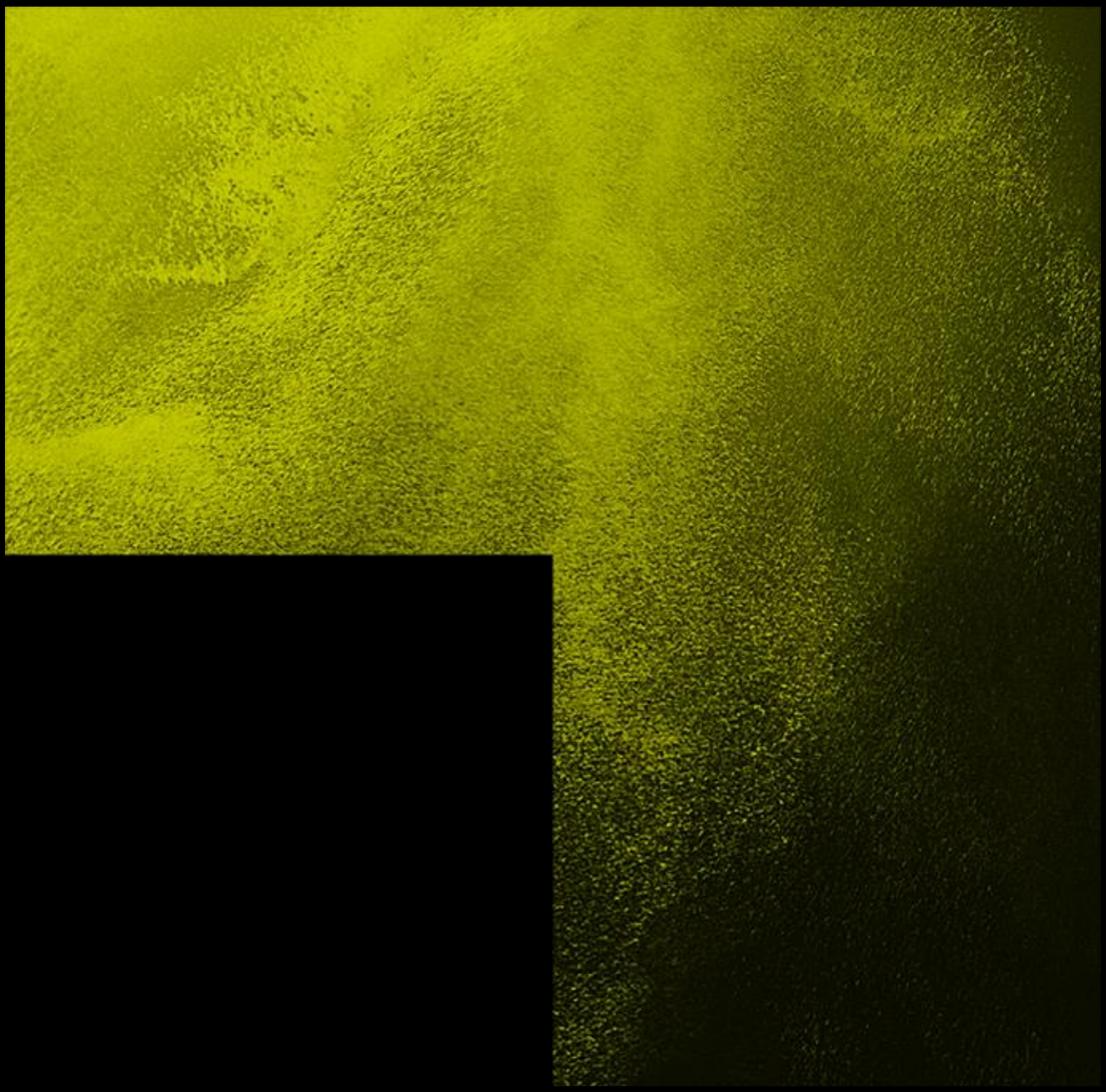
ENERGY GENERATION

Baseline Report Selwyn District Plan Review

Selwyn District Council



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APPENDICES

1.0 INTRODUCTION AND SCOPE

1.1 PROJECT SCOPE

This Baseline Report covers the Energy Generation Topic of the Selwyn District Plan Review. This Topic encompasses large scale renewable energy generators including the Lake Coleridge Power Station through to small scale energy generators, such as domestic wind turbines and solar power.

Under Section 74 (1) (b) of the Resource Management Act (RMA), Councils' must prepare and change district plans in accordance with the provisions of Part 2 of the Act. Sections 7 (ba) and (j) of the RMA require that decision makers have particular regard to the efficiency of the end use of energy and the benefits of the use and development of renewable energy

The National Policy Statement for Renewable Electricity Generation 2011 (NPS-REG) requires District Councils' to review their plans to ensure that the national significance of renewable energy generation activities are recognised and provided for in objectives, policies, and methods (including rules where appropriate). District Councils' are required to have a broad appreciation of relevant developed and undeveloped renewable energy generation resources in their district, as well as the future potential for renewable energy when reviewing their district plans.

The NPS-REG requires District Plans to contain planning provisions to:

a) Assist in meeting the New Zealand Government's renewable energy target;

b) Maintain generation output of existing renewable energy generation;

c) Provide for new development of renewable energy generation activities;

d) Consider including more permissive approaches to establishing small and community-scale renewable energy generation activities; and

e) Limit reverse sensitivity effects of other uses on existing and consented renewable energy generation.

The NPS-REG enables planning provisions to be included within a stand-alone energy chapter or form part of a wider suite of chapters relating to infrastructure or network utilities.

This report provides an overview of existing energy generation within the Selwyn District and potential changes to national and local energy generation to inform the Selwyn District Plan review. It reviews the effectiveness of existing energy generation policy in the Operative Selwyn District Plan (Plan) and its consistency with the National Policy Statement for Renewable Electricity Generation 2011 (NPS-REG). It also assesses energy generation policy approaches for a representative sample of other District Plans across New Zealand and also the Victoria Planning Provisions (Australia).

1.2 METHODOLOGY

This report has been based primarily on desk-top research. A limited number of targeted discussions were undertaken with Energy (E^3)[1] an energy company operating in the Selwyn District, and Trustpower as managers of the Lake Coleridge Power Station.

[1] E3 is an energy company specialising in wind farms across New Zealand from site evaluation through to construction.

2.0 EXISTING RENEWABLE ENERGY GENERATION

2.1 NATIONWIDE RENEWABLE ENERGY GENERATION

In 2016, 85% of electricity supply in New Zealand was generated by renewable energy sources.[2] The percentage of energy generated by type from 2011-2018 is shown in Figure 1 below.

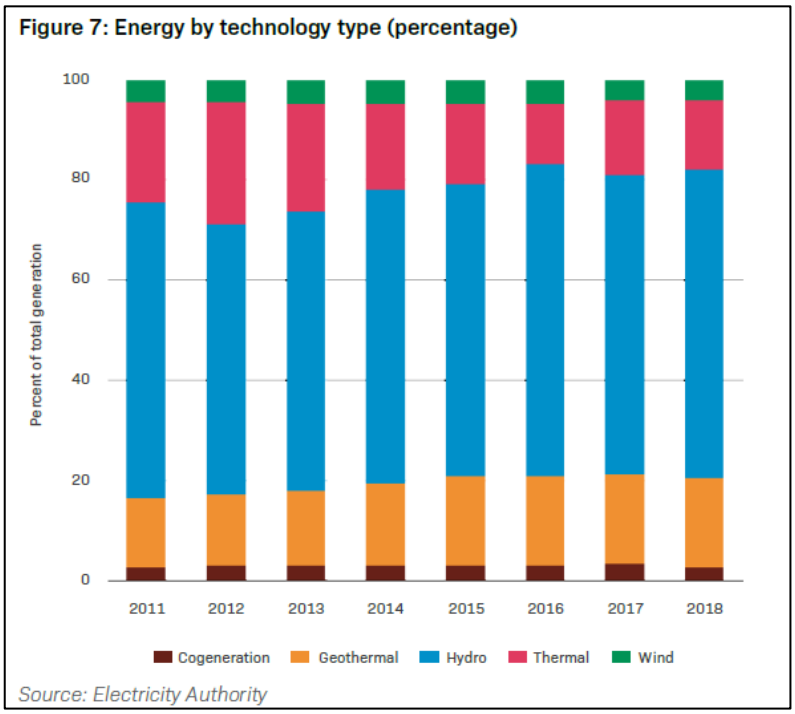


Figure 1: Energy By Type. Source (The Electricity Authority, 2018 p. 29).

2.1.1 GEOTHERMAL ENERGY

New Zealand has an abundant supply of geothermal energy due to its location on the boundary between two tectonic plates. Geothermal energy provides 22% of New Zealand's total primary energy supply. The average percentage of electricity generated from geothermal resources over the last five years was 17% (The Electricity Authority, 2018).

New Zealand's high-temperature geothermal fields are mostly concentrated around the Taupo Volcanic Zone and another major field at Ngawha Springs in Northland. Six fields are currently used for geothermal electricity generation with a further eight new and expanded fields in various stages of planning and development (New Zealand Geothermal Association, 2018).

[2] This is the third highest percentage of renewable electricity generation for countries in the Organisation for Economic Co-ordination and Development (OECD) (MBIE, 2017).

2.1.2 HYDRO ENERGY

New Zealand has had a long history of investment in hydro energy development. Hydro energy currently provides 59% of electricity generation (The Electricity Authority, 2018).

New Zealand has five main hydroelectricity systems; Waitaki, Waikato, Manapouri, Clutha and Tongariro (EECA, 2013). The volumes of electricity produced in stations within these systems are include in Figure 2.

ENERGY BY GENERATION TYPE (GWH)

New Zealand's five largest power stations

SITE CAPACITY	STATION NAME	GENERATION TYPE	LOCATION	OWNER
953 MW	Huntly[1]	Thermal (Gas and Coal)	Waikato	Genesis Energy
800 MW	Manapouri	Hydro	Otago/Southland	Meridian Energy
577 MW	Stratford[2]	Thermal (Gas)	Taranaki	Contact Energy
540 MW	Benmore	Hydro	South Canterbury	Meridian Energy
464 MW	Clyde	Hydro	Otago/Southland	Contact Energy

Source: Electricity Authority

Figure 2: Electricity in New Zealand. Source (The Electricity Authority, 2018 p.28).

No recent investment has been made in new hydroelectricity schemes since the Clyde Dam opened in 1992.

2.1.3 BIOENERGY

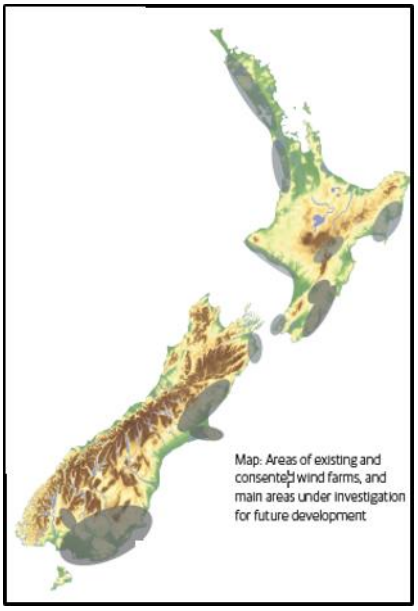
Bioenergy is fuel made from renewable organic material. More than 10 percent of New Zealand's energy currently comes from bioenergy (Bioenergy Association, 2018).

New Zealand has a significant biomass[3] potential (EECA, 2013). The Bioenergy Association estimates that bioenergy could supply 25 percent of New Zealand's energy needs by 2040, including 30 percent of our transport fuel (Bioenergy Association, 2018).

2.1.4 WIND

New Zealand has a high-quality and reliable wind resource due to its geographic location. Locations in the lower North Island (Hawkes Bay, Manawatu and Wellington) and lower half of the South Island (Canterbury, Otago and Southland) are suitable sites to operate wind farms (EECA, 2013). Figure 3 shows the locations of existing and consented wind farms, and main areas under investigation for future wind energy development in New Zealand.

[3] Most waste biomass is available through household rubbish, forestry, agriculture and other industries dealing in organic matter.



The average percentage of electricity generated by wind over the past 5 years' was 5% (The Electricity Authority, 2018).

Figure 3: Map of Wind Generation in New Zealand. Source: New Zealand Wind Energy Association

2.1.5 SOLAR ENERGY

Solar energy can be converted into electricity via solar photovoltaic (PV) panels. The Ministry of Business, Innovation and Employment (MBIE) reports that in 2016 there were 12,698 solar PV connections into the national electricity grid in New Zealand (MBIE, 2017). However, solar generation is a small proportion of energy generation and currently comprises only 0.1% of the total renewable energy generated (EECA, 2016).

2.1.6 SUMMARY

Renewable energy sources comprise a significant percentage (85%) of electricity supply in New Zealand. Hydro energy is the greatest source of electricity (59%) followed by geothermal energy (17%) and wind energy (5%). Other renewable energy sources such as solar provide a lesser amount of electricity.

Current renewable energy sources in the Selwyn District are outlined in section 2.2 of this report.

2.2 SELWYN DISTRICT

2.2.1 GEOTHERMAL ENERGY

There is no known geothermal energy generated in the Selwyn District.

2.2.2 LAKE COLERIDGE POWER STATION

The Lake Coleridge Hydroelectric Power Station (Power Station) is located between Lake Coleridge and the Rakaia River. The power station was constructed in 1914 and later added additional turbines and capacity with the diversion of the Acheron and Wilberforce Rivers into Lake Coleridge (Trustpower, 2018).

The Lake Coleridge Power House is a listed heritage item (Plan reference H112) in the Plan and specific provisions limit works on the building due to its heritage significance.

Image 1: Photograph of Lake Coleridge Power Station. Source: Trustpower website

The Power Station was upgraded following resource consents issued in 2001 and 2009. It now has the capacity to generate 39 megawatts (MW) with an average annual output to 270 gigawatt hours (GWh) (Trustpower, 2018).

2.2.3 WIND ENERGY

A wind turbine owned by Energy3 Generation currently operates in Southbridge. This wind turbine comprises a single three bladed 100kW turbine mounted on a 42m high lattice tower. It has the equivalent capacity to service the annual electricity needs of approximately 20-25 average New Zealand homes (New Zealand Wind Energy Association, 2018).

Two 10 metre high wind turbines located at the Lincoln New World car park meet some of the energy needs of the supermarket.

Three additional resource consents have been granted over the past eight years for wind monitoring masts near Windwhistle, Lake Coleridge and Springston.

2.2.4 SOLAR ENERGY

Solar panels are located on numerous domestic and commercial buildings within the Selwyn District. However, there is no available data on the number of solar panels currently installed for on-site use and the effect this has on reducing energy demand. There is also no data about the amount of electricity being generated or the number of connections to the national electricity grid.

2.2.5 BIOENERGY

There is a lack of published material regarding use of biomass (organic matter) as an energy resource within the Selwyn District.

2.2.6 SUMMARY

The majority of renewable energy generated in the Selwyn District is from the Lake Coleridge Power Station although the amount of electricity generated (39mW) is relatively small compared to the five main hydroelectricity systems in New Zealand. Solar and wind energy generated within the District is only sufficient for on-site

domestic or business use, although the Energy3 wind turbine has the capacity to service the electricity needs of approximately 20-25 average New Zealand homes.

3.0 FUTURE OF RENEWABLE ENERGY GENERATION

3.1 INFLUENCES ON NEW ZEALAND RENEWABLE ENERGY GENERATION

Key influences on renewable energy generation relate to changes in New Zealand Government energy policy and consequential non-renewable electricity plant decommissioning and increased investment in geothermal energy generation. These national influences, which also affect renewable energy generation in the Selwyn District, are summarised in 3.1.1- 3.1.4 below.

3.1.1 NATIONAL RENEWABLE ENERGY TARGETS

The New Zealand Energy Strategy (2011-2021)' sets a target of 90% of electricity demand from renewable sources by 2025. The New Zealand Government's approach is to ensure that market incentives and the regulatory framework support further investment in appropriate renewable projects by removing unnecessary regulatory barriers (MoED, 2011).

3.1.2 CHANGE IN NON-RENEWABALE ENERGY SOURCES

In the past five years' two gas fired electricity plants (Otahuhu Power Station and Southdown Plant) have been retired (MBIE, 2017). Further closures of the two remaining coal / gas burning units at Huntly Power Station were originally planned for 2018, but are now proposed to close in 2022 to enable more time to develop increased generation capacity.

3.1.3 INCREASED INVESTMENT IN GEOTHERMAL ENERGY

Since 2007, eight geothermal schemes[4] with a generating capacity of 10 megawatts or greater have been commissioned (Statistics New Zealand, 2017). These schemes have resulted in increases from 3,210 GW to 7,091 GW (8 percent to 17 percent of net generation) from 2007-2015 (Statistics New Zealand, 2017).

3.1.4 CHANGES IN ENERGY DEMAND

Consumer energy demand is continuing to rise, up 5.9 petajoule (PJ) for the fifth consecutive year (MBIE, 2017). The majority of this increased demand is from industry as industrial energy demand increased by 2.7% (5.5 PJ) in 2016 (MBIE, 2017). However, average residential electricity use has fallen by 2.8% (by individual control point) from 2015 levels, and has been trending downwards since 2009 likely due to energy efficiency improvements, demographic changes and weather variations (MBIE, 2017).

The energy demand for industrial uses within the Selwyn District is not known. However, changes from non-renewable to renewable energy sources are occurring in industry within the district. Synlait, which operates a large dairy factory in Dunsandel, is seeking to lower energy demand from on-site coal boilers by using a large scale electrode boiler which runs on renewable energy. Synlait is also investigating ways of integrating heat pump technology and recovering and re-using waste heat from the manufacturing process (ECCA media release 'Environmental move could be the making of milk, June 2018).

[4] These were either new schemes or upgrades to existing generating capacity.

These nationwide trends all influence renewable energy generation in New Zealand and in the Selwyn District as discussed in section 3.2 of this report.

3.2 FUTURE RENEWABLE ENERGY GENERATION

3.2.1 GEOTHERMAL ENERGY

Within New Zealand, growth in the geothermal energy generation sector is anticipated to increase due to the relatively low cost technology for energy production (Statistics New Zealand, 2017). Geothermal projects that are either under development or are coming on stream include Te Mihi (200MW), Tauhara (263MW) and Mighty River Power (132MW) station constructed in Rotokawa.

Geothermal energy generation is not anticipated to be developed in the South Island or the Selwyn District due to distance from the demand in the upper North Island and lack of high temperature geothermal fields.

3.2.2 HYDROELECTRICITY

Hydroelectricity generation is still anticipated to form the 'backbone' of New Zealand's electricity system in the future (EECA website[5]). The EECA website notes that while there is still significant scope to develop new hydroelectricity generation in New Zealand, large projects are unlikely as the major opportunities have already been taken and there is strong public interest in preserving waterways, including the associated landscape, recreational, biodiversity and cultural values attributed to them.

It is not anticipated that there will be any new hydroelectricity scheme development in the Selwyn District due to the lack of economic opportunities and potential environmental and community concerns. There may be smaller scale upgrades to the Lake Coleridge Power Station which could increase hydro electricity generation efficiency (pers. com Nicola Foran 2018).

Other opportunities for increased hydroelectricity generation relate to small-scale hydroelectric facilities ranging from 5kW micro-hydro servicing houses and buildings up to 10 MW servicing small scale commercial.[6] These facilities use the force of running water to turn turbine blades, which spin a shaft connected to a generator. They can be used in situations where water falls from a higher lever to a lower level such as waterfalls and streams (Energywise website). There may be potential for micro-hydro systems for domestic use and larger scale mini-hydro generation for other uses in the Selwyn District, including through water schemes such as the Central Plains Water Scheme.[7]

3.2.3 WIND ENERGY

The New Zealand Wind Energy Association reports that there is 682 MW installed wind capacity and a further 2000 MW of consented capacity (NZWEA website). There is no certainty that the consented capacity, which is predominantly in the North Island with some consented capacity in North Canterbury and Southland, will be built.

No wind farms are known to be being planned in the Selwyn District. Discussions with the Southbridge wind farm owner and operator (Energy3) have identified that the Selwyn District does not have appropriate wind conditions relative to some other sites

[5] https://www.eeca.govt.nz/

[6] Smaller hydroelectric schemes are often classified as micro-hydro - up to 5 kW, mini-hydro - between 5 kW and 20 kW and small commercial hydro - between 20 kW and 10 MW (Source Energywise website).

[7] The Central Plains Water Scheme (Stage 1) comprises a 17km long canal delivering water from the Rakaia River into a piped distribution network and 23km pipe between the Selwyn and Waimakariri Rivers (Stage 2). Source: Central Plains Water website.

in New Zealand and commercial wind farms are unlikely in the near future (Pers. com between Nicola Rykers and Thomas Cameron). However, small-scale wind turbines for rural based industries, larger commercial and industrial buildings for dairy farms or dairy plants may be feasible subject to costs and benefits and on a case-by-case basis. One example of small-scale turbines is the two wind turbines installed at Lincoln New World supermarket.

It is not anticipated that wind turbines will be developed in residential areas due to costs and environmental effects related to turbine noise, visual amenity, and overshadowing in relation to support pole height.

3.2.4 SOLAR ENERGY

The percentage of solar energy generation in New Zealand is growing quickly as a generation source from a low base, up 52% over the year (MBIE, 2017).

Any increases in solar electricity generation both nationwide and in the Selwyn District are anticipated from solar PV connections for personal use or for personal use and connection back into the national grid. It is not anticipated that any medium or large scale generation plants will be developed within the Selwyn District or within New Zealand in the short-medium term.

3.2.5 BIOENERGY

Research by Crown Research Institute, Scion, shows that bioenergy from different sources could supply a significant amount of New Zealand's liquid fuel and heating demands (EECA website). A key bioenergy resource is wood from plantation forestry. Other potential sources of bioenergy include biomass waste utilisation[8] that could be sourced from intensive farming activities or municipal waste (WIREs Energy Environ 2013).

There are several large-scale forestry interests in the Selwyn District and intensive farming activities (pork and dairy) which could be used as bioenergy sources. Development of plant based biofuel and potential use of bioenergy from the East Selwyn Sewer Scheme may be also be possible subject to economic viability.

3.2.6 SUMMARY

Geothermal energy generation is not anticipated to be developed in the Selwyn District due to distance from markets and lack of high temperature geothermal fields. Hydroelectricity generation development is anticipated to be limited to smaller scale upgrades to the Lake Coleridge Power Station to increase efficiency and other small-scale hydroelectric generation such as use of water irrigation schemes for smaller scale commercial use. Commercial scale wind farms are considered unlikely to be developed within the District due to the lack of appropriate wind conditions relative to other parts of New Zealand and the cost of infrastructure development. However, small-scale wind turbines for rural based industries such as for dairy farms or plants may be feasible. Wind turbines are considered unlikely to be developed in residential areas due to cost and potential for adverse environmental effects. No medium or large scale solar generation plants are anticipated within the Selwyn District in the short-medium term. However, increases in solar electricity generation from solar PV connections for personal use or for personal use and connection back into the national grid are anticipated. Forestry and intensive farming activities could be used as a source of bioenergy subject to economic viability.

[8] Anaerobic digestion of effluents for combined heat and power.

4.0 ANTICIPATED EFFECTS OF FUTURE RENEWABLE ENERGY GENERATION

4.1 ANTICIPATED INFRASTRUCTURE

Section 3.2 noted that future renewable energy generation sources in the Selwyn District are most likely to be from:

- Hydroelectricity from the existing Lake Coleridge Power Station and small-scale operational improvements to this scheme.
- Small-scale in-stream or in-irrigation channel hydroelectricity schemes.
- Small-scale wind turbines for on-site use for rural based industries for dairy farms or plants.
- Small-scale wind turbines for on-site use in rural locations.
- Solar PV connections for on-site use or for on-site use and connection back into the national grid.

There is also potential for future bioenergy generation from forestry and intensive farming activities subject to economic viability.

