SECTION 32 REPORT
Network Utilities

Te Kaunihera-ā-Rohe o Ngāmotu
New Plymouth District Council

1 Executive Summary

Network utilities are utilities that form part of a network, commonly referred to as infrastructure. Overall, network utilities are common place and are expected throughout the District to support settlements and enable people and communities to meet their social, economic and cultural needs.

The Operative District Plan has an objective and policies to manage network utilities, with rules for certain types of network utilities (e.g. substations, communication facilities, electricity lines), and buildings and structures that are duplicated in each Environment Chapter. It also has a requirement for habitable buildings to be setback 22 metres from high voltage transmission lines. This approach is ineffective as the policy framework has limited scope and is focussed on ensuring the health and safety of the community. It does not recognise the national, regional and local benefits of network utilities, nor does it specifically recognise the operational and functional requirements of network utilities or provide for their upgrade and maintenance. Further, it does not sufficiently protect network utilities from potential reverse sensitivity effects, nor does it give effect to the Taranaki Regional Policy Statement or the National Policy Statement for Electricity Transmission (NESETA).

The resource management issues relating to network utilities are:

- Network utilities have important functions and enable social, economic and cultural wellbeing, but the adverse effects of network utilities on the environment need to be avoided, remedied or mitigated.
- There are functional and operational needs of network utilities that need to be recognised.
- Other activities can constrain or compromise the efficient operation, maintenance, repair or upgrading of network utilities.
- Need to ensure that network utilities are coordinated with and meet the needs of existing and planned activities and enable the growth, development economic well-being of the district.

The key changes introduced for network utilities in the Proposed Plan are:

- Objectives and policies that provide direction and certainty to plan users on the outcomes expected for network utilities.
- Provisions that provide for the effective operation, maintenance, upgrading, and removal of network utilities, while managing adverse effects, and protects significant network utilities (the National Grid and Gas Transmission Pipelines) from adverse reverse sensitivity effects of incompatible activities.
- Rules that provide certainty to network utility operators and community about the type and scale of activities that can occur as permitted activities, and provide increased flexibility to network utility operators to reflect emerging technologies.
- Activities requiring resource consent are limited to those that have potential for adverse effects on the environment, which enables a case-by-case assessment, including for certain types of network utilities located in overlay areas.
- The objective and policies give effect to the NPSET, are consistent with NESET and NESTF, and are aligned with best-practice in other second generation plans throughout New Zealand.

The clear decision-making framework of the Proposed District Plan is more likely to lead to result in consistent outcomes and will address the resource management issues associated with network utilities.

2 Introduction and Purpose

This report contains a section 32 evaluation of the objectives, policies, and methods relating to Network Utilities in the Proposed New Plymouth District Plan. The report sets out the trends and issues for this topic, provides an overview of the statutory and policy context, and specific consultation on Network Utilities. The report also includes a review of the existing Plan provisions and evaluation of alternatives to determine the most appropriate way(s) to achieve the purpose of the Resource Management Act 1991 (the RMA) in relation to Network Utilities.

Overall, network utilities are common place and are expected throughout the District to support settlements and enable people and communities to meet their social, economic and cultural needs. Therefore, the Proposed District Plan should recognise the critical ongoing function network utilities have within the District, and provide for their ongoing operation, maintenance, and upgrade while managing the adverse effects of network utilities on surrounding land-uses and the environment. It should also ensure that efficient operation, maintenance, repair or upgrading of network utilities is not constrained or compromised by other activities.

This Section 32 report covers the provisions in the Network Utilities chapter that apply to the zones throughout the District. Other closely related sections to consider are:

- Transport (provisions to provide for the transport network, including design standards)
- Energy (provisions to provide for and manage the effects of renewable and non-renewable energy activities)
- Noise (provisions to manage noise and to locate, design, construct and operate sensitive activities to manage noise and health and safety effects in close proximity to the state highway, railway, airport, port and Major Facilities)
- Special Purpose – Port Zone (provisions to provide for and manage the effects of activities at the Port)
- Special Purpose – Airport Zone (provisions to provide for and manage the adverse effects of activities at the Airport).
- Subdivision (provision for infrastructure at the time of subdivision)

The evaluation for the provisions in the abovementioned chapters is set out in the Section 32 evaluation report specific to each topic. This Network Utilities section 32 report focusses on the provisions in the Network Utilities chapter. The Proposed District Plan contains additional network utility rules within overlays (e.g. Outstanding Natural Features and Landscapes, Notable Trees, Heritage Buildings or Items, Natural Hazard Areas, etc.). The section 32 evaluation of the additional network utility rules that apply within overlays are considered and evaluated in the section 32 report for the relevant overlay topic.

3 Statutory and Policy Context

3.1 Resource Management Act

The RMA sets out in Section 31 the functions of territorial authorities. The key function for the district council is the integrated management of the use, development, or protection of land and associated natural and physical resources of the district. When referring to "natural and physical resources" it is important to recognise that the RMA includes land, water, air, soil, minerals, and energy, all forms of plants and animals (whether indigenous to New Zealand or introduced), and all structures.

Section 5 sets out the purpose of the RMA, which is to promote sustainable management of natural and physical resources, and is explained more in Section 5(2):

In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety.

Section 6 of the RMA specifically requires that the Council recognise and provide for matters of national importance. There are no Section 6 matters of national importance that are directly relevant to the proposed Network Utilities provisions. However, the overlay topics (e.g. outstanding natural features and landscapes and indigenous biodiversity) address matters of national importance and contain network utility provisions – reference should be made to the section 32 reports for those topics.

Section 7 of the Act requires the Council to have particular regard to the following matters:
(b) The efficient use and development of natural and physical resources.
(c) The maintenance and enhancement of amenity values.
(f) Maintenance and enhancement of the quality of the environment.

Section 8 of the RMA requires the district council to take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). Tangata whenua, through iwi authorities have been consulted as part of the District Plan review process. This feedback has informed the section 32 evaluation, and the obligation to make informed decisions based on that consultation is noted.

All of the above matters are relevant when considering network utilities and ensuring their safe, efficient, and sustainable development, operation, maintenance, and upgrading, while also managing potential adverse effects on the environment.

3.2 National Policy Statement on Electricity Transmission 2008

The National Policy Statement on Electricity Transmission (NPSET) came into force in 2008 and recognises the national significance of the electricity transmission network (being the National Grid owned and operated by Transpower).

The NPSET provides the following direction for the District Plan:

- Existing assets (e.g. transmission lines) should be able to be reasonably and effectively operated, maintained, upgraded and developed (Policies 2 and 5).
- Technical and operational constraints of the network should be recognised (Policy 3).

- For new transmission or major upgrades, decision-makers must recognise and provide for the effective development of the network and consider how the route, site and method selection have avoided, remedied or mitigated adverse effects (Policies 2 and 4).
- For major upgrades, where possible, existing adverse effects, including effects on sensitive activities, should be reduced (Policy 6).
- In urban environments, adverse effects on urban amenity should be minimised (i.e. reduced to the extent feasible), and adverse effects on town centres and on areas of high recreational value or amenity and existing sensitive areas should be avoided (Policy 7).
- In rural environments, planning and development of the transmission system should seek to avoid adverse effects on outstanding natural landscapes, areas of high natural character, areas of high recreation value and amenity, and existing sensitive activities (i.e. avoided where possible) (Policy 8).
- Policies 10 and 11 guide the management of activities undertaken by other parties, and the associated potential adverse effects on the transmission network. Policy 10 requires decision makers to manage activities to ensure that the operation, maintenance, upgrading and development of the network is not compromised and avoid reverse sensitivity effects on the transmission network. Direct effects of activities which may include physically obstructing maintenance access, earthworks that may undermine support structures or reduce safe clearance distances, and activities creating electrical safety hazards also have to be managed to give effect to Policy 10.
- Identify the National Grid on the Planning Maps.

3.3 National Planning Standards

Released in April 2019, the purpose of the National Planning Standards (planning standards) is to improve consistency in plan and policy statement structure, format and content.

The standards were introduced as part of the 2017 amendments to the Resource Management Act 1991 (RMA). Their development is enabled by sections 58B–58J of the RMA. They support implementation of other national direction such as national policy statements and help people to comply with the procedural principles of the RMA.

As discussed in the Overview Report, the Proposed District Plan will give effect to the planning standards. The District Plan Structure Standard and the District Wide Matters Standard includes direction that the provisions for infrastructure shall be located within a chapter under the 'Energy, Infrastructure and Transport' heading. MfE Guidance on the planning standards states that:

When there are provisions that relate to two topics and there is not a clearly dominant District-wide matters chapter the council can determine the best location for these provisions, ***depending on the primary outcomes sought.*** *For example, provisions that relate to signage on heritage buildings. These could be located in either a Historical heritage chapter or Signs chapter. In this case, the council* ***can choose the most logical location*** *but should provide cross-referencing from the provisions to the other relevant district-wide chapters so that they can be identified from either location.*

As such all network utility provisions are located in the 'Network Utilities' chapter under the 'Energy, Infrastructure and Transport' heading, except where the primary outcome sought from a proposed provision is to protect values of an identified feature or overlay, in which case the provision is located in the relevant overlay chapter.

