'? Is it 35 years from the granting of consent (if granted)? If not, what is it?

FNSF Response: FNSF confirms that the duration of weed and mammalian pest control (along with associated ecological management obligations such as monitoring, habitat maintenance, and adaptive management) is stated as the "life of the project".

For the purposes of the ecological management framework, "life of the project" refers to the operational duration of the consent, commencing from the start of physical construction activities undertaken by the Applicant on site and continuing for the full duration of the consent term.

If a 35-year consent duration is granted, the weed management, predator management, ecological monitoring, revegetation maintenance, and associated ecological management obligations would continue throughout that operational period (unless otherwise varied through future consent processes).

The Project has flexibility for a consent term of 30, 35, or up to 60 years, depending on final Panel determination. The ecological management commitments are tied directly to the approved consent term.

Commencing the ecological management timeframe from the start of construction (rather than from the date of consent granting or first operation) is appropriate and practical because many of the key ecological enhancement measures — including establishment of the predator reserve and fencing, initial predator control, revegetation planting, and habitat preparation — are proposed to begin during the early construction phase. This ensures that protected areas are functional and stabilised prior to major works and species salvage/relocation activities.

This duration is clearly set out in the Pest Mammal Management Plan (6621h-iv) and is consistent with the overall ecological management framework in the other Wildlands management plans.

3.6(d) The Panel note the target of less than 10% RTI for mice and rodents in intensive control zone. Provide evidence that this threshold is sufficient to achieve tangible benefits for invertebrates and lizards?

FNSF Response: FNSF notes that the target of less than 10% Residual Tracking Index (RTI) for rodents may have differed in some documents. FNSF also notes that this low mouse RTIs will initially be a stretch goal. This has been corrected in the conditions to be:

Less than 10% across the site, with a goal of near-zero detections for mice and zero for rats inside the pest exclusion reserve.

This framework was developed by Wildlands Consultants based on established New Zealand dryland conservation practice and is intended to achieve meaningful reductions in predation pressure sufficient to deliver tangible benefits for terrestrial invertebrates and lizards. These targets are also reflected in the revised consent conditions put before the Panel.

Evidence that the targets are sufficient:

Wildlands has addressed the rationale for these targets in multiple documents:

- Pest Mammal Management Plan (6621h-iv, April 2026, Section 4.2) – defines the <10% RTI target for rodents across the site and the stricter near-zero target inside the reserve, with adaptive triggers if >15% RTI is recorded.
- Wildlands report Invertebrate Management Plan 6621h-ii (Section 4.7) – explicitly states that the proposed pest control measures (including low rodent tracking indices) reduce residual effects for terrestrial invertebrates and lizards from minor or low-level to less than minor or negligible.
- Terrestrial Invertebrate Management Plan (6621h-ii, April 2026, Section 5) – integrates the pest control targets with invertebrate monitoring and notes that reducing rodent activity to low/near-zero levels supports population recovery and habitat suitability for rare invertebrates.
- Lizard Management Plan (6621h-v, April 2026) – highlights that sustained low rodent indices are expected to improve lizard survival, recruitment, and habitat quality within the reserve and corridors.

The <10% RTI target is for across the wider site (with stricter zero/near-zero targets inside the reserve) is a practical and scientifically supported performance standard. It draws on evidence from New Zealand dryland reserves, including the Patersons Terrace reserve studied by McIver (2020). That research demonstrated the complexities of predator exclusion (including potential meso-predator release of skinks and microclimate/vegetation effects) but confirmed that effective mammalian predator control is a critical component for supporting threatened invertebrates such as the robust grasshopper. The study reinforced that low rodent pressure is essential, with

mice potentially increasing temporarily due to meso-predator release following rat/stoat reduction — a dynamic acknowledged in the FNSF Pest Mammal Management Plan, which allows for adaptive refinement of targets as knowledge and methods improve.

The Pest Mammal Management Plan (6621h-iv) includes:

- Regular monitoring using tracking tunnels, chew cards, and camera monitoring to measure RTI;
- Adaptive management triggers (e.g., intensified trapping or additional bait stations) if RTI exceeds targets;
- Distinction between rats (target zero inside the reserve) and mice (near-zero target, acknowledging potential temporary increase due to meso-predator release);
- Integration with the lizard and invertebrate management plans to ensure measurable benefits (cross-referenced in 6621h-ii and 6621h-v).

