# 22 NETWORK UTILITIES

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22 NETWORK UTILITIES

The objectives, policies and rules in this chapter apply across the District. They are grouped together to prevent repetition throughout the Plan.

Historically most network utility services were provided either by the central government, local or supply authorities and the services were generally known as ‘public utilities’, reflecting their ownership by the public for the public good. These include telecommunication and electricity networks, and natural gas reticulation.

Special recognition for network utilities is made in the Plan because they provide an essential and important function in terms of the viability of the District as a place for people to live and work. Although network utility operations, maintenance, upgrading and development can have adverse effects on the environment, it is recognised in the Plan that due to their technical, locational and operational constraints it might not be possible or practicable to avoid, remedy or mitigate all adverse effects of network utilities. In such circumstances there is a need to carefully consider the benefits that the network utility will provide to the District (and beyond), the extent to which any adverse effects have been avoided, remedied or mitigated by the route, site and method selection and the significance of the adverse effects on the environment.

There is also a current trend towards providing some services at a domestic level including radios, antennas and energy generation. Recognition of this is a matter that the Plan must have particular regard to as it promotes the efficient use of physical resources as well as the use and development of renewable energy.

The National Grid infrastructure plays a key role locally, regionally and nationally. It forms an essential part of the efficient functioning of the District and its maintenance and development contributes to the health, safety and well-being of residents. The national, regional or local benefit of having a sustainable, secure and efficient utility network must be recognised and provided for.

This section must also be read in conjunction with any relevant National Policy Statement and National Environmental Standard. The relevant
National Environmental Standards shall apply with no further alteration or modification by this Plan:


  Note: The NES only applies to the actual or potential effects of contaminants in soil on human health. Additional resource consents may be required by that standard, or by the Regional Council.


The NESETA contains provisions (including rules) that apply to the operation, maintenance, upgrading relocating, or removal of National Grid assets existing as at 14 January 2010.


  Note: This NES applies to telecommunication equipment cabinets and antenna located in the Road Reserve and includes regulations of specified radiofrequency fields and noise from telecommunication cabinets.

A copy of any of the Standards can be found on the website for the Ministry for the Environment.

**22.1 ISSUES**

**22.1.1** The need to manage the benefits and the technical, locational and operational requirements of infrastructure facilities against the actual and potential adverse environmental effects (including visual and amenity effects).

**22.1.2** Inappropriate subdivision, land use or development in the vicinity of network utilities can lead to adverse effects on the safe and efficient operation, maintenance, upgrading and development of national, regional and local infrastructure.

**22.1.3** Whanganui has a largely untapped potential to develop a range of renewable energy generation options at a domestic or commercial scale. While the benefits of such options should be recognised and their development encouraged, there will be a need to appropriately manage
the potential adverse effect of such activities on the visual amenity and physical environment.

22.2 OBJECTIVES

22.2.1 To recognise and provide for the sustainable, secure and efficient use, construction, operation, maintenance and upgrading of infrastructure facilities as essential to the economic, social, health, safety and wellbeing of the people and communities in the District.

22.2.2 Recognise and provide for the importance of infrastructure facilities including the National Grid to local, regional, and national social and economic wellbeing.

22.2.3 To manage adverse effects on the surrounding environment resulting from the design, construction, upgrading and maintenance of infrastructure facilities.

22.2.4 That the safety, efficiency and effectiveness of infrastructure facilities, is safeguarded and protected from adverse effects of subdivision, land use and development that may compromise their ability to function.

22.2.5 Provide for new and existing renewable energy generation activities, including investigation of new technologies, in the District.

22.2.6 Avoid land use activities and subdivision that could adversely affect (including through reverse sensitivity) the operation, maintenance, upgrading and development of the regionally or nationally significant infrastructure.

22.3 POLICIES

22.3.1 To recognise the benefits provided by network utilities to the economic, social and cultural wellbeing, and the health and safety of the District.

22.3.2 To recognise the following infrastructure is of regional or national importance in the Whanganui District and the benefits derived from these activities:

a. The electricity distribution, transmission networks and all associated substations and other works to convey electricity;

b. Pipelines and gas facilities used for the transmission and distribution of natural and manufactured gas;

c. The road and railway networks;

d. The Whanganui airport;

e. Telecommunication and radio communication facilities;
f. Public or community sewage treatment plants and associated reticulation and disposal systems;
g. Public water supply intakes, treatment plants and distribution systems;
h. Public or community drainage systems, including stormwater systems;
i. The Port of Whanganui;
j. Defence facilities; and
k. The National Grid.

22.3.3 Provide for the establishment, operation, maintenance, upgrading and repair of network utilities to meet the needs of the community, including at a local, regional and national level, in a manner that enables adverse environmental effects to be avoided, remedied or mitigated as far as practicable (including effects on natural, cultural and amenity values).

22.3.4 When assessing the environmental effects of network utilities consider the locational, technical and operational requirements and constraints of network utilities and how any potential adverse effects are to be avoided, remedied or minimised, including through route, site and method selection.

