Sections 95 and 95A-E

Resource Management Act 1991

Decision and Planning Report

Planning Report pursuant to section 42A of the Resource Management Act 1991 recommending whether or not an application for resource consent should be:

- Publicly notified, limited notified or non-notified

Decision pursuant to section 95 of the Resource Management Act 1991

APPLICATION NUMBER(S)	RC245775
APPLICANT	Darfield Solar and Energy Storage Ltd
BRIEF DESCRIPTION OF THE APPLICATION	This is a land use consent application to construct, operate and maintain a solar farm and battery energy storage facility.
ADDRESS	1352 Homebush Road, Darfield; Lot 1 DP 434071
LEGAL DESCRIPTION	Lot 1 DP 434071, Lot 2 DP 60325
TITLE REFERENCE	529207, CB36A/467
AREA	153.633 ha
ZONING / OVERLAYS	**Operative Selwyn District Plan (2016), Rural Volume** Rural Outer Plains Zone **Partially Operative Selwyn District Plan (Appeals Version)** General Rural Zone Plains Flood Management Overlay Noise Control Overlays - State Highway Noise Control Overlay, Railway Network Noise Overlay, and Dairy Processing Zone Noise Control Overlay Rural Density Overlay - SC-RD2 East Plains / Te Waihora ki Waimakariri
OVERALL ACTIVITY STATUS	**Discretionary**

The Application

1. This application was formally received by the Selwyn District Council on 9 September 2024. A Request for Further Information (RFI) was sent on 12 November 2024.

2. Responses to the RFI were received on 17 January, 10 February, 25 February, 10 March, 27 March, 9 April, 23 April, 6 May and 7 May 2025, and this information now forms part of the application.

3. The application proposes to construct, operate and maintain a solar farm and battery energy storage facility located at 1352 Homebush Road, Darfield, as detailed in **Figure 1** below. The site has an area of approximately 148 hectares. The application consists of 117 MW of solar photovoltaic power generation plus

106 MW / 200 - 400 MWh of battery energy storage (BESS). The solar farm will connect to the National Grid via the Kimberly Substation via underground cabling.

4. The total solar array will be comprised of approximately 188,000 solar panels, set within single axis tracking tables. Each table consists of approximately 60 panels. Each row of tables will be separated by an approximately 3.22m gap. There will be approximately 20 inverters to convert the direct current to Alternating Current (AC) electricity

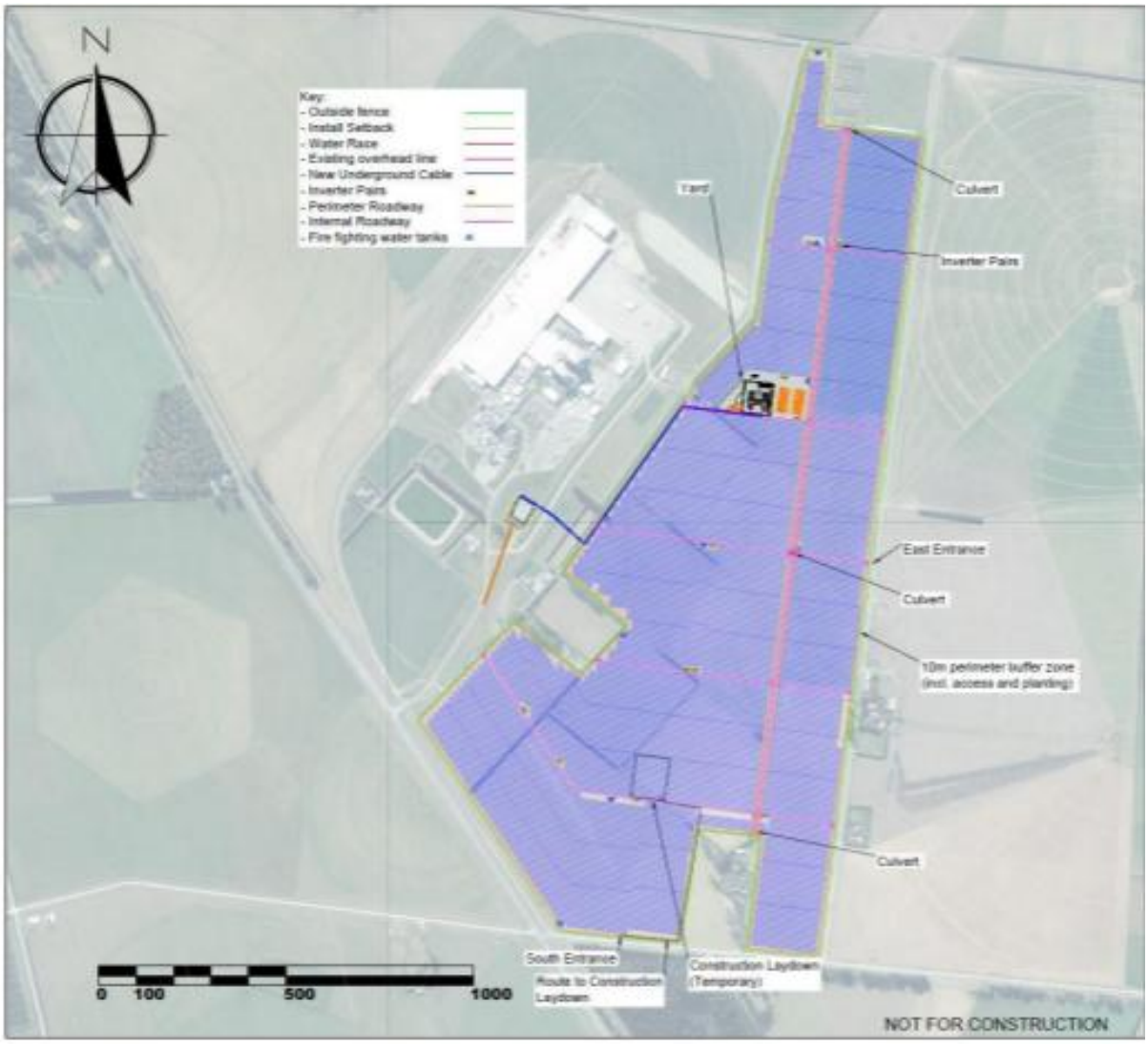


Figure 1. Scheme Plan (source: AEE)

5. The Battery Energy Storage System (BESS) is a facility that consist of numerous battery cells or modules connected together and often housed in containers. The applicant has provided an example of a BESS located within a solar farm, as detailed in **Figure 2** below

Figure 2. Example of solar array and BESS installation

6. Resource consent is required for the establishment of a renewable electricity generation activity, to undertake earthworks exceeding the maximum permitted volume and the establishment of a vehicle crossing. The application seeks a consent duration of 35 years.

7. A comprehensive description of the proposal is set out in Section 3 of the Assessment of Environmental Effects (AEE). The main aspects of the application are as follows:

   (a) The solar panels will be approximately 2.2m long and 1.3m wide, tilting on a single axis. When horizontal (stowed) they will be located approximately 1.5m above ground. At full tilt, the panels will reach a height of approximately 2.8m, positioned about 0.3 - 0.9m above ground level.

   (b) The tables will be fixed to piles that are driven (percussive) into the ground

   (c) It is proposed to construct the solar array in its entirety and in accordance with the following:

      (i) no staging of the development or construction is proposed. Up to 350 staff are anticipated to be working on site during the peak of construction works

      (ii) it is anticipated that the construction will likely take a period of 18 months to complete

      (iii) construction works which generates noise is proposed to be limited to Mondays to Saturdays and between the hours of 7:30am and 6:00pm

      (iv) piling works to be undertaken over 18 months

      (v) No stockpiling of soils or material is proposed

   (d) Other buildings, infrastructure and equipment include:

      (i) A site office with a floor area of approximately 36m^2. The site office is anticipated to include a small lunchroom and is proposed to be serviced by a small roof-fed water tank or alternative water supply. Portable units are proposed for toilet facilities.

(ii) A total of 20 inverters are proposed to be situated throughout the site and are proposed to be housed in shipping container, small building or in skid configuration.

(iii) A Battery Energy Storage System is proposed to be located adjacent to the site office and warehouse.

(iv) A parts warehouse with a floor area of approximately 250m^2

(e) Sheep grazing and other primary production is proposed to occur underneath the panels.

(f) It is proposed to undertake mitigation shelterbelt planting of fast growing, evergreen species to fill in gaps and to plant areas where there is no existing planting in accordance with a Landscaping Mitigation Planting Plan. The proposal seeks to remove internal planting within the site prior to construction.

(g) A security fence is proposed to be installed around the site perimeter. The fencing will be of post and chain mesh construction with an approximate height of 2.4m.

(h) The proposal includes an approximate earthworks volume of 36,800m^3. An Erosion and Sediment Control Plan (ESCP) is proposed to be implemented. The following earthworks activities are proposed:

(i) stripping of topsoil to form internal tracks

(ii) topsoil disturbance for site preparation for building, inverters and battery installation

(iii) trenching of up to 1.0m below existing ground level to lay cables to connect the frames of the solar panels together and to the inverters and also to connect the solar array to the Kimberley substation

(i) The site will be accessed from a vehicle crossing on Homebush Road, approximately 330m from the SH73 intersection. The vehicle crossing is proposed to be constructed to a commercial rural standard in accordance with the relevant District Council standards. A secondary vehicle access is proposed from Loes Road, approximately 1.1km north of the intersection with Homebush Road.

(j) Heavy vehicle movements during construction phase are anticipated to be approximately 60 per day during the peak period of construction (approximately 8 - 12 months). Light vehicle traffic throughout the construction phase (18 months) is anticipated to be between 5 - 120 vehicle trips per day.

(k) Static 30,000 litre water tanks are proposed to be located around the site to allow for panel cleaning maintenance and firefighting capacity.

(l) It is anticipated that up to two staff and one technician could potentially be expected to be on-site at any one time.

(m) The following consents have been sought by the applicant from Environment Canterbury Regional Council (ECan) in relation to the proposal:

(i) Discharge of construction phase stormwater to land

(ii) Discharge of operational phase stormwater to land

(iii) earthworks over an aquifer

8. The applicant has volunteered a number of conditions of consent. These are attached as **Appendix 1**.

The Existing Environment

9. The application site has an approximate area of 148ha and is comprised of Lot 1 DP 434071 and Lot 2 DP 60325. The site is located approximately 3 kilometres northwest of the Darfield township, as detailed in **Figure 3** below.

Figure 3. Application site and Immediate Surrounds (source: Toitū Te Whenua (LINZ)

10. The site contains an existing residential dwelling, with farm buildings, landscaping and shelterbelt planting. Access to the residential dwelling is provided by an existing accessway and vehicle crossing via Homebush Road.

11. A watercourse bisects the site, running north to south and a second watercourse runs broadly northwest to southeast from the Fonterra site boundary to connect to the north-south watercourse via a culvert. There are additional water races and drains that run along the site boundaries.

12. The site has predominantly flat topography and is used for cropping and grazing. A number of shelterbelt plantings and mature trees are located throughout the site. Shelterbelt plantings are located along the majority of the northwestern boundary of the site with the Fonterra Dairy Processing Plant.

13. The Fonterra Dairy Processing Plant is located immediately to the north-west of the site and consists of a number of large industrial buildings and associated structure and plant associated with the dairy processing activities that occur on site. Further to the west of the site is comprised of large rural landholdings with associated residential dwellings.

14. The site is bounded on the western boundary by State Highway 73 / West Coast Road and the West Coast Railway Line.

15. Immediately to the south of the site is McHughs Forest Park, owned by the Selwyn District Council. The McHughs Forest Park has a number of walking and cycling paths located throughout the plantation.

16. The land to the south-east of the site is currently rural in character but is zoned Large Lot Residential Zone. Further to the south is the Darfield township.

17. To the north and east of the site are large rural landholdings with associated residential dwellings, landscaping and shelterbelts. The site is bounded on its eastern boundary by Loes Road, a local shingle road providing a connection between Homebush Road to the south and Auchenflower Road to the north.

18. A Selwyn District Council owned reserve is located on the northern boundary. This reserve is an unused gravel pit that has extensive vegetation growth throughout the site.

19. Homebush Road, Loes Road and Auchenflower Road are all metalled local roads.

20. I have visited the site and surrounding environment on a number of occasions.

Activity Status

Operative Selwyn District Plan

21. The application site is zoned Rural Outer Plains Zones

22. The Council released the Appeals Version of the Partially Operative Selwyn District Plan on 27 November 2023, Many provisions are beyond challenge and are operative/treated as operative (pursuant to cl 103 of Schedule 1 and s 86F of the Act) and the corresponding provisions in the Operative Plan are treated as inoperative.

23. There are no relevant rules that still apply following appeals.

Partially Operative Selwyn District Plan (Appeals Version) ("the Partially Operative Plan")

24. The application site is zoned General Rural Zone. The site is also subject to Plains Flood Management Overlay, Noise Control Overlays - State Highway Noise Control Overlay, Railway Network Noise Overlay, and Dairy Processing Zone Noise Control Overlay, and Rural Density Overlay - SC-RD2 East Plains / Te Waihora ki Waimakariri.

25. The Council released the Appeals Version of the Partially Operative Plan on 27 November 2023. Many provisions are beyond challenge and are operative/treated as operative (pursuant to cl 103 of Schedule 1 and s 86F of the Act). Those subject to appeal continue to have legal effect pursuant to s 86B.

Land use

26. The proposed land use activity does not meet the following rules:

Operative/treated as operative:

RULE	TOPIC	NON-COMPLIANCE	STATUS
EI-R31	Other Renewable Electricity Generation and Renewable Electricity Generation Activities	The establishment of a new renewable electricity generation activity requires consent	Discretionary (Rule EI-R31)
TRAN-R4	Vehicle Crossing	During the construction phase the activity will generate more than 40 vehicle movements per day (averaged over a week)	Restricted Discretionary (TRAN-R4.2)
TRAN-R7	Rural Vehicle Movements and Associated Parking	At the peak of construction activity, the proposal will generate more than the 60 ecm/d per site (averaged over any one-week period) specified in TRAN-TABLE1 for	Restricted Discretionary (TRAN-R7.2)

		maximum vehicle movements on a formed, unsealed and maintained by SDC.	
TRAN-R8	High Trip Generating Activities	At the peak of construction activity, the proposal will generate more than the 50 vehicles per peak hour Development Threshold for Basic ITA specified for an “other activity” in TRAN-TABLE2, but not the 120 vehicles per peak hour Full ITA threshold.	Restricted Discretionary (TRAN-R8.2)

27. Therefore, the land use proposal is a Discretionary activity under the Partially Operative Plan.

National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS)

28. The NES-CS manages activities which involve the disturbance of land which may be contaminated. This is determined by whether activities listed in the Hazardous Activities and Industries List (HAIL) have or are likely to have occurred on the site.

29. The applicant has provided a Detailed Site Investigation Report from Babbage Consultants Ltd. The report advises that soil sample analysis reported metals and organochlorine pesticides as concentrations below rural residential land use standards and that asbestos was not detected in the soil.

