Regulatory Impact Statement

Updating the National Environmental Standards for Telecommunication Facilities

November 2016

Subsequent to Cabinet consideration of the RIS in September 2015, additional decisions were taken to:

- *Repeal the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2008 and replace with new regulations*
- *Add installation of surface-mounted customer connection cables*
- *Allow larger size of replacement poles for aerial cables*
- *Clarify application of rules about natural hazards*
- *Clarify that cabinets are permitted outside of the road reserve or on buildings*
- *Clarify conditions on earthworks*
- *Clarify the scope of the visual amenity rules*
- *Add a district plan default status*
- *Clarify the application of noise controls*
- *Incorporate the latest radio frequency measurement standard (AS/NZS 2772.2:2016)*

The additional policy decisions do not alter the underlying findings of that RIS and do not require a RIS in their own right.

Agency Disclosure Statement

1. This Regulatory Impact Statement (RIS) has been prepared by the Ministry for the Environment and the Ministry of Business, Innovation and Employment.

2. Information about the costs and benefits has been gathered through consultation with industry and councils and through an independent environmental research report. Many of the costs and benefits have not been fully quantified for a number of reasons, including:

    - estimates provided by telecommunications industry operators about anticipated benefits are indicative only, and may vary according to future network development. For instance, many of the benefits relate to facilitating a faster rollout of the Government's Ultra-Fast Broadband and Rural Broadband Initiative programmes. While the Government has recently committed to extending the reach of these programmes, the design of the programmes is yet to be finalised.

    - only a small number of territorial authorities were able to provide estimates of the existing costs associated with processing consents for telecommunications facilities, so estimates are based on the information received from these territorial authorities.

    - environmental effects can only be assessed in a qualitative way, with no attempt made to quantify the value of the environment. Similarly, while costs of environmental mitigation can be estimated, the lessening of impact on the environment also cannot be quantified.

    - the costs of removing the majority of public participation in community planning for telecommunications infrastructure can only be assessed in a qualitative way.

3. Where possible we have addressed environmental and participation gaps by adding conditions to the NESTF in response to concerns raised by submitters; details of this are provided in the RIS.
4. Councils will need to decide whether they want to update their plans to ensure sites of cultural value are identified and remain unaffected by these proposals.

Katherine Wilson
Manager
Resource Management National Direction
Ministry for the Environment

20 August 2015

Jane Tier
Acting Manager
ICT Policy and Programmes
Ministry of Business, Innovation and Employment

20 August 2015

Background

5. Most of the decision-making under the Resource Management Act 1991 (RMA) is done by local authorities – territorial authorities and regional councils – under district plans and regional plans. District plans and regional plans contain rules for activities that may impact the environmental values of the particular community. They are developed by individual councils based on the set of shared values of that particular community.

6. New activities within a community may require consent from the council (resource consent) and be subject to prescribed technical standards, methods or other requirements to address environmental concerns. These rules can, and do, vary from plan to plan.

7. The RMA provides that national direction is able to be given on specific issues using instruments such as a national environmental standard (NES) or a national policy statement (NPS).

8. An NES is a regulation made under sections 43 and 44 of the RMA on the recommendation of the Minister for the Environment. It must be consistent with the purpose of the RMA. An NES 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. An NES can permit activities or development and they can also prohibit or require resource consent for activities in order to manage impacts and/or protect the environment.

9. The use of an NES is appropriate for activities that could benefit from national consistency in resource management planning rules. A set of national rules for a particular activity sits above district plans and regional plans and therefore reduces local variation in rules, costs for councils, and costs and uncertainty for resource consent applicants. Local authorities must observe national environmental standards. Matters not covered by an NES are still regulated by district plans or regional plans.

Status Quo

10. Recognising the growing reliance on telecommunications, and to facilitate the rollout of new infrastructure, the National Environmental Standards for Telecommunication Facilities (NESTF) came into force in October 2008. The NESTF was developed to provide national consistency under the RMA and to permit certain telecommunications activities[1].

11. The policy objectives of the NESTF are to provide for a nationally consistent planning framework for low impact telecommunications activities that will:

    - assist in network and equipment design and equipment sourcing for rollouts
    - reduce compliance costs and timeframes for service providers
    - reduce the timeframe for the availability of new services to consumers
    - reduce cost and workload to councils in processing and determining consent applications
    - ensure that local participation in community planning is maintained in areas of greatest local significance.

[1]The operation of a 'telecommunication facility' that generates radiofrequency fields, subject to maximum exposure levels;
The following activities are permitted on a formed legal road and the land, if there is any, right next to it up to the legal boundary of the adjacent land:

- The installation of telecommunication equipment cabinets, subject to specified limitations of their size and location;
- Noise emitting from telecommunication equipment cabinets, subject to specified noise limits; and
- The installation of replacement masts and antennas on existing structures, subject to specified limitations on height and size.

