Draft Consent Conditions – Twizel Solar Project

Mackenzie District Council Land Use Consent

General Conditions

1. The construction, operation and maintenance of the consented activity being hereafter referred to as the 'Twizel Solar Plant' must be undertaken in general accordance with the information and plans submitted with the application lodged on [DATE] and further information submitted on [DATE] being:

    a. The resource consent applications and all supporting attachments prepared by BTW Company Limited dated [DATE].

    b. The attached stamped Approved Plans entitled **** prepared by ***** dated [DATE]

2. In the event of any conflict or discrepancy between the documents noted in Condition 1 above, and the conditions of this consent, the requirements of the conditions of these consents shall prevail.

3. The consent will lapse 10 years after the date on which it commences unless given effect to before that date.

4. The consent holder must ensure that access is maintained to the CHH-TWZ-A and the TWZ-DEV-A National Grid transmission lines, including support structures, for maintenance at all reasonable times, and emergency works at all times.

5. The consent holder must ensure that all construction activities, the solar panel arrays and all associated infrastructure of the Twizel Solar Plant conform to the following minimum setback and design parameters as shown on the BTW Company drawings titled 'Solar Farm – Lot 3 DP 422901 Concept Design Drawings Nova Energy Ltd':

    a. 20 m setback from all site boundaries

    b. 10 m setback from Sites of Natural Significance

    c. 10 - 35 m from areas of ecologically significant flora and Threatened and At Risk vegetation in accordance with the Shade Modelling Memorandum in Appendix 3 of the Assessment of Potential Ecological Effects dated 16 March 2026 to avoid shading effects

    d. 20 m setback from rivers/streams

    e. 100 m setback from natural inland wetlands

    f. All setbacks specified in the New Zealand Code of Practice for Electrical Safe Distances (NZECP 34:2001) or any subsequent revision of the code

Advice Note: *Where there is any conflict between the setbacks the greater distance must apply.*

6. During the avifauna breeding season (1 July – 1 March):

    a. a 75 m setback from the use of any construction machinery or power tools and the Ōhau River and river delta; and

    b. a 100 m setback from the use of any construction machinery or power tools and the Twizel River and river delta.

Advice Note: *Additional setbacks/buffers may apply depending on the results of the avifauna survey required by condition 51. Where there is any conflict between the setbacks required by condition 5 and 6 above and the buffers in condition 52, the buffers in condition 52 shall prevail.*

7. The solar panel arrays must comply with the following design characteristics:

    a. A minimum spacing of 5 m between rows when panels are at the horizontal position.

    b. A minimum spacing of 10 m between the panel development sections.

    c. The panels must be tracking arrays.

    d. The panels must incorporate an anti-reflective coating.

8. The consent holder must at all times construct, operate, maintain and decommission the Twizel Solar Plant in general accordance with all relevant management plans, monitoring plans, works plans and programmes submitted to, and/or certified by, Mackenzie District Council as part of the conditions of this resource consent being:

Table 1. Management Plans, Monitoring Plans, Works Plans and Programmes for the Twizel Solar Plant

Management Plan	Condition Number	Date for Submission	Timeframe
Construction Environmental Management Plan	24	30 working days prior to commencement of construction	During Construction
Construction Traffic Management Plan	27	30 working days prior to commencement of construction	During Construction
Biosecurity and Vegetation Management Plan	32	30 working days prior to commencement of construction	For Life of the Project
Pest Mammal Management Plan	35	30 working days prior to commencement of construction	For Life of the Project

Terrestrial Invertebrate Management Plan	38	30 working days prior to commencement of construction	For Life of the Project
Lizard Management Plan	41	30 working days prior to commencement of construction	For Life of the Project
Avifauna Management Plan	44	30 working days prior to commencement of construction	For Life of the Project
Bird Collision Management Plan	71		If bird mortality thresholds in Table 2 are reached
Archaeological Management Plan	47	30 working days prior to commencement of construction	For Life of the Project
Natural Hazard/Stormwater Mitigation Works Plan	57	30 working days prior to commencement of construction	For Life of the Project
Emergency Hydro Inundation Response and Evacuation Plan	61	Prior to construction	For Life of the Project
Decommissioning Plan	85	80 working days prior to commencement of decommissioning	Decommissioning

9. The consent holder must ensure that a copy of this consent and all certified management plans, monitoring plans, works plans and programmes (including any certified amendments) are readily available and must be produced without unreasonable delay upon request from a servant or agent of the Mackenzie District Council.

10. The consent holder must ensure that all contractors engaged to undertake activities authorised by this resource consent are made aware of the conditions and management plans, monitoring plans, works plans and programmes that apply to this resource consent that are relevant to their work area and the measures required for compliance with the conditions.

11. The consent holder must notify the Planning Manager, Mackenzie District Council, Transpower New Zealand Limited and the Department of Conservation (DOC) as to the commencement date of earthworks authorised as part of this resource consent, at least twenty (20) working days before such works commence.

Advice Note: *Notification can be sent to transmission.corridor@transpower.co.nz*

Advice Note: *Transpower NZ Ltd has a right to access its existing assets under s23 of the Electricity Act 1992. Any development must not preclude or obstruct this right of access. It is an offence under s163D of the Electricity Act 1992 to intentionally obstruct*

any person in the performance of any duty or in doing any work that the person has the lawful authority to do under s23 of the Electricity Act 1992.

Pre-Construction Conditions

Final Pre-Construction Threatened and At Risk Flora Survey

12. The consent holder must ensure that a final post-consenting, pre-construction survey of the Twizel Solar Plant footprint is completed by a SQEP botanist to confirm no Threatened and At Risk flora will be shaded by the panels. If any Threatened and At Risk flora are found, the layout must be adjusted to avoid shading of this flora.

13. The consent holder must submit a pre-construction report to the Planning Manager, MDC prepared by the SQEP botanist which demonstrates that either no Threatened and At Risk flora will be shaded by the panels, or where Threatened and At Risk flora would be shaded, how the Twizel Solar Plant footprint has been adjusted to avoid shading of this flora.

Construction Exclusion Fencing and Mapping

14. Prior to the commencement of construction activities, the Consent Holder must:

    a. Mark “no-go” areas (ecologically significant indigenous vegetation margins, scarp/terrace habitats being avoided, wetlands and buffers) on site maps; and

    b. Install high-visibility exclusion fencing/markers on the ground.

Lizard Habitat Avoidance and Corridor/nodes Delivery

15. Prior to the commencement of construction activities, the consent holder must peg out and protect the high/moderate lizard habitat areas to be avoided and must implement the lizard corridor and biodiversity node programme outlined in Figure 14 of the Wildlands Assessment of Potential Ecological Effects including:

    a. ≥30 biodiversity nodes of ~100 m² each, plus inclusion of the ~1,250 m² rock pile area as a node;

    b. creation of rock piles to specified dimensions (max 0.5 m height, 1–2 m wide, ~5 m long) at node ends; and

    c. corridor alignment along the central east–west fence line with branches as described in Section 13.3.2 and Figure 14 of the Wildlands Assessment of Potential Ecological Effects.

Invertebrate Salvage and Translocation

16. Prior to the commencement of construction activities in areas that overlap potential/confirmed habitat as shown in Figures 10 and 11 of the Assessment of Potential Ecological Effects, the Consent Holder must implement salvage and translocation for:

    - Tekapo ground wētā (TGW),
    - Minute grasshopper (MG), and
    - Otago short-horned grasshopper (OSG)

17. The salvage and translocation must be undertaken by a SQEP in accordance with the certified TIMP required by Condition 38.

Management Plans, Monitoring Plans and Sampling Programmes - General

18. Prior to the commencement of construction activities, the Consent Holder, in consultation with mana whenua rūnaka, must prepare the following management plans, monitoring plans, works plans and sampling programmes, to be certified in accordance with the certification process outlined in Conditions 19-22.

    - Construction Environmental Management Plan
    - Construction Traffic Management Plan
    - Biosecurity and Vegetation Management Plan
    - Pest Mammal Management Plan
    - Terrestrial Invertebrate Management Plan
    - Lizard Management Plan
    - Avifauna Management Plan
    - Archaeological Management Plan
    - Natural Hazard/Stormwater Mitigation Works Plan

19. No less than twenty (20) working days prior to submitting the plan(s) to the Planning Manager Mackenzie District Council for certification, the Consent Holder must provide the draft plan to mana whenua rūnaka for comment.

20. The Consent Holder must ensure that any written feedback received from mana whenua rūnaka on the plan is provided to the Planning Manager, Mackenzie District Council when the plan is submitted for certification, along with a clear explanation of where any comment made on the plan has or has not been incorporated into the plan and the reasons why.

21. If, following at least twenty (20) working days of providing the draft plan to mana whenua rūnaka, the Consent Holder has not received written comments from mana whenua rūnaka, the Consent Holder may submit the plan to the Planning Manager, Mackenzie District Council for certification.

22. If the Planning Manager, Mackenzie District Council provides the Consent Holder with suggested changes to the submitted plan(s) or declines to certify the plan(s), the Consent Holder must re-submit the plan(s) to the Planning Manager Mackenzie District Council.

23. The Consent Holder may make amendments to the plan(s) at any time, provided that non-administrative changes must be submitted to Mackenzie District Council for review and certification. Any non-administrative amendment to the plans must be submitted to the Planning Manager, Mackenzie District Council for certification following the process outlined in conditions 19-22.

Construction Environmental Management Plan

24. At least thirty (30) working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder must submit a Construction Environmental Management Plan (CEMP) to the Planning Manager, Mackenzie District Council for endorsement acting in a technical certification capacity to certify that the CEMP meets its stated purpose. The purpose of the CEMP is to provide the overarching

framework to ensure that the construction of the Twizel Solar Plant remains within the limits and standards required by these conditions and that works appropriately avoid, remedy, or mitigate adverse effects on the environment.

25. Where relevant to construction activities occurring within or in proximity to the National Grid transmission corridor, the CEMP must be provided to Transpower New Zealand Ltd (Transpower) for review at least twenty (20) working days prior to submission of the final CEMP to the Mackenzie District Council. The Consent Holder must ensure that any written feedback received from Transpower on the CEMP is provided to the Planning Manager, Mackenzie District Council when the CEMP is submitted for certification, along with a clear explanation of where any comment made on the CEMP has or has not been incorporated into the CEMP and the reasons why.