30. The Babbage report states that the site has been subject to an activity on the Hazardous Activities and Industry List - A10 persistent pesticide use or storage. However, the report states that subject to regulation 5(8)(b) of the NES-CS, as the piece of land is to remain as productive land and the proposed soil disturbance is not related to residential or farmhouse activities, the NES-CS does not apply.

31. Mr Jack Grinsted, Contaminated Land Officer at Environment Canterbury reviewed the information and sought further information regarding the change of use of the land.

32. The applicant has provided a Detailed Site Investigation Report from Babbage Consultants Ltd. The report advises that soil sample analysis reported metals and organochlorine pesticides as concentrations below rural residential land use standards and that asbestos was not detected in the soil. The Babbage report states that the site has been subject to an activity on the Hazardous Activities and Industry List - A10 persistent pesticide use or storage.

33. The report recommends a Site Management Plan (SMP) that outlines *"health, environmental and safety controls the redevelopment earthwork contractor must employ during the redevelopment earthworks phase"* and "*mitigation controls to manage unexpected discovery of contaminants, including asbestos containing materials".*

34. The DSI has been peer-reviewed by Mr Grinsted who accepts the conclusions of the report, subject to the proposed Site Management Plan.

35. It is considered that subject to consent conditions requiring a Site Management Plan to manage earthworks and unexpected discovery of contaminants, any adverse effects will be less than minor.

Written Approvals (Sections 95D(e), 95E(3)(a) and 104(3)(a)(ii))

36. The provision of written approvals is relevant to the notification and substantive assessments of the effects of a proposal under sections 95D, 95E(3)(a) and 104(3)(a)(ii). Where written approval has been provided, the consent authority must not have regard to any effect on that person. In addition, that person is not to be considered an affected person for the purposes of limited notification.

37. The applicant has provided the following written approvals, identified in **Figure 4** below :

1. 1352 Homebush Road, Lot 1 DP 434071 and Lot 2 DP 60325 (application site)
2. 3792 West Coast Road (Fonterra Darfield Manufacturing Site)
3. Lot 2 DP 460046 (LLRZ zoned land)
4. 526 Auchenflower Road
5. Owners of 1433 Homebush Road (Title Reference CB488/78), 32 Loes Road (Title Reference 266438) and 68 Loes Road (Title Reference 266438) and CB44C/516, 588217, 603475, CB8K/193, 529208 and 529209
6. Occupiers of 1433 Homebush Road
7. Occupiers of 32 Loes Road
8. Occupiers of 68 Loes Road

Figure 4. Location of Affected Party Approvals Received

Notification Assessment

Assessment of Adverse Environmental Effects (Sections 95A, 95B, 95D and 95E)

Permitted Baseline

38. Sections 95D(b) and 95E(2)(a) allow that a consent authority "may disregard an adverse effect" if a rule or a national environmental standard permits an activity with that effect, a concept known as 'the permitted baseline'. The application of the permitted baseline is discretionary, as denoted by the use of the word "may". It is understood that its intention is to identify and exclude those adverse effects that would be permitted by the Plan from consideration.

39. Case law has established that the permitted baseline test relates to the effects of non-fanciful or credible hypothetical activities which could be carried out as of right under the District Plan, as well as any existing lawfully established activity on the site or any activity for which resource consent has been granted.

40. In this case, I consider that the following would be permitted :

- Utility structures and buildings under both District Plans, provided they do not exceed 12m in height and meet all relevant rule requirements. Notably, under the PODP the definition of a structure includes ancillary structures and buildings.
- Construction noise provided the applicable noise limits are adhered to.
- Earthworks not exceeding 250m^3 per hectare of site area (GRUZ).
- Vehicle movements of 60 ecm/d per site (averaged over any one-week period)

41. The PODP permits plantation forestry (GRUZ-R24) and the establishment of structures (GRUZ-R2), including tunnel houses, shadehouses and greenhouses with no limitation on building coverage and with a maximum height of 12m.

42. In regard to structures, such as permitted utility structures, tunnel houses, shadehouses and greenhouses, I consider this is a fanciful activity at the scale of the solar array proposed. In my view, it would be fanciful for a rural property to have structures fully covering 148ha.

Receiving Environment

43. The receiving environment for this proposal includes the existing environment and the future environment as it could be, i.e. as modified by non-fanciful permitted activities and unimplemented resource consents. As previously stated, the receiving environment is characterised by predominantly rural land uses and the Fonterra Dairy Processing Plant, while also including residential activities. Notably, the receiving environment also includes a large area of residentially zoned land to the south-east of the site.

44. I consider that 'adjacent' in s95D(a) generally refers to properties that are near to an activity, in addition to those that are directly adjoining. The wider environment is the remaining areas, including adjacent roads and the public realm. The terms 'adjacent' or adjoining and 'non-adjacent' or wider environment are used in the following assessment.

Restrictions on Matters Considered

45. The status of the activity is **Discretionary.** As such, the Council's discretion is unrestricted, and all adverse effects must be considered.

46. The applicant has included an assessment of effects in Section 6 of the application. The assessment covers positive effects, cultural effects, construction effects, glint and glare effects, landscape and visual effects, effects on ecology, effects on productive land capacity, operational stormwater effects, operational noise effects, archaeological and cultural heritage effects and electromagnetic field effects. I agree that these are

relevant effects to the proposal. The applicant's assessment is supported by a range of technical assessments that have been peer reviewed and are discussed in turn below.

47. I considered that the effects relevant to the proposal may be considered under the following headings:

- Landscape and Visual
- Glare and reflectivity
- Transportation
- Noise
- Electromagnetic Field (EMF) Effects
- Reverse Sensitivity
- Highly productive land
- Earthworks
- Cultural effects
- Ecological effects
- Hazard effects
- Contaminated Land
- Servicing
- Consent Duration and Site Rehabilitation

Effects

Landscape and Visual Effects

48. The proposal will establish a solar array of approximately 188,000 solar panels on a 148 hectare site. The applicant has provided a landscape, natural character and visual assessment report from Mansergh Graham Landscape Architects Limited. This report has been peer-reviewed on behalf of the Council by Ms Anne Wilkins of Novo Group Ltd (NGL) and this report is appended as **Appendix 2**.

49. The assessment of landscape effects is divided into two headings, being landscape effects and visual effects.

50. The assessment of landscape effects describes that the character of the site is influenced by surrounding pastoral and cropping land use, shelter rows, hedgerows, clusters of specimen trees, woodlots, plantation forests, pylons, transmission lines and post and wire fencing. The report also notes that the wider environment has been heavily modified by land drainage (flood protection works), irrigation (water race network) and land clearance for farming practices and rural settlements.

Landscape Effects

51. The Mansergh Graham report considers that the proposed development will alter the characteristics of the site and surrounds *"from predominantly rural with industrial and energy generation elements towards a landscape character with a stronger emphasis on electrical generation with underlying agricultural production".* The report considers that "*the site will continue to be experienced as a rural or a hybrid agricultural-energy generation site"* and assesses the proposed change as a low - moderate adverse effect on existing landscape character values within the site and a low level effect on the wider environment. The AEE states that this is the equivalent to a no more than minor effect overall.

52. Ms Wilkins has reviewed the assessment and concluded that "*based on the proposal components prior to plant growth, and corresponding with the LVA authors rating scale, that the proposal would present as a Poor VAC"*[1]*.* Of note, Ms Wilkins considers that the following matters contribute to this rating:

- The proposal will be clearly visible. It may also act as a contributing focal / key focal element when paired cumulatively alongside the adjacent Fonterra factory.
- The overall character of the site will be altered from a rural grazed landscape to a highly utilised, built out area which contains a high degree of infrastructure including a substation and solar panels.
- A new visual element of 148ha of solar panels will be highly evident across an existing rural grazed site.

53. Ms Wilkins notes that the proposed development will result in the site being entirely built out without open space, offsets, rural use patterns to support the Mansergh Graham finding of a "*rural or a hybrid agricultural-energy generation site".* Ms Wilkins concludes that the proposal will result in key influential characteristics of the site being changed for the duration of the consent and considers that the landscape effects post mitigation growth will be low - moderate.

Cumulative Effects

54. In response to the request for further information, the applicant provided an assessment of the cumulative effects of the proposal in the RFI response dated 10 February 2025. The response concludes that the *"contrasting nature of the horizontal versus vertical aspects of these two adjoining facilities is such that it largely mitigates the cumulative visual effects of the proposal to the receiving environment.*

55. Ms Wilkins considers the development will result in the adaptation of what is essentially the whole block between West Coast Road and Loes Road from rural to infrastructure acting to *"degrade the environment to a point that the area is essentially not rural in character, resulting in a full character change".* This change is exasperated by the removal of existing shelterbelts and trees located throughout the site. Ms Wilkins concludes that these effects will be moderate, reducing to low - moderate once the boundary plantings reach maturity in 4 - 6 years.

Temporary Effects

56. The Mansergh Graham report provides an assessment of the temporary landscape effects of the construction phase and of the operation phase as the proposed mitigation planting reaches maturity and visual impermeability. The report concludes that the majority of receivers will be subject to a low - moderate effect. The Fonterra Manufacturing Site and the dwellings on Loes Road are identified as having moderate effects.

57. Overall, Ms Wilkins concurs with the conclusions on the scale of effects and the LVA sentiments on the major impacts plant growth and establishment will have on mitigating the proposal. Additionally, Ms Wilkins anticipates that overall, the temporary adverse landscape effects would be moderate, prior to any mitigation planting establishing and filling in to the desired height and density.

58. Ms Wilkins concludes that the temporary effects on users of State Highway 73, Loes Road and Homebush Road will be moderate, and low-moderate on Auchenflower Road. It is considered that given users of the adjacent road network are transient and experiencing the changes to the landscape obliquely, that any adverse effects will be no more than minor. Similarly, given the limited viewpoints for users of McHughs Forest Park, it is considered that the temporary landscape effects will be no more than minor.

59. Ms Wilkins identifies the following residential properties as being subject to moderate temporary effects:

- 1433 Homebush Road

[1] VAC is an assessment of the landscape capacity, or Visual Absorption Capability

- 32 Loes Road
- 68 Loes Road

60. It is considered that given the higher degree of sensitivity to these properties for the 4 - 6 years while the mitigation planting reaches maturity, that the potential adverse landscape effects on these properties will be at least minor.

Visual Amenity

61. The Mansergh Graham report provides an assessment of seven groups of view locations and viewing audiences and the viewing absorption capability. The report concludes that the development will be difficult to discern from Kimberley Road, Tramway Road, Bleakhouse Road, Landsborough Drive, Horndon Street and Clintons Road due to its relatively low profile, distance and existing vegetation providing screening of the development. The visual absorption capability of the landscape surrounding the site is considered to provide as reducing the resulting change in the landscape character from neutral to very good due to screening located both within the site and on adjacent properties, including McHughs Forest Park.

62. The Mansergh Graham report anticipates that the effects of the development on visual amenity will decrease as the mitigation planting establishes, until visual impermeability is achieved at 4-6 years. The report concludes that the short-term adverse effects on visual amenity values will range between very low and (locally) moderate, reducing to a very low to low permanent effect once the mitigation planting has become established. The AEE states that this is the equivalent to a no more than minor effect overall.

63. Ms Wilkins provides an assessment of the visual effects on users of State Highway 73 / West Coast Road , noting that the route is expected to provide expansive, uninterrupted views of rural landscapes, consistent with the character of the Canterbury Plains. The proposal seeks to introduce large scale infrastructure that is anticipated to interrupt the rural amenity provided by this existing rural outlook. Ms Wilkins notes that *"while viewer sensitivity may be lower due to movement, the scale of the proposal and its visibility along such a prominent route makes the visual effects more pronounced and incompatible with the anticipated rural character of the area."* Ms Wilkins states that the proposal is not consistent with the landscape character and values, such as rural openness and low density land use, and does not align that characterises the receiving environment.

64. Noting the visibility of the site from multiple locations along the State Highway and Homebush Road, Ms Wilkins considers that there will be noticeable temporary, long term and cumulative effects on the visual amenity of the receiving environment and concludes:

> *"visual amenity values experienced from key public routes—such as the State Highway and Homebush Lane, which runs alongside a recreational reserve—will not be maintained, at least in the short term prior to the establishment of screening vegetation."*

65. In considering the potential effects on McHughs Recreation Reserve, Ms Wilkin notes that views to the proposal will be brief and experienced in passing. However, "*visitors to the forest anticipate views across a rural landscape, contributing to the overall recreational and amenity value of the experience".* Ms Wilkins concludes that whilst it is not a primary viewing location, the sensitivity of the viewer group elevates the significance of any adverse effects. Ms Wilkins considers that the visual effects will be low - moderate with effects reducing once the mitigation planting has reached maturity and subject to the recommendations discussed below.

66. With regard to the potential effects on residential dwellings in the area, Ms Wilkins considers that the "*transformation from an open, rural outlook to one dominated by infrastructure and screening vegetation will have a lasting impact on visual amenity and rural character."* Ms Wilkins assesses the effects as being moderate due to the sensitivity of the receptor group, the scale of change and the permanence of the development. Noting that affected party approval has been provided for 3792 West Coast Road, 526 Auchenflower Road and the LLRZ zoned land and therefore the adverse effects on these properties have been disregarded, and that Kimberley rural-residential dwellings and dwellings in the Landsborough Subdivision (Landsborough Dr / Whitcombe Pl) are at a sufficient distance to reduce effects, Ms Wilkins concludes that the potential adverse effects on 1433 Homebush Road, 32 Loes Road and 68 Loes Road will be subject to moderate visual effects.

67. It is considered that given the higher degree of sensitivity to 1433 Homebush Road, 32 Loes Road and 68 Loes Road for the 4 - 6 years while the mitigation planting reaches maturity, that the potential adverse landscape effects on these properties will be at least minor.

68. Ms Wilkins has proposed a number of mitigation measures and recommendations to reduce the potential adverse landscape and visual effects that have been identified both in the LVA and Peer Review. It is considered that these matters will need to be developed further in consultation with the applicant at the substantive stage.

Transportation

69. The application includes a transport assessment of the construction and operational phase of the development from Don McKenzie Consulting (DMC). This assessment has been peer-reviewed on behalf of the Council by Mr Mat Collins of Abley and this report is attached as **Appendix 3**.

Construction Phase

70. The applicant anticipates that heavy vehicle movements will be approximately 60 movements per day during the anticipated 12–18 month construction period, with a peak of 10 - 12 truck movements in any one hour. The DMC report assesses the effects of this scale of the heavy vehicle movements generated by the construction phase as being "*generally negligible in terms of network capacity especially along the SH73 route and local access route via Homebush Road into the project site"* and that the effects of these modest additional volumes will be less than minor.

71. During the peak construction period, the DMC report anticipates approximately 120 vehicle movements for staff vehicle arrivals and departures in the morning and evening peak hours, focussed on the SH73 / Homebush Road intersection. The report considers that the current Homebush Road and Loes Road carriageways can safely and effectively accommodate the additional travel demand resulting from the construction phase.