The most significant effects arising from renewable energy generation requiring consideration in the Selwyn District Plan review are likely to be from the construction and operation of infrastructure required to generate energy. This is particularly the case for commercial scale wind farms which are not anticipated to be developed but have been included in the assessment in section 4.2 for completeness.

The key types of infrastructure relating to commercial scale windfarms are likely to be turbines and towers (wind), PV panels generally on roof forms (solar), turbines, buildings and tail races (hydro). An overview of the effects of this type of infrastructure is included in section 4.2.

4.2 OVERVIEW OF TYPES OF ENVIRONMENTAL EFFECTS

The potential effects of renewable energy infrastructure on the environment are summarised in Table 1. Potential effects associated with bioenergy have not been addressed as the majority of these effects are anticipated to fall within regional council functions (e.g. discharge to air or land).

Potential environmental effects associated with renewable energy have been identified through a review of recent consents issued in the Selwyn District and other publications including *Effectiveness Review of Operative District Plan in managing visual amenity effects of network utilities and energy generating activities,* (Boffa Miskell, 2017). The actual and potential effects of renewable energy generation infrastructure will vary depending on the type of infrastructure proposed and the site context.

TABLE 1: POTENTIAL ENVIRONMENTAL EFFECTS FROM RENEWABLE ENERGY INFRASTRUCTURE

RENEWABLE ENERGY INFRASTRUCTURE	POTENTIAL EFFECTS
Hydroelectricity	The key effects associated with maintaining and undertaking operational enhancements to the Lake Coleridge Power Station, relate to the effects of works on the heritage listed buildings and works associated with maintaining tailraces, gates and structures over the surface of waterways. Minor repairs are considered unlikely to affect the heritage values of the buildings. The majority of the Power Station building is not within the Outstanding Natural Landscape (ONL) area. However, part of the building, part of the inlet structure from Lake Coleridge and the tail races are located within the ONL area. Minor repairs or new works may have an adverse effect on the significant natural values of the ONL. Key effects relate to building and infrastructure height, scale and location and reflectivity of materials, colour schemes, and overhead wires. Earthworks associated with new infrastructure and maintenance of infrastructure such as tail races have the potential to: remove native vegetation, affect protected species and associated habitat or adversely affect significant waterways. Earthworks also have the potential to affect sites of cultural significance including the potential for the accidental discovery of archaeological or cultural sites during construction. Trustpower has advised that forestry in close proximity to the Power Station could adversely affect operations. However, use of adjoining land for forestry is considered unlikely due to its location in an area of high landscape significance. Any effects of smaller-scale hydroelectricity generation are likely to be associated with in-stream or in-channel infrastructure. Any infrastructure is likely to be small-scale pipes, pumps, and pumphouses which is considered likely to have relatively minor visual effects.
Wind	The visual effects of commercial scale windfarms and wind monitoring devices, which are generally located in rural settings, have the potential to be more than minor. Windfarm infrastructure requires numerous large turbines and tall support poles which are typically in lighter colours. This infrastructure is often visually dominant in rural settings which are characterised by relatively low numbers of buildings and other infrastructure. Wind energy infrastructure is typically located on ridge lines or in coastal locations with stronger wind conditions. Any wind energy infrastructure located in the Port Hills, margins of Te Waihora, Malvern Hills, Arthur's Pass Village, Castle Hill Village and Outstanding Natural Landscapes, has the potential to adversely affect these sensitive landscapes. Placement of turbines on hilltops of significance to iwi may also adversely affect the cultural values of these places. The noise effects of commercial wind farm turbines on rural dwellings, small townships and other sensitive uses such as schools, have the potential to be more than minor. NZS 6608:2010 Acoustics Wind Farm Noise provides tools to assess, measure and

	limit noise from wind turbines and minimise adverse environmental effects from noise. This standard accounts for actual wind farm layout, turbine type, wind conditions, topography and background and provides an effects-based assessment of noise from wind turbines. It also contains model conditions which generally form the basis of noise related resource consent conditions. Protected bird species may fly into wind turbines which has the potential to adversely affect these bird species. Earthworks to establish windfarm infrastructure can be large in scale[9] and have the potential to remove native vegetation and habitat of protected species. Earthworks may also affect sites of archaeological or iwi significance including the potential for the accidental discovery of archaeological sites or taonga during construction. Construction of a commercial wind farm is likely to generate a significant volumes of traffic associated with earthworks and pole and turbine delivery and construction. The traffic and construction effects, such as the effect on road safety with increased large trucks and access and associated visual amenity effects of new access roads, have the potential to be more than minor. Turbines for domestic use or linked to the national grid are not anticipated in residential settings or commercial areas primarily due to cost and adverse effects of the infrastructure. However, turbines may be sought on larger, stand-alone commercial sites similar to the Lincoln New World. The scale of the blades and support poles are likely to have adverse effects on visual amenity and overshadowing in domestic and other commercial settings. The turbines are not likely to meet NZS6608:2010 in a residential setting and area likely to cause adverse noise effects. Turbines are also unlikely to meet noise standards in commercial areas. Turbines for commercial use or linked to the national grid may be sought in industrial areas. The amenity effects of infrastructure in industrial locations may be relatively minor except in interfaces with other zones. However, noise standards may still not be meet in some locations such as iZone due to the smaller lot sizes.
Solar	Solar panels are typically attached to roofs of dwellings and are aligned with the roof pitch. The visual effects of solar panels are generally minimal and anticipated in residential zones. More significant visual effects may arise if solar panels are not aligned with the roof pitch and are more visually obtrusive. Within industrial and commercial settings, the visual effects of solar panels are likely to be minimal, even if they are not aligned with the roof pitch due to lower levels of amenity in these locations.

[9] Consent data for the most recent Lake Coleridge resource consent application included approximately 36,000m^2 earthworks to construct a new tail race and bunds.

5.0 EFFECTIVENESS OF SELWYN DISTRICT PLAN

5.1 PLAN COMMENCEMENT

The Plan became fully operative on 3 May 2016. The decisions on utility provisions were released on 6 November 2004 and they were treated as effectively operative from 10 June 2008[10]. Therefore, while the utility provisions are relatively comprehensive, they pre-date the NPS-REG which became operative in 2011.

An overview of the key Plan provisions is outlined below.

5.2 DEFINITIONS

There are no specific definitions of renewable energy or renewable energy activities or infrastructure in the Plan. The definition of utility includes the use of any structure, building or land for:

(a) *'The generation, transformation and/or transmission of energy.*

(h) *Meteorological facilities for the observation, recording and communication of weather information.'*

A utility building is defined as: '*any building or part of any building which is a utility or which is used principally to house or support a utility; and that building is 10m² or more in gross floor area, and greater than 2.5m in height.*'

A utility structure is defined as '*any device, equipment or other facility which is used principally to house or support a utility including any antenna, mast, pole or pylon; or any structure housing a utility which is less than 10m² in gross floor area, or less than 2.5m in height.*'

There are no specific definitions for wind farms, solar energy generation or hydroelectricity or bioenergy in the Plan.

5.3 OBJECTIVES AND POLICIES

The objectives and policies in the Plan in both the Township and Rural Volumes are contained in the following sections:

- Natural Resources
- Physical Resources
- Health and Safety Values
- Growth of Townships/ Growth Rural

Relevant objectives and policies are included in **Appendix 2.**

Objectives B2.2.1 and B2.2.2 identify the significance of utilities and the need for utilities to manage any adverse effects on the environment. Policy B2.2.3 (Rural volume) and Policy B2.2.5 (Township volume) aim to avoid adverse reverse sensitivity effects of activities on utilities. Policy B2.2.5 (a) and (b) (Rural volume) aim to avoid siting utility structures or buildings in sensitive landscapes and areas with significant heritage or cultural value and Policy B2.2.6 (Rural volume) requires utility structures to be made of

[10] The Plan became fully operative on 3 May 2016.

low reflective materials. Policy B2.2.7 (Township volume) seeks to ensure that any adverse effects of utilities on or near waterbodies, or on any ecological, heritage, cultural, recreational, aesthetic or amenity values of the waterbody, are avoided, remedied or mitigated.

Other policies in the Rural volume encourage co-siting of utilities (Policy B2.2.7), siting utilities servicing a broader catchment in rural areas (B2.2.10) and ensuring their location does not create or exacerbate hazards (Policy B2.2.8). Policy B2.2.9 relates to managing traffic safety effects of utility installation in road reserves.

5.4 RULES

5.4.1 OVERVIEW OF RULES

Relevant rules within the Plan relating to utility are included in the following three chapters:

- Chapter 6 Living Zone (LZ)
- Chapter 18 Business Zones (township volume) (BZ) and
- Chapter 5 Rural Zones (rural volume) (RZ)

A summary of the relevant rules is included in Table 2 and a copy of all relevant rules is included in **Appendix 3**.

TABLE 2: Summary of Renewable Energy Rules

	LIVING ZONES (LZ)	BUSINESS ZONES (BZ)	RURAL ZONES (RZ)
LAND USE			
Utility (use on-site for solar, wind or petroleum based energy)	**Permitted** (6.1.1.6)	**Permitted** (18.1.1.6)	**Permitted** (5.1.2.4)
Utility* (renewable energy used off site)	**Non-complying** (6.1.5)	**Non-complying** (18.1.1.6)	**Discretionary** (5.1.3)
Upgrading, maintenance, operation and replacement of existing utilities	**Non-complying**** (6.1.5)	**Non-complying**** (18.1.5)	**Discretionary** (5.1.3)
BUILDINGS/INFRASTRUCTURE			
New utility building/ additions and alterations to an existing utility building	**Permitted** (6.2.1) subject to compliance with performance standards. Otherwise **restricted discretionary** (6.2.2) for non-compliance with setbacks Or **discretionary** (Rule 6.2.4) for non-	**Permitted** (18.2.1) subject to compliance with performance standards. Otherwise **restricted discretionary** (18.2.2) for non-compliance with setbacks (except within 10m of	**Permitted** (5.2.1) subject to compliance with performance standards. Otherwise **discretionary** (5.2.2)

	compliance with height.	road/living zone boundary) Or **discretionary** (Rule 18.2.4) for non-compliance with height or within 10m of road/living zone boundary.	
New utility structure/ alterations to existing structure in outstanding landscape areas***	**Permitted** (6.4.1) (Arthurs Pass and Castle Hill) subject to compliance with performance standards. Otherwise a **restricted discretionary** activity (6.4.2).	**Permitted** (18.4.1) (Arthurs Pass and Castle Hill) subject to compliance with performance standards. Otherwise a **restricted discretionary** activity (18.4.2).	**Permitted** (5.6.1) subject to compliance with performance standards. Otherwise a **restricted discretionary** activity (5.6.2) or **non-complying activity** (5.6.4).
New utility structure/ alterations to existing structure	**Permitted** (6.3.1) subject to compliance with performance standards. Otherwise a **discretionary** activity (6.3.5).	**Permitted** (18.3.1) subject to compliance with performance standards. Otherwise a **discretionary** activity (18.3.4)	**Permitted** (5.3.1) subject to compliance with performance standards. Otherwise a **restricted discretionary** activity (5.3.2) if exceeds 25m or **discretionary activity** (5.3.4) for non-compliance with pole/mast height requirements
New utility structure/ alterations to existing structure in outstanding landscape areas	**Permitted** (6.4.1.3) Any antenna, mast or utility or other structure that is not a building and does not exceed 10.5 metres Any utility building or utility (6.4.1.4) constructed of timber/stone/corrug ated iron (Arthurs Pass only) and reflectivity value between 0-37%. Otherwise **restricted discretionary** activity (6.4.2).	**Permitted** (18.4.1.3) Any antenna, mast or utility or other structure that is not a building and does not exceed 15 metres Any utility building or utility (18.4.1.4) constructed of timber/stone. Otherwise **restricted discretionary** activity (18.4.2).	**Permitted** (5.5.1) subject to compliance with performance standards. Otherwise **restricted discretionary** activity (Rule 5.5.3)

*Includes hydroelectricity, bioenergy and larger scale solar, wind and petroleum based energy generation.

**Rules 6.1.1.1 and 18.1.1.1 permit upgrades, maintenance, operation and replacement of existing utilities for telecommunications and electricity transmission. Energy generation is not permitted under Rule 6.1.1.6 or 18.1.16 unless the utility is for solar, wind and petroleum based generators located on the same site.

***Includes the Port Hills, Malvern Hills and the High Country.

Other relevant rules relate to Outstanding Landscape Areas - Utility Structures (5.5), Outstanding Landscape Areas - Utility Buildings (5.6), Rural Character - Utility Buildings (5.7), Natural Hazards –Utility Structures (5.8), Natural Hazards - Utility Buildings, Utility Structures and Sites of Significance to Tangata Whenua (5.10), Utility Buildings and Sites of Significance to Tangata Whenua (5.11), Waterbody Setbacks - Utility Structures and Utility Buildings and Heritage Buildings - Utility Structures and Utility Buildings (5.14).

Overall, the rules regarding utilities are comprehensive. However, they are lengthy and complex and could be consolidated and streamlined further.

5.4.2 CONSENT REQUIREMENTS FOR ANTICIPATED RENEWABLE ENERGY

Based on the Operative Plan, any proposed geothermal energy generation activities, solar generation plants, further expansion to the Lake Coleridge Power Station, in-stream hydrogeneration (such as through the Central Plains Water Scheme), bioenergy generation and commercial scale wind farms requires a resource consent for a discretionary activity. Upgrading, maintenance, operation and replacement of existing utilities at the Lake Coleridge Power Station is a discretionary activity. Associated utility structures and buildings are permitted activities subject to compliance with performance standards in the RZ or otherwise either a restricted discretionary or discretionary activity.

Works on the heritage Lake Coleridge Power Station are a permitted activity under Rule 5.14.1 for minor maintenance as defined in the Plan. More substantive works such as additions and alterations to heritage buildings are a restricted discretionary activity under Rule 5.14.6. A consent is also required under Rule 3.16.12 for a restricted discretionary activity for additions or alterations to the Power Station building as it is heritage listed.

Small-scale wind turbines or solar panels for on-site use for rural based industries such as dairy farms or plants or domestic dwellings are a permitted activity in the LZ, BZ and RZ. Associated utility structures and buildings are permitted subject to compliance with performance standards in the LZ, BZ and RZ or otherwise either a restricted discretionary or discretionary activity.

5.5 ASSESSMENT MATTERS

No specific assessment matters are included for a utility as a land use in the LZ, BZ or RZ as renewable generated for off-site use is a discretionary activity in the RZ and a non-complying activity in the LZ and BZ.

Assessment matters for new utility buildings, and alterations and additions to existing buildings in the LZ under Rule 6.2.3 and 18.2.3 in the BZ relate to effects on privacy, outlooks, shading and amenity values, the character of the street and safety and visibility of pedestrians, cyclists, and motorists.

Assessment matters (Rule 5.6.3) for new larger-scale utility buildings requiring consent in the ONL (RZ) relate to; building design and siting, reflectance values, placement of infrastructure, the appropriateness of the building site, surrounding built form, visibility of the building from public land, opportunities to protect open space and conservation

values and the extent to which the building may dominate the landscape. Assessment matters for new utility structures in the ONL (Rule 5.5.4) are similar to those for larger-scale utility buildings.

Rule 5.7 Rural Character - Utility Buildings and Waterbody Setbacks - Utility Structures and Utility Buildings (5.13) do not have any assessment matters as consents are required for discretionary activities and a broader assessment is required.

Rule 5.8 Natural Hazards - Utility Structures require consideration of the risk of a utility structure being inundated and the effects of a utility structure on proposed flood mitigation (Rule 5.8.3). Rule 5.9 Natural Hazards - Utility Buildings requires assessment of the risk of a building changing overland flow and flooding neighbouring dwellings (Rule 5.9.3).

Assessment matters for Utility Structures and Sites of Significance to Tangata Whenua (5.10) and Utility Buildings and Sites of Significance to Tangata Whenua (5.11) contain identical assessment matters requiring consideration of sites of cultural significance and mahinga kai sites which may affect new energy generation buildings and infrastructure in the future.

In Rule 5.14 Heritage Buildings - Utility Structures and Utility Buildings assessment matters require consideration of the effect of proposed works on the heritage value of buildings which includes the Lake Coleridge Power Station building.

In Landscape Management Alpine Villages (Arthurs Pass and Castle Hill) assessment matters (6.4.3) for utility structures relate; to the effects of the activity on the landscape values of the area, the character of villages, heritage buildings or general heritage values of the area. Assessment matters (6.4.3) for new utility structures in the Landscape Management Alpine Villages (Arthur's Pass and Castle Hill) relate to; the effects of the activity on the landscape, the design of heritage buildings and general heritage values of the area.

Overall, the assessment matters are comprehensive but could be consolidated further.

5.6 EFFECTIVENESS OF EXISTING PROVISIONS

The following criteria have been used to assess the effectiveness of the existing Plan provisions;

- Consistency with the NPS-REG;
- Consistency with the RPS;
- Ability to manage the range of actual and potential environmental effects arising from the infrastructure;
- How effectively policies respond to Ngai Tahu values; and
- Consistency with National Planning Standards.

5.6.1 CONSISTENCY WITH THE NATIONAL POLICY STATEMENT

The NPS-REG[11] sets out the requirements for objective and policies for renewable electricity generation under the Resource Management Act 1991 (Act). The NPS-REG also requires policy and decision makers, including District Councils' to recognise and provide for renewable electricity generation activities at national, regional and local level. The stated objective of the NPSREG is:

[11] The NPS-REG came into effect on 13 May 2011.

> *"To recognise the national significance of renewable electricity generation activities by providing for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand's electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government's national target for renewable electricity generation."*

The NPS is enabling as it seeks to reduce unnecessary barriers to obtaining resource consent for the development of small and community scale renewable electricity generation projects.

The specific NPS-REG requirements which require inclusion in District Plans are outlined in **Table 3**. Table 3 also assesses the consistency of the Plan with the NPS-REG requirements. However, any compliance within the NPS-REG is unintentional as the Plan pre-dates the NPS-REG.

TABLE 3: COMPARATIVE ANALYSIS OF THE PLAN WITH NPS-REG

NPS-REG KEY REQUIREMENTS	CONSISTENCY WITH REQUIREMENTS
Recognise and provide for the development, operation, maintenance and upgrade of new and existing renewable electricity generation activities.	The Plan provides for renewable electricity generation activities by requiring a resource consent for a discretionary activity in the RZ and a non-complying activity in the LZ and BZ. The Plan provides for activities associated with upgrading, maintaining, operating and replacing existing utilities as a discretionary activity in the RZ and a non-complying activity in the LZ and BZ. The plan does not provide a simplified consent process for minor maintenance of the Lake Coleridge Power Station.
Provide for solar, biomass, tidal, wave, ocean current, hydro, wind, and geothermal generation to the extent applicable to the region or district.	The Plan provides for electricity generation from wind and solar for on-site use only as a permitted activity. Generation for off-site use including for community scale activities is provided for as a discretionary activity. This does not create a barrier for obtaining resource consents but is a higher threshold than for a restricted discretionary activity.
The NPS seeks to reduce unnecessary barriers to obtaining resource consent for the development of small and community scale renewable electricity generation projects.	
Incorporating provisions for small and community –scale renewable electricity generation activities into district plans	
Managing reverse sensitivity effects on renewable electricity generation activities	The Plan includes policies that seek to avoid potential adverse reverse sensitivity effects of activities on the efficient operation development, use and maintenance of established utilities.
Conflict with other matters such as amenity values that needs to be	The Plan identifies outstanding landscapes, outstanding natural features, visual amenity areas and

considered in the development of the district plans.	Wāhi Taonga sites, Wāhi Taonga Management Areas, Mahinga Kai sites and the Silent File Areas and has specific provisions for utilities. However, the Plan does not provide any guidance for managing the tension between protecting significant natural and cultural areas and delivering increased renewable energy.
Enabling identification of renewable electricity generating activities	The Plan is not enabling of investigating opportunities for renewable energy generation. No specific provisions are provided in the Plan for activities associated with the investigation, identification and assessment of potential sites and energy sources for renewable electricity generation by existing and prospective generators. Therefore, the general rules for a utility apply.
Definitions **Renewable electricity generation means** *generation of electricity from solar, wind, hydroelectricity, geothermal, biomass, tidal, wave, or ocean current energy sources.* **Renewable electricity generation activities means** *the construction, operation and maintenance of structures associated with renewable electricity generation. This includes small and community-scale distributed renewable generation activities and the system of electricity conveyance required to convey electricity to the distribution network and/or the national grid and electricity storage technologies associated with renewable electricity.* **Small and community-scale distributed electricity generation means** *renewable electricity generation for the purpose of using electricity on a particular site, or supplying an immediate community, or connecting into the distribution network.*	The Plan does not define 'renewable electricity generation', 'renewable electricity generation activities', or 'small and community-scale distributed electricity generation' which are defined in the NPS-REG.
District plans and territorial authorities need to give effect to Policies A, B, C, D, E, F, G and H of the NPS-REG by incorporating provisions into the Plans within 12 months in order to satisfy the requirements of s55 of the Resource Management Act (Act).	The Plan does not give full effect to the NPS-REG as required by s55 of the Act and the NPS-REG as no further changes were made to the Plan following the NPS-REG.

In summary, while some of the provisions of the Plan are consistent with the requirements of the NPS-REG, this was unintentional as the Plan pre-dates the NPS-REG.

The Plan applies an enabling approach for on-site solar and wind energy generation activities which are permitted in the LZ, BZ and RZ (although on-site wind energy generation is unlikely in the LZ due to cost and adverse effects). No specific provisions are provided in the Plan for activities associated with the investigation, identification and assessment of potential sites and energy sources for renewable electricity generation. However, as these activities will not provide any off-site energy they are assumed to be a permitted utility.

The Plan is less enabling for repairs and minor alterations to be undertaken on the Lake Coleridge Power Station which requires a consent for a discretionary activity. The Plan adopts a more restrictive approach for off-site renewable energy generation as it requires consent for a discretionary activity in the RZ and for a non-complying activity in the LZ and BZ. This is considered to be an appropriate balance between enabling renewable energy and providing the opportunity for consideration and management of any actual and potential adverse effects.

5.6.2 CONSISTENCY WITH THE REGIONAL POLICY STATEMENT

The Canterbury Regional Policy Statement 2013 (CRPS) contains specific objectives and policies regarding energy generation in Chapter 16 – Energy to implement the NPS-REG. **Appendix 4** outlines the objectives and policies that are relevant to renewable energy. The objectives and policies are directive by requiring that renewable electricity generation is recognised, promoted and encouraged throughout Canterbury. The CRPS seeks to enable the upgrade of existing, or development of new electricity generation infrastructure, with a particular emphasis on encouraging the operation, maintenance and upgrade of renewable electricity generation activities and associated infrastructure. The CRPS requires due consideration to be given to the impacts of energy generating activities on character values and visual amenity.

The operative Selwyn District Plan is inconsistent with the CRPS as it does not recognise, promote and encourage renewable electricity generation explicitly. Furthermore, there are no specific objectives, policies and rules relevant to renewable electricity generation activities. The Plan does not provide for small and community scale distributed renewable electricity generation. However, it is noted that electricity generation from solar and wind for on-site use only is permitted in the LZ, RZ and BZ.

5.6.3 DRAFT NATIONAL PLANNING STANDARDS

The draft National Planning Standards (Draft Standards) aim to improve consistency in plan and policy statement structure, format and content. The first set of the Draft Standards is anticipated to be gazetted in April 2019 (Ministry for the Environment, 2018).

The Draft Standards currently include definitions regarding renewable energy generation and do not contain any proposed standardised rules. The Draft Standards require any district plan rule to manage noise emissions consistent with noise measurement methods in the New Zealand Standards which in this case is New Zealand Standard 6808:2010 Acoustics - Wind farm noise. The Plan predates the Draft Standards, which carry little weight as they have yet to be gazetted.

An assessment of the consistency of the Plan with the Draft Standards is included in Table 4.