The proposed network utility provisions also use the standardised definitions from the planning standard including network utility operator, functional need, operational need and structure, among other applicable standardised definitions.

3.4 National Environmental Standards on Electricity Transmission Activities 2009

The National Environmental Standards on Electricity Transmission Activities (NESETA) assists councils to implement some aspects of the NPSET policies relating to the existing high voltage transmission network. The NESETA sets out the regulations for the operation, maintenance, and upgrade of existing high voltage electricity transmission lines. Existing transmission lines are transmission lines that were operating, or able to be operated, at 14 January 2010. It specifies that electricity transmission activities are permitted, subject to terms and conditions. Activities that are permitted include:

- Operating existing transmission lines.
- Maintaining conductors (wires) and adding a limited number of conductors provided limits on electric and magnetic fields are not exceeded.
- Signs on transmission line support structures (within specified size limits).
- Strengthening, upgrading and replacing support structures and foundations.

All other electricity transmission activities and any new transmission activities are to be considered and managed through the District Plan.

3.5 National Environmental Standards for Telecommunications Facilities 2016

The National Environmental Standards for Telecommunications Facilities (NESTF) provides national standards for telecommunication facilities and their support structures located within the road reserve. The standards do not provide nationalised methods for facilities within residential, commercial, rural, or industrial zones, other than radio frequency limits and measures. Regional and district plans generally cannot provide alternative rules that are either more lenient or restrictive than a National Environmental Standard.

The NESTF seeks to provide nation-wide consistency in regulations for the following activities:

- Cabinets in the road reserve, outside the road reserve and on buildings.
- Antennas on existing poles in the road reserve.
- Replacement, upgrading and co-location of existing poles and antennas outside road reserve (with different conditions on residential and non-residential areas).
- New poles and antennas in rural areas.
- Antennas on buildings (above a permitted height in residential areas).
- Small-cell units on existing structures.
- Telecommunications lines (underground, on the ground, and overhead).

3.6 Regional Policy Statement

District Plans must give effect to the Regional Policy Statement. The Taranaki Regional Policy Statement 2010 (RPS) contains a section on Infrastructure which provides direction on network utilities.

The key directions from the RPS for the District Plan are as follows:

- INF OBJECTIVE 1 To provide for the continued safe and efficient operation of the region's network utilities and other infrastructure of regional significance (including where this is of national importance), while avoiding, remedying or mitigating adverse effects on the environment.
- INF POLICY 1 Provide for the efficient and effective establishment, operation, maintenance, and upgrading of network utilities and other physical infrastructure of regional significance (including where this is of national importance) and provide for any adverse effects of their establishment to be avoided, remedied or mitigated as far as is practicable.
- INF POLICY 2 The adverse effects of subdivision, use, and development on the safety, efficiency, operation, maintenance, and upgrading of the region's network utilities and on other physical infrastructure of regional significance (including where this is of national importance) will be avoided or mitigated (i.e. avoid or mitigate reverse-sensitivity effects).
- INF POLICY 3 Buffer corridors shall be identified so that development incompatible with the National Grid is not located within such corridors and thereby ensuring reverse sensitivity effects are avoided.
- INF POLICY 4 New land use generated by growth and development and the associated local, regional, and national infrastructure to service that growth should be integrated and planned alongside one another to avoid either constraints being imposed on necessary growth and development by the lack of supporting infrastructure to avoid unsustainable demands being placed on infrastructure to meet new growth.

Given the above key directions, the network utility provisions should provide for the safe and efficient operation of network utilities, while managing adverse effects of them, and on them. The RPS also states District Councils may wish to consider the following methods to give effect to the policy direction:

- INF METH 9 Include in district plans, appropriate provisions (including designations) for network utilities and other infrastructure of regional significance (including where this is of national importance), and the procedures to be followed when proposing to undertake activities in proximity to these network utilities.
- INF METH 11 Recognise the maintenance of existing infrastructure, including the trimming and removal of plants where these pose a risk to the continuation of infrastructure operations in riparian margins, as an essential component for the supply of electricity to communities.
- INF METH 16 Encourage the use of corridors for public network utilities where feasible and practical and where the use of corridors does not conflict with specific coverage objectives of a utility provider so as to contain the geographic effects on amenity values of such utilities to a defined and limited area. The use of corridors should also recognise that conflicts can occur between various utilities.
- INF METH 17 Take into account current infrastructure corridors in resource management decision making; avoid, remedy or mitigate any incompatible use or

activity affecting those corridors and include appropriate protection and recognition of existing infrastructure corridors in district plans and on planning maps.

- INF METH 18 When considering an application for resource consent, notice of requirement or a change or variation to a district or regional plan that is likely to affect a transmission corridor, local authorities shall consult with or notify the operator of the National Grid.
- INF METH 19 Give effect to the New Zealand Code of Practice for Electrical Safe Distances (NZECP34:2001) prepared under the Electricity Act 1992, when establishing rules and considering applications for building structures and other activities near overhead electric lines, support structures or conductors.

3.7 Iwi Environmental Management Plans

For the purposes of the District Plan Review, Iwi Environmental Management Plans must be taken into account under Section 74 (2A) of the RMA. The following iwi management plans are relevant:

3.7.1 Taiao, Taiora: An Iwi Environmental Management Plan for the Taranaki Rohe (2018) (lodged with Council) which does not include policies directly relevant to network utilities, but includes:

- Objectives for sustainable land management.
- A policy that Taranaki Iwi will support effective public transport systems, walking and cycling initiatives and the development of associated infrastructure.
- Policies that Taranaki iwi will not support land uses that cannot demonstrate they will not adversely affect Ranginui, Papatūānuku, Taranaki Mounga, Tāne, Tangaroa-Ki-Uta and Tangaroa-Ki-Tai.

3.7.2 Tai Whenua, Tai Tangata, Tai Ao, Te Atiawa Iwi Environmental Management Plan (2019) (in draft, not yet lodged with Council) which includes:

- Policy to require that district councils acknowledge and provide for interests of Te Atiawa in coastal land development activities, including but not limited to avoiding increased pressure on existing water resources and community infrastructure.
- Objective that water, stormwater and waste water solutions are co-designed with Te Atiawa to ensure Te Atiawa values associated with waterbodies impacted at the time of subdivision are protected and enhanced
- Guidelines for new developments should incorporate measures to minimise pressure on existing water resources, community water supplies and infrastructure
- Require certain methods to facilitate engagement with Te Atiawa where a proposal may have actual or potential adverse effects on cultural values and interests.

3.7.3 The Maniapoto Iwi Environmental Management Plan (Ko Tā Maniapoto Mahere Taiao) (2016) (under revision, not yet lodged with Council), which includes an Infrastructure section, comprised of:

- Recognition that historically, the people of Maniapoto have contributed significant land for public infrastructure services for local, regional and national benefit.
- Objective to avoid adverse effects of infrastructure on the relationship of Maniapoto with significant sites and resources, and policy for Maniapoto to participate at the highest level of decision-making for infrastructure development

to enhance the relationship of Maniapoto with significant sites and resources. An associated 'action' that Maniapoto values, interests and perspectives are appropriately considered and incorporated in the planning and development of all infrastructure, and in the on-going maintenance of existing infrastructure.

- Policy that electricity transmission and distribution does not result in negative effects on the mauri of the environment.
- Avoidance of activities and uses that adversely affect significant cultural, spiritual, natural and ecological landscapes, features or locations in the Maniapoto rohe, and Maniapoto relationships with those landscapes, features or locations are maintained or restored.

3.7.4 Ngāti Mutunga Iwi Environmental Management Plan (2014 update) (under revision, not yet lodged with Council), which includes a section on subdivision, development and changing land use section (page 38). This section recognises that subdivision is more than drawing lines on the map; it enables changes in land use, which may result in damage to the environment and our cultural values. This section includes and objective and policies to:

- Ensure that infrastructure structures and activities avoid adverse effects on wahi tapu and sites of significance, the environment and the health and wellbeing of the people.
- Require recognition of and compensation for the use of Ngāti Mutunga air and soil space for infrastructure works.
- Encourage location of wires which generate electromagnetic fields as far from houses as is practicable.
- Oppose the erection of pylons and cell phone towers in areas where they may be visually intrusive.
- Require compliance with best practice and health guidelines for electromagnetic fields.

The direction in these Iwi Management Plans, in relation to network utilities, has been taken into account in the evaluation below.