72. As part of the formal Request for Further Information, Mr Collins requested further information relating to safety effects during the construction phase on the Homebush Road level rail crossing and the SH73 / Homebush Road intersection:

Homebush Road Rail Crossing

73. The applicant has confirmed consultation with KiwiRail and that the So Far As is Reasonably Practicable (SFAIRP) report has been approved by KiwiRail subject to recommendations for managing construction traffic at the rail crossing. A copy of this report was provided to the Council on 10 March 2025. It is acknowledged that the proposal complies with the relevant District Plan rules, and that it is the responsibility of the applicant to address these matters with KiwiRail.

SH73 / Homebush Road Intersection

74. The DMC report provides an assessment of the effects of right turn movements from SH73 into Homebush Road during the construction phase and concludes that no mitigation is required unless right turns exceed 80 vehicles per hour (veh/hr).

75. In response to concerns raised by Mr Collins (summarised on page 4 of the Abley report), Mr Don McKenzie confirmed that the applicant would provide seal widening in accordance with NZTA Planning Policy Manual Diagram E. Additionally NZTA staff confirmed that NZTA considers that the seal widening is the only mitigation needed and that the 80 veh/hr turning movement limit was no longer required.

76. Mr Collins considers that the seal widening "*goes some way towards addressing our concerns about safety effects"* at the intersection but considers warning signage and temporary speed limit reductions should be considered in accordance with Austroads guidance. Specifically, Mr Collins recommends that

> *"at the times that more than 35 right turning vehicles are anticipated per hour, a temporary speed reduction is implemented on SH73 in the vicinity of the intersection to mitigate the road safety risk and align with the Austroads guidance. This can in our view simply be included as part of the CTMP and in practical terms would require the*

installation of a temporary variable messaging sign (VMS) either side of the intersection for the duration of construction."

77. In light of his concerns regarding the potential safety effects, Mr Collin's has recommended amendments to the CTMP to provide for additional mitigation options. It is considered that these matters will need to be developed further in consultation with the applicant at the substantive stage.

Glint and Glare and the Transport Network

78. In consideration of the potential effects of glint and glare on the transport network, Mr Dave Mansergh provided confirmation of mitigation through interim and permanent screening and tracking management and proposed an adaptive approach through a revised Glare Condition. This position was affirmed by Mr McKenzie who noted that low number of vehicle movements on Auchenflower Road and Homebush Road where residual Green glare effects may be in evidence.

79. In review of Mr Mansergh and Mr McKenzie's assessment, Mr Collins notes that there are uncertainties in accurately predicting glare effects ahead of time and considers the revised, adaptive approach to be appropriate subject to a number of amendments to the Glint and Glare Adaptive Management Plan condition. These have been accepted by the applicant and now form a part of the application (refer **Appendix 1**).

80. It is considered that subject to the Glint and Glare Adaptive Management Plan, any adverse effects of glint and glare on the surrounding road network will be less than minor.

Operational Phase

81. The applicant anticipates that up to two staff and one technician are likely to be on site at any one time during the operational phase for the project. On this basis, there are expected to be no more than 6 traffic movements per day. The DMC report states that this level of extra traffic is *"unlikely to have any noticeable effect on the road network and well within the capacity, safety and operational limits of the SH73 / Homebush Road intersection and other parts of the local road network."*

82. It is considered that any adverse effects on the surrounding transport network from the operational phase of the development will be less than minor.

Rural Vehicle Movements and Associated Parking

83. Rule TRAN-R7 provides for vehicle movements up to 60 ecm/d per site on roads formed, unsealed and maintained by the Council as a permitted activity. The proposal will generate more than 60 ecm/d and therefore is a restricted discretionary activity in accordance with TRAN-R7.2.

84. Mr Collin's provides a brief assessment of this non-compliance noting that the increase in heavy vehicle movements during the construction phase could result in increased carriageway wear and tear. Mr Collins recommends the following condition of consent:

x. Prior to the commencement of construction on the site, the Consent Holder shall arrange a site meeting with the Council Roading Manager to agree on the existing condition of Council assets on the Homebush Road and Loes Road. The Consent Holder shall include a monitoring plan to monitor and report on any damage to public roads, berms, drains, or other Council assets along the Homebush Road and Loes Road, as a result of the construction activities. The monitoring plan shall be provided to Council for certification at least twenty (10) working days prior to the commencement of construction. Should the monitoring plan show that damage has occurred, Council shall be notified within 24 hours of its discovery (or immediately where the damage presents a safety hazard). The costs of rectifying such damage and restoring the asset to its original condition will be met by the Consent Holder.

85. It is considered that the proposed condition provides a suitable monitoring and management approach for addressing any potential adverse effects on the road network. In an email of 10 March 2025, the applicant has indicated acceptance of the intent of this condition, and it is considered that the final form of this condition can be addressed through consultation with the applicant at the substantive stage.

High Trip Generating Activities

86. Rule TRAN-R8 provides for a development threshold of 50 vehicles per peak hour and therefore the proposal is a restricted discretionary activity in accordance with TRAN-R8.2. Mr Collins has reviewed the proposal and

advises that he considers that "*access and on-site manoeuvring area and travel demand management can be addressed through the CTMP".*

87. It is considered that subject to the proposed changes to the CTMP discussed above, that any adverse effects associated with High Trip Generating Activities will be less than minor.

General Compliance with Transport Rules

88. The Transport Assessment assesses several Transport Rules and states that these can comply with District Plan, noting that the final site design is yet to be confirmed. Mr Collins recommends amendments to Condition 6 to ensure compliance is achieved:

Condition 6

Prior to the commencement of construction on the site, the vehicle crossings on Homebush Road and Loes Road which will be used for access during construction shall be formed and sealed in accordance with Diagram E10.D of the Operative District Plan (Rural Volume), at the expense of the Consent Holder. ***The Consent Holder shall ensure that all vehicle accessways, parking, manoeuvring and loading areas comply with TRAN-R5 and TRAN-R6 of the Partially Operative District Plan***

89. Ms Rachel Tompkins, Development Engineer notes that the following additional conditions of consent are required to ensure compliance with the Transport Rules:

x. Vehicle crossings to service the site must be formed in accordance with the requirements of Selwyn District Council Partially Operative District Plan and the approved consent documents.

The vehicle crossing must be sealed/metalled to match the existing road surface for the full width of the crossing and for the first ten metres (as measured from the edge of the existing formed carriageway towards the property) or to the property boundary, whichever is the lesser.

xx. All vehicle crossings and formed accessways must meet Council's testing standards as prescribed by the Engineering Code of Practice.

90. On the 7 May, 2025, the applicant has indicated acceptance these conditions.

Transport Amenity Effects

91. In regard to transportation related amenity effects, an increase in vehicle movements has the potential to impact on surrounding rural amenity values, through increased noise and traffic concentration. I recognise that the PODP permits traffic noise generated within a land transport corridor, and that the scale of vehicle movements generated by the operational phase of the activity are permitted. Therefore, I consider that the transportation related amenity adverse effects on the adjacent environment and the wider environment will be less than minor.

Glare and reflectivity

92. The application has provided an assessment of glare and reflectivity effects for the solar array prepared by Mansergh Graham Landscape Architects (MGLA). This report has been peer-reviewed on behalf of the Council by Mr Rudi Van der Velden of Velden Aviation Consulting Ltd, and this is attached as **Appendix 4**.

93. Mr. Van der Velden describes that solar glare hazard is based on the potential to cause damage to any observer's eyes. Glare is split into the following categories that correspond to hazard potential:

- "*Green zone" glare is considered to have low potential to cause after-image (flash blindness) when observed prior to a typical blink response.*
- *"Yellow zone" glare is considered to have potential to cause after-image (flash blindness) when observed prior to a typical blink response time.*
- *"Red Zone" glare is considered to have high potential to cause permanent eye damage.*

94. Mr Van der Velden notes that it is normally unlikely that red zone glare is created from a solar array reflection, but that green and yellow zone glare can be potentially reflected. The applicant's assessment is based on green and yellow levels of potential glare. Whilst solar arrays can create green zone effects with low potential

for after-image and have less chance of ocular damage over time, Mr Van der Velden views this as less of a concern for dynamic or moving receptors (including vehicles, aircraft, trains, etc.).

95. Mr Van der Velden identifies concerns with the heights used by MGLA to assess the receptor eye level used in the report for both static receivers in adjacent dwellings and for vehicular and train drivers. Mr Van der Velden has assessed the proposed effects on adjacent dwellings using a standard of 1.8m for single storey dwellings and included consideration of a 3.6m receptor eye level for two storey dwellings. Noting the large scale vehicles often using New Zealand roads, Mr Van der Velden has used a 2.5m driver eye level for vehicles and 3m eye level for trains to assess the potential glare effects on adjacent roads and railways.

96. In regard to the effects on dwellings, where the modelled glare is less than 10 hours per year and less than 10 minutes per day, Mr Van der Velden agrees with the applicant that no mitigation would be necessary. This position is based on the Australian New South Wales Government guidelines on Large Scale Solar Energy Development. Mr Van der Velden concludes that the assessment of glare effects for dwellings is covered comprehensively and there is agreement with the applicant's assessment.

97. In consideration of the potential for adverse effects on road and rail users, Mr Van der Velden has identified concerns that the minimum 2m landscaping proposed in the landscape assessment will not be sufficient to mitigate the glint and glare effects. He notes that "*given that the driver eye level height for large vehicles is 2.5m and the top of the PV arrays may be 2.8m as a minimum and 3.1m as a maximum then I not sure how they arrived at the 2m height for shade cloth and mitigation planting height given the drivers of larger vehicles will potentially see over this directly to the PV arrays and any potential reflected glare*." In consideration of train drivers, he notes that the eye levels have been simulated by MGLA (and in the peer review) at 3m, and that the mitigation planting should be at least half a metre more than the diver eye level of the largest vehicles expected to be on the roads and rail. Mr Van der Velden notes that "*it is more important for road traffic that glare is mitigated as far as practicable given the more immediate safety implications for drivers especially for larger vehicles expected along rural roads such as tractors and other large farm vehicles, school buses and haulage vehicles etc*." I note that the MGLA report concludes with "*Potential green and yellow glare on the road network should however be mitigated for traffic safety purposes through tracking adjustments and / or additional screening measures"* but does not appear to provide any further information regarding the required extent of screening measures for traffic safety purposes. Mr Van der Velden has offered the following recommendation for further consideration by the applicant:

> *1. That given the maximum height of the proposed solar arrays are potentially 3.1m based on the drawings provided by the applicant NZ Clean Energy Ltd, that any proposed landscape mitigation planting be at least 4m high to ensure adequate screening from any potential view by observer points.*
>
> *2. That landscape planting along Auchenflower Road and towards and around the Homebush Road and State highway 73 intersection be at least 4m high to ensure it is above any potential view of the solar arrays and be sufficiently dense enough to eliminate potential glare from the solar array.*
>
> *3. In relation to the above, to provide interim screening where plants still need to reach expected established heights to ensure mitigation of glare towards road traffic and so provide margins of safety to road traffic until planned established heights of plants can be reached.*
>
> *4. To ensure that the planned mitigation landscape plantings themselves do not create any hazard by obscuring any view towards oncoming traffic especially at the road intersections being considered.*

98. In the applicants' response of 17 January 2025, they advised that the "*glint and glare modelling confirmed that landscape mitigation planting to a minimum height of 3m is sufficient to achieve effective mitigation of any glare that may be generated by the proposed development."*

99. Mr Mansergh provides a response to Mr Van der Velden's information request in Attachment 4 to the 17 January letter, and provides the following recommendations:

- the proposed screen planting be established and maintained at a minimum height of 3m
- the PV arrays (in locations likely to produce glare) are installed at the minimum installation height
- a 3m high section of shade cloth shall be erected along the boundary of the site and SH73 until the mitigation planting reaches a height of at least 3m and the canopy closure occurs, or post-implementation monitoring determines that glare is not an issue

- that an adaptive management approach is adopted for glare management through the revised glare condition (condition 22)

100. Mr Van der Velden has reviewed the additional information provided by Mr Mansergh and Mr McKenzie as part of the applicant's response to the Request for Further Information (as discussed above). Mr Van der Velden has advised that overall, he is in agreement with Mr Mansergh with regard to adaptive management and post installation of glare. Mr Van der Velden notes:

> *The adaptive management with regard to programming of the tracking arrays should be considered acceptable as reflective angles that can cause glare can be mitigated by programming the tracking routines of PV arrays in terms of delaying the tracking or advancing it to get around the reflective angles that may be causing glare to certain areas.*

101. It is considered that subject to the proposed Glint and Glare Adaptive Management Plan condition and the proposed amendments (discussed above), any adverse effects associated with glint and glare will be less than minor.

Noise

102. The application includes an acoustic assessment of effects from Styles Group (SG) that assesses both construction phase effects and the on-going operational phase effects. The applicant's assessment has been peer-reviewed on behalf of the Council by Mr Jon Farren of Marshall Day Acoustics, and this report is attached as **Appendix 5**. Mr Farren has provided an addendum to the report, and this is attached as **Appendix 6**.

Construction Noise

103. The applicant has proposed to limit construction hours of operation to between 7;30am and 6;00pm Monday to Saturday *"when NOISE-TABLE6 prescribes a noise limit of 70 dB L_{Aeq} and 85 dB L_{AFmax} at any dwelling in GRUZ".* The SG report provides a list of activities and noise sources associated with the construction phase and advises that the proposed construction phase will comply with the construction noise limits in NOISE-TABLE6.

104. The SG report proposes a Construction Noise Management Plan (CNMP) to "*outline the noise mitigation methods that must be adopted when piling works are in proximity (50m) to the closest receivers to enable compliance with the construction noise limits."* The report also recommends exploring mitigation measures, including *"the use of alternative piling methods (i.e. auger, screw or bored piling), use of screening or completing the works when the building is not occupied*."

105. Mr Farren identifies that piling has the potential to result in notable adverse effects at the nearest dwellings. Noting that given the scale of the site and the thousands of piles required for solar arrays, Mr Farren anticipates that the piles could take several months to install with several piling rigs potentially operating at the same time.

106. In the applicant's assessment, SG used a piling rig sound power level of approximately 111 dB L_{WA} (82 dB L_{Aeq} at a distance of 10 metres). Based on measurements undertaken by Marshall Day Acoustics at other locations, piling sound power levels range 120 to 130 dB L_{WA}, and taking a median value of 125 dB L_{WA} Mr Farren considers a separation distance of approximately 200 metres will be required to achieve the nominated noise limit of 70 dB L_{Aeq}. Mr Farren states:

> *"Based on our experience with other construction sites, we consider that the quantity, noise level and duration of percussive piling that is proposed will potentially result in adverse community reaction and requires further justification"*

107. In light of the low piling noise level used in the SG assessment, Mr Farren recommends extending the setback for establishing communication protocol with residents from 50m to 200m in the CNMP.

108. Mr Farren concurs with the SG recommendation that construction noise should be managed and assessed in accordance with NZS 6803: 1999 Acoustics – Construction Noise. Noting that the NZS 6803 requires the best practicable option to be adopted to ensure noise from the site is minimised, Mr Farren recommends that the CNMP includes a:

"discussion of piling methodologies (driven, screw, etc) with respect to factors such as source noise level, efficiency (exposure duration) and practicality. If driven piles are the BPO, mitigation options should be evaluated, such as screening around the hammer and pile head and/or a pile dolly."

