Ministry for the Environment
Manatū Mō Te Taiao

National Environmental Standards
>> for Telecommunication Facilities

USERS' GUIDE



New Zealand Government

National Environmental Standards for Telecommunication Facilities

Users' Guide

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1 Introduction

1.1 Purpose of this document

This document provides a guide to implementing and explaining the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2008 (the NES) for practitioners in local government, the telecommunications industry and the public generally. The guide also describes the relationship between the regulations and existing local government controls. It covers:

- the radiofrequency field (RF) exposures from telecommunication facilities
- the erection of roadside equipment cabinets and the installation of telecommunication antenna
- noise levels from roadside cabinets.

It should be noted that this document does not have any legal status. A complete copy of the regulations is attached as Appendix A.

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1.2 What are national environmental standards?

National environmental standards are regulations developed in accordance with sections 43 and 44 of the Resource Management Act 1991 (RMA). The RMA provides considerable scope for what national environmental standards may do. In effect, they can be developed to do anything a district or regional plan can do, but at a national scale. They can apply to all or only specific parts of New Zealand. National environmental standards can permit activities or development, but they can also prohibit or require resource consent for activities in order to manage or protect our environment. They can set environmental standards or benchmarks to manage and protect our natural resources such as air and water. They have the force of regulation and are implemented by agencies and parties with responsibilities under the RMA.

Every local authority and consent authority must observe national environmental standards and must enforce the observance of national environmental standards to the extent their powers enable them to do so.

A national environmental standard is a binding regulation. The National Environmental Standards for Telecommunication Facilities (the NES) replace certain existing rules in district plans and bylaws that affect the activities of telecommunications operators. This does not mean

that activities not permitted by the NES are prohibited. It simply means that in some cases resource consents will need to be applied for, and these applications will be assessed against the provisions of the relevant district plan.

The NES needs to be read in conjunction with rules in a plan because some rules will still be applicable. Complying with the NES alone may not be sufficient. Where an activity cannot meet the permitted activity criteria in the NES, it will continue to be managed by the existing rules in the relevant district plan.

1.3 National Environmental Standards for Telecommunication Facilities

In October 2008 the NES came into force. The regulations essentially provide for four things.

1. The planning and operation of a telecommunication facility (such as a mobile phone transmitter) that generates RF fields is a permitted activity provided it complies with the New Zealand Standard (*NZS 2772.1: 1999 Radiofrequency Fields Part 1: Maximum Exposure Levels 3 kHz to 300 GHz*).
2. The installation of telecommunication equipment cabinets in the road reserve is a permitted activity, subject to specified limitations on their size and location.
3. Noise emitting from telecommunication equipment cabinets located in the road reserve is a permitted activity, subject to specified noise limits.
4. The installation or replacement of masts and antennas on existing structures in the road reserve is a permitted activity, subject to specified limitations on height and size.

In terms of RF fields, where a telecommunication facility does not qualify as a permitted activity, its status becomes non-complying. For all other provisions in the regulations, where an activity does not qualify as a permitted activity, its activity status reverts to that outlined in the local authority plan. (There is one minor exception where a district plan is more permissive than the NES, and this is explained in detail in section 3.2.)

1.4 Timeline for the development of the NES

September 2004: Cabinet approved a comprehensive set of measures designed to improve the working of the RMA. Part of the review led to the decision to explore greater use of national policy statements and national environmental standards to help local government decide how competing national benefits and local costs of infrastructure should be balanced.

July 2005: Representatives of government and the telecommunications industry formulated a report to form the basis of a national environmental standard and presented it to the Ministry for the Environment (copies of the industry reference group's report are available on request from standards@mfe.govt.nz).

June 2007: The Ministry for the Environment incorporated this report into the discussion document *Proposed National Environmental Standards for Telecommunications Facilities*. This was released for public consultation, and was followed by a series of workshops.

August 2007: 82 submissions were received from local and central government, industry, community groups and individuals. The report covering the submissions received and responses to consultation is available from the Ministry for the Environment.

February 2008: Cabinet decided the National Environmental Standards for Telecommunication Facilities should proceed and that regulations should be drafted to give effect to the policy.

September 2008: The Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2008 were made through an Order in Council by the Governor General under the authority of the Acts and Regulations Publication Act 1989.

2 Background Information

2.1 Why the regulations were developed

There is considerable variation between territorial authority district plans in terms of how they address and control the installation of telecommunication antennas (or masts) and equipment cabinets in the road reserve. In some cases this infrastructure is a permitted activity in one district plan but a controlled or discretionary activity in an immediately adjacent city or district. This makes the process of gaining planning permission and building the structures time-consuming, expensive and inconsistent for telecommunications companies seeking to install infrastructure or to expand existing services across several local authority areas.

The regulations seek to create a level playing field across the country by providing clarity and certainty about the types of telecommunication infrastructure that are permitted and what continues to be managed by a local authority's district plan. In some areas the regulations remove the requirement to obtain resource consent for some roadside structures, while in other districts they place tighter limits on what may require resource consent.

The catalyst for the regulations was a 1997 Organisation for Economic Co-operation and Development (OECD) review of New Zealand, which concluded that it was necessary for central government to:

> *i. strengthen national policy guidance, in the form of policy statements and national environmental standards, in the interest of promoting a level national playing field and improving regulatory efficiency;*
>
> *ii. further integrate environmental concerns into economic and sectoral decisions, particularly by using economic instruments to internalise environmental costs of economic activities; and*
>
> *iii. further develop international environmental co-operation.*[1]

Improved telecommunication infrastructure is considered essential to build New Zealand's economy into the future. The ability to develop national environmental standards is included in the RMA, and the implementation of such a national environmental standard is considered an appropriate tool to enable the telecommunication network to fulfil its potential.

To put this in context, the Digital Strategy 2005 identifies national environmental standards as contributing to:

- providing faster and more cost-effective delivery of telecommunication facilities
- achieving the top half of the OECD (broadband) performance by 2010
- becoming a "world leader in using information and technology to realise its economic, social, environmental, and cultural goals" (Digital Strategy 2005).

[1] OECD Environmental Performance Reviews: New Zealand (2007).

The New Zealand Government recognises the need for improved telecommunication and has set targets for the telecommunications industry in New Zealand in terms of broadband accessibility and speeds. The regulations will contribute to the realisation of those targets. The regulations also have the potential to contribute to economic transformation by providing direction on technical issues, evening out inconsistencies in district plans, and increasing certainty for permitted activities relating to certain telecommunication activities.

Resource consent will continue to be required if a district plan has identified, through rules, specific values the council wishes to preserve. Rules relating to protecting trees and vegetation, historic heritage values, visual amenity values, and the coastal marine area will continue to apply and override the NES.

2.2 Other legislation

Telecommunication facilities continue to be subject to other legislation, in particular the Telecommunications Act 2001. Sections 136 and 142 of the Telecommunications Act provide telecommunications operators with a statutory right to locate telecommunication cabinets in road reserves, subject to providing the road-controlling authority with 10 working days' notice prior to the cabinet being installed. The road-controlling authority may impose reasonable conditions in accordance with specified criteria in section 119 of the Telecommunications Act. This process is given effect to via the council road-opening notice procedures that are undertaken prior to a cabinet or underground apparatus being installed.

The application to the road-controlling authority is for a road-opening notice. It is required by any person or organisation for:

- any activity that will alter or cause to be altered the surface of any part of the road reserve, including, but not limited, to excavating, drilling and resurfacing
- the placement of any pipe, duct, pole, cabinet or other structure below, on or above the road reserve.

Conditions of the road-opening notice should only refer to matters of traffic and pedestrian safety at the time of the installation and operation of the proposed works. Conditions should not extend to visual amenity or other matters covered under the RMA. However, matters of amenity in the road reserve should be considered by utility operators in accordance with the New Zealand Utilities Advisory Group (NZUAG) National Code.[2] This code seeks to achieve a nationally consistent approach to the management of, and access to, road corridors.

[2] The internet link to the NZUAG's draft code is www.nzuag.org.nz/national-code/

3 Matters Addressed by the Regulations (NES)

The regulations provide for specific activities of network operators to be permitted provided they meet certain thresholds. The permitted activities are those considered to have a low potential for adverse effects. These potential adverse effects were considered during the development of the regulations and do not need further "site-specific" consideration. The regulations give the telecommunications industry and the community certainty about the type and intensity of low-impact telecommunication infrastructure that is permitted.

Clauses 4 to 9 of the regulations address specific aspects of telecommunication facilities. These are:

- RF fields in respect of compliance with the accepted New Zealand standard (clause 4)
- the activity status of telecommunication facilities located in the road reserve (clause 5)
- protection of vegetation, and historic, amenity and coastal areas (clause 6)
- antennas and existing utility structures (clause 7)
- telecommunication cabinets (clause 8)
- noise from cabinets (clause 9).

Each of these clauses of the regulations is discussed below.

3.1 Clause 4: Radiofrequency fields

Clause 4 of the regulations requires compliance with the Standards New Zealand standard *NZS 2772: Part 1: 1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300 GHz*, and is relevant to all telecommunication facilities that generate RF fields, whether they are located in the road reserve or not. This standard incorporates advice on health effects and appropriate exposure levels from exposure guidelines published in 1998 by the International Commission on Non-Ionizing Radiation Protection (ICNIRP).

The Ministry of Health considers that there are no established adverse effects from exposures to RF fields that comply with the ICNIRP guidelines and the New Zealand standard. The Environment Court has similarly concluded that there are no adverse health effects arising from exposures to RF fields that comply with the New Zealand standard. Further information is available in the *National Guidelines for Managing the Effects of Radiofrequency Transmitters*, produced jointly by the Ministries of Health and the Environment. This can be viewed online at the Ministry for the Environment website. It is important to relay this information to anyone who expresses health concerns about the installation and operation of telecommunication equipment.

The New Zealand standard *NZS 2772: Part 1: 1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300 GHz* is available for purchase from Standards New Zealand.

Clause 4 states:

Clause 4: Telecommunication facilities generating radiofrequency fields: activity status

(1) This regulation applies to the planning and operation of a telecommunication facility that generates radiofrequency fields.

(2) A telecommunication facility is a permitted activity as far as radiofrequency fields are concerned if the network operator that plans and operates the facility complies with –

(a) the conditions in subclauses (3) and (4); and

(b) the condition in subclause (5), if it applies.

(3) The first condition is that the network operator plans and operates the telecommunication facility in accordance with NZS 2772: Part 1: 1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300 GHz.

(4) The second condition is that the network operator ensures that the relevant local authority receives, before the telecommunication facility becomes operational, the following:

(a) written or electronic notice of where the facility is or where it is proposed to be; and

(b) a report that –

(i) is prepared in accordance with NZS 6609.2: 1990 Radiofrequency Radiation: Part 2: Principles and Methods of Measurement 300 kHz to 100 GHz; and

(ii) takes account of exposures arising from other telecommunication facilities in the vicinity of the facility; and

(iii) predicts whether the radiofrequency field levels at places in the vicinity of the facility that are reasonably accessible to the general public will comply with NZS 2772: Part 1: 1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300 GHz.

(5) The third condition applies if the prediction referred to in subclause (4)(b)(iii) is that the radiofrequency field levels will reach or exceed 25% of the maximum level authorised by NZS 2772: Part 1: 1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300 GHz for exposure of the general public. The network operator must ensure that the relevant local authority receives, within three months of the telecommunication facility becoming operational, a report that –

(a) is prepared in accordance with NZS 6609.2: 1990 Radiofrequency Radiation: Part 2: Principles and Methods of Measurement 300 kHz to 100 GHz; and

(b) provides evidence that the actual radiofrequency field levels at places in the vicinity of the facility that are reasonably accessible to the general public comply with NZS 2772: Part 1: 1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300 GHz.

(6) A telecommunication facility that is not a permitted activity under this regulation is a non-complying activity as far as radiofrequency fields are concerned.

The regulation introduces more restrictive provisions for RF fields for approximately half the existing district plans. Around 25 per cent of district plans reference an out-of-date New Zealand standard for RF fields, and a number of district plans do not contain any rules relating to RF fields.

The regulation enables RF field exposures[3] from mobile phone transmitters and other telecommunication structures to be controlled in a manner consistent with the national guidelines, the existing voluntary New Zealand standard and international guidance from the ICNIRP. The standard makes compliance with *NZS 2772* mandatory throughout New Zealand, and overrides existing rules in district plans on this issue for network operators.

In addition, section 43E of the RMA states that a national environmental standard overrides any bylaws that may be in place relating to any activities controlled by a national environmental standard. So, for example, the Auckland City Council Bylaw Part 28 "Radiofrequency fields" will no longer apply to network operators. Instead, clause 4 of the regulations will manage RF fields for network operators.

Where a telecommunication facility does not comply with clause 4, it will require a resource consent as a non-complying activity in relation to RF fields only. This clause is therefore straightforward in that there are only three possible scenarios:

1. the facility complies with the relevant sub-clauses *and* the predicted exposures are < 25 per cent of the *NZS 2772.1* limit = permitted in terms of RF fields, or
2. the facility complies with the relevant sub-clauses *but* predicted exposures are ≥ 25 per cent of the *NZS 2772.1* limit = permitted in terms of RF fields but measurements are required post-installation, or
3. the facility does not comply with the relevant sub-clauses = non-complying activity in terms of radiofrequency fields. Resource consent required.