12. Alternative approaches to an NES were canvassed by the Ministry for the Environment (MfE) in 2008 when the NESTF was first proposed. The analysis concluded that other approaches were unlikely to be effective at achieving these objectives, and would certainly be less efficient than an NES. These alternatives all rely on local authorities to undertake a full plan change process to incorporate the change in approach, and would therefore likely not be implemented for a number of years:

    - non-regulatory and therefore voluntary options, such as MfE supporting councils to develop consistent plans in this area, would not be a significant improvement on the status quo and may never achieve the objectives.
    - amending the RMA itself would unreasonably elevate a specific activity above others in what is an enabling and broad-scale piece of legislation. This would also be expensive and time consuming with no certainty of outcome.
    - another regulatory approach enabled by the RMA is a 'national policy statement'. This would also elevate the provision of telecommunications infrastructure and services to a matter of national significance but would still rely on councils undertaking amendments to their own plans and therefore wide variation would persist.

13. The NESTF was evaluated by the MfE in 2013. The evaluation determined that, overall, the NESTF has achieved its objectives. For example:

    - it has assisted the telecommunications industry in designing and sourcing equipment for rollouts.
    - it has reduced compliance costs. Industry estimates that $3.2 million in direct costs had been saved and that over $10 million may be saved over the duration of the fourth generation rollout.
    - it has reduced the timeframe and lowering costs for the availability of new services to consumers in the mobile market. Industry considers that the entry of the third mobile provider, 2Degrees Mobile, was accelerated because of the NESTF. This has increased competition in this sector.

14. However, the review also noted that the telecommunications landscape was, and is, evolving rapidly. There are now a number of key network development activities carried out by telecommunications operators which are not covered by the NESTF but could be.

Problem Definition

15. As the telecommunications landscape has evolved, emerging activities are not treated consistently across district plans, creating the same issues of time delays, cost, and uncertainty that brought about the NESTF in the first place.

16. Extending the NESTF to classify deployment of telecommunications cables and a wider range of mobile network infrastructure as a permitted activity (subject to conditions) could eliminate most of these costs and delays. However, there is a limited window within which such a change could be made to realise the greatest benefits.

17. The Government's Ultra-Fast Broadband (UFB), Rural Broadband Initiative (RBI) and Mobile Black Spot Fund (MBSF) programmes involve large-scale deployment of new infrastructure nationally. This includes installation of fibre-optic cabling, placement of new masts and antennas which provide fixed wireless broadband to rural areas, and installation of new masts and antennas to improve coverage along main highways and tourist locations. The UFB and RBI programmes are already halfway through their nine-year timeframe, with the MBSF programme scheduled to commence in 2016.

18. Resource consent applications for these infrastructure builds are generally applied for early in the build schedule to create certainty for project timelines and reduce costs. While

many of the consents required for the initial phase of the UFB build will likely be in place before the NESTF amendments, the expansions to the UFB project mean there is still significant opportunity to achieve efficiencies in this area.

19. In addition, the increasing uptake of new mobile technologies (e.g. smartphones and tablets) means that mobile infrastructure needs to be upgraded to maintain current levels of service. New technology is likely to be deployed in different ways to those activities permitted by the existing NESTF. Particular trends are:

    - fourth generation[2] mobile technology, which generally requires antennas that are taller and wider than the limits specified in the NESTF
    - the rollout of small cell units[3] which service smaller areas and fill in gaps in the coverage of larger antennas
    - co-location of different operators' equipment on the same mast, which requires higher structures as the equipment needs to be sufficiently spaced to avoid interference. Co-location would result in fewer individual structures in an area.

20. Both telecommunications cabling and mobile infrastructure are subject to significant inconsistency in district plan rules across the country; however the infrastructure and the environmental effects are largely the same across all districts. Regional variation under the RMA creates uncertainty for providers, drives up compliance costs, and delays the installation of new telecommunication facilities. This ultimately impedes the delivery of new and improved telecommunications services to communities.

21. The variation between plans places costs on telecommunications operators. A significant number of person-hours are involved for industry in understanding and complying with district plan rules for a national infrastructure project. Local variation in plan rules may mean variations are needed in equipment requirements; for example, it creates an inability to bulk purchase cellular masts because of differences in height allowances between districts. Local planning rules may also inadvertently incentivise the placement of multiple cell phone towers in the same area, rather than co-location (i.e. multiple operators having antennas on the same tower).

22. District plan processes mean that, in order to take into account new technologies, councils may have to bring in technical experts to create rules for these activities where they do not already exist. This can result in increased workload and costs associated with plan development and review, and is duplicated across councils.

23. There are costs to the community if new technologies are not rolled out or are deferred by resource consenting issues. Broadband improvements can increase economic activity and productivity. A study into the economic benefits of broadband demonstrates that the majority of cost savings will accrue in the first 6 years when the major investments are made and consumer uptake is maximised[4]. Being able to deliver on this broadband infrastructure faster and with minimal regulatory delays will therefore result in economic benefit to New Zealand sooner.

24. A report commissioned in 2014 by the Ministry of Business, Innovation and Employment (MBIE) by environmental planners at Jacobs SKM reviewed the 73 district plans in relation to telecommunications cables and 54 in relation to mobile infrastructure[5]. The report found that there is inconsistent treatment of these activities.

---

[2] Fourth generation (4G) Long-Term Evolution is a mobile broadband service that is capable of speeds up to ten times faster than 3G mobile data networks.