3.8 Other Legislation and Policy Documents

There are a number of other pieces of legislation and regulations that are relevant to Network Utilities, and have been considered in preparing this Proposed Plan. These are:

- The Telecommunications Act 2001 regulates the supply of telecommunications services.
- The Electricity Act 1992 provides for the regulation, supply and use of electricity in New Zealand, including the health and safety of members of the public, and the prevention of damage to property.
- The Gas Act 1992 provides for the regulation, supply, and use of gas in New Zealand, and also regulates the gas industry, protects the health and safety of members of the public, and promotes the prevention of damage to property in connection with supply and use of gas.
- The New Zealand Electrical Code of Practice for Electrical Safe Distances 2001 sets minimum safe electrical distance requirements for overhead electric line installations and other works associated with the supply of electricity from

generating stations to end users. The minimum safe distances have been set primarily to protect persons, property, vehicles, and mobile plant from harm or damage from electrical hazards.

- The Utilities Access Act 2010 requires utility operators and corridor managers to comply with a national code of practice that regulates access to transport corridors and provides for the making and administration of that code.
- National Code of Practice on Utilities' Access to the Transport Corridors 2011 sets out the processes and procedures for:
  - Utility operators to exercise right of access to the road corridor for the placement, maintenance, improvement, and removal of utility structures.
  - Corridor Managers to exercise their right to apply reasonable conditions on working in the corridor.
  - Managers of railway and motorway corridors to exercise their discretion to grant rights of access to utility operators.
- The Electricity (Hazards from Trees) Regulations 2003 (referred to as the 'Tree Regulations') define a safe separation distance for trees growing under overhead lines. They also specify who is responsible for ensuring separation distances are maintained; place potential liability on tree owners if the Regulations are breached; and provide an arbitration system to resolve disputes relating to tree trimming.

3.9 Local Policies, Plans and Strategies

3.9.1 New Plymouth District Strategic Framework

Tapuae Roa–Make Way for Taranaki: *Taranaki Regional Economic Development Strategy,* August 2017 (Tapuae Roa) is a culmination of work undertaken by the district councils and regional council of Taranaki in partnership with Ngā Iwi o Taranaki. It is designed to feed into the Long-Term Plans of all the councils in the region, and influence public and private sector investment decision-making on future activities.

3.9.2 The New Plymouth District Blueprint

First adopted in June 2015, the Blueprint is a 30-year spatial plan that provides eight key directions for Council. All of the key directions and associated high-level initiatives in the Blueprint are relevant to the network utility chapter, which were considered during the review of the provisions. These are:

- Nature – enhance the natural environment with biodiversity links and clean waterways.
- Communities – strengthen and connect local communities.
- Citizens – enable engaged and resilient citizens.
- Growth – direct a cohesive growth strategy that strengthens the city and townships.
- Economy – secure and strengthen the rural economy, industry, the port and airport.
- Talent – grow new economies that attract and retain entrepreneurs, talented workers, and visitors.
- City Centre – champion a thriving central city for all.
- Destination – become a world class destination.

4 Context, Research and Trends

4.1 Operative District Plan Approach

4.1.1 Context

The Operative District Plan became operative in August 2005. As described in the Overview Report, the Operative Plan is an effects-based plan and standards are used within each environment area to determine what is appropriate based on the character and amenity values that the community seeks to protect, as opposed to listing types of activities that are permitted, or are subject to some type of consent application.

Under the Operative District Plan, provided an activity can meet the required standards, generally there is no reason to preclude it from a particular environment area even if a particular activity is not generally associated or anticipated within the Environment Area. Where an activity does not meet the standards, applicants are required to apply for resource consent.

Given this effects-based framework, the Operative Plan does not have a chapter that specifically manages Network Utilities related activities, rather rules and standards are repeated in each Environment Area.

4.1.2 Plan Changes

Since becoming operative in 2005, one plan change was investigated to ensure consistency with the National Policy Statement for Electricity Transmission; this plan change was not progressed, as priority was placed on other plan changes. As such, there are no plan changes relating to network utilities that have been introduced since the District Plan become operative.

4.1.3 Management Strategy

Issue 3 in the 'Management Strategy' of the Operative District Plan contains the framework to manage the issue of "adverse effects on health and safety from public works and Network Utilities". The Operative District Plan seeks to address this issue through Objective 3 and Policy 3.1, as set out below:

Objective 3 To ensure public works and network utilities do not adversely affect the health and safety of the community.

Policy 3.1 The establishment, operation, maintenance and upgrading of public works and network utilities should not compromise public health or safety.

In addition, there are general objectives and policies relating to character and amenity values for each 'Environment Area' that would apply to network utilities.

4.1.4 Rules and Standards to Manage Effects of Network Utilities

The Operative District Plan generally provides for network utilities as Permitted activities, although where a network utility does not meet a relevant standard for a permitted activity, they generally default to Discretionary activity status.

The planning maps also identify the district's 'energy pipeline corridors' and 'high voltage electricity transmission lines'.

Rules and standards are repeated in each Environment Area, and generally provide for:

- Erection of structures or buildings in each Environment Area (regardless of their purpose). For example:
  - In the Rural Environment Area, structures up to 15 metres height, or 10 metres divided by the 'average width' of the 'structure' are permitted, structures between 15 metres and 17 metres in height are Restricted Discretionary, or in excess of 17 metres is a Discretionary activity.
  - In the Rural Environment Area, buildings up to 10 metres height are permitted, buildings between 10 metres and 12 metres are Restricted Discretionary, or in excess of 12 metres is a Discretionary activity.
  - In Residential Environment Areas, structures up to 10 metres height, or 7.5 metres divided by the 'average with' of the 'structure' are permitted. Any structure in excess of these requirements is a Restricted Discretionary activity.
  - In Business Environment Areas, structures up to 20 metres height are permitted subject to maximum dimensions of any attachments. Any structure in excess of these requirements is a Restricted Discretionary activity.
- Installation and operation of transformers, lines, and necessary equipment for conveying electricity are permitted in each Environment Area, subject to conditions that manage the maximum electric field strength and maximum magnetic flux density. Any activity not meeting these standards is a prohibited activity.
- Installation and operation of communication facilities are permitted in each Environment Area, subject to standards that manage the maximum electric field strength. Any activity not meeting these standards is a prohibited activity.
- Erection of substations and switching stations are generally permitted in each Environment Area, subject to maximum standards on the size and scale of buildings (maximum $10m^2$ in area and 3m in height), and standards for the provision of landscaping or screening. Any activity not meeting these standards is a restricted discretionary activity.

4.1.5 Rules and Standards to Manage Effects on Network Utilities

To manage potential reverse sensitivity effects on network utilities, there are permitted activity rules for each Environment Area requiring habitable buildings to be setback a minimum of 22 metres from the centre line of a high voltage transmission line. Any habitable building located closer than 22 metres is a restricted discretionary activity, with matters of discretion restricted to:

The extra level of electric magnetic field (EMF) exposure residents in the HABITABLE BUILDING encounter due to a reduced separation distance (refer to International Commission on Non-Ionizing Radiation Protection Guidelines).

2) The ease of operational access to the LINES by staff and contractors responsible to the NETWORK UTILITY operator to allow for upgrades and maintenance.

3) The integrity of the electrical supply provided by the LINE

The Operative District Plan explains the reason for this approach:

Formulating a separation distance between electricity lines and other habitable buildings can provide mutually beneficial outcomes. Separation distances not only help protect community health and safety but they also allow network utility operators access to maintain their facilities.

There are no rules for earthworks, subdivision of land, or other activities (such as sensitive activities) on land containing a high voltage transmission line.

The energy pipelines are shown on planning maps but there are no rules associated with new activities locating in close proximity to the energy pipeline. The District Plan recognises that the pressure of pipelines is managed by existing legislation, regulation and standards (to ensure that are constructed in a manner that ensures they are safe and will not adversely affect public health).

4.2 Other Methods

In addition to the Operative District Plan approach, the following methods of implementation are also used:

- Designations to authorise and protect public works (where network utility operators are requiring authorities).
- Conditions on resource consents to ensure that public health and safety is not unreasonably comprised and manage adverse effects.
- For information purposes, use project information memorandums (PIMs) and land information memorandums (LIMs) to identify for the community details about energy pipelines.
- Other legislation and the use of industry guidelines and national standards when assessing resource consents.

The District Council also administers and enforces the following National Environmental Standards in relation to network utilities:

- NESETA which details regulations for activities relating to the maintenance and upgrading of electricity transmission activities.
- NESTF which details standards for certain new and existing telecommunication facilities and their support structures.

4.3 State of the Environment

4.3.1 Network Utilities in New Plymouth

The New Plymouth District is generally well connected and serviced, with network utilities of varying scale and significance. Some network utilities are nationally and regionally significant, and are a notable feature of the District. For example, First Gas owns and operates approximately 2,500kms of high-pressure gas transmission pipelines, and more than 4,800kms of gas distribution networks across the North Island – many of these pipelines originate and are supplied by gas from the New Plymouth district. The National Grid lines (electricity transmission) are also significant, with 220kV and 110kV lines and associated circuit steel towers, and substations at Port Taranaki, Carrington Street, Huirangi, and Motunui.

