

Chapter 11 Utilities and Energy

11.1 Objectives and Policies - Utilities and energy

11.1.1 Objective: Provision of utilities

1. Effective and efficient provision of utilities in a manner that is integrated with land use and development in the District.
2. The continued operation, maintenance, upgrading and, where appropriate, development of utilities throughout the District, including transmission assets and the National Grid.
3. An increase in appropriate renewable electricity generation activities.

11.1.1.1 Policy: Sustainable water supply

1. To achieve sustainability and resilience of the District's water supply by encouraging water conservation and the re-use and recycling of water.

11.1.1.2 Policy: Security of supply

1. To recognise the national, regional and local benefits of secure utilities by enabling the operation, maintenance, and upgrading of utilities.

11.1.1.3 Policy: Renewable energy generation

Provide for the establishment and operation of utilities that derive or generate energy through renewable sources by:

1. recognising the benefits to people and communities of renewable energy generation;
2. acknowledging the implications and constraints associated with renewable generation activities, including locational, operational and technical matters;
3. avoiding reverse sensitivity effects;
4. promoting in particular small and community scale renewable electricity generation activities such as from solar and wind energy; and
5. reducing the use of finite resources for the generation of electricity.

11.1.1.4 Policy: Telecommunications

1. Enable telecommunication utilities to be developed and used provided that, as a result of its location and design:
 - a. the adverse effects on significant natural and physical resources and cultural values are avoided, or where this is not practicable, remedied, or mitigated; and
 - b. other adverse effects on the environment are appropriately managed.

11.1.1.5 Policy: Established utilities

1. Enable the operational, maintenance and upgrade requirements of established utilities.

11.1.1.6 Policy: New and substantial electricity transmission assets

Provide for additions and upgrades to transmission assets, while managing the adverse effects on the environment by having regard to the extent to which any adverse effects have been avoided, remedied or mitigated by route, site and method selection.

11.1.2 Objective: Adverse effects

Avoid, remedy or mitigate the adverse effects of utilities on other activities and the adverse effects of other activities on utilities while providing for the diverse nature and specialised character of utilities.

11.1.2.1 Policy: Adverse effects from utilities

1. To ensure that, where reasonably practicable, new or upgraded utilities:
 - a. do not result in a reduction in the values of landscapes, features, important ridgelines, Sites of Ecological Significance and conservation reserves;
 - b. do not result in a reduction in the heritage value of heritage items or settings, or a reduction in the health, structural integrity or values of significant trees;
 - c. are located and designed in a way that minimises adverse effects, having regard to their economic benefits and technical and operational needs; and
 - d. avoid, remedy or mitigate the potential for adverse effects of noise from wind turbines.

11.1.2.2 Policy: Adverse effects on utilities

1. Avoid adverse effects on utilities from other activities, including reverse sensitivity effects, that may compromise their development, operation, upgrading and maintenance of utilities.
2. To manage the effects of subdivision, development and land use on the safe, effective and efficient operation, maintenance and upgrading of transmission assets and the National Grid by:
 - a. avoiding the location of sensitive activities in close proximity to transmission assets and the National Grid;
 - b. recognising and providing for existing and future electricity transmission corridors when identifying and managing areas of new subdivision and development; and
 - c. ensuring that changes to existing activities in close proximity to transmission assets and the National Grid do not further restrict or inhibit the operation, maintenance, upgrading and development of the asset.

11.1.2.3 Policy: Radiofrequency, electric and magnetic fields

1. Avoid adverse effects from new or upgraded utilities that generate radiofrequency, electric and magnetic fields.
2. Avoid locating sensitive activities where there could be adverse effects from utilities that generate radio-frequency, electric and magnetic fields.

11.2 Application of these rules

1. Rules in Zone chapters (13 – 21) do not apply to utilities unless specified or referenced. Rules in Chapters 5 – 12 do apply. Chapter 5 (Natural hazards) includes specific rules in relation to utilities in areas subject to hazards.
2. All telecommunications facilities operated by a network operator are controlled by the Resource Management (National Environmental Standards for Telecommunications Facilities) Regulations 2008 in respect of the generation of radiofrequency fields. In the road reserve equipment cabinets, noise from these cabinets, and masts / antennas on existing structures are also controlled by the NES. Other telecommunications facilities or activities will be managed by the District Plan.
3. The Resource Management (National Environmental Standards of Electricity Transmission Activities) Regulations 2009 contain a separate code of rules for the operation, maintenance, upgrading, relocation, or removal of an existing transmission line, which is part of the National Grid, as defined in the regulations. Except as provided for by the regulation, no rules in this District Plan apply to such activities. Where an activity does not relate to an existing transmission line that is

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part of the National Grid or where new transmission lines and associated structures are proposed, the District Plan provisions apply.

4. Any utility or associated activity not listed as permitted, restricted discretionary, non-complying or prohibited, shall be a discretionary activity.
5. Any application for resource consent for a restricted discretionary activity shall be non-notified and shall not require the written approval of affected parties. For any other application for resource consent, the Council may notify the application or require the written approval of other persons.

11.3 Rules

11.3.1 Utilities and energy - General

11.3.1.1 Permitted activities - General

The following activities and works are permitted subject to Activity Specific Standards.