[3] Small cell units can include microcells, picocells, femtocells, and Wi-Fi

[4] Alcatel-Lucent, 2012. *Building the benefits of broadband*. http://www.nbr.co.nz/sites/default/files/images/BellLabsWhitePaper.pdf

[5] Jacobs SKM (2014) *Environmental Effects of Implementing Ultra-Fast Broadband and Mobile Infrastructure* https://www.mfe.govt.nz/publications/rma/environmental-effects-implementing-ultra-fast-broadband-and-mobile-infrastructure

25. A high level analysis of councils that require consent for mobile and broadband structures and installation activities is set out in **Annex A.** Examples of rules for permitted activities and rules for activities that are controlled (allowed but only if conditions are applied) or discretionary (may or may not be allowed) is set out in **Annex B**. For example:

    - out of 73 district plans that mentioned masts and antennas, 41 required resource consent for a 25 metre mast and antenna in rural areas, 22 permitted the activity with controls and 10 permitted the activity.
    - out of 54 district plans that mentioned aerial cabling, 21 required resource consent, 11 permitted the activity with controls and 22 permitted the activity.

26. Where there were controls on the activities, these primarily related to visual amenity. However the methods to address these impacts varied considerably, even though the infrastructure and environmental effects are largely the same.

27. An example of costs for a large telecommunications operator undertaking a nationwide rollout has been assessed in **Table 1** below:

Table 1: Example of costs that could be incurred by a large telecommunications operator

Reviewing district plans	Resource consent applications	Appeals	Additional processing time
$100,000 annually	$4,800-$14,000 per application	>$200,000 per appeal	~3 months per consent

Objectives for an updated NESTF

28. Extending the NESTF to classify deployment of telecommunications cables and a wider range of mobile network infrastructure as a permitted activity (subject to conditions) will facilitate the effective and efficient large-scale deployment of infrastructure nationally, such as the Government's UFB and RBI programmes, as well as mobile network infrastructure upgrades. It is therefore proposed that they be added to the existing NESTF.

29. An updated NESTF will ensure the original objectives continue to be met, by replacing the variability or absence of rules in 73 district plans with one set of nationally consistent provisions for all telecommunications activities of low environmental impact, while retaining provision for areas of key local significance to be managed by district plan rules.

Options development

30. After the review of the current NESTF, a technical advisory group[6] was set up, with representation from the telecommunications industry, local government, and Māori perspectives. In conjunction with this group, issues related to the current NESTF were investigated and options for amending it were developed.

31. The 2014 Jacobs SKM report also contained an assessment of the environmental effects of typical activities involved in deploying fibre broadband and mobile network infrastructure.

[6] Members were Local Government New Zealand, Wellington City Council, NZ Telecommunications Forum, Tasman District Council, Porirua City Council, Chorus Ltd, Northpower Fibre Ltd, Enable Network Services Ltd, Spark New Zealand Ltd, 2Degrees Mobile Ltd, Vodafone New Zealand Ltd, Te Runanganui o Ngāti Porou, Crown Fibre Holdings, Ngā Pū Waea and Auckland Council.

32. Based on the information provided by the technical advisory group and the environmental report, MBIE and MfE developed a discussion document setting out proposals to amend the NESTF which was released for public consultation. The consultation process, and changes made to the proposals as a result of submissions, are detailed further in subsequent sections.

33. The discussion document asked for comment on the ability of each proposal to deliver the objectives of an updated NESTF, including:

- whether the proposed conditions for each activity are appropriate
- whether the proposal will remain fit for purpose in the long term
- the likely costs and benefits of the standards to telecommunications operators, territorial authorities and the general public
- any risks associated with the proposal.

34. Options were selected using a balancing approach, taking into account statutory considerations for an NES under the RMA, and technical considerations for the practical requirements of new infrastructure installation. Each option for amending the NESTF was evaluated on its ability to facilitate network development without generating significant adverse effects on the environment. This is summarised in **Table 2** below.

35. The majority of proposed amendments relate to the addition of new permitted activities to the NESTF. 16 new activities are proposed, as well as amendments to the current standards relating to three matters discussed further below Table 2.

Table 2: Considerations for proposed amendments to the NESTF

Proposed amendment	Statutory considerations	Technical considerations
Telecommunications cables	Ability to minimise visual impact by setting conditions on placement	Ability to connect to customers (lead-ins)
Associated equipment	Ability to set limits on size and placement to control visual impact	Cables and antennas require additional infrastructure in order to function
Associated earthworks	Ability to protect from environmental effects of dust, sediments, erosion	Required for all proposed new activities to varying extents
Antennas -new/replacement -additional -co-location	Ability to set maximum on size (height, width) mitigating visual impact	Ability to operate over new spectrum (e.g. 700 MHz for 4G service) Additional: ability to sit side-by-side Co-location: minimum separation vertically
Associated utility structures	Ability to set maximum on size increase Ability to control alignment with surrounding infrastructure when re-locating structure	Ability to replace & increase diameter where strengthening needed for new antenna Ability to re-locate structure for safety/structural reasons
New free-standing masts -urban -rural	Ability to mitigate visual and environmental impact (on surrounding trees, vegetation)	Rural masts: ability to provide service over large areas (e.g. for Rural Broadband Initiative)