26. The CEMP must include the following information:

    a. The name, experience and qualifications of the person/s nominated by the Consent Holder to supervise the implementation of, and adherence to, the CEMP including, where relevant, those responsible for managing works within or near the National Grid transmission corridor.

    b. An outline construction programme for the works.

    c. Pre-start meeting to ensure all relevant parties are aware of and understand the requirements of compliance with the conditions of the consent and the certified CEMP.

    d. Details of inductions for staff and contractors on site for those working near national grid transmission lines and in relation to compliance including coverage of archaeology, ecology and contamination discovery protocols, the buffer requirements for ecologically significant areas and the cultural component outlined in condition 49.

    e. The location of notice boards that clearly identify the name, telephone number and address for service of the site manager.

    f. The location and layouts of any construction compound(s) proposed within the site, including details of any turning areas, laydown areas, storage containers, and staff parking.

    g. Construction drawings, plans, procedures, methods and measures to demonstrate that all construction activities undertaken on the site will meet the safe distances within the New Zealand Electrical Code of Practice for Electrical Safe Distances 2001 (NZECP 34: 2001).

    h. Identification of any areas that are restricted or “out of bounds” during construction, and any areas where additional controls are required (including fencing, entry controls, height limits, and safety observer requirements).

    i. Emergency contact details and procedures relevant to works within or near the National Grid transmission corridor.

    j. Measures demonstrating how the effects of construction activities on the National Grid transmission lines and structures will be avoided, remedied or mitigated, including:

        - Management of dust and contaminants that could affect transmission infrastructure;

- Management of earthworks, drainage changes and stormwater to avoid adverse effects on tower foundations and associated underground services;

- Management of vibration and ground instability to avoid structural damage; and

- Procedures to ensure continued access to transmission assets during and after construction.

k. Construction noise management measures to ensure compliance with construction noise standards.

l. Erosion and sediment control measures in accordance with the Erosion and Sediment Control Toolbox for the Canterbury Region and in accordance with the Erosion and Sediment Control Plan, to ensure sediment is not transferred off site.

m. Dust management measures for earthworks, the movement of vehicles and any other dust generating activity to ensure that any dust that is noxious, dangerous, offensive or objectionable does not occur at or beyond the boundary of the site

n. Measures to ensure areas of soil disturbed by the project are rehabilitated progressively or immediately post-construction reducing areas of bare soil.

o. Road management measures to ensure road inspection, maintenance, and remediation of any construction related damage to the condition of the local road network.

p. Measures for the protection of utility services, including electricity distribution within the road reserve.

q. Measures to be adopted to maintain the land in a tidy condition in terms of disposal/storage of rubbish, storage and unloading of building materials and similar construction activities.

r. Measures to ensure the safety of the general public where potentially affected by construction activities.

s. How the other environmental management plans related to construction activities are integrated with the CEMP.

t. the methods to engage with stakeholders during construction, including:

    i. Procedures for ensuring that surrounding property owners and occupiers are given prior notice of the commencement of construction works and are informed about the expected duration of those works.

    ii. Procedures for communicating with surrounding property-owners and occupiers during construction works, including consulting prior to any high noise generating activities, and implementing procedures to ensure action is taken in response to any complaints received.

    iii. How the consent holder will engage with the community in order to foster good relationships and to provide opportunities for learning about the Project.

iv. Providing early information on key Project milestones.

v. Identifying stakeholders such as landowners, road users, local community, iwi, regulatory authorities, industry, network utility operators, road maintenance contractors, emergency services.

vi. Responding to queries and complaints.

Construction Traffic Management Plan

27. At least thirty (30) working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder must submit a Construction Traffic Management Plan (CTMP) to the Planning Manager, Mackenzie District Council for endorsement acting in a technical certification capacity to certify that the plan meets the following objectives:

    a. Ensure all specific legislative requirements (e.g. statutes, regulations and / or bylaws) and consent conditions in relation to construction traffic are adhered to.

    b. Encourage a culture of road safety awareness and commitment.

    c. Ensure transport safety.

    d. Ensure emergency services are not obstructed.

    e. Minimise disruption to State Highway 8, the surrounding community, farming operations, and rural services operations.

    f. Manage the condition of State Highway 8 due to effects from the project and project traffic to ensure road user safety and accessibility is maintained.

    g. Minimise traffic generation.

    h. Encourage the participation of the surrounding community in maximising safety and minimising disruption.

28. In order to achieve the objectives in condition 27, the CTMP must, as a minimum, address the following matters:

    a. The construction programme and the associated traffic volumes estimated for each construction stage.

    b. Driver protocols aimed at ensuring safe driving practices and full compliance with the law, including speed limits, appropriate following distances, observing engine braking restrictions, and affording priority to other traffic.

    c. The details of the intended traffic arrangements and provision for the delivery of over-dimension and over-weight loads to the project site.

    d. The nature and timing of the new vehicle access construction.

    e. The timing of construction traffic to minimise disruption to, and potential safety issues for, the operation of school bus services.

    f. Requirements for the monitoring of construction traffic.

    g. Signage to warn drivers approaching the solar plant site.

h. Communication arrangements with affected residents, Mackenzie District Council, the New Zealand Transport Agency, schools, emergency services and other key stakeholders, including provision of prior notice of traffic arrangements.

i. The ongoing review and evaluation of the contents of the CTMP throughout the period of construction works.

j. Monitoring of and cleaning of spillage from construction trucks onto roads.

k. Processes for monitoring, review, and amendments to the CTMP.

29. The CTMP must be prepared by a suitably experienced and qualified traffic engineer and in accordance with Mackenzie District Council's requirements for CTMPs and the New Zealand Transport Agency's Code of Practice for Temporary Traffic Management, and in consultation with the New Zealand Transport Agency and the Planning Manager, Mackenzie District Council.

30. The consent holder must distribute copies of the CTMP certified by the Planning Manager, Mackenzie District Council to emergency services and landowners / occupiers with access to the local construction traffic routes at least ten (10) working days prior to the commencement of each stage of construction works authorised as part of this resource consent.

31. No construction activity must commence until confirmation is provided from Mackenzie District Council that the CTMP satisfactorily gives effect to the stated objectives and addresses the matters in Condition 25, and all measures identified in the CTMP as needing to be put in place prior to commencement of works have been put in place.

Biosecurity and Vegetation Management Plan

32. At least thirty (30) working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder must submit a Biosecurity and Vegetation Management Plan (BVMP) to the Planning Manager, Mackenzie District Council for endorsement acting in a technical certification capacity to certify that the plan meets the objective stated below.

a. Minimise the risk of introducing pest plants and associated threats to biodiversity values present at the site.

33. The BVMP must be in general accordance with the draft BVMP (Attachment 3.9 to the substantive application) and must be prepared by a suitably qualified and experienced person.

34. In order to achieve the objective stated in Condition 32 above, the BVMP must, as a minimum, address the following matters:

a. Identification of pest plants present at the site and key biosecurity threats to biodiversity values.

b. Specific biosecurity measures to be undertaken during the construction and operational phases of the solar project including:

i. Pest plant control.

ii. Biosecurity checks and cleaning of vehicles.

iii. Use of local materials and eco-sourcing plants where practicable.

c. Measures for the monitoring and surveillance of pest plants throughout the life of the project including:

    i. establishment of a minimum of 30 monitoring plots across the site prior to works commencing at the site.

    ii. Provision for vascular plant monitoring surveys to be undertaken one year after works begin at the site and every three years subsequently.

d. Provision for steps to be taken in the event that a detectable increase in pest plants and ecological weeds or a new weed or pest plant occurs at the site, comprising:

    i. implementation of additional control effort.

    ii. ensuring contractors are aware of the issue and will undertake vehicle checks to control the spread of the plant.

e. Provision for steps to be taken in the event that either a decline in Threatened or At Risk plants is detected at the site from data gathered from the permanent vegetation monitoring plots and/or a decline is observed by the ecologist during qualitative surveys. This must comprise the following:

    i. Additional days must be spent monitoring, depending on the nature of the decline. The length of the additional monitoring period must be determined by the ecologist and must be informed by the nature and extent of the decline.

    ii. If the cause of decline is obvious, for example pressure from pest plants, then additional control will be undertaken as soon as reasonably practicable, and before the decline becomes worse.

    iii. If the cause is not obvious, further investigation determined by a SQEP will be undertaken.

    iv. The results of further investigations must inform management measures to address the decline, if it is determined to be caused either directly or indirectly by the project. These may include the following:

        i) Additional pest plant management.

        ii) Additional pest animal management.

        iii) Changes to the animal grazing regime on the site.

    v. Additional monitoring must be undertaken to assess the success of the measures to address the decline. Monitoring methodology and timeframes will depend on the effect and management and will be determined on a case-by-case basis. If there is no evidence that management has been effective, additional management will be undertaken and if necessary, the cause will be further investigated.

f. Provision for the results of monitoring to:

    i. inform an assessment of the vascular plant survey methodology and control measures to determine their appropriateness.

ii. determine whether the BVMP needs to be amended.

The assessment must be undertaken at the end of each three-yearly monitoring period.

g. A schedule for the implementation of management actions recommended by the BVMP.

Pest Mammal Management Plan

35. At least thirty (30) working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder must submit a Pest Mammal Management Plan (PMMP) to the Planning Manager, Mackenzie District Council for endorsement acting in a technical certification capacity to certify that the plan meets the objective stated below.

a. To reduce the abundance of pest mammals present on site and thereby limit their impact on indigenous plants and fauna.

36. The PMMP must be prepared by a suitably qualified and experienced person and must be in general accordance with the draft PMMP (Attachment 3.10 to the substantive application).

37. In order to achieve the objective in Condition 35 above, the PMMP must, as a minimum, address the following matters:

a. Identification of existing ecological values at the site, the pest mammals present or likely to be present and the threats they pose to ecology.

b. Measures for baseline surveying of pest mammals on site. The baseline survey must be undertaken over a 12 month period during the year before construction commences.

c. Provision for monitoring and surveillance of pest mammals throughout the life of the project including:

i. Annual monitoring for the first five years of the project and every four years thereafter.

ii. Review of the monitoring programme once every five years.

d. A process for liaising with neighbouring landowners with the objective of exploring ways to integrate pest management on the site with pest management on neighbouring land.

e. A Pest Control Plan including pest mammal control methods including timing and schedule of methods and trigger points to start and stop controls.

f. Performance standards, which must include:

i. Biodiversity performance standards, which must require:

a. negligible or no signs of pest mammal predation on lizards, adult birds, chicks or bird eggs; and

b. negligible or no possum feeding sign on plants and little to no rabbit or hare feeding sign.

ii. Pest mammal performance standards, which must require:

a. General declines in pest mammal activity and abundance across the site, comparing between the same seasons across different years.

g. Adaptive management measures which provide for:

i. Adaptive management to be implemented if monitoring results show that the performance standards in (e) are not met over two of the same season (e.g. over two summers).

ii. Adaptive management responses, which may include:

a. Reducing the distance between pest control devices.

b. Checking pest control devices more frequently.

c. Adding more pest control devices.

d. Use of pindone poisoning.

e. Fencing.

f. Changes in baiting methods (in the event of bait aversion).