109. Mr Farren considers that construction noise effects will be reasonable, subject to the following amendments to the conditions of consent, and that the CNMP process is followed:

New Condition as per SG condition 3 with suggested text amendments:

x. Construction activities must be conducted in accordance with NZS 6803: 1999 "Acoustics – Construction Noise" and must comply with the "long-term duration" noise limits contained within Table 2 and Table 3 of that Standard.

Revised Condition 10

10. The CNMP shall include, but not be limited to

(a) The applicable permitted noise standards

(b) The programme of works and hours of operation

(c) Identification of surrounding noise sensitive receivers

*(d) Written communication with occupants of all occupied dwellings or minor dwellings that are within **200 metres** of proposed piling works at least ten (10) days prior to the commencement of activities on site. The written advice shall set out:*

i. a brief overview of the construction works.

ii. the working hours and expected duration,

*iii. **an evaluation of piling methodology to demonstrate the Best Practicable Option has been adopted.***

iv. all mitigation measures to be implemented.

v. the procedure for recording concerns/complaints regarding noise.

vi. details of the management and mitigation measures required to comply with the relevant noise limits when piling works are undertaken within 200m of any occupied building that has not provided written approval.

Deletion of Condition 11

~~11. Condition 10(d)vi does not apply if receivers (dwellings or minor dwellings) within 200m of the extent of works provide their written approval to authorise temporary exceedances of the construction noise limits~~

Operational Noise

110. The SG report advises that the BESS and switchstation have been located to achieve separation distances from existing dwellings to reduce potential operational noise effects. The report includes modelling of the operational phase effects from the BESS and switchstation plant that has determined compliance with the standards in the Partially Operative District Plan at all adjacent sites. The report notes that the closest receivers will be able to hear the solar plant operating, particularly when *"periods of high demand or high energy production coincide with periods when the ambient noise environment is very low and during calm meteorological conditions*" but that these are anticipated to "*be very limited due to the proximity of the Dairy Factory and SH73".*

111. The SG report identifies noise from other operational noise sources, such as ongoing general site operation and maintenance activities as being intermittent and generating only a low level of noise.

112. Mr Farren accepts the SG assessment of the sound levels associated with the tracking system's motors of the solar panel and that sound levels from these units will be low. Mr Farren notes that 5 decibel penalty for the special audible characteristics (SAC) for the HV transformers is appropriate but recommends that once the site is operational, the consent holder should commission noise monitoring to confirm if the SG predicted noise levels and SAC assumptions are correct. To this end, Mr Farren recommends the following new consent condition:

x. Within 6 weeks of the project becoming operational, a suitably qualified and experienced acoustic consultant shall perform measurements to confirm compliance with both the daytime and night-time noise limits in Condition 20. The assessment shall include an objective analysis of any special audible characteristics

during the day and at night, in accordance with Appendix B4 of NZS 6802:2008 Acoustics - Environmental Noise.

(a) ***Should the sound commissioning survey indicate that the noise limits are exceeded, then the mitigation options that will be implemented will be clearly outlined, including timeframes for the completion of these mitigation works.***

(b) ***Following completion of any a mitigation measures, the sound commissioning survey will be repeated and an updated report provided to Council***

113. In the response to the Request for Further Information letter dated 17 January 2025, the applicant has confirmed acceptance of the proposed conditions for construction and operational phase.

114. I accept Mr Farren's assessment and consider that subject to these volunteered conditions, I consider any adverse construction and operational noise effects on adjacent properties and the wider environment will be less than minor.

Sensitive Activities and Energy Infrastructure

115. Rule EI-R3 seeks to restrict the establishment of new or expansion of an existing sensitive activity within 250m of any lawfully established noise generating infrastructure used for renewable electricity generation as set from the notional boundary of the sensitive activity. There are a number of existing dwellings located within 250m of the application site, and residentially zoned land, as identified in **Figure 5** below.

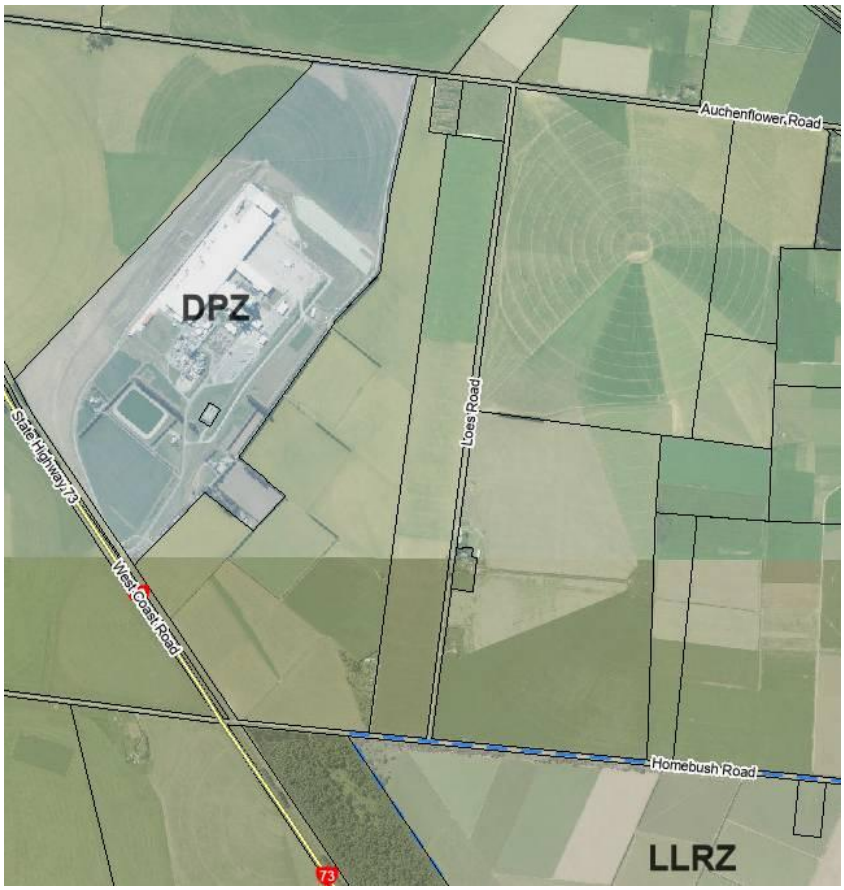


Figure 5. Zoning pattern of site and surrounds (source: Partially Operative District Plan)

116. The applicant has confirmed in the 17 January letter that the southernmost inverter is proposed to be located at approximately NZTM 1526606E 5187419N, at a distance of more than 250m from the nearest boundary of the LLRZ land (lot 2 DP 460046). The applicant has provided a plan of the Noise Contours (Appendix B of SCG Report) confirming the limited extent of noise created by the inverters. It is considered that the proposal will not result in any consequential restrictions on development within the LLRZ land. Further, in consideration of any potential adverse noise effects on occupants of future dwellings in the LLRZ, it is noted that proposed condition 36 will require the applicant to comply with noise limits at these future dwellings.

Vibration Effects

117. The applicant's assessment states that given the distance to receivers, they have not identified the potential for any potential construction activities on the site that will *"approach or exceed the relevant vibrations limits specified in NOISE-TABLE4*" and that thresholds can be achieved without the need for specific mitigation.

Electromagnetic Field (EMF) Effects

118. The application includes an assessment of magnetic and electric fields prepared by EMF Services. This report has been peer-reviewed by Ms Isobel Stout of Pattle Delamore Partners Limited, this report is attached as **Appendix 7**.

119. The EMF report concludes that *"high electric fields might be found within the substation, and high magnetic fields could be found within a few meters of the inverters and transformers"*. Extremely Low Frequency (ELF) fields produced around equipment at the proposed development have been assessed as not extending far from the equipment producing them and would be indiscernible outside the site boundary.

120. Ms Isobel Stout has reviewed the application and advised that small and localised fields will be produced by the solar panels and inverters, with the largest field strengths anticipated to be found around the transformers. Ms Stout accepts the EMF conclusions and states that "*ELF fields produced around equipment at the proposed development will not extend far from the equipment producing them and would be indiscernible outside the site boundary"*. Ms Stout concludes that the "*solar array is expected to make an indiscernible difference to EMF levels outside the site*" and that it *"will not adversely affect the health of the public and any EMF effect from the array would be negligible."*

121. I accept EMF and Ms Stout's assessment and consider that any adverse effects associated with electromagnetic fields from the proposal will be less than minor.

Reverse Sensitivity

122. The potential for reverse sensitivity effects can exist when a new and sensitive activity establishes and then complains about or objects to the effects generated by a lawfully established existing activity or a permitted activity. The PODP defines reverse sensitivity as:

123. *"The potential for an approved (whether by consent or designation), lawfully established existing or permitted activity to be compromised, constrained, or curtailed by the more recent establishment, intensification, or alteration of another activity that may be sensitive to the actual, potential or perceived adverse environmental effects generated by the approved, lawfully established existing or permitted activity".*

124. The General Rural Zone is described by the PODP as "areas predominantly used for primary production activities, including intensive indoor primary production". The zone may also be used for a range of activities that support primary production activities, including associated rural industry, and other activities that require a rural location".

125. Land-based primary production activities can produce effects such as noise, dust, traffic and odour effects, which may be perceived by a sensitive activity as potential nuisance effects, particularly where that new activity does not generate those same effects and may be more sensitive to those 'typical' primary production effects. In the context of this proposal, the proposed future use of the site will include land-based primary production (i.e. grazing), which may decrease the potential risk of reverse sensitivity effects.

126. The subject site is located within the noise overlays for the Dairy Processing Zone, the State Highway and Rail Network. Solar farms are not noise sensitive activities, and therefore it is considered that any potential reverse sensitivity effects from the noise from these sources will be less than minor.

127. The applicant's assessment states that the proposal will not generate reverse sensitivity effects on adjoining primary production activities, as the solar array will not be sensitive to noise or general farming activities, such as ploughing, harvesting and fertilising. In regard to dust from adjoining primary production, the applicant's assessment states that rain is sufficient to keep the panels clean.

128. I have considered the potential for reverse sensitivity effects, and I conclude that the proposal will not generate reverse sensitivity effects on adjoining primary production activities. It is my view that reverse sensitivity adverse effects on both the adjoining and the wider environment will be less than minor.

Highly Productive Land

129. All land is defined as HPL if it is located on class 1, 2 or 3 soils. The subject site is located on Land Use Capability (LUC) class 3 soils. The applicant has provided an assessment of effects on Highly Productive Land (HPL) from Land Vision Ltd. The site is currently used for the grazing of sheep or lambs and has previously been used for cropping.

130. The Land Vision report notes that the effects of solar panels on pasture production is varied, including secondary effects on soil moisture and plant physiology, with variation in the performance of growth relative to exposure to sunlight. The report states that this will not necessarily result in corresponding reductions in animal performance, noting that the changes created by the solar panels may result in additional benefits to the pastoral system by improving pasture quality and delaying the timing of pasture peak production. The report states that the basic elements of pasture production will continue on site, maintaining land based primary production. The report concludes that "*the productive capacity of the site will be maintained and will continue to be available for primary productivity within the bounds of the Site's recognised potential*."

131. The applicant's assessment has been peer-reviewed on behalf of the Council by Mr Jamie Gordon, Macfarlane Rural Business Limited (MRB) dated 15 December 2024, and this is attached as **Appendix 8**. Mr Gordon has provided an addendum to this report dated 5 February 2025 in response to the applicant's 17 January letter, and this is attached as **Appendix 9.**

132. Productive capacity is defined in the NPS-HPL as:

> *…the ability of the land to support land-based primary production over the long term, based on an assessment of:*
>
> *(a) physical characteristics (such as soil type, properties, and versatility); and*
>
> *(b) legal constraints (such as consent notices, local authority covenants, and easements); and*
>
> *(c) the size and shape of existing and proposed land parcels*

133. The NPS-HPL implementation guide states that the key measure of productive capacity depends on the 'potential' capacity of the land to support land-based primary production activities. In this context, there are no relevant legal constraints, and the proposal will not alter the size and shape of any existing parcels. In regard to physical characteristics, the proposal will require earthworks for trenching and piling, although I agree that these are minimal in the context of the site and scale proposed.

134. The applicant provided additional information in the 17 January letter, stating that they have demonstrated the productive capacity of the site remaining largely unchanged and therefore *"that the HPL matters requested are not necessary for consideration of the application".*

Irrigation

135. Mr Gordon provides additional information regarding irrigating the site, noting that the baseline nutrient loss is important as it can be difficult to economically farm with irrigation if the nutrient allocation for the property is too low. Mr Gordon notes that the property is in the Central Plains Water (CPW) Irrigation command area but is not currently a shareholder. CPW are currently seeking submissions from farms in this area who require extra water or want to become shareholders. Mr Gordon notes that the report has been written on the basis that the property will not attain any additional irrigation capability.

136. In response to Mr Gordon's request for additional information relating to the installation of irrigation, the applicant stated that this was beyond the scope of what could be considered under clause 3.9(3). In his 5 February letter, Mr Gordon notes that irrigation does impact the productive capacity and versatility of the land and therefore considered that the ability to attain irrigation should be considered in an HPL review.

Limits to Agricultural Activities

137. Mr Gordon considers that the installation of a solar farm will constrain the type of farming that can take place, with both cattle grazing and dryland cropping being unlikely, and that the inability to diversify the type of farm system could impact the productive capacity of the property.

138. Mr Gordon notes that it is important that the solar farm design does not negatively impact livestock movements, that specialist machinery will be required to support and maintain agricultural activities and that stockwater infrastructure will be required for effective livestock grazing rotations. In his response letter dated 5 February, Mr Gordon disagrees with this view and states

> *"whilst it may not be practical to provide the final design, it is important that provision be made in the initial design so that typical farm practises such as mowing, rolling, baling, drilling, weed control and stock grazing and movements can be undertaken. If these practises are compromised by the design of the solar farm, then the productive capacity and versatility of the land will be impacted."*

139. Mr Gordon notes that without more specific design parameters it is difficult to assess if the solar farm layout will impact the use of agricultural vehicles and machinery.

140. In order to understand how the design and layout of the solar arrays would impact the farm management programme and for manoeuvrability of farming equipment, further information was sought as part of the formal Request for Further Information. The applicant responded that:

> *"Further detail of the solar panels and drive mechanism will not be known until the detailed design / procurement stage of the project. It is not practicable to specify this information at this stage, nor is it considered necessary (...)"*

141. It is noted that the applicant considered that this additional information was not considered necessary as they consider that the purpose of the NPS-HPL is to protect HPL from inappropriate development and that this has been addressed through the Land Vision report, noting that the report *"demonstrates that the productive capacity of the site will remain largely unchanged and effects will be less than minor (and the existing grazing use can continue largely unchanged".*

142. Mr Gordon considers that the restriction of vehicle access and movements created by the proximity of the solar panels will impact key farming practices such as pasture renewal, cropping, fertilisation and making silage or hay, and that livestock movements and stockwater infrastructure is provided for. In conclusion, Mr Gordon states that "a*ssuming that pasture production is not adversely impacted by the solar panels, or the solar farm design and that sheep can be grazed effectively under the panels, then the productive capacity of the land may be reduced but not lost from land based primary production"*.