If consent is required, it would need to be sought from the relevant territorial authority.

3.1.1 The New Zealand radiofrequency (RF) field exposure standard

The New Zealand RF field exposure standard *NZS 2772.1: 1999 Radiofrequency Fields Part 1: – Maximum Exposure Levels 3 kHz to 300 GHz* is based on guidelines published by the ICNIRP, an independent scientific body recognised by the World Health Organization (WHO) for its expertise in this area. The ICNIRP guidelines, and their underlying basis, have been picked up in many countries and by other countries' standards. A full discussion of the standard and why it is considered relevant is beyond the scope of this *Users' Guide*, but further information can be obtained from the *National Guidelines*, the ICNIRP website (www.icnirp.de), the WHO International EMF Project website (www.who.int/peh-emf/) or the National Radiation Laboratory website (www.nrl.moh.govt.nz).

The standard sets exposure limits for the public that are around 50 times lower than the levels at which adverse effects might occur. In addition to compliance with these numerical limits, clause 10(d) of the standard requires:

> *Minimising, as appropriate, RF exposure which is unnecessary or incidental to achievement of service objectives or process requirements, provided that this can be readily achieved at modest expense.*

[3] Exposures in this context mean "radiofrequency field levels at locations in the vicinity of the facility that are reasonably accessible to the general public".

This means that full compliance with the standard is achieved not only by satisfying the numerical limits, but also by the network operator being able to demonstrate that they have designed the site to minimise exposures in surrounding areas that are reasonably accessible to the public. So if there are different options available when designing or siting a radio transmitter, then the options resulting in the lowest incidental exposures in surrounding areas that are reasonably accessible to the public should be chosen, all other things being equal. Measures to achieve this could include:

- minimising transmitter power to that required to achieve coverage and service objectives
- selecting antennas that minimise emissions in directions not required for coverage and service objectives
- if alternative sites are available (or there are different options for mounting antennas on a given site, especially rooftop sites), selecting the option giving the lowest exposures in areas that are reasonably accessible to the public.

The network operator should consider not only exposures at ground level but also exposures in nearby houses, balconies, etc.

3.1.2 The New Zealand RF field measurement standard

New Zealand standard *NZS 6609.2: 1990 Radiofrequency Radiation – Principles and Methods of Measurement – 300 kHz to 300 GHz* sets out basic measurement requirements for RF fields. The standard also includes an outline of techniques that can be used for calculating exposures from a proposed site. These techniques are based on well-established principles, which generally give conservative estimates. Many software packages based on these principles are now available, and they allow cellular network operators to plot exposure contours around antennas.[4]

3.1.3 The exposure report required by clause 4

To facilitate a local authority reviewing or assessing compliance of the reports required under clause 4(4), it is recommended that a simple standard form be used. This should be supplemented by additional information including:

- exposure information (this could be in the form of exposure contours around antennas showing where levels that are 100 per cent and 25 per cent of the limit in the standard are met, or a plot or other means showing exposure levels in accessible areas around the site)
- general technical specifications for the site (power, frequency, antenna gain, etc).

An example summary report form is presented in Appendix C.

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[4] These exposure contours are sometimes referred to as "lobe" or "plume" diagrams. "Contour" or "lobe" is preferred, however, because the word "plume" usually refers to emissions of by-products (generally waste) into the air, whereas RF fields are an intentional product of telecommunication facilities.

3.1.4 Compliance with the standard

The standard specifies limits in terms of *basic restrictions* on the amount of RF power absorbed by the human body. Because RF power absorption is difficult to measure, the standard prescribes *reference levels* in terms of the more easily measured electric and magnetic field strengths, and power flux density. Compliance with the reference levels ensures compliance with the basic restrictions, and in most cases they can be regarded as "exposure limits" (although this term is not used in the standard).

The standard permits exposures to be averaged over a 6-minute period. In determining whether exposures comply with the limits, it should normally be assumed that the telecommunication facility is operating at maximum power all the time (even if, as happens with cell sites, for example, the output power is controlled dynamically so as to be just sufficient to handle the calls going through the site). On the other hand, if a transmitter operates with a fixed-duty cycle (ie, it does not transmit continuously but in bursts with fixed on/off periods), then time averaging of exposures can be considered. The standard also allows the power flux density (PFD) to be averaged over an area when making comparisons against the reference levels. It may be reasonable to apply the spatial averaging provisions if, for example, only a very small part of the body (eg, the hands) might be exposed to either the 100 per cent or 25 per cent thresholds.

3.1.5 What areas are reasonably accessible to the general public?

The standard uses the term "reasonably accessible to the general public" but does not define what this means. It is difficult to provide a precise definition, but in most cases it should be fairly easy to determine what areas might and might not be reasonably accessible. For example, it is reasonable to assume that members of the public might be in areas on the ground near a telecommunication facility that is not fenced off by the network operator. On the other hand, it is not reasonable to assume that a member of the public would hire a crane or cherry picker to position themselves right in front of a cell site antenna that is located in an otherwise vacant area.

In general, areas accessible to the public should include anywhere that might under normal circumstances be occupied by a member of the public. This could include both public and private property (eg, in the street, or on private land). Another way of thinking about it could be in terms of areas where members of the public have lawful access but may be unaware of exposures to RF fields.

The table below gives examples of areas that might be considered accessible or not.

Table 1: Examples of "reasonably accessible" and "reasonably inaccessible" areas

Reasonably accessible area	Comment
Inside homes and workplaces, on balconies etc	
On rooftops of existing private homes and buildings adjacent to a telecommunication facility	These areas should be considered accessible even if access is controlled, because people going onto the rooftops will generally be unaware of exposures.
On public and private land, except land securely fenced off around a telecommunication facility	The area that is fenced off should have radiation hazard signs installed to warn people of the potential electromagnetic radiation (EMR) hazard inside the fence. See sections 10(a)(b) and (c) of *NZS 2772.1*.

Not a reasonably accessible area	Comment
On locked rooftops housing telecommunication antennas	Access to the rooftop is controlled, and there should be warning signs at the entrance.
On masts or lamp-posts with telecommunication antennas mounted on them	Staff climbing the mast/post for maintenance are covered under occupational safety rules (OSH would define this as the staff's workplace).
Inside a securely fenced area around a telecommunication facility	The area that is fenced off should have radiation hazard signs installed to warn people of the potential EMR hazard inside the fence.

If the 25 per cent or 100 per cent exposure contour intersects an area where there may be room for discussion about whether it is "reasonably accessible to the public" (eg, if the contour is less than 2 metres above an adjacent rooftop, or if the contour intersects a tree that may be climbable), it would be helpful for the exposure report to state whether this area has been considered accessible or not, and if not, why not.

Areas that would normally be accessed only by maintenance staff (eg, air-conditioning contractors, painters, window cleaners, lighting contractors) should not be considered "reasonably accessible to the public" even though in terms of *NZS 2772.1* these people would be counted as members of the public. The reason for this is that under occupational health and safety legislation it is their employer's responsibility to be aware of and manage possible hazards in their workplace. This would include the potential for exposures to RF fields from telecommunication facilities.

3.1.6 Which other telecommunication facilities in the vicinity should be taken into account?

Clause 4(4)(b)(ii) requires that the exposure report take into account "exposures arising from other telecommunication facilities in the vicinity". The intention behind this requirement is that exposures from a new telecommunication facility (or new transmitters added to an existing facility) should not be considered in isolation but added to the existing contributions from other equipment at the same site or at telecommunication facilities nearby. A "site" may be a mast or pole, or it may be a rooftop or building with antennas mounted on it.

To some extent, radio engineers are already obliged, under licensing rules developed by the Radio Spectrum Management (RSM) group at the Ministry of Economic Development, to be aware of nearby sites in order to avoid radio interference. The RSM group maintains a publicly available database giving the location of transmitter sites. Most transmitters that are likely to make a significant contribution to exposures should also be easy to see on a site visit (although cell sites disguised behind other structures may be an exception). The primary use of this database would be to determine whether or not there are nearby sites that should be considered: detailed technical information on likely exposures from those sites would need to be found elsewhere. Although the RSM database does not include unlicensed band services, these are usually very low power and so unlikely to add a significant contribution to exposures.

The primary goal of clause 4 is to ensure that exposures comply with the standard. As a check on compliance, measurements are required if exposures are calculated to exceed 25 per cent of the public limit (reference level). Hence clause 4 provides a wide margin between the threshold at which measurements are required (25 per cent) and the level at which the public limits might be exceeded (100 per cent), so transmitters on nearby sites that add only a small contribution (a few per cent of the public limit) should not be of particular concern. (Put another way, if exposures from a proposed transmitter exceed the 25 per cent threshold, measurements are

always required. If exposures from the new transmitter are less than 25 per cent of the limit, it would take a fairly substantial nearby source or sources to make them exceed the limit, so we shouldn't have to worry about the relatively small contributions they might make.)

Potential contributions to exposures from transmitters that are on the same site should certainly be considered in the exposure report. Beyond that, there are no hard and fast rules to say how far away other transmitters should be before they need not be considered. Measurements made around a variety of transmitters in New Zealand suggest that under most circumstances the exposures in publicly accessible areas more than 50 metres away are less than a few per cent of the public limit and so are unlikely to make the difference between compliance with the public limits or not.

It is not necessary to make detailed calculations for every antenna nearby. The important thing is that the antenna or facility be considered, even if the result of that consideration is to conclude that it will make a negligible difference to exposures so that detailed calculations are not necessary. For example, dish antennas emit a tightly focused beam, which, to be useful, must be directed away from the ground and buildings, and so can normally be assumed to make no significant contribution to exposures in areas that are reasonably accessible to the public. Contributions from panel antennas not facing towards the publicly accessible area under consideration can also be neglected under most circumstances.

Network operators should be aware that the question of "cumulative effects" (the possibility that increasing the number of sites leads to rapidly increasing exposure levels) is often of concern to the public, so if in doubt it would be better to include consideration of a "nearby" site even if it turns out to be of little significance.

3.1.7 Good practice

3.1.7.1 Timing of the exposure report submission

Although clause 4 only requires the report to be submitted before the site becomes operational, it is good practice to submit the report to the local authority before construction commences (together with the resource consent application, if one is required). The report may constitute part of an application for a certificate of compliance, which would provide the opportunity for the council to assess whether resource consent is required, if they choose to.

3.1.7.2 Supplementary information about the facility

Clause 4 requires that the report predict whether exposures comply with the public limits in the standard, and if they will exceed 25 per cent of those limits. There is no obligation to provide any more detail than this. However, it would be good practice for network operators to supply additional information that would enable local authorities, if they wished, to independently verify the conclusions in the report. This could include technical specifications and plots showing estimated exposures. This information will already be available in order to prepare the report, so providing it should require little extra effort on the part of the network operator. It would also raise confidence in the report.

3.1.7.3 Auditing

A local authority may wish to audit reports, or monitor sites, to assess compliance. The decision to audit or monitor may depend on the council's policies on audits and monitoring permitted activities, or may be in response to complaints or concerns raised by the public. Note that some operators commission independent monitoring of some of their sites, and so councils may wish to investigate this first to avoid any unnecessary duplication.

3.1.7.4 Future developments on adjacent sites

The report is prepared based on building developments that already exist around the proposed site at the time the report is submitted, rather than what might legally be constructed on adjacent sites in the future. The ongoing legal obligation to comply with clause 4 means that an operator would need to modify a site or apply for resource consent (non-complying activity) if future building on an adjacent site resulted in non-compliance with clause 4.

Councils may consider putting a "flag" on adjacent property files so that if new developments are planned there is the opportunity to assess whether further action is required to assess if there is a non-compliance issue with clause 4.

3.1.7.5 Community consultation

Chapter 7 of the *National Guidelines* highlights the importance of considering community views on transmitter sites, and how failure to do so might result in unfavourable publicity and delays in installation, whether or not a proposal complies with all the necessary regulations. The Ministry for the Environment considers that the advice to the telecommunications industry in Chapter 7 is still valid, and also constitutes good practice.

3.2 Clause 5: Activity status

This clause outlines the activity status for telecommunication facilities in the road reserve and allows activities that fall outside the regulations to continue to be managed through existing rules in district plans.