Terrestrial Invertebrate Management Plan

38. At least thirty (30) working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder must submit a Terrestrial Invertebrate Management Plan (TIMP) to the Planning Manager, Mackenzie District Council for endorsement acting in a technical certification capacity to certify that the plan meets the objective stated below.

a. Increase invertebrate values (including grasshopper abundance) in enhanced areas around the perimeter of the site and reduce the impacts of potential population declines within the panel area.

39. The TIMP must be prepared by a suitably qualified and experienced person and must be in general accordance with the draft TIMP (Attachment 3.11 to the substantive application).

40. In order to achieve the objective stated in condition 38, the TIMP must, as a minimum, address the following matters:

a. Implementation of the TIMP, including roles and responsibilities.

b. Measures to be undertaken to avoid and minimise effects on invertebrates during the construction and operational phases of the solar project including:

i. Avoidance of panels within the enhancement areas in accordance with Figure 5 of the draft TIMP.

ii. Avoidance of destruction of indigenous legumes and other indigenous flowering plants where possible.

iii. Maintenance of areas of bare ground and rock in the enhancement areas.

iv. Use of grasshopper friendly weed control techniques where possible.

v. Dust management.

c. Habitat restoration measures including:

i. Planting of enhancement areas around the perimeter of the site in accordance with Figure 5 of the draft TIMP.

ii. Creation of lizard habitat corridors and biodiversity nodes in accordance with Figure 4 of the draft LMP.

iii. Grazing on site where practicable to minimise habitat modification effects.

iv. Pest mammal control in accordance with the PMMP required by Condition 35.

v. Pest plant control in accordance with the BVMP required by condition 32.

d. Provision for monitoring of invertebrates present at the site, including:

i. Annual monitoring for the first three years following the commencement of construction and once every three years thereafter, for 12 years.

ii. Provision for monitoring to use the existing transects and monitoring methods utilised in the initial surveys (Wildlands 2024a and 2024b).

iii. Additional transects for MSG and OSG and tracking tunnels for TGW to be established in enhancement areas.

e. A salvage and translocation protocol for MG, TGW and OSG which must be in general accordance with Appendix 1 of the Draft TIMP and must provide for the following:

i. Salvage of invertebrates from the panel area prior to construction.

ii. Relocation of salvaged invertebrates within the central southern terrace enhancement area.

iii. If more than 30 individuals from any species or combination of species are salvaged, then surplus individuals must be released in other enhancement areas.

f. An incidental discovery protocol.

g. A timetable for the implementation of the recommended effects management approach.

h. Provision for adaptive management, which must comprise:

i. If after two monitoring periods, the number of OSG and/or MG has not increased within the enhancement areas or the number of TGW has declined within the panel area and within the enhancement areas, adaptive management must be implemented.

ii. Adaptive management may include the following:

a. Rodent management measures.

b. Assessment of enhancement plantings, and creation of additional patches of stony ground in areas that appear to be suboptimal habitat.

c. Additional weed management in accordance with the BVMP required by Condition 32.

iii. If after four monitoring periods, monitoring indicates no increase in OSG and MG populations or declines in TGW populations in the panel area and enhancement areas:

a. Monitoring results should be compared with any available monitoring results for off-site invertebrate populations, to identify whether declines are due to external phenomena.

b. Further management measures may be implemented, which may include:

i) Hedgehog control.

ii) Possum control.

iii) Other management measures agreed in consultation with the Department of Conservation.

iv. If after six monitoring periods, monitoring indicates declines in OSG, MG and TGW populations, the consent holder must pay compensation in accordance with section 5.3.4 of the Draft TIMP.

Lizard Management Plan

41. At least thirty (30) working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder must submit a Lizard Management Plan (LMP) to the Planning Manager, Mackenzie District Council for endorsement acting in a technical certification capacity to certify that the plan meets the objective stated below.

a. To ensure that the construction and operation of the Twizel Solar Plant does not result in the disturbance, injury, or mortality of indigenous avifauna, including Threatened and At Risk species, through habitat avoidance, seasonal and spatial controls, collision-risk mitigation, and adaptive management informed by ongoing monitoring.

42. The LMP must be prepared by a suitably qualified and experienced person, in consultation with DOC, and must be in general accordance with the draft LMP (Attachment 3.12 to the substantive application)

43. In order to achieve the objective in Condition 41, the LMP must, as a minimum, address the following matters:

a. Implementation of the LMP including roles and responsibilities.

b. Measures to be undertaken to avoid, minimise and remedy effects on lizards during the construction and operational phases of the solar project which must include:

    i. Avoidance of areas of high lizard habitat quality at the perimeter of the site, as identified in Figure 3 of the draft LMP.

    ii. Implementation of shading setbacks to avoid shading of areas of high and moderate lizard habitat quality, as shown in Figure 3 of the draft LMP.

    iii. Creation of lizard habitat enhancement corridors and biodiversity nodes in accordance with Figure 4 of the draft LMP;

    iv. Creation of rock piles within lizard habitat corridors using rocks excavated during earthworks.

    v. Planting of lizard habitat enhancement corridors in accordance with Figure 4 of the draft LMP.

    vi. Pest plant control in accordance with the BVMP required by Condition 32.

    vii. Pest mammal control in accordance with the PMMP required by Condition 35.

c. A Protocol for incidental discoveries of indigenous lizards including lizard release, management of injured lizards and lizard carcasses which must be in general accordance with the protocol set out in section 8 of the Draft LMP.

d. Measures for the monitoring of lizard habitat enhancement areas which must include:

    i. Monitoring of lizard population abundance within enhancement areas, lizard habitat corridors and biodiversity nodes at Years 1, 3 and 5 following creation of the enhancement areas.

    ii. Monitoring plant survival, via establishment of photopoints at locations within enhancement areas, lizard habitat corridors and nodes. photographs must be taken at these locations at Years 1, 3 and 5 following creation of the enhancement areas.

    iii. Pest plant monitoring in accordance with the BVMP required by Condition 32

    iv. Pest mammal monitoring in accordance with the PMMP required by Condition 35.

e. Provision for reporting of monitoring results to be provided to the DOC, Mackenzie District Council and mana whenua rūnaka at the end of each monitoring period.

f. Provision for adaptive management which must require the following:

    i. If lizard capture rates increase by less than 10 per cent following the end of monitoring at Year 5, monitoring must continue for a further two additional monitoring periods, at Years 7 and 9.

ii. If lizard capture rates decline between any two monitoring rounds, management measures must be implemented which may include the following:

a. A second round of monitoring in the same year.

b. Increased pest mammal control measures.

c. Increased pest plant control measures.

d. Additional habitat enhancement within enhancement areas, lizard habitat corridors and nodes.

g. In the event that further monitoring indicates that management measures are unsuccessful, compensation must be paid by the consent holder in accordance with section 9.6 of the Draft LMP.

Avifauna Management Plan

44. At least thirty (30) working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder must submit an Avifauna Management Plan to the Planning Manager, Mackenzie District Council for endorsement acting in a technical certification capacity to certify that the plan meets the objective stated below.

a. To ensure that the construction and operation of the Twizel Solar Plant does not result in the disturbance, injury, or mortality of indigenous avifauna, including Threatened and At Risk species, through habitat avoidance, seasonal and spatial controls, collision-risk mitigation, and adaptive management informed by ongoing monitoring.

45. The Avifauna Management Plan must be prepared by a suitably qualified ecologist or ornithologist, in consultation with the DOC, and must be in general accordance with the Draft Avifauna Management Plan (Attachment 3.13 to the substantive application).

46. In order to achieve the objective in condition 44, the Avifauna Management Plan must, as a minimum, address the following matters:

a. Measures to be undertaken to avoid, minimise and remedy effects on avifauna during the construction and operational phases of the solar project which must include:

i. Where practicable, limiting construction during breeding seasons of Threatened and At Risk birds.

ii. Avoiding where practicable the creation of bare ground during construction and use of passive attempts to deter birds from any necessary bare ground.

iii. Minimising noise and vibration levels to the extent practicable.

iv. Measures incorporated into the project design to reduce bird strike, including panel spacing, tilt, stow position and use of anti-reflective front glass.

v. management of pest mammals in accordance with the PMMP required by condition 35.

vi. Avoiding construction activities in areas of high ecological value around the perimeter of the site.

vii. Management of vehicle speeds and behaviour on site.

b. Protocols for managing and responding to Threatened and At Risk indigenous birds being found on the site which must be in general accordance with the incidental discovery protocol set out in section 6.11 of the Draft Avifauna Management Plan.

c. A description of the monitoring requirements to assess the effectiveness of the Avifauna Management Plan which must include:

i. Monitoring of birds present on the site monthly for six months prior to construction commencing and weekly for the first year of construction and a minimum of fortnightly for the remainder of the construction period, and fortnightly for a minimum of three years following completion of construction.

d. An Avifauna Carcass Monitoring Programme prepared by a suitably qualified and experienced ornithologist / ecologist and with input from a biostatistician, in consultation with DOC. The objectives of the Avifauna Carcass Monitoring Programme are to:

i. Enable detection of bird collision with the solar arrays and ancillary infrastructure within the site.

ii. Guide an appropriate management response in the event of collisions of indigenous bird species with the solar arrays and ancillary infrastructure within the site, particularly those classified as nationally Threatened or At Risk to reduce the ongoing risk of exceeding the thresholds of unacceptable adverse effect in Table 2.

iii. Ensure any effects on indigenous birds arising from the operation of the solar plant do not exceed the thresholds of unacceptable adverse effect in Table 2.

e. The Avifauna Carcass Monitoring Programme must include, but not be limited to, the following:

<u>Monitoring Design</u>

i. Frequency, duration (including a minimum of 36 months from commencement of installation of solar panels and ancillary infrastructure within the site), timing, and site coverage of bird collision monitoring surveys that is adequate to ensure any carcasses are detected.