Locally significant and small-scale utilities are those that service each town and settlement, such as, electricity distribution, communications, water supplies, sewage, and stormwater networks. For example, Chorus owns and operates the local access telecommunications network including fixed line infrastructure, exchanges, and microwave transmission sites. These services are essential for personal and business communications, wireless data transfer, linking financial institutions to convey critical

financial transaction data, fire and burglary monitoring and control facilities, and emergency services communications.

Powerco owns and operates the electricity distribution network and has recently undertaken several projects to maintain and upgrade its networks. These include:

- Cable-laying project across New Plymouth from Motorua to upper Vogeltown, involving 9.2km of trenching, the laying of ducting and installation of cables to connect substations at Motoroa and upper Carrington Street, and upgrading of the two substations (between 2017-2019).
- Replacing approximately 700m of electricity cables serving the New Plymouth CBD to improve the resilience of the network, which involves trenching from Huatoki Lane, along Ariki Street, Egmont Street, and King Street to Dawson Street.
- Upgrading the network that supplies electricity to Urenui, Uruti and to the foot of Mt Messenger, which involved pole replacements and installing approximately 24 km of new conductor.

New Plymouth's water supply and wastewater network, including associated pipelines and facilities, are essential services that keep communities healthy and economically viable, and maintain safe environments.

These network utilities by their nature are dispersed throughout the District, and may have fundamental locational, technical, and operational constraints and requirements. For example, the location of telecommunication cabinet is dependent on network connectivity and proximity to existing telecommunication services (i.e. underground telecommunication ducting in the road reserve).

Network utilities typically include buildings, poles, overhead wires, pylons, pipes or antennas, which may have an adverse visual impact depending on their location, scale, design, and/or proximity to other land-use activities. Many of these activities are located within road reserves in highly modified environments. Conversely, network utilities may also involve few structures and have limited visual impact, such as underground power and telecommunications lines but the land disturbance required to install them can have adverse effects on special features such as wāhi tapu sites. Where significant new reticulation or distribution lines are required, they should be located as far as possible within existing corridors, to reduce potential adverse effects on the environment.

Network utilities in New Plymouth are generally already well-established and most future development involves maintenance, upgrades, and additions to existing networks.

4.3.2 Reverse Sensitivity Effects on Network Utilities

Where incompatible activities have been allowed to establish too close to certain regionally significant infrastructure there is increased exposure to or risk of adverse effects on the effective ongoing operation of network utilities.

An example is incompatible activities establishing in close proximity to existing high pressure gas transmission pipelines, which carry hazardous substances. The high-pressure gas pipelines (referred to above) were designed and constructed between 1968 and 1975 in the Taranaki region in accordance with the relevant standards applicable at the time, and designed for the environment within which they were placed

at the time. For example, the pipelines placed in urban areas with denser populations and more intense land uses had different specifications from those used in rural areas with low populations and rural land uses, when rural areas are developed for urban purposes (e.g. housing, industrial development) carries a number of threats to pipelines designed for rural land, including as a result of excavation/disturbance on or near the pipelines, unacceptable soil loading, vibrations from heavy machinery, electromagnetic interference, buildings being placed too close to pipelines, restricted access to pipelines, the presence of hazardous facilities and substances and so on. Urbanisation also changes the risk profile of the pipelines in the event of an incident. The pipelines were not originally designed to mitigate against these risks.

There are various regulations that apply specific standards for the pipeline operator to comply with, including for the design, construction, operation, maintenance and suspension of the high-pressure pipeline network (e.g. the Health and Safety in Employment (Pipeline) Regulations 1999). However, changes in land use from those for which the pipeline was designed, may introduce the need for design and/or operational changes to ensure any ongoing safety obligations can be achieved.

Other examples are dwellings close to a wastewater treatment plant, which increases the potential for complaints about objectionable odour, or new dwellings, sensitive activities or earthworks establishing in close proximity to high voltage electricity transmission lines which can lead to the accumulation of dust on conductors, risk to structural integrity of pylons, reduction in safety distances or public safety generally, or restricted access for maintenance.

Subdivision layout can also resulted in inappropriate boundaries that dissect the National Grid or pipeline corridors, which causes the isolation of sections of the network utility which become inaccessible and it can also increase unauthorised activities (such as clearance and safe separation distances). If network utility operators are unable to access their lines and structures, the ability to maintain and operate the network utility safely is significantly compromised.

As such, there is a need to protect some network utilities from the above-mentioned reverse-sensitivity effects, particularly those that are of national or regional significance and when there are higher consequences resulting from inappropriate activities locating in close proximity to them.

4.3.3 Nation-wide trends in planning for Network Utilities

There has been considerable variation between District Plans Nation-wide in terms of how maintenance and upgrading of the National Grid is provided for, and how the installation of telecommunication antenna, masts and cabinets (or masts) in the road reserve are addressed and controlled. This makes the process of obtaining resource consent and building or upgrading the network utilities time-consuming, expensive and inconsistent for network utility operators seeking to install or upgrade network utilities across several local authority areas.

In response to this, Central Government has introduced greater policy guidance through the NPSET and introduced National Environmental Standards for Telecommunication Facilities (2008) (NESTF) and the National Environmental Standards for Electricity Transmission (2009) (NESET). These national standards provide clarity and certainty across New Zealand about what is permitted and what continues to be managed through existing District Plans.

4.3.4 Resource Consent Trends/Data

The Operative District Plan provisions are 'effects-based' (with many network utilities considered under the general provisions for 'structures' or 'buildings' alongside other activities), therefore it is difficult to source precise data on the number of resource consent applications received in relation to network utilities. However, the following trends have been observed over the life of the Operative District Plan:

- The types of resource consent applications received in relation to network utilities are variable, these can range from a land use consent for a small-scale telecommunications facility to large scale applications such as First Gas Maui pipeline realignment.
- As the maximum height standards are set at a relatively low level (e.g. 15 metres for structures in the Rural Environment Area), often network utilities can infringe the maximum height standards for buildings or structures to achieve greater coverage (e.g. telecommunications antenna and associated support structures).
- Due to the effects-based nature of the plan, the reasons for resource consent for network utilities are often related to proximity to wāhi taonga and network utilities within overlay areas.
- Given the Operative District Plan does not specifically provide for maintenance or upgrades to existing network utilities, there is often uncertainty regarding the activity status of these types of activities (e.g. when the existing structure exceeds the height standards and the replacement structure is marginally higher), sometimes network utility operators rely on existing use rights.

In relation to the high voltage transmission lines, two resource consent applications have been received over the past 10 years for a habitable building within 22m of a high voltage transmission line, including one resource consent application in the Rural Environment Area (in 2008), and one resource consent application in the Residential Environment Area (in 2016). Generally, there has not been significant pressure for residential development in close proximity to the high voltage transmission lines.

4.4 Effectiveness of the Operative District Plan Approach

The effects-based approach of the Operative District Plan approach is not considered effective as it is out-of-date and can lead to inconsistent outcomes. The Operative District Plan only lists certain network utilities (e.g. substations, electricity lines, and communication facilities), meaning other types of network utilities are covered by the general rules for erection of a building or structure, and associated standards. This often means the activity status for different types of network utilities is unclear for plan users. The following issues have been identified in the use, interpretation, and implementation of current network utilities provisions:

Issue	Comment	Response
The policy framework is limited in scope (it relates only to ensuring the health and safety of the community)	The policy framework does not recognise the importance of network utilities or address the broader management of effects of network utilities, and/or effects of land-uses on network utilities. The general amenity and character policies for the underlying Environment Area are relied upon for guidance. The policy framework should	Separate network utilities chapter. Specific, detailed objective and policy framework for network utilities

Issue	Comment	Response
	recognise the benefits of network utilities for communities, and also consider their operational and technical requirements.	
Recognition of the operational and functional requirements of network utilities	The Operative District Plan does not specifically recognise the operational and functional requirements of network utilities. The Operative District Plan does not provide flexibility to recognise these requirements (e.g. applying the same maximum height standards to network utilities and all other structures, which are restrictive). This results in high costs for network utility operators.	Recognition of the operational and functional need and operational needs of network utilities in revised plan framework Maximum bulk, scale and height standards that provide greater flexibility for network utilities while also managing potential adverse effects
Effects-based plan does not explicitly provide for the operation, maintenance or upgrade of existing network utilities	The Operative District Plan objective, policy and rule framework does not specifically provide for the upgrade and maintenance of network utilities, which means the activity status of these activities is unclear (e.g. replacement poles), and may have implications for the ongoing security and reliability of services.	Provide specific policy framework, rules and associated definitions for 'upgrading' and 'maintenance and repair' to include provision for these activities.
Policy and rule framework does not give effect to the NPSET direction	The Operative District Plan contains a 22m setback from the centre-line of the high-voltage transmission line to manage potential reverse sensitivity effects on the efficient operation, maintenance, or upgrade of the National Grid. However, it does not identify a National Grid corridor on the Planning Maps, nor does it include policy direction to manage potential adverse effects on the National Grid. The current provisions do not give effect to the NPSET.	Include a National Grid corridor on planning maps and associated provisions to give effect to the NPSET, in accordance with nationally-consistent approach.
Operative Plan does not protect network utilities from potential reverse sensitivity effects	The Operative Plan provisions are inadequate to address the full range of effects of encroachment of subdivision or development and other third-party activities on nationally and regionally significant infrastructure (including the National Grid and high-pressure gas transmission pipelines). In relation to high pressure gas pipelines, the District Plan places a heavy reliance on other existing legislation, regulations and standards to ensure that pipelines are constructed in a manner that ensures they are safe and will not generate adverse effects. This approach fails to recognise that the risk profile of the	Greater recognition and management of reverse sensitivity effects in revised plan framework, especially in relation to the National Grid and high-pressure gas transmission pipelines