	Activity	Standard
P1	<p>Construction or extension of any access tracks to <u>utilities</u>.</p> <p>Clarification: The National Environmental Standards for Electricity Transmission Activities Regulations 2009 permits the use of an access track to an existing transmission line.</p>	<p>1. <u>Access</u> tracks shall not be located within:</p> <ol style="list-style-type: none"> a. <u>an Outstanding Natural Landscape;</u> b. <u>Outstanding Natural Feature;</u> c. <u>Significant Feature or Significant Landscape;</u> d. <u>Important Ridgeline;</u> e. <u>Area of Outstanding, Very High or High Natural Character;</u> f. <u>a Site of Ecological Significance;</u> g. <u>the dripline of a significant tree; or</u> h. <u>20m of a heritage item, or setting.</u> <p>Advice Note: The provisions of Chapter 8 relating to earthworks also apply.</p>
P2	Weather stations and navigation aids	<p>1. Weather stations and navigation aids greater than 1m in height or 6m² in area shall not be located within:</p> <ol style="list-style-type: none"> a. <u>an Outstanding Natural Landscape;</u> b. <u>Outstanding Natural Feature;</u> c. <u>Significant Feature or Significant Landscape;</u> d. <u>Important Ridgeline;</u> e. <u>Area of Outstanding, Very High or High Natural Character;</u> f. <u>a Site of Ecological Significance;</u> g. <u>the dripline of a significant tree;</u> h. <u>20m of a heritage item, or setting; or</u> i. the Suburban Residential Conservation Zone.

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P3	<p>Maintenance of a <u>utility</u> and associated temporary structure, including vegetation trimming or removal.</p> <p>Clarification:</p> <ol style="list-style-type: none">1. The National Environmental Standards for Electricity Transmission Activities Regulations 2009 manages following activities in relation to an existing transmission line:<ol style="list-style-type: none">a. the addition of overhead conductors;b. earth-wires;c. overhead telecommunications cables;d. additional overhead circuits;e. voltage or current changes;f. underground conductors;g. undergrounding of transmission lines;h. temporary structures and deviations;i. removal of transmission lines;j. cleaning transmission line support structures;k. trimming, felling or removing trees and vegetation: andl. telecommunications devices.	Nil.
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P4	<p><u>utility cabinets</u> as part of any <u>utility</u>.</p> <p>Clarification The National Environmental Standards for Telecommunications Facilities Regulations 2008 manages cabinets associated with telecommunications facilities in the road reserve, including in relation to noise emission.</p>	<ol style="list-style-type: none"> 1. The <u>utility cabinets</u> is located underground: or 2. For telecommunications cabinets other than at (1) – the maximum floor area shall be 1.4m² and the maximum height shall be 1.8m. 3. For <u>utility cabinets</u> other than at (1) or (2) - the maximum floor area shall be 6m² and the maximum height shall be 1.8m (measured from ground level or the top of a concrete plinth if there is one).
P5	<p><u>utility buildings</u></p>	<ol style="list-style-type: none"> 1. Built form standards for the relevant zone.
P6	<p>Installation of network <u>utilities</u> underground in the Transport Zone.</p>	<p>Nil</p>
P7	<p>New lines and associated <u>utility structures</u> to provide power supplies to electric tramway trolley bus or rail systems.</p> <p>Clarification: rules in the National Environmental Standards for Telecommunications Facilities Regulations 2008 manage telecommunications facilities in the road reserve.</p>	<p>Nil.</p>
P8	<p><u>utility structures</u> for street lighting</p>	<p>Nil.</p>
P9	<ol style="list-style-type: none"> 1. Replacement of existing <u>utilities</u> with a utility not larger in any dimension than that being replaced. 2. Strengthening of existing pole transformers structures. 3. The addition of circuits, conductors or lines to existing support structures. 4. New or upgraded customer connections from existing support structures. 5. The replacement of poles that are a traffic hazard with poles in a different position. 6. Maintenance. 7. Upgrades where the number and dimension of utility structures, utility poles 	<p>Nil.</p>

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	<p>or cabinets is not increased.</p> <p>Clarification:</p> <ol style="list-style-type: none"> 1. The National Environmental Standards for Electricity Transmission Activities Regulations 2009 manages the following activities in relation to an existing transmission line: <ol style="list-style-type: none"> a. the addition of overhead conductors; b. earth-wires; c. overhead telecommunications cables; d. additional overhead circuits; e. voltage or current changes; f. underground conductors; g. undergrounding of transmission lines; h. temporary structures and deviations; i. removal of transmission lines; j. cleaning transmission line support structures; k. trimming, felling or removing trees and vegetation: and l. telecommunications devices. 	
<p>P10</p>	<p>The operation of any <u>utility</u> that emits radiofrequency fields.</p> <p>Clarification: rules in the National Environmental Standards for Telecommunications Facilities Regulations 2008 manage telecommunications facilities generating radiofrequency fields.</p>	<ol style="list-style-type: none"> 1. Any <u>utility</u> which emits radiofrequency electro-magnetic radiation, where it is not regulated by an amateur radio licence, that is measured in accordance with NZS 6609 (1990) Part 2 and will comply with the applicable reference levels for the "general public" exposure category as specified in Table 6 of NZS 2772.1:1999 Radiofrequency Fields Part 1: Maximum exposure level 3kHz -300GHz ("the New Zealand Standard"), is permitted where the following information is provided to the Environmental Services Unit of the Council at least 20 working days prior to the installation of the utility:

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	<ul style="list-style-type: none"> a. written advice of the locality of the <u>utility</u>; and b. a report prepared by a suitably qualified radio engineer/technician containing: <ul style="list-style-type: none"> i. an estimate (undertaken in accordance with NZS2772.1:1999) of radiofrequency exposures relative to the applicable reference levels for the "general public" exposure category as specified in Table 6 of the NZS 2772.1:1999 so as to determine whether the NZS will be complied with; ii. Radiofrequency field diagrams illustrating in plan view and elevation: firstly the spatial area where, in accordance with the above-mentioned estimate, radiofrequency exposure levels will not exceed the applicable reference levels for the "general public" exposure category as specified in Table 6 of NZS 2772.1:1999; and secondly the spatial area where such estimate determined that such exposure levels will not exceed 25% of those reference levels, and iii. A scale diagram of the facility located on the site, including the site boundaries and orientation of the radiofrequency emissions; and iv. Details of the qualifications and relevant experience of the person(s) undertaking and assessing the estimate; and c. where the report provided to the Council under (b)(ii) above estimates that radiofrequency exposure levels in any areas reasonably accessible to the general public will exceed 25% of the applicable reference levels for the "general public" exposure category as specified in Table 6 of NZS 2772.1:1999, then, within 3 months of radiofrequency emissions commencing, a report from the National Radiation Laboratory certifying compliance with NZS 2772.1:1999, based on measurements at the site will be provided to the Environmental Services Unit of the Christchurch City Council; d. Any <u>utility</u> which emits radiofrequency electro-magnetic radiation, that is measured in accordance with NZS 6609 (1990) Part 2, and will not comply with the applicable reference levels for the "general public" exposure category as specified in Table 6 of NZS 2772.1.1999 shall be a non-complying activity; and e. Any <u>utility</u> which creates exposures to power frequency electric and magnetic fields in areas normally accessible to the public exceeding 5 kilovolts per metre and 100 microtesla as measured and assessed in accordance with the International Commission on Non-Ionising Radiation Protection guidelines, shall be a non-complying activity.
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11.3.1.2 Restricted discretionary activities - General

The activities listed below are restricted discretionary activities.

Activity	The Council' s discretion shall be limited to the following matters:
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RD1	Any activity listed in Rule 11.3.1.1 that does not comply with the Activity Specific Standards for permitted activity P1.	11.4 (1), (2) and (3)
RD2	Any activity listed in Rule 11.3.1.1 that does not comply with the Activity Specific Standards for permitted activity P3.	11.4 (1)
RD3	Any activity listed in Rule 11.3.1.1 that does not comply with the Activity Specific Standards for permitted activity P4.	11.4 (1), (2) and (3)
RD4	Any activity listed in Rule 11.3.1.1 that does not comply with the Activity Specific Standards for permitted activity P5.	11.4 (1), (2), (3) and (4)
RD5	Any activity listed in Rule 11.3.1.1 that does not comply with the Activity Specific Standards for permitted activity P6.	11.4 (2), (3) and (4)
RD6	Any activity listed in Rule 11.3.1.1 that does not comply with the Activity Specific Standards for permitted activity P11.	11.4 (4)

11.3.1.3 Non-complying activities - General

The activities listed below are non-complying activities.

Activity	
NC1	Any activity listed in Rule 11.3.1.1 that does not comply with the Activity Specific Standards for permitted activities P11.

11.3.2 Electricity utilities

11.3.2.1 Permitted activities - Electricity transmission and distribution

Electricity transmission and distribution utilities are permitted subject to the following standards:

Activity	Standards

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P1	Installation of lines and <u>utility poles</u> for the purpose of electricity transmission and distribution in any Rural Zone or Transport Zone.	<ol style="list-style-type: none"> 1. <u>Utilities</u> shall not be located within: <ol style="list-style-type: none"> a. <u>an Outstanding Natural Landscape</u>; b. <u>Outstanding Natural Feature</u>; c. <u>Significant Feature or Significant Landscape</u>; d. <u>Important Ridgeline</u>; e. <u>Area of Outstanding, Very High or High Natural Character</u>; f. <u>a Site of Ecological Significance</u>; g. <u>the dripline</u> of a significant tree; h. <u>20m of a heritage item, or setting</u>; or i. the Suburban Residential Conservation Zone. 2. <u>Utilities</u> shall not be located within a buffer of 50m horizontal distance or 20m vertical distance, whichever is lesser, from any of the areas or items identified at (1)(a) - (e). 3. The <u>utility poles</u> shall not exceed: <ol style="list-style-type: none"> a. 25m in height in Rural Zones or adjoining Transport Zones; or b. 15m in height in Transport Zones not adjoining a Zone described at (a), or in any other Zone. 4. The utility pole is not a lattice tower.
P2	Activities, <u>buildings</u> and fences within 12 metres of the centre line of a transmission line.	<ol style="list-style-type: none"> 1. No new <u>buildings</u> associated with a sensitive activity except: <ol style="list-style-type: none"> a. an accessory <u>buildings</u> for a sensitive activity under 2.5m high and less than 10m² in area; or b. <u>buildings</u> alterations or additions for a sensitive activity that are under the height and within the footprint of the existing building. 2. No new sensitive activity or hazardous facilities. 3. <u>buildings</u> and fences shall: <ol style="list-style-type: none"> a. have a minimum vertical clearance of 10m below the lowest point of the transmission line conductor (wire) or demonstrate that safe electrical clearance distances required by the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP 34:2001) are maintained under all operating conditions; and b. be at least 12m for <u>buildings</u> and 5m for fences from the nearest transmission line support structure foundation, except for network <u>utilities</u> within a transport corridor or any part of electricity infrastructure that connects to a transmission line.
P3	Overhead incidental equipment	1. The maximum dimensions shall be 300mm wide, 200mm deep and 500mm high.

