

Note to the draft conditions: Text shown in black is that supplied by the Applicant on 21 April 2026. Tracking shows the Panel's changes and additions. Panel comments are added (where necessary) to assist with understanding the Panel's reasoning behind changes.

Discharge Permit under section 15 of the RMA

Administering Authority: Canterbury Regional Council

Activity: The discharge of stormwater generated from:

- (a) Roofs, roads, hardstand areas, and impervious areas; and
- (b) Photo-voltaic (PV) solar panel arrays; and
- (c) Supporting electrical infrastructure/equipment (including BESS and PCUs); and
- (d) Substations.

Location: Haldon Station, Haldon Arm Road, Twizel

Legal Description: Part Reserve 1358, Record of Title CB437/82

Commencement Date:

Lapse Date: 01 July 2036

Duration: 35 years, unless it has been surrendered or cancelled at an earlier date

	<b>Definitions</b>	<b>Panel Comments</b>
	<p><b>Site:</b></p> <p>All land to be used for the Solar Farm, Solar Farm Substation and National Grid Substation on Legal Description Part Reserve 1358, Record of Title CB437/82, shown on Plan CRC____ attached to and forming part of this consent .</p> <p><b>Solar Farm:</b></p> <p>The Solar Farm comprises solar arrays supported above ground on posts; overhead and buried cabling and ducting; site access, internal roading, parking and hardstand areas; landscaping including stabilised stockpiles and bunds; drainage infrastructure including culverts and swales; fencing, security infrastructure and lighting; staff facilities, buildings including for equipment storage, panel storage, hazardous goods storage, and provision for Battery Energy Storage Systems (BESS) module storage; water storage and reticulation; fire-fighting infrastructure and firewater containment; lightning rods; supporting electrical infrastructure such as Power Conversion Units (PCUs) and their foundations, bund structures and access platforms; and <u>includes</u> the <b>Solar Farm Substation</b>. During the construction phase of the Solar Farm, areas of the site will include construction laydown areas. The Solar Farm includes the provision to incorporate BESS in the future.</p>	

	<p><b>Solar Farm Substation:</b></p> <p>The 33kV Solar Farm Substation receives electricity generated from the Solar Farm solar arrays via underground cables and connects into the adjacent <b>National Grid Substation</b>. The Solar Farm Substation includes the main step-up transformers (220kV/33kV), foundations and bund structures, lightning protection poles/rods, switchgear, a control room, water storage tank, lighting, fencing, landscaping, and related infrastructure, and is part of the Solar Farm.</p> <p><b>National Grid Substation:</b></p> <p>The 220kV National Grid Substation will provide the connection from the Solar Farm Substation into the 220kV electricity transmission network which crosses the Solar Farm site. The National Grid Substation includes a control building, water storage tank, gantries, lightning protection poles/rods, a mono-pole, 220kV switchgear equipment (including incomer bays, bus sections, and feeder bays), lighting, fencing and landscaping.</p> <p><b>Power Conversion Unit (PCU):</b></p> <p>A device or integrated system within a solar farm that converts direct current (DC) electricity generated by photovoltaic panels into alternating current (AC) electricity suitable for export to the National Grid. A Power Conversion Unit may include inverters, transformers, switchgear, control systems, and associated housing or enclosures necessary for safe and efficient operation.</p> <p><b>Working Day:</b></p> <p>The same meaning as section 2 of the Resource Management Act 1991 (RMA).</p>	
		Addressed in header
	<b>LIMITS</b>	
2	<p>This resource consent authorises only the discharge of stormwater generated from:</p> <ul style="list-style-type: none"> <li>a) Roofs, roads, hardstand areas, and impervious areas; and</li> <li>b) Photo-voltaic (PV) solar panel arrays; and</li> <li>c) Supporting electrical infrastructure/equipment (including BESS and PCUs); and</li> <li>d) Substations.</li> </ul> <p>associated with the Solar Farm, located at Haldon Station, Haldon Arm Road, Twizel, on land legally described as Part Reserve 1358, held in Record of Title CB437/82, labelled as 'Site' on Plan CRC_____, attached to and forming part of this consent.</p>	

	Stormwater must only be discharged onto and into land within the boundary of the site.	
3	All stormwater infiltration devices (including soakpits or soakage swales) must be sized to provide sufficient soakage for the volume generated from up to and including the 10 percent annual exceedance probability (10% AEP) rainfall event.	
4	Unless treatment is provided, the discharge of roof stormwater from site buildings must not arise from: <ul style="list-style-type: none"> <li>a) Copper building materials; or</li> <li>b) Unpainted galvanised sheet materials.</li> </ul>	
5	There must be no stormwater discharges from any solar panels that do not have glass laminate encapsulation.	
6	All panels installed and used on Site must be coated in anti-reflective coating and have gridlines.	
7	Solar panels and array tables must be cleaned with water only. Chemical cleaning agents, detergents or additives must not be used.	
	<b>SOLAR FARM LAYOUT</b>	
8	The substations at the site must be located in general accordance with the plan shown on Plan CRC _____, attached to and forming part of this consent.	Plan attached is adequate
9	The solar farm layout may be amended from that specified in Condition (8) at any time. Any amendments must be: <ul style="list-style-type: none"> <li>a) Consistent with the conditions of this resource consent; and</li> <li>b) Submitted in writing to the Canterbury Regional Council, Attention: Compliance Manager (via <a href="mailto:ecinfo@ecan.govt.nz">ecinfo@ecan.govt.nz</a>) for certification, prior to any amendment being implemented.</li> </ul>	
10	Each Power Conversion Units (PCU) must be designed and constructed to capture 100 percent of the transformer oil within each PCU, should the transformer fail.	
11	All Battery Energy Storage System (BESS) units installed at the site must be on foundations/footings, within a hardstand surface extending at least six metres around the perimeter of the BESS.	
	<b>SOLAR FARM INSPECTIONS AND MAINTENANCE</b>	
12	Land onto which stormwater is discharged from the solar panel arrays must be maintained in a state in which significant erosion is either avoided or remedied.	

	<p><b>Advice Note:</b> For the purpose of this condition, ‘significant erosion’ is any erosion that could result in sediment entering surface water or entering adjacent properties.</p> <p><b>Advice Note:</b> Measures to prevent significant erosion may include using grass, coarse gravel, mulch, polymers, coconut matting or other means that sufficiently stabilise the soils in the dripline of the solar panels to prevent erosion or the formation of channels or rills.</p>	
13	<ul style="list-style-type: none"> <li>a) The driplines of the solar panel arrays within the Solar Farm must be inspected for erosion three months following the completion of any stage, and thereafter annually; unless three-months after stage completion inspection and the general annual inspection for the same area would otherwise be within three months of each other.</li> <li>b) Any significant erosion observed during the inspections undertaken in accordance with Condition (13)(a) must be photographed and recorded.</li> <li>c) Records of visual assessments including photographs must be kept and provided to the Canterbury Regional Council on request.</li> </ul>	
14	<p>If during the life of the Solar Farm, the discharges from solar arrays cause visible channels or rills and there is associated sediment runoff and/or stormwater is visibly ponding on the soil surface for longer than 48 hours and moving laterally, the Consent Holder must:</p> <ul style="list-style-type: none"> <li>a) Implement erosion mitigation measures including, but not limited to, soil respreading, grass seeding, or the installation of a strip of gravel, or mulch, or geotextile or some type of flow distribution panel; and</li> <li>b) Implement infiltration enhancement measures including, but not limited to, the installation of surface soakage areas, surface contouring to distribute overland flows or some other measure to increase infiltration; and</li> <li>c) Notify Canterbury Regional Council, Attention: Compliance Manager (via <a href="mailto:ecinfo@ecan.govt.nz">ecinfo@ecan.govt.nz</a>) within ten working days of the issue arising and within ten working days of the mitigation measures being implemented.</li> </ul>	
15	<p>Throughout the operation of the solar farm, the Consent Holder must undertake the following:</p> <ul style="list-style-type: none"> <li>a) Annual visual inspections of the PV panels for any signs of damage; and,</li> <li>b) Visual inspection of the panels after a hail storm event with a hail diameter of 25 millimetres or greater; and,</li> <li>c) Ongoing monitoring for signs of damage via system performance data, and any portion of the site where damage is suspected to be investigated further by visual inspection; and,</li> <li>d) Appropriate repair of damaged panels (which may include removal of damaged panels) must be undertaken within one month of discovery</li> </ul>	