<u>Methodology</u>

i. Statistically robust methods for bird collision surveys.
ii. Methods for carcass detection and removal trials that are of an adequate standard to ensure carcasses are detected.
iii. Methods for record keeping and data analysis, including statistical methods to derive annual mortality estimates.

Mortality Thresholds and Management Response

i. Thresholds in Table 2 for indigenous bird species that trigger a management response in accordance with Conditions 71-73.

Table 2. Indigenous bird mortality thresholds that trigger a management response. The thresholds are for individual species (i.e. are not collective for each threat classification).

National Threat Classification	T**hreshold to Trigger a Management Response**
Threatened – Nationally Critical species	One carcass detected at any time during the monitoring period.
Threatened – Nationally Endangered species	
Threatened – Nationally Vulnerable species	Two carcasses detected within any one survey; or three carcasses detected cumulatively in any consecutive 12 month period.
Threatened – Nationally Increasing species	
At Risk species	Three carcasses detected within any one survey; or five carcasses detected cumulatively in any consecutive 12 month period.
Not Threatened indigenous species	Five carcasses detected within any one survey; or 15 carcasses detected cumulatively in any consecutive 12 month period.

Advice Note: *The meaning of 'Threatened and At Risk' and national threat classifications for indigenous bird species are based on the most recent available assessment under the New Zealand Threat Classification System administered by DOC (Rolfe et al. 2022; available at https://nztcs.org.nz/).*

f. Details of how compensation will be calculated in the event that bird mortalities exceed the thresholds of unacceptable adverse effect in Table 2 and adaptive management responses are not fully effective, in accordance with section 6.14.6 of the Draft Avifauna Management Plan.

Archaeological Management Plan (ArchMP)

47. At least thirty (30) working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder must submit an ArchMP to the Planning Manager, Mackenzie District Council for endorsement, acting in a technical certification capacity, to certify that the Plan meets the objective stated below.

a. Ensure all potential archaeological sites within the project area are identified and appropriately managed in accordance with the Heritage New Zealand Pouhere Taonga Act 2014.

48. The ArchMP must be prepared by a suitably qualified archaeologist and must be in general accordance with the Draft ArchMP (Attachment 3.8 to the substantive application).

49. In order to achieve the objective stated above, the ArchMP must, as a minimum, address the following matters:

a. Identification of areas requiring archaeological monitoring

i. A map and description of areas requiring archaeological monitoring.

b. A requirement that an archaeologist present an induction to earthmoving contractors and supervisors to aid in recognition of cultural material and/or sites that may be uncovered during the works.

c. A requirement for an archaeologist or a cultural monitor to be on site to monitor representative areas of the following earthworks:

    i. scraping of the new sections of the access track from the main highway and branch tracks to the new building structures.

    ii. trenching for cabling.

    iii. spoil from distribution lines and fence post holes.

    iv. sediment retention ponds.

    v. re-contouring the terrace slopes.

    vi. Scraping platform for switchyard.

    vii. Scraping platform for new construction office/laydown area, earthworks for water tank placement and trenches for water supply, stormwater and wastewater treatment including disposal field.

    viii. Scraping platform for new workshop and operation and maintenance building.

d. Archaeological Discovery Protocol (ADP)

    i. Procedures to follow in the event of the discovery of archaeological material, koiwi (human remains), or taonga. Care and management in the recovery of Kōiwi tangata is to follow the Te Rūnanga o Ngāi Tahu Kōiwi tangata Policy (2019).

    ii. Immediate notification requirements to Heritage New Zealand Pouhere Taonga and mana whenua.

e. Roles and Responsibilities

    i. Contact details of the archaeologist, site supervisor, and relevant iwi representatives.

50. The consent holder must ensure that the site inductions for all contractors, as specified in the CEMP, include a cultural component which provides details of mana whenua rūnaka for the project area, the cultural significance of the project area to mana whenua and the protocols in place related to archaeological discovery.

<u>Avifauna Survey</u>

51. If construction works are to commence/recommence within the avifauna breeding season (1 July – 1 March) then a pre-works avifauna survey must be undertaken by the project avifauna ecologist no more than eight days prior to commencement/recommencement of works.

52. If the avifauna survey results in the discovery of Threatened and At Risk ground-nesting avifauna, in the act of nesting, then the following must apply:

    a. In open areas a 100 m buffer zone from Threatened and At Risk ground-nesting avifauna must be maintained for construction works.

b. Subject to approval by the project avifauna ecologist, the 100 m buffer zone may be reduced for intermittent, short duration work where nests or chicks are not in line of sight to the source of construction disturbance.

c. Construction is not to occur within the buffer zone until chicks have fledged and are independent of the nesting site, or the nest has been abandoned, as assessed and confirmed by the project avifauna ecologist.

53. A further avifauna survey must be undertaken at the commencement of any new construction phase or if works cease for a period of eight consecutive days or more during the avifauna breeding season.

New Vehicle Entrance

54. The consent holder must provide evidence of New Zealand Transport Agency acceptance of the detailed design of the new vehicle entrance to the Twizel Solar Project off SH8 to the Planning Manager, Mackenzie District Council, at least 20 working days prior to commencement of construction of the vehicle entrance.

55. The consent holder must ensure that the new vehicle entrance to the Twizel Solar Project off SH8 is constructed in the location shown in the approved plan referenced Entranceway Layout Plan – Drawing No 210982-02 Sheet 12 Revision WD1 and in accordance with the NZTA approved detailed design. The vehicle entrance thereafter must be maintained in good condition.

Advice Note: *Before undertaking any physical work on the state highway, including the formation of any vehicle crossing, the consent holder is legally required to apply to the New Zealand Transport Agency for a Corridor Access Request (CAR) and for that request to be approved. The CAR is to be submitted to the New Zealand Transport Agency CAR Manager via Submitica a minimum of 14 working days prior to the commencement of any works on the state highway; longer is advised for complex works.*

Firefighting Water Supply

56. Prior to commencing construction, the consent holder must provide evidence to Mackenzie District Council that engagement with Fire and Emergency New Zealand has occurred regarding firefighting water supply, access to that supply, fire risk management matters and emergency response.

Natural Hazard/Stormwater Mitigation Works Plan

57. At least thirty (30) working days prior to the commencement of any construction works, the consent holder must prepare and submit to the Planning Manager, Mackenzie District Councill for endorsement, acting in a technical certification capacity, a Natural Hazard/Stormwater Mitigation Works Plan.

The objective of the Natural Hazard/Stormwater Mitigation Works Plan is to:

a. Avoid, remedy, or mitigate adverse effects on downstream land, waterbodies, wetlands, and infrastructure.

b. Appropriately manage flood risk and surface water hazards to protect people, property and the environment.

58. The Natural Hazard/Stormwater Mitigation Works Plan must be prepared by a Chartered Professional Engineer (CPEng) with stormwater design and construction experience.

59. The Natural Hazard/Stormwater Mitigation Works Plan must be generally consistent with the principles, findings, and recommendations of the Twizel Solar Project Stormwater Management Plan and the Flood Hazard Risk Assessment, and must include, as a minimum:

    a. Final detailed design drawings and specifications for all permanent and temporary stormwater infrastructure and natural hazard mitigation works.

    b. Confirmation of design flood levels, flow paths, ponding areas, and any landform modification required to manage flood risk.

    c. Details of measures to manage stormwater quantity and quality during construction and operation, including protection of identified wetlands and receiving environments.

    d. Details of works proposed within or adjacent to any mapped flood hazard areas, including how flood risk will be avoided or mitigated.

    e. Staging and sequencing of works where relevant.

    f. Inspection, monitoring, and maintenance requirements for stormwater and natural hazard mitigation infrastructure including provision for supervision of the works by a CPEng with stormwater design and construction experience.

Community Consultation / Communication

60. The consent holder must provide and publicise contact details, including an email address, so that members of the public may raise matters with, or make an enquiry of, the consent holder during the construction of the Twizel Solar Plant. The contact details must be established at least ten (10) working days prior to the commencement of construction works authorised as part of this resource consent and must be maintained until the completion of construction works. The contact details must be publicised by the following means:

    a. Via the consent holder's website or social media;

    b. Via an advertisement in the Twizel Update; and

    c. Via the site signage at the entrance to the Twizel Solar Plant on SH8.

Hydro Inundation

61. The consent holder must, in consultation with Meridian Energy Limited, prepare, implement and maintain a current Emergency Hydro Inundation Response and Evacuation Plan for that part of the site subject to the Hydro Inundation Hazard Overlay in the Operative Mackenzie District Plan (or such replacement) for the purposes of minimising the risk to life and property (including assets) that may arise from the uncontrolled release of water from the Waitaki Power Scheme. The Emergency Hydro Inundation Response and Evacuation Plan must be provided to the Planning Manager, Mackenzie District Council prior to construction beginning on the site, and any subsequent updates of that Plan must be provided within 3 months of an update being finalised.

During Construction Conditions

Vehicle Access

62. The consent holder must notify the Planning Manager, Mackenzie District Council of when the new vehicle entrance to the Twizel Solar Project has completed construction and is being utilised.

Archaeology

63. All earthworks must be undertaken in accordance with the certified Archaeological Management Plan including the procedures to be followed in the event of a discovery of suspected archaeological material.

64. The consent holder must ensure that all earthworks in the areas highlighted in Figure 2 of the certified Archaeological Management Plan are monitored by the project archaeologist.

Complaints

65. The consent holder must maintain and keep a Complaints Register to record any complaints about construction works of the Twizel Solar Plant received by the consent holder in relation to traffic, noise, dust, or any other environmental effects. The register must record, where this information is available, the following:

    a. The date, time and duration of the incident that resulted in the complaint.

    b. The location of the complainant when the incident was detected.

    c. The possible cause of the incident.

    d. Any corrective action taken by the consent holder in response to the complaint, including the timing of the corrective action.

66. The Complaints Register must be available to staff and authorised agents of the Mackenzie District Council at all reasonable times upon request. Complaints received by the consent holder that may infer non-compliance with the conditions of this resource consent must be forwarded to the Planning Manager, Mackenzie District Council within 48 hours of the complaint being received.

    a. The date, time and duration of the incident that resulted in the complaint.

    b. The location of the complainant when the incident was detected.

    c. The possible cause of the incident.

    d. Any corrective action taken by the consent holder in response to the complaint including the timing of the corrective action.

Firefighting

67. The consent holder must ensure that all buildings are provided with a firefighting water supply and access to that supply that complies with the New Zealand Fire Service Firefighting Water Supplies Code of Practice SNZ PAS 4509:2008.

