**IN THE MATTER OF** The Resource Management Act 1991

**AND** 

IN THE MATTER OF Applications by A. W. and K. F. Simpson for resource

consents to authorise a solar array at 397 Braemar Road,

Tekapo.

BETWEEN A. W. AND K. F. SIMPSON

**Applicant** 

AND MACKENZIE DISTRICT COUNCIL

**Consent Authority** 

**CANTERBURY REGIONAL COUNCIL** 

**Consent Authority** 

# JOINT REPORT AND DECISION OF HEARING COMMISSIONERS

Sharon McGarry (Chair), Meg Justice and Darryl Millar

8 November 2023

Heard on 2-4 August 2023 in the Ballroom, Wigram Manor, 14 Henry Wigram Drive, Christchurch.

It is the decision of the Canterbury Regional Council and Mackenzie District Council, pursuant to sections 104 and 104D, and subject to Part 2 of the Resource Management Act 1991, to REFUSE the applications by A. K. and K. F. Simpson for resource consents CRC224567, CRC230898 and RM220048 to authorise activities associated with the construction and operation of a solar array at 397 Braemar Road, Tekapo.

## REPRESENTATIONS AND APPEARANCES

## Applicant:

Ms Kathryn Forward/Ms Jamie Robinson, Counsel, Duncan Cotterill

Mr Andrew (Fred) Simpson, owner of Balmoral Station

Mr Nicholas Bibby, General Manager, Infratech New Zealand

Dr Jaz Morris, Associate Principal and Senior Ecologist, Boffa Miskell Ltd

Ms Emma McRae, Principal Landscape Architect, Boffa Miskell Ltd

Ms Claire Kelly, Senior Principal and Planner, Boffa Miskell Ltd

#### Submitters:

#### **Mackenzie Guardians**

- Ms Rosalie Snoyink/Ms Susan Hall
- Dr Susan Walker

Forest & Bird/Te Reo o Te Taiao - Ms Nicky Snoyink, Regional Conservation Manager

#### **Director-General of Conservation**

- Dr Ceri Warnock, Solicitor, Department of Conservation/Te Papa Atawhai
- Mr Warren Chinn, Technical Advisor, Department of Conservation/Te Papa Atawhai
- Mr Richard Ewans, Technical Advisor, Department of Conservation/Te Papa Atawhai
- Ms Tayla Hooker, Biodiversity Ranger, Department of Conservation/Te Papa Atawhai

## **Environmental Defence Society**

- Ms Bronwyn Carruthers, Counsel
- Mr Mike Harding, Environmental Consultant

**EA Network - Mr Roger Sutton** 

Fire and Emergency New Zealand – tabled letter dated 20 July 2023

**Defence Force New Zealand –** tabled letter dated 25 July 2023

## **Section 42A Reporting Officer:**

Mr Nick Boyes, Independent Planning Consultant

**Technical experts** 

- Ms Bron Faulkner, Landscape Architect
- Dr Kelvin Lloyd

#### BACKGROUND AND PROCEDURAL MATTERS

- 1. This is the joint report and decision of independent Hearing Commissioners Sharon McGarry (Chair), Meg Justice and Darryl Millar. We were delegated powers and functions¹ by the Canterbury Regional Council (CRC) and Mackenzie District Council (MDC) to jointly hear and decide applications by A. W. and K. F. Simpson ('the Applicant') pursuant to the Resource Management Act 1991 (RMA or 'the Act') for resource consents to authorise activities associated with the construction and operation of a solar array located at 397 Braemar Road, Tekapo on Balmoral Station.
- 2. The MDC application for Land Use Consent RM220048 and the CRC applications for Land Use Consent CRC224567 and Discharge Permit CRC230898 were lodged in May 2022.
- 3. The CRC undertook the role of the lead authority in this joint hearing process.
- 4. Prior to the hearing, a joint report<sup>2</sup> (dated 10 July 2023) was produced pursuant to section 42A of the Act ('s42A Report') by Mr Nick Boyes, an independent planning consultant who acted as the Reporting Officer for both Councils. This s42A Report provided an analysis of the matters requiring consideration and recommended the resource consents sought could be granted subject to conditions, if residual concerns which required further assessment were addressed and the conditions were revised to sufficiently address these matters.
- 5. Appended to the s42A Report were:
  - A peer review of the Applicant's landscape and visual effects assessment by Ms Bron Faulkner<sup>3</sup>, a Landscape Architect (Appendix A);
  - A peer review of the Applicant's ecological information by Dr Kelvin Lloyd, an Ecologist for Wildland Consultants (Appendix B);
  - An application site plan (Appendix C); and
  - A pre-circulated set of draft consent conditions (Appendix D).
- 6. The s42A Report, the Applicant's evidence and submitters' expert evidence were precirculated in advance of the hearing<sup>4</sup>. This evidence was pre-read by us and taken 'as read' at the hearing.
- 7. We undertook a site visit on Monday 31 July 2023 and were driven around the surrounding area by Mr Brian May, Station Manager at Mt Hay Station. We viewed the application site from various locations around the site, including views of the alternative sites from Mt John.
- 8. The hearing commenced at 9.30am on 2 August 2023 and evidence was heard over two and a half days. The hearing was adjourned to enable the Applicant to undertake further revisions to the draft conditions, the circulation of these to the parties for further comment and provision of the Applicant's written right of reply.
- 9. Following the hearing adjournment, we issued Minute #1 on 22 August 2023, confirming receipt of the revised proposed conditions and volunteered compensation package to

<sup>&</sup>lt;sup>1</sup> Under section 34A of the Resource Management Act 1991.

<sup>&</sup>lt;sup>2</sup> For both Canterbury Regional Council and Mackenzie District Council.

<sup>&</sup>lt;sup>3</sup> An earlier peer review for MDC was prepared by Mr Graham Densem, a Landscape Architect, who had since retired. Mr Densem's review was appended to Ms Faulkner's peer review as Attachment 1.

<sup>&</sup>lt;sup>4</sup> In accordance with section 103B of the RMA.

- address residual environmental effects. The Minute directed circulation of this material to submitters and the Reporting Officer for further written comment.
- 10. On 4 September 2023, we were provided with further written comments on the proposed compensation from six submitters.
- 11. We were provided with further comments and a final recommendation from the Reporting Officer on 15 September 2023.
- 12. We received the Applicant's final set of 'draft conditions' and written closing legal submissions on 6 October 2023.
- 13. We closed the hearing on 17 October 2023.

#### **DESCRIPTION OF THE ACTIVITIES**

- 14. The proposed activities are detailed in the applications and summarised in the s42A Report and should be read in conjunction with this decision.
- 15. Amendments have been made to the original applications since notification, including undertaking construction of the entire solar array at once, instead of in two phases. Further amendments were made by the Applicant during the hearing process to address matters raised and to refine the proposed conditions of consent. Following the hearing adjournment, the Applicant volunteered a compensation package to address any residual adverse effects on indigenous biodiversity values. We have assessed the application as proposed, subject to the 'draft conditions' provided with the Applicant's legal submission.
- 16. Briefly, the proposal is to construct a solar array (comprising of 134,940 bifacial photovoltaic (**PV**) modules) with a maximum generation capacity of approximately 88 megawatts (**MW**) on a 113-hectare (**ha**) site located at Braemar Road, Tekapo. The modules proposed generate electricity on both sides, allowing for direct and reflected light to be captured; and are fixed tilted at 1-2 metres (**m**) above the land surface, using one or two driven piles per module.
- 17. In addition to the PV modules, the proposed solar array includes:
  - Perimeter security fencing (the Applicant confirmed during the hearing that this would be located on the inside of the existing shelterbelt along Braemar Road with no barb wire);
  - Two new underground lines connecting the site to the transmission network;
  - 17 central inverter skid units, each with a transformer;
  - Two MV Export Switchgear and storage areas;
  - Internal tracks, parking and laydown area;
  - Earthworks;
  - Additional road frontage planting, and planting on parts of the eastern and western boundaries to address visual impacts and potential glare impacts. Associated with this, the development and implementation of a Vegetation Management Plan (VMP); and

- Vegetation clearance.
- 18. The proposed earthworks trigger the requirement for resource consent from both CRC (Land Use Consent CRC224567) and the MDC (RM220048).
- 19. The earthworks totaling an estimated volume of 13,074 cubic metres ( $m^3$ ), over an area of 27,372 square ( $m^2$ ) are required to:
  - Provide a flat platform for structures, parking for nine cars and the laydown areas (approximately 25 m x 50 m);
  - Create internal roads;
  - Minor levelling works within the array area; and
  - Create trenches or reticulation of DC and AC cables between modules, inverters, transformers and to the grid connection.
- 20. Earthworks are proposed to be setback at least 20 m from two identified wetland areas in the centre and southwest of the site. A swale drain will also be created along each of the access tracks to channel surface water run-off and keep it away from the works/array area and wetlands. It is proposed these measures will form part of an Erosion and Sediment Control Plan (ESCP) that will be prepared and implemented to ensure potential adverse effects are avoided or mitigated as much as practicable.
- 21. The application stated vegetation clearance will occur where earthworks are undertaken, but acknowledged the shading of vegetation, especially indigenous vegetation, may lead to a loss of species and diversity. It also recognised shading may benefit exotic pasture species. Permanent direct vegetation clearance associated with construction activities were estimated to be approximately 13,416 m² (1.2% of the site). The total footprint of the solar array is estimated to be approximately 94 ha, including roading, transformers, buildings, parking areas and laydown areas<sup>5</sup>.
- 22. The proposal includes the discharge of operational stormwater from panels, buildings and facilities that form the solar array. Operational stormwater will be discharged onto ground as there is no reticulated stormwater system. Run-off from the access tracks and the site facilities will drain to ground using swales or similar features. Swale drains along the proposed access roads will follow the natural contour of the site, and any stormwater that may concentrate in these drains will flow downslope and be directed away from the wetland areas.
- 23. The two wetland areas will be fenced, supplementary planting established and lizard refugia habitat created within the fenced central wetland and dryland buffer. This work will occur under the guidance of a Lizard Management Plan.
- 24. The proposed compensation package comprises a 300ha dryland protection area (**DPA**) established on freehold land within five kilometres of the site, protected in perpetuity by a QEII National Trust covenant. The stated objective of the DPA is to compensate for the loss

<sup>&</sup>lt;sup>5</sup> Rebuttal evidence of Nicholas Bibby dated 14 August 2023.

of, or impact on, indigenous vegetation and habitats resulting from the exercise of the consents. 'Light' sheep grazing and ongoing animal and plant pest management was also proposed.

### **DESCRIPTION OF THE AFFECTED ENVIRONMENT**

- 25. A description of the existing environment is set out in the application AEE and is summarised in the s42A Report. These should be read in conjunction with this decision. We adopt<sup>6</sup> these summaries for the purpose of our assessment.
- 26. The site is within the Rural Zone, Te Manahuna/Mackenzie Basin Outstanding Natural Landscape (**ONL**) area and a 'High Visual Vulnerability Area' under the Mackenzie District Plan (**MDP**).
- 27. It is agreed the site meets the significance criteria under the Canterbury Regional Policy Statement (CRPS) and as a Site of Natural Significant (SONS) under the MDP; and includes 'Threatened and At Risk' indigenous species and habitats subject to section 6(c) of the RMA.
- 28. The site is identified as 'Irishman Paddocks (LMU14)' in the Balmoral Station Integrated Farm Management Plan (FMP)<sup>7</sup>. The FMP describes the biodiversity values of the site as 'low' and not ecologically significant, with native vegetation largely lacking except for remnant hard tussocks. We note this description of the application site in the FMP does not align with the ecological assessments undertaken and the agreement the site includes ecologically significant values.
- 29. The application site is Crown pastoral land leased under section 83 of the Land Act 1948. The proposed solar array will not meet the conditions of the current pastoral lease that gives the Applicant the right to cultivate, sow seed, top-dress, apply fertiliser and plant a shelterbelt (i.e., pastoral/agricultural activity).
- 30. The Applicant concurrently prepared and lodged an application with LINZ/Crown Property to obtain an easement over the application site to establish the solar array. The Applicant advised in closing submissions that approval had been granted by LINZ/Crown Property for an easement for the solar array on 2 September 2023.

### **NOTIFICATION AND SUBMISSIONS**

- 31. The applications were jointly publicly notified pursuant to section 95A at the request of the Applicant on 22 March 2023.
- 32. A total of 14 submissions were received; 7 in opposition to the applications; 7 in support of the applications; 8 submitters indicated they wished to be heard.
- 33. The s42A Report summarised the key submission points from submissions in opposition as follows:

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<sup>&</sup>lt;sup>6</sup> In accordance with section 113(3).