Telecommunications cabinets	Ability to control for placement and size to mitigate visual impact	New antennas require associated cabinets Telecommunications cable networks require associated cabinets Replacement cabinets for transfer to a new service (e.g. copper to fibre) must sit side by side with existing cabinet until network transfer is complete
Buildings (antennas and cabinets)	Ability to control for placement and size to mitigate visual impact	Placement of cabinets on rooftops subject to structural limits of building Number of antennas able to be placed on a rooftop subject to natural limit
Small cell units	Ability to control for placement and size to mitigate visual impact	Requires ancillary cables and some additional infrastructure in order to function

Amendments to the current standards

The ability of district plan rules to prevail over the NESTF

36. In areas of key local significance, variation can be appropriate. The current NESTF provides that local authorities can manage the effects of new infrastructure in certain areas which would be more sensitive to the visual or environmental effects from the placement of infrastructure. District plan rules for telecommunication facilities that are more stringent that the NESTF prevail over the NESTF in areas identified in the district plan for their historic, cultural or visual value, as well as in the coastal marine area and within the dripline of trees. This ensures that significant adverse effects do not occur as a result of the NESTF, and allows for planning input from local communities.

37. The discussion document proposed to extend the same policies to the wider set of standards proposed. It sought feedback on whether such requirements are appropriate for the proposed telecommunications infrastructure and if so, what are the types of areas that should be subject to special requirements, and what those requirements should be.

Who the NESTF applies to

38. The current NESTF applies only to network operators, as defined in section 5 of the Telecommunications Act 2001. It is proposed that eligibility for activity rights granted through the NESTF be expanded to include the Crown and Crown agents. This is to ensure that government organisations that operate telecommunications networks, or will in future (such as those for emergency services), are subject to these same provisions. Excluding the Crown and Crown agents would have the effect of requiring compliance with district plan rules for each of these activities, even though the facilities have the same environmental effects as network operators' facilities.

Requirements for reporting to councils on radiofrequency field exposure

39. The New Zealand Standard currently incorporated by reference into the NESTF that specifies assessment methods for radiofrequency fields (NZS 6609.2:1990) has been superseded with a new Australia/New Zealand standard (AS/NZS 2772.2:2011).

40. It is therefore proposed to replace the reference to the NZS 6609.2:1990 standard with reference to AS/NZS 2772.2:2011 in the NESTF. This standard will not affect the maximum exposure limits for radiofrequency fields.

Proposed amendment	Statutory considerations	Technical considerations
Delegation to district plans	Ability for councils to continue managing effects of activities in areas of key local significance	Ability to easily determine where district plan rules prevail
Application of regulations	None	None
Radiofrequency field reporting	None	None

41. It is important to note three matters:

i. that the parts of the current NESTF that are not proposed to be amended will still apply to any new telecommunications activities in the updated NESTF.

ii. permitting of any activity under the NESTF does not relieve a telecommunications operator from any obligation under other legislation including the Telecommunications Act 2001, the Heritage New Zealand Pouhere Taonga Act 2014 and industry codes under the Utilities Access Act 2010.

iii. district plan rules still apply to matters not covered by the NESTF. The NESTF therefore must rely on the district plan containing rules that reflect the values of the community it represents in areas where the NESTF specifies that the district plan rules prevail. Addressing any quality issues subsequently identified in district plans is not within scope of this intervention.

Consultation

42. On 3 March 2015, MfE and MBIE released a discussion document, *Proposed Amendments to the National Environmental Standards for Telecommunication Facilities*. Notices were also placed in major papers on 7 March 2015 informing the public where to find information about the proposed amendments and how to make a submission. Iwi authorities were contacted directly about the consultation process. The deadline for submissions was Friday 17 April 2015.

43. Along with the discussion document, MfE and MBIE also released:

- the report of the outcome evaluation of the National Environmental Standards for Telecommunication Facilities
- the preliminary evaluation of the proposed amendments under section 32 of the Resource Management Act 1991
- the report on environmental effects of implementing UFB and mobile infrastructure.

44. A total of 145 submissions were received. Comments and suggestions of submitters have been taken into account in developing the final proposals. A breakdown of the submissions by source is set out in Table 3.

Table 3: Breakdown of submissions, by source

Category	No. of submissions
Individual	109 (75%)
Local government	17 (12%)
Industry	8 (6%)
Community group	3
Iwi organisation	3
Central government	2
Professional association	1
Political party	1
Consumer group	1
Total	**145**

45. In general, the comments of submitters align closely to particular submitter types. The following gives an overall summary of submitters' views.

46. The majority of submissions, from individuals and community groups, commented only on the radiofrequency maximum exposure level standard incorporated by reference into the NESTF (106 submissions). These submissions all requested a review of the maximum exposure standard. The discussion document stated that reviewing this standard is not within the scope of the proposed amendments to the NESTF. Submissions which commented only on this standard were therefore considered to be out of scope.