22.3.5 To encourage the co-siting of structures and sharing of network utility channels, corridors and structures to reduce potential adverse visual effects where this is efficient and practicable.

22.3.6 Protect infrastructure facilities in the District from the adverse effects (including reverse sensitivity effects) of inappropriate land use, subdivision and development which compromises the operation, maintenance and upgrading of such infrastructure.

22.3.7 To manage the effects of domestic and commercial energy production to avoid adverse effects on the environment, particularly in terms of landscape, ecology, amenity, noise, traffic and health and safety effects.

22.3.8 Provide for the investigation, establishment, development and upgrading of renewable energy generation activities where the adverse ecological, amenity and reverse sensitivity effects can be minimised.

22.3.9 Encourage infrastructure to be designed, constructed, and able to be maintained in a manner that is (where applicable):
   a. Cognisant of any potential long term health or safety effects on the community.
   b. Integrated with other infrastructure and land uses.
   c. Responsive to local conditions.
   d. Compatible with other network utilities and reticulated infrastructure.
e. Designed and constructed taking into account the effects of climate change.
f. Resilient to natural hazards.
g. Considerate of the short and long term visual effects.

22.3.10 Recognise and provide for the development, operation, maintenance and upgrading of regionally or nationally significant infrastructure.

22.3.11 When managing the effects of regionally or nationally significant infrastructure consider the locational, technical and operational requirements of network utilities and the contribution they make to the functioning and wellbeing of the community and beyond in assessing their location, design and appearance.

22.3.12 When assessing applications for the establishment, operation, maintenance and other physical resources of regional or national importance, significant weight shall be given to the benefits of the facility.

22.3.13 Land use and subdivision activities that would establish, or allow the establishment of, activities sensitive to the effects of existing activities, particularly infrastructure and other physical resources of regional or national importance, shall be avoided, as far as is reasonably practicable.

22.4 RULES

The rules and performance standards in this chapter apply to network utilities across the District. The rules and performance standards of the underlying zones do not apply to network utilities managed in this section unless specifically stated otherwise in Section 22.4 Rules or Section 22.5 Performance Standards. The rules and performance standards set out in the following Plan Chapters apply on a district wise basis and will continue to apply to network utilities unless specifically stated otherwise: Chapter 9 Cultural Heritage, Chapter 10 Natural Environment; Chapter 11 Natural Hazards; Chapter 13 Subdivisions and Infrastructure, Chapter 16 Signage; Chapter 17 Noise and Chapter 18 Hazardous Substances.

Notes:

1. The zone based rules apply to all network utility earthworks and structures where in close proximity to the National Grid, apart from the following network utilities:
   - In a transport corridor;
   - As part of a transmission activity; or
   - For electricity infrastructure.

2. Consents may also be required from the Manawatu-Whanganui Regional Council.
22.4.1 Permitted Activities

The following infrastructure activities are permitted:

a. The investigation, construction, operation, maintenance, repair, upgrading and removal of the following network utilities provided they comply with the performance standards in Section 22.5:

i. Electricity lines (both underground and above ground), line support structures, pole and ground mounted transformers and switchgear for conveying electricity at a voltage up to and including 110kV.

ii. Underground pump stations and pipelines, and ancillary equipment for water supply, the drainage of water or sewage, and necessary incidental equipment.

iii. Underground pipeline operations for the distribution of natural or manufactured gas at a gauge pressure not exceeding 2000 kPa and necessary incidental equipment including pressure reduction and metering installations.

iv. Water and irrigation schemes and all related culverts, drains, irrigation races or other structures for the conveyance of water.

v. Navigational aids and beacons.

vi. Meteorological structures and activities.

vii. Rail, land transport, bridge, culvert and drain construction, upgrading and maintenance, traffic management and control structures, street lighting and street furniture, provided that the above is undertaken in road reserve or an approved designation.

viii. Underground or above ground telecommunication lines masts and antennas, including microwave dishes, with a diameter of 5 metres or less, provided:

   On a Mast that is in:
   o Any rural or manufacturing zones the maximum height is 25 metres and the antennas shall be located within a 5 metre horizontal diameter circle
o All other zones the maximum height is 20 metres and the antennas shall be located within a 1.2 metre horizontal diameter circle

On a Building that is in:
  o The Residential Zone the maximum height is 3.5 metres above the building where it is attached.
  o Any other zones the maximum height is 5 metres above the building where it is attached.

The maximum height of telecommunication facilities excludes lightning rods.

ix. Other telecommunications or radio communication facilities which comply with the standards below or with the performance standards bulk and location requirements of the particular zone in which the activity is located.

x. Soil conservation, erosion control, river control, or flood protection works undertaken by, or on behalf of, a territorial or regional local authority.

xi. The following domestic scale infrastructure:
  o Renewable energy production activities provided that:
    - Renewable energy must be primarily to support the activity occurring on the site.
  o Ham radios and associated support structures.
  o Television and radio antennas and support structures.

b. The operation, maintenance, repair, upgrading and removal of the following network utilities:
  i. Existing pipelines and necessary incidental equipment exceeding 2000 kPa.
  ii. Existing electricity substations.

c. Trimming or removal of any vegetation that is required to maintain safe separation distances or the ongoing efficient operation of the electricity line provided that the activity complies with Chapter 10.