<sup>&</sup>lt;sup>7</sup> As attached to the resource consent application and discussed in Mr Simpson's statement.

- Solar arrays should not be established in areas of outstanding natural landscapes, on Crown land, or in areas of significant indigenous vegetation and significant habitat for native fauna. Renewable energy generation does not outweigh those significant adverse effects.
- Potential effects on the immediate environment from chemicals used in cleaning the glass surfaces on the panels.
- Large-industrial scale solar array development is inappropriate on Crown pastoral land and is inconsistent with the National Policy Statements, the Canterbury Regional Policy Statement and the Mackenzie District Plan objectives and policies particularly in respect of provisions providing for the protection of significant indigenous vegetation and habitats of significant indigenous fauna. This proposed project will adversely affect freshwater and wetland ecosystems.
- The potential for further 'industrialisation' of the landscape with the construction of solar farm infrastructure and non-farm buildings located in an iconic New Zealand landscape.
- Potential adverse effects on three wetland areas, the proposal will not protect or promote wetland restoration. The lack of formal protection for the three wetland areas.
- The need for more specific details in the Management Plans (MPs) to refine matters such as objectives, performance standards, intervention thresholds, monitoring, adaptive management conditions and the need to comply with the MPs at all times.
- The lack of assessment of the effects of the proposal on invertebrates, particularly beetles, butterflies, and moths and the need for an invertebrate index.
- The lack of science and research in the applications to identify effects of the solar array on ecological values.
- The precedent set by the construction of the first solar array in the Mackenzie Basin. There are more appropriate alternative locations for solar farms.
- Potential adverse effects on the Tekapo Military Training Area (TMTA).
- The application being contrary to the Crown Pastoral Land Act including, but not limited to, because it will have more than minor adverse effects on the inherent values of the land.
- 34. The s42A Report summarised the key submission points from submissions in support as follows:
  - The proposal will assist with decarbonisation and reducing greenhouse gas emissions and lead to lower energy prices.
  - Responds to the need for diversity in renewable electricity systems.
  - Is efficient due to the proximity to existing electrical infrastructure.
  - Solar energy systems support economic development and an equitable transition to a low emissions economy.
  - Energy will be accessible and affordable and support the wellbeing of all New Zealanders.
  - The project will build resilience, reduce emissions, and improve our economic security, solar energy benefits the environment and the community.

- Ecological impacts are minimal and can be mitigated with a small landscaping budget. New Zealand is far behind where it should be in developing PV infrastructure.
- Requires the development of a Fire and Emergency Plan.
- 35. We have read the submissions received in full and consider the above accurately summarises the issues raised.

### THE HEARING

## Applicant's case

- Ms Kathryn Forward, Counsel, conducted the Applicant's case assisted by Ms Jamie 36. Robinson, presenting legal submissions and calling four witnesses. Ms Forward's legal submissions addressed competing priorities, the higher order statutory documents, the application to the Commissioner of Crown Lands (CCL), consideration of alternatives, the precautionary principle, the Resource Management (Stock exclusion) Regulations 2020, Significant Natural Areas, sections 104 and 104D, submitter evidence and proposed conditions. She submitted the Panel's role was to 'balance' the proposal's contribution to the climate change crisis with the landscape and ecology values unique to the Mackenzie Basin. She considered the provisions of the MDP, together with the higher order planning documents, supported the grant of consent; and the CRPS acknowledged it may be impractical to avoid adverse effects on the environment from renewable electricity generation. She submitted the two matters of national importance 'hold equal value' and that the 'carve out' of renewable energy from the National Policy Statement for Indigenous Biodiversity 2023 (NPS-IB) was a clear directive that section 7(j) matters should be front of mind in determining the application and such proposals afforded a 'clear run at obtaining consent'.
- 37. Ms Forward highlighted the Applicant's evidence was that the effects on indigenous biodiversity would be minor (at most) but that regardless, the NPS-IB directed the Panel to prefer renewable electricity generation over indigenous vegetation. She submitted that comparatively less consideration of alternatives was required given no significant adverse effects were anticipated. She considered there would be a change in indigenous biodiversity not a loss or 'clearance' and there was no uncertainty or risk that would require application of the precautionary approach. Ms Forward concluded the application passed both gateway tests of section 104D and consent should be granted. Tabled with legal submissions were copies of letters sent from the Environmental Defence Society (EDS) to the CRC and the CCL.
- 38. **Mr Andrew (Fred) Simpson**, owner of Balmoral Station, presented a PowerPoint presentation and provided a written statement of evidence giving background to management of Balmoral Station and the application. Mr Simpson referred to their Integrated Farm Management Plan (updated 2020) and outlined the operation of Balmoral and Mt Hay Stations. He emphasised the importance of diversification in maintaining a

thriving business and the role of the solar farm in this vision. He outlined background to choosing the site and the competing issues that required balancing when determining which site was applied for. He noted the other two sites had ultimately been disregarded on landscape grounds given they were part of a large open area with expansive views and were visible from Mt John. He noted that the site is used for sheep and beef grazing (2-3 stock units/ha) mainly through the spring and autumn months and had, historically, been direct drilled with a variety of clovers, with fertiliser applied on a 4–5-year cycle.

- 39. In response to a question, Mr Simpson advised the existing shelter belt surrounding the site could be replanted without consent and that this would occur irrespective of the proposal. He stated a new row of hybrid pine trees would be planted in front of the existing trees and the old trees removed when the new shelterbelt was established.
- 40. **Mr Nicholas Bibby**, General Manager with Infratech New Zealand, provided a statement of evidence addressing site selection, the main quantification criteria used (planning regulations, access availability of distribution network or transmission grid, potential output, costs and revenue), acceptable levels of risk, site infrastructure, construction activities, operation and maintenance activities, submissions and conditions. He considered the site was one of the best sites from a construction cost and risk perspective given the flat topography, good ground and no flood risk. He noted the 88 MW plant over 86 ha had been sized to maximise use of the land and to absorb the expected network and grid connection costs. He stated there would be 17 inverter stations (20 foot container base frame) located across the site. He noted the solar panels would have an anti-reflective coating which minimises glare. He highlighted the need to meet significant growth in electricity demand to 2050 from population growth and to decarbonise the grid by 2030. He noted 220 MW of solar is required to be installed each year till 2050 to meet the 22.7 GW capacity target.
- 41. Mr Bibby also provided a statement of rebuttal evidence (dated 2 August 2023) responding to submitter expert evidence. He clarified the arrangement of the solar panels and provided a modelled shade simulation analysis to assess the modelling undertaken by Dr Walker. He noted there would be gaps between the panels which would allow sunlight and water to pass through. He confirmed the area of vegetation clearance required to erect the solar panels was estimated based on use of a single pile. He considered well-draining soils should limit ponding below the panels and the need for extensive erosion and sediment control measures.
- 42. Following the hearing adjournment, Mr Bibby provided a further statement of rebuttal evidence (dated 14 August 2023) outlining sequencing of the development and confirming the total area of the solar farm footprint.
- 43. **Dr Jaz Morris**, Associate Principal and Senior Ecologist with Boffa Miskell Ltd, provided a statement of evidence addressing site investigations and preparation of the Ecological Impact Assessment dated 15 November 2021 (EIA 2021). He acknowledged his assessment

had relied to some extent on international studies and discussion with other qualified ecologists given no solar sites of this size or location had been built in NZ. He noted the site supported indigenous vegetation that was ecologically significant in terms of the MDP criteria and assessed this to be of 'moderate' ecological value. He highlighted adverse effects on sensitive areas of habitat (natural inland wetlands and natural areas of lizard habitat) would be avoided. For dryland habitats, he considered the improvements within the site's setback areas would mitigate the effects in the build area of the site. He found the proposal would benefit the wetland areas. He concluded the proposal would have a 'small degree' of effect from direct vegetation clearance; indirect effects on vegetation composition due to the solar panels; and a 'negligible' degree of habitat loss for birds. He considered the implementation of consent conditions and the requirements of the Wildlife Act would avoid and manage any other possible impacts. He noted the key disagreement with the other ecology experts related to the degree of impact from shading and moisture changes from the solar panels.

- 44. Dr Morris concluded the impacts would be most pronounced only beneath the solar panels, whereas the other ecologists considered there would be site-wide indigenous species habitat loss. He considered despite dispute over the precise nature and degree of adverse effect on ecological values, the conditions of consent could require monitoring and adaptive measures in response to changes in vegetation. He noted the other point of difference was the other ecologists considered there was potential for site-wide effects, including effects beyond the site (due to change in habitat connectivity), adequacy of monitoring, and the need to assess existing invertebrate habitats and potential effects. He concluded that overall, the proposal would have no greater than 'Very Low-Low' (no more than minor) ecological effects.
- 45. Dr Morris also provided a statement of rebuttal evidence responding to the submitter expert evidence. He considered edge effects to microclimate were not of concern to solar arrays. He acknowledged that it was always possible that a small number of species may be missed in a survey but that this did not change his assessment of ecological effects. He considered his ecological assessment provided a suitably detailed and accurate description of the existing site compared to Dr Walker's 'brief' visit to the site. He stated the habitats on outwash habitat at the site were no longer highly representative of outwash habitats, with typical patterning and microhabitats now absent; and highlighted Figure 1 appended to Ms Hooker's evidence suggested that DOC had reached a similar determination that the habitats at the site had already been highly modified. He noted the time of year when shading was the greatest was essentially outside the growing season and would therefore have less consequence to plant growth. He highlighted a study from Europe that suggested bird collision risk is very low. He considered the site was of relatively little importance in terms of ecological connectivity and linkages. He noted concerns related to destocking the dryland buffer area suggested the entire site was vulnerable if grazing was to cease.
- 46. **Ms Emma McRae**, Principal Landscape Architect with Boffa Miskell Ltd, provided a statement of evidence addressing landscape and visual effects of the proposal. Ms McRae

highlighted the site was situated in the Mackenzie Basin ONL and within an area of High Visual Vulnerability in the MDP. She noted the MDC's experts agreed the site was generally best suited to the proposal in terms of minimising potential landscape and ecological effects. She considered human influences at the site from the existing shelter belt and over sowing and top dressing (OSTD) practises to improve pasture had modified the character of the landscape. She was of the view the site was 'well contained', which limited the adverse effects on the ONL and resulted in only localised low level effects. While the proposal would represent a local disruption to a modified area, she considered the proposal would avoid any disruption of the wetland areas and maintain the existing shelter belt. She considered views of the site were limited and were principally transient views from Braemar Road, which resulted in low level effects. She stated this physical and visual separation from the openness and vastness of the surrounding landscape and the fact it is 'tucked in' behind Old Man Range made it ideally suited for this type of development. She concluded the effects on the character of the Basin would be 'low' and would not lead to significant adverse effects or landscape change. She acknowledged the process to identify suitable sites on Balmoral Station had been challenging within the landscape context. Appended to her statement were details regarding the glint and glare methodology used to undertake an assessment subsequent to the wider assessment and a graphic supplement (dated 19 July 2023), including maps, figures and visual simulations.

- 47. In response to questions, Ms McRae considered the degree of change to the local landscape character would be 'moderate' but would not result in 'whole scale change'. She acknowledged the solar array would be visible from the elevated section of Braemar Road.
- 48. Ms Claire Kelly, Senior Principal and Planner with Boffa Miskell Ltd, provided a statement of evidence outlining site selection, the receiving environment, the proposal, iwi engagement, the consents required, amendments to the proposal, the permitted baseline, existing use rights and effects on the environment. She considered a VMP was an appropriate approach to managing the shelter belt and its replacement. She concluded the environmental effects of the proposal would be no more than minor; and that the proposal was consistent with the outcomes sought by the National Policy Statement for Renewable Energy Regulation 2011 (NPS-REG), the National Policy Statement for Freshwater Management 2020 (NPS-FM), the Resource Management (National Environmental Standard for Freshwater) Regulations 2020 (NES-F), CRPS, Canterbury Land and Water Plan (CLWRP) and MDP. She noted the draft NPS-REG (2023) did not have legal effect and cannot be considered as part of the proposal. She considered the NPS-REG (2011) should be given substantial weight as national policy direction and the requirement in Policy A to 'recognise and provide for' renewable electricity generation. She considered that under Policy C2 any residual environmental effects were not of sufficient scale or significance to warrant offsetting or compensation given the requirement was only to 'have regard to' these matters. She was of the view the NPS-IB did not apply to the proposal, which had created a 'national policy gap' and considered for this reason the policies and rules of the CRPS and MDP that apply to indigenous vegetation should be given less weight. Tabled with

- her statement of evidence were a set of revised proposed condition, a prehearing meeting report, and a table of objectives and policies from the relevant statutory documents.
- 49. Following the hearing adjournment, Ms Kelly provided a further statement of rebuttal evidence (dated 14 August 2023) addressing stormwater discharges from the transformers located within the two MV Switchgear units and the 17 inverter units. She acknowledged the application to discharge operational stormwater was for 'clean' stormwater and had not described the discharge of stormwater from the transformer bunds. She confirmed the stormwater discharged from the bunds would be filtered to remove any oil and that revisions to proposed conditions B31 and B35 had been made to address this.