Table 2: Activity classes for radiofrequency

	NES	District plan
Permitted	✓	
Controlled		
Restricted discretionary		
Discretionary		
Non-complying	✓	

Table 3: Activity classes for cabinets and antennas

	NES	District plan
Permitted	✓	
Controlled	✓ (see note below)	✓
Restricted discretionary		✓
Discretionary		✓
Non-complying		✓

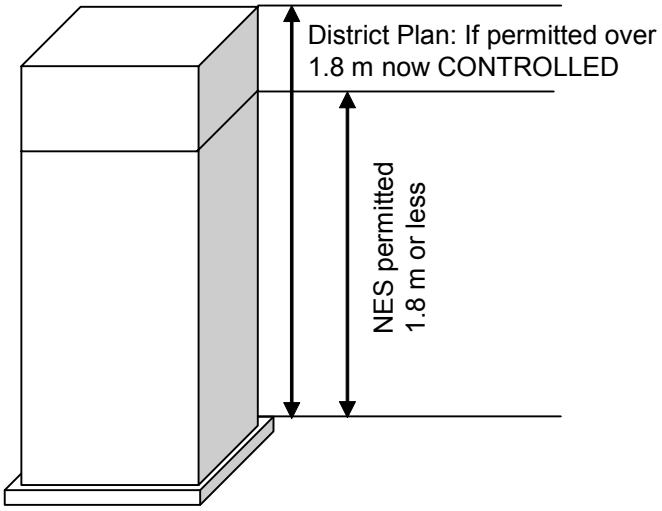
The possible statuses are:

- **permitted** – if the facility complies with regulation 4 (radio frequency fields) and the conditions in regulations 6 to 9 (NES only)
- **controlled** – if the facility does not comply with conditions in regulations 6 to 9 and the facility was permitted or controlled in the relevant district plan or proposed plan (see note below)
- **restricted discretionary** – if the facility does not comply with conditions in regulations 6 to 9 and was restricted discretionary in the relevant district plan or proposed plan
- **unrestricted discretionary** – if the facility does not comply with conditions in regulations 6 to 9 and was unrestricted discretionary in the relevant district plan or proposed plan
- **non-complying** – if the facility does not comply with conditions in regulations 6 to 9 and was non-complying in the relevant district plan (*or* for radiofrequency fields, if the proposal does not meet the requirements of regulation 4)
- **prohibited** – if the facility does not comply with conditions in regulations 6 to 9 and was prohibited in the relevant district plan.

Note that *if a proposal does not comply with regulations 6 to 9, resource consent is required*. The assessment of the resource consent application (regardless of activity status) should be under the terms and conditions for assessment prescribed in the relevant district plan, as if the NES did not exist.

Note also that the one exception to this is where a district plan permits something in excess of the level permitted by the regulations. In this situation, the permitted activity in excess of the regulations becomes a *controlled* activity. Control is limited to the aspect that does not comply with the regulations. By limiting control to regulations 6 to 9, a council need only consider the aspect that tips a proposal outside the parameters of the regulations. For example, if a plan permits cabinets up to 2 metres in height and the regulation only permits a cabinet up to 1.8 metres in height, then a 2-metre-high proposal by a telecommunications company would be a controlled activity. When assessing the application, the consent authority's control would be limited to the height of the cabinet only (ie, the aspect of "non-compliance").

Figure 1: Controlled activity class for district plan rules that are more permissive than the NES



3.3 Clause 6: Conditions protecting trees and vegetation, historic heritage values, visual amenity values, and coastal marine area

Clause 6 of the regulations provides that a plan's rules need to be complied with if consent is already required for works within the dripline of a tree, or where the adjacent site is accorded specific protection under the relevant district plan, such as for heritage or visual amenity or coastal protection. The regulations allow these rules to be more stringent than the regulations. If the plan's rules are not complied with then resource consent may be required.

For example, where a cabinet is proposed to be located next to a site identified as having heritage or amenity values, or is in an area identified for coastal protection (ie, on the seaward side of a road), and the district plan restricts the location of telecommunication facilities within the road reserve, the proposal will be subject to both the conditions of the regulations and the relevant rules of the district plan.

Where the activity is not permitted under the regulations, the status of the application will depend on the more restrictive activity classification. For example, a controlled activity under the regulations and a discretionary activity in terms of heritage under the district plan means the application will be considered as a discretionary activity. In such instances, all relevant assessment criteria within the relevant district plan must be considered.

A number of district plans have overlays: heritage rules and urban design rules that do not directly affect utility rules and/or telecommunication facilities. It is not intended that councils apply their overlays as a new test, potentially leading to a more restrictive regime than in the past. Clause 6 is intended to preserve existing district plan rules relating to protecting trees and vegetation, historic heritage values, visual amenity values, and the coastal marine area. It is not intended to create new consenting requirements where none previously existed.

District plan rules relating to historic heritage values, visual amenity values and the coastal marine area must specifically relate to network utility structures in road reserves (not just the adjacent land) for these to be applicable under clause 6.

The following table gives a summary of district plans where such rules may apply (as at the date of publication of this guide). Further information can be found in each respective district plan, and each council will need to determine how these exceptions relate to the framework of the regulations.

Table 4: Summary of district plans where NES rules may apply

Plan	How specific values and utilities interact within the plan
Rodney	Any permitted utility activity has to consider any relevant provisions of cultural heritage rules. These take precedent over utility rules.
North Shore	Any permitted or controlled utility activity has to comply with relevant rules specified in the cultural heritage section.
Auckland Isthmus	The utility, heritage and coastal protection sections should be read together, without one having more weight than the other.
Waitakere	All utility rules, regardless of activity status, have to comply with the heritage and sensitive ridge rules of the plan.
Manukau	Controlled utility activities need to consider heritage values, because control is reserved over heritage, but permitted activities do not. No permitted or controlled utility can physically alter or modify a scheduled heritage item in terms of the general development and performance standards applying to utilities.
Hamilton	All utility activities, regardless of their status, must comply with the overlay rules of the plan, which include the specific value rules.
Palmerston North	The performance conditions for permitted utility activities mean any utility work shall not disturb any cultural or heritage site.
Wellington	A permitted utility activity must comply with a performance standard that concerns specific values explained within the utility rules chapter.
Christchurch	If a permitted utility activity is proposed for a site that contains a specific value as listed in the district plan (eg, notable trees), the activity status changes to discretionary activity.
Dunedin	All rules in the utility section of the plan, regardless of the activity status, are overridden by specific value rules written in the plan.

Potential adverse effects or affected persons are not considered in the regulations and are left to the discretion of individual councils. It would be appropriate for councils to use their existing practices for determining terms of notification (if any).

The relevant sub-clauses of clause 6 are now discussed in more detail.

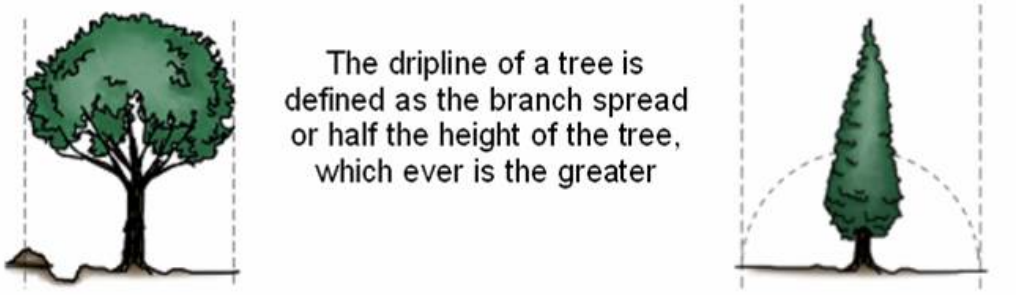
Clause 6: Conditions protecting trees and vegetation, historic heritage values, visual amenity values, and coastal marine area

Trees and vegetation

(1) This condition applies if the telecommunication facility is located in a road reserve within the dripline of a tree or other vegetation and the relevant district plan or proposed district plan would, if these regulations did not exist, require the network operator to obtain a resource consent for the installation and operation of the facility in such a location. The installation and operation of the facility must comply with the plan's rules on tree and vegetation protection. The rules may be more stringent than the conditions in regulations 7 to 9.

The figure below is taken from the Auckland City District Plan (Isthmus Section) and represents a good example of a definition of dripline.

Figure 2: Definition of the dripline for differing shaped trees



Where a telecommunication cabinet is proposed to be located in the dripline of a tree, the proposal will default to the relevant tree rules applicable in the district plan, and the status of the activity will depend on those rules. A number of councils have this restriction currently. This condition also applies where an operator wishes to install a telecommunication facility in the road reserve within the dripline of a protected tree, where the protected tree is located within private property.

Historic heritage

(2) This condition applies if the telecommunication facility is located in a road reserve that is on the same side of the road as and next to land or items that are identified as having historic heritage values in the relevant district plan or proposed district plan. The facility must comply with the plan's rules on historic heritage values. The rules may be more stringent than the conditions in regulations 7 to 9.

From a review of district plans it is clear that only a few retain this control over facilities adjoining historic heritage sites, but some councils may choose to consider this. For example, a telecommunication company that wishes to install a 1.5-metre-high, 1.4-metre-square cabinet, complying with the rules of Section 13 (Townscape) of the Dunedin City District Plan within the Octagon Townscape Precinct of Dunedin, can currently do so as of right and continue to do so, as resource consent is not required.

A further example is Manukau City, where historic heritage has been defined as a general matter for consideration in relation to controlled activities. Under the district plan the council has reserved its control over heritage for all cabinets that are higher than 900 millimetres in height. This has enabled the council to include conditions relating to effects on adjacent heritage items that, while not physically affected, may have been affected in some other way by the siting of a cabinet.

The regulations have as a height limit 1.8 metres permitted. Unless the council changes its plan, there will be no historic heritage control over such cabinets. This is because the regulations now set a permitted cabinet size, which applies in all circumstances except where district plans expressly identify those locations/circumstances where cabinets permitted by the NES are not appropriate in terms of identified heritage values. An example might be where cabinets are proposed within heritage areas. The Manukau City rules relating to the alteration of or modification to scheduled heritage items still apply, so if a cabinet is proposed to be sited in a

way that alters or modifies a scheduled heritage building or object, then the heritage rules of the district plan apply.

Visual amenity

(3) This condition applies if the telecommunication facility is located in a road reserve that is on the same side of the road as and next to land or sites that are identified as having visual amenity values in the relevant district plan or proposed district plan. The facility must comply with the plan's rules on visual amenity values. The rules may be more stringent than the conditions in regulations 7 to 9.

The NES does not define the term "visual amenity values", and there are limited examples found in district plans where this would apply. However, it is likely that roads that run through conservation sites or along ridge lines and hilltops may be subject to more stringent controls about the siting and placement of telecommunication apparatus. Also, some plans may control antennas within identified view shafts.

Coastal marine area

(4) This condition applies if the telecommunication facility is located in a road reserve that is on the same side of the road as and next to coastal marine area. The facility must comply with the plan's rules that apply to telecommunication facilities. The rules may be more stringent than the conditions in regulations 7 to 9.

Many councils have roads that adjoin the coastal marine area and some choose to regulate structures on the seaward side of the road. In Wellington, roads are zoned with the centreline often defining the zone boundary. Generally, land above mean high-water mark on the seaward side is zoned conservation area, such that above-ground utilities are a discretionary activity in the road reserve.

3.4 Clause 7: Antennas and existing utility structures

Clause 7 of the regulations addresses replacements or additions to existing structures or facilities and considers the circumstances where these are permitted. This clause aims to remove the uncertainty that can exist in district plans where no definition of permitted "upgrading" exists. It will provide national consistency by specifying the conditions that must be met.

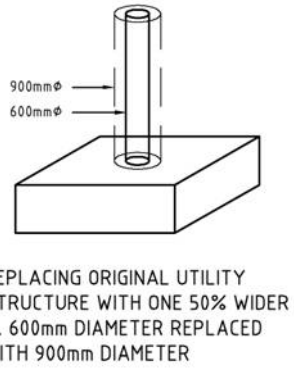
The regulations refer to both original and replacement utility structures:

- **original utility structures** are poles that have a primary function other than telecommunication, such as street lights or traffic lights
- **replacement utility structures** are poles that have been modified from the original form to include telecommunication facilities.

Clause 7: Conditions controlling antennas and utility structures

(1) This condition applies if an original utility structure in a road reserve is replaced by a replacement utility structure. The replacement utility structure must not have a diameter that is more than the original utility structure's diameter at its largest point plus 50%.

Figure 3: Example of replacing an original utility structure



An example of where this might occur is the replacement of an existing lighting pole with a reinforced lighting pole that can also function as a telecommunication facility. This subclause is pragmatic, with an allowance for a slightly bulkier pole without the need for resource consent (although the structure would still need to comply with any conditions relating to safety imposed under the road-opening notice).