TABLE 4: DRAFT NATIONAL PLANNING STANDARDS

DEFINITION/REQUIREMENT	COMMENTARY
Small scale renewable electricity generation is defined as not exceeding a power rating of 20kW.	The Plan does not explicitly provide for small scale renewable electricity generation based on power rating.

Infrastructure is defined as follows: has the same meaning as in section 2 of the RMA (as set out in the box below) means— … (d) facilities for the generation of electricity, lines used or intended to be used to convey electricity, and support structures for lines used or intended to be used to convey electricity, excluding facilities, lines, and support structures if a person— (i) uses them in connection with the generation of electricity for the person's use; and (ii) does not use them to generate any electricity for supply to any other person: … (l) anything described as a network utility operation in regulations made for the purposes of the definition of network utility operator in section 166…	The Plan does not define 'infrastructure' but defines 'utility' as including generation, transformation and/or transmission of energy. The Plan defines 'utility building' and 'utility structure'.
Any plan rule should manage an emission of noise consistent with noise measurement methods in the New Zealand Standards, in the context of wind farms being New Zealand Standard 6808:2010 Acoustics - Wind farm noise for measuring.	The Plan includes general noise standards with reference to NZS 6801:1999 Acoustics – Measurement of Environmental Sound. There is no reference to the NZS 6808:2010 Acoustics - Wind farm noise.

5.6.4 ABIILITY TO MANAGE ENVIRONMENTAL EFFECTS

This section assesses the ability of the existing Plan provisions to adequately manage any actual or potential adverse environmental effects for different renewable energy generation types (as identified in section 4.0 of this report) in residential, commercial and rural settings.

Hydroelectricity (including Lake Coleridge and new in-stream/ in-channel generation)

The discretionary activity status of off-site energy generation under Rule 5.1.3 in the RZ enables consideration of all actual and potential environmental effects. The non-complying activity status of off-site energy generation enables full assessment of all environmental effects in the LZ and BZ which may be significant and warrant notification or refusal of applications.

Additional rules apply for setbacks of utility buildings from waterbodies in the RZ (5.1.3) and enable assessment of effects associated with buildings in close proximity to a waterbody. This rule does not apply to the Lake Coleridge Power Station as tail races do not meet the definition of waterbody under the Plan and the rule only relates to rivers listed in Appendix 17 of the Plan. The Rakaia River is not listed in Appendix 17. Therefore, the Plan does not address building setbacks and other works within close proximity to either the tail race or the Rakaia River.

There are no specific assessment matters for considering the tension between protecting the heritage values of buildings at the Lake Coleridge Power Station and ensuring operational efficiency or future expansion of the Power Station.

Wind (including rural industries/farming and on site use)

The enabling framework which permits on-site wind generation in the LZ, BZ and RZ subject to compliance with performance standards is likely to lead to some unintended consequences by permitting adverse amenity effects (visual, noise and overshadowing) in residential areas.

The discretionary activity status for off-site energy generation will enable consideration of all actual and potential environmental effects in the RZ and the non-complying activity status in the LZ and BZ of off-site energy generation enables full assessment of all environmental effects which may be significant and warrant notification or refusal of applications.

The noise effects of utilities are managed by applying the noise standards in the relevant zones including; chapter 10 (LZ Activities); chapter 22 (BZ Activities) of the township section; and chapter 9 (Activities) of the rural volume. This does not require an assessment of noise against NZS 6808:2010 which requires a more comprehensive assessment and is a deficiency in the Plan.

Solar (Solar PV connections for on-site use or for on-site use and connection back into the national grid)

The permitted activity status of on-site solar generation does not allow assessment of the visual and amenity effects of solar panels which do not align with the roof pitch and may cause adverse effects.

The discretionary activity status for off-site energy generation will enable consideration of all actual and potential environmental effects of any larger scale solar regeneration plant (which is considered unlikely) in the RZ. The non-complying activity status of off-site energy generation in the LZ and BZ enables full assessment of all environmental effects which may be significant and warrant notification or refusal of applications.

Sensitive landscapes

In situations where a utility building and utility structure proposed in a sensitive landscape area does not meet the built form standards, a restricted discretionary activity consent is required. In the RZ, where utility buildings do not meet the standards listed in the restricted discretionary activity, applications are assessed as non-complying activity. The matters of discretion are sufficiently comprehensive as they address visual effects from a utility building or structure although the matters for discretion for utility buildings are more comprehensive in comparison to the matters of discretion for utility structures.

5.6.5 RESPONDING TO NGAI TAHU VALUES

Ngāi Tahu have a particular interest in energy generation, distribution, use and the establishment of wind farms and its potential effects on Ngāi Tahu values and associations with the landscape. The Mahaanui Iwi Management Plan 2013 includes a series of relevant objectives and policies that are attached in **Appendix 5.**

Policies (P.17.1 to P17.5 and TAW1.1 to TAW1.5) are considered relevant in terms of electricity generation from renewable energy particularly wind, solar and hydro. Policy 17.3 specifically supports the use of Cultural Impact Assessments (CIA) to assess potential and actual effects of proposals on Ngāi Tahu values for renewable energy generation. Ngā Paetae objectives in section 5.8 Ngā Tūtohu Whenua require cultural landscapes to be recognised and provided for as a planning tool including heritage mapping. The objectives and policies reiterate the importance of consultation with the Rūnanga to address cultural, heritage and landscape values early in the consent stage. The Plan provisions do not have specific reference to requiring CIA's but contains specific policies that seek to ensure any adverse effects of utilities on or near waterbodies, or on

any ecological, heritage, cultural, recreational, aesthetic or amenity values of the waterbody, are avoided, remedied or mitigated.

The Plan recognises the cultural values of rūnanga through specific rules that are triggered when undertaking earthworks associated with utility structures and buildings within Wāhi Taonga Sites, Wāhi Taonga Management Areas, Mahinga Kai Sites and the Silent File Areas. These sites are listed within Appendix E5 in Township and Rural Volumes of the Plan. Non-compliance with the relevant permitted standards requires resource consent as a restricted discretionary with one of the matters of discretion reflecting consultation with the local Rūnanga and Heritage New Zealand.

The Plan contains comprehensive matters of discretion for addressing effects on the sites of significance to Tangata Whenua by taking into account any inappropriate disturbance, damage, destruction, removal or other potential adverse effects on any site of significance within a silent File Area, Wahi Taonga Management Area, and Mahinga Kai sites. The matters of discretion implies consultation with the local Rūnanga and the New Zealand Historic Places Trust Pouhere Taonga. The matters of discretion also give consideration to if any alternatives options are available, positive effects and if any monitoring or review conditions are required.

6.0 BEST PRACTICE REVIEW

6.1 CASE STUDIES

A preliminary review of district and unitary plans confirms that a range of approaches have been applied to enable and manage renewable energy generation across New Zealand. Four operative Unitary and District Plans, which cover a range of different geographic areas and types of renewable energy resources and activities, were selected to provide a representative sample of the type of policy approaches used. The four case studies selected for further analysis were:

- Auckland Unitary Plan (AUP)
- Christchurch District Plan (CDP)
- Far North District Plan (FNDP)
- Proposed Dunedin District Plan (pDDP)

These particular case studies represent second generation District Plans prepared to give effect to the NPS-REG. The exception is the Far North District Plan which is recognised as being one of the more comprehensive first generation District Plans in respect to how it manages renewable energy generation.

The four case studies have been analysed to identify the approach each District or Unitary Plan takes to defining relevant terms, setting the policy framework, and providing rules and a decision-making framework for renewable energy generation, resource consent requirements and performance standards. A summary of the different renewable energy approaches adopted in the four case studies is included in **Appendix 1.**

The following analysis assesses the effectiveness of the four case studies using the following criteria:

- Clear definitions provided for all renewable energy types and renewable energy infrastructure.
- Clear, concise and robust policy and objectives.
- Rules that provide for existing and reasonably anticipated renewable energy generation and manage any associated adverse effects
- Achieve consistency with the NPS-REG.

6.2 DEFINITIONS

6.2.1 OVERVIEW

The definitions of renewable energy related terms included in each district plan vary significantly across the four case studies. The CDP Plan definition of renewable electricity generation (rather than energy) is limited to solar and wind energy sources whereas the FNDP defines renewable energy more holistically to include energy produced from solar, wind, hydro, geothermal, biomass, tidal, wave and ocean current sources. It also defines solar, wind marine, biomass and hydropower energy separately. The AUP and pDDP do not define renewable energy although the AUP includes a definition of a large scale wind farm. The only two district plans that define 'bioenergy' are the FNDP and the pDDP.

The CDP and AUP refer to electricity generation activities rather than broader renewable energy activities. The CDP defines small or community-scale renewable electricity generation activities as renewable electricity generation activities while electricity generated by network utility operators is defined as a utility. The AUP defines electricity generation activities as including large scale windfarms, research and small scale energy

generation including electricity from renewable sources and roof top turbines less than 2.5m diameter and photovoltaic systems. Under the AUP the threshold for large scale windfarms is to be able to convey electricity to a substation for supply to the wholesale electricity market.

The FNDP defines energy generation devices which convert natural resources into energy and includes specific definitions for in-stream hydro generation and solar photovoltaics. It also defines utility scale renewable energy (commercial scale facility) and wind energy facilities as being a cluster of turbines capable of generating more than 500kW of energy.

The proposed pDDP adopts a different approach of categorising renewable energy activities for hydro, solar, wind and biomass into 'on-site' (generated and used on the same site), 'community scale' (micro-generation serving smaller catchment which may be on the grid) and 'regional scale' (exceed the scale thresholds for community scale/on national grid) through a series of definitions some of which include size or capacity thresholds. The scale categories for each renewable energy generation source are grouped into small scale network utilities and large scale network utilities.

Both the AUP and the pDDP define research and exploratory-scale investigations for renewable electricity generation activities.

6.2.2 ASSESSMENT

The NPS-REG includes definitions of renewable electricity generation, renewable energy generation activities, and small and community-scale distributed electricity generation. The only relevant definition included in the Draft Planning Standards is *small scale renewable electricity generation*[12] which is defined differently to the NPS-REG[13]. No single case study provides definitions for all renewable energy types (hydro, wind, solar, geothermal and bioenergy) or all types of renewable energy infrastructure. While a range of definitions have been applied in other district plans ranging from extremely comprehensive to a more minimal approach, it is recommended that consideration is given to 'wrapping up' definitions into higher order definitions. For example, renewable energy can be defined more generally similar to the approach taken in the Victoria Planning Provisions rather than defining each type of renewable energy resource separately. The same approach could apply to renewable energy infrastructure so that all relevant renewable energy resources and types of infrastructure are defined without needing a separate definition for each term. Definitions could be used to refer to the scale of the infrastructure or activity.

6.3 OBJECTIVES AND POLICIES

6.3.1 OVERVIEW

All four case study district plans include objectives and policies addressing either renewable energy (FNDP and pDDP) or electricity generation (AUP and CDP).

The CDP contains a single objective to increase renewable electricity generation activities and corresponding policy which provides for operation and development of utilities which generate electricity through renewable sources and promote small and community scale renewable electricity generation. In contrast the FNDP includes much stronger objectives in section 12.9.3 as it aspires to become one of the most energy self-sufficient local authorities in New Zealand and to enable people in remote and isolated communities to provide for their own energy needs. Objectives in the AUP focus on enabling renewable energy generation. The pDDP also encourages increased local energy generation and

[12] means renewable electricity generation which does not exceed a power rating of 20kW.

[13] means renewable electricity generation for the purpose of using electricity on a particular site, or supplying an immediate community, or connecting into the distribution network.

objectives in the FNDP and PDDP also refer to managing the effects of renewable energy resources.

All four district plans contain policies which encourage development of renewable energy resources particularly in locations where adverse effects on the environment can be appropriately managed. Policy within the FNDP is comprehensive as it encourages domestic and community scale renewable energy use and development and discourages utility scale renewable electricity generation within urban and semi-urban zones and within heritage precincts. It also contains policy on reverse sensitivity effects.

The pDDP contains policy to avoid regional scale energy generation and biomass generators outside rural or industrial zones which is not addressed in other plans. The pDDP is the only case study plan that has a strong policy position on this issue.

6.3.2 ASSESSMENT

The comprehensiveness of the policy approach in the pDDP and FNDP is preferred over the approach in the other two plans. However, further simplification of these objectives and policies would rationalise the overall number of policies. Inclusion of the enabling policy focus in the AUP and the pDDP would ensure consistency with the NPS-REG. Consideration could be given to limiting regional scale energy generation and bioenergy generators outside rural or industrial zones as proposed in the pDDP.

6.4 RULES

6.4.1 OVERVIEW

The four case study district plans provide for permitted, restricted discretionary, discretionary and non-complying activities with the exception of FNDP which does not have non-complying activities. None of the four district plans provide for controlled or prohibited activities.

The rules relevant to renewable electricity/electricity energy generation are listed under the 'utilities' chapters in each of their respective district plans. The rules that apply to renewable electricity generation (REG) activities within sensitive landscape areas are located in different sub-chapters of the AUP unlike in the CDP, FNDP and the pDDP where all of these matters are addressed in the utilities section which applies to renewable energy generation activities.

6.4.2 SITE SUITABILITY INVESTIGATIONS

The four case study district plans provide permitted activity provisions for research and exploratory-scale investigations in some zones subject to meeting activity specific standards and when located outside any sensitive areas managed through overlays. This is a requirement under Policy G of the NPS-REG which enables identification of renewable electricity generation opportunities by existing and prospective generators. Time limits on these temporary activities are included in the CDP.

6.4.3 SMALL-SCALE RENEWABLE ENERGY GENERATION ACTIVITIES

The case study district plans provide for small-scale (domestic-scale/on-site energy generation) renewable electricity generation as permitted activities subject to meeting activity specific standards and built-form standards in relevant zones. Wind turbines are permitted in rural and industrial zones subject to meeting relevant activity and/or performance standards in the CDP and AUP. Other small-scale renewable electricity generation activities are provided for in almost all zones as there are tight controls around built-form standards and they are only permitted for on-site use.

Operation, repair and maintenance of existing network utilities is only provided for in the pDDP and AUP. The AUP and the pDDP do not provide for upgrading any existing network utilities as a permitted activity. Installation, maintenance, operation and upgrade of free-standing renewable energy devices and associated structures in Outstanding Natural Features, Outstanding Landscape Features or Outstanding Landscapes, Heritage Precinct, an Archaeological Site, Historic Building, Site or Object, Site of Cultural Significance to Maori are discretionary activities in the FNDP. Generation of electricity from solar and wind turbines located within sensitive landscape areas triggers NCA status in the CDP.

Hydro and solar panels for on-site energy generation located within sensitive areas are RDA in the pDDP which is less restrictive. Small-scale activities are assessed as discretionary activities in the Outstanding Natural Character and High Natural Character Overlay in the AUP. Non-complying activity status is triggered when small-scale REG activities are located in sensitive landscape areas in the pDDP.

6.4.4 COMMUNITY-SCALE RENEWABLE ENERGY GENERATION ACTIVITIES

The case study district plans provide for community-scale renewable electricity generation as permitted activities subject to meeting activity specific standards and built-form standards in relevant zones. Community-scale activities are generally provided for in rural, industrial and other zones (except residential) for both on-site and off-site use subject to meeting activity and built-form standards. Installation and operation of wind turbines for generation and use of electricity on a site or sites other than in rural or industrial zones are assessed as a restricted discretionary activity in the CDP.

Installation, maintenance, operation and upgrading of existing free standing and community-scale renewable energy activities is only provided for in the FNDP explicitly. Community-scale REG activities trigger restricted discretionary activity status in the FNDP in sensitive landscape areas. Construction, operation, maintenance and upgrade of community scale renewable electricity generation devices and associated structures in Outstanding Natural Features, Outstanding Landscape Features or Outstanding Landscapes, Heritage Precinct, an Archaeological Site, Historic Building, Site or Object, or Site of Cultural Significance to Maori in the FNDP are assessed as restricted discretionary activities. Generation of electricity from solar and wind turbines located within the sensitive landscape areas triggers non-complying activity status in the CDP. The non-complying activity status is triggered in CDP and pDDP for community-scale REG activities.

Community-scale REG activities in residential zones are restricted discretionary activities in the AUP. Community-scale electricity generation facilities that do not comply with permitted activity standards in High Natural Character (HNC) and Outstanding Natural Landscape (ONL) overlays in AUP are assessed as a restricted discretionary activity. Community-scale activities are assessed as discretionary activities in the Outstanding Natural Character and High Natural Character Overlay in the AUP. The AUP contains a less restrictive restricted discretionary activity status for community-scale REG activities when located in sensitive landscapes in comparison with the other three case studies where the activity status is discretionary in most cases and non-complying in some cases.

6.4.5 LARGE-SCALE REG ACTIVITIES

Wind farms and renewable electricity generation or development and use which is distributed off-site are a discretionary activity under the FNDP. Large-scale activities trigger DA status if located in sensitive areas in the FNDP. Discretionary activity status is triggered for solar and wind REG activities that serve more than 20 sites and which are commercial in nature in rural, commercial and industrial zones and if located outside the sensitive areas subject to meeting other relevant activity specific standards in the CDP.

The FNDP and the pDDP are the only two district plans that provide for hydro energy investigation and electricity generation in rural and coastal zones in the FNDP and rural and industrial zones in the pDDP. The non-complying activity (NCA) status is triggered in CDP and pDDP for large-scale REG activities. Non-complying activity status is triggered for large-scale REG activities if they are located in urban environments across the four district plans.

Electricity generation facilities that do not comply with permitted activity standards and that are not otherwise provided for in Outstanding Natural Character in the AUP trigger discretionary activity status. Electricity generation facilities not otherwise provided for in HNC and ONL overlays in the AUP trigger discretionary activity status. Non-complying activity status is triggered when large-scale REG activities are located in sensitive landscape areas in the pDDP. The AUP contains a less restrictive restrictive discretionary activity status for large-scale REG activities when located in sensitive landscapes in comparison with the other three case studies where the activity status is a discretionary in most cases and non-complying in some cases.

6.4.6 OTHER VARIATIONS BETWEEN THE FOUR PLANS

The CDP and the FNDP do not have separate built-form standards within their relevant renewable energy sub-chapters but have incorporated them into the activity specific standards. The performance/built-form standards are listed separately for AUP and pDDP and not incorporated into the activity specific standards. The renewable electricity generation activities and rules in the FNDP does not have listed non-complying activities or trigger non-complying activity status.

In terms of the CDP, compliance with relevant zone noise standards are required only for the installation and operation of equipment for assessing a site for suitability for renewable electricity generation and installation and operation of a wind turbine in Rural or Industrial Zones. Compliance with NZS 6808:2010 (Acoustics – Wind Farm Noise) is required for REG activities that serve more than 20 sites and is commercial in nature in rural zones. Relevant zone noise standards apply to REG activities in the AUP, FNDP and pDDP with no reference to the NZS 6808:2010 (Acoustics – Wind Farm Noise).

On a broader level, the AUP and FNDP appear to have taken the less restrictive approach with most REG activities being either permitted or a restricted discretionary activity.

6.4.7 ASSESSMENT

The approach of retaining all assessment matters for renewable energy in the same chapter used in the CDP, FNDP and the pDDP is considered appropriate for plan useability.

The permitted activity provisions for research and exploratory-scale investigations in some zones subject to meeting activity specific standards and when located outside any sensitive overlays is consistent with the NPS-REG and is an appropriate approach.

The preferred approach to rules is that they relate to the scale of activities and related effects and relate to the sensitivity of locations.

Permitting small-scale (domestic-scale/on-site energy generation) renewable electricity generation and other smaller scale infrastructure subject to meeting activity specific standards and built-form standards in relevant zones is consistent with the enabling intent of the NPS-REG.

Requiring consents for large scale infrastructure, and smaller scale permanent infrastructure, in sensitive landscapes is preferred.

6.4.8 CONSISTENCY WITH NPS- REG

The best practice district plan review confirms that all the examples aim to comply with NPS-REG, although the FNDP predates NPS-REG. In a general sense, the objectives and policies are consistent with the requirements of the NPS-REG such as recognising the national significance of renewable electricity generation activities by incorporating relevant objectives, policies and rules that are consistent with the NPS-REG.

The case study district plans provide small and community-scale activities as permitted activities and activities associated with the investigation, identification and assessment of potential sites and energy sources for renewable electricity generation by existing and prospective generators consistent with the NPS-REG.

Overall, the objectives, policies and rules in the four case studies are consistent with the NPS-REG primarily as they are second generation district plans that were written after the NPS-REG came into effect with the exception of FNDP.

6.5 VICTORIA PLANNING PROVISIONS

The Victoria Planning Provisions (VPP) are a planning standard applied to all 79 Councils' in Victoria, Australia[14]. While there is scope in the VPP for local variation, standard definitions and rules apply to matters such as renewable energy across the State.

The definitions relate to high level terms such as 'renewable energy facility' which applies to renewable energy resources from the sun, wind, ocean, water flows, organic matters and the earth's heat and associated buildings and structures. With the exception of a 'wind energy facility', these terms are not defined any further.

Key objectives relate to facilitating appropriate development of energy supply infrastructure and promoting renewable energy while ensuring appropriate siting and design considerations are met.

Consent requirements permit anemometers (wind measuring devices) for less than 3 years and turbines principally used to supply electricity for domestic or rural use of the land regardless of their scale. Renewable energy facilities and utility installations (including transmitting power) generally require a consent. Wind energy facilities require a consent (including land owners consent of domestic dwellings within 1 kilometre of turbines) and are prohibited in sensitive locations.

A key learning is that having a broad, inclusive definition for renewable energy is a sound policy approach. The VPP approach focuses on the scale of the activity and the significance of effects by permitting temporary wind infrastructure for investigations and renewable energy for domestic or rural use and requiring a consent for larger scale activities with off-site generation.

[14] Australia has state based planning systems which are different in each state or territory with no national standards or national planning legislation.

7.0
CONCLUSIONS AND NEXT STEPS

7.1 SUMMARY OF FINDINGS

A relatively small amount of renewable energy is generated within the Selwyn District with the most significant source being the Lake Coleridge Power Station.

Key future opportunities for renewable energy generation within the Selwyn District are;

- Repairs and operational improvements at Lake Coleridge Power Station for hydroelectricity;
- Small-scale in-stream or in-irrigation channel hydroelectricity generation;
- Wind turbines for on-site use for rural based industries and larger industrial buildings;
- Small-scale wind turbines for on-site use in rural locations;
- Increased solar PV connections for on-site use or for on-site use and connection back into the national grid; and
- Potential for bioenergy (dependent on feasibility).

Commercial wind farms are considered unlikely within the Selwyn District due to the lack of appropriate wind conditions relative to other localities, distance from electricity markets and capital costs. However, given the known effects of wind farms (noise, amenity, landscape, cultural, traffic, ecological), it is important to ensure that the proposed district plan provides a framework to manage the potential effects of commercial wind farms.

The Plan was prepared prior to the NPS-REG. It generally enables renewable energy and provides an appropriate approach of permitting smaller scale on-site energy generation activities with lesser environmental effects and requiring a resource consent for either a discretionary or a non-complying activity for more significant off-site energy generation activities. This approach has not prevented more renewable energy infrastructure from establishing within the District. The cost of establishing renewable energy infrastructure is more likely to have been a deterrent.

The Plan contains some objectives which are consistent with the NPS-REG by default but requires updating to achieve full compliance with the NPS-REG.

The four case studies of renewable energy policy in other district plans provide some valuable insights into developing renewable energy policy within the Selwyn District. For example, the approach of retaining all assessment matters for renewable energy in the same chapter used in the CDP, FNDP and the pDDP is considered appropriate for district plan useability. The approach of permitting small-scale (domestic-scale/on-site energy generation) renewable electricity generation and other smaller scale infrastructure subject to meeting activity specific standards and built-form standards in relevant zones is consistent with the enabling intent of the NPS-REG. The preferred approach to rules is that they relate to the scale of activities and related effects and the sensitivity of locations. The approach of requiring consents for large scale infrastructure, and smaller scale permanent infrastructure in sensitive landscapes and areas of cultural or historic significance is preferred.