#### **Submitters**

- 50. Mackenzie Guardians Incorporated were represented at the hearing by Ms Rosalie Snoyink and Ms Susan Hall and called expert evidence from Dr Susan Walker. Ms Snoyink provided a written statement and summarised this at the hearing. She emphasised the time and energy spent by many people and organisations to achieve stronger landscape and biodiversity protection for the Mackenzie Basin, particularly Plan Change (PC) 13 to the MDP. She noted evidence given by Mr Densem during PC13 confirmed that a 'tipping point' had been passed for protecting landscape values and that solar development could undermine the designation as an ONL. She noted that an assessment of effects on an ONL should not be limited to consideration of views from the road given the site sits in the heart of the intact glacial outwash between Lakes Tekapo and Pukaki, and adjacent to the large area of NZDF land. She highlighted the potential for visual effects from elevated view points and the air (planes and gliders); and the potential for light spill (glare). She agreed with Mr Densem and Ms Faulkner that the ecological benefits to the wetland through stock exclusion did not outweigh the adverse effect on natural character. Overall, she concluded the Mackenzie Basin was not the right place for solar arrays given the areas of ONL and significant ecological values; and would set a precedent if granted consent. In response to questions, she stated they had little faith in conditions given Councils do not monitor or enforce the conditions and considered relying on the existing shelterbelt for mitigation was not very secure.
- 51. In response to the Applicant's compensation proffered after the adjournment of the hearing, Ms Rosalie Snoyink provided further written comments (dated 31 August 2023) strongly opposing the compensation due to concerns it would directly and severely compromise the integrity of the MDP. She noted the MDP intended adverse effects on significant environmental values would be avoided and allowing for compensation would result in further irreversible loss of landscape and ecological values.
- 52. **Dr Susan Walker**, an Ecologist with Crown Research Institute Manaaki Whenua Landcare Research, provided a statement of evidence for the Mackenzie Guardians addressing ecological effects of the proposal. Dr Walker presented a PowerPoint presentation at the hearing setting out the landscape and ecological context of the Mackenzie Basin. She

highlighted there had been no consideration of new solar generation or its ecological or landscape effects in the MDC planning processes since 2009. She considered there was no need to locate new solar generation within the Mackenzie Basin in SONS and there was an abundance of converted land and water (e.g. canals). She concluded the proposal would result in the total loss or major alteration across about 100 ha; a consequent 100 ha reduction of the extent of significant indigenous vegetation and habitats of indigenous fauna; declines of Threatened and At Risk plant and invertebrate species; loss of connectivity and buffering which contributes to species and communities persisting; and potentially significant adverse effects on nationally Threatened and At Risk bird species from collisions with the panels. She considered the adverse effects could be completely avoided given alternative locations that have been converted to exotic vegetation. She noted that clearance of indigenous biodiversity represented a permanent loss and that it is not possible to recreate, replace, exchange/trade-off or offset the remaining rare indigenous ecosystems and plant communities. She stated the limited vegetation survey was likely to have missed additional indigenous plants and highlighted there was no independent field survey undertaken by ecologists for the Councils. She considered the site was not particularly modified compared to elsewhere in the Basin; and that an invertebrate survey and bird survey were required to fully assess the effects of the proposal.

- 53. Dr Walker used her own ecological understanding and details from the application to estimate the area affected by shading at different times of the year and the interception of precipitation. She concluded the changes to abiotic regimes (light, snow lie and moisture) would be new effects affecting most of the 100 ha of the built area of the site. She predicted an alternating pattern of east-west bands of different vegetation character would develop across the site, with light limiting dryland indigenous plant species. She noted sheep grazing would further assist exotic grass growth and the site would progressively lose the values that made it significant.
- 54. Forest & Bird/Te Reo o Te Taiao were represented at the hearing by Ms Nicky Snoyink, Regional Conservation Manager, who spoke in opposition to the applications. Ms Snoyink outlined the organisations long history of conservation and advocacy in the Mackenzie Basin, including the establishment of the Kakī/black stilt recovery programme. She noted the importance of the area to many Threatened and At Risk indigenous species. She highlighted DOC's Tū Te Rakiwhānoa Drylands document emphasises the importance of the Basin floor, as this was the place the greatest ecological losses had occurred, and the most significant ecological values remain. She considered a robust planning framework was required to achieve the vision to halt biodiversity loss through land use changes. She stated there needed to be a strategic approach to renewable energy generation to enable development in the right place, to avoid significant natural areas and ONLs, and prevent exacerbating the biodiversity loss crisis. She acknowledged the 'policy gap' created by the NPS-IB and considered the Panel should revert to Part 2 and section 6 of the RMA. She noted ecological values were inherent to the ONL and must be protected to maintain the ONL as a matter of national importance. She concluded the application did not pass either

- gateway test of s104D; and that granting consent would create a precedent that could undermine the integrity of the MDP.
- 55. In response to the Applicant's compensation proffered after the adjournment of the hearing, Ms Nicky Snoyink provided further written comments (dated 1 September 2023) confirming Forest & Bird did not consider the compensation was appropriate given adverse effects on vulnerable and irreplaceable biodiversity values could be avoided through appropriate siting.
- 56. **Director-General of Conservation** ('the Director-General') was represented at the hearing by Dr Ceri Warnock, Solicitor, for Department of Conservation/Te Papa Atawhai (**DOC**), who presented legal submissions and called three expert witnesses. Dr Warnock noted the Director-General opposed the applications in part in recognition of the positive aspect of renewable energy generation and concern for potential significant adverse effects on indigenous biodiversity and the risk of loss of Threatened and At Risk species. She submitted there was inadequate ecological baseline data to inform the Panel on the values present on the site and, in turn, to fully assess the effects. She highlighted the evidence presented indicated it was not possible to avoid, remedy and mitigate key effects that have been identified and no offsetting or compensation had been offered. She submitted the Panel must consider whether there was adequate information to assess effects and, if not, to decline consent pursuant to s104(6) or adjourn pursuant to s41C(3)(4). She highlighted the uncertainty of effects from shading on the dryland indigenous ecosystems and the absence of baseline data needed to determine the application. She considered the high degree of risk that Threatened and At Risk species would be lost warranted a precautionary approach.
- 57. Dr Warnock stated the Director-General accepted the view of the Applicant and the Reporting Officer that the application was not contrary to the objectives and policies of the MDP. She highlighted the site's significance in consideration of the wider context of ecosystem loss within the Basin; and submitted the Panel should prefer the evidence of Ms Hooker and Mr Harding that the ecological values of the site were of high significance. She considered submitter expert opinion supported the view there was a real possibility that Threatened and At Risk indigenous flora would be significantly impacted and unlikely to persist, thus moving further towards extinction. She noted the considerable weight given to comparison between the ongoing effects of OSTD and the likely effects of the solar farm in the s42A Report conclusions. She urged caution with this comparison given the evidence the solar farm would alter the biotic and abiotic conditions leading to significant and irreversible changes; and the adverse effects of OSTD do not form part of the permitted baseline. She submitted there was clear direction from the planning framework where activities contribute to the decline of indigenous biodiversity, significant residual effects should be avoided, remedied, mitigated, offset or compensated for.
- 58. In response to the Applicant's compensation proffered after the adjournment of the hearing, Dr Warnock provided a memorandum of Counsel on behalf of the Director-General

(dated 1 September 2023). Dr Warnock submitted that if the Panel finds it is possible that the proposal would create significant adverse effects on Threatened and At Risk species and endangered ecosystems and land environments, it was not possible to compensate for this loss. However, she submitted that if the Panel finds it is possible in principle to compensate for the loss of Threatened and At Risk species and endangered ecosystems and land environments, the Director-General considers the proposed compensation would not provide adequate or meaningful compensation to address that loss.

- 59. Mr Warren Chinn, a Technical Advisor with Department of Conservation/Te Papa Atawhai specialising in terrestrial ecology and invertebrate conservation, provided a statement of evidence outlining the need for an invertebrate survey to identify cryptic Threatened and At Risk species. He outlined the ecological context, indigenous invertebrate fauna, habitat modification and degradation, and the critical phase now reached for management and protection of indigenous biodiversity. He highlighted the application site retained intact soil horizons and invertebrates undisturbed by soil cultivation. He considered the EIA report gave an impression of a low indigenous invertebrate diversity, however, the tussock species and plant assemblages surveyed suggested a richer fauna than had been surveyed. He considered that it was necessary to know what invertebrate communities were present (or not) across the site - prior to assessing any adverse effects on them. He highlighted the ecological uncertainties relating to how changes in light and ground temperatures affect indigenous invertebrate communities. He expected changes would occur slowly over a couple of years in conjunction with changes in vegetation composition. He noted the ongoing degradation of values reinforces 'ecological amnesia' where it gets easier to justify change and environmental modification when they have already been modified.
- 60. Mr Richard Ewans, a Technical Advisor with Department of Conservation/Te Papa Atawhai specialising in indigenous flora, provided a statement of evidence addressing the ecological significance of the site as a SONS and the potential adverse effects on indigenous vegetation from shading and changes in microclimate leading to an increased dominance of exotic plant species. He considered these potential adverse effects had been understated and that there was significant uncertainty associated with mass shading effects across most of the site (approximately 95 ha). He considered the most likely outcome was that short tussock grassland would not persist or would decrease in cover and be out competed, independent of grazing. He noted adaptive management to mitigate these effects was inappropriate due to the high degree of uncertainty and irreversibility. He concluded more comprehensive mitigations were required given the likely trajectory of the ecosystem towards more exotic pasture species. He noted plant diversity at the site was still dominated by indigenous species (41 indigenous species compared to 22 exotic plant species) even if vegetation cover was not. He highlighted that there were virtually no indigenous ecosystems on mainland NZ that have not been modified by human activity or introduced pests, but that modification has little statutory relevance because the site clearly meets the CRPS ecologically significant criteria. He noted the site connected to the extensive undeveloped land surfaces to the north and that the more developed land to the south interrupted the ecological sequence. He concluded that adverse effects on ecological values over the

lifetime of the project were likely to be 'moderate to high' (more than minor) and would lead to a loss of indigenous biodiversity extent and condition at the site, including compromising the values that made it ecologically significant.

- 61. Mr Ewans provided written comments on the proposed compensation proffered after the adjournment of the hearing as Appendix 1 of the memorandum of Counsel for the Director-General. He noted that neither he nor the other submitters had had the opportunity to visit the compensation site or to prepare and present evidence on this substantive change to the application. He concluded the proposed compensation was inadequate for the scale of effects and inappropriate in the ecosystems concerned; and that even with the proposed compensation a net loss of indigenous biodiversity was likely.
- 62. Ms Tayla Hooker, Biodiversity Ranger, Department of Conservation/Te Papa Atawhai, provided a statement of evidence for the Director-General assessing the ecological significance of the application site against the CRPS Guidelines for Significance and the Department of Conservation's Guidelines<sup>8</sup> for significance and management. She highlighted the 'Critically Endangered' threat status of the naturally uncommon ecosystems and land environments with less than 20% cover at the site. She concluded the site met all four National Priorities for protection; five out of six criteria within DOC's Guidelines; and the thresholds for all four matters under the CRPS criteria, with values assessed as 'moderate to high' and an overall ranking of 'high'. She considered the negative effects of the solar panels on the drylands had not been accounted for and the wetland management did not avoid, remedy or mitigate the impact of the activity on the drylands. She highlighted the scale of indigenous biodiversity loss occurring in the Mackenzie Basin; and considered the rate of clearance and associated threat status of naturally uncommon ecosystems meant that any remaining assemblage of native biodiversity occurring on these landforms was significant and should be protected. She noted direct losses of Threatened and At Risk plant species was anticipated (vegetation clearance through moraine hummock habitats). She noted all the ecologists agreed the proposal would benefit pasture species at the expense of indigenous flora and that species composition would change. She considered a desk top invertebrate survey was insufficient. She disagreed that shading and microclimate effects were comparable to the effects of OSTD. She noted the MDP provisions were intended to halt the loss of significant biodiversity values on modified sites such as this. She concluded the loss of Threatened and At Risk species associated with a 'critically endangered' naturally rare ecosystems and land with less than 20% cover left would be a significant adverse effect.
- 63. **Environmental Defence Society (EDS)** was represented at the hearing by Ms Bronwyn Carruthers, Counsel, who presented legal submissions and called one expert witness. Ms Carruthers highlighted the high level of solar irradiance and commercial attractiveness of the Mackenzie Basin for solar projects. She noted Mr Simpson's evidence indicated land suited for primary production was excluded from consideration and that site selection was

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<sup>&</sup>lt;sup>8</sup> Davis, M.; Head, N.J.; Myers, S.C.; Moore, S.H. 2015 Department of Conservation guidelines for assessing significant ecological values. Department of Conservation, Hurunui.

of great importance to ecological values. She submitted the ecological effects were uncertain and could be significant and irreversible. She noted the now offered 'baseline survey' of existing species and habitats would be too late to affect the outcome of this consent process. She considered the likelihood of significant adverse effects required all possible alternatives to be considered under RMA Schedule 4 clause 6(1)(a). She submitted adaptive management was inappropriate if ecological effects were irreversible. She said the Applicant was wrong that the CRPS and MDP provisions should be afforded less weight following the gazettal of the NPS-IB given it did not apply. She considered the 'hierarchy' did not need to be applied and the CRPS and MDP should not be 'read down'. She also considered the Applicant was wrong that a 'balance' of 'competing provisions' was required where an effect is required to be avoided. She considered the applications failed both s104D thresholds and was not worthy of consent under s104. She submitted EDS support solar power but that climate change mitigation must protect indigenous biodiversity and outstanding natural landscapes.