	<p>of damage, to ensure no internal components are exposed to stormwater.</p> <p>Records of any inspections or maintenance carried out in accordance with (a)-(d) must be kept by the Consent Holder and provided to Canterbury Regional Council upon request.</p> <p><b>Advice Note:</b> For the purpose of compliance with (d), damaged solar panels must not be stored outside.</p>	
	<p><b>Stormwater Management Plan</b></p>	
16	<p>At least 20 working days prior to commissioning of the Solar Farm, the Consent Holder must submit a Stormwater Management Plan to the Canterbury Regional Council, Attention: Compliance Manager, for certification.</p> <p>The purpose of the Stormwater Management Plan is to demonstrate how stormwater from the operating solar farm and substations will be managed and discharged to land only (via soakage) to avoid, remedy or mitigate adverse effects on the environment. The Stormwater Management Plan must be prepared by a suitably qualified and experienced practitioner and must include the following information:</p> <ul style="list-style-type: none"> <li>a) Confirmation of the availability of stormwater soakage to alleviate any possible ponding under the solar panel arrays; and</li> <li>b) The design of the proposed stormwater soakage to be provided for associated buildings via soakage pits.</li> </ul> <p>The certified Stormwater Management Plan (and any subsequent amendments) must be implemented and adhered to throughout the operation of the solar farm. Any amendments made must be in accordance with Condition 17.</p> <p><b>Advice Note:</b> The Stormwater Management Plan must be consistent with all other management plans for the consented activity certified by Canterbury Regional Council or Mackenzie District Council.</p>	<p>Wording improved for certainty</p>
17	<p>The Stormwater Management Plan may be amended at any time. Any amendments must be:</p> <ul style="list-style-type: none"> <li>a) Only for the purposes of: <ul style="list-style-type: none"> <li>i. improving the efficacy of the stormwater management measures and must not result in reduced discharge quality;</li> <li>ii. applying best practicable measures to mitigate adverse effects;</li> </ul> </li> <li>b) Consistent with the conditions of this resource consent; and</li> </ul>	<p>Wording improved for certainty</p>

	c) Submitted in writing to the Canterbury Regional Council, Attention: Compliance Manager, prior to any amendment being implemented for certification.	
	Solar Farm operations (generation of electricity) may not commence until the Stormwater Management Plan is certified by the Canterbury Regional Council.	Clarity regarding need for certification
	The certified Stormwater Management Plan must be complied with throughout the operational phase of the project.	Clarity regarding compliance with Plan
	<b>Soil Monitoring Plan</b>	
18	<p>A Soil Monitoring Plan (SMP) must be prepared and provided to the Canterbury Regional Council, Attention: Compliance Manager (via <a href="mailto:ecinfo@ecan.govt.nz">ecinfo@ecan.govt.nz</a>), for certification at least three months prior to the commencement of any physical works on site. The purpose of the SMP is to monitor soil contamination and quality across the site. The SMP must:</p> <ul style="list-style-type: none"> <li>a) Be prepared by a suitably qualified and experienced practitioner with experience in soil contamination and in general accordance with the Ministry for the Environment's <i>Contaminated land management guidelines No. 5: Site investigation and analysis of soils (Revised 2021)</i>; and</li> <li>b) Detail a representative soil sampling regime to monitor changes to soil contamination over the lifetime of the solar panels; and</li> <li>c) Detail the soil quality sampling to be undertaken in those locations at the following stages: <ul style="list-style-type: none"> <li>i. Prior to commencement of construction (baseline testing);</li> <li>ii. Prior to commencement of operation;</li> <li>iii. Every fifth year after commencement of operation; and</li> <li>iv. At decommissioning.</li> </ul> </li> </ul> <p><b>Advice Note:</b> For the purpose of Condition (18)(c)(i-ii), due to the installation of the solar array over time and in stages, sampling in the <span style="background-color: yellow;">    </span> locations referred to under (b) may occur over a number of stages.</p> <p><b>Advice Note:</b> The Soil Monitoring Plan must be consistent with all other management plans for the consented activity certified by Canterbury Regional Council or Mackenzie District Council.</p>	
19	<p>Representative soil samples must be taken:</p> <ul style="list-style-type: none"> <li>a) At the stages detailed in the Soil Monitoring Plan; and</li> <li>b) By, or under the supervision of a suitably qualified and experienced practitioner and in accordance with best practice sampling methodologies; and</li> </ul>	

	<ul style="list-style-type: none"> <li>c) From the 15 representative locations detailed in the certified Soil Monitoring Plan; and</li> <li>d) From within the driplines of the solar panels; and</li> <li>e) At a depth of no greater than 50 millimetres below the ground surface.</li> </ul>	
20	<p>The soil samples required by Condition (19) must be analysed by an International Accreditation New Zealand (IANZ) accredited laboratory, or by a laboratory accredited by an organisation with a mutual agreement with IANZ, for the following:</p> <ul style="list-style-type: none"> <li>a) pH</li> <li>b) Electrical conductivity</li> <li>c) Silver – Ag</li> <li>d) Cadmium – Cd</li> <li>e) Copper – Cu</li> <li>f) Lead – Pb</li> <li>g) Antimony – Sb</li> <li>h) Zinc – Zn</li> <li>i) Per-fluorinated compounds</li> </ul>	
21	<p>Within three months of the completion of each soil quality monitoring event detailed in the SMP, the Consent Holder must submit to the Canterbury Regional Council, Attention: Compliance Manager (via <a href="mailto:ecinfo@ecan.govt.nz">ecinfo@ecan.govt.nz</a>), a 'Soil Monitoring Report' prepared by a suitably qualified and experienced practitioner and in general accordance with the Ministry for the Environment's <i>Contaminated land management guidelines No. 1: Reporting on contaminated sites in New Zealand (Revised 2021) (CLMG1)</i>.</p> <p>The purpose of the Soil Monitoring Report is to assess soil quality monitoring results and identify any required measures to manage potential or actual soil contamination. The Monitoring Report must include:</p> <ul style="list-style-type: none"> <li>a) Copies of the laboratory analysis results; and</li> <li>b) A comparison of the soil monitoring results against the relevant land use and environmental protection standards applicable at the time; and</li> <li>c) Assessment of the results of soil contaminant testing, including if the results indicate any trend of increasing contaminants or if any contaminant exceeds the WasteMINZ Class 4 Guidelines Table 3-C Adopted Values or the 'PFAS National Environmental Management Plan Version 3.0, Heads of EPA Australia and New Zealand 2025, Table 6, Interim Ecological indirect exposure – all land uses' (or, where these Guidelines have been updated, the updated values); and</li> <li>d) If the assessments indicate that soil contaminants are increasing or exceed the Guideline Values, details of mitigating actions to be</li> </ul>	

	<p>undertaken to ensure that Guideline Values are not exceeded or further exceeded.</p> <p>e) Any mitigating actions recommended in the Soil Monitoring Report must be implemented by the Consent Holder within 60 working days.</p>	Remove uncertainty
22	<p>Within 15 working days following completion of decommissioning works on the site, the Consent Holder must provide a Detailed Site Investigation (DSI) to the Canterbury Regional Council, Attention: Contaminated Sites Manager for certification. The DSI must be prepared by a suitably qualified and experienced practitioner in accordance with the current edition of the CLMG1 guidelines.</p>	Wording improved for certainty
23	<p>In the event that the DSI required in Condition 22 finds that site contamination exceed the baseline testing values, a Remedial Action Plan (RAP) and Site Validation Plan (SVP) must be prepared in accordance with the current edition of the CLMG1 and CLMG5 guidelines. The RAP and SVP must be provided to Canterbury Regional Council, Attention: Contaminated Sites Manager, within 15 working days of the submission of the DSI required under Condition 22, for certification.</p>	
<b>SUBSTATIONS STORMWATER SYSTEM</b>		
24	<p>Stormwater must be discharged into land via the following stormwater system:</p> <ul style="list-style-type: none"> <li>a) Stormwater from roofs must be discharged via a sealed system that excludes all other stormwater;</li> <li>b) Stormwater from roofs must be collected in tanks;</li> <li>c) Stormwater from any bunded transformer area must drain via an oil/water separator fitted with a stop valve before discharging via soak pit; and</li> <li>d) Stormwater from hardstand areas must be discharged via swales and <u>soakpits</u>;</li> </ul> <p>as shown on Plan CRC_____, attached to and forming part of this consent.</p>	
25	<p>When the capacity of any soakage device is exceeded, stormwater from the National Grid Substation must be directed away from the adjacent Solar Farm Substation and vice versa.</p>	
26	<p>The stormwater system must be designed and constructed to collect, treat, and dispose of stormwater from the contributing catchment from storm events up to and including a 10 percent Annual Exceedance Probability (AEP) event of 1-hour duration.</p> <p><b>Advice Note:</b> <i>The roof water may also be collected within rainwater tanks, however the soakpits or soakage swales must be sized to dispose of the design storm event, in the situation that the rainwater tanks are at capacity.</i></p>	
27	<p>Stormwater must not pond in any swales for longer than 48 hours after the cessation of any storm event.</p>	