7.2 MATTERS TO BE REFLECTED IN PROPOSED SELWYN DISTRICT PLAN

This assessment provides baseline information to assist Council to develop District Plan provisions to enable and manage renewable energy consistent with Part 2 of the RMA and the NPS-REG.

7.2.1 DEFINITIONS

While a range of definitions have been applied in other district plans ranging from extremely comprehensive to a more minimal approach, it is recommended that consideration is given to 'wrapping up' definitions into higher order definitions. For example, renewable energy can be defined more generally, similar to the approach taken in the Victoria Planning Provisions, rather than defining each type of renewable energy resource separately. The same approach could apply to renewable energy infrastructure. Definitions should be consistent with the NPS-REG and take into account the Draft Standards. Although it is noted that the Draft Standards have not been gazetted and may be subject to further change.

7.2.2 MATTERS TO BE INCLUDED IN POLICY AND RULES

This baseline assessment has identified a range of matters that should be reflected in policy and rules to meet the requirements of Part 2 of the Act, the NPS-REG, the Draft Planning Standards and best practice. Inclusion of a 'small scale renewable electricity generation' definition in the NPS-REG and Draft Standards also creates the potential for a framework of policies and rules based on scale of infrastructure. This approach is consistent with the NPS-REG enabling approach for renewable energy generation and would simplify interpretation of policies and rules.

Matters which should be reflected in policy and rules, and considered further in the Preferred Option Report phase, are summarised below.

GENERAL

- Enabling policy for the different types and varying scales of renewable energy generation activities and infrastructure where they are unlikely to adversely affect the environment.
- Policy encouraging regional scale renewable energy generation activities and infrastructure in rural or industrial zones (as proposed in the pDDP) and limiting it elsewhere.
- Rules managing the scale and effects of activities and infrastructure in sensitive landscapes.
- Rules managing reverse sensitivity effects of other activities on existing renewable energy generation.

HYDRO

- Enabling policy to support the maintenance and minor repair of infrastructure and heritage buildings at the Lake Coleridge Power Station.
- Enabling policy for small scale in-stream or in-channel hydroelectricity generation.
- Rules managing more significant upgrades to Lake Coleridge Power Station (new infrastructure and works).
- Rules managing reverse sensitivity effects of forestry on the continued operation of the Lake Coleridge Power Station.

BIOENERGY

- Policy managing bioenergy generation activities, and potential effects such as infrastructure, traffic, earthworks and dust which fall under district council functions.
- Rules to manage potential effects of larger scale bioenergy activities and infrastructure.

WIND

- Enabling policy for temporary wind energy resource monitoring activities and infrastructure.
- Enabling policy for on-site wind energy generation activities and infrastructure in rural and industrial locations provided they are not in areas with landscape, iwi or historic heritage significance.
- Policy limiting wind generation activities and infrastructure in residential or commercial areas.
- Policy managing potential adverse effects of commercial wind farms.
- Rules enabling wind turbines in industrial areas with appropriate standards (including noise, setbacks from zone boundaries).
- Rules managing potential adverse effects of commercial wind far activities and infrastructure as a precautionary measure in case they are sought in the future.
- Rules/performance standards requiring compliance with New Zealand Standard 6808:2010 Acoustics - Wind farm noise.

SOLAR

- Enabling policy for solar panels for on-site and on-site/ grid use where potential environmental effects are minor.
- Rules/performance standards to avoid adverse amenity effects in residential areas (e.g. reflectivity and alignment of panel with roof).

Matters of discretion could relate to managing the following environmental effects:

- Visual (scale of buildings, infrastructure, reflectivity and overhead wires)
- Landscape (ridgelines, sensitive landscapes)
- Noise from wind turbines and consistency with NZS6608:2010
- Ecological values (removal of native vegetation and effect on habitat)
- Construction (earthworks, noise and traffic)
- Overshadowing (from large structures)
- Heritage (Lake Coleridge Power Station)
- Cultural (Ngai Tahu values and sites of cultural significance)

7.3 NEXT STEPS

Recommended next steps on the Energy Generation including Small Scale Energy Generation topic include:

- Consultation with Mahaanui Kurataiao and Ecan to inform the Preferred Option Report.
- Discussion with topic leads on interdependencies with other topics need to be addressed and managed.
- Prepare Preferred Option Report which identifies and assesses options for enabling and managing energy generation in the district and make recommendations for the content of objectives and policies and the scope of proposed rules.

8.0 LIMITATIONS

8.1 GENERAL

This report is for the use by Selwyn District Council only, and should not be used or relied upon by any other person or entity or for any other project.

This report has been prepared for the particular project described to us and its extent is limited to the scope of work agreed between the client and Harrison Grierson Consultants Limited. No responsibility is accepted by Harrison Grierson Consultants Limited or its directors, servants, agents, staff or employees for the accuracy of information provided by third parties and/or the use of any part of this report in any other context or for any other purposes.

9.0
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Various resource consents granted in the Selwyn District Council in relation to utilities

APPENDIX 1
OVERVIEW OF OTHER PLAN APPROACHES

SELWYN DISTRICT PLAN REVIEW

	CHRISTCHURCH DISTRICT PLAN	FAR NORTH DISTRICT PLAN	AUCKLAND UNITARY PLAN (OPERATIVE IN PART 15 NOVEMBER 2016)	PROPOSED DUNEDIN DISTRICT PLAN
Defined terms	• Renewable electricity generation • Renewable electricity generation activities • Utility	• Bio energy • Domestic scale renewable energy devices • Distributed generation • Energy generating structure • Energy generation device • Hydro power • In-stream hydro generation. • Marine energy • Renewable electricity generation device • Renewable energy • Solar energy • Solar photovoltaics • Utility scale renewable energy • Wind energy • Wind energy facility	• Community scale electricity generation • Electricity generation activities • Large-scale wind farm • Research and exploratory-scale investigations for renewable electricity generation activities • Small scale electricity generation	• Biomass Generators - On-site Energy Generation • Biomass Generators - Stand-alone • Community Scale Energy Generation • Energy Resource Investigation Devices • Hydro Generators • Hydro Generators - Community Scale • Hydro Generators - On-site Energy Generation • Hydro Generators - Regional Scale • Large Scale Network Utilities • Network Utilities • On-site Energy Generation • Regional Scale Energy Generation • Small Scale Network Utilities • Solar Panels - Community Scale • Solar Panels - On-site Energy Generation • Solar Panels - Regional Scale • Wind Generators - Community Scale • Wind Generators - On-site Energy Generation • Wind Generators - Regional Scale
Objectives	**11.2.1 Objective - Provision of utilities** a) Effective and efficient provision of utilities in a manner that is integrated with land use and development in the District. b) The continued operation, maintenance, upgrade and development of utilities throughout the District. c) An increase in renewable electricity generation activities.	• 12.9.3.1 To become among the most energy self-sufficient local authorities in New Zealand through encouraging and promoting the efficient use of energy and the greater use and development of renewable energy while having appropriate regard to the special values of the District identified in the Plan. • 12.9.3.2 To recognise that some utility scale renewable energy resources of the District are restricted to specific locations and to encourage the use and development of these where positive effects can be optimised and adverse effects can be appropriately managed, through avoidance, remediation or mitigation as appropriate. • 12.9.3.3 To enable people, especially the remote and isolated communities of the District, to provide for their own energy needs in a	**(Regional Policy Statement)** **B3.4.1. Objectives** • (1) Existing and new renewable electricity generation is provided for. • (2) Energy efficiency and conservation is promoted. **E26.2. Network utilities and electricity generation – All zones and roads** **E26.2.1. Objectives [rp/dp]** • (8) The use and development of renewable electricity generation is enabled……	**Objective 2.2.2: Energy resilience** • Dunedin is well equipped to manage and adapt to any changes that may result from volatile energy markets or diminishing energy sources by having: • increased local electricity generation; • reduced reliance on private motor cars for transportation; and • increased capacity for local food production. **Objective 5.2.1** • Network utilities activities, including renewable energy generation activities, are able to operate efficiently and effectively, while minimising, as far as practicable, any adverse effects on the amenity and character of the zone; and, where located in an overlay zone, scheduled site, or mapped area,

	CHRISTCHURCH DISTRICT PLAN	FAR NORTH DISTRICT PLAN	AUCKLAND UNITARY PLAN (OPERATIVE IN PART 15 NOVEMBER 2016)	PROPOSED DUNEDIN DISTRICT PLAN
		sustainable manner, including through the use and development of renewable energy resources. • 12.9.3.4 To encourage and promote renewable energy use and development proposals that provide significant local community benefit as well as regional and/or national benefit. • 12.9.3.5 To achieve an integrated approach in terms of the responsibilities of the Far North District and Northland Regional Councils' management of renewable energy generation and energy efficiency. • 12.9.3.6 To ensure that the people of the Far North are able to identify and plan for a sustainable energy future within their communities. • 12.9.3.7 To manage activities that adversely affect renewable energy infrastructure including reverse sensitivity effects. • 12.9.3.8 To ensure actual and potential adverse effects associated with renewable energy and energy efficiency are avoided, remedied or mitigated.		meeting the relevant objectives and policies for those areas.
Policies	**11.2.1.3 – Renewable energy** 11.2.1.3 Policy - Renewable electricity generation a) Provide for the operation, maintenance, upgrade and development of utilities that derive or generate electricity through renewable sources by: i. recognising the benefits to people and communities of renewable electricity generation; ii. acknowledging the implications and constraints associated with renewable electricity generation activities, including locational, operational and technical matters; iii. promoting small and community scale renewable electricity generation activities, such as from solar and wind energy; iv. reducing the use of finite resources for the generation of electricity; and	• 12.9.4.1 That the efficient use of energy and the greater use and development of renewable energy resources, including electricity generation and transmission, and the operation, maintenance and upgrading of existing and future renewable energy activities, is promoted, particularly where there is potential for national, regional or local community benefits, including increased security of supply and reduced greenhouse gas emissions. • 12.9.4.2 That renewable energy use and development is facilitated in locations where significant adverse effects on the environment can be appropriately avoided, remedied or mitigated while also having regard to the local, regional and national benefits and positive effects (particularly any local benefits) associated with the proposed development. • 12.9.4.3 That in assessing any specific renewable energy development proposal, the Council will consider the appropriateness of the proposal in terms of location, scale, and type of	**(Regional Policy Statement)** **B3.4.2. Policies** 1. Recognise the national, regional and local benefits to be derived from maintaining or increasing the level of electricity generated from renewable energy sources. 2. Provide for renewable electricity generation activities to occur at different scales and from different sources to reduce reliance on non-renewable energy sources. 3. Recognise the locational constraints in the development of large-scale renewable electricity generation activities. 4. Provide for the development, operation and maintenance of small-scale renewable electricity generation, provided that adverse effects on the environment are avoided, remedied or mitigated. **E26.2. Network utilities and electricity generation – All zones and roads** **E26.2.2. Policies [rp/dp]**	**Policy 2.2.2.3** • Enable renewable energy generation through policies and rules that: • enable renewable on-site energy generation; and • support the development of small and large scale renewable energy generation in appropriate locations. **Policy 2.2.5.1** • Encourage domestic scale renewable energy generation through rules that enable these utilities. **Policy 5.2.1.1** • Encourage the use and development of renewable energy generation. **Policy 5.2.1.5** • Require network utilities structures to be of a scale, size, design and location that enables the provision of network utilities while: a) minimising, as far as practicable, adverse effects on the amenity and character of the zone;

	CHRISTCHURCH DISTRICT PLAN	FAR NORTH DISTRICT PLAN	AUCKLAND UNITARY PLAN (OPERATIVE IN PART 15 NOVEMBER 2016)	PROPOSED DUNEDIN DISTRICT PLAN
	v. recognising the benefits of reducing greenhouse gas emissions that contribute to climate change.	proposal and in terms of the effects of any supporting infrastructure. • 12.9.4.4 That the Council discourages the location of activities associated with utility scale renewable electricity generation within areas identified on the District Plan Resource Maps; within urban and semi-urban zones; and within heritage precincts. • 12.9.4.5 That the Council encourages early consultation and will work supportively with applicants in the planning stages for utility scale developments with the aim of identifying broader social and community benefits that can be considered early in the proposal development. • 12.9.4.6 That domestic and community scale renewable energy use and development, including electricity generation, is encouraged throughout the District where there will be significant local benefits and the adverse effects are avoided, remedied or mitigated. • 12.9.4.7 That subdivision and land use activities, undertaken in terms of Chapter 13 of the District Plan avoid, remedy or mitigate adverse effects on the efficient operation of consented or lawfully established renewable electricity generation activities and their supporting infrastructure. • 12.9.4.8 That the Council encourages early engagement with the community, including Maori in the planning stages for energy developments with the aim of identifying community energy goals and objectives and any potential effects on Maori sacred sites and mauri around sites of significance to Maori. • 12.9.4.9 That the technical and operational requirements for locating utility scale renewable energy electricity generation facilities and associated transmission works are recognised including by encouraging a rural location where appropriate.	New technologies (11) Provide flexibility for infrastructure operators to use new technological advances that: • improve access to, and efficient use of services; • allow for the re-use of redundant services and structures where appropriate; • result in environmental benefits and enhancements; and • utilise renewable sources. (12) Renewable electricity generation Provide for renewable electricity generation activities to occur at different scales and from different sources, including small and community-scale renewable electricity generation activities...	b) maintaining a high level of pedestrian amenity in pedestrian street frontages. **Policy 5.2.1.10** • Avoid regional scale energy generation and biomass generators - stand-alone outside the rural or industrial zones unless there will be no material adverse effects on the amenity of surrounding area. **Policy 5.2.1.11** • Only allow network utility structures - large scale, regional scale energy generation in the rural zones, network utilities poles and masts - small scale (other than in the rural, rural residential or industrial zones), community scale energy generation, biomass generators - stand-alone, and biomass energy generation on-site energy generation and energy resource investigation devices (other than in the rural and industrial zones) where the activity is designed and located to avoid any significant adverse effects and minimise adverse effects, as far as practicable, including: a) effects on visual amenity and the character of the zone in which the activity is located; and b) effects on the amenity of any surrounding residential activities.
Permitted activities	• Rule 11.6.1 (P1) - Installation and operation of equipment for assessing a site for suitability for renewable electricity generation subject to meeting activity specific standards.	• Rule 12.9.6.1.1 - Domestic scale renewable energy devices • Rule 12.9.6.1.2 - In-stream hydro or ocean energy investigation and electricity generation in Rural Production, General Coastal, Conservation, Rural Living or Coastal Living	**E26.2.3. Activity table** • (A59) Small-scale electricity generation in all Zones except as below * for Roads, unformed roads and the Strategic Transport. * solar electricity generation which is ancillary to network utilities located in roads and	• Rule 5.3.2 - Wind, hydro, solar panels on-site energy generators are permitted in Rural, Industrial and all other zones subject to meeting relevant performance standards. • Rule 5.3.2 - Hydro generators community scale, energy resource investigation devices and

	CHRISTCHURCH DISTRICT PLAN	FAR NORTH DISTRICT PLAN	AUCKLAND UNITARY PLAN (OPERATIVE IN PART 15 NOVEMBER 2016)	PROPOSED DUNEDIN DISTRICT PLAN
	• Rule 11.6.1 (P2) - Installation and operation of solar cells or array of cells or the generation and use of electricity subject to meeting activity specific standards • Rule 11.6.1 (P3) - Substations, transformers, or buildings ancillary to electricity generation equipment subject to meeting activity specific standards. • Rule 11.6.1 (P5) - Installation and operation of a wind turbine for the generation and use of electricity on a site or sites in Rural or Industrial Zones subject to meeting activity specific standards.	Zones if it complies with the permitted activity standards set out in Part 2 and Part 3 of the Plan or set out in the rules for permitted activities. • Rule 12.9.6.1.4 - Installation, maintenance, operation and upgrade of free standing renewable energy devices and associated structures excluding those associated with in-stream hydro or ocean investigation or electricity generation in Rural Production, Rural Living, General Coastal or Coastal Living Zone if it complies with the permitted activity standards set out in Part 2 and Part 3 of the Plan or set out in the rules for permitted activities. • Rule 12.9.6.1.5 - construction, operation, maintenance and upgrade of community scale renewable electricity generation device(s) and associated structures in Rural Production Zone or General Coastal Zone if it complies with the permitted activity standards set out in Part 2 and Part 3 of the Plan or set out in the rules for permitted activities	unformed roads and Strategic Transport Corridor Zone • (A60)Community-scale electricity generation in rural zones, future urban zone and special purpose- Quarry Zone, coastal- Marina Zone (land) and Coastal- Minor Port Zone (land), Industrial Zones and the Business- General Business Zone. • (A60) Community-scale solar electricity generation in Residential zones, Special Purpose – Māori Purpose Zone and Special Purpose – School Zone, Centres zones, Business – Mixed Use Zone, Special Purpose – Airports and Airfields Zone, Special Purpose – Major Recreation Facility Zone, Special Purpose – Healthcare Facility and Hospital Zone, Business – Business Park Zone and Special Purpose – Tertiary Education Zone, Open space zones and the Special Purpose – Cemetery Zone • (A62)Research and exploratory scale investigations for renewable electricity generation activities in Rural Zones, Future Urban Zones and Special Purpose- Quarry Zone, Open space zones and the Special Purpose – Cemetery Zone • (A64)Electricity storage facility that is not a minor utility structure Rural Zones, Future Urban Zones and Special Purpose- Quarry Zone and coastal- Marina Zone (land), Coastal- Minor Port Zone (land), Industrial Zones and the Business- General Business Zone.	biomass generators onsite energy generation in Rural and Industrial Zone subject to meeting relevant performance standards. • Rule 5.3.2.3- Operation, repair and maintenance of existing network utilities in all zones subject to meeting light spill performance standard.
Restricted discretionary	• Rule 11.6.3 (RD4) - Installation and operation of a wind turbine for the generation and use of electricity on a site or sites other than in Rural or Industrial Zones that meet the activity specific standards • Rule 11.6.6.3 (RD1-RD4, RD5-RD6 & RD8) - Permitted activities that do not meet some or all of the activity specific standards • Rule 11.6.6.3 (RD7) - Installation and operation of a utility and associated pipes and structures for the generation of energy using waste products.	• Rule 12.9.6.2 (a) - Non-compliance with the permitted activity standards are assessed as a Restricted Discretionary Activity.	**E26.2.3. Activity table** • (A60) Community-scale electricity generation in Residential zones, Special Purpose – Māori Purpose Zone and Special Purpose – School Zone, Centres zones, Business – Mixed Use Zone, Special Purpose – Airports and Airfields Zone, Special Purpose – Major Recreation Facility Zone, Special Purpose – Healthcare Facility and Hospital Zone, Business – Business Park Zone and Special Purpose – Tertiary Education Zone, Open space zones and the Special Purpose – Cemetery Zone * solar electricity generation	• Rule 5.3.2 - Hydro generators and solar panels on--site energy generation located within SNL, NCC, ONL, ASCV, SHS, and HP. • Rule 5.3.2 - Community scale solar panels and wind generators are a restricted discretionary activity located within the rural and industrial zones subject to compliance with relevant performance standards and if located outside the overlays. • Rule 5.3.2 - Energy resource investigation devices and Biomass generators onsite energy generation are a restricted discretionary activity if located outside the rural and industrial zones subject to compliance with relevant performance standards and if located within SNL, NCC, ONL, ASCV, SHS, HP.

	CHRISTCHURCH DISTRICT PLAN	FAR NORTH DISTRICT PLAN	AUCKLAND UNITARY PLAN (OPERATIVE IN PART 15 NOVEMBER 2016)	PROPOSED DUNEDIN DISTRICT PLAN
			• (A61) Large scale wind farms in rural zones, future urban zone and special purpose- Quarry Zone, Industrial Zones and the Business- General Business Zone. • (A64) Electricity storage facility that is not a minor utility structure in Roads, unformed roads and the Strategic Transport Corridor Zone, Residential zones, Special Purpose – Māori Purpose Zone and Special Purpose – School Zone, Centres zones, Business – Mixed Use Zone, Special Purpose – Airports and Airfields Zone, Special Purpose – Major Recreation Facility Zone, Special Purpose – Healthcare Facility and Hospital Zone, Business – Business Park Zone and Special Purpose – Tertiary Education Zone, Open space zones and the Special Purpose – Cemetery Zone. **Table E26.13.3.1 Activity table** • (A192) Electricity generation facilities that do not comply with permitted activity standards in High Natural Character (HNC) and Outstanding Natural Landscape (ONL) overlays in AUP.	
Discretionary	• Rule 11.6.4 (D1 & D2) - Non-compliance with activity specific standard in terms of being ancillary to the principal use of the site or if supplying the electricity generated to more than 20 residential units and or commercial or industrial tenancies. Compliance with other activity specific standards is necessary. • Rule 11.6.4 (D3) - Non-renewable electricity generated in Industrial Zones subject to complying with relevant Zone and General Noise standards.	• Rule 12.9.6.3.1 - Any wind energy facility (wind farm) • Construction, maintenance, operation and upgrade of any wind energy facility (wind farm), including transmission to the national grid or local distribution network, is a discretionary activity. • Rule 12.9.6.3.2 - Any other renewable electricity generation or renewable energy development and use activity • The construction, operation and maintenance of any other renewable electricity generation or renewable energy use and development activity not meeting the standards for permitted or restricted discretionary activities as set out under Rules 12.9.6.1 and 12.9.6.2 or any activity not otherwise provided for elsewhere in the plan is a discretionary activity.	**E26.2.3. Activity table** • (A61) Large scale wind farms in Coastal – Marina Zone (land) and Coastal – Minor Port Zone (land), Centres zones, Business – Mixed Use Zone, Special Purpose – Airports and Airfields Zone, Special Purpose – Major Recreation Facility Zone, Special Purpose – Healthcare Facility and Hospital Zone, Business – Business Park Zone and Special Purpose – Tertiary Education Zone. • (A62) Research and exploratory scale investigations for renewable electricity generation activities in Roads, unformed roads and the Strategic Transport Corridor Zone • (A63) Other electricity generating facilities in Rural zones, Future Urban Zone and Special Purpose – Quarry Zone, Coastal – Marina Zone (land) and Coastal – Minor Port Zone (land), Industrial zones and the Business – General Business Zone, Centres zones, Business – Mixed Use Zone, Special Purpose – Airports and Airfields Zone, Special Purpose – Major	• Rule 5.3.2 - solar panels and hydro generators at community scale are discretionary activity if located within SNL, NCC, ONL, ASCV, SHS, HP. • Rule 5.3.2 - Wind, hydro, solar panels at regional scale and stand-alone biomass generators are discretionary activity if located within Rural and Industrial Zone and not subject to any overlays. • Rule 5.3.2 – Solar panels and hydro at community scale and stand-alone biomass generators are discretionary activity if located within Rural and Industrial Zone and not subject to any overlays.