- 64. In response to the compensation proffered after the adjournment of the hearing, Ms Carruthers provided a memorandum of Counsel for EDS (dated 25 August 2023). She highlighted the AEE confirmed that land suitable for primary production had been excluded from consideration and that siting the solar array on converted land elsewhere on Balmoral Station would avoid adverse effects on ecological values.
- 65. **Mr Mike Harding**, an independent Environmental Consultant, provided a statement of evidence addressing terrestrial ecology for EDS. Mr Harding highlighted the distinctive and vulnerable indigenous biodiversity and ecosystems in the Basin, including 91 threatened plant species in 2018 (up from 83 in 2013). He noted the ecological values present were only what remains following extensive loss and degradation since human settlement; and that new land uses such as solar arrays require careful consideration to avoid further biodiversity loss. He considered the vegetation description in the EIA was constrained by survey effort and survey method, and were not sufficient to detect Threatened and At Risk plant species. He noted there had been no formal bird survey to determine what bird species may use habitats at the site or an invertebrate survey, which constrained any assessment of effects and the ability to draw conclusions. He highlighted the adjacent NZDF land had high indigenous biodiversity values and noted that the site is connected to and ecologically integrated with that extensive area.
- 66. Mr Harding considered the most important ecological values at the site were rarity and ecological context and assessed the ecological value as 'high' based the high rarity value. He noted the effects of the proposal on dryland vegetation were unknown and the conclusions reached were 'unreasonably optimistic'. He noted Threatened and At Risk plant species were vulnerable to habitat change and would be disproportionately adversely affected, with exotic pasture plants benefitting. He considered the direct disturbance across the site would modify the indigenous vegetation across the whole location through shading and sheltering, as well as direct loss or disturbance of an estimated 2.7 ha, which had been assessed in the EIA as 'negligible' across the wider Tekapo ED. He concluded the

adverse effects on indigenous plant species were likely to be high and given the change in baseline environmental conditions this would also potentially result in high adverse effects on invertebrates. He provided a 2020 plan of mapped 'converted' land (from PC18) on Balmoral Station where indigenous vegetation had been removed and suggested that siting the proposal on this land would avoid adverse effects on ecologically significant sites.

- 67. **EA Network** was represented at the hearing by Mr Roger Sutton who spoke to a PowerPoint presentation outlining the need for more renewable energy generation, and the social and economic benefits of the proposal. He highlighted the need to decarbonise and reduce greenhouse gases, lower energy prices and diversify REG.
- 68. **Mr Kevin Dunn** did not appear at the hearing but provided written comments on the proposed compensation. He considered the compensation would not address further permanent loss of indigenous biodiversity, adverse effects on the ONL or the precedent that would be set.
- 69. Mrs Annette and Mr Michael Hamblett did not appear at the hearing but provided written comments on the proposed compensation. They considered the compensation would not address further permanent loss of indigenous biodiversity, adverse effects on the ONL or the precedent that would be set; and would weaken the MDP provisions intended to protect significant environmental values.

## **Section 42A Report**

- 70. **Ms Bron Faulkner**, a self-employed Landscape Architect, provided a peer review on behalf of MDC of the Applicant's landscape assessment in her report dated 30 June 2023 (Appendix A of the s42A Report), including comments on an earlier peer review undertaken by Mr Densem. She considered many of the ONL values of the Mackenzie Basin (openness, natural landforms, tawny grasslands and high apparent naturalness) were present on the site within the shelterbelts. She agreed the existing level of natural character of the site was 'moderate'. She disagreed that overall, the proposal would have a 'neutral to low beneficial effect' on natural character and considered the Applicant's assessment had placed too much weight on improved ecological outcomes of the wetland and too little on the changes to the site context within which the wetlands sit. She agreed with Mr Densem that these were more accurately described as 'Low (negative)' and not 'Low (neutral)' in the Applicant's assessment. In response to a question, she considered there would be minor adverse effects on the natural character aspect of the landscape values.
- 71. Ms Faulkner agreed with Mr Densem that the visual effects would be greater than assessed by the Applicant at closer proximity to the site; and that the assessment underestimated the potential effects of light reflection. She considered the visual effects from Braemar Road would be greater than assessed due to gaps in the shelterbelt, ranging from 'Moderate to Moderate-High' where gaps were wider. She noted there would be a substantial change to character and landscape values within the site from a pastoral grassland to a more industrial

character which would degrade the existing ONL values by a 'High' magnitude. At a larger, Basin wide scale, she agreed the changes to landscape character and effects on ONL values would be 'Low' due to the physically secluded location of the site and its relative size. She highlighted the importance of the shelterbelt to mitigate adverse effects on the ONL and the need to retain this visual screening over the long term.

- Dr Kelvin Lloyd, an Ecologist with Wildland Consultant Limited, provided a peer review report (updated March 2023) of the ecological information in the application (Appendix B of the s42A Report) and a written statement at the hearing. He outlined the ecological context of the site and noted it was good habitat for invertebrates. He noted the site was primarily significant because of rarity factors, including indigenous vegetation on naturally uncommon landforms, indigenous vegetation on land environments that have lost more than 20% of their original cover, and the presence of Threatened and At Risk flora and fauna. He considered the site had 'moderate' ecological value for representativeness and was not significant for ecological context. He highlighted hard tussock would not cope with too much shade and at worst may die off in the shadiest areas beneath the panels; whereas copper tussock was more tolerant of shade and would be positively affected by the removal of cattle. He agreed that pastural species would be favoured by the solar farm because of an increase in humidity and shelter; and considered that would be inimical to small indigenous herbs and grasses, which would be adversely affected the most by the proposal. He highlighted the Threatened and At Risk plant species which would be adversely affected included dryland sow thistle, celadon mat daisy, mountain twitch, pin cushion and Pterostylis tristis.
- 73. Dr Lloyd considered it was impossible to gauge effects on invertebrates because insufficient information had been collected but noted that as a general rule, loss of indigenous plant diversity would adversely affect indigenous invertebrates. He noted the solar farm would displace nesting birds that require open habitat and would comprise a net loss of avifauna values; and highlighted the uncertainties regarding bird strike effects meant there was a risk that research into bird strike may not identify any practical management options. He concluded the adverse effects on Threatened and At Risk indigenous plants would be more than minor and would risk the values that currently made the site ecologically significant. He considered an offsite compensation approach that protected and managed a dry outwash plain and/or dry moraine site could provide a significant positive 'averted loss' effect to address the residual adverse effects.
- 74. Dr Lloyd provided a further report evaluating the proposed compensation package and further comments of submitters. He concluded compensation was appropriate for the site because many of the Threatened and At Risk plant species present were not easily propagated and translocated, and therefore offsetting adverse effects on these was less practical. He considered the moist moraine and outwash plain habitat at the application site, that is actively farmed, had only low irreplaceability value and was a low priority for protection or management of older moraine and outwash plain landforms in the Mackenzie Basin. He noted extensive ungrazed landforms of the same type and age as the site were

widespread in the adjacent Tekapo Military Training Area and are well-managed for the indigenous biodiversity values. He considered the proposed DPA supported all of the At Risk plant species that could be affected at the application site and provided additional habitat for other Threatened and At Risk plant species of dryland habitats. He noted the DPA was also a known site for breeding of braided river birds; had a compact shape; and was directly adjacent to the Tekapo Military Training Area, which had high standards of indigenous biodiversity management. He considered QEII covenants provide robust protection and, given stock exclusion and effective control of rabbits and hares, there should be a slow improvement in the cover and diversity of indigenous plant species in the proposed DPA.

- 75. Mr Nick Boyes spoke to his s42A Report and provided a supplementary planning report (dated 4 August 2023) addressing matters raised at the hearing. He outlined changes to the proposal and did not support use of barbed wire fencing outside the shelterbelt plantings. He noted existing use rights can be applied to activities that occur on a cyclical or rotation basis in the receiving environment and confirmed he had considered the cyclical effects of this activity was part of the existing environment. He highlighted his consideration of precedent effects in his s42A Report under section 104(1)(c) and considered this was not an issue for this application given it was improved pasture. He noted each application was required to be assessed on its merits and was very site dependent. He considered there was sufficient evidence on ecological effects and highlighted all experts agreed that the site meets the CRPS significance criteria and section 6(c) of the RMA. He considered the existing natural character of the central wetland would be reduced but that this is mitigated by the proposed setback and buffer area. He considered there was adequate information to determine the application without an invertebrate survey and a bird survey; and disagreed with Dr Warnock that the application should be declined under section 104(6). He remained of the view the MDC application failed the section 104D(1)(a); but could potentially pass section 104D(1)(b) with an appropriate offset or compensation.
- 76. Following the adjournment of the hearing, Mr Boyes provided written comment on the proposed conditions and compensation, with an additional report by Dr Lloyd. Mr Boyes suggested changes to the revised conditions to achieve effective visual screening and improve clarity. He noted Dr Lloyd's key findings in relation the proposed compensation. He considered the 'additionality' concerns raised by DOC had some merit given the DPA had some protections through the MDP and part of the site is recognised as a SONS. However, he noted the MPD did not protect the DPA from grazing by livestock or from pest plant species, except for boundary control of some pest species under the Canterbury Regional Pest Management Strategy and rabbit control down to Level 3 on the Modified Mclean Scale). He relied on the evidence of Dr Lloyd that the proposed DPA would result in significant positive effects, including removal of stock and control of pest species; and the proposed QEII covenant would provide enduring protection of indigenous and landscape values. He concluded the proposed compensation went beyond what can be achieved under the MDP and therefore would achieve a gain in indigenous biodiversity beyond the gains that would occur in the absence of compensation.

### **Applicant's Right of Reply**

- 77. The Applicant provided closing legal submissions (dated 6 October 2023) addressing matters raised in the hearing and the compensation package proposed after the adjournment of the hearing, together with supplementary statements of evidence from Mr Simpson and Dr Morris. Also provided were copies of caselaw referenced during the hearing process and an updated suite of proposed conditions. The closing submissions concluded the MDC application met both gateway tests set out in section 104D of the Act; would contribute significant positive biodiversity outcomes with the addition of the DPA; and would contribute to the local and national renewable energy footprint.
- 78. Mr Simpson's supplementary statement of evidence (dated 6 October 2023) outlined the current grazing regime on the proposed DPA. He highlighted stock access through the site for connectivity between the farm base area and other parts of the farm was operationally important. He noted preference for maintaining the current light grazing regime to add value to the to managing indigenous biodiversity, but acknowledged this would ultimately be determined through the QEII covenant process.
- 79. Dr Morris' supplementary statement of evidence (dated 6 October 2023) addressed adherence of the proposed DPA with the biodiversity compensation principles, changes to DPA boundaries and known ecological values of the DPA. Appended to his supplementary statement was an updated DPA map (Attachment 1) and a memorandum (dated 17 August 2023) describing the known ecological values of the DPA (Attachment 2). He concluded the DPA compensation proposed was consistent with the principles for biodiversity as laid out in Appendix 4 of the NPS-IB and was therefore an appropriate approach to addressing residual effects of the proposal.

## Tabled statements at hearing

- 80. A letter from the New Zealand Defence Force (**NZDF**) (dated 25 July 2023) was tabled at the hearing. The letter stated the NZDF did not oppose the application being granted provided the agreed condition outlined was imposed.
- 81. A letter from BECA Limited on behalf of Fire and Emergency New Zealand (**FENZ**) (dated 20 July 2023) was tabled at the hearing. The letter stated the concerns raised in submission by FENZ had been partially addressed and outlined further amendments sought.