28	<p>All transformers on site must be installed with an oil containment system. The oil/water separator must:</p> <ul style="list-style-type: none"> <li>a) Have the capacity to treat flows of at least the 10 percent AEP 1-hour duration event for the separator's catchment without bypassing;</li> <li>b) Achieve a discharge quality of 15 milligrams per litre of total petroleum hydrocarbons or less; and</li> <li>c) Be fitted with an automatic shut-off valve at the outlet that closes when the spill containment volume is reached;</li> <li>d) Be fitted with an alarm system that alerts personnel if the automatic shut-off valve is triggered; and</li> <li>e) Be constructed and installed in compliance with the manufacturer's specifications.</li> </ul>	
29	<p>Soakage swales and any soak pits must:</p> <ul style="list-style-type: none"> <li>a) Store and dispose of all rainfall events up to and including the 1-hour duration ten (10) percent annual exceedance probability event from the contributing catchment;</li> <li>b) Have a base that extends into free draining soil strata; and</li> <li>c) Have a factor of safety of three incorporated into the soak pit design to account for reduction of infiltration performance over time (clogging).</li> </ul>	
<b>SUBSTATIONS INSPECTIONS AND MAINTENANCE</b>		
30	<p>The Substations' stormwater system must be maintained by:</p> <ul style="list-style-type: none"> <li>a) Inspecting the soakage swales and soak pits at least once every six months;</li> <li>b) Removing any visible hydrocarbons, debris or litter within ten working days of the inspection;</li> <li>c) Removing any accumulated sediment in the soakage swales within ten working days of the inspection;</li> <li>d) Removing any accumulated sediment in the sumps when the sediment occupies more than one quarter of the depth below the invert of the outlet pipe; and</li> <li>e) Repairing any scour or erosion within ten working days of the inspection.</li> </ul> <p>Records of any inspections or maintenance carried out in accordance with (a)-(e) must be kept by the Consent Holder and provided to Canterbury Regional Council upon request.</p>	Enables compliance checks
31	<p>The oil/water separator must be maintained in accordance with the manufacturer's specifications, including removing accumulated hydrocarbons as required.</p>	

32	<p>In the event that any oil/water separator's automatic shut-off valve alarm is triggered, the Consent Holder must have the oil/water separator inspected within 24 hours of the shut-off alarm being triggered.</p> <p>If there has been any spill of oil or other hazardous substances, the Spills procedures of Conditions (37-39) must be undertaken.</p>	
33	Any material removed from the devices in accordance with Conditions (30-32) must be disposed of at a site authorised to accept such materials .	Consistency with condition 39
<b>DESIGN PLANS AND CERTIFICATION</b>		
34	<p>At least 10 working days prior to the commencement of the installation of the Substations' stormwater systems, the Consent Holder must submit to the Canterbury Regional Council, Attention: Compliance Manager:</p> <ul style="list-style-type: none"> <li>a) Final detailed design plans for the stormwater system;</li> <li>b) A certificate signed by a Chartered Professional Engineer (CPEng) with stormwater system design and construction experience confirming that the stormwater system has been designed in accordance with the Conditions of this resource consent; and</li> <li>c) A statement signed by the CPEng confirming that they are competent to certify the engineering work.</li> </ul> <p><b>Advice Note:</b> For the avoidance of doubt; the requirement for CPEng sign-off applies only to the stormwater system for the substations. CPEng sign-off is not required for the design of the wider Solar Farm site.</p>	
35	The substations' stormwater systems must not be constructed prior to confirmation being received from the Canterbury Regional Council, Attention: Compliance Manager, that it meets the requirements under this resource consent.	
36	<p>Within 10 working days following the completion of the installation of the Substations' stormwater systems, the Consent Holder must submit to the Canterbury Regional Council, Attention: Compliance Manager:</p> <ul style="list-style-type: none"> <li>a) All as-built design plans of the stormwater system installed;</li> <li>b) A certificate signed by a CPEng with stormwater system design and construction experience confirming that confirming that the installed stormwater system complies with the conditions of this resource consent; and</li> <li>c) A statement signed by the CPEng confirming that they are competent to certify the engineering work.</li> </ul>	
<b>SPILLS</b>		
37	All practicable measures must be taken to avoid spills of fuel or any other hazardous substances within the site. In the event of a spill of fuel or any other hazardous substance:	

	<ul style="list-style-type: none"> <li>a) The spill must be cleaned up immediately, the stormwater system must be inspected and cleaned, and measures must be taken to prevent a recurrence;</li> <li>b) The Canterbury Regional Council, Attention: Compliance Manager, must be informed within 24 hours of a spill event exceeding five litres and the following information provided: <ul style="list-style-type: none"> <li>i. The date, time, location and estimated volume of the spill;</li> <li>ii. The cause of the spill;</li> <li>iii. The type of hazardous substance(s) spilled;</li> <li>iv. Clean up procedures undertaken;</li> <li>v. Details of the steps taken to control and remediate the effects of the spill on the receiving environment;</li> <li>vi. An assessment of any potential effects of the spill; and</li> <li>vii. Measures to be undertaken to prevent a recurrence.</li> </ul> </li> </ul>	
38	<p>All best practicable options must be used to contain spills or leaks of any hazardous substance from being discharged via the stormwater system. These must include, but not be limited to the following:</p> <ul style="list-style-type: none"> <li>a) Making spill kits available at the Substation sites to contain or absorb any hazardous substances used or stored on the site;</li> <li>b) Maintaining signs to identify the location of the spill kits; and</li> <li>c) Maintaining written procedures in clearly visible locations that are to be undertaken to contain, remove and dispose of any spilled hazardous substance.</li> </ul>	
39	<p>Any materials removed under condition 37 must be removed and disposed of at a site authorised to accept such materials. Receipts of disposal must be provided to the Canterbury Regional Council within 10 working days of the material being disposed of.</p>	
	<b>ADMINISTRATION</b>	
40	<ul style="list-style-type: none"> <li>a) Canterbury Regional Council may, pursuant to section 128 of the RMA, serve notice of its intention to review any or all of the conditions of this consent on any of the last five working days of May or November of any year .</li> <li>b) A review of conditions under clause (a) may allow for the consideration of the following: <ul style="list-style-type: none"> <li>i. the alteration of monitoring activities, including the frequency of monitoring;</li> <li>ii. the deletion, amendment or addition of new conditions as necessary to avoid, remedy, mitigate, offset or compensate for any unanticipated adverse effect on the environment that may arise from the exercise of these resource consents.</li> </ul> </li> </ul>	<p>No reference to section of legation under which this process may occur.</p> <p>Improved certainty</p>

41	<p>Pursuant to section 36 of the RMA, the Consent Holder must pay the actual and reasonable costs incurred by Canterbury Regional Council when monitoring the conditions of these resource consents, including but not limited to costs associated with:</p> <ul style="list-style-type: none"> <li>a) site visits;</li> <li>b) review and certification of management plans;</li> <li>c) monitoring of works; and</li> <li>d) administration.</li> </ul>	Enables administrative charges
		Addressed in header

DRAFT

Land Use Consent under section 9 of the RMA - Earthworks

Administering Authority: Canterbury Regional Council

Activity: The earthworks of land associated with the excavations for the solar farm and the solar farm substations

Location: Haldon Station, Haldon Arm Road, Twizel

Legal Description: Part Reserve 1358, Record of Title CB437/82

Commencement Date:

Lapse Date: 01 July 2036

Duration: 5 years

	<b>Definitions</b>	<b>Panel Comments</b>
	<p><b>Site:</b></p> <p>All land to be used for the Solar Farm, Solar Farm Substation and National Grid Substation on Legal Description Part Reserve 1358, Record of Title CB437/82, shown on Plan CRC____, attached to and forming part of this consent.</p> <p><b>Solar Farm:</b></p> <p>The Solar Farm comprises solar arrays supported above ground on posts; overhead and buried cabling and ducting; site access, internal roading, parking and hardstand areas; landscaping including stabilised stockpiles and bunds; drainage infrastructure including culverts and swales; fencing, security infrastructure and lighting; staff facilities, buildings including for equipment storage, panel storage, hazardous goods storage, and provision for Battery Energy Storage Systems (BESS) module storage; water storage and reticulation; fire-fighting infrastructure and firewater containment; lightning rods; supporting electrical infrastructure such as Power Conversion Units (PCUs) and their foundations, bund structures and access platforms; and <u>includes</u> the <b>Solar Farm Substation</b>. During the construction phase of the Solar Farm, areas of the site will include construction laydown areas. The Solar Farm includes the provision to incorporate BESS in the future.</p> <p><b>Solar Farm Substation:</b></p> <p>The 33kV Solar Farm Substation receives electricity generated from the Solar Farm solar arrays via underground cables and connects into the adjacent <b>National Grid Substation</b>. The Solar Farm Substation includes the main step-up transformers (220kV/33kV), foundations and bund structures, lightning protection poles/rods, switchgear, a control room, water storage tank, lighting, fencing, landscaping, and related infrastructure, and is part of the Solar Farm.</p>	