    Advice Note: *If the consent holder determines that an alternative water source cannot be accessed for firefighting purposes for the development, or does not have sufficient capacity or pressure in accordance with the New Zealand Fire Service Fire Fighting*

Water Supplies Code of Practice SNZ PAS 4509:2008, consultation on an alternative supply such as water sprinklers will need to be undertaken with Fire and Emergency New Zealand and evidence of this consultation provided to Mackenzie District Council for its consideration when determining whether the condition relating to the Code of Practice has been satisfied.

During Operation Conditions

Grazing

68. The Consent Holder must maintain controlled sheep grazing under solar panels to suppress exotic vegetation and reduce the need for the use of agrichemicals for vegetation and weed control.

Use of Agrichemicals

69. The consent holder must not use broadcast agrichemical spraying within or near:

- Short-stature herbfields/bare ground/rocky areas that may support grasshoppers;
- Areas where Tekapo ground wētā are confirmed/suspected; and
- Within enhancement or corridor areas.

Where agrichemical use is unavoidable, it must be limited to cut-and-paste or similarly targeted methods.

Monitoring, Performance Standards, Triggers and Reporting

70. Twenty (20) working days after the 1, 2 and 3 year anniversary of the avifauna carcass monitoring required by the Avifauna Carcass Monitoring Programme, an independent suitably qualified and experienced ecologist/ornithologist is to submit a report to the Planning Manager, Mackenzie District Council and DOC setting out the results of the monitoring.

Bird Collision Management Plan

71. Within 5 working days of exceeding a threshold in Table 2 (condition 46) at any time prior to the conclusion of the monitoring period, an independent suitably qualified and experienced ecologist/ornithologist is to advise the Planning Manager, Mackenzie District Council setting out:

    a. The details of the mortality threshold breach; and

    b. Notice of the preparation and recommendations on the content of an on-going Bird Collision Management Plan (BCMP) to ensure mortality of avifauna does not continue to exceed the thresholds in Table 2, in Condition 46.

72. Within (20) working days following the exceedance of a threshold in Table 2, the consent holder must submit a BCMP, prepared by a suitably qualified ecologist or ornithologist, to the Planning Manager, Mackenzie District Council for endorsement acting in a technical certification capacity to certify that the plan meets the objective stated below.

    a. To ensure mortality of avifauna does not continue to exceed the thresholds in Table 2, in condition 46.

73. The BCMP must include:

a. details of ongoing monitoring to be undertaken; and

b. details of collision prevention/deterrent measures that are to be developed in consultation with the DOC and must be implemented at the site which may include (as relevant to the nature of the impacts identified by the monitoring provided for under Conditions 46) but are not limited to:

i. Bird-sensitive anti-reflective coatings and/or applications to the panels.

ii. Use of deterrent devices or visual warning devices/markings (flags, streamers, or visually distinctive markings on panels) to deter attempted landing on panels.

iii. Bird balls or other flight diverters on transmission lines.

iv. Limitations on angle or orientation of solar panels over defined spatial, temporal scales, or environmental conditions if collisions were able to be attributed to certain spatial temporal or environmental patterns.

v. Further monitoring, at an appropriate time scale, to test the effectiveness of proposed mitigation responses.

vi. Provision for compensation to be payable by the consent holder in accordance with the applicable methodology set out in the certified AMP.

74. If a BCMP is required, no less than twenty (20) working days prior to submitting the BCMP to the Planning Manager Mackenzie District Council for certification, the Consent Holder must provide the draft BCMP to mana whenua rūnaka and DOC for comment.

75. The Consent Holder must ensure that any written feedback received from mana whenua rūnaka and DOC on the BCMP is provided to the Planning Manager, Mackenzie District Council when the BCMP is submitted for certification, along with a clear explanation of where any comment made on the BCMP has or has not been incorporated into the BCMP and the reasons why.

76. If, following at least twenty (20) working days of providing the draft plan to mana whenua rūnaka and DOC, the Consent Holder has not received written comments from mana whenua rūnaka or DOC, the Consent Holder may submit the BCMP to the Planning Manager, Mackenzie District Council for certification.

77. If the Planning Manager, Mackenzie District Council provides the Consent Holder with suggested changes to the submitted BCMP or declines to certify the BCMP, the Consent Holder must re-submit the BCMP to the Planning Manager Mackenzie District Council.

78. The Consent Holder may make amendments to the BCMP at any time, provided that non-administrative changes must be submitted to the Planning Manager, Mackenzie District Council for review and certification. Any non-administrative amendment to the BCMP must be submitted to the Planning Manager, Mackenzie District Council for certification following the process outlined in conditions 74-77.

Annual Ecological Compliance Report

79. The consent holder must submit an annual report to the Planning Manager, Mackenzie District Council summarising:

- Compliance with buffers/setbacks;
- Results of monitoring (flora, birds incl. carcass monitoring, lizards, invertebrates);
- Pest plant and pest mammal control results;

- Incidents (spills, IDP events, wildlife interactions); and
- Responses taken by the Consent Holder to any issues identified.

The first report must be provided 12 months after the Twizel Solar Plant first becomes operational.

Independent Ecological Audit

80. At least once every 3 years post the Twizel Solar Plant becoming operational, and for the life of the plant, the consent holder must engage an independent SQEP ecologist to audit implementation of the certified management plans and the effectiveness of mitigation measures, with findings and recommendations provided to the Planning Manager, Mackenzie District Council.

Glare Mitigation

81. To avoid glare impacts of the solar plant, all solar panels must have a rest angle no less than 5 degrees.

Building and Structure Finishes

82. The consent holder must ensure that all buildings, transformers, water tanks, and other structures are coloured in a dark, natural and recessive colour within the hues of greys, greens and browns which have a light reflectance value of less than 30%. If any part of a transformer or other structure that is externally visible cannot meet recessive colour and/or the light reflectance value requirement, the consent holder must submit written justification to the Planning Manager, Mackenzie District Council for approval prior to installation. This condition does not apply to distribution poles and lines, solar panels, supporting structures, or fencing.

Minimum Finished Floor Level for Natural Hazard Sensitive Buildings

83. The workshop and operations and maintenance buildings must have minimum finished floor levels of RL 441.63 m (NZVD 2016)

84. The temporary construction site office buildings must have a minimum finished floor level which is 300 mm above the identified 500-year ARI flood level in the Flood Hazard Risk Assessment.

Post Operation Conditions

Decommissioning and Site Rehabilitation

85. At least eighty (80) working days prior to the commencement of decommissioning of the solar farm authorised as part of this resource consent, the consent holder must submit a Decommissioning Plan to the Planning Manager, Mackenzie District Council for endorsement acting in a technical certification capacity to certify that the plan meets the following objectives. The Decommissioning Plan must be prepared by a suitably qualified and experienced person and provide for the following objectives:

    a. Decommissioning of the solar panels and all associated infrastructure in a manner that complies with all legislative requirements.

    b. Leaving the land in a condition that is safe and suitable for the subsequent land use.

c. Ensuring that the components and infrastructure are repurposed or disposed of in a way that maximises re-use and recycling. For any parts that cannot be reused or recycled, ensuring that they are disposed of in an environmentally responsible way in accordance with good industry practice.

86. The Decommissioning Plan must include but not be limited to:

a. Details on all infrastructure to be decommissioned, including details, method and location of reuse, recycling or disposal and the reasons why the options have been chosen.

b. Details of specific infrastructure to remain on-site post-closure and reasons why it will remain on site.

c. Scheduling and timing for decommissioning.

d. Details for finished ground cover at completion of decommissioning and future intended land use.

87. The consent holder must prepare the Decommissioning Plan and any amendments in accordance with conditions 19-22 of this consent.

88. The consent holder must notify Mackenzie District Council and Environment Canterbury at least thirty (30) working days prior to the commencement date for decommissioning the Twizel Solar Plant.

89. The consent holder must notify Mackenzie District Council and Environment Canterbury at least ten (10) working days prior to completion of the decommissioning to allow Council staff to carry out site inspections to determine compliance with the certified Decommissioning Plan.

90. The consent holder must ensure that a Decommissioning Report is prepared and submitted to Mackenzie District Council and Environment Canterbury following completion of the decommissioning of the Twizel Solar Plant. The report must detail evidence demonstrating that the site is left in a condition that is safe and suitable for the subsequent land use.

Draft Consent Conditions – Twizel Solar Project

Environment Canterbury Regional Council – Land Use Consent

- Section 9 RMA - To undertake earthworks over aquifers

Limits

1. The works authorised by this resource consent are limited to the excavation of land associated with the development of the Twizel Solar Plant, Twizel, legally described as Lot 3 DP 422901, at or about map reference NZTM2000 1372167 mE – 5091255 mN, within the site shown on the attached drawing number 210982-02 Sheet GD1 Rev WD, which forms part of this resource consent.

   Advice Note: *Driving piles for the for building/structure foundations, or for solar array foundations does not constitute 'excavation of land' and is therefore not managed under this resource consent.*

2. The maximum depth of excavation for the works authorised by this resource consent must not exceed 1.8 metres below ground level.

   Advice Note: *It will be up to the Consent Holder to demonstrate compliance with the maximum excavation depth. This can be done, for example, via reference to a specified datum and reduced levels from that datum or via site specific survey points or other measurements.*

3. Excavation works must not be carried out within the exposed water table during times when groundwater levels are higher than the deepest part of the excavations.

Prior to Commencement of Works

4. Prior to commencement of the works described in Condition (1), all personnel working on the site must be made aware of, and have access to, the following:
   a. The contents of this resource consent document and all associated documents.

   b. Resource Consents CRCC*** and CRCC**** and all associated documents, including the Erosion and Sediment Control Plan (ESCP) required to be prepared and maintained under Resource Consent ***.

5. At least 10 working days prior to the commencement of works on site, the Canterbury Regional Council, Attention: Compliance Manager (via ecinfo@ecan.govt.nz) must be informed of the commencement of works.

6. At least 10 working days prior to the commencement of works on site, the consent holder must request a pre-construction site meeting with the Canterbury Regional Council, Attention: Compliance Manager (via ecinfo@ecan.govt.nz), and all relevant parties, including the primary contractor. At a minimum, the following must be covered at the meeting:

a. Scheduling and staging of the works.

b. Responsibilities of all relevant parties, including confirmation that the person/persons implementing the ESCP on the site is/are suitably trained and/or experienced.

c. Contact details for all relevant parties.

d. Expectations regarding communication between all relevant parties.

e. Procedures for implementing any amendments.

f. Site inspection.

g. Confirmation that all relevant parties have copies of the contents of this resource consent document and all associated documents including the ESCP and any other discharge treatment methodologies employed.