Issue	Comment	Response
	pipelines can change with changes in land use in close proximity.	
Reference to out of date performance standards	Reference to 'magnetic flux density' and 'electric field strength' are out of date and refer to outdated standards (e.g. NZS6609:2:1990). The rules and conditions that refer to them do not effectively and efficiently provide for the ongoing development, operation, maintenance and upgrade of network utilities and are not aligned with best-practice.	Refer to updated performance standards in accordance with best-practice and current technology

4.5 Effectiveness of Other Methods

The District Council administers the NESETA to ensure the appropriate management, ongoing maintenance and upgrading of electricity transmission lines and structures, and the NESTF to ensure the appropriate management of new and the replacement and upgrading of telecommunication facilities within the road reserve. Therefore, the NESETA and NESTF sufficiently manages the network utilities relevant to each national environmental standard within the district.

5 Consultation

5.1 General Consultation

Extensive consultation has been undertaken as part of this District Plan Review process with key stakeholders and the local community. Refer to the General Overview Section 32 Report for details on the methods that were used to carry out that consultation. Feedback from consultation relevant to the Network Utilities section is summarised below.

The first Draft District Plan was released for public comment in 2016, revised and then the second draft plan released in February 2018 for public feedback. Feedback on the Network utility section was received from interest groups and network utility operators including Federated Farmers, Climate Justice Taranaki, Powerco, Transpower, First Gas and NZ Transport Agency. In summary, the consultation indicated:

- A preference for a standalone Network Utilities chapter which overrides specific zone provisions, to provide consistency across the district in relation to maintenance, upgrade and installation of network utilities.
- From network utility operators, general support for more detailed policy guidance, particularly to:
  - Recognise and provide for the continued operation, maintenance and development of network utilities, and recognise the functional and technical constraints of locating network utilities.
  - Support the social and economic wellbeing of the District, while managing adverse effects on the environment.
  - Recognise the regional and national significance of the National Grid and Gas Transmission Pipelines and protect them from reverse sensitivity effects.

- Provide sufficient flexibility to reflect best-practice and emerging trends/technologies.

- From Transpower and First Gas, who indicated that the provisions should address the full range of effects of encroachment of development and other third-party activities (reverse sensitivity effects) on nationally and regionally significant infrastructure (e.g. National Grid and high-pressure gas transmission pipelines) and to give effect to the NPSET.
- From Federated Farmers on reverse sensitivity issues, the RMA does not prioritise any one land use over another, and all land uses are required to avoid, remedy or mitigate their adverse effects.
- Federated Farmers sought some restrictions on upgrading of existing network utilities, noting that these can have adverse effects on the environment and surrounding land uses when large-scale upgrades and associated earthworks are proposed (e.g. a large number of heavy vehicle movements and disruption to farming activities).

In addition, as mentioned above Network Utility operators have also formed a 'working group' of representatives to develop set of 'best-practice' District Plan provisions that are used as model provisions during engagement with Councils undertaking District Plan reviews to achieve greater consistency and integration throughout District Plans. These provisions were reviewed during the development of the proposed Network Utility provisions. These provisions are a work in progress and may, in future, become part of a national environmental standard for network utilities. Detailed feedback and comments were received from those operators and considered during the development of the plan provisions.

This feedback has been considered during the evaluation of the network utility provisions and changes made to the provisions where relevant.

5.2 Consultation with Iwi Authorities

Ngā Kaitiaki provided feedback on the Draft District Plan Network Utilities section. Ngā Kaitiaki understands and recognises that network utilities are common place and are expected throughout the District to support communities. In short, Ngā Kaitiaki provided the following feedback.

- Historically, land had been acquired from Ngā Kaitiaki for network utilities but the land acquired has changed use. Ngā Kaitiaki consider that this land should be returned to those hapū following the completion of use from a network utility. This matter is wider than the scope of the District Plan.
- Request for more direct provisions relating to the potential adverse effects of network utilities on Māori Historic Heritage, stating that the terminology of "minimising" adverse effects on the environment is not considered sufficient. These matters have been addressed through the Sites of Significance to Māori chapter.
- Highlighted that there is no definition on what constitutes "maintenance", stating that maintenance activities that involve earthworks are of interest to Ngā Kaitiaki as they can potentially exacerbate existing or create new adverse effects on sites that are of significance to Ngā Kaitiaki. A definition of 'maintenance' has been added and effects standards to manage the potential effects of maintenance. In addition, the land disturbance would be subject to the earthworks and sites of significance to Māori chapter.

- Additional consideration is required for the appropriate location of a network utility, specifically the capacity of wastewater infrastructure, location of pumping stations, and the number of instances discharges into water bodies. While discharges to water is the responsibility of the regional council, the waterbodies setbacks are applicable to wastewater pumping stations which will go some way to considering the appropriate location of certain network utilities in relation to sensitive areas.
- Requested the removal of specific reference to "visual amenity effects" as a qualifier in the policies, as the effects of network utilities are broader than visual amenity, and infer that underground network utilities need not be removed. Ngā Kaitiaki has expressed a preference for redundant network utilities to be removed, which has been incorporated as a requirement through effects standards (within 6 months of becoming redundant).
- Suggestion that the network utilities chapter needs to be linked back to the overlay provisions elsewhere in the plan. A cross-reference to the relevant overlay chapters has been provided in the 'overview' chapter.

6 Key Resource Management Issues

The key resource management issues that need to be addressed are:

- Network utilities have important functions and enable people and communities to provide for the social, economic and cultural wellbeing, but the adverse effects of network utilities on the environment need to be avoided, remedied or mitigated. The positive effects of network utilities may be realised locally, regionally or nationally.
- There are functional and operational needs of network utilities that need to be recognised.
- Other activities can constrain or compromise the efficient operation, maintenance, repair or upgrading of network utilities.
- Need to ensure that network utilities are coordinated with and meet the needs of existing and planned activities and enable the growth, development economic well-being of the district.

7 Proposed District Plan Provisions (Objectives, Policies and Methods/Rules)

The proposed provisions are set out in the Network Utilities section of the Proposed New Plymouth District Plan. These provisions should be referred to in conjunction with this evaluation report. The strategic objectives, including HC-1 to HC-3 in relation to historic and cultural matters, strategic objectives NE-4 to NE-7 in relation to natural environment matters, strategic objectives TW-8 to TW-12 in relation to tangata whenua matters, and strategic objective UFD-21 in relation to efficient operation of port and airport activities are also relevant to the network utility provisions.

7.1 Objectives and Policies

In summary, the proposed objectives and policies provide a framework to:

- Recognise the benefits of and provide for network utilities (NU-P1 – NU-P3).
- Manage the adverse effects of network utilities (NU-P4 – NU-P5).

- Manage adverse effects of activities on network utilities, including the National Grid, Gas Transmission Pipeline and other network utilities (NU-P6 – NU-P8).

7.2 Rules and Standards to Provide for, and Manage Effects of Network Utilities

7.2.1 Permitted Activity to provide for the following, subject to standards:

- Operation, maintenance and repair, removal of network utilities and ancillary vehicle access tracks.
- Underground network utilities and upgrading of underground network utilities.
- Upgrading of aboveground network utilities, subject to standards to manage scale, bulk and location.
- Vehicle access tracks.
- Aboveground customer connections, subject to standards to manage the number of additional poles in Residential, Commercial and Mixed-Use Zones.
- Temporary network utilities.
- Substations, aboveground ancillary gas transmission and distribution structures not enclosed by a building, energy storage batteries not enclosed by a building.
- New network utilities in existing buildings.
- Navigational aids, sensing and environmental monitoring equipment.
- New overhead lines and associated support structures that convey electricity below 110kV (in rural and less-sensitive zones).
- Communications kiosk, subject to standards to manage bulk and scale.
- Telecommunications or radiocommunications activities (not regulated by the NESTF or otherwise provided for by another rule).
- Telecommunications poles, new antennas or cabinets (regulated by the NESTF but not meeting permitted activity standards).
- Aboveground network utilities (including network utility buildings and encloses substations) not otherwise provided for, subject to standards to manage maximum bulk and scale.
- Liquid petroleum or gas transmission and distribution pipelines (including operation, maintenance and repair, removal or upgrading).
- Network utilities emitting electric and magnetic fields, or generating radiofrequency fields, provided standards are complied with.
- Underground pipelines and ancillary structures for conveyance, treatment, storage or retention/detention of water, wastewater or stormwater.
- Water, wastewater and stormwater storage tanks.
- Stormwater treatment devices, stormwater detention/retention ponds and wetlands.
- Water, wastewater and stormwater pump stations.
- Water treatment plants in rural and less sensitive areas.
- Amateur radio configuration, subject to standards to manage clutter and visual dominance.