143. Based on the assessment supplied by the applicant and the Council's peer review, I accept that land-based primary production, in the form of grazing of sheep and lambs, with the potential for some cropping to continue in the long-term. However, I note Mr Gordon's concerns regarding the final design and ensuring that sufficient manoeuvring space is provided for typical farm practises.

144. The NPS-HPL does not compel a landowner to undertake land-based primary production, however, if a proposal is able to step through Clause 3.9(2), it is required to minimise or mitigate the loss of available and productive capacity of highly productive land. I note that to address this matter, similar applications of similar scale within the Selwyn District have included a requirement for Farm Management Plans (including methods and systems and plans identifying turning areas for machinery), to ensure that the application site can continue to be used for land-based primary production. It is considered that this matter can be addressed through consultation with the applicant at the substantive stage.

145. On balance, I consider that the potential loss of productive capacity will be no more than minor.

Earthworks

146. The application proposes an approximate 36,800m^3 of earthworks to establish internal access tracks, hardstand areas and cable trenching. The applicant has volunteered that an Erosion and Sediment Control Plan (ESCP) will be implemented and will incorporate a Dust Management Plan (DMP). The general principles that will be adopted during earthworks and incorporated in the ESCP are:

- minimise the disturbance to areas subject to earthworks activities as far as practicable while satisfying all requirements for construction of the site
- minimise exposed ground by restricting the maximum length of track stripped to 50m at any one time
- install silt fences to contain construction areas
- implement a stabilised construction entrance to allow entry and provide a raised barrier connecting with the proposed silt fence / earth bund
- implement dust management methods including the watering of haul road and manoeuvring areas and suspending operations during unfavourable weather conditions

147. In the 17 January 2025 letter, the applicant volunteered conditions of consent relating to erosion, sediment and dust control (as detailed in **Appendix 1**). It is considered that, subject to works occurring in accordance with the proposed conditions above, that any adverse effects will be less than minor.

Cultural effects

148. Mahaanui Kurataiao Ltd have reviewed the application and undertaken an assessment of the proposal against the Mahaanui Iwi Management Plan (IMP) and consulted with Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga to inform the Cultural Advice Report. A copy of this advice report is attached as **Appendix 10**.

149. The advice report notes that long consent durations remove the ability of future generations of mana whenua to fulfil their kaitiakitanga obligations and therefore seeks to reduce the duration of the consent to 15 years.

150. In consideration of cultural effects, the advice report notes that ground disturbance has the potential to uncover cultural material or wāhi tapu. An Accidental Discovery Protocol is sought to manage the potential cultural effects associated with earthworks on the subject site.

151. The potential for the solar panels to leach contaminants into land, groundwater and nearby water races has been identified as a concern. The advice report notes that this can have *"effects on Ngāi Tahu cultural associations, such as mahinga kai,* wāhi *tapu or historical associations".* The report proposes consent conditions 4, 5 and 10 to reduce these risks.

152. The advice report has identified a need to plant and maintain a riparian buffer of indigenous vegetation on site to mitigate the impact of earthworks and on-going operations for the protection of the drains. The report seeks plantings to *"enhance the cultural landscape, increase indigenous habitat, filter sediment and sequester carbon".*

153. The report also addresses potential adverse effects associated with erosion and sediment control and stormwater management and proposes conditions for mitigating these effects.

154. The Rūnanga have advised that they will not consider themselves to be an affected party subject to the applicant accepting the following conditions:

1. *The duration of this consent must not exceed 15 years.*
2. *An Accidental Discovery Protocol (ADP) must be in place during all earthworks required to give effect to this consent to deal with archaeological finds and protect the interests of mana whenua. This condition does not constitute a response under the Heritage New Zealand Pouhere Taonga Act (HNZPT 2014).*
3. *A site-specific Erosion and Sediment Control Plan (ESCP) for any earthworks required to give effect to this consent must be developed and implemented on-site during all earthwork activity. All contractors working on-site must be made aware of this plan and strictly adhere to it. This plan must*
    i. *Ensure the protection of the surrounding environment including water soil and air.*
    ii. *Restrict sediment runoff and erosion from entering the drain.*
4. *An accidental discovery protocol for contaminated soils must be developed and implemented in case unexpected contamination is identified in the soil.*

5. *Excavated contaminated material must be removed from site, disposed of at an appropriate facility, and not reused onsite.*
6. *The applicant must establish and maintain indigenous planting on site to enhance the cultural landscape, increase indigenous habitat, filter sediment and sequester carbon.*
7. *Indigenous planting must be established within a riparian buffer zone from the drains to protect and enhance the ecological values of the waterways. The plants must mature to a height of at least the width of the waterway.*
8. *Untreated stormwater must not be discharged into the drains.*
9. *A site survey for wetlands and springs must be undertaken on site by a suitably qualified wetland specialist prior to any works commencing on site.*
    (a) *Any waipuna/springs or artesian flows discovered must be protected, naturalised and not be capped.*
    (b) *Wetland areas on site must be retained and planted with an indigenous riparian margin.*
10. *There must be a regular monitoring program for contaminants and the accumulation of heavy metals in soil.*

155. Additionally, the following advice notes are proposed to be included in the final decision:

1. *The overall development of the proposed buildings should align with the Ngāi Tahu Subdivision and Development Guidelines to the greatest practical extent; particularly with regards to stormwater controls and indigenous plantings.*
2. *The design of stormwater infrastructure should have sufficient capacity to prevent ponding at the site*

156. In the response to the Request for Further Information of 17 January 2024, the applicant advised that they cannot accept conditions 1, 7 or 10.

Condition 1 - Duration Limit

157. The applicant advised that a 15 year duration limit is *"impractical given the scale of investment in the solar facility and hence the need for security of term".* The applicant advises that they continue to seek a 35 year term for the consent.

Condition 5 - Contaminated soil management

158. Condition 5 seeks to ensure that excavated contaminated land is removed from site and disposed of at an appropriate facility. The applicant has responded to this condition stating, "*the level of contaminants found on the site are incredibly low and are not required to be disposed off-site from a regulatory perspective for either human or environmental health purposes"* and have sought advise as to whether there is a threshold level of contamination that the Rūnanga would accept.

159. It is unclear whether the applicant accepts this condition, noting these objections.

Condition 7 - Riparian Plantings

160. As the applicant notes, there is a degree of conflict between the proposed plantings and the Selwyn District Council requirements for maintaining the water race. An agreement between Selwyn District Council, Canterbury Regional Council and the applicant has been reached whereby "*one side of the water race be kept clear for SDC maintenance purposes, and the opposite side of the water race subject to riparian planting within the 4-5m balance area".*

161. In an email of 26 February, the applicant states that

> *Based on correspondence with SDC and CRC, we will now be providing riparian planting on one side of the active drain within our site. It is noted that the other drain is a former drain and does not have any active flow within it and does not form part of any irrigation scheme. As such, we will not be providing riparian planting along either side of it.*
>
> *The other side of the drain will be kept clear to enable SDC to maintain the drain as part of their standard water race maintenance processes.*
>
> *While this outcome does not wholly align with what is sought by MKT under this condition, we believe it achieves an acceptable outcome for all parties involved, including SDC and MKT.*

162. It is considered that this agreement does not accord with condition 7.

Condition 10 - Monitoring of contaminants

163. In the 17 January letter, the applicant identifies costs and queries the implications of the monitoring requested and states that "*we would need additional advice from Mahaanui Kurataiao Ltd on what they envision this condition entailing".* Additionally, the applicant provides further information regarding the chemical composition of solar panels not proposed to be used for the current development, to demonstrate that the chemicals utilised within panels is relatively consistent across the industry. The applicant concludes stating that:

> *It is also noted that the construction standard of modern panels utilises more robust external materials than older models, making them less susceptible to extreme weather events and other exposure incidents than those older models.*

164. It is unclear whether the applicant accepts this condition, noting these objections.

165. The Cultural Advice Report concludes that *"if the consent conditions are provided for, the Rūnanga will not consider themselves to be an adversely affected party".* The applicant as confirmed that they do not accept conditions 1, 5, 7 and 10 and therefore it is considered that Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga are affected by the proposal in a way that is at least minor.

166. The applicant has sought to discuss these matters in an informal basis with Mahaanui Kurataiao Limited. Ms Angela Burton has advised that "*due to the amount of mahi this request requires*" formal consultation with Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga is required. A copy of the emails relating to this matter is attached as **Appendix 11**.

167. On 6 May 2025, the applicant advised that they do not intend to request any further consultation with Mahaanui Kurataiao Limited and provided a copy of the letter and appendices sent to the Rūnanga. This letter is attached as **Appendix 12**.

Ecological effects

168. The applicant has provided an assessment of ecological effects from Ecological Solutions Ltd (ESL). This report has been peer-reviewed by Wildlands Consultants Limited (WCL), this report is attached as **Appendix 13**. WCL have provided an addendum to the report, and this is attached as **Appendix 14**.

Terrestrial Ecology

169. The ESL assessment assesses the site as being dominated by exotic vegetation with a 'low' or 'very low' ecological value across the site. Given the low values of the site, and noting that no mitigation is proposed, the report assesses the potential adverse effects of the proposed vegetation clearance as having an overall effect of "very low". ESL provided additional information in response to the Request for Further Information clarifying the habitat species lists. WCL notes that the mitigation planting selection includes incorrect species names (e.g. *Coprosma cotoneaster*, which is not a species), cultivator type species (e.g. *Olearia lineata 'Dartonii'*) and species not native to Canterbury or the South Island (e.g. *Pittosporum ralphii* North Island species - known to naturized). WCL recommends that this planting list is reviewed and revised to include correct and appropriate indigenous species for the Canterbury High Plains Ecological District.

Avifauna and Habitat

170. The ESL assessment identifies very little suitable habitat for native birds and identifies low ecological values for these species within the site. ESL notes that the proposal includes the removal of shelterbelts and that this process has the potential to have an adverse effect on nesting species and recommends

> *If vegetation clearance occurs during the breeding season, other mitigation techniques such as avoiding trees containing nests until chicks have fledged should be employed to minimise effects*

171. The ESL report considers that with the appropriate level of mitigation, effects on avifauna is assessed as 'low'.

172. ESL provides an assessment of potential avian mortality caused by avian collisions with solar farms, noting the complexity involved in understanding the magnitude of this potential effect. The report concludes that as the site and surrounds are unsuitable for birds of conservation value and the site is not considered to be

beneath a significant flyway for water associate birds and therefore that any adverse effects associated with bird strike will be low.

173. The WCL report agrees with the ESL report that vegetation clearance or trimming can adversely affect indigenous birds if undertaken during the breeding season. However, the WCL report notes that there is no assessment of the likelihood of bird species being present within the different habitats on the site. WCL notes the proximity of the site to the Waimakariri River, an area that provides habitat to Threatened and At Risk bird species, including tūturiwhatu/banded dotterel (*Charadrius bicinctus*), ngutu pare/wrybill (*Anarhynchus frontalis*), tarapirohe/black-fronted tern (*Chlidonias albostriatus*), tarāpuka/black-billed gull (*Chroicocephalus bulleri*). To address this, WCL recommended conditions to limit proposed works, including vegetation clearance during the avifauna breeding season.

174. In response to this, the applicant responded on the 27 March, proposing conditions of consent to manage the adverse effects of vegetation clearance.

175. WCL has reviewed these conditions and identified concerns that the wording of these consent conditions could provide for vegetation clearance that conflicts with the conditions of consent for managing herpetofauna, noting that if the lizard habitat was preserved, while other vegetation (i.e. avifauna habitat) was cleared, this could constitute lizard disturbance.

176. It is considered that the final form of the applicant's volunteered conditions can be addressed through consultation with the applicant at the substantive stage.

Herpetofauna and Habitat

177. The report identifies very little suitable habitat for herpetofauna or bats and negligible ecological values for these species. Noting that vegetation clearance and earthworks could potentially impact these species, the report concludes that it is unlikely that these species could be present at the site and therefore any effects without mitigation is assessed as 'very low'.

178. The WCL report considers that there is some potential habitat for herpetofauna within the subject site and that as no targeted survey have been undertaken the lizard value remain unknown. WCL requested that a survey is undertaken during the lizard active season (October - April).

179. In their 27 March response, the applicant proposed that a lizard management plan is prepared prior to the commencement of vegetation clearance on the site.

180. WCL notes that a lizard survey is generally undertaken first to determine the necessity of a Lizard Management Plan and that in the event that lizards are present a Wildlife Act Authority (WAA) will also be required, which will cause significant delays. However, on balance, WCL accepts that subject to revised wording, a lizard survey and a lizard management plan will address their concerns.

181. It is considered that the final form of the applicant's volunteered conditions can be addressed through consultation with the applicant at the substantive stage.

Aquatic Ecology

182. The north-south oriented stock water race is identified by the ESL report as having a "'*low' measure of representativeness and diversity / pattern dues to its artificial nature, lack of habitat diversity, including structure and composition (both riparian and instream)*". However, the report notes that due to the presence of diadromous fish of conservation interest upstream of the subject site "*the water race may provide a migratory pathway and scored 'moderate' on measure of ecological context".* The report concludes that the ecological value of the water race is assessed as 'low'. To manage any adverse effects associated with the construction works, the report recommends the implementation of appropriate erosion and sediment control and treatment of stormwater and the provision of fish passages within culverts.

183. WCL notes that an EOS ecology report on the Malvern Water race scheme (prepared for SDC, James 2011), found 11 sites of 'high' ecological value and 7 sites of 'moderate' value, and that therefore "*the freshwater ecological values cannot be confirmed until an adequate freshwater fish survey is undertaken".*

184. In their 27 March response, the applicant proposed that a fish management plan is prepared prior to culvert installation on the site.

185. WCL states that the collection and analysis of eDNA specifically to detect the presence of Canterbury mudfish should be undertaken prior to any works commencing and before the NFMP is developed. WCL notes that the results of the survey will impact the NFMP and how in-stream works are carried out. On balance, WCL accepts that subject to revised wording, a survey and an NFMP will address their concerns.

186. I accept the conclusions of the WCL report and consider that these matters will need to be developed further in consultation with the applicant at the substantive stage.

Hazard effects

Flooding

187. The subject site is located within the plains Flood Management Overlay (PFMO), which identifies areas where flooding from a 200-year Average Recurrence Interval (ARI) flood event needs to be managed.

188. In response to the request for further information regarding earthworks and overland flow, the applicant provided additional information on 10 March 2025. This has been reviewed by Ms Rachel Tompkins, Council Development Engineer, who notes that while a significant portion of the earthworks involves removing topsoil from the access track, this will be placed adjacent to the track, resulting in no net change to the levels across the site. Ms Tompkins concludes that subject to conditions relating to water race management, the development is acceptable. I accept Ms Tompkins conclusions and consider that any adverse flooding effects will be less than minor.

Geotechnical

189. BCD Group have provided a desktop study of the application site on behalf of the applicant. This report has been peer-reviewed by Mr Ian McCahon of Geotech Consulting (NZ) Ltd, attached as **Appendix 15**. Mr McCahon is in general agreement with the report noting that there is minimal to no liquefaction potential at the site and that active faulting is unlikely to be a hazard. Additionally, Mr McCahon notes that "*the proposed pile foundation system for the solar panels can be easily adjusted for variation in depth to gravel and thus the lack of test data from the site itself does not present the same risks as could apply to an intensive residential development, for instance*." The report concludes that they do not consider that any conditions pertaining to geotechnical issues are necessary.