### **ASSESSMENT**

82. In assessing the applications, we have considered the application documentation and AEE, the submissions, the s42A Report and technical reviews, the evidence presented at the hearing, further comments on revised conditions and the Applicant's right of reply.

### Status of the Application

83. The starting point for our assessment of the applications is to determine the status of the activities under the relevant planning provisions.

- 84. The s42A Report considered land use consent is required for earthworks under Rule 5.176 of the LWRP as restricted discretionary activity; and a discharge permit is required for the discharge of operational stormwater under Rule 5.96 of the LWRP. It noted the discharge of construction phase stormwater is a permitted activity under Rule 5.94A of the LWRP.
- 85. The s42A Report outlined resource consent is required under the MDP under Rules 1.5a and 1.5e (as a 'Utility' Section 16 of the MDP) as a discretionary and under Rule 1.3.2.1 (for vegetation clearance Section 19 of the MDP) as a non-complying activity. The Report considered the activities should be 'bundled' and assessed overall as a non-complying activity.
- 86. We note for completeness that we agree with Ms Kelly and Mr Boyes that the earthwork rules of the Rural chapter of the MDC do not apply.
- 87. We consider the CRC consents and MDC consents should not be bundled given separate decisions are required. We consider the CRC consents sought should be bundled and considered under the most restrictive activity status as a **discretionary activity**; and the MDC application considered overall as a **non-complying activity**. This was not disputed.

### **Statutory Considerations**

- 88. In terms of our responsibilities for giving consideration to the applications, we are required to have regard to the matters listed in section 104 and for the MDC application section 104D of the Act.
- 89. In terms of section 104(1), and subject to Part 2 of the Act, which contains the Act's purpose and principles, for both applications, we must have regard to-
  - (a) Any actual and potential effects on the environment of allowing the activity;
  - (ab) Any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment offset or compensate for any adverse effects on the environment that will or may result from allowing the activity;
  - (b) Any relevant provisions of a national environmental standard, other regulations, a national policy statement, a New Zealand coastal policy statement, a regional policy statement or a proposed regional policy statement, a plan or proposed plan; and
  - (c) Any other matters the consent authority considers relevant and reasonably necessary to determine the application.
- 90. Section 104(2) states that when forming an opinion for the purposes of section 104(1)(a), we <u>may</u> disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect. This is referred to as consideration of the 'permitted baseline'.

- 91. In terms of section 104(3)(a)(ii), in considering the applications, we must not have regard to any effect on any person who has given written approval to the application. No written approvals were provided.
- 92. In making our assessment of the MDC application under section 104D(1) of the RMA, we can only grant consent for a non-complying activity, if <a href="either">either</a> of the following 'gateway tests' is passed:
  - (a) The adverse effects of the activity on the environment will be minor; or
  - (b) The application is for an activity that will not be contrary to the objectives and policies of
    - (i) the relevant plan, if there is a plan but no proposed plan in respect of the activity; or
    - (ii) the relevant proposed plan, if there is both a plan and a proposed plan in respect of the activity; or
    - (iii) both the relevant plan and the relevant proposed plan, if there is both a plan and a proposed plan in respect of the activity.
- 113. We consider each of these sections of the RMA below.

### **Existing Environment**

- 114. In making our assessment, we are required to consider the actual and potential effects of the activities on the existing environment. The existing environment is that which exists at the time this determination is made and includes lawful existing activities, permitted activities and activities authorised by existing resource consents.
- 115. This includes the future state of the environment as it might be modified by the utilisation of rights to carry out permitted activities, existing use rights, and the implementation of resource consents granted and those that have, or are likely to be, implemented.
- 116. Ms Forward highlighted the evidence of Mr Simpson that the terms of the current pastoral lease together with a regular cycle of periodic pasture maintenance, including over-sowing and topdressing (**OSTD**) and grazing with cattle and sheep, had established a modified land use within the site.
- 117. There was general agreement that the Applicant has existing use rights to continue the current land use activities at the site, notwithstanding that many of those activities would now require consent under the provisions introduced by way of PC13 and PC18 of the MDP.
- 118. We consider the existing environment includes adverse environmental effects of the ongoing farming activities on indigenous biodiversity values. We acknowledge these farming activities can lawfully continue.
- 119. Despite ongoing modification the application site from current land practises, it retains significant indigenous vegetation values and habitats for Threatened and At Risk indigenous

fauna. Given these farming activities have occurred over many years, it is reasonable to assume that the remaining indigenous species will continue to persist into the future under similar land use intensity.

#### **Permitted Baseline**

- 120. The s42A Report set out a number of permitted activities under the MDP.
- 121. Ms Forward submitted consideration of a permitted baseline was not of any great assistance given there was not much similarity to the proposed activities.
- 122. Ms Kelly considered it was appropriate to apply the permitted baseline to the matters outlined in the s42A Report and set out additional matters relating to earthworks, shelterbelts, indigenous vegetation clearance and construction phase stormwater.
- 123. Dr Warnock highlighted existing uses rights do not form part of the permitted baseline. She stated the Director-General did not support the suggestion that the permitted activity of developing 24 kWh transmission line established a permitted baseline.
- 124. We have focussed on the potential effects of some of the permitted activities outlined in the s42A Report and in the evidence of Ms Kelly. Given the nature and scale of the activity and the potential for more than minor adverse environmental effects, we determine there is no applicable permitted baseline to taken into consideration.

## Section 104(1)(a) Actual and potential effects on the environment

- 125. We have considered all of the actual and potential effects in relation to the applications, as outlined in submissions and the s42A Report.
- 126. To summarise our findings, and to signal the effects issues that warrant our detailed assessment, we conclude from the evidence that:
  - Adverse effects on mana whenua values are acceptable, based on the advice received from Aoraki Environmental Consultancy Ltd;
  - In general terms, not including ecological effects, construction impacts and adverse impacts from stormwater discharges can be appropriately managed through a range of management plans and consent conditions offered by the Applicant;
  - While the site would contain numerous transformers containing oil, separator systems would ensure that oil could not be entrained beyond the containment bund. An option for 'dry' transformers also exists;
  - Following construction, the solar farm would be largely passive with low levels of activity and traffic generation; and
  - A range of positive benefits could accrue from the proposal; none the least of which
    relates to improved resilience in the electricity generation network and a contribution
    to a reduction in greenhouse gas emissions.

127. On the basis of the evidence presented, we focus our assessment of environmental effects on ecological effects, and landscape and visual effects below.

### **Ecological Effects**

- 128. The application site is quite typical of dryland farmed depositional landform in the Mackenzie Basin, where the land has been modified by years of human land use but still retains high indigenous biodiversity values, including Threatened and At risk species and their habitats. We acknowledge all remaining indigenous vegetation has been modified by land use and human introduced plant and pest species. We accept Dr Lloyd's evidence that tussock grassland, like the application site, covers no more than 48% of the Tekapo ED; and that modification at the application site has not been intense compared to other sites.
- 129. We accept the evidence of Mr Harding, Ms Hooker, Mr Ewans and Dr Walker regarding the significant cumulative loss of indigenous vegetation and its replacement with exotic vegetation in Mackenzie District. This information indicates that between 2011 and 2016 an estimated loss of 15,600 ha of indigenous ecosystems in the Tekapo Ecological District (ED) and 20,400 ha in the Pukaki ED (sourced from the MDP PC13 decision); and that there has been further ongoing incremental loss since that time. We accept their expert evidence that the cumulative, interlinked consequences of ongoing indigenous biodiversity losses in the Basin compounds adverse effects on remaining indigenous biodiversity.
- 130. The ecological experts *all* agree that the application site meets the threshold of ecologically 'significant' in terms of giving effect to section 6(c) of the RMA under the assessment criteria of the CRPS and MDP. There are no degrees of significance. The application site retains significant indigenous vegetation and habitats for Threatened and At Risk indigenous species which must be protected as a matter of national importance under section 6(c) of the RMA and the provisions of the CRPS and MDP. We consider these statutory documents are the appropriate criteria to use for assessing Part 2 RMA matters. We also note the evidence of Ms Hooker that the site also meets all four National Priorities for protection set down by the Ministry for the Environment in 2007 and DOC's additional significance criterion.
- 131. There was a high level of agreement amongst the submitter's experts regarding their assessed ranking of the application site against each of the CRPS criteria, with an overall ranking of 'Moderate' to 'High'. Dr Lloyd noted the ecological values of the site were higher than assessed by Dr Morris due to the use of the site by Threatened and At Risk birds and the widespread presence of lizards. He noted that without an invertebrate survey it was not possible to assess the ecological values of the site for Threatened and At Risk indigenous invertebrates at the site. We accept with this position.

<sup>&</sup>lt;sup>9</sup> Davies, M.; Head, N. J.; Myers, S.C.; Moore, S.H. 2015. Department of Conservation guidelines for assessing significant ecological values. Department of Conservation, Hurunui.

- 132. Dr Morris acknowledged the agreement that the site meets the statutory significance criteria under the CRPS but considered the relative importance of the site needed to be understood within the context of the surrounding areas on Balmoral Station and the ED, which was the basis for some of his disagreement with the other ecological experts. In his view, the site is not part of the less modified and uninterrupted sequence of landforms that is present to the north, west and east. He considered the site is essentially fragmented from, or a dead end in, the surrounding habitat context; and that any connectivity function of the central wetland would be preserved and enhanced.
- 133. Dr Morris also gave weight to his observation that the application site was 'unremarkable' in terms of its ecological values compared to other parts of Balmoral Station. However, we consider this comparative approach across the property is irrelevant and is not supported by the statutory framework. Using a comparative approach across a large property can understate the ecological values present on the basis that other areas have higher ecological value and is inadequate for protecting remaining significant indigenous ecosystems.
- 134. We share the concerns of Dr Lloyd and the submitters' experts regarding use of the non-statutory EIANZ Guidelines to rank the relative ecological values of a significant site and the potential for biased guidance on the level of effects. The methodology involves use of a matrix with the assignment of ecological value on a five point scale, combined with the magnitude of effect, to determine the overall level of ecological effect (loss or alteration) at the ED scale. Dr Lloyd highlighted this approach enabled the loss of part of a 'naturally uncommon' ecosystem and 'chronically threatened' land environment to be considered as 'Negligible' across the ED, when the effects of the activity were more than minor at the site. We share these concerns given the methodology relies on the subjective assignment of ecological values and averaging, and the overall result is highly dependent on the context used (e.g. local, ED, regionally or nationally).
- 135. We note the use of the EIANZ Guidelines has not been endorsed by the Ministry for the Environment, DOC or the Ecological Society of NZ. We disagree with Ms Forward's submission that the Environment Court has confirmed the suitability of the EIANZ Guidelines as an appropriate approach to assessing ecological effects as they relate to assessing section 6(c) RMA matters. We consider the caselaw referenced is not helpful in this regard given the use and limitations of the methodology was not a contentious matter in the cases cited.
- 136. We consider use of the EIANZ Guidelines and the magnitude of effect/ecological value matrix to determine the overall level of ecological effect is the primary reason for the significant difference in opinions between Dr Morris and the other ecology experts. We also agree with Mr Harding that Dr Morris has been overly optimistic regarding the potential effects of shading on indigenous vegetation and of the mitigation provided by sheep grazing, when this is unknown.

- 137. The evidence of Dr Lloyd and Dr Morris was that overall, the application site has 'Moderate' ecological value under the CRPS criteria based on the available information; primarily due to its high value in terms of rarity factors (indigenous vegetation on unnaturally uncommon landforms; indigenous vegetation on land environments that have lost more than 20% of their original cover; and presence of Threatened and At Risk flora and fauna).
- 138. Ms Hooker and Mr Harding concluded it was 'High' based on its rarity factors and ecological context given its connection to other ecologically significant areas. In response, Dr Lloyd's agreed and acknowledged that the site may be significant for ecological context depending on the results of a comprehensive invertebrate survey.
- 139. We accept the lack of a comprehensive survey for both invertebrates and avifauna does not enable a robust conclusion to be made on ecological context. However, on the basis of the evidence from Dr Lloyd and the submitters' ecology experts regarding the likely presence of Threatened and At Risk invertebrates and birds, we conclude that overall the ecological context is 'Moderate-High'.
- 140. Using the EIANZ Guidelines, Dr Morris concluded the direct loss of up to 2.7 ha of 'modified plant communities' would be a 'Negligible' (very slight change from baseline) magnitude of effect on vegetation of 'Moderate' ecological value within the Tekapo ED and at a national level, which resulted in a 'Very Low' (less than minor) overall ecological effect.
- 141. In contrast, the submitters' experts highlighted that the direct loss from earthworks would include the permanent loss of Threatened and At Risk plant species and associated Threatened and At Risk invertebrate species that are known to live in association with these indigenous plant species. They considered this was more than a minor cumulative effect.
- 142. Dr Lloyd agreed this direct loss would be 'minimal' within the context of the Tekapo ED but agreed it represented a cumulative effect, additional to the effects caused by the pastoral farming activity which can continue at the site. He also noted the disturbed areas would likely be invaded by exotic species and that the loss of indigenous plants would likely be permanent. He noted that an internal access road would overlap a moraine hummock and would not avoid effects on the two identified At Risk indigenous plants.
- 143. We find that the <u>direct loss</u> of 2.7 ha of plant communities at the application site will be minor but will increase the cumulative loss of the current extent of Threatened and At Risk indigenous plant species that are currently sparsely spread throughout the wider ED. We find this loss is likely to be permanent and irreversible. We agree with submitters' experts that the relatively low level of survey effort for the size of the site is likely to have under recorded the extent and presence of additional Threatened and At Risk plant species.
- 144. Dr Morris used the EIANZ Guidelines to conclude the indirect effects on plant communities over approximately 95 ha from microclimate changes, shading and changes in land management would be a 'Low' (minor shift away from baseline) magnitude of effect on

'Moderate' ecological values within the Tekapo ED and at a regional level, which resulted in a 'Low' level of ecological effect at the Tekapo ED.