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P4	Transformers, substations, switching stations, and ancillary buildings	<ol style="list-style-type: none"> 1. Any substation, transformer or building ancillary to generation equipment shall comply with the following built form standards for the relevant zone: <ol style="list-style-type: none"> a. minimum setback from side and rear internal boundaries; and b. daylight recession planes. 2. The total area of the facility shall not exceed 10m². 3. The maximum height of the facility shall not exceed 5.5m.
P5	<ol style="list-style-type: none"> 1. The reconducting of the line with higher capacity conductors. 2. The resagging of conductors. 3. The addition of longer and more efficient insulators. 4. On electricity lines on lattice towers, the addition of earth wires which may contain telecommunication lines, earthpeaks, and lightning rods. 	<ol style="list-style-type: none"> 1. There shall not be an increase in the voltage of the line unless the line was originally constructed to operate at the higher voltage. 2. No increase in the diameter of: <ol style="list-style-type: none"> a. any individual wire, cable, other similar conductor; or b. the bundling together of any wire, cable, or other similar conductor so that the individual wire or bundle exceeds 20mm in diameter. <p>Standard (2) does not apply to electricity lines carried on lattice towers.</p>

11.3.2.2 Restricted discretionary activities - Electricity transmission and distribution

The activities listed below are discretionary activities.

Activity		The Council's discretion shall be limited to the following matters:
RD1	Any activity listed in Rule 11.3.2.1 that does not comply with the Activity Specific Standards for permitted activities P1 (3) and (4).	11.4 (2), (3) and (4)
RD2	Any activity listed in Rule 11.3.2.1 that does not comply with the Activity Specific Standards for permitted activities P3	11.4 (2), (3) and (4)
RD3	Any activity listed in Rule 11.3.2.1 that does not comply with the Activity Specific Standards for permitted activities P4.	11.4 (1), (2), (3) and (4)
RD4	Any activity listed in Rule 11.3.2.1 that does not comply with the Activity Specific Standards for permitted activities P5.	11.4 (2), (3) and (4)

11.3.2.3 Discretionary activities - Electricity transmission and distribution

The activities listed below are discretionary activities.

Activity	
D1	Any activity listed in Rule 11.3.2.1 that does not comply with the Activity Specific Standards for permitted activities P1 (1) and (2).
D2	Any utility not specified in this chapter shall be a discretionary activity.

D3	Any activity listed in Rule 11.3.2.1 that does not comply with the Activity Specific Standards for permitted activities P2.
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11.3.3 Energy

11.3.3.1 Permitted activities - Energy

Utilities activities are permitted activities subject to compliance with the standards below, and the following standards:

Activity	Standards
P1 Installation and operation of equipment for assessing a site for suitability for <u>renewable energy generation</u> .	<ol style="list-style-type: none"> 1. Equipment shall not be erected on a site for more than 12 months in any 36 month period. 2. The noise standards for the zone in which the activity is located are met. 3. Equipment shall not be located within: <ol style="list-style-type: none"> a. <u>an Outstanding Natural Landscape;</u> b. <u>Outstanding Natural Feature;</u> c. <u>Significant Feature or Significant Landscape;</u> d. <u>Important Ridgeline;</u> e. <u>Area of Outstanding, Very High or High Natural Character;</u> f. <u>a Site of Ecological Significance;</u> g. <u>the dripline of a significant tree;</u> h. <u>20m of a heritage item, or setting; or</u> i. the Suburban Residential Conservation Zone.
P2 Installation and operation of a solar cell or array of cells for small or community scale <u>renewable energy generation</u> where ancillary to the principal use of the site.	<ol style="list-style-type: none"> 1. The cell or cells shall be either incorporated into the roof or roof-mounted with at least one long side of the cell or cells within 20mm of the roof. 2. The cell or cells shall be mounted at an angle less than 55° from horizontal. 3. The utility is not a solar concentrator.
P3 Substations, transformers, or buildings ancillary to generation equipment.	<ol style="list-style-type: none"> 1. Any substation, transformer, or building ancillary to generation equipment shall comply with the following built form standards for the relevant zone. <ol style="list-style-type: none"> a. minimum setback from side and rear internal boundaries; and b. daylight recession planes. 2. The total area of the <u>utility</u> shall not exceed 10m². 3. The maximum height of the <u>utility</u> shall not exceed 5.5m.
P4 Emergency or back-up electricity generation.	<ol style="list-style-type: none"> 1. The electricity generation activity is not the primary electricity supply to the site or sites. 2. The noise standards for the zone in which the activity is located are met.