47. A key secondary concern for individual and community group submitters was the potential impact on visual amenity values and community participation in the planning for placement of telecommunications infrastructure.

48. The majority of submitters who commented on the proposals in the discussion document (local government, iwi organisations, industry and professional associations, central government) stated support for the general purpose and direction of the proposed amendments.

49. Central government agencies who submitted were broadly supportive of the amendments and restricted their comments to their particular area of responsibility. Local government submitters tended to support the proposals in part or with conditions. Most local authorities agreed with the reasons for the proposed amendments but expressed concern about the ability of the proposed NES to recognise and protect the full range of amenity values that could be compromised by telecommunications facilities. These submitters generally sought a more detailed and restrictive set of provisions in the NESTF.

50. Iwi organisation submitters tended to agree with the direction of the amendments, provided they do not have significant adverse environmental or cultural effects. Iwi organisations highlighted the importance of consultation for ensuring areas of cultural significance are protected from inappropriate development.

51. Industry submitters tended to fall into two sub-groups. The first sub-group, consisting of telecommunications network operators, tended to support the proposed amendments, although suggestions for improvement were made, usually involving more permissive standards. The second sub-group, consisting of electricity industry submitters, also broadly supported the proposed amendments, but expressed differing views about who the NESTF should apply to, as well as highlighting professional safety aspects.

52. The professional associations were broadly supportive of the proposals, and made largely technical suggestions for how the proposals could be altered. The consumer group was supportive of the proposed amendments.

53. Key themes of submissions are set out in **Table 4**.

Table 4: Key theme: per proposal

Proposed amendment	Themes
Telecommunications cables	Earthworks allowances Councils general move towards undergrounding of cables Total number of cables that may be added aerially Ancillary equipment conditions Protections for special areas
Antennas	Concern about size limits Colour Concern about potential clustering Responsibility for original structures Ancillary equipment conditions Protections for special areas
Special requirements for certain areas	Addition/removal of natural hazard zones Protection of ecological areas Protection of culturally significant areas Suggestions for other special areas
Conditions controlling cabinets	Redefine 'site' Reduce timeframe for replacement cabinets Account for cabinets required for new networks
Radiofrequency measurement standard update	Raising the reporting threshold

Proposed new permitted activities

54. Taking into account submissions to the public consultation process, and subsequent information from the technical advisory group on the suggestions put forward in that process, MBIE and MfE have refined the proposals.

55. MfE and MBIE also met separately with the Ministry for Culture and Heritage and Heritage New Zealand to discuss options for addressing the concern raised by local government and iwi submitters about possible adverse impacts of an updated NESTF on sites of significance to Māori, such as wāhi tapu not listed in district plans.

56. In response to the submissions process, it is proposed that the majority of proposals presented in the discussion document are retained; however some changes to conditions are proposed to ensure interpretation is straightforward, visual and environmental effects are managed adequately, and network deployment is facilitated.

57. Proposed new activities for the NESTF are set out in **Table 5** below. Amendments made as a result of consultation are summarised here, along with the reasons for the change. A more detailed description of conditions, as well as further explanation on the changes made as a result of submissions is set out in **Annex C**.

Table 5: Proposed new permitted activities

	Proposed permitted activity	Conditions	Current NESTF	Proposed change following consultation
1.	Aerial telecommunications cables alongside existing cabling	Subject to conditions controlling size of cabling and ancillary equipment, to mitigate visual impact.	Not in current NESTF.	Control on size of ancillary equipment added to mitigate visual impact.
2.	Aerial telecommunications cables for customer connections	None.	Not in current NESTF.	No change.
3.	Underground telecommunications cables	No proposed conditions as environmental impact is minimal once installed.	Not in current NESTF.	Earthworks managed through separate provision.
4.	Earthworks required for installing telecommunication facilities in the NESTF	Subject to conditions around managing the environmental effects appropriately.	Not in current NESTF.	New proposal. Controls on earthworks added to manage environmental effects.
5.	New masts to carry antennas in the road reserve	Subject to conditions ensuring the size of the mast is in keeping with other infrastructure in the area.	Permits antennas on existing utility structures only.	No change.
6.	Relocation of replacement utility structures	Subject to controls on new location.	Does not allow movement of a replacement utility structure.	Control on location relaxed to ensure appropriate placement.
7.	New antennas	Panel antenna size limit of 3.5m height and 0.7m width and dish antenna size limit of 1.2 m diameter.. Associated increase in diameter of the replacement utility structure to support larger antenna permitted.	Panel antennas currently 2m height and 0.5m width, dish antennas 0.38 m diameter. Replacement utility structure subject to certain size conditions.	No change. Provision for larger dish antennas added than what is provided.
8.	Replacement of existing antennas with larger antenna	Subject to conditions controlling size of the replacement antenna to reduce visual impact. Associated increase in diameter of the replacement utility structure to support larger antenna permitted	Permits replacement antennas only where overall structure size does not increase.	Provision for dish antennas added.