- 145. Dr Morris concluded the effects on the two individual plants of dryland sow thistle (Threatened Nationally Vulnerable) identified in the field survey as a 'Negligible' magnitude of effect on a species of 'Very High' ecological value, which resulted in a 'Low' level of ecological effect. For other At Risk species identified at the site, he concluded a 'Negligible' magnitude of effect on species of 'High' ecological value, which resulted in a 'Very Low' level of ecological effect.
- 146. Dr Morris assessed the proportion of indigenous and exotic vegetation beneath the solar panels would change with increased cover and dominance of exotic grass but considered this was essentially similar to the end result of OSTD practices. He said it is this consequence (not the cause) that informed his view that ecological effects could be appropriately considered in the light of the existing land use. He agreed changes to vegetation composition from the alteration of microclimate were likely to be more favourable for exotic grass species and clover; but concluded available studies suggest shade would not result in dramatic changes to the 'character of the species nor any loss or gain of any species'. He considered any change in species composition beneath the solar panels would be counteracted 'to some degree' by 'tighter grazing by sheep'.
- 147. This was the most significant point of difference between the Dr Morris and the other ecological experts who considered the effects of abiotic changes (particularly shading) on indigenous plants across approximately 95 ha was likely to be more than minor; and potentially significant on Threatened and At Risk indigenous plant species if these were lost permanently across the wider site.
- 148. Mr Ewans noted sheep grazing was the main direct mitigation for adverse effects on indigenous vegetation due to the increase in exotic pasture species. He considered there was a low degree of certainty sheep grazing would retain the current density and distribution of the components that make it ecologically significant. He also considered totally removing grazing from the dryland buffer around the wetlands could be detrimental to the drylands and the wetlands, but acknowledged removing cattle grazing would be beneficial for both.
- 149. Mr Harding noted the available literature indicated solar arrays alter baseline conditions and that this in combination with continued sheep grazing and OSTD would hasten the conversion of the site to exotic pasture. He noted the indigenous dryland plants persisted because of high light and drought tolerance but the changed baseline conditions and sheep grazing would favour exotic pasture. Mr Ewans, Ms Hooker and Dr Walker's evidence aligned with this view.
- 150. Dr Lloyd noted that while the effects of shading from the panels on the species composition was unable to be quantified, it was accepted by all experts it was likely the changes would

favour the growth and dominance of exotic pasture grasses over indigenous species. The key point of difference between Dr Lloyd and the other submitters' experts was that in his peer review he had considered any such change of composition could be compared to that which can occur following the application of fertiliser or over-sowing of new pasture under existing use rights.

- 151. We consider the abiotic changes at the site will be additive to the adverse effects of OSTD and sheep grazing not comparable to these adverse effects. We find the <u>indirect effects</u> of the solar panel on indigenous plant species and communities over an area of 95 ha is likely to be more than minor and overtime is likely result in the permanent loss of Threatened and At Risk indigenous plant species from the application site, excluding the wetland areas.
- 152. Dr Morris considered four potential adverse effects on birds from permanent habitat modification/loss, displacement from construction disturbance, impacts on breeding birds, and trauma (bird strike). On the basis of the quality of the habitat, a low number of birds and the large extent of similar habitat surrounding the site and in the wider ED, he concluded the ecological effects would range from 'Very Low' to 'Low'.
- 153. We note no targeted bird surveys undertaken and bird observations were recorded during the vegetation and lizard surveys. Dr Lloyd noted that only four indigenous bird species were observed but considered a further 14 indigenous bird species, including three Threatened species and four At Risk species, may be present at the site and could utilise the site at different times of year. He also noted the potential for use of the site by more cryptic species such as the Australasian bittern. He considered the displacement of any nesting birds would comprise a net loss of avifauna values.
- 154. Dr Lloyd noted the proposed condition requiring funding for research into bird strike effects, but highlighted the risk that, if impacts were identified, there may be no practical management actions to be implemented.
- 155. Mr Harding considered there was insufficient information on existing bird use of the site to assess the loss of the open-country habitat or potential bird strike mortality to draw a conclusion that only a small number of indigenous birds would be affected. Dr Walker agreed and considered there was enough reliable evidence available to support the view that collision related mortality could have significant adverse effects on Threatened and At Risk bird species. However, she noted this cannot be assessed without knowing which bird species may be affected.
- 156. We accept the evidence of the submitters' ecological experts and Dr Lloyd that there will be permanent loss of habitat for open-country bird species such as NZ pipit ('At Risk declining') but consider the assessment of risk is not possible without an understanding of regional bird use of the site. We note there is uncertainty regarding bird strike mortality and bird species that may be at risk within the context of the site. Overall, we consider

- there is potential for more than minor adverse <u>effects on birds</u> species that are Threatened and At Risk, but accept that this is not able to be adequately assessed.
- 157. Dr Morris concluded the effects on wetlands were likely to be 'Positive' (i.e. a net gain) and no adverse effects were expected. This contrasted with the submitters' experts who considered Dr Morris had overstated the benefits to the wetlands and understated the central wetland's ecological value to the wider dryland area.
- 158. Dr Lloyd noted Dr Morris had assigned a 'Low' value to the central wetland and considered the value should be higher given the presence of indigenous wetland species. He noted removal of stock from the central wetland area would potentially have both positive and negative effects on indigenous biodiversity values but that overall the positive effects on lizards and invertebrates were likely to outweigh any negative effects of excessive grass growth on indigenous plant species. He concluded adverse effects would be sufficiently avoided on the wetlands.
- 159. We consider Dr Morris has understated the ecological value of the central wetland and has overstated the benefits of excluding grazing given cattle will be required to be excluded from the wetland area under the Resource Management (Stock exclusion) Regulations 2020, regardless of the application. We consider the loss of connection of the wetland with the wider surrounding dryland area is likely to negate any positive effect on the central wetland. However, we find the adverse effects on the wetlands present on the site will be sufficiently avoided.
- 160. We agree with Dr Lloyd that the adverse effects on lizards can be mitigated by implementation of a Lizard Management Plan that provides artificial refuge habitat in the protected central wetland area, and other management actions. We accept this mitigation will reduce any impacts on existing lizard habitat. We find any adverse effects on lizards are likely to be less than minor following the completion of construction works and with the imposition of consent conditions.
- 161. Dr Morris concluded effects on invertebrates would essentially reflect the changes to vegetation and that similar habitats may be maintained under the solar panels.
- 162. Although no invertebrate survey has been undertaken, it is agreed that the site is likely to provide habitat for a number of Threatened and At Risk indigenous invertebrates living in close association with indigenous vegetation. We accept the evidence of Dr Lloyd and the submitters' experts that the adverse effects on indigenous invertebrates cannot be determined at this time but is likely to be commensurate with adverse effects on indigenous plant species. We accept indigenous tussock grasses provide good habitat for invertebrates. A condition to undertake an invertebrate survey after consent is granted cannot inform this assessment of effects.

- 163. On the basis of our findings on the potential adverse effects on indigenous plants over the wider site from abiotic changes, we find any adverse <u>effects on Threatened and At Risk invertebrate species</u> from habitat changes is likely to be more than minor and potentially significant if permanently lost from the application site.
- 164. Overall, we agree with Dr Lloyd that the residual adverse effects of the proposed solar farm primarily relate to risk of loss of Threatened and At Risk plant and invertebrate species, and loss of breeding habitat for Threated and At Risk braided river birds. There is a high level of uncertainty regarding the scale and magnitude of adverse effects on dryland indigenous vegetation. On the basis of the evidence, we find it is likely that over time the indigenous vegetation, particularly small indigenous herbs and grasses beneath the solar panels will be permanently lost by being outcompeted by exotic pasture species. We find continued grazing and OSTD activities at the site will likely hasten this transition. We agree with Dr Lloyd and the submitters' ecology experts that the loss of the remnant indigenous species across approximately 95 ha, including Threatened and At Risk plant species is likely to be more than minor and potentially significant if indigenous plant and invertebrate species are lost permanently at the site.

## **Landscape and Visual Effects**

- 165. We received evidence from Ms McRae and Ms Faulkner. To a large degree there was alignment in their opinions.
- 166. As noted earlier, the site is located within the Mackenzie Basin ONL and within an area of High Visual Vulnerability (HVV) as identified in the MDP. We accept the view that the 'human influences' on the site go some way to moderating adverse effects on landscape and visual impacts from the proposal; and on the consideration of wider impacts on the values associated with the ONL. Within this context Ms McRae highlighted the existing shelterbelt and the OSTD practices that have historically occurred at the site. It was evident from our site visit, that the shelterbelt was a prominent feature and, in some ways, an unusual feature in this location. Overall, while we accept that the presence of the shelterbelt (and the ability to replace it over time) has some bearing on our assessment, we are less inclined to accept the OSTD component.
- 167. While it is agreed that the existing shelterbelt provides a significant amount of visual screening and containment, it was apparent from our site visit that there are gaps in the shelterbelt (both existing and proposed). Within this context, we agree with Ms Faulkner's view that visual effects at the Braemar Road frontage will be greater than originally assessed in the MDC resource consent application until additional planting is established. We also noted at the hearing that the site would be visible from the elevated section of Braemar Road to the north of the site. Related to this issue, Ms Faulkner raised concerns about potential glint and glare effects from the panels on road users and the need to ensure the long-term maintenance and permanence of the shelterbelt.

- 168. In response to these issues, the Ms McRae outlined the following:
  - The results of a glint and glare assessment;
  - Additional planting to strengthen the screening function of the shelterbelt and to assist with glint/glare impacts;
  - The development of a Vegetation Management Strategy to provide certainty as to the long-term management of the shelterbelt; and
  - A suite of proposed conditions addressing these matters.
- 169. Given the above, and with the additional mitigation offered by the Applicant, we find that the visual effects of the proposal will be minor.
- 170. In terms of adverse effects on ONL values, Ms Faulkner expressed the view that the impacts of the proposal within the site would degrade the existing ONL values by a 'high' magnitude due to a transition from a pastoral grassland to a utility site and impacts on many of the Basin ONL values currently present on the site. On this issue Mr Boyes, in the s42A Report, opined that the focus of the effects assessment should be on views of the site, rather than on the site itself. We do not entirely agree with this proposition, but we do agree that the key issue should be the impacts on the wider Basin ONL values.
- 171. Within the wider ONL context, Ms Faulkner concluded the changes to landscape character and effects on ONL values would be minor due to the physically secluded location of the site and its relatively small size the wider scale of the Basin. She highlighted the importance of the shelterbelt to mitigate adverse effects on wider ONL values and the need to retain this visual screening over the long term. Ms McRae formed a similar view and also acknowledged the importance of the mitigation measures identified by Ms Faulkner.
- 172. We accept that the site is not visible from Mt John and State Highway 8 and will only be visible from the elevated section of Braemar Road and from an aircraft. We accept the site is modified and contained (to a degree) by the existing shelterbelt. We agree with the experts that visual screening is critical to reducing adverse impacts on the wider ONL. We accept that appropriate conditions can be imposed to ensure this is achieved over the long term.
- 173. On the issue of natural character aspect of landscape values, we accept the evidence of Ms Faulkner that impacts of the proposal would be minor and acceptable. Our finding on this issue acknowledges the point made by Ms Faulkner that Ms McRae's assessment placed too much weight on the improved ecological outcomes of proposed wetland improvements.
- 174. Overall, we find adverse effects on the wider ONL values will be minor. However, we acknowledge the permanent loss of 94 ha of 'significant' ecological values will contribute to the ongoing cumulative loss of terrestrial biodiversity values within Mackenzie Basin that are an important component of its ONL values.