	CHRISTCHURCH DISTRICT PLAN	FAR NORTH DISTRICT PLAN	AUCKLAND UNITARY PLAN (OPERATIVE IN PART 15 NOVEMBER 2016)	PROPOSED DUNEDIN DISTRICT PLAN
			Recreation Facility Zone, Special Purpose – Healthcare Facility and Hospital Zone, Business – Business Park Zone and Special Purpose – Tertiary Education Zone. • **E26.13.3.1. Activity table** • (A193) Network utilities and electricity generation facilities not otherwise provided for in HNC and ONL overlays.	
Non-complying	• Rule 11.6.5 (NC1) - Any activity listed in Rule 11.6.1 P2 that does not meet activity specific standard (a) and is not provided for in Rule 11.6.4 D1. (Installation and operation of a solar cell or array of cells for the generation and use of electricity if located in ONL, ONF, SF, RAL, Area of Outstanding, or High and Very High, Natural Character in the Coastal Environment, dripline of significant tree, heritage item or heritage setting). • Rule 11.6.5 (NC2) - Any activity listed in Rule 11.6.1 P5 that does not meet activity specific standard (a) and is not provided for in Rule 11.6.4 D2. (Installation and operation of a wind turbine for the generation and use of electricity on a site or sites in Rural or Industrial Zones if located in ONL, ONF, SF, RAL, Area of Outstanding, or High and Very High, Natural Character in the Coastal Environment, dripline of significant tree, heritage item or heritage setting). • Rule 11.6.5 (NC3) - Non-renewable electricity generation activities not provided for in Rule 11.6.4 D3.	• There are no non-complying activities.	**E26.2.3. Activity table** • (A61) Large scale wind farms and other electricity generating facilities in Residential, Special Purpose-Maori, Special Purpose School Zone, Open space zones and Special Purpose-Cemetery Zone. • (A63) Other electricity generating facilities in Roads, unformed roads and the Strategic Transport Corridor Zone, Residential zones, Special Purpose – Māori Purpose Zone and Special Purpose – School Zone Open space zones and the Special Purpose- Cemetery Zone. **E26.13.3.1. Activity table** • (A192) Network utilities and electricity generation facilities that do not comply with permitted activity standards in E26.13.5.1 in Outstanding Natural Character. • (A193) Network utilities and electricity generation facilities not otherwise provided for in Outstanding Natural Character.	• Rule 5.3.2 - Wind, hydro, solar panels at on-site energy generators scale; community scale and regional scale are non-complying if located within the Outstanding Natural Feature, High Natural Coastal Character and Outstanding Natural Coastal Character Overlay Zones. • Rule 5.3.2 - Wind generators at community scale; Wind, hydro, solar panels at regional scale; and stand-alone biomass generators are non-complying if located within the Significant Natural Landscape, Natural Coastal Character and Outstanding Natural Landscape Overlay Zones and Scheduled Area of Significant Conservation Value, Scheduled Heritage Site and Heritage precinct. • Rule 5.3.2 - Wind, hydro, solar panels at regional scale, and stand-alone biomass generators are non-complying if located outside Rural and Industrial Zone.
Prohibited	• There are no prohibited activities.	• There are no prohibited activities.	• There are no prohibited activities.	• There are no prohibited activities.

APPENDIX 2
SELWYN DISTRICT PLAN OBJECTIVES AND POLICIES

APPENDIX 2: SELWYN DISTRICT PLAN

TABLE 1: OBJECTIVES AND POLICIES	
RURAL VOLUME- UTILITIES	
Objective B2.2.1	Utilities are recognised as essential tools for people's economic and social well-being, and to mitigate effects of other activities, on the environment.
Objective B2.2.2	The provision of utilities where any adverse effects on the environment and on people's health, safety and wellbeing is managed having regard to the scale, appearance, location and operational requirements of utilities.
Policy B2.2.3	Avoid potential reverse sensitivity effects of activities on the efficient operation development, use and maintenance of established utilities.
Policy B2.2.5(a)	Avoid siting utility structures or buildings on hilltops in the margins of lakes or rivers or in areas identified as outstanding natural features and landscapes, sites with special cultural values (Silent File Areas, Wāhi Taonga Sites and Management Areas or Mahinga Kai Sites) or Heritage Sites in the Plan, unless operational necessity makes this impractical.
Policy B2.2.5(b)	Where not practical mitigate any adverse effects of the utility, and of any access road or ancillary features, on the landscape values of the area.
Policy B2.2.6	Require utility structures to be made of low reflective materials.
Policy B2.2.7	Encourage the co-siting of utilities, where practical.
Policy B2.2.8	Ensure utilities located in areas subject to flooding or slips, do not create or exacerbate natural hazards.
Policy B2.2.9	Encourage utilities located in road reserves to be installed, maintained and replaced with minimal adverse effects on traffic safety or flow.
Policy B2.2.10	Enable the provision of utility networks that serve extensive areas to be located in rural areas commensurate with operational requirements.

TABLE 2: OBJECTIVES AND POLICIES	
TOWNSHIP VOLUME- UTILITIES	
Objective B2.2.2	Efficient use of utilities is promoted.
Objective B2.2.3	The provision of utilities where any adverse effects on the receiving environment and on people's health, safety and wellbeing is managed having regard to the scale, appearance, location and operational requirements of the facilities.
Policy B2.2.4	Ensure provision is made for the ongoing maintenance and repair of utilities which do not vest in the Council, and that the users of these utilities are informed of any responsibility they have for ongoing maintenance or repair.
Policy B2.2.5	Avoid potential 'reverse sensitivity' effects of activities on the efficient development, use and maintenance of utilities.
Policy B2.2.7	Ensure any adverse effects of utilities on or near waterbodies, or on any ecological, heritage, cultural, recreational, aesthetic or amenity values of the waterbody, are avoided, remedied or mitigated.
Policy B2.2.8	Require utilities located in areas identified in the District Plan as areas likely to be subject to natural hazards, to be designed and sited considering possible effects of the potential natural hazard.

APPENDIX 3
SELWYN DISTRICT PLAN RULES

PART C

5 RURAL RULES - UTILITIES

Notes

1. The undergrounding or ducting of any utility is permitted subject to compliance with Rule 1- Earthworks, except where the provisions of Rule 1.6 (Earthworks and Protected Trees) apply.

2. The Rules in the Rural Volume of this Plan are applicable to activities generally, including utilities. However, the rules under Rule 3 Buildings, Rule 4 Roading and Rule 9.4 Scale of Non-Residential and Non-Rural Activities do not apply to utilities, except the following;

   Rule 3 Buildings

   - Rule 3.15.1 Relocated Buildings
   - Rule 3.9.1.1 Access and Parking
   - Rule 3.13.1.2 Line of sight – railway crossings

   Rule 4 Roading

   - Rules 4.5.1.2 – 4.5.1.5 Roads, Accessways and Vehicular Crossings.
   - Rules 4.6 Parking
   - Rule 4.1.1 Outstanding Landscapes

3. Work on utilities which are undertaken by requiring authorities under designations are not subject to the rules in this Plan.

4. All utility buildings and structures in the Porters Ski and Recreation Area shall be exempt from compliance with these rules.

5. PERMITTED ACTIVITIES do not require a resource consent. OTHER ACTIVITIES do require a resource consent.

6. Development contributions under the LTP Development Contribution Policy will be taken where network infrastructure, community infrastructure or reserves have to be constructed or expanded as a direct result of growth from development.

5.1 UTILITIES — ACTIVITIES

Permitted Activities — Utilities – Activities

The following existing utilities shall be permitted activities:

5.1.1 Upgrading, maintenance, operation and replacement of existing utilities shall be permitted and shall not be subject to compliance with any other performance standards, conditions or rules in this Plan provided that the effects of such shall be the same or similar in character and scale to those which existed before such upgrading, maintenance or replacement activities commenced. For the avoidance of doubt, the following activities are permitted:

5.1.1.1 The replacement of support structure cross arms;

5.1.1.2 The reconductoring or replacement of lines;

5.1.1.3 The resagging of conductors or lines;

5.1.1.4 The addition of longer or more efficient insulators or mountings;

5.1.1.5 The addition of earth wires which may contain telecommunication lines, earthpeaks and lighting rods;

5.1.1.6 The clearance and trimming of vegetation under lines or structures necessary to maintain security of electricity supply and telecommunication;

5.1.1.7 Pole replacement;

5.1.1.8 Where an existing electricity distribution line requires upgrading to improve the reliability of supply, the addition of one support structure cross arms;

5.1.1.9 The substitution of low voltage (400 Volts) electricity distribution lines with Aerial Bundled Cable provided that the overall diameter of the bundle shall not exceed 40 mm;

5.1.1.10 An increase in the voltage of a line, but only where the line was originally installed to operate at a higher voltage, but has been operating at a reduced voltage.

5.1.2 Any utility which meets the following provisions shall be a permitted activity:

5.1.2.1 Any utility which emits electromagnetic radiation shall meet the following conditions:

(a) Exposures shall comply with NZS 2772.1:1999 Radio Frequency Fields Part 1: Maximum exposure levels 3kHz–300 GHz (“the New Zealand Standard”).

(b) Prior to commencing any radiofrequency emissions, the following shall be sent to and received by the Selwyn District Council:

(i) Written notice of the location of the facility or proposed facility; and

(ii) A report prepared by a radio engineer/technician or physical scientist containing a prediction or whether the New Zealand Standard will be complied with (note – this requirement shall not apply to the holder of an amateur radio licence).

(c) If the report provided to the Council under condition 5.1.2.1(b)(ii) predicts that emissions will exceed 25% of the exposure limit set for the general public in the New Zealand Standard, then within 3 months of radiofrequency emissions commencing, a report from National Radiation Laboratory (or Selwyn District Council, being an appropriately qualified organisation specifically identified in this rule), certifying compliance with the New Zealand Standard, based on measurements at the site, shall be provided to the Selwyn District Council.

5.1.2.2 Any power frequency electric and magnetic fields created by a utility do not exceed 100 micro tesla and 5kV/m in areas which are accessible to the public. Note: Electric and magnetic fields are measured and assessed in accordance with the International Commission on Non Ionising Radiation Protection Guidelines.

5.1.2.3 Any transformer, line or wire does not exceed a voltage of 110kV or a capacity of 100 MVA per circuit.

5.1.2.4 The utility is not used for the generation of energy, apart from the generation of energy for use on the same site, or to enable continued supply during emergencies, maintenance or repairs. (This rule does not apply to solar, wind or petroleum based powered generators used to generate energy for use only on the

site on which they are located).

5.1.2.5 Open channels or waterbodies used to convey water, are limited to:

(a) Maintenance of existing drains and stock water races.

(b) Construction of new channels for drainage or irrigation purposes on any individual property which serve only that property.

5.1.2.6 Any pipe used for distribution of gas (manufactured or natural) does not exceed a gauge pressure of 2,000 kilopascals, including household connections and compressors.

Discretionary Activities — Utilities – Activities

5.1.3 Any activity which does not comply with Rules 5.1.2.2–5.1.2.6 shall be a discretionary activity.

Non-Complying Activities — Utilities – Activities

5.1.4 Any activity which does not comply with Rule 5.1.2.1 shall be a non-complying activity.

5.2 HEIGHT AND SETBACKS – UTILITY BUILDINGS

Permitted Activities — Height and Setbacks – Utility Buildings

5.2.1 Erecting any utility building, or any addition or alterations to, or modification or demolition of any utility building, if all of the following conditions are met:

5.2.1.1 The height of the utility building shall not exceed 12 metres.

For Rule 5.2.1, the height of any utility building shall be measured from ground level at the base of the utility building, to the highest point on the building, but excluding any chimney, mast, aerial, or other structure which is attached to the outside of the utility building.

5.2.1.2 The utility building is set back a minimum distance of 10 metres from a strategic road, 5 metres from any other road, and 1 m from any property boundary.

5.2.1.3 The utility building is positioned so that it complies with the recession plane angles in Part E, Appendix 16.

Discretionary Activities — Height and Setbacks – Utility Buildings

5.2.2 Any utility building which does not comply with Rule 5.2.1 shall be discretionary activity.

5.3 HEIGHT – UTILITY STRUCTURES

Permitted Activities — Height – Utility Structures

5.3.1 Any utility structure which complies with all of the following conditions shall be a permitted activity:

5.3.1.1 The height of the utility structure shall not exceed 25m;

5.3.1.2 Any pole or mast shall not exceed 500mm in diameter beyond a height of 6m above ground level.

5.3.1.3 If any pole or mast exceeds 500mm in diameter beyond a height of 6m above ground level, it shall comply with the recession planes in Part E, Appendix 16.

(For the avoidance of doubt, 5.3.1.2 and 5.3.1.3 do not apply to cross arms or antenna, except dish antenna);

5.3.1.4(a) Any dish antenna of less than 1.2m in diameter, shall not exceed a height of 25m, or if attached to a building shall not extend more than 2.5m above the point of attachment;

5.3.1.4(b) Any dish antenna of more than 1.2m but less than 4m in diameter on a site adjoining a Living zone, shall not exceed a height of 25m or 2.5m above the point of attachment to any building to which it is attached; and shall comply with the recession plane in Part E, Appendix 16;

5.3.1.4(c) Any dish antenna of more than 1.2m but less than 4m in diameter on a site not adjoining a Living zone, shall not exceed a height of 25m or 2.5m above the point of attachment.

For the purposes of Rule 5.3.1.1 to 5.3.1.3, the maximum height of any utility structure is measured from the ground surface to the top of the highest point of the utility structure and includes any attachments. Where a utility structure is attached to a building or another structure, the height of the utility structure will still be measured from ground level.

Restricted Discretionary Activities — Height – Utility Structures

5.3.2 Any utility structure which does not comply with Rule 5.3.1.1 shall be a restricted discretionary activity.

5.3.3 Under Rule 5.3.2 the Council shall restrict the exercise of its discretion to consideration of:

5.3.3.1 Any adverse visual impacts or shading of neighbouring dwellings or living areas

5.3.3.2 Whether the facility (and its siting) is visually obtrusive having regard to the character of the surrounding environment.

Discretionary Activities — Height – Utility Structures

5.3.4 Any utility structure which does not comply with Rules 5.3.1.2 to 5.3.1.3 shall be a discretionary activity.

5.4 COLOUR — UTILITY STRUCTURES

Permitted Activities — Colour – Utility Structures

5.4.1 Any telecommunication or radiocommunication tower (excluding fittings) which is finished in a non-reflective colour (or a surface which weathers to a colour) in shades of green, brown, or grey shall be a permitted activity.

Discretionary Activities — Colour – Utility Structures

5.4.2 Any telecommunication or radiocommunication tower (excluding fittings) which does not comply with Rule 5.4.1 shall be a discretionary activity.

5.5 OUTSTANDING LANDSCAPE AREAS – UTILITY STRUCTURES

Permitted Activities — Outstanding Landscape Areas – Utility Structures

5.5.1 In any area shown on the Planning Maps as an Outstanding Landscape Area any utility structure which complies with the following conditions shall be a permitted activity:

5.5.1.1 Any utility structure erected does not exceed:

(a) A gross floor area of 40m^2;

(b) A height of 8m with the horizontal dimension not exceeding 600mm above a height of 4m; and

(c) A reflectance value of 37% (excluding fittings).

Note: *For the purposes of Rule 5.5.1.1(b) the maximum height is measured from the ground surface to the tip of the highest point of the structure, and includes any mast, aerial or other attachment.*

For the purposes of Rule 5.5.1.1(c), reflectance value applies to the exterior surfaces of any structure. The reflectance value of any exterior finish is measured using the reflectance value for the colour recorded on the paint chart for that paint. If the colour used does not have a reflectance value recorded in the paint chart, the Council will determine its reflectance value using the reflectance value recorded on the paint chart for a paint finish of the same colour.

5.5.1.2 Any cable is laid underground;

5.5.1.3 In the Outstanding Landscape Areas in the Malvern Hills and the High Country, no utility structure is positioned so that it protrudes into the skyline above any mountain range or isolated hill, as viewed from any road; and

5.5.1.4 In the Port Hills Area, no utility structure is positioned so that it protrudes above the summit of the Port Hills, as viewed from the Summit Road or any road on the Plains.

5.5.2 In any area shown on the Planning Maps as High Country:

5.5.2.1 Any cable is laid underground within 300m of SH73 or the Midland Railway.

Restricted Discretionary Activities — Outstanding Landscape Areas – Utility Structures

5.5.3 Any activity which does not comply with Rule 5.5.1 or 5.5.2 shall be a restricted discretionary activity if all of the following standards are met:

5.5.3.1 The utility structure is located in an area shown on the Planning Maps as:

(a) An Area of Outstanding Natural Landscape in the High Country or the Malvern Hills; or

(b) The Lower Slopes or Visual Amenity Landscape of the Port Hills; and

(c) The road or utility structure has to be located within that area.

5.5.4 Under Rule 5.5.3, the Council shall restrict its discretion to consideration of the following matters:

5.5.4.1 Whether the site is appropriate for the utility structure and any associated infrastructure, considering the topography, stability and prominence of the site and the extent to which the site and surrounds have been modified by existing roads, buildings and utility structures;

5.5.4.2 The design and siting of the utility structure and any associated infrastructure;

5.5.4.3 The need for, species and design of any landscaping around the utility structure or any planting in the road reserve, to mitigate visual effects;

5.5.4.4 Whether there are alternative sites available for the utility structure and the costs, technical feasibility and practicality of using an alternative site;

5.5.4.5 Any positive effects which may offset any adverse effects;

5.5.4.6 Any monitoring or review conditions.

5.6 OUTSTANDING LANDSCAPE AREAS – UTILITY BUILDINGS

Permitted Activities — Outstanding Landscape Areas – Utility Buildings

5.6.1 In the areas shown on the Planning Maps as Outstanding Landscape Areas in the Port Hills, Malvern Hills and the High Country, any utility building which complies with the following conditions shall be a permitted activity:

5.6.1.1 A maximum gross floor area not exceeding 40m^2;

5.6.1.2 A maximum height not exceeding 4m; and

5.6.1.3 A maximum reflectance not exceeding 37%.

Restricted Discretionary Activities — Outstanding Landscape Areas – Utility Buildings

5.6.2 Any building which does not comply with Rule 5.6.1 shall be a restricted discretionary activity if all of the following standards and terms are met:

5.6.2.1 The building is within the Lower Slopes or Visual Amenity Landscape on the Port Hills;

5.6.2.2 In the areas shown on the Planning Maps as areas of Outstanding Landscape in the Malvern Hills and the High Country:

(a) The building is associated with an activity which is located within the area of Outstanding Landscape; and

(b) The building cannot effectively serve that activity if it is located on a site outside the area of Outstanding Landscape.

5.6.3 Under Rule 5.6.2, the Council shall restrict its discretion to consideration of:

5.6.3.1 The design of the building including height, size/scale, external finish, colour and reflectance value;

5.6.3.2 The appropriateness of the building site having regard to geotechnical conditions and site stability;

5.6.3.3 The visibility of the building from land which is publicly owned and freely accessible by the public, including any area of curtilage if the building is a dwelling;

5.6.3.4 The extent to which the building or structure may:

(a) dominate or detract from openness, visual coherence, legibility or integrity of the landscape;

(b) include earthworks or new planting to assist in mitigation of any adverse landscape effects;

(c) use topography or vegetation to assist in mitigation or containment of visual effects;

(d) break the skyline or interrupt the form of any ridges, hills or prominent slopes;

(e) be visually prominent in an area characterised by high natural values;

(f) affect the amenity values of adjoining properties.

5.6.3.5 Whether the landscape has further capacity to absorb change having regard to existing and consented development on adjoining sites and in the locality, and any benefits that can be obtained from clustering buildings or structures;

5.6.3.6 Whether the proposal creates opportunities to protect open space, indigenous vegetation or nature conservation values;

5.6.3.7 The design and siting of any access to the building or structure, and the visibility of that access, including any contrast with natural contours and the proposed revegetation of any earthworks;

5.6.3.8 The siting of any utilities installed to serve the building, including whether any water storage tanks, cables or pipes are to be placed underground;

5.6.3.9 Any positive effects to be created by the proposed building and its associated accessway;

5.6.3.10 Any monitoring or review conditions.

Discretionary and Non-Complying Activities — Outstanding Landscape Areas – Utility Buildings

5.6.4 Any activity which does not comply with Rule 5.6.2.1 shall be a non-complying activity.

5.6.5 Any building which does not comply with Rule 5.6.2.2 shall be a non-complying activity.

5.7 RURAL CHARACTER – UTILITY BUILDINGS

Permitted Activities — Rural Character – Utility Buildings

5.7.1 In any areas shown on the Planning Maps as the High Country or the Malvern Hills (outside the areas shown as Areas of Outstanding Landscape), any utility building which complies with the following condition shall be a permitted activity:

5.7.1.1 The exterior finish of any utility building has a reflectance value not exceeding 37%, except for buildings which are clad in unpainted corrugated iron.

Discretionary and Non-Complying Activities — Rural Character – Utility Buildings

5.7.2 Erecting any utility building or any part of a utility building which does not comply with Rule 5.7.1 shall be a discretionary activity.

5.8 NATURAL HAZARDS – UTILITY STRUCTURES

Permitted Activities — Natural Hazards – Utility Structures

5.8.1 In any area shown on the Planning Maps as a flood area, any utility structure which is not located in a position or designed in such a way that it would:

5.8.1.1 Divert, or displace, any floodwater; or

5.8.1.2 Impede or alter the existing drainage pattern of the land;

Shall be a permitted activity.

Restricted Discretionary Activities — Natural Hazards – Utility Structures

5.8.2 Any activity which does not comply with Rule 5.8.1 shall be a restricted discretionary activity.

5.8.3 Under Rule 5.8.2, the Council shall restrict its discretion to consideration of:

5.8.3.1 Any potential risk of the utility structure being inundated and the extent of any potential flood damages;

5.8.3.2 The effectiveness of any mitigation measures proposed to reduce the risk of inundation or extent of flood damages

5.8.3.3 Any effects of the utility structure or any proposed flood mitigation measures, on diverting or displacing floodwaters on to other property or increasing the potential level of floodwater on other properties;

5.8.3.4 Any other effects of any proposed mitigation measures on the environment;

5.8.3.5 Any positive effects which may offset any adverse effects;

5.8.3.6 Any monitoring or review conditions.

5.9 NATURAL HAZARDS — UTILITY BUILDINGS

Permitted Activities — Natural Hazards – Utility Buildings

5.9.1 Any new utility building which is not erected in any of the following areas shall be a permitted activity:

5.9.1.1 Any area shown on the Planning Maps as the Waimakariri Flood Category A area;

5.9.1.2 Seaward of the Coastal Hazard 1 Line as shown on the Planning Maps;

5.9.1.3 Between any waterbody and any stopbank designed to contain floodwater from that waterbody; and

5.9.1.4 The area shown on the Planning Maps as the Lower Plains flood or ponding areas; unless a minimum building floor level 300m above a 2% Annual Excedence Probability (AEP) hazard event is identified;

5.9.1.5 The area shown on the Planning Maps as the Lake Ellesmere/Te Waihora flood area, unless a minimum building floor level of 3m above mean sea level (Lyttleton Datum 1937) is identified.

Note: *The Proposed Regional Coastal Environment Plan prohibits habitable buildings with floor areas in excess of 25m², including any extensions or alterations, seaward of the Hazard 1 line. If the Prohibited status remains once the Regional Plan is operative, then no consents will be granted for these activities.*

Refer to Council pamphlet "Building a House in the Rural Zone" in respect to Rules 5.9.1.4 or 5.9.1.5.

Restricted Discretionary Activities — Natural Hazards – Utility Buildings

5.9.2 Erecting any new utility building on any site in the areas stated in Rules 5.9.1.4 and 5.9.1.5, which does not have a minimum floor level which complies with Rules 5.9.1.4 and 5.9.1.5, shall be a restricted discretionary activity.

5.9.3 Under Rule 5.9.2, the Council shall restrict its discretion to consideration of:

5.9.3.1 The potential risk of the dwelling or other principal building being inundated and the extent of any flood damages; including its proximity to any adjacent stopbank where in the case of overtopping, breach or failure of a stopbank, the depth and velocity of that event (i.e. depth (m) x velocity (ms^{-1}) > 1) shall be taken into account.

5.9.3.2 The effectiveness of any mitigation measures proposed to reduce the risk of inundation or extent of flood damages;

5.9.3.3 Any effects of the dwelling or other principal building or the proposed flood mitigation measures on diverting or displacing floodwaters on to other property or increasing the potential level of floodwater on other properties;

5.9.3.4 Any other effects of any proposed mitigation measures on the environment;

5.9.3.5 Any positive effects which may offset any adverse effects; and

5.9.3.6 Any monitoring or review conditions.

Discretionary and Non-Complying Activities — Natural Hazards – Utility Buildings

5.9.4 Erecting any new utility building on any site in the areas listed in Rules 5.9.1.1 and 5.9.1.3, shall be a non-complying activity.