7.2.2 Restricted Discretionary activity for:

- Electricity lines and associated support structures that convey electricity of 110kV or above.

- Most of the above-listed permitted activities that do not comply with one or more of the effects standards.
- Water treatment plants in urban zones.
- Wastewater treatment plants in certain zones.
- Aboveground pipelines and ancillary structures for the conveyance, treatment, storage or retention/detention of water, wastewater or stormwater.

7.2.3 Discretionary activity for:

- Wastewater treatment plants or new overhead lines in Residential, Future Urban and other sensitive zones.

7.2.4 Non-complying activity for:

- Network utilities that cannot comply with standards for electric and magnetic fields, or standards for radiofrequency fields.

Effects standards to manage the effects of permitted activities, relating to:

- Maximum height of structures, relative to the sensitivity of the zone:
  - 15 metres in the Residential Zone and Future Urban Zone;
  - 20 metres in the City Centre Zone, Town Centre Zone, Local Centre Zone and Hospital Zone; and
  - 25 metres in other zones (or 30 metres in these zones where there are two or more users of the same pole)).
- Parking and access
- Radio frequency fields (including reference to applicable standards)
- Electric and magnetic fields (including reference to applicable standards)
- Outdoor lighting
- Noise

7.3 Rules and Standards to Manage Effects on Network Utilities (National Grid and Gas Transmission Pipeline)

The Gas Transmission Pipeline Corridor is identified on the planning maps as a distance 20 metres either side of the Gas Transmission Pipeline (a pipeline with a pressure greater than 2,000 kilopascals). The definitions of 'National Grid Yard' and 'National Grid Corridor' are aligned with the terms and distances used in other District Plans throughout New Zealand:

National Grid Corridor *is identified on the planning maps, and means the area measured either side of the centreline of the aboveground National Grid Line as follows:*

a. 16m for the 110kV lines on pi poles.

b. 32m for the 110 kV lines on towers.

c. 37m for the 220 kV transmission lines.

National Grid Yard *means the area located 12 metres in any direction from the outer edge of a National Grid support structure, and the area located 12 metres either side of the centreline of any overhead National Grid line on pi poles or towers. The National*

Grid Yard does not apply to underground cables or any transmission lines (or sections of line) that are designated

7.3.1 Permitted activity for:

- Buildings or structures within the National Grid Yard, subject to standards to manage the type and scale of structures (there are more permissive standards for parts of the National Grid Yard where under-build or development already exists / where the National Grid has already been compromised).
- Earthworks within the National Grid Yard subject to maximum depth around support structures, and other standards to maintain stability and practical access to the National Grid.
- Earthworks within the Gas Transmission Pipeline Corridor, subject to standards to protect the stability and integrity of the gas transmission pipeline and other standards.

7.3.2 Controlled activity for:

- Subdivision of land containing a Gas Transmission Pipeline Corridor, where it can be demonstrated that it will not result in sensitive activities being located within the gas transmission pipeline corridor, and the layout of allotments maintains physical and practical access to the pipeline.

7.3.3 Restricted discretionary activity for:

- New sensitive activities, including the erection of buildings for sensitive activities, within the National Grid Substation Corridor.
- Subdivision of land in the National Grid Corridor, subject to standards regarding building platforms and the layout of allotments.
- Subdivision of land for sensitive activities within the National Grid Substation Corridor.
- Sensitive activities within the Gas Transmission Pipeline Corridor.
- Any other activity that cannot comply with permitted activity standards.

7.3.4 Non-complying activity for:

- Buildings and structures within the National Grid Yard not complying with permitted activity standards (e.g. for sensitive activities).
- Subdivision in the National Grid Corridor that does not meet standards as a Restricted Discretionary activity.
- Sensitive activities within the National Grid Yard

7.3.5 Other Methods

Other methods described in Section 4.2 of this Report will also continue to be implemented in conjunction with the District Plan provisions.

8 Approach to Evaluation

The Act requires that this report contain a level of detail that corresponds with the scale and significance of the environmental, economic, social and cultural effects that are anticipated from the implementation of this proposal.

This section of the RMA requires that:

- New proposals must be examined for their appropriateness in achieving the purpose of the RMA.
- The benefits and costs, and risks of new policies and rules on the community, the economy and the environment need to be clearly identified and assessed.
- All advice received from iwi authorities and the response to the advice needs to be summarised.
- The analysis must be documented, so stakeholders and decision-makers can understand the rationale for policy choices.

8.1 Evaluation of Scale and Significance

	Minor	Low	Medium	High
Degree of change from the Operative Plan			✓	
Effects on matters of national importance		✓		
Scale of effects – geographically (local, district wide, regional, national).			✓	
Scale of effects on people (how many will be affected – single landowners, multiple landowners, neighbourhoods, the public generally, future generations?).			✓	
Scale of effects on those with specific interests, e.g., Tangata Whenua			✓	
Degree of policy risk – does it involve effects that have been considered implicitly or explicitly by higher order documents? Does it involve effects addressed by other standards/commonly accepted best practice?		✓		
Likelihood of increased costs or restrictions on individuals, communities or businesses.			✓	

8.2 Explanation Summary

In summary:

- The degree of change from the Operative District Plan is moderate, considering:
  - The Council is proposing a new objective and policy framework, and rules specific to network utilities.
  - The network utility provisions are District Wide but are expected to affect a limited number of properties, with the exception of:
    : 688 properties that contain land within the National Grid Corridor (which covers 0.35% of the District within the District); and
    : 545 properties that contain land within the Gas transmission pipeline corridor (which covers 0.32% of land within the District).

  - Many network utilities are established in road reserves or other public land, which is generally considered appropriate.
- The efficient operation, maintenance and upgrade of network utilities is necessary and has wide-ranging community benefits.
- The scale of effects applies to those experiencing the effects of the establishment of new network utilities or from maintenance and upgrading of existing network utilities, or those who are restricted in the efficient use of their land by the proposed National Grid Corridor or Gas Transmission Pipeline Corridor approach.
- The proposed network utilities provisions are similar to the approach adopted in other second generation plans throughout New Zealand and consistent with the national direction provided in the NPSET, and direction provided in the RPS.

Overall, it is considered that the scale and significance of the proposal is low-moderate. The level of detail in this report corresponds with the scale and significance of the environmental, economic and cultural effects that are anticipated from the implementation of the Network Utilities provisions.

9 Evaluation of Objectives

Existing Objective(s)	Appropriateness to achieve the purpose of the RMA.
The Operative District Plan has one objective specific to network utilities, that being: *Objective 3 To ensure public works and network utilities do not adversely affect the health and safety of the community.*	The existing objective does not address the key resource management issues set out in Section 6 of this report. Namely, it does not recognise the national, regional and local benefits of network utilities, or the technical, locational, and operational constraints of network utilities. The objective also does not seek to manage reverse sensitivity effects of incompatible adjoining activities on network utilities. Apart from addressing effects on health and safety, the existing objective does not provide plan users with certainty as to the expected outcomes, or recognise the range of adverse effects that need to be managed (beyond health and safety). The current objective does not give effect to the NPSET, and results in reliance on zone-based or district-wide objectives relating to character, amenity, and natural hazards. The existing objective could lead to inconsistent outcomes, and for the above reasons is not appropriate to achieve the purpose of the Act.

Proposed Objective(s)	Appropriateness to achieve the purpose of the RMA
NU-O1 *Effective, resilient, efficient and safe network utilities that:* 1. *provide essential and secure services, including in emergencies;* 2. *facilitate local, regional, national or international connectivity;* 3. *contribute to the economy and support a high standard of living;* 4. *integrate with development, infrastructure and other activities; and*	The purpose of the RMA is to promote the sustainable management of natural and physical resources by managing the use, development and protection of physical resources in a way which enables people and communities to provide for their social, economic and cultural well-being. This includes Section 6 and Section 7 matters of the RMA described in Section 3.1 of this report. The objectives specifically and clearly set out the outcomes anticipated by the Proposed District Plan in relation to Network Utilities, and addresses the resource management issues identified in Section 6 of this report. In particular, the recognition of the national, regional and local benefits to the community provided by network utilities, the operational requirements of network utilities, the management of adverse effects of network utilities on the environment and effects of other land-use activities on network utilities.