Section 104(1)(ab) Any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment offset or compensate for any adverse effects on the environment that will or may result from allowing the activity

- 175. We have considered the compensation package volunteered by the Applicant to address any adverse residual effects on indigenous biodiversity at the site. We acknowledge the Applicant's view that the compensation is volunteered to address the assessed 'minor' residual effects on indigenous biodiversity and responds to discussions in the hearing.
- 176. We agree with Dr Warnock that determining compensation is 'ecologically complex' and requires identification of the relevant principles for compensation against which to evaluate the proposed compensation to avoid a qualitatively and quantitatively arbitrary approach. We also agree the Applicant has not provided expert ecological evidence to assist the Panel in determining the weight to be afforded to the compensation proposal, such as the principles to be applied to guide the comparative evaluation between the values lost and compensation gained.
- 177. The regional and district plans do not assist the Panel in establishing a framework for evaluating compensation. However, CRPS Policy 9.3.6 states an offset must ensure there is no net loss of biodiversity and should preferably deliver a net gain for biodiversity. While it is agreed the NPS-IB is not relevant to the application, the parties acknowledged the Panel may be assisted by the Principles for Compensation in Appendix 4 of the NPS-IB given this reflects an internationally developed best practice standard. We note clauses 2, 3, 4 and 9 of Appendix 4 are pertinent.
- 178. Mr Ewans outlined the known ecological values in the northern part of the compensation site (as they related to consideration of alternative Site A) but noted no detailed ecological survey work had been undertaken to inform any evaluation process. He acknowledged the ecological values at the proposed compensation site appeared to be higher than at the application site but considered this provided only limited 'additionality' (clause 4 of Appendix 4) because these values were already protected under the current statutory framework. He highlighted the need for certainty that the condition suite would protect ecological values and identified risks to achieving this goal, including lack of a detailed baseline assessment, certainty and timing of a covenant, lack of external input into a covenant management plan and enforcement of covenant conditions.
- 179. In the event the Panel considered compensation could appropriately address the adverse effects of the proposal, Mr Ewans considered it would need to be a large connected area of formal protection with more robust conditions; better management and monitoring of direct and indirect effects on Threatened and At Risk plant species at the application site; robust research into ecological issues related to the solar farm; and contingencies to increase the value of compensation.

- 180. Dr Warnock submitted compensation was not appropriate because it did not accord with s6(c) of the RMA, which required protection of significant indigenous biodiversity. She considered compensation can play a role in maintaining indigenous biodiversity but cannot protect indigenous biodiversity; and noted difference between protection and maintenance, with the former being proactive and the latter including *ex post facto* actions that may be remedial. She submitted the proposed compensation would allow for an incremental loss and overall reduction of irreplaceable and vulnerable Threatened and At Risk species, and endangered ecosystems and land environments.
- 181. Dr Warnock submitted the proposed reduction in monitoring and reporting at the site constituted a reduction in compensation and reduced the ability of Council to understand the effects of solar arrays in dryland ecosystems. She noted no additional requirements were imposed on the condition suite for the management of the compensation land, with the management details left to the QEII Trust and the consent holder. She considered this was problematic because the management of the compensation land would be beyond the scrutiny or control of the consent authority; and defers a judicial function in setting the management regime that should be determined at the time of assessing the application. She considered this was unsupported in law given it amounted to an unlawful reservation and a failure to decide a fundamental issue; excluded the public who have an interest in protecting the Mackenzie Basin; and derogated from the Panel's duties by sanctioning the loss of significant biodiversity without ensuring enforceable conditions to provide for compensation. She submitted proposed condition A8 was unlawful because it amounted to a delegation of the Council's functions under the RMA.
- 182. Dr Lloyd highlighted the DPA was three times larger than the size of the solar array area and had higher ecological values. He noted it was directly adjacent to the Tekapo Military Training Area and dry glacial landforms that have high irreplaceability value. He considered QEII covenants offer strong legal protection and include biennial monitoring. He noted the location of the DPA on dry and shallow soils would limit the speed of indigenous biodiversity response to management but that a positive response would be anticipated over longer timeframes, as evidenced by an increase in the cover and diversity of indigenous plant species. He considered there was no risk of dense exotic grass swards developing on these very dry landforms, in the absence of grazing. He highlighted dry outwash plains are key sites for indigenous biodiversity and that large areas of dry glacial outwash plains (approximately 13,000 ha) to the south were unprotected. He considered all remaining uncultivated dry outwash plain warranted legal protection for its biodiversity values. He recommended quantitative monitoring of vegetation at the solar array site before commencing the development and at year 2, year 5 and year 10 after construction.
- 183. Dr Lloyd considered submitter concerns regarding additionality of the DPA had some merit given its partial protection under the MDP but concluded the proposed DPA would result in positive effects, including removal of stock and control of pest plants and pest animals; and the proposed QEII covenant would provide enduring protection of indigenous biodiversity and landscape values. He highlighted that the proposed DPA was located on dry outwash

plains and moraine habitat that had high irreplaceability value on a national scale; and protecting 300 hectares of such habitat had considerable value in this context.

- 184. Ms Ford, and additional evidence of Dr Morris, addressed the above in closing legal submissions, noting that:
  - The compensation package is of a much greater scale than required to compensate for residual minor adverse effects;
  - This is to ensure that there is no question that it provides a consent pathway even if we were to agree with the submitters as the scale of effects;
  - Amendments have been made to the boundaries of the DPA to address submitter concerns regarding land otherwise afforded some protection under the MDP;
  - Highlighted the additional evidence of Dr Morris which fully addresses all aspects of Appendix 4 of the NPS-IB; and
  - Additionality is provided through commitments to plant and pest control, monitoring and reporting in perpetuity.
- 185. Ms Ford concluded in closing submissions that the relevant policy framework allowed for compensation and that the proposed compensation package was appropriate in light of the assessment criteria of Appendix 4 of the NPS-IB.
- 186. Appendix 4: Principles for biodiversity compensation of the NPS-IB states that biodiversity compensation is not appropriate where:
  - (a) the indigenous biodiversity affected is irreplaceable or vulnerable;
  - (b) effects on indigenous biodiversity are uncertain, unknown, or little understood, but potential effects are significantly adverse or irreversible;
  - (c) there are no technically feasible options by which to secure a proposed net gain within acceptable timeframes.
- 187. On this basis, we consider the compensation package fails clause (a) and (b) and does not sufficiently address clause (c).
- 188. We accept that in principle biodiversity compensation can be a valid tool to address adverse effects on indigenous biodiversity, where appropriate. In formulating our findings, we acknowledge and accept the submitters' expert evidence that given the lack of robust baseline data to determine what Threatened and At Risk flora and fauna species may be affected at the application site and uncertainty as to the magnitude of effect of the solar panel on indigenous vegetation, it is not possible to evaluate whether the compensation package will result in no net loss of biodiversity values. Without this information, we agree that accepting the proposed compensation could allow for an incremental loss and overall reduction of irreplaceable and vulnerable Threatened and At Risk species, and endangered ecosystems and land environments.

189. We are cognisant that Policy C2 of the NPS-REG anticipates a compensation pathway but consider it does not support the proposal when considered in the context of our above conclusion. We have formed a similar view with respect to Policy 5(b)(iv) of Section 19 of the MDP and CRPS Policy 9.3.6, noting that the latter seeks that where a separate site is involved there will be no net loss and preferably a net gain for indigenous biodiversity.

### **Overall finding on environmental effects**

- 190. We noted in our introductory discussion on this topic that there were a number of effects areas where we considered outcomes would be acceptable, subject to a range of proposed conditions and/or mitigation measures. For this reason, we have focussed on what we consider to be the key matters; being impacts on landscape values and ecology.
- 191. There is no disagreement amongst the parties that the application site sits in a sensitive environment and is, in itself, a sensitive site. Our overall finding is that adverse landscape and visual impacts will be minor, and we have drawn a similar conclusion with respect to impacts on wider ONL values.
- 192. In terms of ecological values, we are mindful that this proposal would introduce a significant degree of structure cover that would lead to adverse effects on indigenous plants over the wider site from abiotic changes and related impacts on invertebrates. Given this, we largely prefer the evidence of the submitters' experts noting that:
  - The residual adverse effects of the proposed solar farm primarily relate to risk of loss of Threatened and At Risk indigenous plant species and invertebrates, and loss of open breeding habitat for braided river birds;
  - There is a high level of uncertainty regarding the scale and magnitude of adverse effects on dryland indigenous vegetation; and
  - Over time the indigenous vegetation, particularly small indigenous herbs and grasses beneath the solar panels will likely be permanently lost by being outcompeted by exotic pasture species.
- 193. Our conclusion with respect to adverse ecological impacts is that they will be more than minor and potentially significant; and are not addressed by proposed compensation package.
- 194. On the issue of ecology, we state for clarity that the 'carve out' that exists in the NPS-IB for renewable energy generation does not obviate us from consideration the nature and scale of such effects.

## Section 104(1)(b) Relevant objectives and policies

- 195. Analyses of the relevant provisions of the NPS-REG, NPS-FM, NPS-IB, CRPS, LWRP, and the proposed and operative MDP were provided in the applications, the s42A Report and in the evidence of Ms Kelly.
- 196. Overall, we accept the conclusions of the s42A Report and the evidence of Ms Kelly that the proposal is consistent with the objectives and policies of the relevant planning documents related to hazardous substances (Section 10 of the MDP), transportation (Section 15 of the MDP) and the provisions that recognise the benefits of utilities and renewable energy generation activities (Chapters 5 and 16 of the CRPS and Section 7 of the MDP, and the Strategic Direction Objective ACT-O4 of the MDP). We also accept that the proposal is consistent with the objectives and policy that address stormwater and water quality in the CLWRP (Objectives 3.1, 3.2 and 3.8 and Policy 4.17).
- 197. With the exception of the discussion on ONL values in the paragraph below, we have focused our consideration on the outcomes sought for indigenous biodiversity in the relevant provisions, based on our conclusion that adverse effects on indigenous biodiversity will be more than minor.
- 198. CRPS Objective 12.2.1 requires the identification and protection of outstanding natural landscapes from inappropriate subdivision, use or development. Policy 12.3.2 ensures management methods are in place to achieve protection of outstanding natural features and landscapes from inappropriate subdivision, use and development. In the context of our finding that adverse effects on ONL values will be minor, we agree with the s42A supplementary report, that the proposal is not inappropriate at the subject site due to the existing shelterbelt. We accept the assessment of Ms Faulkner that the proposal is consistent with Policy 3B1(3)(a) of the MDP due to its capacity to absorb more intensive land use in the form of a solar array than the balance of the Mackenzie Basin due to the relatively secluded location of the site and the visual screening provided by the existing shelter belt, including additional planting to improve its effectiveness. However, we do not consider that the proposal is entirely consistent with Objective 3B which seeks to protect and enhance the outstanding natural landscape of the Mackenzie Basin, most notably the openness and vastness of the landscape, the tussock grasslands and the lack of 'other structures'. Nor do we consider the proposal to be consistent with Policy 3B2(3) which seeks to ensure adverse effects on the environment are avoided or mitigated by strongly discouraging non-farm buildings outside of Farm Base Areas.
- 199. We accept that the NPS-IB does not apply to renewable energy generation applications. We agree with Dr Warnock's submission that this does not create a conflict given the provisions of the NPS-REG, CRPS and MDP; and there is no legal mechanism to 'implied repeal' argued in the Applicant's legal submissions. We agree with Dr Warnock that the NPS-IB 'carve out' for renewable energy generation does not direct the Panel to prefer renewable energy generation over the protection of indigenous biodiversity; or for the current planning provisions for the protection of significant indigenous flora and fauna to be ignored. We

- acknowledge that the s42A supplementary report shares this view. We consider the relevant planning provisions for managing indigenous biodiversity below.
- 200. The s42A report and the evidence of Ms Kelly provides analysis of the NPS-REG. We agree that the proposal will contribute to achieving the objective of this NPS which recognises the national importance of developing, operating, maintaining and upgrading renewable electricity generation activities. Policy C2 states that:

'When considering any residual environmental effects of renewable electricity generation activities that cannot be avoided, remedied or mitigated, decision-makers shall have regard to offsetting measures or environmental compensation, including measures or compensation which benefit the local environment and community affected'.