	Proposed permitted activity	Conditions	Current NESTF	Proposed change following consultation
9.	Additional antennas at existing sites	Subject to conditions controlling both size of the whole structure and individual parts. This is not proposed to be permitted in residential areas or in the road reserve due to visual impact.	Not in current NESTF.	Exclusion from road reserve introduced to manage visual impact. Provision for dish antennas added.
10.	New masts and antennas up to 25 m high and 6 m in diameter in rural areas	Subject to conditions controlling the size and the location. Conditions will also reduce impact on vegetation.	NESTF applies on the road reserve. Outside road reserve not in scope.	Controls on location and vegetation amended to manage visual effects.
11.	Co-location of multiple telecommunications operators' antennas at existing sites	Subject to conditions controlling the total height and width increase of the structure. This is not proposed to be permitted in residential areas or in the road reserve due to visual impact.	Not in current NESTF.	Exclusion from road reserve added to manage visual impact. Control on height increase modified for clarity.
12.	Antennas on buildings	Subject to conditions controlling antenna size, and building height in residential areas, to reduce visual impact.	Not in current NESTF.	Control on building height removed for buildings outside residential areas. Provision for dish antennas added.
13.	Cabinets servicing antennas on buildings	Subject to conditions controlling size and placement.	Not in current NESTF.	Slight changes to conditions for clarity. Provision for dish antennas added.
14.	Small cell units on existing structures (e.g. buildings, bus stops, light poles).	Subject to conditions controlling size to reduce visual impact.	Not in scope – the small cell unit shape does not fit within the current size specifications.	No change.
15.	New telecommunications cabinets	Subject to conditions controlling size (based on district plan zone) and proximity from other cabinets. Cabinets must be grouped in 'sites' at minimum distances from each other to reduce visual impact.	Cabinets subject to smaller size conditions in residential areas	No change.

	Proposed permitted activity	Conditions	Current NESTF	Proposed change following consultation
16.	Replacement telecommunications cabinets	Subject to time limit for cabinet removal where installation is for the same service. Replacement cabinets installed for network transfer must be removed once transfer is complete.	Not in current NESTF.	Provision for network transfer added.

Costs and benefits

58. The table below sets out environmental, economic, social and cultural effects of these amendments to the NESTF as compared to maintaining the status quo. The costs and benefits are discussed in terms of economic, social, cultural and environmental impacts. The amendments are discussed as a whole rather than individually, as this captures the interaction between the proposals and the practical impact they are likely to have.

Table 3: Environmental, economic, social and cultural effects of the amendments to the NESTF

BENEFITS
• **Realising the benefits of UFB and the RBI sooner**: the New Zealand economy will be able to realise sooner the estimated $32.8 billion financial benefits over 20 years.
• **Cost savings for the telecommunications industry:** the telecommunications industry will be able to save costs and time spent reviewing district plans and plan changes, applying for resource consents, attending hearings and complying with consent conditions.
• **Reduced processing delays:** telecommunications infrastructure will be able to be installed faster without regulatory delays caused by rules in district plans and resource consent processing times.
• **Cost savings to update district plans:** councils will not have to use expensive plan change processes to update plans in order to incorporate new telecommunications technologies.
• **Cost savings for the end consumer:** regulatory costs will not need to be passed on to the ultimate consumer, enabling them to have access to improved telecommunications services.
• **Increased certainty and national consistency:** telecommunications providers and consumers will have increased certainty and national consistency.
COSTS
• **Potential for moderate cumulative environmental effects:** the cumulative environmental effects of telecommunications infrastructure could be moderate, particularly in sensitive environments.
• **Removal of public participation in community planning in most areas:** the ability of the public to be involved in community planning decisions relating to telecommunications infrastructure will be removed for those activities that are permitted outside of key areas of local significance.
• **Potential cost and resources spent on amending district plans:** as the amendments include reference to special protected areas in district plans, councils may wish to spend time and resources updating their district plans to put rules in place for these areas.

• **Proposed changes may enable infrastructure to be developed in culturally sensitive areas:** this will only occur if these areas are not protected through district plan provisions and the Heritage New Zealand Pouhere Taonga Act 2014.
• **Reduction in visual amenity:** there is a reduction in visual amenity for residents and the community, particularly when the cumulative effects are considered.

Economic impacts

59. The major benefit of updating the NESTF is that it will facilitate the rollout of UFB, RBI and mobile network upgrades.

60. In general, consistent consenting requirements will result in more certainty for network operators. Improved certainty will enable operators to purchase equipment and commence site designs earlier, making their operations more efficient. It will also mean reduced time and resources spent reviewing and interpreting district plans and applying for resource consents nationally.

61. The conditions attached to the permitted activities will be consistent across all regions, meaning telecommunications operators will be able to achieve certainty and economies of scale when planning their rollout. This will result in additional savings within the funding allocated to extend the UFB and RBI programmes, as well as the Mobile Black Spot Fund, so that they can extend the reach of this infrastructure to more people across New Zealand.

Benefits for the telecommunications industry

62. Information was sought from the telecommunications industry on the economic benefits of the proposed permitted activities. Industry operators have provided some figures to quantify the benefits anticipated from including the proposed new activities in the NESTF. However, these estimations should be treated as indicative only and may vary according to the final shape of the Government's infrastructure programmes, as well as sector trends more generally.