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P5	Installation and operation of a wind turbine for small or community scale <u>renewable energy generation</u> in Rural or Industrial Zones.	<ol style="list-style-type: none"> 1. Any wind turbine shall be ancillary to the principal use of the site. 2. Not more than one wind turbine is to be erected per site. Where the activity is a community electricity generation system to power a number of sites, turbines may be clustered on one or more sites. 3. No wind turbine exceeds a total height of 20m. Compliance with this standard shall be to any above ground part of the wind turbine <u>utility</u> structure and the full extent of blades. 4. The wind turbine complies with the relevant Zone provisions relating to Street Scene and Separation from Neighbours. Compliance with this standard shall be to any above ground part of the wind turbine utility structure and the full extent of blades. 5. The noise standards for the zone in which the activity is located are met. 6. No wind turbine operates between 10pm and 7am. 7. Any wind turbine is not located in: <ol style="list-style-type: none"> a. an Outstanding Natural Landscape; b. Outstanding Natural Feature; c. Significant Feature or Significant Landscape; d. Important Ridgeline; e. Area of Outstanding, Very High or High Natural Character; f. a Site of Ecological Significance; g. the dripline of a significant tree; or h. 20m of a heritage item, or setting; 8. Utilities shall not be located within a buffer of 50m horizontal distance or 20m vertical distance, whichever is the lesser, from any of the areas or items identified at (7)(a) - (e).
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11.3.3.2 Restricted discretionary activities - Energy

The activities listed below are discretionary activities.

Activity	The Council's discretion shall be limited to the following matters:
RD1 Any activity listed in Rule 11.3.3.1 that does not comply with the Activity Specific Standards for permitted activities P1.	11.4 (2)(a) and, (3)(a)
RD2 Any activity listed in Rule 11.3.3.1 that does not comply with the Activity Specific Standards for permitted activities P2.	11.4 (2)(b) and (c) and (5)(k)
RD3 Any activity listed in Rule 11.3.3.1 that does not comply with the Activity Specific Standards for permitted activities P3.	11.4 (1), (2), (3), (4), and (5)
RD4 Any activity listed in Rule 11.3.3.1 that does not comply with the Activity Specific Standards for permitted activities P4.	11.4 (1), (2), (3), (4), and (5)
RD5 Any activity listed in Rule 11.3.3.1 that does not comply with the Activity Specific Standards for permitted activities P5.	11.4 (1), (2)(a), (3)(a), (4)(a), and (5)(a) and (j)

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RD6	<p>Installation and operation of a wind turbine for small or community scale <u>renewable energy generation</u> in Zones other than Rural or Industrial where:</p> <ol style="list-style-type: none"> 1. any wind turbine is ancillary to the principal use of the site; 2. not more than one wind turbine is be erected per site. Where a community electricity generation system is to power a number of sites, the equivalent number of turbines may be clustered on one or more sites; 3. no wind turbine exceeds a total height of 20m. Compliance with the rule shall be to any above ground part of the wind turbine utility structure and the full extent of blades; 4. The wind turbine complies with the relevant Zone provisions relating to Street Scene and Separation from Neighbours. Compliance with this rule shall be to any above ground part of the wind turbine <u>utility structure</u> and the full extent of blades; 5. The noise standards for the Zone in which the activity is located are met. 6. no wind turbine operates between 10pm and 7am; 7. any wind turbine is not located within: <ol style="list-style-type: none"> a. <u>an Outstanding Natural Landscape</u>; b. <u>Outstanding Natural Feature</u>; c. <u>Significant Feature or Significant Landscape</u>; d. <u>Important Ridgeline</u>; e. <u>Area of Outstanding, Very High or High Natural Character</u>; f. <u>a Site of Ecological Significance</u>; g. <u>the dripline of a significant tree</u>; h. <u>20m of a heritage item, or setting; or</u> i. the Suburban Residential Conservation Zone. 8. <u>Utilities</u> shall not be located within a buffer of 50m horizontal distance or 20m vertical distance, whichever is the lesser, from any of the areas or items identified at (7)(a)- (e). 	11.4 (1), (2)(a), (3)(a), (4)(a), and (5)(a) and (j)
RD7	Installation and operation of a <u>utility</u> and associated pipes and structures for the generation of energy using waste products.	11.4 (1), (2), (3), (4), (5),and (7)

11.3.3.3 Discretionary activities - Energy

The activities listed below are discretionary activities.