- 201. We agree with the s42A report that this NPS-REG places emphasis on appropriate site selection and prioritises measures to avoid, remedy or mitigate environmental effects in the first instance; with offsetting or compensation to be considered only where residue effects remain. We accept the view of Ms Kelly that the requirement to 'have regard to' compensation means that the decision maker must give those matters genuine attention and thought but the decision maker is not necessarily required to accept them. For the subject application, we find it appropriate to consider offsetting or compensation for any residue ecological effects on the site, which is agreed by all parties to be ecologically 'significant'.
- 202. MDP Policy 5(b)(iv) closely aligns to NPS-REG Policy C2. However, Policy 5 requires residue adverse effects to be 'significant' before triggering the need for compensation or offsetting whereas the NPS-REG trigger is 'any' adverse effects. At the hearing, discussion centred on the interpretation of Policy 5 (of PC18 to the MDP), which is subject to appeal. We agree with Dr Warnock that the policy provisions of PC18 should be interpreted within the wider context of the renewable energy generation activities that existed in the Mackenzie Basin at the time these provisions were drafted, which did not envisage solar generation.
- 203. We also acknowledge the evidence of Mr Harding which highlighted the ecosystems and biodiversity sections of the MDP (promulgated via PC18) had not been prepared in consideration of renewable energy generation, apart from that associated with the existing Waitaki and Opua hydro-electric power schemes. To illustrate this point, he noted that the PC18 definition of vegetation clearance had not considered the effects of shading and sheltering, when artificial drainage, overplanting, oversowing, top-dressing and irrigation activities were considered.
- 204. Dr Walker's evidence also noted the MDC planning processes she had been involved in since 2009 had not considered the ecological and landscape effects of new solar generation activities, which, in her view, resulted in significant gaps in the MDP. She considered that without more policy direction from the planning instruments, there was incentives for landowners to target undeveloped land that was considered low value but was ecologically significant.

- 205. While we accept that the authors of Policy 5 may not have been cognisant of solar generation when drafting, we agree with the s42A Report that clause (b) of Policy 5 is relevant to the consideration of the solar farm, as it provides for the upgrading and development of renewable energy generation. However, as Policy 5 is subject to appeal, we accept that it is subject to change via this process. For that reason, we consider less weight should be attributed to this policy than NPS-REG Policy C2, which aligns with our view that residual adverse effects on the site's significant indigenous vegetation and habitats for Threatened and At Risk indigenous species should be offset or compensated. We also consider that MDP the Section 19 Objective is relevant to the consideration of this proposal, as this provision requires the protection of significant indigenous vegetation and significant habitats of indigenous fauna.
- 206. It is accepted that the proposal assists to achieve the CRPS objectives and policies which recognise the benefits of renewable energy generation, which is defined as regionally significant infrastructure (Objective 5.2.2(1)). Objective 5.2.2(2)(b) requires 'adverse effects resulting from the development or operation of regionally significant infrastructure are avoided, remedied or mitigated as fully as practicable'. The focus on the avoidance, remedy or mitigation of adverse effects is continued in Policy 5.3.2(1) and Policy 5.3.9(3)(b). Policy 5.3.9(3)(c) specifically refers to sensitive environments that are the subject of section 6 of the RMA, which requires all alternative sites and methods are considered to achieve sustainable management under RMA.
- 207. CRPS Objective 9.2.1 requires halting the decline of Canterbury's ecosystems and indigenous biodiversity. Objective 9.2.3 requires areas of significant indigenous vegetation and significant habitats of indigenous fauna be identified and their values and ecosystem function protected. Policy 9.3.1 requires significant natural areas to be identified and clause (3) requires areas identified as significant to be protected to ensure no net loss of indigenous biodiversity or indigenous biodiversity values as a result of land use activities. Policy 9.3.2 establishes four national priorities for the protection of indigenous vegetation in land environments, including clause (1) where less than 20% of the original indigenous vegetation cover remains and clause (4) habitats of Threatened and At Risk indigenous species which are of relevance which are of relevance. Policy 9.3.6 sets out the limitations for biodiversity offsets, and clause 5 of this policy notes that where the offset involves the ongoing protection of a separate site, it will deliver no net loss, and preferably, a net gain for indigenous biodiversity conservation. In this context, the term offset, when on a separate site, aligns with the concept of compensation.
- 208. Based on our findings that the adverse effects on Threatened and At Risk species from habitat changes is likely to be more than minor and potentially significant if permanently lost from the application site, we find the proposal to be inconsistent with Objective 9.2.1 of the CRPS. While we accept that residual adverse on indigenous biodiversity could be compensated, which could assist with the proposal achieving this provision, no evidence is available to assist us in determining the weight to be afforded to the compensation

- proposal. We therefore cannot conclude that the proposal will result in no net loss of indigenous biodiversity or indigenous biodiversity values (Policy 9.3.6).
- 209. Other provisions relevant to our consideration of ecological effects are contained in the MDP. We agree with the s42A report that MDP Strategic Direction Objective NE-O1 reinforces the matters of national importance, which includes the protection of significant indigenous vegetation and significant habitats of indigenous fauna, are relevant to the consideration of this development proposal. Again, we find the proposal to be inconsistent with this objective.
- 210. The NPS-REG and CRPS policies seek to enable and encourage the development of renewable energy generation activities, while avoiding, remedying and mitigating adverse environmental effects. There is clear and strong policy direction to protect significant indigenous biodiversity values. Where residual effects cannot be avoided, mitigated and remedied, a pathway is provided for offsetting and compensation, where appropriate.
- 211. We conclude that the proposal is consistent with the provisions that encourage the development of renewable energy generation activities and recognise the benefits of this type of development. We conclude that the proposal is inconsistent with Objectives 9.2.1 and 9.2.3 and Policy 9.3.1 of the CRPS which relate to ecosystems and indigenous biodiversity. We also conclude the proposal is inconsistent with Objective NE-O1 of the MDP and other policy elements relating to ecology (Section 19 Objective and Policy 5).
- 212. We accept that our overall consideration under s104(1)(b) requires us to consider all objectives and policies holistically. Within this context and acknowledging there are various degrees of alignment with the CRPS and MDP policy frameworks, we conclude overall that the proposal is inconsistent (but not contrary) with both.

## Section 104(1)(c) Other matters

- 213. Some submitters have raised concern regarding the development occurring on Crown leased land and the need for approval from the Commissioner for Crown Lands (CCL). We accept the submissions of Ms Forward that this approval is under separate and different statutory process. We agree that the outcome of the CCL process is not relevant to this consent process.
- 214. Some submitters considered granting the consents sought would create a precedent effect which would make it easier for subsequent applications to gain approval within the Mackenzie Basin.
- 215. Dr Warnock submitted the Director-General was concerned the application would set a precedent in two ways first, by determining an application without adequate evidence to baseline or effects; and second, by granting the application and establishing a framework for comparison. She noted there was likely to be significant pressure on the Mackenzie

- Basin for utility scale solar energy; and that the consenting the application, as proposed, risked establishing a 'precedent framework and low bar'.
- 216. Ms Carruthers agreed and considered there was a very real risk of a precedent effect given it was the first and would not be the last, and there were no factors to set it apart.
- 217. Ms Forward submitted any future renewable energy proposal would need to stand on its own merits. Ms Kelly agreed and noted cumulative effects were more likely to be taken into consideration for subsequent applications.
- 218. Mr Boyes considered that given the 'high bar' set under PC13 and PC18 of the MDP in relation to landscape and indigenous biodiversity protection, the application would not create a precedent or undermine the integrity of the MDP.
- 219. We agree that future applications for solar arrays in the Mackenzie Basin will be considered on a case-by-case basis on their merits. We also agree that as the first application of its type considered, it may establish a framework for comparison for other solar farm applications in the Mackenzie Basin. However, we have focused our assessment on the attributes of the subject site and the adverse environmental effects anticipated to result from the proposal at this site, based on the information and evidence available to us. In that respect, we agree it should not establish a precedent for the consideration of future solar farm applications in the Basin.
- 220. We agree with Mr Boyes that in giving effect to RMA section 6 matters of national importance, the CRPS and MDP set a high bar of protection of significant biodiversity and landscape values.

#### Section 104D

- 221. The section 104D gateway tests are only relevant to our consideration of the MDC resource consent application, as a non-complying activity. On the basis of the evidence, we conclude that the adverse environmental effects of the land use activities are likely to be more than minor. We therefore find the MDC application fails to satisfy section 104D(1)(a) due to more than minor potential adverse effects on biodiversity values.
- 222. We conclude the MDC application is inconsistent with key objectives and policies of the MDP relating to ecological values and landscape values, but not contrary to these provisions. We therefore find the proposal passes section 104D(1)(b) in respect of the MDC land use consent sought.

#### Part 2 of the Act

223. The s42A Report stated that reference to Part 2 when considering a resource consent should not be necessary if the applicable plans have been prepared having regard to Part 2 and

with a coherent set of policies designed to achieve clear environmental outcomes. In the context of these solar array applications, it is considered that the relevant policy statements and plans (national, regional and district) had been competently prepared (acknowledging that MDC Section 19 Policy 5 is subject to appeal) and the relevant provisions were coherent and comprehensive. On this basis, it concluded there was no need to go beyond the relevant provisions and specifically assess Part 2 in making a decision.

- 224. Ms Forward generally agreed with the above, noting that Section 19 of the MDP is recent and was prepared within the context of the CRPS and the NPS-REG, and within the statutory requirements of s6(c) and s7(j) of the Act. Ms Forward further submitted there was no need to refer back to the RMA given matters are appropriately addressed by way of the NPS-REG and NPS-IB. She considered these two documents established a hierarchy where renewable energy considerations were placed higher than indigenous vegetation.
- 225. We do not agree with Ms Forward that the NPS-REG and the NPS-IB elevate renewable energy generation activities above the protection of significant biodiversity values. The NPS-REG requires decision makers to have regard to offsetting and compensation measures when residual environmental effects cannot be avoided, remedied or mitigated. Overall, while we do not agree with Ms Forward on the above matter, we do not consider that reference to Part 2 would add anything to the evaluative assessment we have undertaken under sections 104 and 104D.

#### Conclusion

- 226. Ms Ford's opening legal submissions<sup>10</sup> noted that it was our role to 'balance' the proposal's contribution to the climate change crisis on one hand, and the landscape and ecology values unique to the Mackenzie Basin on the other. In our view, that statement succinctly summarises the task that we have completed. With that in mind we have canvassed in some detail above the evidence and legal submissions we have received. Our critical finding is that the proposal is likely to give rise to more than minor adverse effects on significant biodiversity values present at the application site.
- 227. We acknowledge the significant positive impacts that would arise from the proposal and the recognition of the importance of renewable energy in the higher order documents such as the NPS-REG.
- 228. We recognise the Applicant's proposed compensation package was provided at the end of the hearing to address 'minor' residual effects. However, for the reasons outlined above, we conclude that permanent and irreversible loss of threatened land environments and Threatened and At Risk indigenous species from the site would be a significant adverse effect. The evidence supports the conclusion that abiotic changes and continued farming activities will result in the gradual decline in indigenous vegetation across the site.

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<sup>&</sup>lt;sup>10</sup> Paragraph 13

- 229. Our overall finding with respect to the MDC resource consent application is that consent cannot be granted without evidence demonstrating there will be no net loss of significant indigenous biodiversity values. We conclude that without robust baseline information on Threatened and At Risk flora and fauna species potentially affected at the site <u>and</u> at the compensation site, it is simply not possible to be satisfied that no net loss will occur.
- 230. The CRC applications for land use consent (earthworks) and operational phase stormwater discharges required under the LWRP are inextricably linked to the MDC application. As we have determined above that the MDC application cannot be granted, it follows that the CRC applications should be considered in the same way. We say this primarily because our findings with respect to the nature and scale of adverse ecological impacts are equally applicable to the earthworks and stormwater discharge activities that would otherwise be authorised by the CRC consents. While our reason for this conclusion with respect to the earthworks consent should be clear, it may not be so obvious in terms of the stormwater consent application. For certainty, therefore, we highlight that from the evidence received the discharge of stormwater to ground from the PV panels contributes to potential abiotic changes and is directly linked to impacts on indigenous vegetation and the habitats of Threatened and At Risk species. For this reason, we find that the CRC resource consent applications cannot be granted.

#### Decision

231. For the above reasons, it is the decision of the Canterbury Regional Council and the Mackenzie District Council, pursuant to sections 104 and 104D, and subject to Part 2 of the Resource Management Act 1991, to REFUSE the following applications by A. W. and K. F. Simpson for resource consents RM220048, CRC224567 and CRC230898 to authorise the construction and operation of a solar array on Braemar Road, Tekapo.

Dated at Christchurch this 8th day of November 2023

**Sharon McGarry** 

S.M. Carry

**Independent Hearing Commissioner (Chair)** 

Meg Justice

**Independent Hearing Commissioner** 

**Darryl Millar** 

**Independent Hearing Commissioner**