Advice Note**: Pre-construction site meetings required under resource consents *** may be held as one single pre-construction site meeting at the commencement of works on site.*

During Works

7. All practicable measures must be taken to:

    a. Minimise soil disturbance to that necessary to carry out the works described under condition 1;

    b. Prevent soil erosion

    c. Avoid placing excavated material in a position where it may enter:

        i. Any neighbouring site; or

        ii. A surface water body.

8. Tracking of material off-site during the works must be avoided at all times. In the event that material is tracked off-site, the tracked material must be removed as soon as practicable.

Discovery of Contaminated Soils or Materials

9. In the event that any contaminated soil or material is uncovered by the works, a Contamination Discovery Protocol must be implemented, including but not limited to the following steps:

    a. Earthworks within ten metres of discovered contaminant soil or material must cease immediately;

    b. All practicable steps must be taken to prevent the contaminated material becoming entrained in stormwater. Immediate steps must include, where practicable:

        i. Diverting any stormwater runoff from surrounding areas away from the contaminated material; and

ii. Minimising the exposure of the contaminated material, including covering the contaminants with an impervious cover;

c. Notification of the Canterbury Regional Council, Attention: Compliance Manager (via ecinfo@ecan.govt.nz), within 24 hours of the discovery;

d. Earthworks within 10 metres of discovered contaminant soil or material must not recommence until a suitably qualified and experienced contaminated land practitioner (SQEP) confirms to Canterbury Regional Council, Attention: Compliance Manager, that continuing works does not represent a significant risk to the environment;

e. All records and documentation associated with the discovery must be kept and copies must be provided to the Canterbury Regional Council within 20 working days of such a request being made

10. Any material removed from the site during the works that is potentially or confirmed as contaminated, must be disposed of at a facility authorised to receive such material. Receipts of disposal must be provided to the Council within 10 working days of the material being disposed of.

Spills

11. All practicable measures must be taken to avoid spills of fuel or any other hazardous substances within the site. These measures must include:

    a. Refuelling of machinery and vehicles must not occur within 20 metres of:

        i. Open excavations.

        ii. Surface waterbodies.

        iii. Exposed groundwater.

        iv. Stormwater devices.

        v. Areas with ecologically significant indigenous biodiversity values as shown on the [site plan].

    b. In the event of a spill of fuel or any other hazardous substance, the spill must be cleaned up as soon as practicable, the stormwater system or erosion and sediment control measure must be inspected and cleaned and measures taken to prevent a recurrence.

    c. The Canterbury Regional Council, Attention: Compliance Manager, must be informed (via ecinfo@ecan.govt.nz) within 24 hours of a spill event exceeding five litres and the following information provided:

        i. The date, time, location and estimated volume of the spill.

        ii. The cause of the spill.

        iii. The type of hazardous substance(s) spilled.

        iv. Clean up procedures undertaken.

v. Details of the steps taken to control and remediate the effects of the spill on the receiving environment.

vi. An assessment of any potential effects of the spill.

vii. Measures to be undertaken to prevent a recurrence.

12. Any materials removed under Condition 11 must be removed and disposed of at a site authorised to accept such materials. Receipts of disposal must be provided to the Council within 10 working days of the material being disposed of.

Accidental Artesian Aquifer Interception

13. In the event of an interception or unanticipated levels of artesian flows, all practicable measures must be undertaken to remedy or mitigate any change in aquifer pressure, water quality or temperature. This must include:

    a. The contractor must immediately cease all works within the immediate area of excavation that caused the interception of the artesian flows.

    b. The contractor must determine and document whether the flow is constant or increasing, if the turbidity is constant or increasing and if the flow is confined to the excavation.

    c. The contractor must notify the site engineer and/or other appropriate personnel to determine the emergency measures required to arrest the artesian flow. Emergency measures must include, but not be limited to:

        i. The installation of a layer of impermeable material to the extent required to reform a capping layer over the aquifer to prevent the upward movement of groundwater through the confining layer; or

        ii. Inserting a vertical pipe in the aquifer interception point (if practicable) and provide for a secure seal against the pipe to enable the stabilisation of the artesian flow in the pipe, and to determine the above ground water level to assess any further measures.

    d. The temporary artesian flow beyond the excavation must be controlled and mitigated with appropriate erosion and sediment control measures.

    e. The Canterbury Regional Council, Attention: Compliance Manager (via ecinfo@ecan.govt.nz) must be notified as soon as practicable but no later than two working days after the interception.

    f. Upon remediation and arresting of flow from the aquifer interception, the construction methodology must be reconsidered and, if required, revised to avoid future interceptions of the aquifer.

After Completion of Works

14. Within two weeks of the completion of works authorised by this resource consent:

    a. All disturbed areas must be stabilised and/or revegetated; and

    b. All spoil and other waste materials from the works must be removed from site.

***Advice Note**: The use of polymers for site stabilisation purposes, including those forming a component of hydro-seeding formulas, may require separate authorisations. Further, polymers are not considered a long-term or permanent stabilisation technique and may require repeated application to ensure the site remains stabilised.*

Administration

15. If this resource consent is not given effect to before [DATE], it will lapse in accordance with clause 26 of Schedule 5 of the Fast-track Approvals Act 2024.

Draft Consent Conditions – Twizel Solar Project

Environment Canterbury Regional Council - Discharge to Land

- Section 15 RMA - To discharge operational phase stormwater to land

Limits

1. This resource consent authorises only the discharge of stormwater generated from

    a. Photo-voltaic (PV) solar panel arrays.

    b. Roofs of buildings and structures and other supporting solar plant infrastructure.

    c. Roads, hardstand areas, and impervious areas associated with the Twizel Solar Plant, Twizel, on land legally described as Lot 3 DP 422901, labelled on 'Site Overview Plan' drawing number 210982-02 Sheet GD1 Rev W attached to and forming part of this consent.

2. Stormwater must only be discharged onto and into land within the boundary of the site.

3. All stormwater infiltration devices (including soakpits or soakage swales) must be sized to provide sufficient soakage for the volume generated from up to and including the 10 percent annual exceedance probability (10% AEP) rainfall event.

4. Unless treatment is provided, the discharge of roof stormwater must not arise from:

    a. Copper building materials; or

    b. Unpainted galvanised sheet materials.

5. There must be no stormwater discharges from any solar panels without glass laminate encapsulation.

6. All panels installed and used on site must be coated in anti-reflective coating which contains no PFAS and have gridlines.

7. Solar panels and array tables must be cleaned with water or non-caustic detergent only.

Solar Plant Layout

8. The solar arrays, inverters, switchyard, workshop, operations and maintenance building and laydown areas at the solar plant must be located in general accordance with drawing numbers 210982-02 GD1-GD15 Rev WD.

9. Stormwater from the solar plant switchyard, workshop and operations and maintenance buildings must be discharged in general accordance with the stormwater design shown on drawing numbers 210982-02 GD12 Rev WD and 210982-02 GD15 Rev WD.

Solar Plant Inspections and Maintenance

10. Land onto which stormwater is discharged from the solar panel arrays must be maintained in a state in which significant erosion is either avoided or remedied.

***Advice Note**: For the purpose of this condition, 'significant erosion' is any erosion that could result in sediment entering surface water or entering adjacent properties.*

***Advice Note:** Measures to prevent significant erosion may include using grass, coarse gravel, mulch, polymers, coconut matting or other means that sufficiently stabilise the soils in the dripline of the solar panels to prevent erosion or the formation of channels or rills.*

11. The driplines of the solar panel arrays within the Solar Plant must be inspected for erosion three months following the completion of the installation of the panel arrays, and thereafter annually, with the following information recorded:

    a. Any significant erosion observed during the inspections must be photographed and recorded.

    b. Records of visual assessments including photographs must be kept and provided to the Canterbury Regional Council on request.

12. If during the life of the solar plant, the discharges from the solar arrays cause visible channels or rills and there is associated sediment runoff and/or stormwater is visibly ponding on the soil surface for longer than 48 hours and moving laterally, the Consent Holder must:

    a. Implement erosion mitigation measures including, but not limited to, soil respreading, grass seeding, or the installation of a strip of gravel, or mulch, or geotextile or some type of flow distribution panel; and

    b. Implement infiltration enhancement measures, including but not limited to, the installation of surface soakage areas, surface contouring to distribute overland flows or some other measures to increase infiltration; and

    c. Notify the Canterbury Regional Council, Attention: Compliance Manager (via ecinfo@ecan.govt.nz) within 10 working days of the issue arising and within 10 working days of the mitigation measures being implemented.

13. Throughout the operation of the solar plant, the consent holder must undertake the following:

    a. Annual visual inspections of the panels for any signs of damage; and,

    b. Visual inspection of the panels after a hail event with a hail diameter of 25 millimetres or greater; and,

    c. Ongoing monitoring for signs of damage via system performance data, and any portion of the site where damage is suspected to be investigated further by visual inspection; and,

    d. Appropriate repair of damaged panels. Repair of damaged panels (which may include removal of damaged panels), must be undertaken within one month of discovery of damage, to ensure no internal components are exposed to stormwater.

e. Records of any inspections or maintenance carried out in accordance with (a) - (d) must be kept by the Consent Holder and provided to Canterbury Regional Council upon request.

***Advice Note**: For the purpose of compliance with (d), damaged solar panels must not be stored outside.*

Stormwater Management Plan

14. No less than 20 working days prior to commissioning of the Solar Plant, the Consent Holder must submit a Stormwater Management Plan (SWMP) to the Canterbury Regional Council, Regional Leader - Monitoring and Compliance for certification.

15. The purpose of the SWMP is to demonstrate how stormwater from the operating solar plant will be managed and discharged to land only (via soakage) to avoid, remedy or mitigate adverse effects on the environment. The SWMP must be prepared by a suitably qualified and experienced practitioner and must include the following information:

    a. Confirmation of the availability of stormwater soakage to alleviate any possible ponding under the solar panel arrays; and

    b. The design of the proposed stormwater soakage to be provided for associated buildings via soakage pits.

16. The certified SWMP (and any subsequent amendments) must be implemented and adhered to throughout the operation of the solar plant. Any amendments made must be in line with Condition 17.