Activity

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D1	<p>Installation and operation of wind turbines for large scale <u>renewable energy generation</u> where:</p> <ol style="list-style-type: none"> 1. installation and operation of a wind turbine occurs only in Rural 1-5, Rural Quarry, or Rural Banks Peninsula zones; 2. noise levels comply with the limits prescribed in NZS6808:2010 (Acoustics – Wind Farm Noise). Noise levels shall be measured and assessed in accordance with NZS6808:2010. 3. any wind turbines for large scale renewable energy generation are not located within: <ol style="list-style-type: none"> a. an Outstanding Natural <u>Landscape</u>; b. Outstanding Natural Feature; c. Significant Feature or Significant <u>Landscape</u>; d. Important Ridgeline; e. Area of Outstanding, Very High or High Natural Character; f. a <u>Site</u> of Ecological Significance; g. 50m of a significant tree; or h. 50m of a <u>heritage item, or setting</u>. 4. <u>Utilities</u> shall not be located within a buffer of 150m horizontal distance or 50m vertical distance, whichever is the lesser, from any of the areas or items identified at (3)(a) – (e).
D2	<p>Installation and operation a solar cell or concentrator for large scale <u>renewable energy generation</u> where:</p> <ol style="list-style-type: none"> 1. installation and operation of solar cells or concentrators occurs only in Rural, Commercial, or Industrial zones; 2. any solar concentrator for large scale renewable generation energy is not within the area covered by the approach slopes for the Christchurch International Airport; 3. any solar concentrator does not reflect light into a Residential Zone for more than 15 hours per annum. 4. any solar cell or concentrator for large scale <u>renewable energy generation</u> is not located within: <ol style="list-style-type: none"> a. <u>an Outstanding Natural Landscape</u>; b. <u>Outstanding Natural Feature</u>; c. <u>Significant Feature or Significant Landscape</u>; d. <u>Important Ridgeline</u>; e. <u>Area of Outstanding, Very High or High Natural Character</u>; f. <u>a Site of Ecological Significance</u>; g. <u>50m of a significant tree</u>; h. <u>50m of a heritage item, or setting; or</u> i. the Suburban Residential Conservation Zone. 5. <u>Utilities</u> shall not be located within a buffer of 150m horizontal distance or 50m vertical distance, whichever is the lesser, from any of the areas or items identified at (4)(a) –(e).
D3	<p>Non-renewable Electricity Generation:</p> <ol style="list-style-type: none"> 1. in Industrial Zones; and 2. where the utility complies with the rules in Chapter 16 (Industrial) and noise rules in Chapter 6 (General Rules).
D4	<p>Any electricity generation <u>utility</u> not specified in this chapter shall be a discretionary activity.</p>
D5	<p>Any activity listed in Rule 11.3.3.3 that does not comply with the Activity Specific Standards for permitted activities RD6.</p>
D6	<p>Any new <u>sensitive activity</u> or increase to the extent of a <u>sensitive activity</u> in a location that would result in an established or consented wind turbines for large scale <u>renewable energy generation</u> not complying with the noise standards at Chapter 6.</p>

11.3.3.4 Non-complying activities - Energy

The activities listed below are non-complying activities.

Activity	
NC1	Any activity listed in Rule 11.3.3.3 not provided for at D1.
NC2	Any activity listed in Rule 11.3.3.3 not provided for at D2.
NC3	Any activity listed in Rule 11.3.3.3 not provided for at D3.

11.3.4 Communications Facilities

11.3.4.1 Permitted activities - Communications facilities

Communications facilities are permitted subject to the following standards:

Activity	Standards
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<p>P1 Freestanding communications <u>utilities</u></p> <p>Clarification:</p> <ol style="list-style-type: none"> 1. The National Environmental Standards for Telecommunications Facilities Regulations 2008 defers to the District Plan for telecommunications facilities in the road reserve and: <ol style="list-style-type: none"> a. within the dripline of a tree or other vegetation where the trees or other vegetation are managed by the District Plan. For the purposes of this rule, this means significant trees and sites of ecological significance; b. on the same side of the road as items or land identified as having historic heritage values, where the land or items are identified by the District Plan. For the purposes of this rule, this means heritage items and heritage settings; c. on the same side of the road as land or sites that are identified as having visual amenity values by the District Plan. For the purposes of this rule, this means any Outstanding Natural Feature, Outstanding Natural Landscape, Significant Feature, Significant Landscape, Important Ridgeline, or Area of Outstanding, Very High or High Natural Character; and d. on the same side of the road as next to the Coastal Marine Area. 2. The National Environmental Standards for Telecommunications Facilities Regulations 2008 manages instances where: <ol style="list-style-type: none"> a. an original utility structure is replaced with a replacement utility structure; b. the addition of an antenna makes a structure into a replacement utility structure; c. if an antenna on a replacement utility structure is replaced; or d. a dish antenna is added to or replaced on an original utility structure or replacement utility structure. 	<ol style="list-style-type: none"> 1. Freestanding communications utilities shall not be located in: <ol style="list-style-type: none"> a. an Outstanding Natural Landscape; b. Outstanding Natural Feature; c. Significant Feature; d. Important Ridgeline; e. Area of Outstanding, Very High or High Natural Character; f. a Site of Ecological Significance; g. the dripline of a significant tree; h. 20m of a heritage item, or setting; or i. the Suburban Residential Conservation Zone. 2. Utilities shall not be located within a buffer of 50m horizontal distance or 20m vertical distance, whichever is the lesser, from any of the areas or items identified at (1)(a) – (e). 3. Any utility structure shall not be: <ol style="list-style-type: none"> a. greater than 25m in height and 1.0m in diameter above a height of 6m in Transport, SP(Port), Industrial, Commercial, Rural Urban Fringe, or Rural Waimakariri Zones; or b. greater than 30m in height and 1m in diameter above a height of 6m in Transport, Industrial, Commercial, or Rural Urban Fringe, or Rural Waimakariri Zones where two or more network operators utilise the same utility structure. c. greater than 20m in height and 1.0m in diameter above a height of 6m in any other Zone. 4. <ol style="list-style-type: none"> a. Any dish antenna shall be less than 1.5m in diameter in Industrial, Commercial, or Rural Zones and less than 0.75m in any other Zone; and b. Any other antenna shall not exceed a surface area of 1.5m².
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P2	Communications <u>utilities</u> attached to a building	<ol style="list-style-type: none"> Any dish <u>antenna</u> shall be less than 1.5m in diameter in Industrial, Commercial, or Rural Zones and less than 0.75m in any other Zone; Any other <u>antenna</u> shall not exceed a surface area of 1.5m²; and Any <u>antenna</u> shall not exceed a height of 3m or the height limit for the relevant Zone.
P3	Amateur or ham radio equipment	<ol style="list-style-type: none"> The top of any <u>utility structures</u> is less than 20m above ground level. Any <u>antenna</u> shall be less than 0.5m in diameter / width. The <u>utility structures</u>, <u>antenna</u> and any guys are not located between any road and any building on the site. The <u>utility</u> shall meet Zone rules relating to separation from neighbours.
P4	Phone boxes	Any attached wifi <u>antennae</u> shall be less than 1m in height and shall not have a horizontal dimension greater than the horizontal dimensions of the phone box.
P5	Installation, upgrade and maintenance of lines and <u>utility structures</u>	<ol style="list-style-type: none"> No new overhead lines shall be erected in an area where no overhead utilities exist. Any new overhead lines shall be in the transport zone.