190. I accept BCD Group and Mr McCahon's assessment and consider that any adverse effects will be less than minor.

Fire

191. The application states that they have sought advice from Fire and Emergency New Zealand and consider that:

> *for the purposes of emergency vehicle access, the standard of carriageway along Homebush Road and Loes Road and the proposed access points will be satisfactory to ensure a timely and practical emergency vehicle access if and when required.*

192. The applicant has also advised that internal access tracks will be constructed to accommodate large fire applicants tracking curves and width requirements at the detailed design stage.

193. The proposal includes dual 30,000 litre tanks proposed to be located in *"optimal locations*" around the site to provide for firefighting services. These locations are proposed to be confirmed by FENZ though consultation with their regional fire safety team at the detailed design phase. The areas around the tanks will be equipped with a hardstand to provide access for a fire appliance to connect to the tanks and be clear of the access track.

194. It is understood that under the Health and Safety at Work Act and Fire and Emergency Act, the applicant will need to provide a Health and Safety Management Plan and a Fire Emergency Plan.

Contaminated Land

195. The applicant provided a Preliminary Site Investigation (PSI) from Babbage Consultants Ltd. The report concludes that the site has potential contaminants, including OCPs, OPPs and metals from historical agricultural activities, with a level of risk to human health being assessed as minor for Lot 2 and less than minor of Lot 1. However, the report considers that *"pursuant to regulation 5(8)(b) of the NESCS, the piece of land is to remain as production land (grazing) and the proposed soil disturbance is not related to residential or farmhouse activities, therefore the NESCS does not apply."*

196. The PSI report has been peer-reviewed by Mr Jack Grinsted, Contaminated Land Officer at Environment Canterbury. The Officer notes that the proposal will result in a change of land use from grazing land only to grazing plus solar farming and that the PSI does not acknowledge this and did not explicitly say that the HAIL activity was.

197. The applicant has provided a Detailed Site Investigation Report from Babbage Consultants Ltd. The report advises that soil sample analysis reported metals and organochlorine pesticides as concentrations below rural residential land use standards and that asbestos was not detected in the soil. The Babbage report states that the site has been subject to an activity on the Hazardous Activities and Industry List - A10 persistent pesticide use or storage.

198. The report recommends a Site Management Plan (SMP) that outlines *"health, environmental and safety controls the redevelopment earthwork contractor must employ during the redevelopment earthworks phase"* and "*mitigation controls to manage unexpected discovery of contaminants, including asbestos containing materials".*

199. Mr Grinsted has reviewed the DSI and accepts the conclusions of the report, subject to the proposed Site Management Plan.

200. It is considered that subject to consent conditions requiring a Site Management Plan to manage earthworks and unexpected discovery of contaminants, any adverse effects will be less than minor.

Servicing

201. The applicant has provided an Engineering and Infrastructure Report from CKL. This report has been peer-reviewed by Rachel Tompkins, Development Engineer.

Stormwater

202. It is noted that the stormwater runoff from buildings, the carparking and laydown areas are proposed to be discharged to ground, and the applicant will need to obtain the necessary consents from Environment Canterbury.

Wastewater

203. The CKL Engineering and Infrastructure Report states that toilet facilities will be provided via a portable toilet that is serviced monthly or as required depending on staff numbers. Alternatively, wastewater will be held in a holding tank and disposed of off-site. Additionally, the report states that if kitchen facilities be provided, wastewater will be collected in accordance with the same options proposed for the toilet facilities.

Water

204. The applicant proposed static water tanks of 30,000 litres positioned around the site to provide for panel cleaning maintenance and for firefighting capacity. Potable water is proposed to be provided via rainwater tanks collecting roof water to supply the site office.

Water Race

205. A water race is located within the site, as identified in yellow in **Figure 6** below. The management of water races is controlled by the Selwyn District Council Water Race Bylaw that requires a minimum five metre setback for buildings and structures from the side of any water races without Council Approval (Clause 7.1).

Figure 6. Plan of Water Race

206. The applicant has confirmed that no buildings or structures will be located within the 5 metre setback required by the Bylaw (17 January 2025 letter). The applicant has also confirmed that agreement has been reached between Selwyn District Council (as asset owner) and Environment Canterbury to plant one side of the water race, to enable the other side to be clear for access for maintenance. As has been noted above, confirmation from Mahaanui Kurataiao Ltd on behalf of the Rūnanga regarding the proposed riparian planting has not been provided.

207. The application has been peer-reviewed by the Development Engineering Team, who have proposed a number of conditions of consent to manage works on the water race.

208. It is considered that these matters will need to be developed further in consultation with the applicant and Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga at the substantive stage.

Consent Duration and Site Rehabilitation

Consent Duration

209. The applicant has sought a 35 consent duration. As has been noted, Mahaanui Kurataiao Limited on behalf of Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga have sought to have this limited to 15 years. The Cultural Advice Report states that shorter durations are requested as long consent durations

> *"remove the ability for future generations of mana whenua to fulfil their kaitiakitanga obligations, where there is a duty to pass the environment to future generations in a state that is as good as, or better than, the current state."*

210. It is considered that these matters will need to be developed further in consultation with the applicant and Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga at the substantive stage.

Site Rehabilitation

211. In response to a request for further information regarding what rehabilitation will be required to enable the site to continue to be used for land based primary production, the application has volunteered the inclusion of a decommissioning condition (refer **Appendix 1**).

212. It is considered that the proposed condition is appropriate for ensuring that rehabilitation will be undertaken to enable the site to continue to be used for land based primary production.

Positive Effects

213. Positive effects are not relevant to the consideration of notification and will be considered as part of the s 104 assessment.

Conclusion

214. I conclude that the adverse effects of the proposal on 1433 Homebush Road, 32 Loes Road and 68 Loes Road will be more than minor.

215. Additionally, I conclude that Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga are affected by the proposal in a way that is at least minor.

216. I conclude that the adverse effects on the wider environment will be no more than minor.

Public Notification (Section 95A)

217. Section 95A states that a consent authority must follow the steps in the order given to determine whether to publicly notify an application for resource consent.

STEP 1: MANDATORY PUBLIC NOTIFICATION IN CERTAIN CIRCUMSTANCES (SECTIONS 95A(2) AND 95A(3))	
Has the applicant requested the application is publicly notified?	No
Is public notification required under section 95C (no response or refusal to provide information or agree to the commissioning of a report under section 92)?	No
Has the application has been made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977?	No

STEP 2: PUBLIC NOTIFICATION PRECLUDED IN CERTAIN CIRCUMSTANCES (SECTIONS 95A(4) AND 95A(5))	
Are all activities in the application subject to one or more rules or national environmental standards that preclude public notification?	No
Is the application for one or more of the following, but no other types of activities: A controlled activity? A boundary activity only (as per the definition of “boundary activity” in s 87AAB of the Act)?	No

STEP 3: PUBLIC NOTIFICATION REQUIRED IN CERTAIN CIRCUMSTANCES (SECTIONS 95A(7) AND 95A(8))	
Is the activity subject to a rule or national environmental standard that requires public notification?	No
Will the activity have, or is it likely to have, adverse effects on the environment that are more than minor?	No

STEP 4: PUBLIC NOTIFICATION IN SPECIAL CIRCUMSTANCES (SECTION 95A(9))	
Do special circumstances exist in relation to the application that warrant public notification?	No

Conclusion

218. In conclusion, in accordance with the provisions of section 95A, the application must not be publicly notified and a determination on limited notification must be made, as follows.

Limited Notification (Section 95B)

219. Section 95B states that a consent authority must follow the steps in the order given to determine whether to give limited notification of an application for resource consent, if it is not publicly notified under section 95A.

STEP 1: CERTAIN AFFECTED GROUPS AND AFFECTED PERSONS MUST BE NOTIFIED (SECTIONS 95B(1)-(4))	
Are there any affected protected customary rights groups, as defined in s 95F?	No
Are there any affected customary marine title groups, as defined in s 95G (in the case of an application for a resource consent for an accommodated activity (as defined in the Act))?	No
Is the proposed activity on or adjacent to, or may it affect, land that is the subject of a statutory acknowledgement made in accordance with an Act specified in Schedule 11; and is the person to whom that statutory acknowledgement is made an affected person under s 95E?	No

STEP 2: LIMITED NOTIFICATION PRECLUDED IN CERTAIN CIRCUMSTANCES (SECTIONS 95B(5) AND 95B(6))	
Are all activities in the application subject to one or more rules or national environmental standards that preclude limited notification?	No
Is the application for a controlled activity under the district plan only and not a subdivision of land?	No

STEP 3: CERTAIN OTHER AFFECTED PERSONS MUST BE NOTIFIED (SECTIONS 95B(7)-(9))	
In the case of a “boundary activity”, is an owner of an allotment with an infringed boundary an affected person?	No
For any other activity, are there any affected persons in accordance with section 95E of the Act (as assessed in the Assessment of Adverse Environmental Effects above)?	Yes

STEP 4: LIMITED NOTIFICATION IN SPECIAL CIRCUMSTANCES	
Do any special circumstances exist in relation to the application that warrant notification to any other persons not already determined to be eligible for limited notification (excludes persons assessed under section 95E as not being affected)?	No

Conclusion

220. In conclusion, in accordance with the provisions of section 95B, the application must be limited notified. As the applicant has not accepted the proposed cultural conditions, the application shall be limited notified to Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga.

Notification Recommendation

221. I recommend that the application RC245775 be processed on a **limited notified** basis in accordance with sections 95A-E of the Resource Management Act 1991.

Report by: Jane Anderson Consultant Planner	Date: 8 May 2025

Notification Decision

222. For the reasons set out in the report above, the Notification Recommendation is adopted under delegated authority.

 Commissioner O'Connell	**Date: 16 May 2025**

Appendix 1 – Conditions volunteered by the applicant 7 May 2025

Note: Additional minor amendments identified by **bold and underlining** have been included to ensure the wording is in accordance with Selwyn District Council consent conditions standards, or to identify minor omissions.

General

1. The proposal shall proceed in general accordance with the information formally received with the application on **9 September 2024, the further information provided on 17 January, 10 February, 25 February, 10 March, 27 March, 9 April and 23 April 2025, and the attached Approved Plans entitled XXXX** except where another condition of this consent must be complied with.
2. The Consent Holder shall ensure that all contractors engaged to undertake activities authorised by this resource consent are made aware at all times of the conditions and management plans that apply to this resource consent that are relevant to their work area and the measures required for compliance with the conditions.

Management Plan Certification

3. The Consent Holder shall prepare the following management plans for certification by the Council (compliance@selwyn.govt.nz) or by their nominated appointee.

   (a) Construction Noise Management Plan (CNMP)

   (b) Construction Traffic Management Plan (CTMP)

   (c) Landscaping Management Plan (LMP)

   (d) Native Fish Management Plan (NFMP)

   (e) Lizard Management Plan (LizMP)

   (f) Erosion Sediment and Dust Control Plan (ESDCP)

   (g) Glint and Glare Adaptive Management Plan (GGAMP)

4. The certification process shall be limited to confirming in writing that the Management Plan has been prepared in accordance with the relevant conditions(s) and will achieve the objectives of the Management Plan.
5. Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga must be invited to participate in preparation of the following management plans prior to submission to Council for certification under Condition 3:

   (a) Landscaping Management Plan (LMP)

   (b) Native Fish Management Plan (NFMP)

   (c) Lizard Management Plan (LizMP)

   (d) Erosion Sediment and Dust Control Plan (ESDCP)

   Amendments to Management Plans

6. The Consent Holder may make amendments to the above Management Plans that are consistent with the objectives and performance requirements of the management plan and relevant consent conditions. The Amended Management Plan shall be submitted to SDC for certification in accordance with Conditions 3-4.

Site Preparation and Construction

7. Prior to the commencement of construction on the site, the vehicle crossings on Homebush Road and Loes Road which will be used for access during construction must be formed and sealed in accordance with Diagram E10.D of the Operative District Plan (Rural Volume), at the expense of the Consent Holder. The Consent Holder must ensure that all vehicle accessways, parking, manoeuvring and loading areas comply with TRAN-R5 and TRAN-R6 of the Partially Operative District Plan.
8. Vehicle crossings to service the site must be formed in accordance with the requirements of Selwyn District Council Partially Operative District Plan and the approved consent documents. The vehicle crossing must be sealed/metalled to match the existing road surface for the full width of the crossing and for the first ten metres (as measured from the edge of the existing formed carriageway towards the property) or to the property boundary, whichever is the lesser.

9. All vehicle crossings and formed accessways must meet Council's testing standards as prescribed by the Selwyn District Council Engineering Code of Practice.

Erosion, Sediment and Dust

10. The Consent Holder must submit an Erosion Sediment and Dust Control Plan (ESDCP) to the Manager for certification at least 20 working days prior to the proposed date of works authorised under this consent commencing. The ESDCP must be prepared in consultation with the contractor undertaking the works and a suitably qualified and experienced person and be in general accordance with the Canterbury Regional Council "Erosion and Sediment Control Toolbox for the Canterbury Region" (ESCT) or an equivalent industry guideline. If an alternative guideline is used, the ESCDP must provide details of the relevant alternative methods used and an explanation of why they are more appropriate than the ESCT.

11. The ESDCP must include as a minimum the following:

    (a) The specific sediment control measures that will be implemented to ensure compliance with the conditions of this resource consent;

    (b) Details for inspection and maintenance of erosion and sediment control measures;

    (c) Identification of the discharge points where stormwater is discharged onto land or infiltrates into land; and

    (d) Measures for stabilising the site and appropriate decommissioning of all erosion and sediment control measures after works have been completed.

12. The ESCDP may be amended at any time. Any amendments shall be:

    (a) Only for the purpose of improving the efficacy of the erosion and sediment control measures and must not result in reduced discharge quality; and

    (b) For the purpose of applying best practicable measures to mitigate dust and/or sediment transport off-site;

    (c) Consistent with the conditions of this resource consent; and

    (d) Submitted in writing to the Selwyn District Council prior to any amendment being implemented.

13. All erosion and sediment control measures detailed in the ESCDP required by Condition 3 of this resource consent must be installed prior to the commencement of any earthworks or stripping of vegetation and topsoil occurring on the site.

Construction Traffic

14. The Consent Holder shall, at least 30 working days prior to the commencement of construction, submit to the SDC for certification a CTMP.

15. The CTMP must include, but not be limited to:

    (a) Construction traffic routes;

    (b) Measures to control the numbers of vehicles turning right into Homebush Road off SH 73 such that they do not exceed 80 vehicles per hour.

    (c) Measures to manage traffic at the Homebush Road railway crossing;

    (d) Nature and duration of any temporary traffic management proposed;

    (e) Measures to prevent, monitor and remedy tracking of debris onto public roads and dust onto sealed sections; and

    (f) Provision of sufficient onsite access and manoeuvring space, and parking spaces.