    ***Advice Note**: The SWMP must be consistent with all other management plans for the consented activity certified by Canterbury Regional Council or Mackenzie District Council.*

17. The SWMP may be amended at any time. Any amendments must be:

    a. Only for the purpose of improving the efficacy of the stormwater management measures and must not result in reduced discharge quality;

    b. For the purpose of applying best practicable measures to mitigate adverse effects;

    c. Consistent with the conditions of this resource consent; and

    d. Submitted in writing for certification to the Canterbury Regional Council, Attention: Regional Leader Compliance Monitoring, prior to any amendment being implemented for certification.

    ***Advice Note:** The amended SWMP must be consistent with all other management plans for the consented activity certified by Canterbury Regional Council or Mackenzie District Council.*

Soil Monitoring Plan

18. A Soil Monitoring Plan (SMP) must be prepared in consultation with mana whenua rūnaka and provided to the Canterbury Regional Council, Attention: Compliance Manager (via ecinfo@ecan.govt.nz), for certification at least three months prior to the commencement of any physical works for the initial construction of the Solar Plant. The

purpose of the SMP is to monitor the potential for soil contamination across the site. The SMP must:

a. Be prepared by a suitably qualified and experienced practitioner (SQEP) with experience in soil contamination and in general accordance with the Ministry for the Environment's *Contaminated land management guidelines No. 5: Site investigation and analysis of soils (Revised 2021)*; and

b. Detail a representative soil sampling regime to monitor changes to soil health over the lifetime of the solar plant; and

c. Detail the soil quality sampling to be undertaken in the proposed sampling locations at the following stages:

   i. Prior to commencement of construction (baseline testing);

   ii. Prior to commencement of operation;

   iii. Every fifth year after commencement of operation; and

   iv. At decommissioning.

Advice Note: *The SMP must be consistent with all other management plans for the consented activity certified by Canterbury Regional Council or Mackenzie District Council.*

19. Representative soil samples must be taken:

    a. At the stages detailed in the SMP; and

    b. By, or under the supervision of, a SQEP and in accordance with best practice sampling methodologies; and

    c. From the representative locations detailed in the certified SMP; and

    d. From within the driplines of the solar panels; and

    e. At a depth of no greater than 50 millimetres below the ground surface.

20. The soil samples required by Condition 19 must be analysed by an International Accreditation New Zealand (IANZ) accredited laboratory, or by a laboratory accredited by an organisation with a mutual agreement with IANZ, for the following:

    i. pH
    ii. Electrical conductivity
    iii. Silver – Ag
    iv. Cadmium – Cd
    v. Copper – Cu
    vi. Lead – Pb
    vii. Antimony – Sb
    viii. Zinc – Zn
    ix. Per-fluorinated compounds

21. Within three months of the completion of each soil quality monitoring event detailed in the SMP, the Consent Holder must submit to the Canterbury Regional Council, Attention: Compliance Manager (via ecinfo@ecan.govt.nz), a 'Soil Monitoring Report' prepared in general accordance with the Ministry for the Environment's Contaminated land management guidelines No. 1: Reporting on contaminated sites in New Zealand (Revised 2021) (CLMG1). The Monitoring Report must include:

a. Copies of the laboratory analysis results; and

b. A comparison of the soil monitoring results against the relevant land use and environmental protection standards applicable at the time; and

c. Assessment of the results of soil contaminant testing, including if the results indicate any trend of increasing contaminants or if any contaminant exceeds the WasteMINZ Class 4 Guidelines Table 3-C Adopted Values or the 'PFAS National Environmental Management Plan Version 3.0, Heads of EPA Australia and New Zealand 2025, Table 6, Interim Ecological indirect exposure – all land uses' (or, where these Guidelines have been updated, the updated values); and

d. If the assessments indicate that soil contaminants are increasing or exceed the Guideline Values, details of mitigating actions to be undertaken to ensure that Guideline Values are not exceeded or further exceeded.

e. Any mitigating actions recommended in the Soil Monitoring Report must be implemented by the consent holder as soon as practicable.

Solar Plant Workshop, Operations and Maintenance Buildings and Switchyard

22. Stormwater must be discharged into land via the following stormwater system:

    a. Stormwater from roofs shall be discharged via a sealed system that excludes all other stormwater;

    b. Stormwater from roofs shall be collected in rainwater tank/s; and

    c. Stormwater from hardstand areas shall be discharged via a vegetated swale as shown on drawing numbers 210982-02 Sheet GD12 Rev WD and 210982-02 Sheet GD15 Rev WD, which forms part of this consent.

23. The stormwater system must be designed and constructed to collect, treat, and dispose of stormwater from the contributing catchment from storm events up to and including a 10 percent Annual Exceedance Probability (AEP) event of 1-hour duration.

24. Stormwater must not pond in any swales for longer than 48 hours after the cessation of any storm event.

25. Soakage swales and any soak pits must:

    a. Store and dispose of all rainfall events up to and including the 1-hour duration ten (10) percent annual exceedance probability event from the contributing catchment;

    b. Have a base that extends into free draining soil strata; and

    c. Have a factor of safety of three incorporated into the soak pit design to account for reduction of infiltration performance over time (clogging).

Solar Plant Workshop, Operations and Maintenance Buildings and Switchyard – Inspections and Maintenance

26. The stormwater systems for the solar plant workshop, operations and maintenance buildings and switchyard must be maintained by:

a. Inspecting the soakage swales and soak pits at least once every six months.

b. Removing any visible hydrocarbons, debris or litter within 10 working days of the inspection.

c. Removing any accumulated sediment in the soakage swales within 10 working days of the inspection.

d. Removing any accumulated sediment in the sumps when the sediment occupies more than one quarter of the depth below the invert of the outlet pipe.

e. Repairing any scour or erosion within 10 working days of the inspection.

Design Plans and Certification

27. At least 10 working days prior to the commencement of the installation of the stormwater systems in condition 26, the consent holder must submit to the Canterbury Regional Council, Attention: Compliance Manager:

    a. Final detailed design plans for the stormwater system;

    b. A certificate signed by a Chartered Professional Engineer (CPEng) with stormwater system design and construction experience confirming that the stormwater system has been designed in accordance with the conditions of this resource consent; and

    c. A statement signed by the CPEng confirming that they are competent to certify the engineering work.

    Advice Note: *For the avoidance of doubt; the requirement for CPEng sign-off applies only to the stormwater system for the solar plant workshop and operations and maintenance buildings area and the switchyard. CPEng sign-off is not required for the design of the wider solar plant.*

28. The stormwater systems in condition 26 must not be constructed prior to confirmation being received from the Canterbury Regional Council, Attention: Compliance Manager, that it meets the requirements under this resource consent.

29. Within 10 working days following the completion of the installation of the stormwater systems in condition 26, the consent holder must submit to the Canterbury Regional Council, Attention: Compliance Manager:

    a. All as-built design plans of the stormwater system installed;

    b. A certificate signed by a CPEng with stormwater system design and construction experience confirming that confirming that the installed stormwater system complies with the conditions of this resource consent; and

    c. A statement signed by the CPEng confirming that they are competent to certify the engineering work.

Spills

30. All practicable measures must be taken to avoid spills of fuel or any other hazardous substances within the site. In the event of a spill of fuel or any other hazardous substance:

a. The spill must be cleaned up as soon as practicable, the stormwater system must be inspected and cleaned and measures must be taken to prevent a recurrence.

b. The Canterbury Regional Council, Attention: Compliance Manager, Regional Leader – Monitoring and Compliance must be informed within 24 hours of a spill event exceeding five litres and the following information provided:

i. The date, time, location and estimated volume of the spill.
ii. The cause of the spill.
iii. The type of hazardous substance(s) spilled.
iv. Clean up procedures undertaken.
v. Details of the steps taken to control and remediate the effects of the spill on the receiving environment.
vi. An assessment of any potential effects of the spill.
vii. Measures to be undertaken to prevent a recurrence.

31. All best practice options must be used to contain spills or leaks of any hazardous substance from being discharged via the stormwater system. These must include, but not be limited to the following:

a. Making spill kits available to contain or absorb any hazardous substances used or stored on the site.

b. Maintaining signs to identify the location of the spill kits.

c. Maintaining written procedures in clearly visible locations that are to be undertaken to contain, remove and dispose of any spilled hazardous substance.

Administration

32. If this resource consent is not given effect to before [DATE], it will lapse in accordance with clause 26 of schedule 5 of the Fast-track Approvals Act 2024.

Draft Consent Conditions – Twizel Solar Project

Environment Canterbury Regional Council – Discharge to Land

- Section 15 RMA -Discharge of construction phase stormwater to land.

Limits

1. The activity authorised under this resource consent is limited to:

2. The discharge to land of sediment-laden stormwater and construction phase stormwater from exposed areas during the development of the Twizel Solar Plant, Twizel, legally described as Lot 3 DP 422901, at or about map reference NZTM2000 1372167 mE - 5091255 mN, as shown on drawings 210982-02 Sheet EW1 Rev WD, 210982-02 ES1 Rev WD and 210982-02 Sheet ES2 Rev WD ,which form part of this resource consent; and

3. Sediment laden stormwater must be discharged:

    a. In accordance with the Erosion Sediment Control Plan (ESCP) required by Condition (9) of this resource consent;

    b. In accordance with the Stormwater Management Plan submitted with the consent application; and

    c. Onto and/or into land via soak holes, excavations and bunded areas.

4. The area of exposed ground must not exceed 40,000 square metres (4 hectares) at any one time.

Prior to Commencement of Work

5. Prior to the commencement of the activities described in Condition (2), all personnel working on the site must be made aware of and have access to:

    a. The contents of this resource consent document and all associated documents.

    b. The ESCP and other discharge treatment methodologies.

    c. Resource Consents CRC*** and CRC***** and all associated documents.

    d. The Stormwater Management Plan.

6. All erosion and sediment control measures detailed in the ESCP required by Conditions 9-11 of this resource consent must be installed prior to the commencement of any earthworks or stripping of vegetation and topsoil occurring on the site.

7. At least 10 working days prior to the commencement of works on site, the Canterbury Regional Council, Attention: Compliance Manager (via ecinfo@ecan.govt.nz) must be informed of the commencement of works.

8. At least 10 working days prior to the commencement of works on site, the consent holder must request a pre-construction site meeting with the Canterbury Regional Council, Attention: Compliance Manager (via ecInfo@ecan.govt.nz), and all relevant parties,

including the primary contractor. At a minimum, the following must be covered at the meeting:

a. Scheduling and staging of the works (if applicable).

b. Responsibilities of all relevant parties, including confirmation that the person or persons implementing the ESCP on the site are suitably trained and/or experienced.

c. Contact details for all relevant parties.

d. Expectations regarding communication between all relevant parties.

e. Procedures for implementing any amendments.

f. Site inspection.

g. Confirmation that all relevant parties have copies of the contents of this resource consent document and all associated erosion and sediment control plans and any other discharge treatment methodologies employed.