11.3.4.2 Restricted Discretionary activities - Communications facilities -

The activities listed below are restricted discretionary activities.

	Activity	The Council' s discretion shall be limited to the following matters:
RD1	Any activity listed in Rule 11.3.4.1 that does not comply with the Activity Specific Standards for P1.	11.4 (1), (2), (3) and (4)
RD2	Any activity listed in Rule 11.3.4.1 that does not comply with the Activity Specific Standards for P2.	11.4 (1), (2), (3) and (4)
RD3	Any activity listed in Rule 11.3.4.1 that does not comply with the Activity Specific Standards for P3.	11.4 (1), (2), (3) and (4)
RD4	Any activity listed in Rule 11.3.4.1 that does not comply with the Activity Specific Standards for P4.	11.4 (1), (2), (3) and (4)

11.3.4.3 Discretionary activities - Communications facilities

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The activities listed below are discretionary activities.

Activity	
D1	Any <u>utility</u> not specified in this chapter shall be a discretionary activity.
D2	Any new <u>sensitive activity</u> or increase to the extent of a <u>sensitive activity</u> in a location that would result in an established, permitted, or consented cell tower not complying with Rule 11.3.1.1 P11.

11.3.5 Water, wastewater and stormwater

11.3.5.1 Permitted activities - water, wastewater and stormwater

Water, wastewater and stormwater utilities are a permitted activity if they comply with the standards listed below.

	Activity	Standards
P1	Water, wastewater and stormwater connections to public networks.	<p>Nil.</p> <p>Advice Notes:</p> <ol style="list-style-type: none"> 1. Refer to the Infrastructure Design Standard and/or Construction Specification Standard apply as published by the Christchurch City Council. 2. Connections to the Christchurch City Council's reticulated water supply are applied for through the "WS1 Water Connection Application form". 3. Connections to the Christchurch City Council's reticulated stormwater and wastewater systems are through the Building Consent process. Connections are to be installed by a Council Authorised Drain Layer.
P2	Construction, maintenance or operation of structures for the conveyance, treatment, storage or retention / detention of water, wastewater and stormwater by the Christchurch City Council or a network operator.	<p>Built form standards for the relevant Zone.</p> <p>Advice Notes:</p> <ol style="list-style-type: none"> 1. The requirements of the Infrastructure Design Standard and/or Construction Specification Standard apply. 2. Refer also to relevant Stormwater Management Plans and Integrated Catchment Management Plans.
P3	Stormwater treatment devices, erosion protection, and measuring devices.	<p>Nil.</p> <p>Advice Notes:</p> <ol style="list-style-type: none"> 1. The requirements of the Infrastructure Design Standard and/or Construction Specification Standard apply. 2. Refer also to the Canterbury Regional Council's Erosion and Sediment Control Guide and Natural Resources Regional Plan.

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P4	Use of greywater or rainwater collection systems.	<p>1. Water tanks shall comply with Zone provisions for height and boundary setbacks.</p> <p>Advice note:</p> <p>1. The installation of greywater systems and rainwater tanks may require building consent.</p> <p>2. The use of greywater may require resource Consent from the Canterbury Regional Council.</p>
P5	Solar hot water systems	<p>Nil.</p> <p>Advice note:</p> <p>The installation of solar hot water systems may require building consent.</p>

11.3.5.2 Restricted discretionary activities - water, wastewater and stormwater

The activities listed below are restricted discretionary activities.

Activity		The Council's discretion shall be limited to the following matters:
RD1	Any activity listed in Rule 11.3.5.1 that does not comply with the Activity Specific Standards for P2.	11.4 (1), (2), (3), (4) and (6).
RD2	Any activity listed in Rule 11.3.5.1 that does not comply with the Activity Specific Standards for P4.	11.4 (1), (2), (3), (4) and (6).