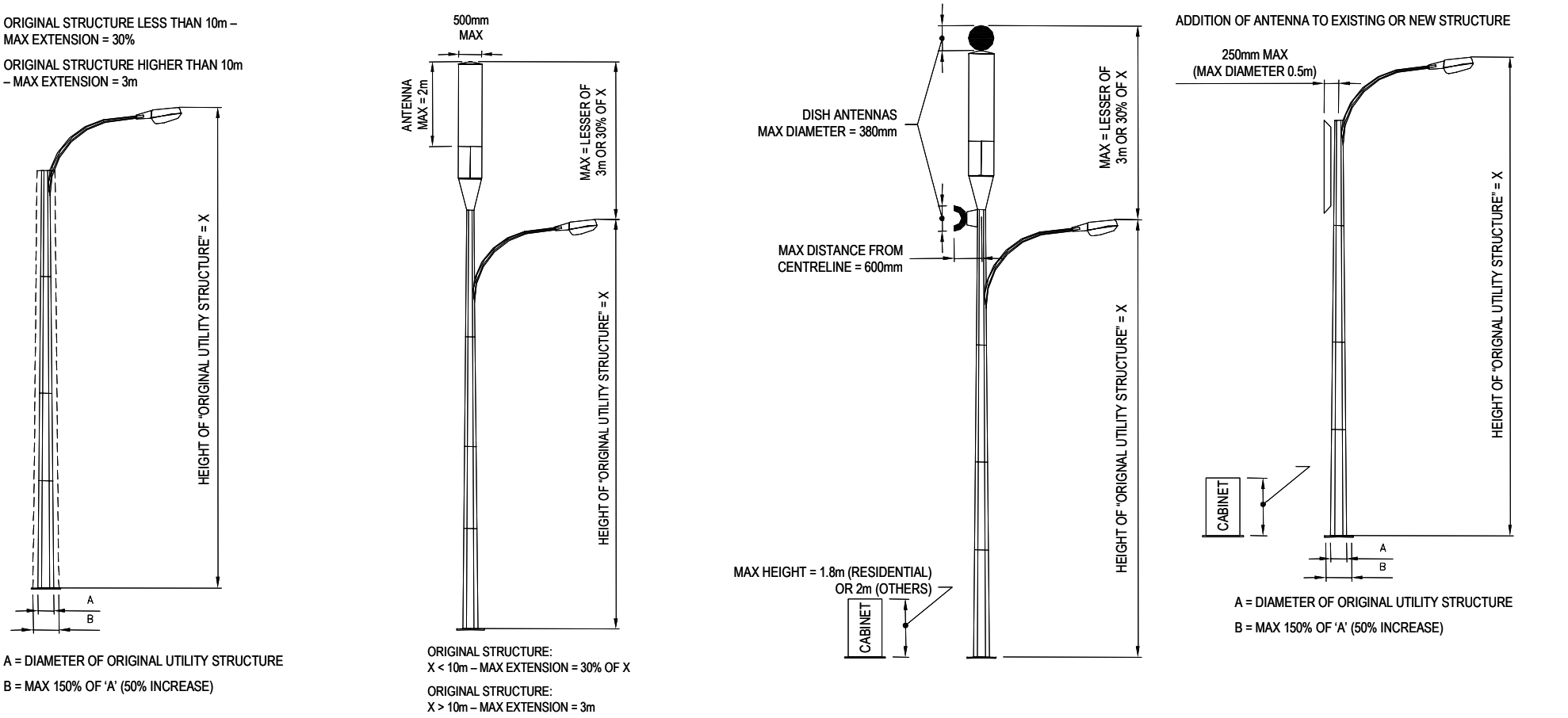
(2) This condition applies if the addition of an antenna makes a structure into a replacement utility structure in a road reserve. The height of the replacement utility structure must be no more than the original utility structure's highest point plus the lesser of 3 m or 30%.

In simple terms:

- if the height of the original structure is less than 10 metres, the maximum height increase is 30 per cent
- if the height of the original structure is 10 metres or higher, the maximum height increase is 3 metres.

The examples below are courtesy of Vodafone New Zealand and show typical antenna additions to lighting standards.

Figure 4: Typical antenna additions to lighting standards

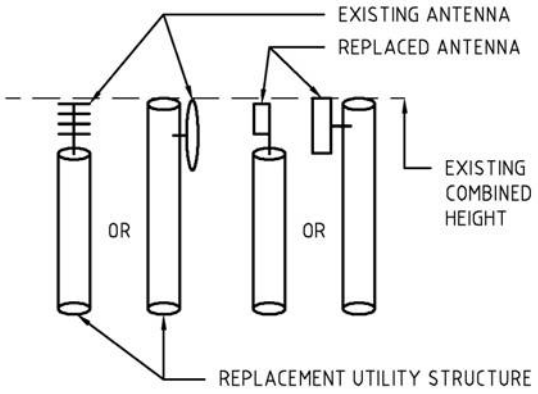


Note: drawings are not to scale.

Once there is one antenna addition, you then have a replacement utility structure. New works cannot be any higher (as per condition 3 below), and any further additions increasing height would require resource consent. Note that the height measurement was not intended to include the likes of small whip antenna and GPS locators that are often located on the top of antenna installations.

(3) This condition applies if an antenna on a replacement utility structure in a road reserve is replaced. The combined height of the replacement utility structure and the replacement antenna must be no more than the combined height of the replacement utility structure and the original antenna. This essentially means that the overall height of the structure and antenna must not increase where replacements occur.

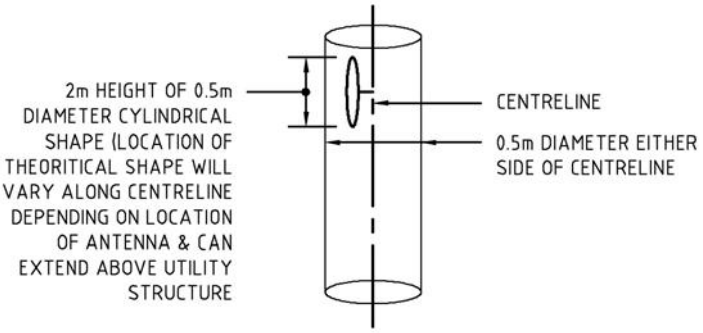
Figure 5: Examples of replacing an antenna on a replacement utility structure



An example would be where a technological change requires an existing antenna to be replaced. The new antenna could be slightly heavier and require a new support structure. Under the Manukau City District Plan, resource consent would be required as a restricted discretionary activity. However, following the introduction of the NES it will be permitted.

(4) This condition applies if an antenna is added or replaced under subclause (2) or (3). The antenna – excluding the mount, if there is one, and the shroud, if there is one, and ancillary equipment, if there is any – must fit within the dimensions of a cylindrical shape that, when measured along the centre line of the original utility structure or the replacement utility structure, is no more than 2 m high and no more than 0.5 m in diameter.

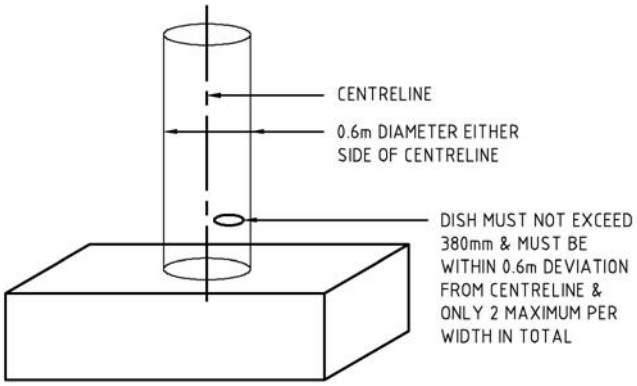
Figure 6: Example of adding or replacing an antenna under subclause (2) or (3)



An example of when this would be a controlled activity would be a proposal to attach an aerial to an existing utility structure in Wellington that will extend 0.7 metres from the centreline of that pole. The Wellington District Plan currently permits this activity to 1 metre from the pole, but because the NES is more restrictive at 0.5 metres, the activity becomes a controlled activity.

(5) This condition applies if a dish antenna either is added to an original utility structure in a road reserve or a replacement utility structure in a road reserve or replaces an antenna on an original utility structure in a road reserve or a replacement utility structure in a road reserve. The dish antenna must have a diameter of no more than 380 mm, must not protrude from the structure's centre line by more than 0.6 m, and must be one of only two on the structure.

Figure 7: Example of installing a dish antenna



This condition limits the dimensions of replacement antenna structures to those that have minimal visual impact. Where a network operator has been asked by a road-controlling authority to move an existing pole slightly (eg, to improve traffic safety), and no environmental effects would arise from the movement, it is envisaged that this could be considered a replacement structure in terms of the regulations.

3.5 Clause 8: Telecommunication cabinets

The installation of telecommunication equipment cabinets in the road reserve is a permitted activity, subject to specified limitations on their size and location for residential and non-residential areas, and the proximity of cabinets to each another. Where specific values have been identified in the district plan, these will continue to be considered. This will ensure local values, such as protected vegetation, continue to be addressed.

The regulations provide for equitable allocation of space for roadside cabinets by providing a maximum footprint allowance for a location. Discussions with industry representatives indicate that the proportionate allowance for a single cabinet is large enough to provide space for co-location of more than one service provider's equipment within that cabinet.

Telecommunication cabinets in road reserves are permitted activities subject to the following restrictions (see Table 5).

Table 5: Restrictions on telecommunication cabinets in road reserves

Limitations on cabinet size and location (above ground level)[a]	**Adjacent area type**
Maximum height: 1.8 m Maximum footprint of any single cabinet: 1.4 m² Maximum footprint occupied by all cabinets: 1.8 m² Maximum number of telecommunication cabinets exceeding 900 mm in height in any one location:[b] 1[c] Minimum separation distance from any existing cabinet exceeding 900 mm in height: 30 m	Primarily residential
Maximum height: 2 m Maximum footprint: 2.0 m² Minimum separation distance from any existing cabinet exceeding 900 mm in height: 30 m	Other (meaning all road reserve locations other than those defined as primarily residential)

a All maximum heights refer to the height of the cabinet and do not include the height of the concrete plinth to which they are affixed.

b The standard does not specify the site or location, because legal road is not specifically a site according to the RMA or most district plan definitions. The interpretation is that it relates to a site adjoining legal road.

c The justification is found in the Cabinet paper agreeing to the preparation of the NES.

The regulations prescribe a maximum footprint for any one location, and any one cabinet may only take up a set proportion of that space, with the remainder of the allowance available for a further cabinet or cabinets. This aims to avoid a situation where the first cabinet installed by an operator would use up all of the permitted development allowance, thereby forcing subsequent operators to apply for resource consents before installing further cabinets. The standard is considered to be a pragmatic solution to encouraging co-location within the "first-come-first-served" framework of the RMA.

The NES provisions relating to cabinets were not intended to apply to small customer connection pedestals or pillars, which provide the connection point between the distribution cable in the road and a customer's lead-in cable.

The term "primarily residential" is intended to capture the following situations:

- zoned residential
- predominant use residential
- residential in character.

It is not intended that the "primarily residential" provisions apply to mixed-use zones where both commercial and residential activities are provided for as a permitted activity.

The specific conditions controlling cabinets are outlined below.

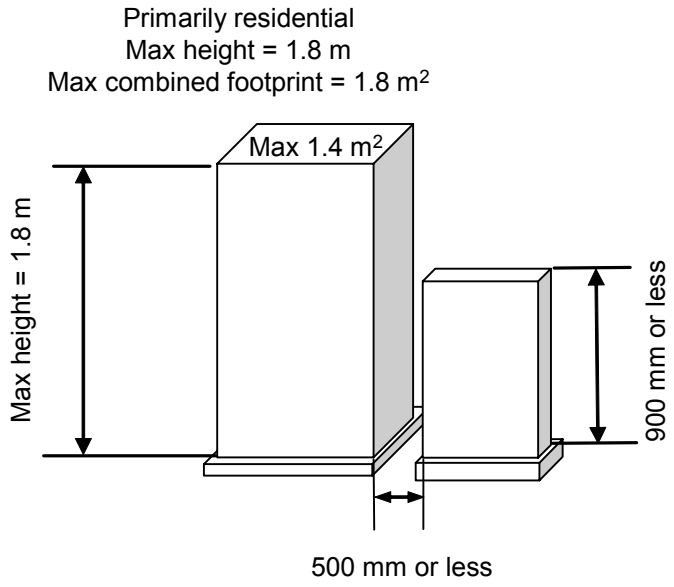
Clause 8: Conditions controlling cabinets

(1) This condition applies if a cabinet is located by itself in a road reserve next to land that a relevant district plan or proposed district plan classifies as primarily for residential activities. The cabinet's footprint must be no more than 1.4 m². The cabinet must be no higher than the height of the concrete foundation plinth, if there is one, plus 1.8 m.

Typically the cabinets will be flush with the ground, but there will be instances where this is not possible, such as where there is sloping ground. In those cases a portion of the plinth will be visible. The height should be measured from the natural ground level.

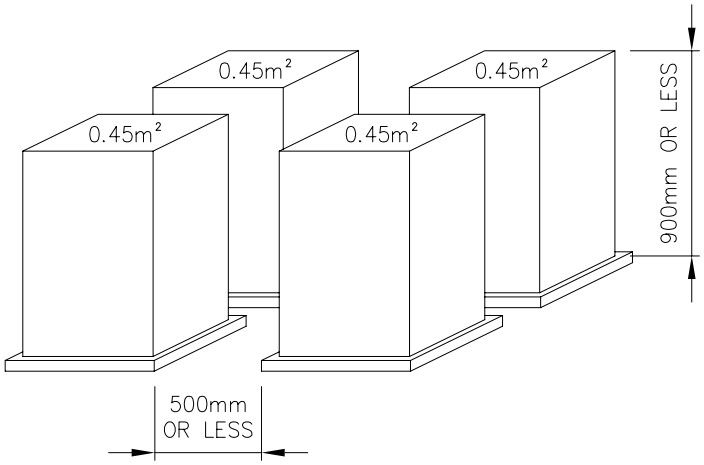
(2) This condition applies if two or more cabinets are located at the same site in a road reserve next to land that a relevant district plan or proposed district plan classifies as primarily for residential activities. Each cabinet's footprint must be no more than 1.4 m². The total footprint of all the cabinets must be no more than 1.8 m². The distance between each cabinet and the cabinet or cabinets closest to it must be no more than 500 mm. The cabinets must be no higher than the height of the concrete foundation plinths, if there are any, plus 900 mm, with the exception that one cabinet may be as high as the height of the concrete foundation plinth, if there is one, plus 1.8 m.