	<p><b>National Grid Substation:</b></p> <p>The 220kV National Grid Substation will provide the connection from the Solar Farm Substation into the 220kV electricity transmission network which crosses the Solar Farm site. The National Grid Substation includes a control building, water storage tank, gantries, lightning protection poles/rods, a mono-pole, 220kV switchgear equipment (including incomer bays, bus sections, and feeder bays), lighting, fencing and landscaping.</p> <p><b>Power Conversion Unit (PCU):</b></p> <p>A device or integrated system within a solar farm that converts direct current (DC) electricity generated by photovoltaic panels into alternating current (AC) electricity suitable for export to the National Grid. A Power Conversion Unit may include inverters, transformers, switchgear, control systems, and associated housing or enclosures necessary for safe and efficient operation.</p> <p><b>Working Day:</b></p> <p>The same meaning as section 2 of the Resource Management Act 1991 (RMA).</p>	
		Addressed in header
	<b>Limits</b>	
1	<p>The works authorised by this resource consent are limited to the earthworks of land associated with the excavations of the Solar Farm, the National Grid Substation and the Solar Farm Substation, located at Haldon Station, Haldon Arm Road, Twizel, on land legally described as Part Reserve 1358, held in the Record of Title CB437/82, labelled as 'Site' on Plan _____, attached to and forming part of this - consent.</p> <p><b>Advice Note:</b> <i>Driving piles for the building/structure foundations, or for solar array foundations does not constitute 'excavation of land' and is therefore not managed under this resource consent.</i></p>	
2	<p>The maximum depth of excavation for the works authorised by this resource consent must not exceed 2 metres below ground level.</p> <p><b>Advice Note:</b> <i>It will be up to the Consent Holder to demonstrate compliance with the maximum excavation depth. This can be done, for example, via reference to a specified datum and reduced levels from that datum or via site specific survey points or other measurements.</i></p> <p><b>Advice Note:</b> <i>Driving piles for the building/structure foundations, or for solar array foundations does not constitute 'excavation of land' and is therefore not managed under this resource consent.</i></p>	
3	<p>Excavation works must not be carried out within the exposed water table during times when groundwater levels are higher than the deepest part of the excavations.</p>	
	<b>Prior to Commencement of Works</b>	

4	<p>Prior to commencement of the works described in Condition (1), all personnel working on the site must be made aware of, and have access to, the following:</p> <ul style="list-style-type: none"> <li>a. The contents of this resource consent document and all associated documents; and</li> <li>b. Resource Consents _____, _____, and _____, and all associated documents, including the Erosion and Sediment Control Plan (ESCP) required to be prepared and maintained under Resource Consent _____.</li> </ul>	
5	<p>At least 20 working days prior to the commencement of works on site as described in Condition (1), the Canterbury Regional Council, Attention: Compliance Manager (via <a href="mailto:ecinfo@ecan.govt.nz">ecinfo@ecan.govt.nz</a>) must be informed of the commencement of works.</p>	<p>Timing aligned with MDC consent</p>
6	<p>At least 20 working days prior to the commencement of any construction works on site, the Consent Holder must request a pre-construction site meeting with the Canterbury Regional Council, Attention: Compliance Manager (via <a href="mailto:ecinfo@ecan.govt.nz">ecinfo@ecan.govt.nz</a>), and all relevant parties, including the primary contractor. At a minimum, the following must be covered at the meeting:</p> <ul style="list-style-type: none"> <li>a. Scheduling and staging of the works;</li> <li>b. Responsibilities of all relevant parties, including confirmation that the person/ persons implementing the ESCP on the site is/are suitably trained and/or experienced;</li> <li>c. Contact details for all relevant parties;</li> <li>d. Expectations regarding communication between all relevant parties;</li> <li>e. Procedures for implementing any amendments;</li> <li>f. Site inspection; and</li> <li>g. Confirmation that all relevant parties have copies of the contents of this resource consent document and all associated documents, including erosion and sediment control plans and any other discharge treatment methodologies employed.</li> </ul> <p><b>Advice Note:</b> <i>Pre-construction site meetings required under resource consents _____, _____, _____, may be held as one single pre-construction site meeting at the commencement of works on site.</i></p>	<p>Timing aligned with MDC consent</p>
	<p><b>During Works</b></p>	
7	<p>All practicable measures must be taken to:</p> <ul style="list-style-type: none"> <li>a. Minimise soil disturbance to that necessary to carry out the works described under Condition (1);</li> <li>b. Prevent soil erosion;</li> <li>c. Avoid placing excavated material in a position where it may enter: <ul style="list-style-type: none"> <li>i. Any neighbouring site; or</li> <li>ii. A surface water body.</li> </ul> </li> </ul>	

8	Tracking of material off-site during the works must be avoided at all times. In the event that material is tracked off-site, the tracked material must be removed as soon as practicable and no later than 24 hours after tracking.	
	<b>Discovery of Contaminated Soils or Materials</b>	
9	<p>In the event that any contaminated soil or material is uncovered by the works, a Contamination Discovery Protocol must be implemented, including but not limited to the following steps:</p> <ul style="list-style-type: none"> <li>a. Earthworks within ten metres of discovered contaminant soil or material must cease immediately;</li> <li>b. All practicable steps must be taken to prevent the contaminated material becoming entrained in stormwater. Immediate steps must include, where practicable: <ul style="list-style-type: none"> <li>i. Diverting any stormwater runoff from surrounding areas away from the contaminated material; and</li> <li>ii. Minimising the exposure of the contaminated material, including covering the contaminants with an impervious cover;</li> </ul> </li> <li>c. Notification of the Canterbury Regional Council, Attention: Compliance Manager (via <a href="mailto:ecinfo@ecan.govt.nz">ecinfo@ecan.govt.nz</a>) within 24 hours of the discovery;</li> <li>d. Earthworks within ten metres of discovered contaminant soil or material must not recommence until a suitably qualified and experienced practitioner confirms to Canterbury Regional Council, Attention: Compliance Manager, that continuing works does not represent a significant risk to the environment;</li> <li>e. All records and documentation associated with the discovery must be kept and copies must be provided to the Canterbury Regional Council, Attention: Compliance Manager within 20 working days of such a request being made.</li> </ul>	
10	Any material removed from the site during the works that is potentially or confirmed as contaminated, must be disposed of at a facility authorised to receive such material. Receipts of disposal must be provided to the Canterbury Regional Council, Attention: Compliance Manager within 10 working days of the material being disposed of.	
	<b>Spills</b>	
11	<p>All practicable measures must be taken to avoid spills of fuel or any other hazardous substances within the site. These measures must include:</p> <ul style="list-style-type: none"> <li>a. Refuelling of machinery and vehicles must not occur within 20 metres of: <ul style="list-style-type: none"> <li>i. Open excavations;</li> <li>ii. Surface water bodies;</li> <li>iii. Exposed groundwater; and</li> <li>iv. Stormwater devices.</li> </ul> </li> </ul>	

	<ul style="list-style-type: none"> <li>b. A spill kit, or multiple spill kits, must be kept on site that is, or are, capable of absorbing the quantity of oil and petroleum products that may be spilt on site at any one time.</li> <li>c. In the event of a spill of fuel or any other hazardous substance, the spill must be cleaned up immediately, any stormwater system or erosion and sediment control measure must be inspected and cleaned, and measures taken to prevent a recurrence;</li> <li>d. The Canterbury Regional Council, Attention: Compliance Manager, must be informed (via <a href="mailto:ecinfo@ecan.govt.nz">ecinfo@ecan.govt.nz</a>) within 24 hours of a spill event exceeding five litres and the following information provided: <ul style="list-style-type: none"> <li>i. The date, time, location and estimated volume of the spill;</li> <li>ii. The cause of the spill;</li> <li>iii. The type of hazardous substance(s) spilled;</li> <li>iv. Clean up procedures undertaken;</li> <li>v. Details of the steps taken to control and remediate the effects of the spill on the receiving environment;</li> <li>vi. An assessment of any potential effects of the spill; and</li> <li>vii. Measures to be undertaken to prevent a recurrence.</li> </ul> </li> </ul>	
12	Any materials removed under Condition (11) must be removed and disposed of at a site authorised to accept such materials. Receipts of disposal must be provided to the Canterbury Regional Council, Attention: Compliance Manager, within 10 working days of the material being disposed of.	
	<b>Artesian Aquifer Interception</b>	
13	<p>In the event of interception or unanticipated levels of artesian flows, all practicable measures must be undertaken to remedy or mitigate any change in aquifer pressure, water quality or temperature. This must include:</p> <ul style="list-style-type: none"> <li>a. All works must immediately cease within the immediate area of excavation that caused the interception of the artesian flows;</li> <li>b. Determining and documenting whether the flow is constant or increasing, if the turbidity is constant or increasing and if the flow is confined to the excavation;</li> <li>c. Notifying the site engineer and/or other appropriate personnel to determine the emergency measures required to arrest the artesian flow. Emergency measures must include, but not be limited to: <ul style="list-style-type: none"> <li>i. the installation of a layer of impermeable material to the extent required to reform a capping layer over the aquifer to prevent the upward movement of groundwater through the confining layer; or</li> <li>ii. inserting a vertical pipe in the aquifer interception point (if practicable) and provide for a secure seal against the pipe to enable the stabilisation of the artesian flow in the pipe, and to determine the above ground water level to assess any further measures.</li> </ul> </li> </ul>	Improved wording for certainty