22.4.2 Restricted Discretionary Activities

The following are restricted discretionary activities:

a. Upgrading or replacement of any existing network utility that is not provided for as a permitted or discretionary activity.

  Council restricts its discretion to the following matters:
    i. Any positive effects to be derived from the activity;
ii. Any opportunities to reduce existing adverse effects on sensitive activities;

iii. Health and safety;

iv. Layout, design and materials;

v. Visual effects;

vi. Context and surroundings;

vii. Effects on sensitive natural features;

viii. Effects on natural character;

ix. Effects on historic heritage;

x. Visual, character and amenity effects;

xi. Ecological or biodiversity effects;

xii. Adequacy of methods of mitigation/remediation or ongoing management; and

xiii. Any financial contributions.

b. Any cabinet, standalone mast and associated antenna in road reserve that does not comply with the requirements of the National Environmental Standard for Telecommunication Facilities.

In exercising its discretion, the Council shall be limited to the standards in the National Environmental Standard with which that activity fails to comply.

c. Activities associated with commercial scale renewable energy generation investigations, construction and operation.

Council restricts its discretion to:

i. The positive effects of the proposal;

ii. Traffic and vehicle movement effects;

iii. Natural hazards;

iv. Compliance with NZS 6808:2010 Acoustics Wind Farm Noise;

v. Visual effects;

vi. Ecological effects;

vii. Impact on:

1. Sites of significance for tangata whenua.

2. Historic heritage.

4. Landscape values.
5. Amenity values.
6. Aviation, navigation & existing network utilities.

viii. Electromagnetic effects;
ix. Reserve sensitivity effects; and
x. Cumulative effects of all of the above matters.

22.4.3 Discretionary Activities
The following are discretionary activities:

a. The construction, alteration or addition to the following structures:

i. New electricity substation.

ii. Depots for the maintenance, upgrading, alteration, or security of lines or pylons associated with the National Grid.

iii. Transformers and electricity lines and support structures for conveying electricity at a voltage exceeding 110kV.

iv. New pipes for the transmission of natural or manufactured gas at a gauge pressure exceeding 2000 kilopascals and necessary incidental equipment.

v. Any other utility structure or activity not listed as a permitted or restricted discretionary activities.

22.5 PERFORMANCE STANDARDS

22.5.1 Earthworks
a. Where the construction, maintenance, upgrade or removal of a network utility involves disturbance to the ground, at the completion of the work the ground shall be reinstated to the same or similar condition existing prior to commencement of the work unless covered by a building, structure or landscaping.

b. All network utilities are exempt from the earthworks performance standards in Chapter 14, except where the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011 apply.

22.5.2 Signage
All activities shall comply with the performance standards in Chapter 16.

22.5.3 Noise
All activities shall comply with the performance standards in Chapter 17.
22.5.4 Lighting

Any artificial lighting system shall ensure that its use does not result in an added illuminance, over and above the measured ambient level in excess of 10 lux measured at the boundary of any residentially zoned site.

22.5.5 Structures

All above ground structures shall comply with the ‘structures’ performance standards for any zone in which they are located except that:

a. Structures provided for in 22.4.1(a)(i) and 22.4.1(a)(viii) above and antennas and aerials shall not have to comply with any performance standards that control the height and setback of structures or site coverage standards.

b. Structures with a floor area not exceeding 10m² and a height not exceeding 5 metres shall not have to comply with any performance standards that control the height and setback of structures or site coverage standards.

22.5.6 Undergrounding of Lines and Pipes

The following standards apply to lines and pipes but not to incidental equipment which require an above ground location:

a. Lines shall be located underground except in the following circumstances:

i. Where they traverse any rural zones or roads in a rural zone; or

ii. Where it is not practicable due to geological topographical, technical or operational constraints; or

iii. The lines are part of any maintenance, repair, replacement or upgrading of existing overhead lines. (‘Upgrading’ for the purposes of this condition means any increase in the carrying capacity, efficiency or security of lines or cables, or any new overhead lateral customer connections from existing overhead lines, in either case, utilizing the already existing support structures or structures of a similar scale and character); or

iv. The lines shall be located on an existing overhead network; or

v. Extensions to the existing overhead network where the extension involves no more than 4 additional single pole support structures or is required for the purposes of security of supply.

b. All pipes for network reticulation shall be located underground.
c. Where lines are to provide temporary links, connections or services, they may be above ground for up to three consecutive months.

22.5.7 Domestic Scale Renewable Energy Generation

The following standards apply to domestic renewable energy production:

a. Activities shall comply with the zone rules, except in the following circumstances:
   i. The maximum height can be breached by up to 1 metre.
   ii. The equipment can breach the Height Recession Plane if exempt in the underlying zone rule.

b. Only one turbine shall be permitted per site.