Figure 8: Example of two cabinets located in the road reserve at the same site next to primarily residential land



The distance between two cabinets should be no greater than 500 millimetres in all instances to qualify as a permitted activity.

Figure 9: Example showing multiple cabinets as permitted activity



The examples above show theoretical examples of co-location and the sizes that can be put in place. However, there are many different combinations that could apply so long as the total footprint is no more than 1.8 square metres, the maximum height of the first cabinet is less than 1.8 metres, with the remaining cabinets being no more than 900 millimetres, and there is a separation distance less than 500 millimetres.

Replacement of existing cabinets – temporary activities

Upgrading networks may require the replacement of an existing cabinet or cabinets with new ones. To ensure continuity of services to customers and minimise disruption, telecommunication suppliers often install a new cabinet alongside or near the existing one. The connections are then transferred from the existing cabinet to the new one in a process known as "cutting over". The old cabinet is then removed, usually within three months of commencing construction work on the new cabinet.

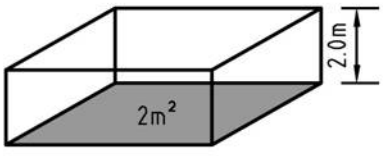
There are conflicting views on whether the temporary location of two cabinets or sets of cabinets would be permitted under the regulations. In this situation a pragmatic approach is recommended.

On the face of it, the installation (albeit temporary) of new cabinets adjacent to existing cabinets to facilitate a changeover would not comply with the minimum separation distance of 30 metres for cabinets over 900 millimetres. The temporary situation could arguably require resource consent. However, there is a strong case for considering the temporary situation as ancillary to the activity of installing and operating the new telecommunication cabinet. Furthermore, it is not the intent of the regulations to require resource consent for the temporary changeover period. Requiring consent would in fact defeat the intent of the regulations, which is to provide for new or upgraded telecommunication cabinets as permitted activities where they comply with the performance specifications in the regulations.

It is suggested that the size and separation requirements be applied to the completed arrangement only. It is not intended that the regulations be applied to temporary changeover situations.

(3) This condition applies if a cabinet is located by itself in a road reserve, or if two or more cabinets are located at the same site in a road reserve, next to land that a relevant district plan or proposed district plan does not classify as primarily for residential activities. The total footprint of all the cabinets must be no more than 2 m². Each cabinet must be no higher than the height of the concrete foundation plinth, if there is one, plus 2 m.

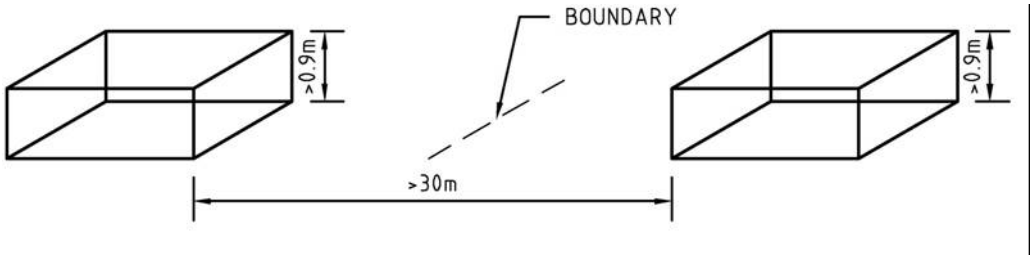
Figure 10: Maximum footprint and height of cabinets in a road reserve next to non-residential land



This relates to non-residential sites where the dimensions can be larger on the basis that the road reserve adjoining non-residential sites is not as sensitive in terms of residential amenity.

(4) This condition applies if two or more cabinets are located at different sites in the road reserve, on the same side of the road as one another, and next to land that a relevant district plan or proposed district plan either does or does not classify as primarily for residential activities and are higher than the height of the concrete foundation plinths, if there are any, plus 900 mm. Each cabinet must be at least 30 m from each other cabinet that is higher than the height of the concrete foundation plinth, if there is one, plus 900 mm. The 30 m must be measured between the two closest points of the cabinets.

Figure 11: Minimum separation of telecommunication cabinets in the road reserve



Note: The separation distance of 30 metres only applies between two or more telecommunication cabinets. The definition of "cabinet" in the regulations is: "Cabinet means a casing around equipment that is necessary to operate a telecommunication network".

Failure to comply with any of the dimensions and setbacks outlined in this condition is a controlled activity infringement if the activity would have been permitted under the relevant district plan rules. If the activity was not permitted under the relevant district plan, then the relevant rules and status of that plan will apply. The heritage, amenity and tree rules of district plans are also relevant and are discussed previously in section 3.3 of this guide.

If the activity is considered a controlled activity, under the regulations control is limited to those conditions in regulations 6 to 9 with which the facility does not comply. An example of this is where two cabinets are to be constructed 15 metres from each other, both measuring 1.8 metres in height. The 30-metre separation clause of the regulations is infringed, but would otherwise be permitted in the Waitakere City District Plan. The cabinet would therefore be considered a controlled activity. Control would be limited to specifying the separation distance in the resource consent. The same infringement would, however, be considered a discretionary activity under the Auckland City District Plan (Isthmus Section).

The 30-metre separation distance only applies to other telecommunication cabinets located on the same side of the road being considered.

(5) This condition applies if a cabinet is located in a road reserve next to land that a relevant district plan or proposed district plan either does or does not classify as primarily for residential activities and requires a power supply. The power supply must be located either below ground or within the cabinet.

This condition relates to underground cabling for any power supply and is included to prevent a proliferation of the small junction boxes that otherwise could be found next to utility cabinets. These are often considered *de minimis* (negligible), but can present a trip hazard to pedestrians.

Where an existing cabinet gets its power supply from an existing above-ground power pillar, and that cabinet is replaced by a new cabinet, it is intended that the existing power supply would need to be relocated underground to meet this condition.

3.6 Clause 9: Noise

Noise can be an issue for the roadside location of cabinets, particularly where they are adjacent to residential sites. Clause 9 of the regulations refers to the noise emissions from the cabinets and the way that noise is measured. To ensure consistency, the relevant New Zealand standard (*NZS 6801: 2008)* for noise measurement must be met. Levels of noise have been taken from the reasonably accepted definitions nationwide of "daytime" and "night-time" hours.

Cooling fans within the cabinets do generate noise, the level of which is related to a combination of air temperature and usage. As a result, the noise generated will usually be greater during the day, when both air temperature and usage are higher. Depending on the receiving environment, the ambient background noise from other sources, such as road traffic, will also be at its greatest during the day.

There has, however, been a lack of consistency among councils regarding the maximum permitted levels of noise and where the noise is to be measured. The regulation has set the limits for noise, the method of measurement (*NZS 6801: 2008*) and where the measurements will take place.

Clause 9: Conditions controlling noise

(1) This condition applies if a cabinet is located in a road reserve in an area in which a relevant district plan or proposed district plan allows residential activities. The noise from the cabinet must not exceed –

- *(a) 50 dB LAeq (5 min) between 7 am and 10 pm;*
- *(b) 40 dB LAeq (5 min) between the 10 pm referred to in paragraph (a) and the following 7 am;*
- *(c) 65 dB LAFmax between the 10 pm referred to in paragraph (a) and the following 7 am.*

(2) This condition applies if a cabinet is located in a road reserve in an area in which a relevant district plan or proposed district plan does not allow residential activities. The noise from the cabinet must not exceed –

- *(a) 60 dB LAeq (5 min) at any time;*
- *(b) 65 dB LAFmax between 10 pm and the following 7 am.*

Sub-clauses 1 and 2 set noise rules for cabinets based on whether or not the cabinet is located in a road reserve, in areas where a district plan allows residential activities. It is intended that "allowing residential activities" means a residential zone. It is not intended to capture situations in business zones where there is provision for a caretaker or manager's residence on a commercial/industrial site, or in mixed-use zones where commercial and residential activities are permitted and/or where noise rules require insulation for noise-sensitive activities, including residential uses. The intention of sub-clause 1 is that it only applies where residential activity in general is allowed for (and not other more noisy activities), and the relevant district plan objectives and policies seek to maintain and enhance residential amenity values, or similar, as a principle objective. See Appendix D for descriptions of the terms LAeq and LAFmax.

In Wellington, for example, the central area and suburban centres, as well as residential zones, allow residential activities as of right. It is intended that sub-clause 1 capture the residential areas only and not the central area or suburban centre mixed-use zones, which have higher permitted activity noise levels and permit commercial and industrial activities in addition to residential activities. This will ensure the noise provisions of the NES correspond with most plans' distinctions between the expectation for lower noise in sensitive areas and the higher expectations for town centres and industrial areas.

The maximum noise level stipulated in the regulations is 50 dB LAeq (5 min) during the day, reducing to 40 dB LAeq (5 min) at night (between the hours of 10 pm and 7 am), with that level having an additional control of 65 dB LAFmax. A 50 dB LAeq (5 min) and 65 dB LAFmax means that the noise levels measured and averaged over a 5-minute (LAeq 5 min) period must not exceed 50 dB, and that a single noise event effectively measured instantaneously (LAFmax) must not exceed 65 dB. The definitions of LAeq and LAFmax have been reproduced from *NZS 6801: 2008*, and a further explanation is included in Appendix C.

However, some people have difficulty understanding what 50 or 65, or the associated letters, mean. By way of comparison, a level of 60 dB is a normal speech level, and a quiet office or home at night is roughly 40 dB. NZ Occupational, Safety and Health provides further guidance.

Having set noise levels will ensure national consistency and will avoid instances where acoustic barriers may be required in order to meet the rules of the district plan but may be detrimental to the visual amenity of an area.

(3) The noise from the cabinet must be measured and assessed at one of the following points:

- *(a) if the side of a building containing a habitable room is within 4 m of the closest boundary of the road reserve, the noise must be measured –*
  - *(i) at a point 1 m from the side of the building; or*
  - *(ii) at a point in the plane of the side of the building:*
- *(b) in any other case, the noise must be measured at a point that is –*
  - *(i) at least 3 m from the cabinet; and*
  - *(ii) within the legal boundary of land next to the part of the road reserve where the cabinet is located.*

Where district plans required noise readings to be taken from the front boundary of the site it has been difficult for the cabinets to meet the maximum noise levels, particularly the night-time noise levels, which are generally lower than during the day. Furthermore, most district plans require a front-yard setback of around 3 to 4 metres in residential areas, usually to ensure dwellings do not dominate the street. In rural areas that setback is even further and generally not less than 10 metres. In many of these rural settings a notional boundary within the site is used to measure noise. This concept has been transferred to the regulations.

A practical approach has been taken whereby noise can be measured at least 3 metres inside the boundary of the residential property adjacent to the location of the cabinet.

There are instances, particularly in older suburbs and high-density areas, where dwellings currently exist or are permitted to be constructed closer than 4 metres from the boundary. In those instances, noise measurements will be taken 1 metre from the dwelling or the plane (front façade) of the dwelling. This applies only if that closest point is a habitable space.[5] An example of where this could occur would be in Residential 2, 3 or 4 of the Dunedin City District Plan, where 3 metres is the front-yard setback.

The point of measurement for noise is to be in either the vertical or horizontal plane, to address the situation where habitable rooms may be one or more storeys above street level, but in plan view adjoin the boundary. The measurement point used where there is commercial or car-parking activity on lower floors in an apartment building constructed up to the front boundary and a cabinet is constructed close to the property boundary will be a point 1 metre from the closest habitable room within the upper levels of the apartment building.

(4) The noise from the cabinet must be measured in accordance with NZS 6801: 2008 Acoustics – Measurement of Environmental Sound, the measurement must be adjusted in accordance with NZS 6801: 2008 Acoustics – Measurement of Environmental Sound to a free field incident sound level, and the adjusted measurement must be assessed in accordance with NZS 6802: 2008 Acoustics – Environmental Noise.

The New Zealand standards for measuring noise have been accepted by the acoustic community and the Environment Court, and adherence to them ensures consistency across the country.

[5] The definition of what is a habitable room or habitable space also differs between councils. For clarity, the intended meaning of "habitable space" is that given in the Building Code (Building Regulations 1992) as: "A space used for activities normally associated with domestic living, but excludes any bathroom, laundry, water-closet, pantry, walk-in wardrobe, corridor, hallway, lobby, clothes-drying room, or other space of a specialised nature occupied neither frequently nor for extended periods".

4 Implementation of the Regulations

4.1 Relationship between national environmental standards (sections 43B–43E) and district plans

Section 43B of the RMA outlines the effect of a national environmental standard. This provision states that a rule in a district plan or a resource consent:

- cannot be more stringent than the national environmental standard (unless the national environmental standard expressly says that it may be); and
- cannot be more lenient than the national environmental standard.