63. There are up to 37 areas that have been announced as potential UFB extension candidate areas, covering 28 local authorities and over 30 district plans. Resource consent for aerial telecommunications cables is required in 19 of these areas. The remaining 21 plans that 'permit' aerial deployment are likely to impose a range of different conditions. There are considerable costs associated with reviewing plans and preparing applications for consent where such variation exists.

64. Telecommunications operators' involvement in council planning processes can be a costly exercise. For example, two operators jointly spend between $350,000 and $400,000 per year reviewing district plans, and have spent $275,000 to date submitting on the Proposed Auckland Unitary Plan. They expect further involvement in the Auckland planning process to cost up to $1 million. Each network operator may save around $100,000 per year reviewing and submitting on plans.

65. The expansion of the RBI will see the potential benefits of the NESTF extended even further. There could be another 100 to 200 towers built under the RBI. Current district plan rules could mean that up to 56 per cent (112) of the new towers would require a resource consent, costing the telecommunications operators an estimated $1,586,000, including possible hearings and appeals.

66. Critical equipment rollouts and upgrades will be required over the coming years. The required equipment does not fit under the existing NESTF provisions. All three mobile network operators expect an increase in their resource consenting costs if amendments to the NESTF are not made.

Costs for the telecommunications industry

67. While the proposed amendments are expected to benefit the telecommunications industry, some operators may face increased costs in some areas because of the changes. Costs may occur in those districts where district plans currently have less restrictive conditions for permitted activities or no conditions at all, than the proposed NESTF. This may occur in a minority of local authority districts, and is expected to be less significant than the benefit for industry from reduced and more consistent regulation at a national level. There may be a small cost associated with the change to the assessment standard for radiofrequency field levels which is incorporated by reference in the NESTF, as referred to in paragraph 40.

Benefits for local government

68. The proposed changes to the NESTF may result in minor financial benefits to local government as a result of reduced resource consent processing and compliance costs and workload.

69. A small number of territorial authorities provided information regarding the time and resources currently spent on processing resource consents and certificate of compliance for telecommunications facilities. The councils indicated that, in the past few years, they had received anywhere between 1-12 resource consent applications per year, with application processing time ranging from 5-13 hours.

70. Overall savings are not able to be extrapolated from the information provided through the consultation process with councils, as the figures provided were indicative for their respective regions only, and are unlikely to apply across the board.

71. Information received through the consultation process indicated that the impact from updating the NESTF is likely to vary from region to region. Workload savings is a function of a number of variables, for example, whether a major infrastructure rollout is currently occurring or scheduled to occur in the council area, and the nature of the area's network development needs.

72. However, it should be noted that the review of the NESTF identified that there is only minimal opportunity for an updated NESTF to achieve many gains in this area, as councils usually recover the costs associated with consent processing and compliance through the fees attached to resource consent applications.

73. More substantial savings are likely to be found in the plan development and review stage; however these potential savings are not able to be quantified with the information received from councils through the consultation process, as councils provided only an indication of whether the amendments would likely result in a net cost or net benefit.

Costs for local government

74. The proposed changes may result in costs to local government to implement the changes, through updating and training staff, particularly those processing applications, and potentially updating district plans.

75. Many of the territorial authorities who provided information during the consultation phase commented that the actual costs that may be faced by councils will depend on the timing of the proposed changes.

76. The RMA allows for the NESTF to apply immediately, and for duplicate or conflicting rules in plans to be amended without undertaking a full plan change process. However, the proposed expansion of activities in the NESTF outside the road reserve, and the accompanying proposal to continue allowing district plan rules to prevail in particular areas of local significance specified in the district plan, means that councils may wish to undertake a plan change process to develop rules for these areas.

77. If the changes come into force while a council is going through a plan change process, changes could be incorporated into that process. If a council was not already going through a plan change process, it may wish to instigate one to set new rules relating to the areas not covered by the NESTF (such as visual amenity or historic heritage areas). A council undertaking a plan change specifically to update the rules or schedules pertaining to these areas might incur an estimated one-off cost of $80,000 to $100,000.

78. However, it should be noted that many district plans already have plans in place to identify and protect these areas where they have not already.

79. Early engagement with councils has been undertaken so that, if they are undergoing a plan change process in the near future, they can incorporate the changes they wish to make in response to an updated NESTF. In addition the proposal to update the NESTF has been included on MfE's forward agenda for national direction priorities, published in August 2015.

80. There is also an unquantifiable cost from councils' loss of ability to control the visual impacts of deploying cables and antennas, as proposed by the amendments to the NESTF. In addition, councils may face costs from increased complaints about the placement of new infrastructure. However, the purpose of the consultation undertaken on the proposed new activities is to come to an agreement with councils that the effects of telecommunications infrastructure can appropriately be mitigated via a national level rule through, for example, height and diameter restrictions.

Social effects

81. Education, healthcare, communities, and small business all stand to gain from improved communications technologies. The NESTF will ensure that these benefits can be realised sooner, particularly through enabling the UFB and RBI programmes to reach as many people as possible. It is difficult to reliably quantify these benefits as the future use of these technologies cannot be foreseen.