16. Prior to the commencement of construction on the site, the Consent Holder shall upgrade the SH73/Homebush Road intersection to include seal widening on the western side of SH1, in accordance with NZTA Planning Policy Manual Diagram E, at the expense of the Consent Holder.

17. In preparing the CTMP, the consent holder shall include a description and summary of the consultation undertaken by the consent holder with NZTA staff with respect to the proposed limitation of right turning traffic specified in condition 13(b), including the outcome of this consultation with NZTA and listing all issues raised by NTA and the means by which the issue has been addressed in the CTMP.

Construction Noise

18. Construction activities must be conducted in accordance with NZS 6803: 1999 “Acoustics – Construction Noise” and must comply with the “long-term duration” noise limits contained within Table 2 and Table 3 of that Standard.

19. The Consent Holder must, at least 30 working days prior to the commencement of construction, submit to the SDC for certification a CNMP.

20. The CNMP must include, but not be limited to:

    (a) The applicable permitted noise standards;

    (b) The programme of works and hours of operation;

    (c) Identification of surrounding noise sensitive receivers;

    (d) Written communication with occupants of all occupied dwellings or minor dwellings that are within 200 m of proposed piling works at least ten (10) days prior to the commencement of activities on site. The written advice shall set out:

        i. a brief overview of the construction works;

        ii. the working hours and expected duration;

        iii. an evaluation of piling methodology to demonstrate the Best Practicable Option has been adopted;

        iv. all mitigation measures to be implemented;

        v. the procedure for recording concerns/complaints regarding noise; and

        vi. details of the management and mitigation measures required to comply with the relevant noise limits when piling works are undertaken within 200m of any occupied building that has not provided written approval.

21. Construction work on the site must only take place between the hours of 7.30 am and 6.00 pm, Monday to Saturday (inclusive), except that this condition does not preclude quieter work related to construction outside of standard hours providing it can comply with the permitted construction noise limits at these times.

    Advice note: Quieter activities may be undertaken outside of the hours of 7.30 am and 6.00 pm, Monday to Saturday (inclusive) if they are generally inaudible at sensitive receivers. This may include electrical testing and commissioning, bracket installation, cable management works, surveying, office and administrative work, PV module installation, use of hand tools and light vehicle movements.

Accidental Discovery

22. In the event of accidental discovery of any archaeological material, all works must cease immediately in the part of the site known, or suspected, to be an archaeological site, and the following steps must be undertaken:

    (a) The Selwyn District Council, Heritage New Zealand Pouhere Taonga and Papatipu Rūnanga, as well as the New Zealand Police in the case of discovery of kōiwi/human bones, must be informed immediately of the disturbance, and the archaeological authority process under the Heritage New Zealand Pouhere Taonga Act 2014 must be followed.

    (b) In the event of the accidental discovery of Māori archaeological sites or material, the accidental discovery protocol for Māori archaeology, included as Attachment 1, must be followed in addition to the process under the Heritage New Zealand Pouhere Taonga Act 2014.

    (c) To ensure that all statutory and cultural requirements have been met, any works in the part of the site subject to the archaeological discovery must not recommence until authorised by the Selwyn Dstrictl Council, and:

        i. upon completion of the archaeological authority process referred to under clause (c);

        ii. in the event of the accidental discovery of Māori archaeological sites or material, and in addition to clause (c) upon completion of the process referred to under clause (d); and

        iii. in the event of the discovery of kōiwi/human bones, the New Zealand Police.

Landscaping

23. At least 30 working days prior to the commencement of landscaping, the Consent Holder must submit to SDC for certification a Landscape Management Plan (LMP). The LMP will be in general accordance with the Mitigation Planting Plan Drawings No. 01 and 02 dated 10/04/24 included as Attachment 2 to these conditions and must also include provision for a planting strip of minimum width of 3m along one bank of the water race that is located in the centre of the site (running north to south), which will have a maximum growth height equivalent to the maximum width of the water race within the site.

24. The LMP shall include, but not be limited to:

    (a) Identification of existing vegetation within the Site and along the site boundaries to be retained and protected or replaced;

    (b) A planting programme including staging, timing and species; and

    (c) Measures to maintain the retained and additional planting for the duration of this consent.

25. All species utilised in new planting must be appropriate indigenous species for the Canterbury High Plains Ecological District.

26. All landscaping must be implemented in accordance with the LMP and maintained for the duration of the solar array activity.

Ecology

27. No vegetation clearance, earthworks or construction activities may be undertaken between 1 September – 28 February (inclusive), other than in accordance with Conditions 27-29.

28. Within 8 days of and vegetation clearance, earthworks or construction activities being undertaken in any area between 1 September – 28 February (inclusive), a site survey must be conducted by a suitably qualified and experienced avifauna ecologist to determine whether indigenous birds and non-indigenous birds that are protected under the Wildlife Act (1953) are present.

29. If the survey required by Condition 26 finds that breeding birds are present, a setback buffer as determined by the suitably qualified and experienced ecologist site must be applied from the nest site(s) and works must not commence within buffers until any chicks present have fledged or the ecologist advises for other reasons that the buffer is no longer required.

30. A report of the results of the survey required by Condition 26 and any measures required under Condition 19 must be submitted to SDC and representatives of Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga within 10 working days of the survey being undertaken.

31. At least 30 working days prior to installation of any culverts, the consent holder must submit to SDC for certification a Native Fish Management Plan (NFMP) to meet the objectives of:

    (a) preventing injury/mortality to fish during installation of the culverts; and

    (b) providing for fish passage post-installation.

32. The NFMP must include:

    (a) a methodology for the collection and analysis of eDNA specifically to detect the presence of Canterbury mudfish within/upstream of the site; and

    (b) provision for the use of a de-fishing methodology suitable for the capture and relocation of any Canterbury mudfish present.

33. All works to install culverts must be:

    (a) Undertaken in accordance with the certified NFRP;

    (b) To a standard compatible with Regulation 70(2) of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020; and

    (c) Scheduled and undertaken in a manner that avoids unnecessary disturbance to any Canterbury mudfish present.

Advice note 1: The Resource Management (National Environmental Standards for Freshwater) Regulations 2020 do not otherwise apply.

Advice note 2: Avoiding unnecessary disturbance to any Canterbury mudfish present may be achieved by undertaking river crossing works in close succession / at the same time to avoiding affecting the same fish multiple times.

34. At least 30 working days prior to the commencement of vegetation clearance or earthworks (whichever is the sooner), the Consent Holder must submit a Lizard Management Plan (LizMP) to the Selwyn District Council for certification that it meets the objective of *"avoiding, remedying or mitigating any adverse effects of vegetation clearance or earthworks on any lizard species."*.

35. The LizMP must address the following matters:

    (a) Details of a site survey to be carried out by a suitably qualified ecologist/herpetologist with at least five years' experience conducting lizard surveys in order to determine whether indigenous lizard species are present within the solar array footprint; and

    (b) Procedures for the capture and relocation of any lizards that may be found.

36. The survey required by Condition 33.A(a) ~~may~~ **shall** be targeted to potentially suitable habitat and must be undertaken during the lizard active season (October-April).

37. Should lizards be discovered in any area, then they must be relocated in accordance with the LMP prior to any vegetation clearance or earthworks in that area.

    Advice note: Authorisation is required under the Wildlife Act for the relocation of any lizards found. The Department of Conservation should be contacted in this regard.

38. The Consent Holder must undertake monitoring for bird strike to include:

    (a) a record of information about any bird species found dead at the Site that appear to have suffered trauma injuries, including species, number, and suspected cause of death. Input from an SQEP or veterinarian may be required.

        Note: Due to Wildlife Act 1953 requirements the handling of injured indigenous birds or the storage of dead indigenous birds would likely require approval from the Department of Conservation.

    (b) Provide this information on an annual basis, to Selwyn District Council and / or the Department of Conservation, in order to increase the understanding of possible bird strike issues with solar arrays.

Operational Noise

39. Operational noise levels shall be measured in accordance with *NZS6801:2008 Acoustics-Measurement of environmental sound*, and assessed in accordance with the provisions of *NZS6802:2008 Acoustics - Environmental noise*, and noise must not exceed the following levels when measured and assessed at:

40. The notional boundary of any dwelling on another site in the GRUZ

Timeframe	**Noise limit**
7:00am to 10:00pm	55 dB LAeq
10:00pm to 07:00am	45dB LAeq and 70 dB LAmax

41. Within the site boundary of any site in a Residential Zone:

Timeframe	**Noise limit**
7:00am to 10:00pm	55 dB LAeq
10:00pm to 07:00am	45dB LAeq and 70 dB LAmax

42. No later than six weeks prior to commencement of construction of the solar farm, the consent holder shall provide Council with a report setting out an acoustic assessment from a suitably qualified and experienced acoustic expert that demonstrates the selected plant and layout will achieve compliance with the noise limits in Condition 37. The report shall include an assessment of the cumulative sound power levels for all electro-mechanical plant and confirm any proposed mitigation measures that must be incorporated in the layout, design and operation of the activity.

43. Within 6 weeks of the project becoming operational, a suitably qualified and experienced acoustic consultant must perform measurements to confirm compliance with both the daytime and night-time noise limits in Condition 37. The assessment must include an objective analysis of any special audible characteristics during the day and at night, in accordance with Appendix B4 of NZS 6802:2008 Acoustics - Environmental Noise, and:

    (a) Should the sound commissioning survey indicate that the noise limits are exceeded, then the mitigation options that will be implemented will be clearly outlined, including timeframes for the completion of these mitigation works.; and

    (b) Following completion of any a mitigation measures, the sound commissioning survey will be repeated and an updated report provided to Council.

Glint and Glare Adaptive Management Plan

44. The Consent Holder must prepare and implement a Glint and Glare Adaptive Management Plan (GGAMP) to address any substantiated adverse glint and glare impacts on affected parties and/or the surrounding road network as identified in the Glint and Glare Analysis Report (dated 25 June 2024). The GGAMP must include the following:

    (a) Details of screening to be established in line with the Glint and Glare Analysis Report (dated 25 June 2024) as updated by the memo: Darfield Agrivoltaic Development: Request for Additional Information (S92) Response, Mansergh Graham, Dated 9 December 2024. For the avoidance of doubt, temporary screening is required to be in place prior to panel tracking operations commencing on-site, and erected and regularly maintained to a height of 3 metres to mitigate effects of “Yellow glare” until such time as the mitigation screening vegetation growth reaches a minimum height of 3m.

    (b) Contact Information: The GGAMP must provide contact details for the Consent Holder and their agent responsible for addressing glint and glare complaints, ensuring that affected parties have a direct line of communication for reporting issues.

    (c) Reporting procedures: The plan must include procedures for reporting glint and glare issues by affected parties, including Road Controlling Authorities and KiwiRail for any road or rail network affected by “Yellow glare” or “Green glare”. This includes:

        i. The process for lodging a complaint.

        ii. The timeline within which the Consent Holder must acknowledge receipt of the complaint.

        iii. A detailed timeline for the investigation and response process, ensuring that any substantiated glare issues reported are addressed promptly and effectively within a specified timeframe.

        iv. Adaptive management strategies: The GGAMP should detail a range of possible mitigation solutions to address reported glint and glare issues. These solutions may include but are not limited to, physical alterations to the solar farm setup, installation of screening or landscaping to block or diffuse glare, and adjustments to the operational procedures of the solar farm (such as tracking management).

    (d) Monitoring and Evaluation: The Consent Holder must implement a monitoring regime to assess the effectiveness of the mitigation measures implemented under the GGAMP, including any road or rail network affected by “Yellow glare” or “Green glare”. This includes feedback from affected parties on the resolution of reported glare issues.

    (e) Duration of the Plan: Unless otherwise authorised by the Consent Authority, the GGAMP must be implemented for whichever is the greater duration of the following:

        i. A period of three years following the mitigation planting obtaining the minimum 3m height; or

        ii. For a year following any remedial action undertaken.

During this period, the Consent Holder is obligated to respond to and manage glint and glare complaints as per the procedures outlined in the GGAMP.

(f) Review and Reporting: The Consent Holder must submit an Annual Report to the Consent Authority, summarising the glint and glare complaints received, actions taken, and the effectiveness of the mitigation measures implemented. The Annual Report may also recommend whether ongoing management of glint and glare issues is required along with any relevant supporting information.

Advice Note: *An adaptive management plan offers a flexible and responsive approach to managing glint and glare that may arise from the approved agrivoltaic activity, recognising the inherent challenges and uncertainties in accurately predicting glare impacts ahead of time. This approach allows for real-time monitoring and addressing of actual impacts as they occur, rather than relying solely on predictive models that may not fully capture the dynamic and variable nature of sunlight and its interactions with the environment. By focusing on adaptive measures, the plan can more efficiently respond to affected parties' concerns, ensuring that mitigation strategies are directly tailored to the specific conditions and experiences of those impacted.*

Decommissioning and Site Rehabilitation

45. At least six (6) months prior to undertaking the decommissioning of the development in accordance with Condition 2 below, a Decommissioning Management Plan shall be prepared, submitted to, and certified by the Consent Authority. The following matters regarding decommission of the development shall be outlined:

    (a) The methodology for removal of all structures and associated infrastructure administered by the Consent Holder;

    (b) The intended disposal location for all structures and associated infrastructure to be removed from the site;

    (c) The methodology for reinstatement of the site to predevelopment standard;

    (d) The soil testing strategy to be implemented with regards to the confirmation that, as a result of decommissioning the development, the site is suitable to return to the full productive agricultural use standard it was in immediately prior to the development being established;

    (e) A Construction Traffic Management Plan (CTMP) shall be prepared and submitted to the Consent Authority roading manager for certification at least one (1) month prior to the commencement of the decommissioning activities within the site. The CTMP shall include, but not be limited by, the following matters:

        i. Management of traffic within the adjacent road network;

        ii. Approximate schedule for heavy vehicle movements and procedure for notifying the Consent Authority of any periods of higher movement numbers;

        iii. Specification of any additional measures necessary during periods of activities which involve high levels of construction traffic on nearby properties (including communication and any necessary physical management steps); and

        iv. The procedure for recording concerns/complaints regarding construction traffic; and

    (f) A completion report shall be provided to the Consent Authority no more than six (6) months following completion of the decommissioning of the development. The completion report shall include confirmation of compliance with the requirements of Condition 1 as well as the Decommissioning Management Plan, as well as the findings of the testing required under Condition 1(d) above were, and what, if any, remedial actions were subsequently undertaken.

Advice Notes

The actions required to be undertaken in order to achieve compliance with this condition may result in additional resource consent/s being required. The responsibility, including all associated costs, of obtaining of any such resource consent/s, including any specialist reporting and the Consent Authority processing fees, shall be born wholly by the Consent Holder.

It is noted that there may be elements of the development that Orion wishes to take responsibility for. As the Consent Holder would no longer be the agent administering those elements, removal of those elements may not be possible.

46. Prior to the end of the 35 year consent duration, the Consent Holder shall remediate the site in accordance with the Decommissioning Management Plan, including removing all structures, as well as any associated infrastructure administered by the Consent Holder, including (but not limited to) PV modules, tracking table posts and mechanisms, BESS units, substation (only that located within the subject site), switchyard station building, and site office building. Where relevant, all associated electrical cables shall either be removed or decommissioned in accordance with electricity transmission industry best practice and standards.