5.10 UTILITY STRUCTURES AND SITES OF SIGNIFICANCE TO TĀNGATA WHENUA

Permitted Activities — Utility Structures and Sites of Significance to Tāngata Whenua

5.10.1 Any utility structure which meets the following conditions shall be a permitted activity:

5.10.1.1 Within any area listed in Appendix 5 and shown on the Planning Maps as a Silent File Area, any earthworks associated with any utility structure is limited to the disturbance of soil over areas and to depths where that soil has been previously disturbed by cultivation, planting (trees, pasture or crops), building or earthworks;

5.10.1.2 In the area listed in Appendix 5 and shown on the Planning Maps as Wāhi Taonga Management Area C39(a), any earthworks associated with any utility structure is limited to the disturbance of soil over areas where that soil has been previously disturbed by cultivation, planting (trees, pasture or crops), building or earthworks. Any disturbance within those areas shall be limited to a maximum depth of 20cm;

5.10.1.3 Within any area listed in Appendix 5 and shown on the Planning Maps as a Wāhi Taonga Site or any Wāhi Taonga Management Area not listed in 5.10.1.2, the construction, maintenance, upgrading or replacement of any utility structure does not involve the disturbance, damage to, removal or destruction of any object, artefact or other symbol of pre-European settlement, occupation or use of that site; and

5.10.1.4 Within any area listed in Appendix 5 and shown on the Planning Maps as a Mahinga Kai site, any damage to, or removal of, indigenous vegetation associated with the construction, maintenance, upgrading or replacement of any utility structure is limited to that undertaken by Tāngata Whenua for Mahinga Kai purposes.

Restricted Discretionary Activities — Utility Structures and Sites of Significance to Tāngata Whenua

5.10.2 Any activity which does not comply with Rules 5.10.1.1 to 5.10.1.4 shall be a restricted discretionary activity.

5.10.3 Under Rule 5.10.2, the Council shall restrict its discretion to the following matters:

5.10.3.1 Any inappropriate disturbance or other potential adverse effects on any site of significance within a Silent File Area, as advised by local Rūnanga;

5.10.3.2 In the area listed in Appendix 5 nd shown on the Planning Maps as Wāhi Taonga Management Area C39(a), any inappropriate disturbance or other potential adverse effects on any site of significance, object, remnant or artefact, as advised by local Rūnanga and the New Zealand Historic Places Trust Pouhere Taonga;

5.10.3.3 Any damage to, destruction or removal of, any object, remnant or artefact contained within a Wāhi Taonga Site or any Wāhi Taonga Management Area not listed in 5.10.3.2, as advised by local Rūnanga; or

5.10.3.4 Any adverse effects of the proposed activity on any Mahinga Kai site, as advised by local Rūnanga;

5.10.3.5 Other than in Wāhi Taonga Management Area C39(a), any potential costs to the landholder of not being able to undertake the proposed activity on that site;

5.10.3.6 Any alternative options available to undertake the activity in another form or on another site and the costs and practicality of these options;

5.10.3.7 Any positive effects which may offset any adverse effects; and

5.10.3.8 Any monitoring or review conditions.

5.11 UTILITY BUILDINGS AND SITES OF SIGNIFICANCE TO Tāngata WHENUA

Permitted Activities —Utility Buildings and Sites of Significance to Tāngata Whenua

5.11.1 Any utility building which meets the following conditions shall be a permitted activity:

5.11.1.1 In any area listed in Appendix 5and shown on the Planning Maps as a Silent File Area, any earthworks associated with the building is limited to the disturbance of soil over areas and to depths where that soil has been previously disturbed by cultivation, planting (trees, pasture or crops), building or earthworks.

5.11.1.2 In the area listed in Appendix 5 and shown on the Planning Maps as Wāhi Taonga Management Area C39(a), any earthworks associated with the building is limited to the disturbance of soil over areas where that soil has been previously disturbed by cultivation, planting (trees, pasture or crops), building or earthworks. Any disturbance within those areas shall be limited to a maximum depth of 20cm;

5.11.1.3 In any area listed in Appendix 5 and shown on the Planning Maps as a Wāhi Taonga Site or any Wāhi Taonga Management Area not listed in 5.11.1.2, the construction, maintenance, upgrading or replacement of the building does not involve the disturbance, damage to, removal or destruction of any object, artefact or other symbol of pre-European settlement, occupation or use of that site.

5.11.1.4 In any area listed in Appendix 5 and shown on the Planning Maps as a Mahinga Kai site, any damage to or removal of indigenous vegetation associated with the construction, maintenance, upgrading or replacement of any utility building is limited to that undertaken by Tāngata whenua for mahinga kai purposes.[PC28]

Restricted Discretionary Activities — Utility Buildings and Sites of Significance to Tāngata Whenua

5.11.2 Any activity which does not comply with Rules 5.11.1.1 to 5.11.1.4 shall be a restricted discretionary activity

5.11.3 Under Rule 5.11.2, the Council shall restrict its discretion to all of the following matters:

5.11.3.1 Any inappropriate disturbance or other potential adverse effects on any site of significance within a Silent File Area, as advised by local Rūnanga;

5.11.3.2 In the area listed in Appendix 5 and shown on the Planning Maps as Wāhi Taonga Management Area C39(a), any inappropriate disturbance or other potential adverse effects on any site of significance, object, remnant or artefact, as advised by local Rūnanga and the New Zealand Historic Places Trust Pouhere Taonga;

5.11.3.3 Any damage to, destruction or removal of any object, remnant or artefact contained within a Wāhi Taonga Site or any Wāhi Taonga Management Area not listed in 5.11.3.2, as advised by local Rūnanga;

5.11.3.4 Any adverse effects of the proposed activity on any Mahinga Kai site, as advised by local Rūnanga;

5.11.3.5 Any potential costs to the landholder of not being able to undertake the proposed activity on that site;

5.11.3.6 Any alternative options available to undertake the activity in another form or on another site and the costs and practicality of these options;

5.11.3.7 Any positive effects which may offset any adverse effects; and

5.11.3.8 Any monitoring or review conditions.

5.12 WEST MELTON AIRFIELD AND HORORATA DOMAIN – UTILITY STRUCTURES AND UTILITY BUILDINGS

Permitted Activities — West Melton Airfield and Hororata Domain – Utility Structures and Utility Buildings

5.12.1 Any utility structure or utility building which complies with the maximum height requirements in the approach paths to the runways at West Melton Airfield and Hororata Domain, as shown in Appendix 19 shall be a permitted activity.

Note: *For Rule 5.12.1, the maximum height of any building is measured from ground level at the base of the building, to the highest point on the building. It includes any chimney, aerial, mast, satellite dish or other structure which is attached to and protrudes above the roof height of the building.*

Non-Complying Activities — West Melton Airfield and Hororata Domain – Utility Structures and Utility Buildings

5.12.2 Any utility structure or utility building or any part of any utility structure or utility building which does not comply with Rule 5.12.1 shall be a non-complying activity.

5.13 WATERBODY SETBACKS – UTILITY STRUCTURES AND UTILITY BUILDINGS

Permitted Activities — Waterbody Setbacks – Utility Buildings

5.13.1 Any utility building which is setback at least the following minimum distances shall be a permitted activity:

5.13.1.1 100m from the edge of any lake or any wetland which adjoins a lake; and

5.13.1.2 20m from the edge of any waterbody listed in Appendix 17 other than a lake; and

5.13.1.3 10m from the edge of any other waterbody (excluding aquifers).

Note: *For the purposes of Rule 5.13.1.1 the edge of any lake is measured from:*

- *The edge of the space of water which the lake covers at its annual highest level without exceeding its margin; or*
- *If the lake level is controlled by artificial means, the space of land which the waters of the lake cover at its maximum permitted operating level.*

For the purposes of Rules 5.13.1.2 to 5.13.1.3 the edge of any waterbody is measured from the edge of the bed of the river. The bed is defined in section 2 of the Act as-

"the space of land which the waters of the river cover at its fullest flow, without overtopping its banks.".

Permitted Activities — Waterbody Setbacks – Utility Structures

5.13.2 Any utility structure which is setback at least the following minimum distances shall be a permitted activity:

5.13.2.1 100m from the edge of any lake; and

5.13.2.2 20m from the edge of any waterbody listed in Appendix 17 other than a lake; and

5.13.2.3 10m from the edge of any other waterbody (excluding aquifers).

Discretionary Activities — Waterbody Setbacks – Utility Structures and Utility Buildings

5.13.3 Any activity which does not comply with Rule 5.13.1 or 5.13.2 shall be a discretionary activity.

5.14 HERITAGE BUILDINGS – UTILITY STRUCTURES AND UTILITY BUILDINGS

Permitted Activities — Heritage Buildings – Utility Structures and Utility Buildings

5.14.1 The maintenance of any utility building, structure or site listed in Appendix 3 shall be a permitted activity. For the purposes of this rule the term “maintenance” means:

5.14.1.1 Replacement of any materials which do not form part of the original heritage features of the building, structure, or site;

5.14.1.2 The replacement of any materials which form part of the original heritage values of the buildings, structure, or site, provided that these materials are of the same or similar appearance and character as the original material;

5.14.1.3 Any repainting of existing painted surfaces;

5.14.1.4 Any cleaning or washing of external heritage features provided this does not involve the use of abrasive materials or techniques, such as sandblasting.

Restricted Discretionary Activities — Heritage Buildings – Utility Structures

5.14.2 Any activity which involves the addition to, or alteration or modification of, any utility structure listed in Appendix 3 as a Heritage Site shall be a restricted discretionary activity.

5.14.3 Under Rule 5.14.2, the Council shall restrict its discretion to consideration of:

5.14.3.1 The heritage value(s) of the utility structure or site, and the extent to which it has already been modified by additions or alterations;

5.14.3.2 Whether the proposed additions, alterations or modifications will adversely affect the heritage values of the utility structure or site;

5.14.3.3 Any positive effects of the additions, alterations or modifications on the heritage values of the utility structure or site, including (but not limited to): any restoration or enhancement of heritage features or values; works which improve the efficiency or desirability of the utility structure for ongoing use; and any proposal to provide public access to the heritage utility structure or site.

Discretionary and Non-Complying Activities — Heritage Buildings – Utility Structures

5.14.4 Any demolition or removal of any utility structure or site, or any part of any utility structure or site, listed in Appendix 3(except as set out under Rule 5.14.5 below) shall be a discretionary activity.

5.14.5 Any demolition of destruction of any utility structure or part of any utility structure which is listed as “Category 1” under the HPT Category in Appendix 3 as a Heritage Building shall be a non-complying activity.

Restricted Discretionary Activities — Heritage Buildings – Utility Buildings

5.14.6 Any activity which involves the addition to, or alteration or modification of, any building or any part of any building listed in Appendix 3 as a Heritage Building shall be a restricted discretionary activity.

5.14.7 Under Rule 5.14.6, the Council shall restrict its discretion to consideration of:

5.14.7.1 The heritage value(s) of the listed building, and the extent to which it has already been modified by additions or alterations;

5.14.7.2 Whether the proposed additions, alterations or modifications will adversely affect the heritage values of the building;

5.14.7.3 Any positive effects of the additions, alterations or modifications on the heritage values of the building, including (but not limited to): any restoration or enhancement of heritage features or values; works which improve the efficiency or desirability of the building for ongoing use; and any proposal to provide public access to the heritage building;

5.14.7.4 The costs to the applicant or owner of not allowing the modifications, additions or alterations to the building;

5.14.7.5 Any alternative options which may better maintain the heritage values of the building and the relative costs of the alternatives;

5.14.7.6 Any other works the applicant has undertaken or proposes to undertake to maintain or enhance heritage values on the site or elsewhere in the District and the appropriateness of such works as a mitigation measure; and

5.14.7.7 Any monitoring or review conditions.

Discretionary Activities — Heritage Buildings – Utility Buildings

5.14.8 Any demolition or removal of any building or part of any utility building which is listed in Appendix 3 (except any building or part of any building which is listed as “Category 1” under the HPT Category in Appendix 3) as a Heritage Building shall be a discretionary activity.

Non-Complying Activities — Heritage Buildings – Utility Buildings

5.14.9 Any demolition or removal of any building or part of any utility building which is listed as “Category 1” under the HPT Category in Appendix 3shall be a non-complying activity.

Reasons for Rules

Rule 5 manages effects of establishing, maintaining, upgrading and replacing utilities on the environment. These rules should be read in conjunction with Rule 1 – Earthworks and Rule 3 – Buildings. Cross references to other relevant rules are provided at the beginning of Rule 5.

Many activities involving utilities are undertaken by requiring authorities, using designations. In these cases, the District Plan rules may not apply. However, it is still necessary to have rules in the Plan, because:

(a) Not all utilities are managed by requiring authorities;

(b) Often utilities are installed by private developers as part of subdivisions or land uses. Some utilities may vest in the Council. The Plan needs to have rules for the undertaking of these activities, so the Council can manage the standard of utilities which will vest in the Council;

(c) If rules in the District Plan allow activities as permitted activities, it may reduce the need for network utility operators to designate land; and

(d) It is consistent with Part II and section 32 of the Act to provide for activities which have only minor effects on the environment as permitted activities.

The Outstanding Landscapes of the Port Hills, Malvern Hills and High Country are equally managed with only very small buildings and utility structures provided for as a permitted activity. In relation to the Port Hills, utilities are a restricted discretionary activity in the Lower Slopes and Visual Amenity Landscape of the Port Hills and a non-complying activity in the Upper Slopes. This is consistent with the rule structure for dwellings, where the Plan provides for a more lenient housing density within the Lower Slopes and Visual Amenity Landscape to encourage development to this part of the Port Hills and to maintain relatively open Upper slopes.

Rules 5.1 and 5.1.2.2 address potential effects from electromagnetic radiation and power frequency electric and magnetic fields. The rules are firmly based on recognised national standards concerning these effects.

Rule 5.1.2.3 concerns cables and lines. The rules encourage undergrounding of such lines where this is a realistic expectation. New high voltage lines will require consent and assessment given their potentially significant visual impacts, with particular eye to siting.

Rule 5.1.2.4 discourages on-site energy production (subject to specific exemptions) because of potential adverse effects of such activities.

Rule 5.1.2.5 provides for small scale drainage and irrigation facilities which would not raise issues in respect to wider effects on water resources, where resource consent would be required.

Rule 5.1.2.6 provides for reticulated gas supplies of a scale appropriate to a residential or light industrial environment.

Rule 5.2 relates to utility buildings. It allows them to be of the same scale as rural buildings generally, but also recognising that functionally they do not require as much surrounding space as dwellings. Setback and recession plane requirements are set in place to protect neighbours and any adjoining Living zone from the bulk of utility buildings.

Rule 5.3 relates to utility structures which comprise very small buildings, or poles, masts, pylons and antenna. For operational efficiency these are allowed to be higher than buildings, but also require compliance with recession planes on Living zone

boundaries where a utility support structure has a “thick” profile of more than 500 mm.

Rule 5.4 requires that telecommunication or radiocommunication towers (but not their attached fittings) be finished in colours which are (or weather to) shades which will not be visually obtrusive in the rural environment.

Rules 5.5 and 5.6 address buildings in the Areas of Outstanding Landscapes shown on the Planning Maps. These areas have been identified as having very special landscape values (see Part B Section 1.4). The landscapes they contain have been modified by human activities, particularly by the clearance of indigenous scrub or forest, but they remain mostly free of large structures or buildings. The rules allow very small structures or buildings, such as tramping huts or water tanks, as permitted activities, provided they are finished in materials with low reflectivity values. The Plan allows larger buildings to be erected in these areas if they need to be located there, for example, a skifield development. These buildings require a resource consent, and the Council maintains discretion over the location, siting and design of the building and associated infrastructure. Buildings which do not need to locate in an area of Outstanding Landscape, such as a house which could be located on a property outside the area of Outstanding Landscape, are non-complying activities and are discouraged from locating there.

The provisions are slightly different for the Port Hills. The Port Hills landscape has been subject to greater levels of residential development than the areas in the Malvern Hills and High Country. The Plan provisions allows for low level residential development on the Port Hills but controls the siting, design and density of houses and other buildings, to reduce potential visual effects. The Plan provisions protect the area located between the summit and a distance of 30.46m vertically below the Summit Road. This approach is similar to the existing protection given under the Summit Road (Canterbury) Protection Act 2001. The Plan policies recognise that there may be some sites within the Upper Slopes where a dwelling could be erected with only minor visual effects. However, most residential development is encouraged to locate in the Lower Slopes. Erecting houses in the Upper Slopes is therefore a non-complying activity and may be publicly notified. Erecting houses within the Lower Slopes is a restricted discretionary activity, to manage design and siting, and resource consent applications are non-notified.

Rule 5.7 recognises the role of rural areas surrounding areas of Outstanding Landscape in providing a quality backdrop. The rules manage the reflectivity of new buildings, to help maintain the appearance of a pre-dominance of vegetation cover in these areas. The rules for residential density (Rule 3.10), site coverage (Rule 3.11) and tree planting (Rule 2) also help to maintain the ‘rural character’ of these areas.

Rules 5.8 and 5.9 identify areas where dwellings and other principal buildings should not be erected as a permitted activity because of potential flooding unless where indicated identified floor levels are met. The rules apply to dwellings and principal buildings, because these buildings are the ones likely to contain valuable assets which are not easily moved beyond reach of floodwaters. The rules do not apply to accessory buildings such as hay barns and implement sheds. In the Waimakariri Flood Category A area, seaward of the Coastal Hazard Line, and between any waterbody and any stopbank, floodwaters move at such a velocity that buildings are prone to both inundation and scouring of foundations. Therefore, dwellings and principal buildings are non-complying activities in these areas. They are strongly discouraged. The activity is not a prohibited activity due to the coarseness of the mapping, which means some land may be included in the flood areas (particularly around the edges) where the flood risk is minor. Flooding in the area covered by the Lower Plains and the Lake Ellesmere/Te Waihora flood areas, includes areas which are at risk from flooding based on the best available information. These areas may be subject to one or more forms of flooding, including ponding, stormwater, windlash and overland flow. Therefore, dwellings and principal buildings may be allowed if the building is appropriately designed or raised to reduce the risk of inundation or the level of damage from inundation, otherwise they are restricted discretionary activities (need resource consent). Specific consideration is required where development is proposed in close proximity to a stopbank due to the greater risk of damage to property and potential loss of human life from increased water velocity associated with a stopbank breach.

Rules 5.10 and 5.11 manage the effects of erecting buildings in Silent File Areas and Wāhi Taonga Management Areas, and on Wāhi Taonga Sites and Mahinga Kai sites. Activities which may disturb these areas and sites require a resource consent, so the Council can assess whether the activity will affect any culturally or archaeologically important site, as advised by local Rūnanga and in the case of the Wāhi Taonga Management Area which comprises the Rakaia River Mouth Moa Hunter Site (C39(a) and C39(b)), the New Zealand Historic Places Trust Pouhere Taonga.

The Council has a policy to consider reducing or waiving resource consent processing fees for activities in such areas (see Part B, Section 3.3). For further information on these areas and sites, refer to the Reasons for the Earthworks Rules.

Rule 5.12 manages the effects of tall buildings and other structures within the height restriction areas around West Melton airfield and Hororata Domain. Height restrictions apply to land which lies underneath the approach paths to the runway. Any breach of the height restrictions is a non-complying activity. The approach paths need to be clear of obstacles to ensure aircraft can take off or land safely. The height restrictions are shown in Appendix 19. They are drafted to accommodate the current use of the existing runways at both airfields. Height restrictions affect the range of land uses able to occur on surrounding properties. Therefore, any further restrictions on building height to accommodate further use of these airfields, would need to be considered alongside any proposal to increase use of either airfield.

Rule 5.14 manages additions or alterations to, and demolition of, heritage buildings. The buildings listed in Appendix 3 have been identified as having important heritage values. The process and criteria used to identify these buildings is outlined in Part B, Section 3.3. General cleaning and maintenance of these buildings does not require a resource consent but additions and

alterations do. The Plan policies allow for additions and alterations because they are necessary to provide for their ongoing use and retention. The policies require alterations and additions to maintain or enhance the heritage values of the building, where practical. Demolition of heritage buildings also requires a resource consent. Demolition is not encouraged, although Plan policies recognise that in some cases there may be no practical, affordable alternative. The demolition or removal of listed buildings having a Category 1 classification under the HPT system is a non-complying activity recognising the particular significance of such buildings.

PART C

6 LIVING ZONE RULES — UTILITIES

Notes

1. The undergrounding or ducting of any utility is permitted subject to compliance with Rule 2 (Earthworks), except where the provisions of Rule 3 (Heritage) apply.

2. The rules in this Plan are applicable to activities generally, including utilities. However, the following rules do not apply to utilities:

Land Use Rules for Living Zones:

- Rule 4.15 (Setbacks from Waterbodies)
- Rule 11 (Landscape Management, Alpine Villages)
- Rule 4.2 (Landscaping)
- Rule 4.8 (Building Height)
- Rule 4.9 (Building Position)
- Rule 4.7 (Site Coverage)

Rules in respect to the above matters are contained in the following rules on utilities

3 Work on utilities which are undertaken by requiring authorities under designations are not subject to the rules in this Plan.

4 Earthworks affecting any archaeological sites require the consent of the New Zealand Historic Places Trust Pouhere Taonga (refer to Part B, Section 3.3, “Archaeological Sites”.

5 Development contributions under the LTP Development Contribution Policy will be taken where network infrastructure, community infrastructure or reserves have to be constructed or expanded as a direct result of growth from development. Refer to Section B4.4 for further information on development contributions.

6.1 UTILITIES — ACTIVITIES

Permitted Activities — Utilities – Activities

6.1.1 Any utility which meets the following provisions and complies with all other relevant rules shall be a permitted activity:

6.1.1.1 Upgrading, maintenance, operation and replacement of existing utilities shall be permitted and shall not be subject to compliance with any other performance standards, conditions or rules in this Plan provided that the effects of such shall be the same or similar in character and scale to those which existed before such upgrading, maintenance or replacement activities commenced. For the avoidance of doubt, the following activities are permitted:

(a) The replacement of support structure cross arms;

(b) The reconductoring or replacement of lines;

(c) The resagging of conductors or lines;

(d) The addition of longer or more efficient insulators or mountings;

(e) The addition of earth wires which may contain telecommunication lines, earthpeaks and lighting rods;

(f) The clearance and trimming of vegetation under lines or structures necessary to maintain security of electricity supply and telecommunication;

(g) Pole replacement;

(h) Where an existing electricity distribution line requires upgrading to improve the reliability of supply, the addition of one support structure cross arms;

(i) The substitution of low voltage (400 Volts) electricity distribution lines with Aerial Bundled Cable provided that the overall diameter of the bundle shall not exceed 40 mm;

(j) An increase in the voltage of a line, but only where the line was originally installed to operate at a higher voltage, but has been operating at a reduced voltage.

6.1.1.2 Any utility which emits electromagnetic radiation that meets the following conditions:

(a) Exposures comply with NZS2772.1:1999 Radio Frequency Fields Part 1: Maximum exposure levels 3kHz–300 GHz (“the New Zealand Standard”).

(b) Prior to commencing any radiofrequency emissions, the following is sent to and received by the Selwyn District Council:

- Written notice of the location of the facility or proposed facility; and

- A report prepared by a radio engineer/technician or physical scientist containing a prediction of whether the New Zealand standard will be complied with (note – this requirement shall not apply to the holder of an amateur radio license).

(c) If the report provided to the Council under condition Rule 6.1.1.2(b) predicts that emissions will exceed 25% of the exposure limit set for the general public in the New Zealand Standard, then within three months of radiofrequency emissions commencing, a report from National Radiation Laboratory (or Selwyn District Council, being an appropriately qualified organisation specifically identified in this rule), certifying compliance with the New Zealand Standard, based on measurements at the site, shall be provided to the Selwyn District Council.

6.1.1.3 Any power frequency electric and magnetic fields created which do not exceed 100 micro tesla and 5kV/m in areas which are accessible to the public.