Advice Note: *Pre-construction site meetings required under resource consents ******* may be held as one single pre-construction site meeting at the commencement of works on site.*

Erosion Sediment and Control Plan

9. The purpose of the ESCP is to ensure that earthworks are managed to avoid discharge of sediment-laden stormwater to surface waterbodies, whether directly or indirectly, and to ensure that all stormwater is retained, treated, and discharged to land within the site boundaries via infiltration so as to protect the receiving environment. The ESCP must:

    a. Be prepared by a suitably qualified person with experience in erosion and sediment control in accordance with:

        i. Canterbury Regional Council's Erosion and Sediment Control Toolbox for the Canterbury Region (ESCT), which can be accessed under http://esccanterbury.co.nz/; or

        ii. an equivalent industry guideline. If an alternative guideline is used, the ESCP must provide details of the relevant alternative methods used and an explanation of why they are more appropriate than the ESCT; and

    b. Be signed by an engineer or suitably qualified person with experience in erosion and sediment control, confirming that the erosion and sediment control measures for the site are appropriately sized and located in accordance with the ESCT or alternative guideline.

10. The ESCP must:

    a. Include a map showing the location of all works, including any staging if proposed.

    b. Detailed plans showing the location of sediment control measures, on-site catchment boundaries, and sources of runoff.

c. Detail how best practice measures are taken to minimise discharges of sediment-laden stormwater run-off beyond the boundaries of the site.

d. Include drawings and specifications of designated sediment control measures, if these are not designed and installed in accordance with the ESCT.

e. Detail the methodology for stabilising the site entrance and exit points and any measures employed to prevent off-site tracking of sediment and other materials from the site.

f. Include a confirmation that the erosion and sediment control devices have been sized appropriately in accordance with the ESCT.

g. Include a programme of works, including a proposed timeframe for each stage of the works (if applicable) and the earthworks methodology.

h. Detail the management of any stockpiled material including long term stockpiles.

i. Detail inspection and maintenance of the sediment control measures.

j. Where specific discharge points are used such as infiltration devices, define the discharge points where stormwater is discharged onto land / infiltrates into land.

k. Include a description of dust mitigation to be used and details of best practise options to be applied to mitigate dust and sediment discharge beyond the site boundary.

l. Detail the methodology for stabilising the site if works are paused for more than five working days or abandoned.

m. Detail the methodology for stabilising the site and appropriate decommissioning of all erosion and sediment control measures after works have been completed.

n. Where present, detail measures to keep 'A' and 'B' soil horizons separate upon their removal during excavation so they can be replaced as they were removed (i.e. not mixed) following completion of earthworks.

Advice Note: *for the purposes of this consent, 'stabilising' or 'stabilised' requires that disturbed soils are stabilised sufficiently so that the risk of either off-site effects, or effects on surface water, from sediment are low.*

Advice Note: *The 'A horizon', is also known as topsoil. This can have an organic layer 'O horizon' in some cases, which is often only 1-2 cm, but for simplicity they are both referred to as the 'A horizon'. The 'B Horizon' is a second layer which often has clay in it.*

11. The ESCP must be submitted to the Canterbury Regional Council, Attention: Compliance Manager, after the commencement of the resource consent and at least 10 working days prior to works commencing, for certification that it complies with the ESCT and the conditions of this resource consent.

    a. The discharge must not commence until approval has been received from the Canterbury Regional Council that the ESCP is consistent with the

ESCT or equivalent industry guideline as per the requirements under Condition (9)(a)(ii), and the conditions of this resource consent.

Advice Note: *The ESCP must be consistent with all other management plans for the consented activity certified by Canterbury Regional Council or Mackenzie District Council.*

12. The ESCP may be amended at any time. Any amendments must be:

    a. Only for the purpose of improving the efficacy of the erosion and sediment control measures;

    b. For the purpose of applying best practice measures to mitigate sediment transport off-site;

    c. Consistent with the conditions of this resource consent; and

    d. Submitted in writing to the Canterbury Regional Council, Attention: Compliance Manager, prior to any amendment being implemented.

13. Erosion and sediment control measures must be inspected at least once per week, and as soon as practicable following any rainfall event that results in more than five millimetres of rainfall within any 24-hour period at the site. Any accumulated sediment must be removed, and repairs made, as necessary, to ensure effective functioning of measures and devices. Records of any inspections must be kept and provided to the Canterbury Regional Council on request.

14. If the consent holder abandons work on-site, or pauses works for more than 10 working days, adequate preventative and remedial measures must be taken to manage sediment discharges from exposed or unconsolidated surfaces. These measures must be maintained for so long as necessary until the site has been stabilised sufficiently so that the risk of off-site effects on surface water are low.

During Works

15. All practicable measures must be taken to:

    a. Minimise soil disturbance to that necessary to minimise the potential for sediment-laden stormwater runoff to be generated.

    b. Prevent soil erosion as a result of stormwater runoff generated from the works area.

    c. Avoid placing excavated material in a position where it may become entrained in stormwater runoff and discharged to:

        i. any surface water body; or
        ii. any neighbouring site.

16. Tracking of material off-site during the works must be avoided at all times. In the event that material is tracked off-site, the tracked material must be removed as soon as practicable.

17. Material discharged into excavations or onto land within the site must only be either:

    a. Material excavated from within the site; or

b. Material that meets the definition of 'cleanfill' as defined by the Canterbury Land and Water Regional Plan.

Advice Note: *For the purpose of condition 17(a), any material excavated from the site that is contaminated or potentially contaminated must not be discharged to land and must be disposed of at a site authorised to accept contaminated material, as required by the Contamination Discovery Protocol of associated resource consent CRC .*

Advice Note: *The LWRP defines 'cleanfill' as "material that, when buried, will have no adverse effects on people or the environment. Cleanfill material includes virgin natural materials such as clay, soil and rock, and other inert materials such as concrete or brick that are free of:*

i. combustible, putrescible, degradable or leachable components;
ii. hazardous substances;
iii. products or materials derived from hazardous waste treatment, hazardous waste stabilisation, or hazardous waste disposal practices;
iv. materials that may present a risk to human or animal health, such as medical and veterinary waste, asbestos, or radioactive substances; or
v. liquid waste.

18. There must be no noxious, dangerous, objectionable or offensive dust to the extent that it causes an adverse effect at or beyond the boundary of the site as shown on drawing number 210982-02 Sheet GD1 Rev WD attached to and forming part of this resource consent.

19. During works and when a discharge of construction-phase stormwater and/or dewatering water is occurring via dedicated management or discharge devices, the discharge locations into land associated with such dedicated devices must be visually assessed for:

    a. Any sheen of oil or grease or discoloration (other than discolouration from sediment); and

    b. Any sludge or emulsion; and

    c. Observations of effects observed under Clauses (a) or (b) of the dedicated management or discharge devices must be photographed and recorded; and

    d. Records of visual assessments including photographs must be kept and provided to Canterbury Regional Council on request.

Advice Note*: A dedicated management or discharge device includes devices such as sediment retention ponds (SRPs), soakage basins or areas or similar devices that concentrate stormwater or dewatering water into land. They do not include diffuse discharge locations that generally follow natural infiltration patterns across the site.*

Monitoring

20. During works and when a discharge of construction-phase stormwater is occurring, the stormwater runoff generated during the rainfall and flowing towards the discharge points into land must be visually assessed for:

    a. Any sheen of oil or grease or discoloration (other than discolouration from sediment).

b. Any sludge or emulsion.

c. Observations must be photographed and recorded.

d. Records of visual assessments including photographs must be kept and provided to Canterbury Regional Council on request.

Advice Note: *A dedicated management or discharge device includes devices such as sediment retention ponds (SRPs), soakage basins or areas or similar devices that concentrate stormwater or dewatering water into land. They do not include diffuse discharge locations that generally follow natural infiltration patterns across the site.*

Spills

21. All practicable measures must be taken to avoid spills of fuel or any other hazardous substances within the site. These measures must include:

    a. Refuelling of machinery and vehicles must not occur within 20 metres of:
        i. Open excavations;
        ii. Exposed groundwater;
        iii. Surface water bodies; or
        iv. Stormwater devices.

    b. A spill kit, or multiple spill kits, must be kept on site that is capable of absorbing the quantity of oil and petroleum products that may be spilt on site at any one time.

    c. In the event of a spill of fuel or any other hazardous substance, the spill must be cleaned up as soon as practicable, the stormwater system must be inspected and cleaned, and measures taken to prevent a recurrence;
        i. The Canterbury Regional Council, Attention: Compliance Manager, must be informed within 24 hours of a spill event exceeding five litres and the following information provided:
        ii. The date, time, location and estimated volume of the spill;
        iii. The cause of the spill;
        iv. The type of hazardous substance(s) spilled;
        v. Clean up procedures undertaken;
        vi. Details of the steps taken to control and remediate the effects of the spill on the receiving environment;
        vii. An assessment of any potential effects of the spill; and
        viii. Measures to be undertaken to prevent a recurrence.

22. Any materials removed under Condition 21(c) must be removed and disposed of at a site authorised to accept such materials. Receipts of disposal must be provided to the Council within 10 working days of the material being disposed of.

Upon Completion of Works

23. Erosion and sediment control measures must not be decommissioned until the site is stabilised and the stormwater system for the developed site is functioning. Decommissioning of the measures must be undertaken in the following order:

    a. All disturbed areas or loose sediment (if not removed) must be stabilised within 10 working days and/or re-vegetated as soon as practicable following completion of the works.

b. Any visible debris, litter, sediment and hydrocarbons must be removed from all sediment control measures and disposed at a suitable facility.

c. Erosion and sediment control measures must be removed.

Advice Note: *The use of polymers for site stabilisation purposes, including those forming a component of hydro-seeding formulas, may require separate authorisations. Further, polymers are not considered a long-term or permanent stabilisation technique and may require repeated application to ensure the site remains stabilised.*

24. Upon completion of works and the removal of erosion and sediment control measures, any visible sediment accumulated on impervious surfaces within or immediately adjacent to the works site must be stabilised to minimise the risk of sediment becoming entrained in stormwater.

Administration

25. If this resource consent is not given effect to before [DATE], it will lapse in accordance with clause 26 of Schedule 5 of the Fast-track Approvals Act 2024.