11.3.5.3 Discretionary activities - water, wastewater and stormwater

The activities listed below are discretionary activities.

Activity	
D1	Any utility not specified in this chapter shall be a discretionary activity.

11.4 Assessment Matters - Utilities

1. Heritage and natural environment

- a. The extent to which the utility and associated structures affect the values of areas identified in the District Plan as an Outstanding Natural Landscape, Outstanding Natural Feature, Outstanding Natural Character areas in the Coastal Environment or Sites of Ecological Significance.
- b. Any cumulative visual effects arising from the utility, particularly in relation to telecommunication facilities and energy generation facilities.
- c. The effects of the utility on protected trees, heritage items and settings, including those of significance to Tangata Whenua.
- d. Any relevant assessment matters in Chapter 9, if any activity is proposed within an Outstanding Natural Landscape, Outstanding Natural Feature, Significant Feature or Significant Landscape, Important Ridgeline, Area of Outstanding, Very High or High Natural Character, Site of Ecological Significance, on the site of or within the dripline

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of a significant tree, on the site of or within 20m of a heritage item, or setting: any relevant assessment matters in Chapter 9.

- e. Any relevant assessment matters in Chapter 14, if any activity is proposed within the Suburban Residential Conservation Zone.

2. Amenity, location and design

- a. The practicality and effectiveness of screening the utility.
- b. In respect of utilities attached to buildings; whether the utility is placed within the visual envelope of an existing building, and the extent to which the colour and design of the facility corresponds to the existing building.
- c. Consideration of the number and size of any other existing utility on the building.
- d. The extent to which any adverse effects of the utility have been avoided, remedied or mitigated by the route, site and method selection.
- e. Whether the location and size of the utility impacts on the ability of people to access any facility, building, shop, recreation facility or other activity on a site.

3. Operational considerations

- a. The extent to which the scale and height of buildings or other structures proposed are necessary to meet the technical, operational or functional requirements of the utility.
- b. Consideration of soil stability, erosion, and geotechnical matters on the selection of the route or site of a utility and the extent to which these matters can be mitigated.
- c. Whether placing lines or other utilities underground is unreasonable in terms of additional costs or environmental effects.
- d. Any risk to and effects on the operation, maintenance, upgrading and development of transmission lines, including the National Grid.

4. Health and safety

- a. Whether the utility will be located in close proximity to any sensitive activity and the extent of any effect on human health.
- b. Whether the effects associated with radio-frequency, electric, and magnetic fields are appropriately managed.

5. Energy generation

- a. The distance between the utility and residences, public places, or places from which the utility would be visible, and whether the utility would impose adverse visual effects on or dominate the surrounding landscape, including but not limited to outstanding natural landscapes and sites of ecological significance.
- b. Whether views to the utility are expansive or constrained.
- c. The extent to which the siting and size of the proposal responds to its landscape context.
- d. The relative elevation of the utility in relation to residences, public places or place from which the utility will be visible, including whether the utility is located on a ridgeline or series of ridgelines, or would form part of a skyline.
- e. Number, design and extent of turbines and associated structures, and predominant orientation in relation to the landform.
- f. The effects on natural topography, landforms and geological forms.
- g. The ecological effects including any loss of indigenous flora, fauna, habitat and riparian margins, including through birdstrike.
- h. The extent of and effect on adjoining land uses of noise levels, noise modulation, glint/glare, and shadow flicker.
- i. The need to locate wind turbines and associated structures where the wind resource is available and the quality of the wind resource.
- j. The extent and visibility of roads, earthworks and vegetation clearance associated with the construction, operation or maintenance of the utility.

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- k. For solar cells, in addition to the above:
 - i. the time of day, year, and time per day when adjoining or adjacent properties would be affected by reflected solar glare and the degree of luminance;
 - ii. the number of properties affected and their relative proximity; and
 - iii. whether there is any glare hazard.
- l. The necessity for non-renewable electricity generation elements in the District's electricity supply network, including for building resilience.

6. **Water, wastewater and stormwater**

- a. The requirements of the Infrastructure Design Standard and/or Construction Standard Specifications.
- b. Whether the proposed servicing will serve its intended purpose.
- c. Whether the proposal utilises the existing or proposed topography and proposed networks to convey surface water by way of gravity systems.
- d. Whether provision is made for safe access for maintenance of surface water infrastructure.
- e. Whether the works incorporate existing or new appropriate indigenous vegetation, recognising the ability of particular species to absorb water, and to which planting reflects Ngai Tahu history and identity associated with specific place.
- f. The suitability of the proposed water supply for fire fighting purposes (the Council may obtain a report from the Chief Fire Officer), including the extent of compliance with the SNZ PAS:4509:2008 in respect of the health and safety of the community, including neighbouring properties.
- g. The extent to which the proposed surface water management systems are consistent with the relevant Council Stormwater Management Plan or Integrated Catchment Management Plan.
- h. Any adverse effects on the functioning or values of the existing network of drains, springs, waterways and ponding areas.
- i. The provision for and protection of the flood storage and conveyance capacity of waterways.
- j. Whether the proposed ponding area will be attractive to birdlife that might pose a bird strike risk to the operation of Christchurch International Airport Limited.