Advice Notes

Consent Holder shall be responsible for the subsequent disposal of all equipment removed from the site associated with the decommissioning of the development in accordance with this consent condition. The equipment shall be removed from the site to a suitably certified disposal or recycling facility or returned to the manufacturer of the equipment if an agreement for such disposal process applies.

It is noted that there may be elements of the development that Orion wishes to take responsibility for. As the Consent Holder would no longer be the agent administering those elements, removal of those elements may not be possible.

Hazard Management

47. Inverters, batteries and transformers must be established at a minimum height of 0.3m above the 200 Year ARI flood level where they are positioned.

48. Prior to the operation of the solar array, the Consent Holder must provide the Council with a copy of a Fire Safety Management Plan that is prepared under the Fire and Emergency New Zealand Act 2017 and specifies the fire detection and suppression systems to be installed and maintained within the battery containers for the duration of the use of batteries on the site.

Advice note: It is intended that the version of the Fire Safety Management Plan submitted to the Consent Authority in accordance with this condition of consent shall have obtained prior approval from Fire and Emergency New Zealand (FENZ).

Water Race

49. Any works undertaken on a water race located within the development site must completed in accordance with the Engineering Code of Practice and accepted engineering plans.

50. Access to all parts of the water race must be made available at any time to Council.

Advice note: The design proposes additional culverts on the water race which require engineering acceptance from SDC. Permission will also be required for any temporary shutdowns of the water race for culvert installation. Culvert installation needs to be witnessed by SDC staff.

Attachments

1. Protocol for the accidental discovery of Māori archaeological sites or material
2. Landscape Mitigation Planting Plan Drawings No. 01 and 02

Attachment 1: Protocol for the accidental discovery of Māori archaeological sites or material

PRIOR TO COMMENCEMENT OF ANY WORKS, A COPY OF THIS ADP SHOULD BE MADE AVAILABLE TO ALL CONTRACTORS WORKING ON SITE.

Purpose

This Accidental Discovery Protocol (ADP) sets out the procedures that must be followed in the event that taonga (Māori artefacts), burial sites/kōiwi (human remains), or Māori archaeological sites are accidentally discovered. The Protocol is provided by Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga. Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga are the representative body of the tangata whenua who hold mana whenua in the proposed area.

Background

Land use activities involving earthworks have the potential to disturb material of cultural significance to tangata whenua. In all cases such material will be a taonga, and in some cases such material will also be tapu. Accidental discoveries may be indicators of additional sites in the area. They require appropriate care and protection, including being retrieved and handled with the correct Māori tikanga (protocol).

Under the *Heritage New Zealand Pouhere Taonga Act 2014*, an archaeological site is defined as any place associated with pre-1900 human activity, where there is material evidence relating to the history of New Zealand. It is unlawful for any person to destroy, damage or modify the whole or any part of an archaeological site (known or unknown) without the prior authority of the Heritage New Zealand Pouhere Taonga (HNZPT). This is the case regardless of the legal status of the land on which the site is located, whether the activity is permitted under the District or Regional Plan or whether a resource or building consent has been granted. The HNZPT is the statutory authority for archaeology in New Zealand.

Note that this ADP does not fulfil legal obligations under the Heritage New Zealand Pouhere Taonga Act 2014 regarding non-Māori archaeology. Please contact the HNZPT for further advice.

Immediately following the discovery of material suspected to be a taonga, kōiwi or Māori archaeological site, the following steps shall be taken:

1. All work on the site will cease immediately.
2. Immediate steps will be taken to secure the site to ensure the archaeological material is not further disturbed.
3. The contractor/works supervisor/owner will notify the Kaitiaki Rūnanga and the Area Archaeologist of the HNZPT. In the case of kōiwi (human remains), the New Zealand Police must be notified.
4. The Kaitiaki Rūnanga and HNZPT will jointly appoint/advise a qualified archaeologist who will confirm the nature of the accidentally discovered material.
5. If the material is confirmed as being archaeological, the contractor/works supervisor/owner will ensure that an archaeological assessment is carried out by a qualified archaeologist, and if appropriate, an archaeological authority is obtained from HNZPT before work resumes (as per the *Heritage New Zealand Pouhere Taonga Act 2014*).
6. The contractor/works supervisor/owner will also consult the Kaitiaki Rūnanga on any matters of tikanga (protocol) that are required in relation to the discovery and prior to the

commencement of any investigation.

7. If kōiwi (human remains) are uncovered, in addition to the steps above, the area must be treated with utmost discretion and respect, and the kōiwi dealt with according to both law and tikanga, as guided by the Kaitiaki Rūnanga.
8. Works in the site area shall not recommence until authorised by the Kaitiaki Rūnanga, the HNZPT (and the NZ Police in the case of kōiwi) and any other authority with statutory responsibility, to ensure that all statutory and cultural requirements have been met.
9. All parties will work towards work recommencing in the shortest possible time frame while ensuring that any archaeological sites discovered are protected until as much information as practicable is gained and a decision regarding their appropriate management is made, including obtaining an archaeological authority under the *Heritage New Zealand Pouhere Taonga Act 2014* if necessary. Appropriate management may include recording or removal of archaeological material.
10. Although bound to uphold the requirements of the Protected Objects Act 1975, the contractor/works supervisor/owner recognises the relationship between Ngāi Tahu whānui, including its Kaitiaki Rūnanga, and any taonga (Māori artefacts) that may be discovered.

IN DOUBT, STOP AND ASK; TAKE A PHOTO AND SEND IT TO THE HNZPT ARCHAEOLOGIST

Contact Details

HNZPT Archaeologist: (03) 357 9615 archaeologistcw@heritage.org.nz

HNZPT Southern Regional Office (03) 357 9629 infosouthern@heritage.org.nz

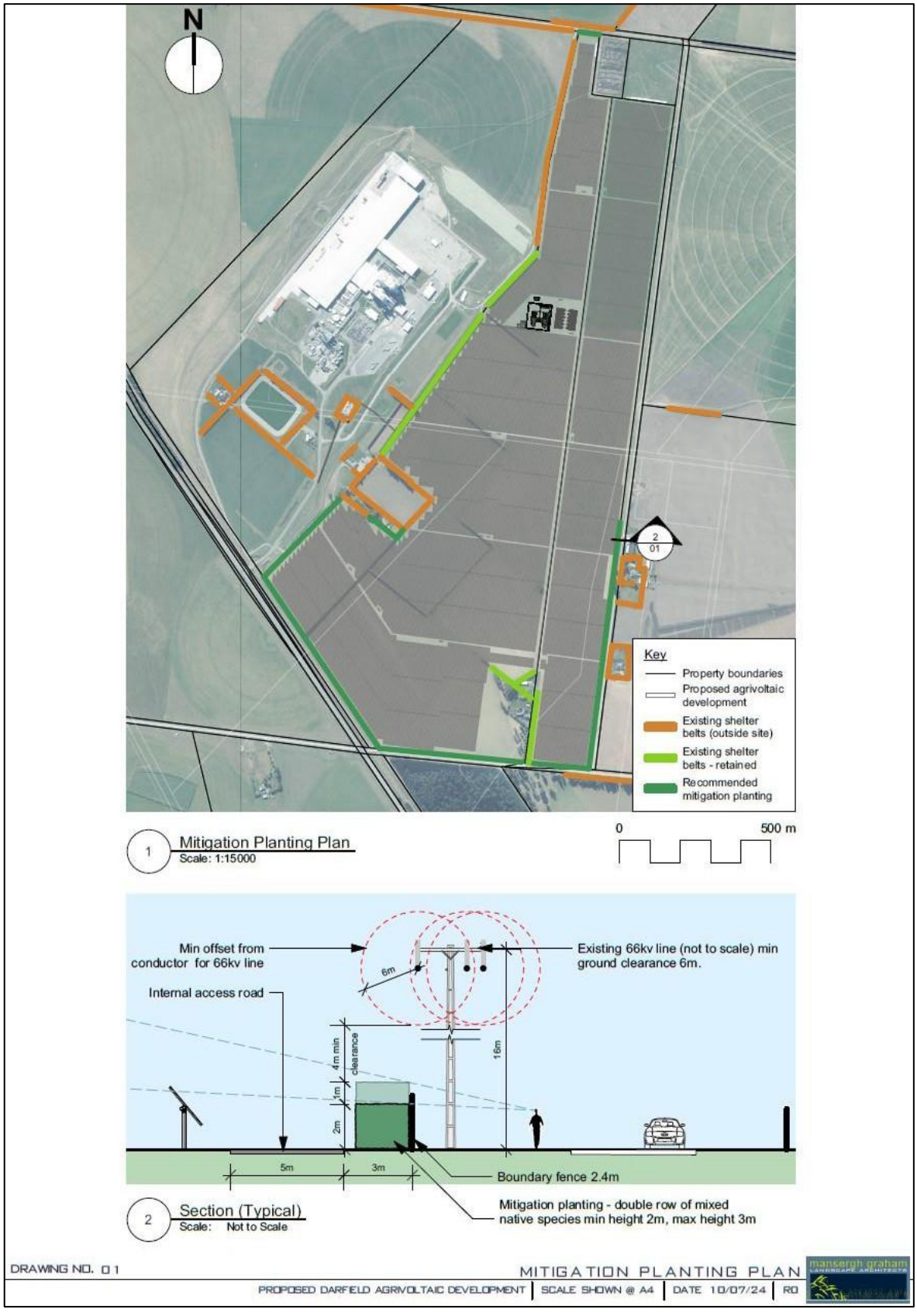
HNZPT Māori Heritage Advisor (03) 357 9620 pouarahisouth@heritage.org.nz

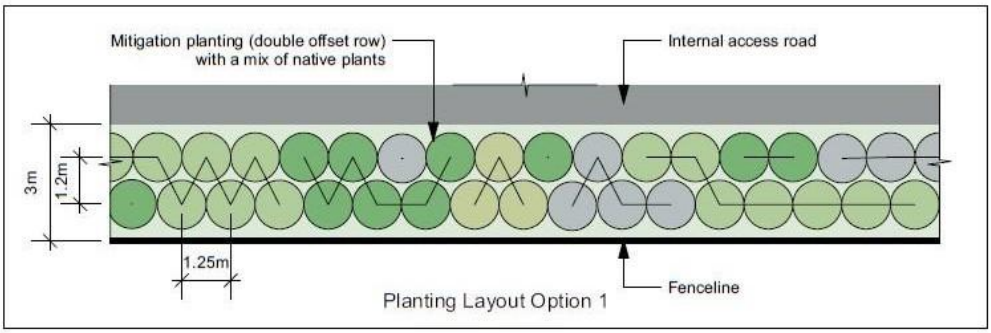
Kaitiaki Rūnanga:

Te Ngāi Tūāhuriri Rūnanga: (03) 313 5543, Tuahiwi.Marae@ngaitahu.iwi.nz

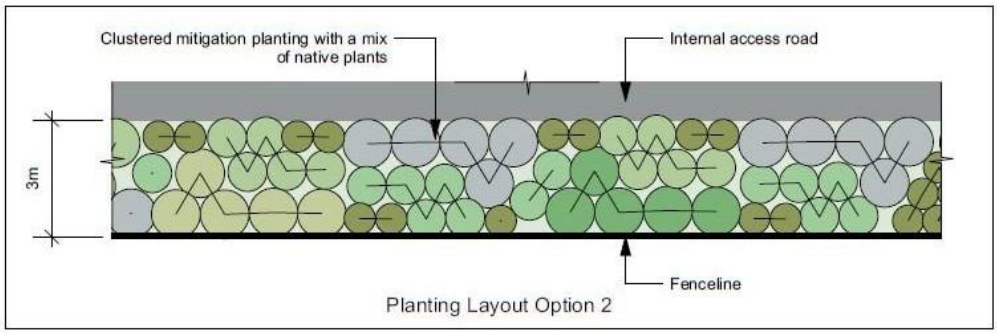
Te Taumutu Rūnanga: 03 371 2660, taumutu@ngaitahu.iwi.nz

Attachment 2: Landscape Mitigation Planting Plan Drawings No. 01 and 02





Planting Layout Option 1



Planting Layout Option 2

Suggested Plant Species

Botanical Name	Common Name	Mature size (ht x wth)	Yrs to 3m	Flammability [1]	Min size at planting	Plant spacing
Exotic - Single species border						
Pinus sp	Pine	25m x 7m	4yr	x	20-30cm	2m
Native - Single species border						
Griselinia littoralis	Kapuka	6m x 2.5m	5yr	Low	20-30cm	1m
Pittosporum tenuifolium	Kohuhu	6m x 3m	3-4yr	Moderate	20-30cm	1m
Native - Mixed species border						
**Coprosma cotoneaster	Korokio	3m x 2m	5-7yr	x	20-30cm	1
Coprosma crassifolia	Mingimingi	4m x 2m	3yr	Low	20-30cm	1m
Coprosma propinqua	Mingimingi	5m x 2.5m	5yr	Low	20-30cm	1m
Coprosma robusta	Karamu	5m x 4m	5yr	Low	20-30cm	1m
**Coprosma rugosa	Needle-leaved Mountain Coprosma	3m x 2m	5yr	x	20-30cm	1m
Coprosma virescens	Mikimiki	5m x 3m	5-7yr	x	20-30cm	1m
Corokia cotoneaster	Korokio	3m x 2m	7yr	x	20-30cm	1m
Griselinia littoralis	Kapuka/Broadleaf	6m x 2.5m	5yr	Low	20-30cm	1m
Griselinia littoralis Canterbury	Kapuka/ Broadleaf	4m x 2m	5yr	Low	20-30cm	1m
*Myrsine australis	Red matipo	5m x 3m		Low	20-30cm	1m
Lophomyrtus obcordata	Rohutu	5m x 2.5m	5yr	x	20-30cm	1m
Olearia avicenniifolia	Mountain akeake	4m x 3m	5+	x	20-30cm	1m
Olearia lineata 'Dartonii'	Twiggy Tree Daisy	4m x 3m	5yr	x	20-30cm	
Olearia paniculata	Akiraho/Golden Ake Ake	4m x 2.5m	5yr	x	20-30cm	1m
Olearia solandri	Coastal Shrub Daisy	4m x 2m	5yr	x	20-30cm	1m
*Pittosporum eugenioides	Tarata/lemonwood	9m x 3m	5yr	Low/mod	20-30cm	1m
Pittosporum ralphii	Ralph's karo	5m x 3m	5yr	x	20-30cm	1m
Pittosporum tenuifolium	Kohuhu	6m x 3m	3-4yr	Moderate	20-30cm	1m
Veronica salicifolia	Koromiko	4m x 2m	5yr	Low/mod	20-30cm	1m

x = flammability not listed in the Fire Emergency New Zealand Low Flammability Plant List (unknown)
* Tips can be frosted when young but will recover after 2 yrs.
**Presumed this plant will have the same flammability as the other plants of the same species listed

DRAWING NO. 02 PLANTING LAYOUT AND SUGGESTED SPECIES LIST

PROPOSED DARFIELD AGRIVOLTAIC DEVELOPMENT | SCALE SHOWN @ A4 | DATE 10/07/24 | RD