	<ul style="list-style-type: none"> <li>d. The temporary artesian flow beyond the excavation must be controlled and mitigated with appropriate erosion and sediment control measures;</li> <li>e. The Canterbury Regional Council, Attention: Compliance Manager (via <a href="mailto:ecinfo@ecan.govt.nz">ecinfo@ecan.govt.nz</a>) must be notified as soon as practicable but no later than two working days after the interception; and</li> <li>f. Upon remediation and arresting of flow from the aquifer interception, the construction methodology must be reconsidered and, if required, revised to avoid future interceptions of the aquifer</li> </ul>	
	<b>Discovery of Archaeological Material</b>	
14	<ul style="list-style-type: none"> <li>a. Any activity which may modify, damage or destroy a pre-1900 archaeological site or material must follow the archaeological authority process under the Heritage New Zealand Pouhere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangī Kōrero.</li> <li>b. 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.</li> <li>c. The Canterbury Regional 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.</li> <li>d. In the event of the accidental discovery of Māori archaeological sites or material, the attached accidental discovery protocol for Māori archaeology must be followed in addition to the process under the Heritage New Zealand Pouhere Taonga Act 2014.</li> <li>e. 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 Canterbury Regional Council and: <ul style="list-style-type: none"> <li>i. Upon completion of the archaeological authority process referred to under (c); and</li> <li>ii. In the event of the accidental discovery of Māori archaeological sites or material, and in addition to (c) upon completion of the process referred to under (d); and</li> <li>iii. In the event of the discovery of kōiwi/human bones, immediately advise the New Zealand Police.</li> </ul> </li> </ul>	<p>This condition differs from the condition on the Mackenzie DC consents. Alignment is preferred. The consent authorities may wish to propose a more aligned condition.</p>
	<b>After Completion of Works</b>	
15	<p>Within two weeks of the completion of each stage of works authorised by this resource consent:</p> <ul style="list-style-type: none"> <li>a. All disturbed areas must be stabilised; and</li> <li>b. All spoil and other waste materials from the works must be removed from site.</li> </ul>	

	<p><b>Advice Note:</b> <i>The use of polymers for site stabilisation purposes, including those forming a component of hydro-seeding formulas, may require separate authorisations under the Resource Management Act 1991. Further, polymers are not considered a long-term or permanent stabilisation technique and may require repeated application to ensure the site remains stabilised.</i></p>	
	<p><b>Administration</b></p>	
16	<ul style="list-style-type: none"> <li>a) The Canterbury Regional Council may, pursuant to section 128 of the RMA, serve notice of its intention to review any or all of the conditions of this consent on any of the last five working days of May or November of any year.</li> <li>b) A review of conditions under clause (a) may allow for the consideration of the following: <ul style="list-style-type: none"> <li>i. the alteration of monitoring activities, including the frequency of monitoring;</li> <li>ii. the deletion, amendment or addition of new conditions as necessary to avoid, remedy, mitigate, offset or compensate for any unanticipated adverse effect on the environment that may arise from the exercise of these resource consents.</li> </ul> </li> </ul>	<p>No reference to section of legislation under which this process may occur.</p> <p>Improved certainty</p>
17	<p>Pursuant to section 36 of the RMA, the Consent Holder must pay the actual and reasonable costs incurred by Canterbury Regional Council when monitoring the conditions of these resource consents, including but not limited to costs associated with:</p> <ul style="list-style-type: none"> <li>a) site visits;</li> <li>b) review and certification of management plans;</li> <li>c) monitoring of works; and</li> <li>d) administration.</li> </ul>	<p>Enables administrative charges</p>
		<p>Addressed in header</p>

Discharge Permit under section 15 of the RMA

Administering Authority: Canterbury Regional Council

Activity: The discharge to land of sediment-laden stormwater and construction phase stormwater from exposed areas.

Location: Haldon Station, Haldon Arm Road, Twizel

Legal Description: Part Reserve 1358, Record of Title CB437/82

Commencement Date:

Lapse Date: 01 July 2036

Duration: 5 years.

	<b>Definitions</b>	<b>Panel Comments</b>
	<p><b>Site:</b></p> <p>All land to be used for the Solar Farm, Solar Farm Substation and National Grid Substation on Legal Description Part Reserve 1358, Record of Title CB437/82, shown on Plan CRC_____ attached to and forming part of this consent.</p> <p><b>Solar Farm:</b></p> <p>The Solar Farm comprises solar arrays supported above ground on posts; overhead and buried cabling and ducting; site access, internal roading, parking and hardstand areas; landscaping including stabilised stockpiles and bunds; drainage infrastructure including culverts and swales; fencing, security infrastructure and lighting; staff facilities, buildings including for equipment storage, panel storage, hazardous goods storage, and provision for Battery Energy Storage Systems (BESS) module storage; water storage and reticulation; fire-fighting infrastructure and firewater containment; lightning rods; supporting electrical infrastructure such as Power Conversion Units (PCUs) and their foundations, bund structures and access platforms; and <u>includes</u> the <b>Solar Farm Substation</b>. During the construction phase of the Solar Farm, areas of the site will include construction laydown areas. The Solar Farm includes the provision to incorporate BESS in the future.</p> <p><b>Solar Farm Substation:</b></p> <p>The 33kV Solar Farm Substation receives electricity generated from the Solar Farm solar arrays via underground cables and connects into the adjacent <b>National Grid Substation</b>. The Solar Farm Substation includes the main step-up transformers (220kV/33kV), foundations and bund structures, lightning protection poles/rods, switchgear, a control room,</p>	

	<p>water storage tank, lighting, fencing, landscaping, and related infrastructure, and is part of the Solar Farm.</p> <p><b>National Grid Substation:</b></p> <p>The 220kV National Grid Substation will provide the connection from the Solar Farm Substation into the 220kV electricity transmission network which crosses the Solar Farm site. The National Grid Substation includes a control building, water storage tank, gantries, lightning protection poles/rods, a mono-pole, 220kV switchgear equipment (including incomer bays, bus sections, and feeder bays), lighting, fencing and landscaping.</p> <p><b>Power Conversion Unit (PCU):</b></p> <p>A device or integrated system within a solar farm that converts direct current (DC) electricity generated by photovoltaic panels into alternating current (AC) electricity suitable for export to the National Grid. A Power Conversion Unit may include inverters, transformers, switchgear, control systems, and associated housing or enclosures necessary for safe and efficient operation.</p> <p><b>Working Day:</b></p> <p>The same meaning as section 2 of the Resource Management Act 1991 (RMA).</p>	
		Addressed in header
	<b>Limits</b>	
1	The activities authorised under this resource consent are limited to the discharge to land of sediment-laden stormwater and construction phase stormwater from exposed areas associated with the Solar Farm, located at Haldon Station, Haldon Arm Road, Twizel, on land legally described as Part Reserve 1358, held in Record of Title CB437/82, labelled as 'Site' on Plan CRC _____, attached to and forming part of this consent.	
2	Concrete slurry must not be discharged into any excavation when groundwater levels are higher than the deepest part of the excavation.	
	<b>Prior to Commencement of Work</b>	
3	<p>Prior to the commencement of the activities described in Condition (1), all personnel working on the site must be made aware of and have access to:</p> <ul style="list-style-type: none"> <li>a. The contents of this resource consent document and all associated erosion and sediment control plans and other discharge treatment methodologies; and</li> <li>b. Resource Consents _____, _____, _____, and _____, and all associated documents.</li> </ul>	

4	All erosion and sediment control measures detailed in the Erosion and Sediment Control Plan required by Condition (7) of this resource consent must be installed prior to the commencement of any earthworks or removal of vegetation and topsoil occurring within the relevant stage of works on the site.	Improved wording for certainty
5	At least 20 working days prior to the commencement of works on site, the Canterbury Regional Council, Attention: Compliance Manager (via <a href="mailto:ECInfo@ECan.govt.nz">ECInfo@ECan.govt.nz</a> ) must be informed of the commencement of works.	Timing aligned with MDC consent
6	<p>At least 20 working days prior to the commencement of physical works on site, the Consent Holder must request a pre-construction site meeting with the Canterbury Regional Council, Attention: Compliance Manager (via <a href="mailto:ECInfo@ECan.govt.nz">ECInfo@ECan.govt.nz</a>), and all relevant parties, including the primary contractor. At a minimum, the following must be covered at the meeting:</p> <ul style="list-style-type: none"> <li>a. Scheduling and staging of the works;</li> <li>b. Responsibilities of all relevant parties, including confirmation that the person /persons implementing the ESCP on the site is/are suitably trained and/or experienced;</li> <li>c. Contact details for all relevant parties;</li> <li>d. Expectations regarding communication between all relevant parties;</li> <li>e. Procedures for implementing any amendments;</li> <li>f. Site inspection; and</li> <li>g. Confirmation that all relevant parties have copies of the contents of this resource consent document and all associated erosion and sediment control plans and any other discharge treatment methodologies employed.</li> </ul> <p><b>Advice Note:</b> <i>Pre-construction site meetings required under resource consents _____, _____, _____, _____, may be held as one single pre-construction site meeting at the commencement of works on site.</i></p>	Timing aligned with MDC consent
	<b>Erosion and Sediment Control</b>	
7	<p>The discharges authorised under this resource consent must occur in accordance with an Erosion and Sediment Control Plan.</p> <ul style="list-style-type: none"> <li>a. The Erosion and Sediment Control Plan must be submitted to the Canterbury Regional Council, Attention: Compliance Manager, at least 10 working days prior to works commencing, for certification that it complies with; <ul style="list-style-type: none"> <li>i. the Erosion and Sediment Control Toolbox for the Canterbury Region; and</li> <li>ii. the conditions of this resource consent.</li> </ul> </li> </ul>	