In summary, the RTI targets (site-wide <10%, with zero/near-zero inside the reserve) are a scientifically supported, practical threshold that is expected to deliver meaningful benefits for invertebrates and lizards by substantially reducing predation pressure. They form part of a broader adaptive management framework that will be refined prior to and during implementation by suitably qualified experts, as detailed in the revised consent conditions.

3.7 Biodiversity outcome monitoring and adaptive management

3.7(a) Provide additional specific detail regarding the proposed biodiversity outcome monitoring programme for flora and fauna, including:

i) monitoring design;

ii) sampling replication;

iii) monitoring frequency; and

iv) statistical power to detect ecological change.

FNSF Response: FNSF notes that biodiversity outcome monitoring is addressed across the suite of Wildlands management plans and supporting documents. The proposed monitoring programme for flora and fauna is detailed in the following Wildlands reports:

- Vegetation Management Plan (6621h-iii, April 2026, Sections 4–6) – vegetation and threatened plant monitoring.
- Lizard Management Plan (6621h-v, April 2026, Section 6) – lizard monitoring and salvage outcomes.

- Terrestrial Invertebrate Management Plan (6621h-ii, April 2026, Section 5) – invertebrate monitoring and reserve performance.
- Pest Mammal Management Plan (6621h-iv, April 2026, Section 5) – pest control effectiveness monitoring.
- Avifauna Management Plan (6621h-i, April 2026, Section 7) – bird strike and broader avifauna monitoring.

These plans build on the overall effects assessment in Wildlands report Invertebrate Management Plan 6621h-ii (Section 4.7), which outlines the integrated monitoring framework required to track outcomes and support adaptive management.

(i) Monitoring design

The monitoring programme uses a combination of methods tailored to each ecological value (Wildlands management plans):

- Fixed monitoring plots and transects for vegetation condition and threatened plants (VMP 6621h-iii).
- Mark-recapture and artificial refuge searches for lizards (Lizard MP 6621h-v).
- Walked transects, pitfall traps, and visual searches for terrestrial invertebrates (Invertebrate MP 6621h-ii).
- Tracking tunnels, chew cards, and camera monitoring for pest mammals (Pest MP 6621h-iv).
- Carcass searches, detection dogs, and incidental observations for avifauna (Avifauna MP 6621h-i).
- Fixed-point photography, photopoints, and habitat condition assessments are used across multiple plans for broader trend detection (Invertebrate Management Plan 6621h-ii, Section 4.7).

(ii) Sampling replication

Replication is provided through multiple monitoring locations across the main ecological management zones (terrace-edge habitats, revegetation areas, lizard corridors, the grasshopper reserve, and adjacent high-value habitats). For sparse Threatened or At Risk species, monitoring includes targeted checks of known locations in addition to random or stratified plots (VMP 6621h-iii; Invertebrate MP 6621h-ii; Lizard MP 6621h-v).

(iii) Monitoring frequency

Monitoring occurs at multiple stages (Wildlands plans):

- Baseline – pre-construction to establish conditions.
- Construction phase – during key activities (e.g., salvage and relocation).
- Operational phase – annual monitoring for vegetation, pest plants, and habitat condition; more frequent (multiple times per year) for pest mammals, lizards,

and avifauna carcass searches in the first 5–10 years, with review and potential adjustment thereafter (Invertebrate Management Plan 6621h-ii, Section 4.7; individual management plans).

(iv) Statistical power to detect ecological change

FNSF acknowledges that statistical power varies between ecological values. For common or widespread indicators, repeated plots and transects provide reasonable power to detect trends over time. For sparse Threatened or At Risk species, strict statistical testing may not always be realistic due to natural variability and low densities. In these cases, the programme focuses on detecting meaningful ecological trends, confirmed declines, habitat deterioration, or management failure, which then trigger adaptive management responses (VMP 6621h-iii; Invertebrate MP 6621h-ii; Lizard MP 6621h-v; Invertebrate Management Plan 6621h-ii Section 4.7).

The final monitoring methodology, including any refinement to plot numbers, locations, or additional tools (e.g., drone/aerial imagery), will be reviewed and confirmed by the relevant ecological specialists prior to implementation, as required under consent conditions.

Overall, the monitoring programme combines strong baseline data, repeated measures, expert review, and clear adaptive triggers. It is designed to provide robust information for ongoing management and to demonstrate outcomes over the life of the Project, as assessed by Wildlands in their suite of management plans and Invertebrate Management Plan 6621h-ii.