As we have seen, the National Environmental Standards for Telecommunication Facilities (the NES) took effect on 9 October 2008 and take precedence over existing rules in council district plans that address the same matters, unless the NES regulations expressly state that a rule or consent may be more stringent. The regulations allow district plans to include rules that are more stringent only in terms of trees and vegetation, historic heritage, visual amenity and/or proximity to coastal marine areas. A rule or consent cannot be more stringent in terms of the bulk and location performance standards in the regulations.

How section 43B of the RMA might operate is illustrated below.

- **A rule cannot be more lenient than the regulations**. An example of where a rule is more lenient is in Waitakere City, where, under the district plan, above-ground infrastructure can currently cover 2 square metres in area. Following implementation of the regulations, when cabinets are proposed in the residential zones of the city, either individually or cumulatively totalling between 1.8 and 2 square metres, they will be considered a controlled activity.
- **A resource consent granted prior to the regulations prevails over the standard**. Where a decision has not yet been made, a resource consent prevails over the NES if the consent application was the subject of a decision on whether (or not) to notify it before the date on which the NES was notified in the *Gazette* (ie, 11 September 2008).

Section 43D of the RMA outlines the relationship between an NES and designations. The existing designation takes precedence unless it lapses or is altered to an extent that the conditions of the NES are relevant. However, there are specific instances where that is not the case, and for clarity refer to section 43D and section 176A of the RMA.

4.2 Influence of a national environmental standard on district plans and proposed district plans

Section 43A of the RMA, subsection 5, states in relation to the influence of a national environmental standard on district plans and proposed district plans:

> *(5) If a national environmental standard allows an activity and states that a resource consent is not required for the activity, or states that an activity is a permitted activity, the following provisions apply to plans and proposed plans:*

(a) a plan or proposed plan may state that the activity is a permitted activity on the terms or conditions specified in the plan; and

(b) the terms or conditions specified in the plan may deal only with effects of the activity that are different from those dealt with in the terms or conditions specified in the standard; and

(c) if a plan's terms or conditions deal with effects of the activity that are the same as those dealt with in the terms or conditions specified in the standard, the terms or conditions in the standard prevail.

4.3 Removal of plan rules that duplicate or conflict with national environmental standard provisions

Under section 44A, rules in plans that duplicate or conflict with provisions contained in a national environmental standard must be removed by amending the plan. This can be done without using the usual processes under Schedule 1, and must be done as soon as practicable after the standard comes into force. A rule is deemed to conflict with a standard's provision if:

- the plan rule is more restrictive than the standard's provision, or
- a plan rule is more lenient than the standard's provision.

Councils may amend their plans to include references to a national environmental standard (such as in other rules where compliance with the standard may be relevant) without having to use Schedule 1.

4.4 Certificates of compliance

The telecommunications industry often applies for certificates of compliance for undertaking routine works in the road reserve. This practice gives an applicant "peace of mind" prior to undertaking works that resource consent is not required.

Section 139 enables councils (and the Environmental Protection Authority for called-in applications) to issue certificates of compliance where a national environmental standard makes an activity lawful without a resource consent (in addition to the existing power in respect of plan rules). The ability to issue certificates of compliance for activities permitted by a national environmental standard has been provided for from 1 October 2009 by the Resource Management (Simplify & Streamline) Amendment Act 2009.

4.5 Existing-use rights

Existing-use rights will apply in the same way to activities established as permitted activities under the NES as they do to activities established as permitted activities under district plan rules. Accordingly, when the environment adjoining a telecommunication facility changes around it, there is no requirement to modify the facility in response to those changes. For example, when a new residential building is established closer to a cabinet located in the road reserve, there is no requirement to modify the facility to satisfy noise rules from a closer measurement point.

4.6 Public complaints guidance

The local council is likely to be the first port of call for any public complaints about equipment erected under the NES. In the first instance, the council should direct any complainant to the telecommunications company for the infrastructure if they can identify the network operator.

As a road-opening notice should be obtained for all work in roads, the council should be able to track down adequate records to direct any complainant to the appropriate company. The council has a role in enforcement if equipment has been installed that is not within permitted activity controls of the NES or is the subject of a resource consent.

5 Frequently Asked Questions

Q1 What is a national environmental standard?

A1 A national environmental standard (NES) is a regulation made under sections 43 and 44 of the Resource Management Act 1991. These standards can be numerical limits, narrative statements, or methodologies in a legally enforceable form.

An NES may contain explicit or quantitative statements that will permit certain uses of land that may otherwise require resource consent from some local councils. A local authority may not impose more restrictive requirements than those in the NES unless the NES expressly permits this.

Q2 Why have national environmental standards, and why introduce them now?

A2 The NES for telecommunication facilities provides direction on technical issues, ensures consistency among district plans, and increases certainty regarding resource consent requirements for the community, local government and the telecommunications industry.

There has been considerable variation between territorial authority district plans in terms of how they address and control the installation of telecommunication antennas (or masts) and equipment cabinets on roadsides. This creates uncertainties and inconsistencies, and can make the process of gaining consent and installing structures time consuming and expensive for telecommunications companies seeking to replace or expand their services across several local authority areas.

The standards seek to create a level playing field across the country. In some areas they will remove the requirement to first obtain resource consent, while in other districts they will place tighter limits on what will require resource consent.

Q3 What do the standards cover?

A3 The telecommunication standards address:

- radiofrequency fields generated by telecommunications operators' antennas
- the erection of roadside equipment cabinets, which can contain equipment for telephones (both landlines and mobiles), cable television and internet
- the addition of antennas to existing structures such as light poles on roadsides or verges – these antennas are used for wireless internet connections and mobile phones, including new technologies that can transmit television, internet and radio to mobile phones and PDAs[6]
- noise levels from roadside cabinets.

[6] PDAs = Personal Digital Assistants, which are hand-held mobile devices that allow a person to send and receive a variety of information, including telephone, email and data.

Q4 Will resource consents continue to be required?

A4 In some cases, yes. If a proposed facility cannot comply with the regulations, then a resource consent will be required in accordance with the district plan. It should also be emphasised that if an activity is not permitted by the standard, this does not mean a resource consent should not be granted. It simply means that these consents are subject to the rules in the district plan.

Q5 Can councils disregard the NES?

A5 No. The NES is a regulation that takes precedence over anything in a district plan that addresses the same subject material. In a case where a district plan is more restrictive, then the regulations prevail.

Q6 What should councils do to district plans?

A6 Under section 44A, rules in plans that duplicate or conflict with provisions contained in an NES must be removed by amending the plan. This must be done as soon as practicable after the NES comes into force. A rule is deemed to conflict with an NES provision if:

1 both of the following apply:

(i) the rule is more stringent than the provision in that it prohibits or restricts an activity that the provision permits or authorises; and

(ii) the standard does not expressly say that a rule may be more stringent than it; or

2 the rule is more lenient than the provision.

Q7 Do these plan changes go through the normal plan change process?

A7 Councils may amend their plans to include references to an NES (such as in other rules where compliance with the NES may be relevant) without having to use the usual processes under Schedule 1.

Q8 Where will noise be measured from?

A8 In the majority of instances, noise will be measured 3 metres from the front boundary of the site. Noise will be measured in accordance with the Standards New Zealand noise standards for measuring and adjusting noise measurements (*NZS 6801: 2008* and *NZS 6802: 2008*).

Q9 Can I object to a cabinet being located outside my house?

A9 If the apparatus is permitted under the regulations, then no. However, you can approach the telecommunications operator, who may in some circumstances be able to accommodate specific location requests for the facility prior to installation. Such instances are provided for in section 148 of the Telecommunications Act 1991, which states:

Sec 148: Alteration to line on road requested by owner

(1) If an owner of land or some other person requires a line or works on a road to be altered so that the owner or other person has access to, or reasonable use of, the land, the network operator may require the person who makes the request to pay the cost of the alteration.

(2) A network operator is not entitled to be paid the cost of any improvement to a line that is, or works that are, required to be altered by an owner of land or some other person under subsection (1)*.*

Q10 Does the NES place any restrictions on the size of masts/antennas that can be installed?

A10 For permitted activity status, yes. The NES will ensure that an acceptable size threshold applies across the country. Establishing a consistent threshold will help the roll-out of new technology, as there will be no time spent having to interpret different local government planning controls and designing equipment of slightly different sizes to comply with different size thresholds.

Q11 What controls are proposed to prevent new masts/antennas and cabinets cluttering the streetscape or landscape?

A11 The NES includes a limit on the maximum footprint (and therefore numbers) of roadside cabinets allowed in one specific location, as well as a minimum separation distance to other structures. This reduces the potential for visual cluttering.

Q12 Would the NES mean that telecommunications companies could site masts/antennas and cabinets anywhere they choose?

A12 No, the NES applies only to equipment cabinets and antennas located within the road reserve, and there is a limit on the footprint, number and size of cabinets permitted.

Telecommunications operators are required to notify the road owner of their intention to install equipment in, on or under a road (under the Telecommunications Act). The road owner may require compliance with specific conditions that include road safety and access. Roads are owned and administered by road-controlling authorities (RCAs). For state highways and motorways the RCA is the New Zealand Transport Agency. The RCA for most other roads is the local council.

Q13 Does this mean there will be no local say over where cabinets or antennas are installed by telecommunications companies?

A13 No, the NES removes the requirement for telecommunications companies to obtain planning permission (resource consent) for some low-impact structures by the roadside. However, the community can still have a say. Where a district plan has identified specific areas or values the community wishes to protect or manage, then telecommunications operators have to comply with the requirements of the district plan.

Where cabinets and antennas were previously subject to amenity and/or heritage rules, for example, then new cabinets and antennas would not be permitted automatically and would require resource consent to be granted by the local council before they were installed.

There is also a legal requirement under the Telecommunications Act to comply with any conditions imposed by the road-controlling authority for things such as safety and location. Broader consideration of clutter through increased minimum separation distances between cabinets has been applied in the regulations.

Q14 The NES will mean a relaxation of planning controls in some local authorities' district plans. Is this appropriate?

A14 The telecommunication NES provides national consistency for what can be installed without first obtaining resource consent, and details on where installation is or is not appropriate. The Ministry for the Environment commissioned consultants to analyse the current planning provisions in the district plans of all local authorities in New Zealand to see whether the NES would be more restrictive, consistent with, or less restrictive than district plans. The results showed that the NES is more restrictive than, or is consistent with, most current district plans for all the areas studied.

Q15 What assurances can you provide that radiofrequency fields generated from masts/antennas will not harm me or my children?

A15 The National Environmental Standards for Telecommunication Facilities effectively reproduce the existing New Zealand standard for radiofrequency (RF) fields and draw on existing Ministry of Health and Ministry for the Environment national guidance for RF fields that is widely accepted and used in New Zealand.

The World Health Organization (WHO) updated their research in 2006 and concluded: "Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak RF signals from base stations and wireless networks cause adverse health effects." A fact sheet produced by WHO explains this further.

The regulations for RF fields were based on international guidelines endorsed by the WHO. The regulation requires a telecommunications company to undertake monitoring if initial modelling indicates that emissions will be more than 25 per cent of the maximum allowed by the standard. The regulations for RF fields also set limits that take into account the RF fields generated from a particular location, not just the fields generated from a single new antenna, thereby addressing potential cumulative effects.

The regulations are intended for telecommunication facilities operated by network operators and are not intended to cover RF fields from personal equipment inside homes, schools or offices.

Q16 Does the NES take into account new research?

A16 The Ministry for the Environment participates in a New Zealand inter-agency committee monitoring research in this area. The committee meets twice a year and includes representatives from government, public health, consumer interests and industry. The committee is required to inform the Minister of Health and the Minister for the Environment if there is suspicion of health hazards from exposures to RF fields that comply with current Ministry of Health recommendations. The regulation can be updated if the Minister for the Environment deems it necessary.

Q17 Will there be noise from the equipment boxes?

A17 Yes – equipment boxes contain cooling fans necessary for their operation. The NES sets daytime and night-time limits for noise from roadside cabinets for residential and non-residential areas. The limits are typical of those found in district plans throughout New Zealand.

The NES is largely based on the voluntary Standards New Zealand standards for environmental noise.[7] The Standards NZ standards were commissioned by the Ministry of Health and prepared by a committee of environmental noise experts. One of the NZ standards is for assessing noise (*NZS 6802*). It gives a range of noise levels as a guideline for the reasonable protection of health and amenity for land used for residential purposes. Noise limits for less sensitive areas (business and industrial) are typically less stringent, and this is reflected in the telecommunication NES.

Q18 Who pays for this regulation?

A18 The cost–benefit analysis undertaken as part of the development of the discussion document points to cost savings for local councils and the telecommunications industry. There is no need for a local council to go through a costly plan change process when an NES comes into force.

Q19 Why has the Ministry for the Environment taken a role in developing National Environmental Standards for Telecommunication Facilities?

A19 The Ministry for the Environment administers the Resource Management Act, and national environmental standards are provided for in the Act. It is the role of the Ministry for the Environment to consider and develop proposals for national environmental standards.