5. *enable people and communities to provide for their health, safety and wellbeing* NU-O2 *The adverse effects of network utilities on the environment are avoided, remedied or mitigated, while recognising:* 1. *The functional need and operational need of network utilities;* 2. *Which positive effects of network utilities may be realised locally, regionally or nationally.* NU-O3 *The efficient operation, maintenance, repair or upgrading of network utilities is not constrained or compromised by other activities.*	These objectives apply district-wide and give specific recognition to network utilities as a necessity for the District which need to be provided for in a safe, efficient, and sustainable manner, and integrate with development, infrastructure and other activities. The objectives balance these required services with the principle/overarching goal of avoiding, remedying or mitigating adverse effects of network utilities on the environment. The objectives also seek to ensure that the efficient operation, maintenance, repair or upgrading of network utilities is not constrained or compromised by other activities. In relation to the National Gird this is consistent with and gives effect to the direction of the NPSET. The proposed objectives provide plan users and decision makers with certainty as to the outcomes that are appropriate under the District Plan provisions, and are considered reasonable and achievable, and consistent with the objectives of other similar second-generation district plans. They also seek to ensure that adverse effects of network utilities on the environment are avoided, remedied or mitigated, to maintain amenity values and quality of the environment and achieve the purpose of the RMA.

Evaluation of Alternative Options	**Appropriateness to achieve the purpose of the Act**
Do not define expectations for network utilities	This approach could adversely affect the environment and is unlikely to achieve the purpose of the RMA.

Summary
The proposed objectives achieve the purpose of the RMA as they recognise the contribution to social, economic and cultural wellbeing that network utilities make (including provision for essential services). They reflect clear statements of intent regarding their ongoing use and development; additionally, they give effect to the RPS, and the NPSET. The proposed objectives also provide increased certainty regarding the outcomes anticipated under the District Plan provisions and align with contemporary planning practice applied elsewhere throughout the country.

10 Evaluation of Options to Achieve the Objectives

Objectives NU-01 to NU-02 Providing for, and managing the effects of network utilities

Options to achieve the District Plan objectives relating to Network Utilities	Benefits	Costs	Efficiency and Effectiveness	Risks of acting/not acting
Option A: Proposed approach • Standalone network utilities chapter • Introduce policies specific to network utilities that: - recognise the benefits of network utilities, including by supporting network utilities in adopting new technologies - encourage coordination of network utilities planning and delivery with land use, subdivision, development and urban growth - Manage the adverse effects of network utilities • Rules and standards specific to network utilities that: - are generally permissive to enable the use,	• Activity-based provisions provide certainty to network utility operators and the community about the expectations, and associated activity status for network utilities in certain areas and standards to manage effects (consistent outcomes) • Provides a clear decision-making framework for plan users. • Considers operational requirements of network utilities, including future requirements and advances in technology, thereby decreasing the likelihood for remedial works in future, and potentially less effects on the environment (e.g. larger height thresholds, encouraging co-location	• Less familiarity for existing plan users. • Relatively permissive approach provides less control over potential adverse effects on the environment, and greater potential for a reduction in amenity values. • Potential for less community involvement in decision-making.	Provisions are effective in that they provide for the efficient development, operation, maintenance and upgrade of network utilities. This approach will strike an appropriate balance between the need for affordable, effective, resilient and efficient network utilities and the need to avoid, remedy or mitigate the effects of such network utilities. This includes clearer policy direction, and explicit requirements for certain activities likely to generate adverse effects. The rules and standards reflect best practice (e.g. co-location), and give effect to national policy direction (NPSET) and are	There is sufficient information on which to act on these provisions. The risk is considered low given that the proposal will address the identified resource management issues, the implementation issues experienced with the Operative District Plan framework, and bring the plan into line with best-practice, consistent with provisions in other second-generation District Plans throughout NZ.

operation, maintenance, upgrade or development of network utilities - control the height, bulk and location of network utilities to manage adverse effects - require compliance with recognised standards to manage effects on health and safety - manage certain activities that have greater potential to generate adverse effects as restricted discretionary, discretionary or non-complying activities (e.g. activities not complying with standards, new overhead lines in sensitive urban areas, wastewater treatment plants).	leads to less telecommunications masts throughout the district (and/or clutter) while still achieving maximum coverage). • More flexibility for network utility providers to locate and co-locate their activities and maintain/upgrade/replace as appropriate and provide safe and efficient services contributing to community and economic wellbeing. • Less costs to network utility providers, council and ratepayers for resource consent applications and associated compliance which could have a potential positive economic effect. • Provides for the effective operation, maintenance and upgrading of network utilities. • Increased flexibility could lead to improved services in the district, creating better economic and employment opportunities, and		consistent with the NESET and NESTF. This approach addresses current issues and provides clarity and flexibility to network utility operators (to reduce compliance costs) while also managing potential adverse effects on the environment.	

	increased resilience in an emergency • Gives effect to the NPSET in relation to the National Grid. • Is not inconsistent with the NESET or NESTF.			
Option B: Status quo regulatory approach • Policy framework with focus on ensuring network utilities do not compromise or adversely affect the health and safety of the community. • Effects-based plan framework with rules for specific network utilities (e.g. installation and operation of transformers, lines and necessary equipment for conveying electricity, or communication facilities, or substations and switching stations). • Maximum height, bulk and scale standards for buildings or structures (the same as all other buildings and structures).	• Level of familiarity for existing plan users. • Restrictive approach (e.g. restrictive maximum height limits) manages potential adverse effects on the environment. • Maintains amenity values for the community and protects neighbouring properties from adverse effects of network utilities.	• Effects-based approach leads uncertainty and inconsistent outcomes. • High consenting and compliance costs for network utility operators and Council. • Limits flexibility for network utility operators (does not take into account operational, technical and locational requirements or advances in technology). • Limited flexibility can lead to increased adverse effects or visual clutter (e.g. a greater number of telecommunication masts to comply with height limits, and achieve maximum coverage in comparison with one taller mast with increased coverage).	The effects-based approach is uncertain and out of date in relation to network utilities. This approach does not reflect best practice to provide sufficient flexibility or reflect current technology. They do not provide a robust assessment framework as the provisions are silent on the operational, technical and locational requirements of network utilities, the benefits of network utilities and the management of adverse effects.	There is sufficient information to make a decision not to act on this approach. The risks of acting are known and would include the continuation of the implementation issues experienced with the Operative District Plan (referred to in Section 4.4).

Option C: Non-Regulatory Approach • Rely on methods outside the District Plan to manage network utilities	• Minimal consenting and compliance costs. • Efficient use, operation, maintenance, development or upgrade of network utilities. • Maximum flexibility for network utility operators leading to improved technology and services. • Potential to contribute to better economic and employment opportunities, and community wellbeing.	• Potential for adverse effects on the environment (particularly effects on amenity value and health and safety). • Little to no community involvement in decision-making • Inconsistent with national and regional policy direction.	No rules or standards would enable the development without any constraints. This approach has the potential to result in significant adverse effects, particularly for affected landowners. This approach would not achieve the objectives for network utilities.	The risk of acting on the non-regulatory approach means that Council may not be carrying out its duty/requirements under the RMA. This approach may result in adverse effects on the environment and the safety of people. There is sufficient information not to act on this approach.

Quantification

Section 32(2)(b) requires that if practicable the benefits and costs of a proposal are quantified.

Option A provides certainty on activity status for different types of network utilities and specifically provides for operation, maintenance or upgrade. The maximum height thresholds for structures provide increased flexibility to enable greater coverage (for example, in the Rural Zones, the maximum height for a structure is 15 metres in the Rural Environment Area in the Operative District Plan, whereas the maximum height as a permitted activity is 25 metres in the Rural Zone, or 30 metres when there are two or more users of the same pole).

Option A includes specific permitted activity rules and standards tailored for each type of network utility. The maximum height, bulk and scale thresholds for buildings and structures are aligned with best-practice throughout New Zealand. As such, the number of resource consent applications received for network utilities is likely to be reduced from the status quo with Option A (the Proposed Approach).

Given the assessment of the scale and significance of the proposed changes above it is considered that further quantifying costs and benefits would add significant time and cost to the s32 evaluation processes. The evaluation in this report identifies where there may be additional cost(s), however the exact quantification of the benefits and costs discussed was not considered necessary, beneficial or practicable.

Summary

The above table has demonstrated that Option A is the most appropriate method. A regulatory approach in providing for network utilities and managing adverse effects is well established and proven in other Second-Generation District Plans throughout New Zealand. Option B status quo approach is restrictive and does not take into account operational, technical and locational requirements of network utilities. Nor does it specifically

recognise the benefits provided by network utilities or provide detailed policy direction on the management of potential adverse effects from network utilities.

The Proposed approach (Option A)provides greater flexibility for network utility providers to locate establish, operate, maintain, upgrade, replace network utilities, to provide safe and efficient services which contribute to community and economic wellbeing while also managing their adverse effects. It also gives effect to higher order documents and is aligned with best-practice. Therefore, Option A is considered the most appropriate option to achieve the proposed objectives.