	<p>b. The discharge must not commence until approval has been received from the Canterbury Regional Council that the Erosion and Sediment Control Plan is consistent with the Erosion and Sediment Control Toolbox for the Canterbury Region or equivalent industry guideline and the conditions of this resource consent.</p> <p><b>Advice Note:</b> <i>The Erosion and Sediment Control Plan must be consistent with all other management plans for the consented activity certified by Canterbury Regional Council or Mackenzie District Council.</i></p>	
8	<p>The purpose of the Erosion and Sediment Control Plan is to ensure that earthworks are managed to avoid the discharge of sediment-laden stormwater to surface waterbodies, whether directly or indirectly, and to ensure that all stormwater is retained, treated, and discharged to land within the Site boundaries via infiltration so as to protect the receiving environment.</p> <p>The Erosion and Sediment Control Plan must:</p> <ul style="list-style-type: none"> <li>a. Be prepared by a suitably qualified practitioner with experience in erosion and sediment control in accordance with: <ul style="list-style-type: none"> <li>i. Canterbury Regional Council’s <i>Erosion and Sediment Control Toolbox for the Canterbury Region</i>, which can be accessed under <a href="http://esc.canterbury.co.nz/">http://esc.canterbury.co.nz/</a>; or</li> <li>ii. An equivalent industry guideline. If an alternative guideline is used, the Erosion and Sediment Control Plan must provide details of the relevant alternative methods used and an explanation of why they are more appropriate than the Erosion and Sediment Control Toolbox for the Canterbury Region; and</li> </ul> </li> <li>b. Be signed by an engineer or suitably qualified person with experience in erosion and sediment control, confirming that the erosion and sediment control measures for the site are appropriately sized and located in accordance with the Erosion and Sediment Control Toolbox for the Canterbury Region or alternative guideline.</li> </ul>	
9	<p>The Erosion and Sediment Control Plan must:</p> <ul style="list-style-type: none"> <li>a. Detail best practicable sediment control measures that will be implemented for any stage of work to manage effects on surface water or off-site effects such as overland flow paths or material tracking, and to ensure compliance with the conditions of this resource consent;</li> <li>b. Include a map showing the location of all works, including any staging;</li> <li>c. Include detailed plans for each stage showing the location of sediment control measures (if used), on-site catchment boundaries, and sources of runoff;</li> </ul>	

- d. Detail how best practicable measures are taken to minimise discharges of sediment-laden stormwater run-off beyond the boundaries of the site;
- e. Include drawings and specifications of designated sediment control measures (if used), if these are not designed and installed in accordance with the *Erosion and Sediment Control Toolbox for the Canterbury Region*;
- f. Detail the methodology for stabilising the site entrance and exit points and any measures employed to prevent off-site tracking of sediment and other materials from the site;
- g. Include a confirmation that the erosion and sediment control devices (if used) have been sized appropriately in accordance with the *Erosion and Sediment Control Toolbox for the Canterbury Region* or in accordance with other guidance if (c) applies;
- h. Include a programme of works, including a proposed timeframe for each stage of the works and the earthworks methodology;
- i. Detail the management of any stockpiled material, including long-term stockpiles;
- j. Detail inspection and maintenance of the sediment control measures;
- k. Where specific discharge points are used such as infiltration devices, define the discharge points where stormwater is discharged onto land / infiltrates into land;
- l. Detail the methodology for stabilising the site if works are paused for more than five working days or abandoned;
- m. Detail the methodology for stabilising the site and appropriate decommissioning of all erosion and sediment control measures after each stage of works have been completed;
- n. Include a description of dust mitigation to be used and details of best practicable options to be applied to mitigate dust and sediment discharge beyond the site boundary; and
- o. Where present, detail measures to keep 'A' and 'B' soil horizons separate upon their removal during excavation so they can be replaced as they were removed (i.e. not mixed) following completion of earthworks.

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

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

10	<p>The Erosion and Sediment Control Plan may be amended at any time. Any amendments must be:</p> <ul style="list-style-type: none"> <li>a. Only for the purposes of: <ul style="list-style-type: none"> <li>i. improving the efficacy of the erosion and sediment control measures and must not result in reduced discharge quality;</li> <li>ii. applying best practicable measures to mitigate sediment transport off-site;</li> </ul> </li> <li>b. Consistent with the conditions of this resource consent; and</li> <li>c. Submitted in writing for certification to the Canterbury Regional Council, Attention: Compliance Manager, prior to any amendment being implemented.</li> </ul>	Improved wording for certainty
11	<p>Erosion and sediment control measures must be inspected at least once per week, and as soon as practicable following any rainfall event that results in more than five millimetres of rainfall within any 24-hour period at the site. Any accumulated sediment must be removed, and repairs made, as necessary, to ensure effective functioning of measures and devices. Records of any inspections must be kept and provided to the Canterbury Regional Council on request.</p>	
12	<p>If work is abandoned on-site, or works pause for more than 10 working days, adequate preventative and remedial measures must be taken to manage sediment discharges from exposed or unconsolidated surfaces. These measures must be maintained for so long as necessary until the site has been stabilised sufficiently so that the risk of off-site effects or effects on surface water are low.</p>	Improved wording for certainty
	<p>Construction works may not commence until the Erosion and Sediment Control Plan is certified by the Canterbury Regional Council.</p>	Certainty as to certification
	<p>The certified Erosion and Sediment Control Plan must be complied with throughout the construction phase of the project.</p>	Certainty as to compliance
	<p><b>Dust Management Plan</b></p>	
13	<p>No less than 20 working days prior to the commencement of any physical works on site, the Consent Holder must submit a Dust Management Plan to the Canterbury Regional Council, Attention: Compliance Manager, for certification.</p> <p>Certification is required to demonstrate that the Dust Management Plan:</p> <ul style="list-style-type: none"> <li>a. provides the mean to achieve the purpose as set out in Condition 14; and</li> <li>b. complies with the requirements of Schedule 2 of the Canterbury Air Regional Plan.</li> </ul> <p>Earthworks must not commence until certification has been received from the Canterbury Regional Council that the DMP is consistent with the</p>	

	<p>requirements of Schedule 2 of the Canterbury Air Regional Plan or equivalent industry guideline.</p> <p><b>Advice Note:</b> <i>The Dust Management Plan must be consistent with all other management plans for the consented activity certified by Canterbury Regional Council or Mackenzie District Council.</i></p>	
14	<p>The purpose of the Dust Management Plan is to demonstrate how dust generating activities will be managed so as to avoid, remedy or mitigate adverse effects on the environment. To achieve this outcome, the plan must:</p> <ul style="list-style-type: none"> <li>a. Include best practicable dust control measures that will be implemented to ensure compliance with the conditions of this resource consent;</li> <li>b. Be prepared by a suitably qualified person with experience in air quality control in accordance with the requirements of Schedule 2 of the Canterbury Air Regional Plan or equivalent industry guideline.</li> </ul>	Improved wording for certainty
15	<p>The Dust Management Plan may be amended at any time. Any amendments must be:</p> <ul style="list-style-type: none"> <li>a. Only for the purposes of: <ul style="list-style-type: none"> <li>i. improving the efficacy of the dust control measures and must not result in reduced discharge quality;</li> <li>ii. applying best practicable measures to mitigate dust transport off-site;</li> </ul> </li> <li>b. Consistent with the conditions of this resource consent; and</li> <li>c. Submitted in writing for certification by the Canterbury Regional Council, Attention: Compliance Manager, prior to any amendment being implemented.</li> </ul>	Improved wording for certainty
	The certified Dust Management Plan must be complied with throughout the construction phase of the project.	Certainty as to compliance
	<b>During Works</b>	
16	<p>All practicable measures must be taken to:</p> <ul style="list-style-type: none"> <li>b. Minimise soil disturbance to minimise the potential for sediment-laden stormwater runoff to be generated;</li> <li>c. Prevent soil erosion as a result of stormwater runoff generated from the works area;</li> <li>d. Avoid placing excavated material in a position where it may become entrained in stormwater runoff and discharged to: <ul style="list-style-type: none"> <li>i. Any surface water body; or</li> <li>ii. Any neighbouring site.</li> </ul> </li> </ul>	Improved wording for certainty