In the discussion document the Ministry for the Environment noted its views on areas in the proposed standards for which they considered closer scrutiny was required. Part of that scrutiny is the consideration of public submissions. The standards take into account concerns raised by submitters, and the standards have changed as a result of the consultation process.

Q20 Can telecommunications companies still apply for certificates of compliance for activities permitted under the NES?

A20 Yes, the Resource Management (Simplify & Streamline) Act 2009 amended section 139 to explicitly provide for certificates of compliance for activities permitted by national environmental standards.

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7 *NZS 6801: 2008 – Acoustics – Measurement of Environmental Sound levels and NZS 6802: 2008 – Assessment of Environmental Sound.*

Q21 What is the situation if all roads are designated in district plans?

A21 The provisions of an NES prevail over new designations. However, in circumstances where existing roads are already designated under the Resource Management Act (RMA) before the regulations came into effect, activities permitted under the regulations would still require the written permission from the road-controlling authority: the New Zealand Transport Agency (NZTA) or local government under section 176 of the RMA. This is because the activity is still a use of land under section 9(4) of the RMA and existing designations prevail over the regulations. Further, permission may also be required from NZTA for facilities within the state highway road reserve under section 78 of the Government Roading Powers Act.

Q22 What happens with unimplemented resource consents for telecommunication facilities?

A22 Any resource consent that existed prior to 9 October 2008 prevails over the NES itself. This means that all components that required consent can be constructed, without any further authorisations, after 9 October 2008.

Q23 What happens with existing conditions on resource consents?

A23 If a network operator is relying on an approved resource consent for a telecommunication facility, then the consent and relevant conditions remain. If the facility would no longer require resource consent and is permitted under the NES, then the operator could surrender the existing consent under section 125 of the RMA and rely on the permitted activity status brought about by the NES. This would mean the existing conditions would no longer apply. Unless the consent can be surrendered in full, however, the existing conditions of consent will remain.

Q24 Who administers the regulations and is responsible for enforcing them?

A24 The regulations are administered by all territorial authorities within New Zealand. The district or city council with jurisdiction over the area in which the telecommunication facility is proposed is responsible for administration and enforcement relating to the NES regulations.

Q25 Do unimplemented resource consents need to be considered when determining compliance with the regulations?

A25 Yes, existing resource consents (even unimplemented ones) form part of the existing environment and need to be considered when determining compliance with the regulations.

Appendix A: National Environmental Standards for Telecommunication Facilities

2008/299

Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2008

Rt Hon Dame Sian Elias, Administrator of the Government

Order in Council

At Wellington this 8th day of September 2008

Present:
The Right Hon Helen Clark presiding in Council

Pursuant to section 43 of the Resource Management Act 1991, Her Excellency the Administrator of the Government, acting on the advice and with the consent of the Executive Council (given on the recommendation of the Minister for the Environment after consultation in accordance with section 44 of that Act), makes the following regulations.

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Regulations

1 Title

These regulations are the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2008.

2 Commencement

These regulations come into force on the 28th day after the date of their notification in the *Gazette*.

3 Interpretation

In these regulations, unless the context requires another meaning,—

antenna—

(a) means a device that—

(i) receives or transmits radiocommunication or telecommunication signals; and

(ii) is operated by a network operator; and

(b) includes the mount, if there is one, for the device; and

(c) includes the shroud, if there is one, for the device

cabinet means a casing around equipment that is necessary to operate a telecommunication network

mount means a structure for attaching an antenna to an original utility structure or a replacement utility structure

network operator has the meaning given to it by section 5 of the Telecommunications Act 2001

original utility structure means a power pole, street light pole, traffic light pole, or structure like those kinds of poles, as it is before any of the following happens to it:

(a) an antenna is added to it; or

(b) it is modified to enable an antenna to be added to it; or

(c) it is replaced to enable an antenna to be added to the replacement

replacement utility structure means—

(a) an original utility structure that has an antenna added to it; and

(b) an original utility structure that—

(i) is modified to enable an antenna to be added to it; and

(ii) has an antenna added to it; and

(c) a replacement of an original utility structure that—

(i) replaces the original utility structure to enable an antenna to be added to the replacement; and

(ii) has an antenna added to it

road reserve means a formed legal road and the land, if there is any, right next to it up to the legal boundary of the adjacent land

telecommunication facility means—

(a) an antenna:

(b) a cabinet and, if there is one, the concrete foundation plinth for the cabinet.

4 Telecommunication facilities generating radiofrequency fields: activity status

(1) This regulation applies to the planning and operation of a telecommunication facility that generates radiofrequency fields.

(2) A telecommunication facility is a permitted activity as far as radiofrequency fields are concerned if the network operator that plans and operates the facility complies with—

(a) the conditions in subclauses (3) and (4); and

(b) the condition in subclause (5), if it applies.

(3) The first condition is that the network operator plans and operates the telecommunication facility in accordance with *NZS*

2772: Part 1:1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300 GHz.

(4) The second condition is that the network operator ensures that the relevant local authority receives, before the telecommunication facility becomes operational, the following:

(a) written or electronic notice of where the facility is or where it is proposed to be; and

(b) a report that—

(i) is prepared in accordance with *NZS 6609.2: 1990 Radiofrequency Radiation: Part 2: Principles and Methods of Measurement 300 kHz to 100 GHz*; and

(ii) takes account of exposures arising from other telecommunication facilities in the vicinity of the facility; and

(iii) predicts whether the radiofrequency field levels at places in the vicinity of the facility that are reasonably accessible to the general public will comply with *NZS 2772: Part 1:1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300 GHz*.

(5) The third condition applies if the prediction referred to in subclause (4)(b)(iii) is that the radiofrequency field levels will reach or exceed 25% of the maximum level authorised by *NZS 2772: Part 1:1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300 GHz* for exposure of the general public. The network operator must ensure that the relevant local authority receives, within 3 months of the telecommunication facility becoming operational, a report that—

(a) is prepared in accordance with *NZS 6609.2: 1990 Radiofrequency Radiation: Part 2: Principles and Methods of Measurement 300 kHz to 100 GHz*; and

(b) provides evidence that the actual radiofrequency field levels at places in the vicinity of the facility that are reasonably accessible to the general public comply with *NZS 2772: Part 1:1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300 GHz*.

(6) A telecommunication facility that is not a permitted activity under this regulation is a non-complying activity as far as radiofrequency fields are concerned.

5 Telecommunication facilities in road reserves: activity status

(1) The installation and operation of a telecommunication facility in a road reserve is a permitted activity as far as the situations in regulations 6 to 9 are concerned if—

(a) the facility is a permitted activity as far as radiofrequency fields are concerned under regulation 4; and

(b) the facility complies with the applicable conditions in regulations 6 to 9.

(2) The installation and operation of a telecommunication facility in a road reserve is a non-complying activity as far as radiofrequency fields are concerned if the facility does not comply with the condition specified in subclause (1)(a).

(3) The installation and operation of a telecommunication facility in a road reserve is a controlled activity as far as the situations in regulations 6 to 9 are concerned if—

(a) the facility does not comply with the conditions specified in subclause (1)(b); and

(b) the facility would have been a permitted activity or a controlled activity under the relevant district plan or proposed district plan if these regulations did not exist.

(4) For the purpose of assessing resource consent applications for a telecommunication facility to which subclause (3) applies, control is reserved over the conditions in regulations 6 to 9 with which the facility does not comply.

(5) The installation and operation of a telecommunication facility in a road reserve is a restricted discretionary activity as far as the situations in regulations 6 to 9 are concerned if—

(a) the facility does not comply with the conditions specified in subclause (1)(b); and

(b) the facility would have been a restricted discretionary activity under the relevant district plan or proposed district plan if these regulations did not exist.

(6) For the purpose of assessing resource consent applications for a telecommunication facility to which subclause (5) applies, discretion is restricted to the conditions in regulations 6 to 9 with which the facility does not comply.

(7) The installation and operation of a telecommunication facility in a road reserve is a discretionary activity if—

(a) the facility does not comply with the conditions specified in subclause (1)(b); and

(b) the facility would have been a discretionary activity under the relevant district plan or proposed district plan if these regulations did not exist.

(8) The installation and operation of a telecommunication facility in a road reserve is a non-complying activity if—

(a) the facility does not comply with the conditions specified in subclause (1)(b); and

(b) the facility would have been a non-complying activity under the relevant district plan or proposed district plan if these regulations did not exist.

(9) The installation and operation of a telecommunication facility in a road reserve is a prohibited activity if—

(a) the facility does not comply with the conditions specified in subclause (1)(b); and

(b) the facility would have been a prohibited activity under the relevant district plan or proposed district plan if these regulations did not exist.

6 Conditions protecting trees and vegetation, historic heritage values, visual amenity values, and coastal marine area

(1) This condition applies if the telecommunication facility is located in a road reserve within the drip line of a tree or other vegetation and the relevant district plan or proposed district plan would, if these regulations did not exist, require the network operator to obtain a resource consent for the installation and operation of the facility in such a location. The installation and operation of the facility must comply with the plan's rules on tree and vegetation protection. The rules may be more stringent than the conditions in regulations 7 to 9.

(2) This condition applies if the telecommunication facility is located in a road reserve that is on the same side of the road as and next to land or items that are identified as having historic heritage values in the relevant district plan or proposed district plan. The facility must comply with the plan's rules on historic heritage values. The rules may be more stringent than the conditions in regulations 7 to 9.

(3) This condition applies if the telecommunication facility is located in a road reserve that is on the same side of the road as and next to land or sites that are identified as having visual amenity values in the relevant district plan or proposed district plan. The facility must comply with the plan's rules on visual amenity values. The rules may be more stringent than the conditions in regulations 7 to 9.

(4) This condition applies if the telecommunication facility is located in a road reserve that is on the same side of the road as and next to coastal marine area. The facility must comply with the plan's rules that apply to telecommunication facilities. The rules may be more stringent than the conditions in regulations 7 to 9.

7 Conditions controlling antennas and utility structures

(1) This condition applies if an original utility structure in a road reserve is replaced by a replacement utility structure. The replacement utility structure must not have a diameter that is more than the original utility structure's diameter at its largest point plus 50%.

(2) This condition applies if the addition of an antenna makes a structure into a replacement utility structure in a road reserve. The height of the replacement utility structure must be no more than the original utility structure's highest point plus the lesser of 3 m or 30%.

(3) This condition applies if an antenna on a replacement utility structure in a road reserve is replaced. The combined height of the replacement utility structure and the replacement antenna must be no more than the combined height of the replacement utility structure and the original antenna.

(4) This condition applies if an antenna is added or replaced under subclause (2) or (3). The antenna—excluding the mount, if there is one, and the shroud, if there is one, and ancillary equipment, if there is any—must fit within the dimensions of a cylindrical shape that, when measured along the centre line of the original utility structure or the replacement utility structure, is no more than 2 m high and no more than 0.5 m in diameter.

(5) This condition applies if a dish antenna either is added to an original utility structure in a road reserve or a replacement utility structure in a road reserve or replaces an antenna on an original utility structure in a road reserve or a replacement utility structure in a road reserve. The dish antenna must have a diameter of no more than 380 mm, must not protrude from the structure's centre line by more than 0.6 m, and must be one of only 2 on the structure.

8 Conditions controlling cabinets

(1) This condition applies if a cabinet is located by itself in a road reserve next to land that a relevant district plan or proposed district plan classifies as primarily for residential activities. The cabinet's footprint must be no more than 1.4 m^2. The cabinet must be no higher than the height of the concrete foundation plinth, if there is one, plus 1.8 m.

(2) This condition applies if 2 or more cabinets are located at the same site in a road reserve next to land that a relevant district plan or proposed district plan classifies as primarily for residential activities. Each cabinet's footprint must be no more than 1.4 m^2. The total footprint of all the cabinets must be no more than 1.8 m^2. The distance between each cabinet and the cabinet or cabinets closest to it must be no more than 500 mm. The cabinets must be no higher than the height of the concrete foundation plinths, if there are any, plus 900 mm, with the exception that 1 cabinet may be as high as the height of the concrete foundation plinth, if there is one, plus 1.8 m.

(3) This condition applies if a cabinet is located by itself in a road reserve, or if 2 or more cabinets are located at the same site in a road reserve, next to land that a relevant district plan or proposed district plan does not classify as primarily for residential activities. The total footprint of all the cabinets must

be no more than 2 m². Each cabinet must be no higher than the height of the concrete foundation plinth, if there is one, plus 2 m.

(4) This condition applies if 2 or more cabinets are located at different sites in the road reserve, on the same side of the road as one another, and next to land that a relevant district plan or proposed district plan either does or does not classify as primarily for residential activities and are higher than the height of the concrete foundation plinths, if there are any, plus 900 mm. Each cabinet must be at least 30 m from each other cabinet that is higher than the height of the concrete foundation plinth, if there is one, plus 900 mm. The 30 m must be measured between the 2 closest points of the cabinets.

(5) This condition applies if a cabinet is located in a road reserve next to land that a relevant district plan or proposed district plan either does or does not classify as primarily for residential activities and requires a power supply. The power supply must be located either below ground or within the cabinet.