Objective NU-03 Managing effects on network utilities

Options to achieve the District Plan objectives relating to Network Utilities	Benefits	Costs	Efficiency and Effectiveness	Risks of acting/not acting
Option A: Proposed approach • Identify National Grid Corridor and Gas Transmission Pipeline Corridor on Planning Maps. • Specific policies relating to managing potential reverse sensitivity effects on the National Grid and Gas Transmission Pipeline • General policy to ensure new sensitive activities are appropriately located and/or designed to minimise reverse	• Protection of significant network utilities (National Grid and Gas Transmission Pipeline) from activities which have the potential to compromise the efficient operation and maintenance of the utility, or increase potential exposure to health and safety risks. • Recognition of the importance of the National Grid and gas transmission pipelines (high voltage and high-pressure transmission networks)	• Reduced development potential and flexibility for landowners, (prospective) loss of land value. • Increased costs for landowners of applying for resource consents for activities within the National Grid or Gas Transmission Pipeline Corridor, and network utility operators being involved in resource consents.	This approach is considered to be efficient and effective as it provides clear direction and tailored provisions to manage potential reverse sensitivity effects on significant network utilities to address the issues outlined in Section 4.3.2 of this Report. Only those activities which have potential to compromise the network utility are managed. It will ensure the ongoing efficient use, operation, maintenance of significant network utilities and manage potential health	The information on the risks and issues experienced in relation to the National Grid and high-pressure gas transmission pipelines, resulting from encroachment of other activities on these networks are explained in Section 4.3.2. The risk of acting on this information is considered to be low particularly as the restrictions on activities in proximity to the pipelines are applied to zones where there is limited pressure for development and on land

sensitivity effects on network utilities, where necessary, including by requiring compliance with NZECP34:2001. • Rules and standards to manage earthworks, buildings, structures, sensitive activities, and subdivision within National Grid Corridor and Gas Transmission Pipeline Corridor.	• Certainty to the network utility providers that potential reverse sensitivity effects will be managed or assessed through the resource consent process. • Ability to determine the appropriateness of activities on a case-by-case basis through the resource consent process.		and safety effects on the community.	where sites are typically large enough to locate new activities away from the pipelines. There is national policy direction on the National Grid approach, which is common practice in other second-generation District Plans. Considering the above, the risk of acting on the proposed approach is low.
Option B: Status quo regulatory approach • No policy direction to ensure the efficient operation, maintenance, repair or upgrading of network utilities is not constrained or compromised by other activities. • Apply a 22m setback from high voltage transmission lines for new habitable buildings • No other provision to manage reverse sensitivity effects on network utilities.	• Increased flexibility to use and develop land in proximity to the National Grid and Gas transmission pipeline Corridor. • Provides for the efficient use of land. • Level of familiarity for existing plan users and degree of certainty. • Provides a minimum level of protection to the National Grid and Gas transmission pipelines. •	• The significant network utilities (National Grid and Gas Transmission Pipeline) are not sufficiently protected from activities which have the potential to compromise its efficient operation and maintenance. Only 'habitable' buildings are restricted in close proximity to the National Grid. • Increased costs to network utility operators and the community in the event of outages and/or inability to access the networks for maintenance, repair or upgrade. • Increased potential for reverse sensitivity effects,	This approach is not considered to be the most efficient or effective as will not address the resource management issue or achieve the objective. Limited policy direction and a 22m setback from the National Grid (with restrictions relating to habitable buildings) does not give effect to the corridor management approach in the NPSET.	The risk of acting on these status quo provisions is that the current policy framework would not give effect to the NPSET, and current issues would continue and could incrementally result in land-use activities, development, and subdivision adversely affecting the effective operation, maintenance, and upgrading of the National Grid. The ineffectiveness of these status quo provisions is demonstrated in Section 3.4 of this report.

		and associated health and safety risks • Inefficient operation, maintenance or upgrade of network utilities (including the risks outlined in Section 4.3.2). • Does not give effect to the NPSET.		It is considered that the risk of acting on these provisions outweighs the risk of not acting. There is sufficient information not to act on this approach.
Option C: Non-Regulatory Approach • Rely on methods outside the District Plan (e.g. compliance with other legislation and regulations)	• Reduced consenting and compliance costs • Maximum flexibility for landowners to locate activities in close proximity to network utilities, enabling an efficient use of land.	• Significant network utilities (National Grid and Gas Transmission Pipeline) are not sufficiently protected from activities which have the potential to compromise its efficient operation and maintenance. • Increased costs to network utility operators and the community in the event of outages and/or inability to access the networks for maintenance, repair or upgrade. • Increased potential for reverse sensitivity effects, and associated health and safety risks • Inefficient operation, maintenance or upgrade of network utilities (including the risks outlined in Section 4.3.2).	No provisions would enable activities to occur in proximity to network utilities subject to compliance with other regulations. This approach has the potential to result in significant adverse effects on the efficient operation and maintenance of network utilities including health and safety effects on the community. This approach would not address the resource management issue or achieve the objective, and would not be effective or efficient.	Council may not be carrying out its duty/requirements under the RMA with this approach and would fail to give effect to the NPSET. This approach may result in adverse effects on the efficient operation, maintenance or upgrade of network utilities. It is considered that there is sufficient information to make a decision not to act on this approach.

		• Does not give effect to the NPSET.		

Quantification

Section 32(2)(b) requires that if practicable the benefits and costs of a proposal are quantified.

The proposed approach increases the width of the 'National Grid Corridor' (maximum of 37m either side of the 220kV transmission lines, or 32m either side of 110kV lines on towers, or 16m for 110kv lines on pi poles), and essentially restricts buildings within the 'National Gird Yard' (the area located 12 metres in any direction from the outer edge of a National Grid support structure), and also places greater restrictions on the scale of buildings, structures and earthworks that can occur within the National Grid Yard. The area of land subject to these restrictions covers a total area of 828 ha (which makes up 0.35% of the District). The 'gas transmission pipeline corridor' is a new approach that is not used in the Operative District Plan. It places restrictions on land use within an area of 758 ha (which makes up 0.32% of the District).

As stated in Section 4.3.4, with Option B there have been two resource consent applications received for habitable buildings within 22 metres of the high voltage electricity transmission lines. The proposed approach (Option A) places stronger controls on the use of land within the Gas Transmission Pipeline Corridor and the National Grid Corridor. While the Gas Transmission Corridor provisions are applied to land where there is a typically a lower risk of development pressure or likelihood for sensitive activities in close proximity to the gas transmission pipeline (e.g. Rural Zone, General Industrial Zone, most Special Purpose Zones). Nevertheless, the number of resource consent applications overall is likely to increase as a result of the proposal. Transpower and First Gas are also likely to become more involved in resource consent applications for activities in proximity to their networks.

A large number of rules and standards (including detailed provisions) are proposed in the Network Utilities chapter to recognise the variety of network utilities and apply tailored provisions to effectively manage the different types of network utilities.

Given the assessment of the scale and significance of the proposed changes above it is considered that further quantifying costs and benefits would add significant time and cost to the s32 evaluation processes. The evaluation in this report identifies where there may be additional cost(s), however the exact quantification of the benefits and costs discussed was not considered necessary, beneficial or practicable.

Summary

The above table has demonstrated that Option A is the most appropriate method for managing the potential reverse sensitivity issues affecting network utilities in the New Plymouth District. The Status Quo Approach (Option B) is relatively permissive and does not effectively protect significant network utilities from incompatible activities that may compromise their effective or safe operation and maintenance. The proposed approach restricts certain activities in proximity to the national grid, and gas transmission pipelines, and also includes a general policy to ensure that new sensitive activities are appropriately located and/or designed to minimise reverse sensitivity effects on network utilities, where necessary, including by requiring compliance with NZECP34:2001. It is considered that Option A strikes an appropriate balance between the protection of significant network utilities from adverse effects of other activities, and enabling the efficient use of land. Therefore, Option A is considered the most appropriate option.

11 Summary

This evaluation has been undertaken in accordance with Section 32 of the Act in order to identify the need, benefits and costs and the appropriateness of the proposal having regard to its effectiveness and efficiency relative to other means in achieving the purpose of the RMA. The evaluation demonstrates that this proposal is the most appropriate option as:

- The Objectives and policies provide direction and certainty to plan users on the outcomes expected for network utilities, including recognition of the functional, locational and operational needs of network utilities and the management of adverse effects. The clear decision-making framework will lead to consistent outcomes.
- The provisions provide for the effective operation, maintenance, upgrading, and removal of network utilities, while managing adverse effects, and protects significant network utilities (the National Grid and Gas Transmission Pipelines) from adverse reverse sensitivity effects of incompatible activities.
- Rules provide certainty to network utility operators and community about the type and scale of activities that can occur as permitted activities, and provide increased flexibility to network utility operators to reflect emerging technologies.
- Activities requiring resource consent are limited to those that have potential for adverse effects on the environment, which enables a case-by-case assessment.
- The objective and policies give effect to the NPSET, are consistent with NESET and NESTF, and are aligned with best-practice in other second generation plans throughout New Zealand.

Overall, it is considered that the set of preferred provisions is the most appropriate given that the benefits outweigh the costs, and there are considerable efficiencies to be gained from adopting the preferred provisions. The risks of acting are also clearly identifiable and limited in their extent.