Note: Electric and magnetic fields are measured and assessed in accordance with the International Commission on Non Ionising Radiation Protection Guidelines

6.1.1.4 Any transformer, line or wire does not exceed a voltage of 110kV or a capacity of 100 MVA per circuit.

6.1.1.5 Any new cable or line is laid underground; except for the provision of additional service connections to a maximum of three additional poles within, areas where services are already above ground.

6.1.1.6 The utility is not used for the generation of energy, apart from the generation of energy for use on the same site, or to enable continued supply during emergencies, maintenance or repairs.

(This rule does not apply to solar, wind or petroleum based powered generators used to generate energy for use only on the site on which they are located).

6.1.1.7 The digging of channels or ditches to convey water is limited to maintenance or minor realignment of existing drains and stock water races.

6.1.1.8 Any pipe used for distribution of gas (manufactured or natural) does not exceed a gauge pressure of 2000 kilopascals, including household connections and compressors.

6.1.1.9 The utility may involve the maintenance, operation, and improvement of existing coastal protection works, flood protection and river maintenance works, including the planting and harvesting of trees.

6.1.1.10 The utility does not involve the treatment of sewage or effluent, apart from the treatment and disposal of effluent on site.

6.1.1.11 The utility does not involve the treatment or disposal of solid waste, apart from solid waste permitted in terms of Rule 9.

6.1.1.12 Any pipe to convey water, sewerage or gas, is laid underground.

Restricted Discretionary Activities — Utilities – Activities

6.1.2 Any activity which does not comply with Rule 6.1.1.5 shall be a restricted discretionary activity.

6.1.3 Under Rule 6.1.2 the Council shall restrict its discretion to:

6.1.3.1 whether surrounding sites have overhead or underground cables;

6.1.3.2 if surrounding sites have overhead cables, the time frame with which they are likely to be replaced with underground cables;

6.1.3.3 any physical or technical difficulties with laying cables underground to the site.

Discretionary Activities — Utilities – Activities

6.1.4 Any activity which does not comply with Rules 6.1.1.4, Rule 6.1.1.7,Rule. 6.1.1.8, Rule 6.1.1.9 and 6.1.1.12 shall be a discretionary activity.

Non-Complying Activities — Utilities – Activities

6.1.5 Any activity which does not comply with Rules 6.1.1.2,Rule 6.1.1.3, Rule 6.1.1.6,Rule 6.1.1.10 and Rule 6.1.1.11 shall be a non-complying activity.

6.2 HEIGHT AND SETBACKS – UTILITY BUILDINGS

Permitted Activities — Height and Setbacks – Utility Buildings

6.2.1 Erecting any utility building, or any addition or alterations to, or modification of any utility building which complies with all of the following conditions shall be a permitted activity.

6.2.1.1 The height of the utility building shall not exceed 8m. For Rule 6.2.1.1, the height of any building shall be measured from ground level at the base of the building, to the highest point on the building, but excluding any chimney, mast, aerial, or other structure which is attached to the outside of the building.

6.2.1.2 Except as specified under subclauses (a) or (b) below, the utility building is setback a minimum distance of 4 metres from a road boundary, and 2 metres from an internal property boundary except that a utility building may be sited along the internal boundary of a site if the boundary shares a common wall with another building.

(a) Prebbleton

Any utility building in the Living 1A Zone at Prebbleton shall be set back from the road boundary of Trices Road by not less than 10 metres, provided that the 10 metre area is landscaped.

Any utility building shall be set back not less than 6 metres from the north east or north west zone boundaries of the Living 1A2 Zone at Prebbleton.

(b) Castle Hill

Any utility building shall be set back not less than 6m from the south eastern boundaries of Lots 1 and 2 DP 22544 in the Living 1A Zone at Castle Hill Village.

Any building or structure shall be set back not less than 1.5 metres from all internal and road boundaries within the Living 1A zone at Castle Hill, except that:

- along the Living 1A zone boundaries the minimum setback shall be 3 metres; and

- where an internal boundary is also the boundary of a reserve (other than a road reserve) exceeding 1 metre in width or of an access lot or right of way there shall be no minimum setback.

6.2.1.3 The utility building is positioned so that it complies, at the property boundary with the recession plane angles in Appendix 11.

Restricted Discretionary Activities: Height and Setbacks — Utility Buildings

6.2.2 Any activity which does not comply with Rule 6.2.1.2 shall be a restricted discretionary activity.

6.2.3 Under Rule 6.2.2 the Council shall restrict its discretion to:

6.2.3.1 Internal Boundary

Any adverse effects on:

(a) Privacy;

(b) Outlook;

(c) Shading; or

(d) Amenity values of the adjoining property, it's occupiers and their activities; and

6.2.3.2 Road Boundary

Any adverse effects on:

(a) The character of the street;

(b) Safety and visibility of pedestrians, cyclists and motorists, and;

(c) Shading of the road or footpath in winter.

Discretionary Activities: Height and Setbacks — Utility Buildings

6.2.4 Any activity which does not comply with Rules 6.2.1.1 andRule 6.2.1.3 shall be a discretionary activity.

6.3 HEIGHT — UTILITY STRUCTURES

Note: For the purposes of Rules 6.3.1,Rule 6.3.2, Rule 6.3.3 and Rule 6.3.4, the maximum height of any utility structure is measured from the ground surface to the top of the highest point of the utility structure and includes any attachments. Where a utility structure is attached to a building or another structure, the height of the utility structure will still be measured from the ground level.

Permitted Activities — Height – Utility Structures

6.3.1 Any utility structure (except dish antenna) which complies with all of the following conditions shall be a permitted activity:

6.3.1.1 The structure does not exceed a height of 15 metres; or in the case of an aerial or antenna attached to a building, does not extend more than 2.5 metres above the point of attachment on the building to which it is attached.

6.3.1.2 The structure comprises any pole or mast which does not exceed 500mm in diameter beyond a height of 6m above ground level

6.3.1.3 The structure comprises any pole or mast which exceeds 500mm in diameter beyond a height of 6 m above ground level, provided it complies with the recession planes in Appendix 11 as if that pole or mast were a building.

For the avoidance of doubt, Rules 6.3.1.2 andRule 6.3.1.3 do not apply to cross arms or antenna.

6.3.2 Any dish antenna which complies with the relevant following condition shall be a permitted activity.

6.3.2.1 A dish antenna of not more than 1.2m diameter shall not exceed a height of 8m, or if attached to a building, it shall not extend more than 2.5m above the point of attachment.

6.3.2.2 A dish antenna of more than 1.2m but not more than 2m in diameter shall not exceed a height of 8m, or if attached to a building, it shall not extend more than 2.5m above the point of attachment. It shall not be located in the front yard of any dwelling; and shall comply with the recession plane in Appendix 11.

Restricted Discretionary Activities — Height – Utility Structures

6.3.3 Any dish antenna which complies with the following condition shall be a restricted discretionary activity:

6.3.3.1 A dish antenna of more than 2m but less than 4m in diameter shall not exceed a height of 8m, shall not be located in the front yard of any dwelling; and shall comply with the recession plane in Appendix 11}.

6.3.4 Any resource consent application made under Rule 6.3.3 shall not be notified and shall not require the written approval of affected parties. The exercise of discretion shall be restricted to consideration of:

6.3.4.1 The colour and reflectivity of the structure; and

6.3.4.2 The type of materials used, taking into account the technical requirements of the dish antenna; and

6.3.4.3 The design and scale of the structure; and

6.3.4.4 The technical suitability of the dish antenna position; and

6.3.4.5 The integration of the dish antenna within the site and with the surrounding environment including, but not limited to, the extent of any landscaping where this is appropriate.

Discretionary Activities — Height – Utility Structures

6.3.5 Any utility structure which does not comply with Rule 6.3.1, Rule 6.3.2 or Rule,6.3.3 shall be a discretionary activity.

6.4 LANDSCAPE MANAGEMENT ALPINE VILLAGES — UTILITIES

Arthurs Pass and Castle Hill

Permitted Activities — Landscape Management Alpine Villages – Utilities

6.4.1 The following activities shall be permitted activities in Arthurs Pass and Castle Hill Alpine Villages:

Utility Structures

6.4.1.1 Any utility pipe or cable laid underground.

6.4.1.2 Any dish antenna less than 0.75 metres in diameter, the height of which does not exceed that of the building or structure to which it is attached.

Antennas and Masts

6.4.1.3 Any antenna (other than a dish antenna) or mast no part or element of which exceeds a height of 10.5 metres above the ground immediately below.

Utility Building and Utility Structure Materials and Colour

6.4.1.4 Any utility building or utility structure which is constructed using one or more of the following materials:

(a) Timber;

(b) Stone of the same type as that found in the local area; or

(c) Coloured corrugated metal sheeting (Arthur's Pass only).

6.4.1.5 Any building or structure is painted or coloured having a reflectivity value between 0 and 37% inclusive.

Restricted Discretionary Activities — Landscape Management Alpine Villages – Utilities

6.4.2 Any activity which does not comply with Rules 6.4.1.1 to Rule 6.4.1.5 shall be a restricted discretionary activity, which shall not be notified and shall not require the written approval of affected parties.

6.4.3 Under Rule 6.4.2 the Council shall restrict its discretion to:

6.4.3.1 The effects of the activity on the landscape values of the area.

6.4.3.2 Whether the proposed activity reflects the design of any heritage buildings or general heritage values of the area.

6.4.3.3 The cost to the applicant and practicality of modifying the proposed activity to better complement the landscape values of the area.

6.4.3.4 Any compensatory works proposed to enhance the landscape values elsewhere in the village and the appropriateness of this work as a mitigation measure.

6.4.3.5 For dwellings and principal buildings erected at Castle Hill, the appropriateness of the design of the building in relation to the 'chalet or alpine theme' of the village.

6.5 LANDSCAPING — UTILITY BUILDINGS

Permitted Activities — Landscaping — Utility Buildings

6.5.1 Any utility building shall be a permitted activity if the following conditions are met:

6.5.1.1 The area between the road boundary and the utility building is:

(a) Planted in lawn, and/or

(b) Paved or sealed, and/or

(c) Dressed with bark chips or similar material

***Note**: Except that fences on boundaries adjoining reserve areas, cycleways or pedestrian accessways identified in the Outline Development Plan for Lincoln in Appendix 18 shall not exceed 1.2m in height.*

Discretionary Activities — Landscaping — Utility Buildings

6.5.2 Any activity which does not comply withRule 6.5.1 shall be a discretionary activity.

6.6 SETBACK FROM WATERWAYS — UTILITIES

Permitted Activities — Setback from Waterways – Utilities

6.6.1 Any utility building or other structure shall be a permitted activity if it is sited in accordance with the following setbacks:

6.6.1.1 Not less than 20 metres from the edge of any waterbody listed in Appendix 12; or

6.6.1.2 Not less than 10 metres from the edge of any other waterbody (excluding aquifers).

Discretionary Activities — Setback from Waterways – Utilities

6.6.2 Any activity which does not comply with Rule 6.6.1 shall be a discretionary activity.

Notes on Rule 6.6

1 Rule 6.6.1 does not apply to walkway facilities; utility structures attached to existing buildings or structures; or signs which are permitted activities under Rule 19.

2 The edge of any waterbody is measured from the edge of the bed of the river. The bed is defined in section 2 of the Act as “the space of land which the waters of the river cover at its fullest flow, without overtopping its banks”.

3 Rule 6.6 shall not apply on any allotment adjoining an esplanade reserve or strip along a waterbody where the reserve or strip has previously been vested in the Council.

Reasons for Rules

Rule 6 manages the effects of establishing, maintaining, upgrading and replacing utilities on the environment.

Many activities involving utilities are undertaken by requiring authorities, using designations. In these cases, the District Plan rules may not apply. However, it is still necessary to have rules in the Plan, because:

(a) Not all utilities are managed by requiring authorities;

(b) Often utilities are installed by private developers as part of subdivisions or land uses. Some utilities may vest in the Council. The Plan needs to have rules for the undertaking of these activities, so the Council can manage the standard of utilities which will vest in the Council;

(c) If the rules in the District Plan allow activities as permitted activities, it may reduce the need for network utility operators to designate land; and

(d) It is consistent with Part II and Section 32 of the Act to provide for activities which have only minor effects on the environment as permitted activities

The Plan clarifies situations where the upgrading, maintenance and replacement of utilities can occur as of right, to provide legal certainty. The rules for the height and bulk of utility structures and building are specific to those activities, and rules applicable to other buildings do not apply in most cases. This reflects the specialised (and usually minor) scale of buildings and structures such as poles, masts and antenna associated with utilities. However the sensitivity of important landscapes and living environments is recognised in the thresholds rule set in the Plan. Rules 6.1.1.2 and Rule 6.1.1.3 address potential effects from electromagnetic radiation and power frequency electric and magnetic fields. The rules are firmly based on recognised national standards concerning these effects.

Rules 6.1.1.4 and Rule 6.1.1.5 concern cables and lines. The rules encourage undergrounding of such lines where this is a realistic expectation. New high voltage lines will require consent and assessment given their significant visual impacts, with particular regard to siting.

Rules 6.1.1.6 and Rule 6.1.1.11 discourage on site energy production or treatment of solid waste (subject to specific exemptions) because of potential adverse effects of such activities in Living Zones.

Rule 6.1.1.7 provides for drains and channels of a small scale which would not raise issues in respect to wider effects on water resources, where resource consent would be required.

Rule 6.1.1.8 provides for reticulated gas supplies of a scale appropriate to a residential or light industrial environment.

Rule 6.2 relates to utility buildings. It allows them to be at the same scale as buildings in Living Zones generally, but also recognising that they do not require as much surrounding space as dwellings. Setback and recession plane requirements are set in place to protect neighbours and any Living zone, from the bulk of utility buildings.

Rule 6.3 relates to utility structures which comprise very small buildings, or poles, masts, pylons and antenna. For operational efficiency these are allowed to be higher than buildings, but also require compliance with recession planes on Living Zone boundaries where a utility support structure has a “thick” profile of more than 500mm. The rules relate to the sensitivity of the receiving zone environment.

PART C

18 BUSINESS ZONE RULES — UTILITIES

Notes

1 The undergrounding or ducting of any utility is permitted subject to compliance with Rule 14 (Earthworks), except where the provisions of Rule 15 (Heritage) apply.

2 The rules in this Plan are applicable to activities generally, including utilities. However, the following rules do not apply to utilities:

Land Use Rules for Business Zones:

- Rule 23 (Landscape Management, Alpine Villages)
- Rule 16.1 (Buildings and Landscaping)
- Rule 16.6 (Building Height)
- Rule 16.7 (Building Position)

Rules in respect to the above matters are contained in the following rules on utilities.

3 Work on utilities which are undertaken by requiring authorities under designations are not subject to the rules in this Plan.

4 Earthworks affecting any archaeological sites require the consent of the New Zealand Historic Places Trust Pouhere Taonga (refer to Part B, Section 3.3, “Archaeological Sites”).

5 Development contributions under the LTP Development Contribution Policy will be taken where network infrastructure, community infrastructure or reserves have to be constructed or expanded as a direct result of growth from development. Refer to Section B4.4 for further information on development contributions.

18.1 UTILITIES — ACTIVITIES

Permitted Activities — Utilities Activities

18.1.1 Any utility which meets the following provisions and complies with all other relevant rules shall be a permitted activity:

18.1.1.1 Upgrading, maintenance, operation and replacement of existing utilities shall be permitted and shall not be subject to compliance with any other performance standards, conditions or rules in this Plan provided that the effects of such shall be the same or similar in character and scale to those which existed before such upgrading, maintenance or replacement activities commenced. For the avoidance of doubt, the following activities are permitted:

(a)
- The replacement of support structure cross arms;

(b)
- The reconductoring or replacement of lines;

(c)
- The resagging of conductors or lines;

(d)
- The addition of longer or more efficient insulators or mountings;

(e)
- The addition of earth wires which may contain telecommunication lines, earthpeaks and lighting rods;

(f)
- The clearance and trimming of vegetation under lines or structures necessary to maintain security of electricity supply and telecommunication;

(g)
- Pole replacement;

(h)
- Where an existing electricity distribution line requires upgrading to improve the reliability of supply, the addition of one support structure cross arms;

(i)
- The substitution of low voltage (400 Volts) electricity distribution lines with Aerial Bundled Cable provided that the overall diameter of the bundle shall not exceed 40 mm;

(j)
- An increase in the voltage of a line, but only where the line was originally installed to operate at a higher voltage, but has been operating at a reduced voltage.

18.1.1.2 Any utility which emits electromagnetic radiation that meets the following conditions:

(a)
- Exposures comply with NZS2772.1:1999 Radio Frequency Fields Part 1: Maximum exposure levels 3kHz–300 GHz (“the New Zealand Standard”).

(b)
- Prior to commencing any radiofrequency emissions, the following is sent to and received by the Selwyn District Council:

- Written notice of the location of the facility or proposed facility; and

- A report prepared by a radio engineer/technician or physical scientist containing a prediction of whether the New Zealand standard will be complied with.

Note: this requirement shall not apply to the holder of an amateur radio license.

(c)

- If the report provided to the Council under condition 18.1.1.2(b) predicts that emissions will exceed 25% of the exposure limit set for the general public in the New Zealand Standard, then within three months of radiofrequency emissions commencing, a report from National Radiation Laboratory (or Selwyn District Council, being an appropriately qualified organisation specifically identified in this rule), certifying compliance with the New Zealand Standard, based on measurements at the site, shall be provided to the Selwyn District Council.

18.1.1.3 Any power frequency electric and magnetic fields created do not exceed 100 micro tesla and 5kV/m in areas which are accessible to the public.

Note: Electric and magnetic fields are measured and assessed in accordance with the International Commission on Non Ionising Radiation Protection Guidelines.

18.1.1.4 Any transformer, line or wire does not exceed a voltage of 110kV or a capacity of 100 MVA per circuit.

18.1.1.5 Any new cable or line is laid underground; except for the provision of additional service connections to a maximum of three additional poles within, areas where services are already above ground.

18.1.1.6 The utility is not used for the generation of energy, apart from the generation of energy for use on the same site, or to enable continued supply during emergencies, maintenance or repairs.

Note: this rule does not apply to solar, wind or petroleum based powered generators used to generate energy for use only on the site on which they are located.

18.1.1.7 Any pipe used for distribution of gas (manufactured or natural) does not exceed a gauge pressure of 2000 kilopascals, including household connections and compressors.

18.1.1.8 Any pipe to convey water, sewage or gas, is laid underground.

18.1.1.9 The construction and use of a rail siding undertaken in the area identified on the Outline Development Plan at Appendix 43.

Restricted Discretionary Activities — Utilities Activities

18.1.2 Any activity which does not comply with Rule 18.1.1.5 shall be a restricted discretionary activity.

18.1.3 Under Rule 18.1.2 the Council shall restrict its discretion to:

18.1.3.1 Whether surrounding sites have overhead or underground cables;

18.1.3.2 If surrounding sites have overhead cables, the time frame with which they are likely to be replaced with underground cables;

18.1.3.3 Any physical or technical difficulties with laying cables underground to the site;

Discretionary Activities — Utilities Activities

18.1.4 Any activity which does not comply with Rules 18.1.1.4, 18.1.1.7 and 18.1.1.8 shall be a discretionary activity.

Non-Complying Activities — Utilities Activities

18.1.5 Any activity which does not comply with Rules 18.1.1.2, 18.1.1.3 and 18.1.1.6 shall be a non-complying activity.

18.2 HEIGHT AND SETBACKS – UTILITY BUILDINGS

Permitted Activities — Height and Setbacks – Utility Buildings

18.2.1 Erecting any utility building, or any addition or alterations to, or modification of any utility building which complies with all of the following conditions shall be a permitted activity.

18.2.1.1 The height of the utility building shall not exceed the following standards:

(a) Business 1A Zone; 8m

(b) Business 1 Zone; 10m

(c) Business 2 Zone; 15m

(d) Business 2A and 2B Zones; 15m

(e) Business 3 Zone; 25m

For Rule 18.2.1.1, the height of any building shall be measured from ground level at the base of the building, to the highest point on the building, but excluding any chimney, mast, aerial, or other structure which is attached to the outside of the building.

18.2.1.2 The setback of the utility building shall not be less than the following standards:

(a) Business 1A Zone – 6m from a road boundary, or from the boundary of Lots 1 and 2 DP 22544.

(b) Business 2 Zone: 2m from a road boundary, or any boundary adjoining a Living Zone.

(c) Business 2A Zone:

- Road Boundaries: 10m
- Internal Boundaries: adjoining a rural zoned property: 10m, except that this requirement shall be 15m in those locations identified on the Outline Development Plan attached at Appendix 22.

(d) Business 2B Zone:

- Road Boundaries: 5m
- Internal Boundaries: adjoining a rural zoned property: 3m, adjoining a Living Z zone: 50m,

(e) Business 3 Zone: 10m from a road boundary or a Living Zone boundary.

(f) In all Business Zones, the building shall be positioned so that it complies on a Living Zone boundary, with the recession plane angles in Appendix 11.

Restricted Discretionary Activities — Height and Setbacks – Utility Buildings

18.2.2 Any activity which does not comply with Rule 18.2.1.2 (a) – (e) shall be a restricted discretionary activity.

18.2.3 Under Rule 18.2.2 the Council shall restrict the exercise of its discretion to consideration of:

18.2.3.1 Any adverse effects of shading on any adjoining property owner; or on any road or footpath during winter.

18.2.3.2 Road Boundary

Any adverse effects on:

(a) Roadscape; and

(b) Landscaping potential; and

(c) Shading of the adjoining road.

18.2.3.3 Internal Boundary

Any adverse effects on:

(a) Privacy; and

(b) Outlook; and

(c) shading; and

(d) any other amenity values of the adjoining property.

Discretionary Activities — Height and Setbacks – Utility Buildings

18.2.4 Any activity which does not comply with Rule 18.2.1.1 or 18.2.1.2(e) shall be a discretionary activity.

18.3 HEIGHT – UTILITY STRUCTURES

Note: For the purposes of Rules 18.3.1 and 18.3.2, the maximum height of any utility structure is measured from the ground surface to the top of the highest point of the utility structure and includes any attachments. Where a utility structure is attached to a building or another structure, the height of the utility structure will still be measured from the ground level.

Permitted Activities — Height – Utility Structures

18.3.1 Any utility structure (except dish antenna) which complies with all of the following conditions shall be a permitted activity:

18.3.1.1 The structure does not exceed the following heights:

(a) Business 1 and 2 Zones: 25m

(b) Business 1A Zone: 20m

(c) Business 2A and 2B Zones: 25m

(d) Business 3 Zone: 30m

18.3.1.2 The structure comprises any pole or mast which does not exceed 500mm in diameter beyond a height of 6m above ground level; or

18.3.1.3 The structure comprises any pole or mast which exceeds 500mm in diameter beyond a height of 6m above ground level, provided it complies with the recession planes in Appendix 11 as if that pole or mast were a building.

Note: For the avoidance of doubt, Rules 18.3.1.2 and 18.3.1.3 do not apply to cross arms or antenna.

18.3.2 Any dish antenna which complies with the relevant following condition shall be a permitted activity.

18.3.2.1 A dish antenna of less than 1.2m in diameter shall not exceed a height of 25m; or if attached to a building, it shall not extend more than 2.5m above the point of attachment.

18.3.2.2 A dish antenna of more than 1.2m but less than 4m in diameter, on a site adjoining a Living Zone, shall not exceed a height of 25m; or if attached to a building, it shall not extend more than 2.5m above the point of attachment. It shall also comply with the recession plane in Appendix 11.

18.3.2.3 A dish antenna of more than 1.2m in diameter but less than 4m, on a site not adjoining a Living Zone, shall not exceed a height of 25m; or if attached to a building, it shall not extend more than 2.5m above the point of attachment.