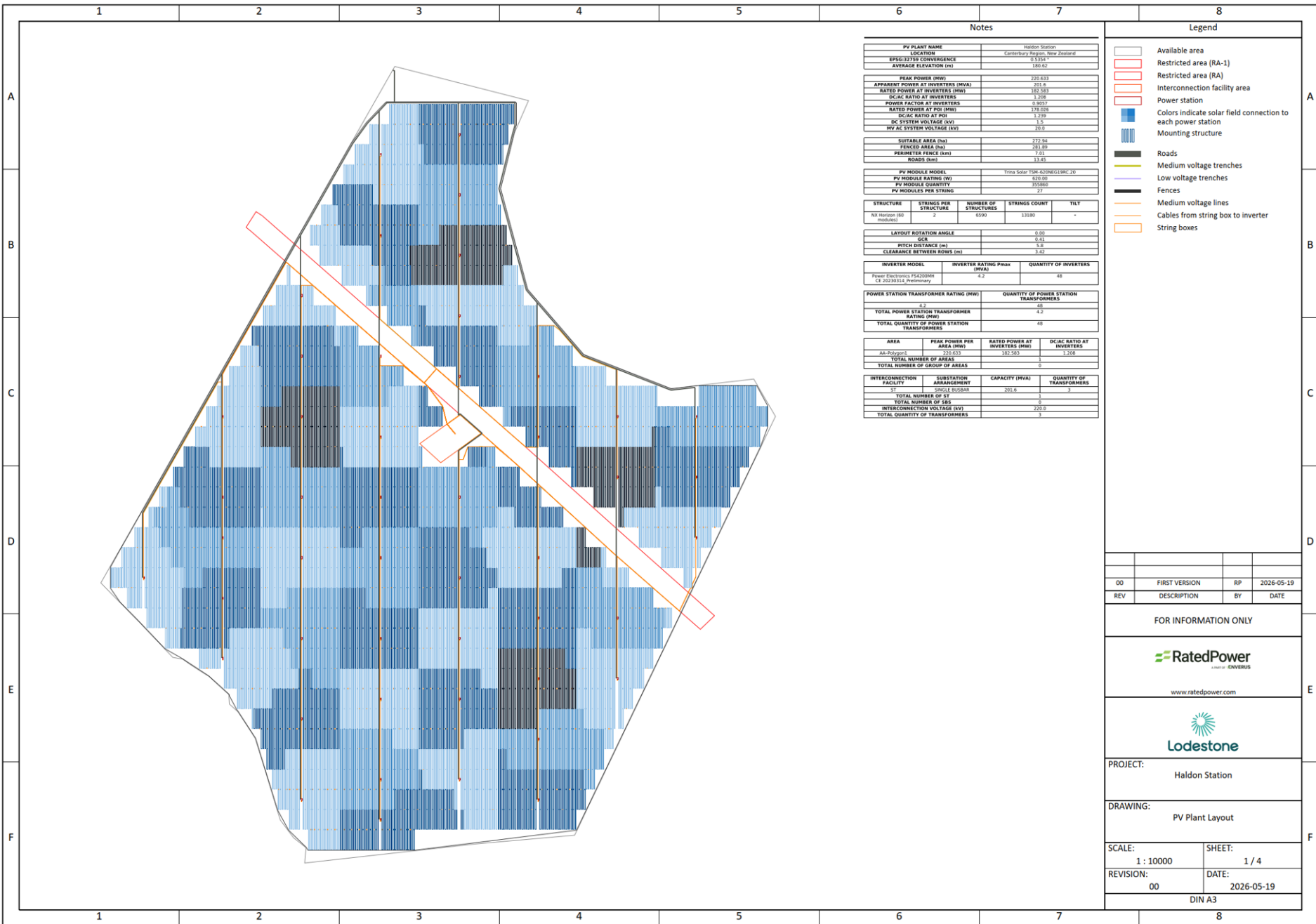
17	<p>Material discharged into excavations or onto land within the site must only be either:</p> <ul style="list-style-type: none"> <li>a. Material excavated from within the site; or</li> <li>b. Material that meets the definition of ‘cleanfill’ as defined by the Canterbury Land and Water Regional Plan (LWRP).</li> </ul> <p><b>Advice Note:</b> For the purpose of Condition X(a), any material excavated from the site that is contaminated or potentially contaminated must not be discharged to land and must be disposed of at a site authorised to accept contaminated material, as required by the Contamination Discovery Protocol of associated resource consent CRC_____.</p> <p><b>Advice Note:</b> The LWRP defines ‘cleanfill’ as “material that, when buried, will have no adverse effects on people or the environment. Cleanfill material includes virgin natural materials such as clay, soil and rock, and other inert materials such as concrete or brick that are free of:</p> <ul style="list-style-type: none"> <li>1. Combustible, putrescible, degradable or leachable components;</li> <li>2. Hazardous substances;</li> <li>3. Products or materials derived from hazardous waste treatment, hazardous waste stabilisation, or hazardous waste disposal practices;</li> <li>4. Materials that may present a risk to human or animal health, such as medical and veterinary waste, asbestos, or radioactive substances; or</li> <li>5. Liquid waste.”</li> </ul>	
18	Tracking of material off-site during the works must be avoided at all times. In the event that material is tracked off-site, the tracked material must be removed as soon as practicable and no later than 24 hours after tracking.	
19	There must be no noxious, dangerous, objectionable or offensive dust to the extent that it causes an adverse effect at or beyond the boundary of the site as shown on Plan CRC_____A attached to and forming part of this resource consent.	
	<b>Monitoring</b>	
20	<p>During works and when a discharge of construction-phase stormwater is occurring via dedicated management or discharge devices:</p> <ul style="list-style-type: none"> <li>a. The discharges must be visually assessed for: <ul style="list-style-type: none"> <li>i. Any sheen of oil or grease or discoloration (other than discolouration from sediment); and</li> <li>ii. Any sludge or emulsion; and</li> </ul> </li> <li>b. Observations of effects observed under Clause (a) must be photographed and recorded; and</li> </ul>	Improved wording for certainty

	<p>c. Records of visual assessments including photographs must be kept and provided to Canterbury Regional Council on request.</p> <p><b>Advice Note:</b> <i>A dedicated management or discharge device includes devices such as sediment retention ponds (SRPs), soakage basins or areas or similar devices that concentrate stormwater or dewatering water into land. They do not include diffuse discharge locations that generally follow natural infiltration patterns across the site.</i></p>	
	<b>Discovery of Contaminated Soils or Materials</b>	
21	<p>In the event that any contaminated soil or material is uncovered by the works, a contamination discovery protocol must be implemented, including but not limited to the following steps:</p> <ul style="list-style-type: none"> <li>a. Earthworks within 10 metres of discovered contaminant soil or material must cease immediately;</li> <li>b. All practicable steps must be taken to prevent the contaminated material becoming entrained in stormwater. Immediate steps must include, where practicable: <ul style="list-style-type: none"> <li>i. Diverting any stormwater runoff from surrounding areas away from the contaminated material; and</li> <li>ii. Minimising the exposure of the contaminated material, including covering the contaminants with an impervious cover;</li> </ul> </li> <li>c. Notification of the Canterbury Regional Council, Attention: Compliance Manager (via <a href="mailto:ecinfo@ecan.govt.nz">ecinfo@ecan.govt.nz</a>) within 24 hours of the discovery;</li> <li>d. Earthworks within ten metres of discovered contaminant soil or material must not recommence until a suitably qualified and experienced person confirms to Canterbury Regional Council, Attention: Compliance Manager that continuing works does not represent a significant risk to the environment;</li> <li>e. All records and documentation associated with the discovery must be kept and copies must be provided to the Canterbury Regional Council upon request.</li> </ul>	
	<b>Stockpiling of Contaminated Material/Soil</b>	
22	<p>Stockpiling of contaminated material or soils must be avoided where possible. In the event that temporary stockpiling of suspected contaminated or contaminated material is required, then the contaminated material stockpiles must be managed as below:</p> <ul style="list-style-type: none"> <li>a. Stockpiled contaminated material or soils must be kept separate from uncontaminated excavated soils stockpiles and any virgin aggregate or other material also stockpiled on-site; and</li> </ul>	