9 Conditions controlling noise

(1) This condition applies if a cabinet is located in a road reserve in an area in which a relevant district plan or proposed district plan allows residential activities. The noise from the cabinet must not exceed—

(a) 50 dB LAeq (5 min) between 7 am and 10 pm:

(b) 40 dB LAeq (5 min) between the 10 pm referred to in paragraph (a) and the following 7 am:

(c) 65 dB LAFmax between the 10 pm referred to in paragraph (a) and the following 7 am.

(2) This condition applies if a cabinet is located in a road reserve in an area in which a relevant district plan or proposed district plan does not allow residential activities. The noise from the cabinet must not exceed—

(a) 60 dB LAeq (5 min) at any time:

(b) 65 dB LAFmax between 10 pm and the following 7 am.

(3) The noise from the cabinet must be measured and assessed at 1 of the following points:

(a) if the side of a building containing a habitable room is within 4 m of the closest boundary of the road reserve, the noise must be measured—
  (i) at a point 1 m from the side of the building; or
  (ii) at a point in the plane of the side of the building:

(b) in any other case, the noise must be measured at a point that is—
  (i) at least 3 m from the cabinet; and
  (ii) within the legal boundary of land next to the part of the road reserve where the cabinet is located.

(4) The noise from the cabinet must be measured in accordance with *NZS 6801: 2008 Acoustics – Measurement of environmental sound*, the measurement must be adjusted in accordance with *NZS 6801: 2008 Acoustics – Measurement of environmental sound* to a free field incident sound level, and the adjusted measurement must be assessed in accordance with *NZS 6802: 2008 Acoustics – Environmental noise*.

Rebecca Kitteridge,
Clerk of the Executive Council.

Explanatory note

This note is not part of the regulations, but is intended to indicate their general effect.

These regulations provide national environmental standards for telecommunication facilities. The standards relate to the radiofrequency fields of all telecommunication facilities and the dimensions and noise levels of telecommunication facilities in road reserves.

The regulations come into force 28 days after they are notified in the *Gazette*.

2008/299

Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2008

Issued under the authority of the Acts and Regulations Publication Act 1989.
Date of notification in *Gazette*: 11 September 2008.
These regulations are administered by the Ministry for the Environment.

Appendix B: Relevant Resource Management Act 1991 Provisions

Part 5: Standards, policy statements, and plans

National environmental standards

43 Regulations prescribing national environmental standards

(1) The Governor-General may, by Order in Council, make regulations, to be known as national environmental standards, that prescribe any or all of the following technical standards, methods, or requirements:

(a) standards for the matters referred to in section 9, section 11, section 12, section 13, section 14, or section 15, including, but not limited to –

(i) contaminants;

(ii) water quality, level, or flow;

(iii) air quality;

(iv) soil quality in relation to the discharge of contaminants;

(b) standards for noise;

(c) standards, methods, or requirements for monitoring.

(2) The regulations may include:

(a) qualitative or quantitative standards;

(b) standards for any discharge or the ambient environment;

(c) methods for classifying a natural or physical resource;

(d) methods, processes, or technology to implement standards;

(e) exemptions from standards;

(f) transitional provisions for standards, methods, or requirements.

(3) Section 360(2) applies to all regulations made under this section.

43A Additional powers to implement national environmental standards

(1) National environmental standards may –

(a) prohibit an activity;

(b) allow an activity;

(c) restrict the making of a rule or the granting of a resource consent to matters specified in a national environmental standard;

(d) require a person to obtain a certificate from a specified person stating that an activity complies with a term or condition imposed by a national environmental standard:

(e) specify, in relation to a rule made before the commencement of a national environmental standard –

(i) the extent to which any matter to which the standard applies continues to have effect; or

(ii) the time period during which any matter to which the standard applies continues to have effect;

(f) require local authorities to review, under section 128(1), all or any of the permits to which paragraph (ba) of that subsection applies as soon as practicable or within the time specified in a national environmental standard.

(2) A national environmental standard that prohibits an activity –

(a) may do one or both of the following:

(i) state that a resource consent may be granted for the activity, but only on the terms or conditions specified in the standard; and

(ii) require compliance with the rules in a plan or proposed plan as a term or condition; or

(b) may state that the activity is a prohibited activity.

(3) If an activity has significant adverse effects on the environment, a national environmental standard must not, under subsections (1)(b) and (4), –

(a) allow the activity, unless it states that a resource consent is required for the activity; or

(b) state that the activity is a permitted activity.

(4) A national environmental standard that allows an activity –

(a) may state that a resource consent is not required for the activity; or

(b) may do one or both of the following:

(i) state that the activity is a permitted activity, but only on the terms or conditions specified in the standard; and

(ii) require compliance with the rules in a plan or proposed plan as a term or condition.

(5) If a national environmental standard allows an activity and states that a resource consent is not required for the activity, or states that an activity is a permitted activity, the following provisions apply to plans and proposed plans:

(a) a plan or proposed plan may state that the activity is a permitted activity on the terms or conditions specified in the plan; and

(b) the terms or conditions specified in the plan may deal only with effects of the activity that are different from those dealt with in the terms or conditions specified in the standard; and

(c) if a plan's terms or conditions deal with effects of the activity that are the same as those dealt with in the terms or conditions specified in the standard, the terms or conditions in the standard prevail.

(6) A national environmental standard that allows a resource consent to be granted for an activity –

(a) may state that the activity is –

(i) a controlled activity; or

(ii) a restricted discretionary activity; or

(iii) a discretionary activity; or

(iv) a non-complying activity; and

(b) may state the matters over which –

(i) control is reserved; or

(ii) discretion is restricted.

43B Relationship between national environmental standards and rules or consents

(1) A rule or resource consent that is more stringent than a national environmental standard prevails over the standard, if the standard expressly says that a rule or consent may be more stringent than it.

(2) For the purposes of subsection (1), –

(a) a rule is more stringent than a standard if it prohibits or restricts an activity that the standard permits or authorises;

(b) a resource consent is more stringent than a standard if it imposes conditions on an activity that the standard does not impose or authorise.

(3) A rule or resource consent may not be more lenient than a national environmental standard.

(4) For the purposes of subsection (3), a rule or resource consent is more lenient than a standard if it permits or authorises an activity that the standard prohibits or restricts.

(5) A resource consent that exists when a national environmental standard is made prevails over the standard. This subsection does not apply to water, coastal, or discharge permits.

(6) A water, coastal, or discharge permit that exists when a national environmental standard is made prevails over the standard until a review of the permit's conditions under section 128(1)(ba) results in some or all of the standard prevailing over the permit.

(7) A national environmental standard that exists before the hearing of an application for a resource consent begins prevails over a resource consent granted as a result of the application.

(8) A national environmental standard that prescribes transitional provisions relating to a resource consent application notified before the commencement of the standard prevails over a resource consent granted as a result of the application to the extent (if any) specified in the standard.

(9) If a national environmental standard requires a resource consent to be obtained for an activity, sections 10, 10A, 10B, and 20A(2) apply to the activity as if the standard were a rule in a plan that had become operative.

43C Relationship between national environmental standards and water conservation orders

(1) A water conservation order that is more stringent than a national environmental standard applying to water prevails over the standard.

(2) A national environmental standard applying to water that is more stringent than a water conservation order prevails over the order.

43D Relationship between national environmental standards and designations

(1) A designation that exists when a national environmental standard is made prevails over the standard until the earlier of the following:

(a) the designation lapses:

(b) the designation is altered under section 181 by the alteration of conditions in it to which the standard is relevant.

(2) If the conditions of a designation are altered as described in subsection (1)(b), the standard –

(a) applies to the altered conditions; and

(b) does not apply to the unaltered conditions.

(3) A national environmental standard prevails over a designation that requires an outline plan if, when the standard is made, –

(a) the designation exists; and

(b) no outline plan for the designation has completed the process described in section 176A.

(4) A national environmental standard that exists when a designation is made prevails over the designation.

(5) A use is not required to comply with a national environmental standard if –

(a) the use was lawfully established by way of a designation that has lapsed; and

(b) the effects of the use, in character, intensity, and scale, are the same as or similar to those that existed before the designation lapsed; and

(c) the standard is made –

(i) after the designation was made; and

(ii) before or after it lapses.

(6) Work under a designation is not required to comply with a national environmental standard if the work has come under the designation through the following sequence of events:

(a) the work is made; and

(b) the standard is made; and

(c) the designation is applied to the work.

(7) In this section, ***conditions*** includes a condition about the physical boundaries of a designation.

43E Relationship between national environmental standards and bylaws

(1) A bylaw that is more stringent than a national environmental standard prevails over the standard, if the standard expressly says that a bylaw may be more stringent than it.

(2) For the purposes of subsection (1), a bylaw is more stringent than a standard if it prohibits or restricts an activity that the standard permits or authorises.

(3) A bylaw may not be more lenient than a national environmental standard.

(4) For the purposes of subsection (3), a bylaw is more lenient than a standard if it permits or authorises an activity that the standard prohibits or restricts.

(5) In this section, ***bylaw*** means a bylaw made under any enactment.

43F Description of discharges in national environmental standards for discharges

A national environmental standard for an activity that is a discharge may describe the discharge by referring to –

(a) particular contaminants or sources of contaminants in a discharge; or

(b) the circumstances or sources of a discharge.

43G Incorporation of material by reference in national environmental standards

A national environmental standard may incorporate material by reference under Schedule 1AA.

44 Restriction on power to make national environmental standards

The Minister must not recommend to the Governor-General the making of any national environmental standard unless the Minister has –

(a) notified the public and iwi authorities of –

  (i) the proposed subject matter of the standard; and

  (ii) the Minister's reasons for considering that the standard is consistent with the purpose of the Act; and

(b) established a process that –

  (i) the Minister considers gives the public and iwi authorities adequate time and opportunity to comment on the proposed subject matter of the standard; and

  (ii) requires a report and recommendation to be made to the Minister on those comments and the proposed subject matter of the standard; and

(c) publicly notified that report and recommendation.

Appendix C: Radiofrequency Reporting Template

Notice of new telecommunication facility generating radiofrequency fields

Submitted in accordance with clause 4(4) of the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2008.

Location of telecommunication facility

Address:	
Facility on road reserve?	☐ Yes ☐ No
Grid reference:	
Physical structure consent requirements	☐ Permitted (NES) ☐ Permitted (district plan) ☐ Requires resource consent
Estimated date of starting operation:	

Network operator details

Operator name:			
Contact person:			
Address:			
Phone/fax:		**Email:**	

Compliance checklist

	Yes	No
Design and operation Facility planned and operated in accordance with *NZS 2772.1: 1999*, including compliance with clause 10(d)? [cl 4(3) of NES]		
Predicted exposure levels report Is report on predicted exposure levels attached? [cl 4(4)(b) of NES] Report prepared in accordance with *NZS 6609.2. 1990*? [cl 4(4)(b)(i) of NES] Other transmitters nearby taken into account? [cl 4(4)(b)(ii) of NES] Exposures in publicly accessible areas exceed 25% of public limits (post-installation measurements required)? [cl 4(5)5 of NES] Will exposures in publicly accessible areas exceed public limits specified in *NZS 2772.1. 1999*?[8] (If yes, then facility will be non-complying)		

Supporting documentation attached (tick all applicable)

Location plan:	
Site plan:	
Elevation drawing:	
Technical specifications:	
Others:	

Other information

(Note: if a certificate of compliance is required, check the specific information requirements of the relevant local authority.)

Name of person responsible for this report:	
Qualification/experience:	
Signature of person responsible for this report:	

[8] If the answer is YES, then resource consent will be required before the facility can be installed.

Appendix D: Noise Measurement Interpretation

Laeq:

Time-average A-weighted sound pressure level ($L_{Aeq(t)}$) (formerly known as equivalent continuous A-weighted sound pressure level)

10 times the logarithm, to the base 10, of the ratio of the average of the square of the A-frequency-weighted sound pressure over a specified period of time, to the square of the reference value. The time interval for every LEQ measurement shall be stated

$$L_{Aeq(t_3)} = 10 \lg \left(\frac{1}{t_3} \int_{t_1}^{t_2} p_A^2(t)\, dt \,/ p_0^2 \right) \text{dB} \quad \text{..... Equation 7}$$

where:

t_3 is the measurement time interval between start and finish times t_1 and t_2

$L_{Aeq(t_3)}$ is the LEQ over time period t_3

$p_A^2(t)$ is the square of the A-frequency-weighted sound pressure as a function of time

p_0 is the reference value of 20 μPa

LAFmax:

Maximum A-frequency -weighted, F-time-weighted sound pressure level

Ten times the logarithm, to the base 10, of the ratio of the square of the maximum sound pressure, obtained with a standardised A-frequency-weighting and F-time-weighting during a stated time period, to the square of the reference pressure (20 μPa). For the purposes of this Standard Lmax derived from measured short-LEQ values of 100 – 125 milliseconds duration shall be taken as equivalent to Lmax derived from F-time-weighted measurements

Source: Standards New Zealand. NZS 6801: 2008 Acoustics – Measurement of Environmental Sound.