Discretionary Activities — Height – Utility Structures

18.3.4 Any utility structure which does not comply with Rule 18.3.1 or 18.3.2 shall be a discretionary activity.

18.4 LANDSCAPE MANAGEMENT ALPINE VILLAGES (ARTHUR'S PASS AND CASTLE HILL) – UTILITIES

Permitted Activities — Landscape Management Alpine Villages (Arthur's Pass and Castle Hill) – Utilities

18.4.1 The following activities shall be permitted activities in the Arthur's Pass and Castle Hill Alpine Villages:

Utility Structures

18.4.1.1 Any utility pipe or cable laid underground.

18.4.1.2 Any dish antenna less than 0.75 metres in diameter, the height of which does not exceed that of the building or structure to which it is attached.

Antennas and Masts

18.4.1.3 Any antenna (other than a dish antenna), mast or utility or other structure that is not a building, no part or of which exceeds a height of 15 metres above the ground immediately below.

Building Materials and Colour for Utility Buildings and Utility Structures

18.4.1.4 Any utility building or utility structure which is constructed using one or more of the following materials:

(a) Timber; or

(b) Stone of the same type as that found in the local area, provided that it complies with all other "relevant" rules, and

18.4.1.5 The exterior roof and wall colour(s) of any utility building or utility structure, except for trim items, has a reflectivity value between 0 and 37% (inclusive).

Restricted Discretionary Activities — Landscape Management Alpine Villages (Arthur's Pass and Castle Hill) – Utilities

18.4.2 Any activity which is not listed in Rules 18.4.1.1 to 18.4.1.5 shall be a restricted discretionary activity, which shall not be notified and shall not require the written approval of affected parties.

18.4.3 Under Rule 18.4.2 the Council shall restrict its discretion to:

18.4.3.1 The effects of the activity on the landscape values of the area.

18.4.3.2 Whether the proposed activity reflects the design of any heritage buildings or general heritage values of the area.

18.4.3.3 The cost to the applicant and practicality of modifying the proposed activity to better complement the landscape values of the area.

18.4.3.4 Any compensatory works proposed to enhance the landscape values elsewhere in the village and the appropriateness of this work as a mitigation measure.

18.4.3.5 For principal buildings erected, the appropriateness of the design of the building in relation to the 'chalet or alpine theme' of the village.

18.5 LANDSCAPING – UTILITY BUILDINGS

Permitted Activities — Landscaping Utility Buildings

18.5.1 Any utility building shall be a permitted activity if the following conditions are met:

18.5.1.1 The area between the road boundary and the utility boundary is:

(a) Paved or sealed; or

(b) Planted in lawn; or

(c) Landscaped with shrubs, bark chips or similar materials

(d) For the purpose of screening in the Business 2, 2B and 3 zones, landscaping methods listed in (a)–(c) can be employed.

18.5.2 Any principal building in the Business 2A Zone shall be a permitted activity if the following standard is met:

18.5.2.1 A landscaping strip of at least 3 metres width shall be provided along every road frontage, except along the frontage with Railway Road. The landscaping shall meet the following standards:

(a) The landscaping shall consist of only those species listed in Appendix 21. Planting for each allotment shall include:

- A minimum of two trees from Group A for every 10 metres of road frontage. For boulevard roads the species selected shall match any Group A species in the adjacent road.
- At least 35% of the required area shall be planted in species from Group C.
- At least 10% of the required area shall be planted in species from Group D.
- Group B and C species shall be used when screening blank walls and vehicle courts.

(b) All plants shall be of the following maximum spacings:

- Group B – 1.5 metre centres;
- Group C – 1.5 metre centres;
- Group D – 700mm centres.

(c) The landscaping planted shall be maintained and if dead, diseased or damaged shall be removed and replaced.

(d) No fences or structures shall be erected within the 3 metre landscaping strip. Footpaths of up to 1.5m in width and generally at right angles to the road frontage may be provided in the landscape strip.

(e) All new planting areas shall be mulched.

18.5.3 Any utility building within the Business 2B Zone shall be a permitted activity, if the following standards are met:

18.5.3.1 A landscape strip of at least 5m width shall be established and maintained along the Springs Road frontage of every site, comprising one Podocarpus totara tree for every 5m of the road frontage, 1.5m high (when planted), which is capable of growing to at least 15m height at maturity.

18.5.3.2 A landscape strip of at least 3m width shall be established and maintained along all other boundaries of the Business 2B and Outer Plains zone, comprising one Podocarpus totara tree for every 10m, 1.5m high (when planted), which is capable of growing to at least 15m height at maturity, with spacing of no less than 5m and no greater than 15m.

18.5.3.3 Before any utility building is erected on any parcel of land subject to Rule 16.1.5.1 to 16.1.5.3, all of the landscape planting on that allotment shall be completed.

18.5.3.4 The landscaping planted shall be maintained, and if dead, diseased or damaged, shall be removed and replaced.

Discretionary Activities — Landscaping – Utility Buildings

18.5.4 Any activity which does not comply with Rule 18.5.1, 18.5.2 or 18.5.3 shall be a discretionary activity.

Reasons for Rules

Rule 18 manages effects of establishing, maintaining, upgrading and replacing utilities on the environment.

Many activities involving utilities are undertaken by requiring authorities, using designations. In these cases, the District Plan rules may not apply. However, it is still necessary to have rules in the Plan, because:

(a) Not all utilities are managed by requiring authorities;

(b) Often utilities are installed by private developers as part of subdivisions or land uses. Some utilities may vest in the Council. The Plan needs to have rules for the undertaking of these activities, so the Council can manage the standard of utilities which will vest in the Council;

(c) If the rules in the District Plan allow activities as permitted activities, it may reduce the need for network utility operators to designate land; and

(d) It is consistent with Part II and Section 32 of the Act to provide for activities which have only minor effects on the environment as permitted activities.

The Plan clarifies situations where the upgrading, maintenance and replacement of utilities can occur as of right, to provide legal certainty. The rules for the height and bulk of utility structures and building are specific to those activities, and rules applicable to other buildings do not apply in most cases. This reflects the specialised (and usually minor) scale of buildings and structures such as poles, masts and antenna associated with utilities. However the sensitivity of important landscapes and living environments is recognised in the thresholds rule set in the Plan. Rules 18.1.1.2 and 18.1.1.3 address potential effects from electromagnetic radiation and power frequency electric and magnetic fields. The rules are firmly based on recognised national standards concerning these effects.

Rules 18.1.1.4 and 18.1.1.5 concern cables and lines. The rules encourage undergrounding of such lines where this is a realistic expectation. New high voltage lines will require consent and assessment given their significant visual impacts, with particular regard to siting.

Rule 18.1.1.6 discourages on site energy production or treatment of solid waste (subject to specific exemptions).

Rule 18.1.1.7 provides for reticulated gas supplies of a scale appropriate to a residential or light industrial environment.

Rule 18.2 relates to utility buildings. It allows them to be at the same scale as buildings in Living Zones generally, but also recognising that they do not require as much surrounding space as dwellings. Setback and recession plane requirements are set in place to protect neighbours and any Living zone, from the bulk of utility buildings.

Rule 18.3 relates to utility structures which comprise very small buildings, or poles, masts, pylons and antenna. For operational efficiency these are allowed to be higher than buildings, but also require compliance with recession planes on Living Zone boundaries where a utility support structure has a “thick” profile of more than 500mm. The rules relate to the sensitivity of the receiving zone environment.

APPENDIX 4
REGIONAL POLICY STATEMENT OBJECTIVES AND POLICIES

APPENDIX 4: CANTERBURY REGIONAL POLICY STATEMENT 2013

TABLE 1: OBJECTIVES AND POLICIES	
CHAPTER 5- LAND-USE AND INFRASTRUCTURE	
5.2.1 Location, design and function of development (Entire Region)	Development is located and designed so that it functions in a way that: 1. achieves consolidated, well designed and sustainable growth in and around existing urban areas as the primary focus for accommodating the region's growth; and 2. enables people and communities, including future generations, to provide for their social, economic and cultural well-being and health and safety; and which: (a) maintains, and where appropriate, enhances the overall quality of the natural environment of the Canterbury region, including its coastal environment, outstanding natural features and landscapes, and natural values; (b) provides sufficient housing choice to meet the region's housing needs; (c) encourages sustainable economic development by enabling business activities in appropriate locations; (d) minimises energy use and/or improves energy efficiency; (e) enables rural activities that support the rural environment including primary production; (f) is compatible with, and will result in the continued safe, efficient and effective use of regionally significant infrastructure; (g) avoids adverse effects on significant natural and physical resources including regionally significant infrastructure, and where avoidance is impracticable, remedies or mitigates those effects on those resources and infrastructure; (h) facilitates the establishment of papakāinga and marae; and (i) avoids conflicts between incompatible activities
5.2.2 Integration of land-use and regionally significant infrastructure (Wider Region)	In relation to the integration of land use and regionally significant infrastructure: 1. To recognise the benefits of enabling people and communities to provide for their social, economic and cultural well-being and health and safety and to provide for infrastructure that is regionally significant to the extent that it promotes sustainable management in accordance with the RMA. 2. To achieve patterns and sequencing of land-use with regionally significant infrastructure in the wider region so that: (a) development does not result in adverse effects on the operation, use and development of regionally significant infrastructure. (b) adverse effects resulting from the development or operation of regionally significant infrastructure are avoided, remedied or mitigated as fully as practicable. (c) there is increased sustainability, efficiency and liveability.
5.3.1 Regional growth (Wider Region)	To provide, as the primary focus for meeting the wider region's growth needs, sustainable development patterns that:

	1. ensure that any (a) urban growth; and (b) limited rural residential development occur in a form that concentrates, or is attached to, existing urban areas and promotes a coordinated pattern of development; 2. encourage within urban areas, housing choice, recreation and community facilities, and business opportunities of a character and form that supports urban consolidation; 3. promote energy efficiency in urban forms, transport patterns, site location and subdivision layout; 4. maintain and enhance the sense of identity and character of the region's urban areas; and 5. encourage high quality urban design, including the maintenance and enhancement of amenity values.
5.3.2 Development conditions (Wide Region)	5.3.2 Development conditions (Wider Region) To enable development including regionally significant infrastructure which: 1. ensure that adverse effects are avoided, remedied or mitigated, including where these would compromise or foreclose : (a) existing or consented regionally significant infrastructure; (b) options for accommodating the consolidated growth and development of existing urban areas; (c) the productivity of the region's soil resources, without regard to the need to make appropriate use of soil which is valued for existing or foreseeable future primary production, or through further fragmentation of rural land; (d) the protection of sources of water for community supplies; (e) significant natural and physical resources; 2. avoid or mitigate: (a) natural and other hazards, or land uses that would likely result in increases in the frequency and/or severity of hazards; (b) reverse sensitivity effects and conflicts between incompatible activities, including identified mineral extraction areas; and 3. integrate with: (a) the efficient and effective provision, maintenance or upgrade of infrastructure; and (b) transport networks, connections and modes so as to provide for the sustainable and efficient movement of people, goods and services, and a logical, permeable and safe transport system.

TABLE 2: OBJECTIVES AND POLICIES	
CHAPTER 6- RECOVERY AND REBUILDING OF GREATER CHRISTCHURCH	
6.2.1 Recovery framework	Recovery, rebuilding and development are enabled within Greater Christchurch through a land use and infrastructure framework that: 1. identifies priority areas for urban development within Greater Christchurch; 2. identifies Key Activity Centres which provide a focus for high quality, and, where appropriate, mixed-use development that incorporates the principles of good urban design; 3. avoids urban development outside of existing urban areas or greenfield priority areas for development, unless expressly provided for in the CRPS; 4. protects outstanding natural features and landscapes including those within the Port Hills from inappropriate subdivision, use and development; 5. protects and enhances indigenous biodiversity and public space; 6. maintains or improves the quantity and quality of water in groundwater aquifers and surface water bodies, and quality of ambient air; 7. maintains the character and amenity of rural areas and settlements; 8. protects people from unacceptable risk from natural hazards and the effects of sea-level rise; 9. integrates strategic and other infrastructure and services with land use development; 10. achieves development that does not adversely affect the efficient operation, use, development, appropriate upgrade, and future planning of strategic infrastructure and freight hubs; 11. optimises use of existing infrastructure; and 12. provides for development opportunities on Māori Reserves in Greater Christchurch.
6.2.3 Sustainability	Recovery and rebuilding is undertaken in Greater Christchurch that: 1. provides for quality living environments incorporating good urban design; 2. retains identified areas of special amenity and historic heritage value; 3. retains values of importance to Tangata Whenua; 4. provides a range of densities and uses; and 5. is healthy, environmentally sustainable, functionally efficient, and prosperous.
6.3.5 Integration of land use and infrastructure	Recovery of Greater Christchurch is to be assisted by the integration of land use development with infrastructure by: 1. Identifying priority areas for development to enable reliable forward planning for infrastructure development and delivery; 2. Ensuring that the nature, timing and sequencing of new development are co-ordinated with the development, funding, implementation and operation of transport and other infrastructure in order to: (a) optimise the efficient and affordable provision of both the development and the infrastructure; (b) maintain or enhance the operational effectiveness, viability and safety of existing and planned infrastructure;

TABLE 2: OBJECTIVES AND POLICIES	
CHAPTER 6- RECOVERY AND REBUILDING OF GREATER CHRISTCHURCH	
	(c) protect investment in existing and planned infrastructure; and (d) ensure new development does not occur until provision for appropriate infrastructure is in place; 3. Providing that the efficient and effective functioning of infrastructure, including transport corridors, is maintained, and the ability to maintain and upgrade that infrastructure is retained; 4. Only providing for new development that does not affect the efficient operation, use, development, appropriate upgrading and safety of existing strategic infrastructure, including by avoiding noise sensitive activities within the 50dBA Ldn airport noise contour for Christchurch International Airport, unless the activity is within an existing residentially zoned urban area, residential greenfield area identified for Kaiapoi, or residential greenfield priority area identified in Map A (page 6-28); and 5. Managing the effects of land use activities on infrastructure, including avoiding activities that have the potential to limit the efficient and effective, provision, operation, maintenance or upgrade of strategic infrastructure and freight hubs.

TABLE 3: OBJECTIVES AND POLICIES	
CHAPTER 12- LANDSCAPE	
12.2.2 Identification and management of other landscapes	The identification and management of other important landscapes that are not outstanding natural landscapes. Other important landscapes may include: 1. natural character 2. amenity 3. historic and cultural heritage
12.2.3 Consistency of assessment and management	Ensure consistency of assessment and promote consistency of management of outstanding natural features and landscapes across the Canterbury region.

TABLE 3: OBJECTIVES AND POLICIES	
CHAPTER 16- ENERGY	
16.2.2 Promote a diverse and secure supply of energy	Reliable and resilient generation and supply of energy for the region, and wider contributions beyond Canterbury, with a particular emphasis on renewable energy, which: 1. provides for the appropriate use of the region's renewable resources to generate energy; 2. reduces dependency on fossil fuels; 3. improves the efficient end-use of energy; 4. minimises transmission losses; 5. is diverse in the location, type and scale of renewable energy development; 6. recognises the locational constraints in the development of renewable electricity generation activities; and (a) avoids any adverse effects on significant natural and physical resources and cultural values or where this is not practicable, remedies or mitigates; and (b) appropriately controls other adverse effects on the environment.
Policy 16.3.2 Small and community scale distributed renewable electricity generation	Encourage and provide for the operation maintenance and development of small and community scale distributed renewable electricity generation provided that: 1. any adverse effects on significant natural and physical resources or cultural values are avoided, or where this is not practicable, remedied or mitigated; and 2. other adverse effects on the environment are appropriately controlled
16.3.3 Benefits of renewable energy generation facilities	To recognise and provide for the local, regional and national benefits when considering proposed or existing renewable energy generation facilities, having particular regard to the following: 1. maintaining or increasing electricity generation capacity while avoiding, reducing or displacing greenhouse gas emissions; 2. maintaining or increasing the security of supply at local and regional levels, and also wider contributions beyond Canterbury; by diversifying the type and/or location of electricity generation; 3. using renewable natural resources rather than finite resources; 4. the reversibility of the adverse effects on the environment of some renewable electricity generation facilities; 5. avoiding reliance on imported fuels for the purposes of generating electricity; and 6. assisting in meeting international climate obligations.
Policy 16.3.5 — Efficient, reliable and resilient electricity generation within Canterbury	To recognise and provide for efficient, reliable and resilient electricity generation within Canterbury by: 1. avoiding subdivision, use and development which limits the generation capacity from existing or consented electricity generation infrastructure to be used, upgraded or maintained; 2. enabling the upgrade of existing, or development of new electricity generation infrastructure, with a particular emphasis on encouraging the operation, maintenance and upgrade of renewable electricity generation activities and associated infrastructure:

TABLE 3: OBJECTIVES AND POLICIES	
CHAPTER 16- ENERGY	
	a) having particular regard to the locational, functional, operational or technical constraints that result in renewable electricity generation activities being located or designed in the manner proposed; (b) provided that, as a result of site, design and method selection: (i) the adverse effects on significant natural and physical resources or cultural values are avoided, or where this is not practicable remedied, mitigated or offset; and (ii) other adverse effects on the environment are appropriately controlled. 3. providing for activities associated with the investigation, identification and assessment of potential sites and energy sources for renewable electricity generation; 4. maintaining the generation output and enabling the maximum electricity supply benefit to be obtained from the existing electricity generation facilities within Canterbury, where this can be achieved without resulting in additional significant adverse effects on the environment which are not fully offset or compensated.

APPENDIX 5
IWI MANAGEMENT PLAN OBJECTIVES AND POLICIES

APPENDIX 5: MAHAANUI IWI MANAGEMENT PLAN

TABLE 1: OBJECTIVES AND POLICIES	
5.4 PAPATŪĀNUKU- ENERGY	
Ngā Kaupapa / Policy	P17.1 Ngāi Tahu must have a strategic and influential role in decisions about energy extraction and generation in the region, as a Treaty partner with specific rights and interests in resources used for energy generation, particularly water. P17.2 To continue to engage with the energy sector and build constructive and enduring relationships. P17.3 To require that the energy sector engage with Ngāi Tahu at the concept development stage, rather than at the resource consent stage and to support the use of Cultural Impact Assessment (CIA) reports to assess potential and actual effects of proposals on Ngāi Tahu values. P17.4 To require that local authorities develop and implement effective policies requiring the use of renewable energy and energy saving measures in residential, commercial, industrial and other developments. P17.5 To support in principle the use of wind and solar energy generation in the region (see Section 5.7, Issue TAW1).

TABLE 2: OBJECTIVES AND POLICIES	
5.7 TĀWHIRIMĀTEA	
Ngā Kaupapa / Policy	TAW1.1 To assess and evaluate the cultural implications of any wind farm proposal in the takiwā with particular regard to: (a) Location: (i) Proximity and visibility in relation to culturally significant sites, places, features, and landforms; and (ii) Relationship of site to wider Ngāi Tahu cultural landscape. (b) Nature, extent and significance of cultural landscape values in the area, including: (i) Historic and contemporary mahinga kai associations; (ii) Tribally significant landforms; (iii) Indigenous flora and fauna, including plants and insects; (iv) Wāhi tapu and wāhi taonga, including archaeological sites; (v) Waterways, wetlands, waipuna; and (vi) Natural character (i.e. degree of existing modification of site). (c) Size of the wind farm (i.e. would a smaller wind farm have less impact?); (d) Ability of the wind farm to reduce pressure on water resources through providing alternative source of energy; (e) Opportunities to enhance cultural landscape values (e.g. enhancement of indigenous biodiversity); and (f) Robust assessment of alternatives. TAW1.2 To promote co-operative and constructive relationships between the energy sector and Ngāi Tahu, over and above RMA 1991 consultation, to facilitate consideration of effects of wind farms on tāngata whenua values and interests. TAW1.3 To require the protection of key cultural landscape values, as identified by tāngata whenua, from activities associated with the development and operation of wind farms. TAW1.4 To require, where a proposal has the potential for significant effects on tāngata whenua values, one or more of the following, at the discretion of the Papatipu Rūnanga: (a) Cultural Impact Assessment (CIA), as part of the Assessment of Environmental Effects; (b) Site visit; (c) Archaeological assessment, by a person nominated by the Papatipu Rūnanga; (d) Provision of accurate graphic representations of proposals to enable tāngata whenua to clearly visualise; projects on the landscape; and (e) Cultural monitoring during earthworks. TAW1.5 To require that consultation with tāngata whenua and assessments of actual and potential effects on cultural values occur as part of feasibility assessments, alongside other technical impact assessment reports (e.g. landscape, ecology).

TABLE 3: OBJECTIVES AND POLICIES	
5.8 NGĀ TŪTOHU WHENUA	
Ngā Paetae Objectives	(1) Cultural landscapes are recognised and provided for as a planning tool to protect wāhi tapu and wāhi taonga, the multiple values associated with these sites and places (traditional and contemporary), and the relationship of tāngata whenua to them. (2) The Ngāi Tahu cultural heritage mapping project is completed and used to effectively protect and manage wāhi tapu and wāhi taonga in a manner consistent with tikanga Ngāi Tahu. (3) Wāhi tapu and wāhi taonga are protected from inappropriate use, subdivision and development. (4) Ngāi Tahu whānui have access to sites of cultural significance in the takiwā. (5) Good working relationships are maintained with those agencies involved in the protection of Ngāi Tahu cultural and historic heritage, including the New Zealand Historic Places Trust Pouhere Taonga (NZHPT).

APPENDIX 6
VICTORIA PLANNING PROVISIONS

APPENDIX 6: VICTORIA PLANNING PROVISIONS

TABLE 1: VICTORIA PLANNING PROVISIONS - ENERGY

DEFINED TERMS	DEFINITION	CONSENT REQUIREMENTS
Anemometer	A wind measuring device.	Permitted if less than 3 years.
Renewable energy Facility (includes wind energy facility)	Land used to generate energy using resources that can be rapidly replaced by an ongoing natural process. Renewable energy resources include the sun, wind, the ocean, water flows, organic matter and the earth's heat. It includes any building or other structure or thing used in or in connection with the generation of energy by a renewable resource. It does not include a renewable energy facility principally used to supply energy for an existing use of the land.	Various as outlined in zones
Utility installation	Land used: a) for telecommunications; b) to transmit or distribute gas, oil, or power; c) to collect, treat, transmit, store, or facility distribute water; or d) to collect, treat, or dispose of storm or flood water, sewage, or sullage. It includes any associated flow measurement device or a structure to gauge waterway flow.	Various as outlined in zones
Wind energy facility	Land used to generate electricity by wind force. It includes land used for: Wind energy facility a) any turbine, building or other structure or thing used in or in connection with the generation of electricity by wind force b) an anemometer. It does not include turbines principally used to supply electricity for domestic or rural use of the land.	Permit required Prohibited in listed sensitive locations (permitted)
CLAUSE	**OBJECTIVES**	**RELEVANT STRATEGIES**
19.01-1S- Energy supply	To facilitate appropriate development of energy supply infrastructure.	Support the development of energy facilities in appropriate locations where they take advantage of existing infrastructure and provide benefits to industry and the community. Support transition to a low-carbon economy with renewable energy and greenhouse emission reductions including geothermal, clean coal processing and carbon capture and storage.

		Facilitate local energy generation to help diversify the local economy and improve sustainability outcomes.
19.01-2S – Renewable energy	To promote the provision of renewable energy in a manner that ensures appropriate siting and design considerations are met.	Facilitate renewable energy development in appropriate locations. Protect energy infrastructure against competing and incompatible uses. Develop appropriate infrastructure to meet community demand for energy services. Set aside suitable land for future energy infrastructure. Consider the economic and environmental benefits to the broader community of renewable energy generation while also considering the need to minimise the effects of a proposal on the local community and environment. Recognise that economically viable wind energy facilities are dependent on locations with consistently strong winds over the year.
19.01-2R – Renewable energy metropolitan Melbourne		Facilitate the uptake of renewable energy technologies on a site-by-site and neighbourhood level during the master planning of new communities and in green wedge and peri-urban areas.
19.01-2R - Renewable energy - Wimmera Southern Mallee		Support the development of locally generated renewable energy, including bioenergy clusters.