	<ul style="list-style-type: none"> <li>b. Stockpiled contaminated material must be placed on polythene sheeting or similar impervious material to prevent contamination of underlying material; and</li> <li>c. Stockpiled contaminated material must include a perimeter bund or berm installed to prevent runoff leaving the area and stormwater from other areas entering the stockpile area; and</li> <li>d. Stockpiled material must be covered or dampened during dry and windy conditions so as to prevent wind erosion; and</li> <li>e. If any rainfall is forecasted that has the potential to cause runoff from the stockpiles, or if the stockpiles are left overnight, over the weekend or over public holidays, the stockpiled material must be covered with plastic sheeting or a suitable material such as clean topsoil, or otherwise stabilised, to prevent stormwater runoff coming into contact with contaminated material.</li> </ul> <p><b>Advice Note:</b> For the purpose of this condition, temporary stockpiling means material being stockpiled for no longer than the overall construction period or the stage of construction if construction occurs in stages, whichever is the shorter period, and only for as long as reasonably necessary. The overall requirement to avoid, where possible, the stockpiling of contaminated material or soils prevails.</p>	
	<b>Spills</b>	
23	<p>All practicable measures must be taken to avoid spills of fuel or any other hazardous substances within the site. These measures must include:</p> <ul style="list-style-type: none"> <li>a. Refuelling of machinery and vehicles must not occur within 20 metres of: <ul style="list-style-type: none"> <li>i. Open excavations;</li> <li>ii. Exposed groundwater;</li> <li>iii. Surface water bodies; or</li> <li>iv. Stormwater devices; and</li> </ul> </li> <li>b. A spill kit, or multiple spill kits, must be kept on site that is capable of absorbing the quantity of oil and petroleum products that may be spilt on site at any one time.</li> </ul> <p>In the event of a spill of fuel or any other hazardous substance:</p> <ul style="list-style-type: none"> <li>a. The spill must be cleaned up immediately;</li> <li>b. The stormwater system must be inspected and cleaned, and measures taken to prevent a recurrence; and</li> <li>c. The Canterbury Regional Council, Attention: Compliance Manager, must be informed within 24 hours of a spill event exceeding five litres and the following information provided: <ul style="list-style-type: none"> <li>i. The date, time, location and estimated volume of the spill;</li> </ul> </li> </ul>	Improved wording for certainty

	<ul style="list-style-type: none"> <li>ii. The cause of the spill;</li> <li>iii. The type of hazardous substance(s) spilled;</li> <li>iv. Clean up procedures undertaken;</li> <li>v. Details of the steps taken to control and remediate the effects of the spill on the receiving environment;</li> <li>vi. An assessment of any potential effects of the spill; and</li> <li>vii. Measures to be undertaken to prevent a recurrence.</li> </ul>	
24	Any materials removed under Condition (23) must be removed and disposed of at a site authorised to accept such materials. Receipts of disposal must be provided to the Council within 10 working days of the material being disposed of.	
	<b>Upon Completion of Works</b>	
25	<p>Erosion and sediment control measures for any stage of works must not be decommissioned until the stage is stabilised and any stormwater system (where to be developed) for the stage is functioning. Decommissioning of the measures must be undertaken in the following order:</p> <ul style="list-style-type: none"> <li>a. All disturbed areas or loose sediment (if not removed) must be stabilised within 10 working days following completion of the stage;</li> <li>b. Any visible debris, litter, and hydrocarbons must be removed from all sediment control measures and disposed at a suitable facility; and</li> <li>c. Erosion and sediment control measures must be removed.</li> </ul> <p><b>Advice Note:</b> <i>The use of polymers for site stabilisation purposes, including those forming a component of hydro-seeding formulas, may require separate authorisations under the Resource Management Act 1991. Further, polymers are not considered a long-term or permanent stabilisation technique and may require repeated application to ensure the site remains stabilised.</i></p>	
26	Upon completion of works and the removal of erosion and sediment control measures, any visible sediment accumulated on impervious surfaces within the site must be stabilised to minimise the risk of sediment becoming entrained in stormwater.	
27	Any long-term soil stockpile(s) must be stabilised and appropriately vegetated as soon as practicable but at least 5 working days following the completion of works.	
	<b>Administration</b>	
28	a) The Canterbury Regional Council may, under section 128 of the Resource Management Act 1991 (RMA), serve notice of its intention to review any or all of the conditions of this consent on any of the last five working days of May or November of any year .	Improved certainty

	<p>b) A review of conditions under clause (a) may allow for the consideration of the following:</p> <ul style="list-style-type: none"> <li>i. the alteration of monitoring activities, including the frequency of monitoring;</li> <li>ii. the deletion, amendment or addition of new conditions as necessary to avoid, remedy, mitigate, offset or compensate for any unanticipated adverse effect on the environment that may arise from the exercise of these resource consents.</li> </ul>	
29	<p>Pursuant to section 36 of the RMA, the Consent Holder must pay the actual and reasonable costs incurred by Canterbury Regional Council when monitoring the conditions of these resource consents, including but not limited to costs associated with:</p> <ul style="list-style-type: none"> <li>a) site visits;</li> <li>b) review and certification of management plans;</li> <li>c) monitoring of works; and</li> <li>d) administration.</li> </ul>	Enables administrative charges
		Addressed in header



**Notes**

<b>PV PLANT NAME</b>		Haldon Station		
<b>LOCATION</b>		Canterbury Region, New Zealand		
<b>EPEG 1:150 CONFORMANCE</b>		6,376		
<b>AVERAGE ELEVATION (m)</b>		180.42		
<b>PEAK POWER (MW)</b>		220.633		
<b>APPARENT POWER AT INVERTERS (MVA)</b>		201.6		
<b>RATED POWER AT INVERTERS (MW)</b>		182.583		
<b>DC/AC RATIO AT INVERTERS</b>		1.208		
<b>POWER FACTOR AT INVERTERS</b>		0.9937		
<b>RATED POWER AT PDI (MW)</b>		178.026		
<b>DC/AC RATIO AT PDI</b>		1.249		
<b>DC SYSTEM VOLTAGE (kV)</b>		1.5		
<b>HV AC SYSTEM VOLTAGE (kV)</b>		20.0		
<b>SUITABLE AREA (ha)</b>		272.56		
<b>FENCED AREA (ha)</b>		281.89		
<b>PERIMETER FENCE (km)</b>		7.61		
<b>ROADS (km)</b>		13.42		
<b>PV MODULE MODEL</b>		Trina Solar TSM-G20N6C194C-20		
<b>PV MODULE RATING (W)</b>		420.00		
<b>PV MODULE QUANTITY</b>		355860		
<b>PV MODULES PER STRING</b>		27		
<b>STRUCTURE</b>	<b>STRINGS PER STRUCTURE</b>	<b>NUMBER OF STRUCTURES</b>	<b>STRINGS COUNT</b>	<b>TILT</b>
NH Horizon 160 modules	2	6590	13180	-
<b>LAYOUT ROTATION ANGLE</b>		0.00		
<b>GCR</b>		0.43		
<b>PITCH DISTANCE (m)</b>		5.8		
<b>CLEARANCE BETWEEN ROWS (m)</b>		3.42		
<b>INVERTER MODEL</b>	<b>INVERTER RATING P<sub>max</sub> (MW)</b>	<b>QUANTITY OF INVERTERS</b>		
Power Electronics F84200RH C2 2023014 preliminary	4.2	48		
<b>POWER STATION TRANSFORMER RATING (MW)</b>		<b>QUANTITY OF POWER STATION TRANSFORMERS</b>		
4.2		48		
<b>TOTAL POWER STATION TRANSFORMER RATING (MW)</b>		48		
<b>TOTAL QUANTITY OF POWER STATION TRANSFORMERS</b>		48		
<b>AREA</b>	<b>PEAK POWER PER AREA (MW)</b>	<b>RATED POWER AT INVERTERS (MW)</b>	<b>DC/AC RATIO AT INVERTERS</b>	
AA-Polygon1	220.633	182.583	1.208	
<b>TOTAL NUMBER OF AREAS</b>	1			
<b>TOTAL NUMBER OF GROUP OF AREAS</b>	0			
<b>INTERCONNECTION FACILITY</b>	<b>SUBSTATION ARRANGEMENT</b>	<b>CAPACITY (MVA)</b>	<b>QUANTITY OF TRANSFORMERS</b>	
-ST	SINGLE BUSBAR	203.6	3	
<b>TOTAL NUMBER OF ST</b>		1		
<b>TOTAL NUMBER OF BUS</b>		0		
<b>INTERCONNECTION VOLTAGE (kV)</b>		220.0		
<b>TOTAL QUANTITY OF TRANSFORMERS</b>		3		

**Legend**

- Available area
- Restricted area (RA-1)
- Restricted area (RA)
- Interconnection facility area
- Power station
- Colors indicate solar field connection to each power station
- Mounting structure
- Roads
- Medium voltage trenches
- Low voltage trenches
- Fences
- Medium voltage lines
- Cables from string box to inverter
- String boxes

00	FIRST VERSION	RP	2026-05-19
REV	DESCRIPTION	BY	DATE

FOR INFORMATION ONLY

**RatedPower**  
BY INVERTERS

www.ratedpower.com

**Lodestone**

PROJECT: Haldon Station

DRAWING: PV Plant Layout

SCALE: 1 : 10000	SHEET: 1 / 4
REVISION: 00	DATE: 2026-05-19

DIN A3