82. The major social cost of the proposed amendments to the NESTF relates to the removal of ability of residents to comment on proposals that may affect them. Again, this is not easily quantified.

83. Local residents can currently be involved in the decision-making process for telecommunications infrastructure not currently covered by the NESTF. Local residents can make submissions on district plans, and notified resource consents or on resource consents where they are considered to be an affected party. Through the district plan process the community has also had the opportunity to identify where potential effects of telecommunications activities is an issue for them.

84. The extent to which residents have any effective input in that process is difficult to judge. The level of response on previous RMA and other local government consultation has demonstrated that most residents are not active in trying to influence decisions, except where it affects them directly.

85. It is proposed to incorporate local interests through the provisions for district plan rules for the placement of telecommunication facilities to apply in key areas of local significance. In addition, activities not permitted or not covered by the NESTF will also be governed by local rules.

86. The impact on property values is uncertain. The analysis conducted for the establishment of the NESTF in 2008 found evidence on the relationship between cellular facilities and property values to be mixed. Quantitative analysis of actual transaction data suggested the negative impact is small and falls away rapidly with distance from the site. Additionally, the perceived reduction in value from close location of towers is much greater than the actual reduction.

87. Conversely, given the rising popularity of smartphone use, and the expectation for cell phone connectivity, there may in fact be an opposing effect, such that reduced or poor mobile connectivity in a region has a negative effect on property values.

Cultural effects

88. The benefits of updating the NESTF on cultural values are assessed to be minimal. The social benefits above are generic and will apply to all cultures within communities including to Māori.

89. Costs of the proposals on cultural values are the risk that permitting a wider range of activities will mean that telecommunications infrastructure may be installed in areas that are culturally significant within communities including to Māori. This may have an adverse effect on these areas. While this cost is unable to be quantified, a report commissioned by MBIE assessed the overall cultural impacts on Māori cultural values and the impacts were assessed as minimal, based on the proposed expanded scope of areas subject to district plan rules[7].

90. This means that if district plans have identified sites of cultural value, including wāhi tapu, in the district plan in a way consistent with the definition of historic heritage in the RMA[8], and made rules that apply to them, the sites can be protected as the community has chosen. The NESTF allows these district plan rules to be more stringent than the standards in the NESTF.

91. However, it is recognised that the efficacy of the NESTF to address potential adverse cultural effects is dependent upon the efficacy of a given district plan to identify and protect sites of cultural value. While many district plans record and protect sites with cultural values, there is variability in the completeness and efficacy of those provisions. For example, iwi may not wish to have wāhi tapu publicly identified in a district plan. This may result in adverse cultural effects from the NESTF. It is intended that the guidance document for the current NESTF will be updated with guidance to councils on the potential impact of the NESTF on cultural values.

Environmental effects

92. Under the RMA, an NES cannot allow or permit an activity if it has significant adverse effects on the environment. Before an activity can be permitted in the NESTF, the impacts therefore must either be less than significant or, via conditions, mitigated to be less than significant.

93. Environmental effects are classified in two ways: the installation/construction phase, and permanent visual amenity effects.

94. The main environmental effect from the installation of cabling and mobile network infrastructure is earthworks effects, e.g. from trenching and the installation of new poles. These installation activities and earthworks are temporary and generally of a low level. However, it is proposed that conditions be attached to the ability to carry out earthworks necessary for the placement of facilities.

95. The 2014 Jacobs SKM report found that overall, the environmental effects from each piece of telecommunications infrastructure individually, and their installation activities, tend to be low (less than minor or negligible). However, cumulative visual effects of above-ground infrastructure including above-ground cables, above-ground cabinets,

[7] Andrew Stewart Ltd (2015) *Proposed Amendment to the National Environmental Standards for Telecommunication Facilities – Review of (Maori) Cultural Benefits and Costs*.

[8] Under the RMA, 'historic heritage' means those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, deriving from any of the following qualities:(i) archaeological: (ii) architectural: (iii) cultural: (iv) historic: (v) scientific: (vi) technological; and (b) includes— (i) historic sites, structures, places, and areas; and (ii) archaeological sites; and (iii) sites of significance to Māori, including wāhi tapu; and (iv) surroundings associated with the natural and physical resources.

masts and antennas, have the potential to be greater (minor or more than minor). In the rural environment, a single mast and antenna and the associated access way created could create moderate visual effects.

96. The report found that this risk is adequately mitigated by conditions including controlling earthworks activities, requiring new large masts to be set back from dwellings and educational facilities, as well as the expanding the coverage of areas set aside for protection through the district plan.

97. The risk, raised by a number of submitters, of proliferation of telecommunication infrastructure is considered to be low. Infrastructure is expensive to install, providing an incentive for telecommunications network operators to design efficient networks with only the equipment that is necessary.

Conclusions and Recommendations

98. Consultation with industry and councils indicates that there will be a net benefit from adopting the proposed amendments to the NESTF, with conditions to mitigate environmental impacts.

99. This benefit will primarily be felt through the cost savings that could be made by both industry and local government through reducing the workload for resource consent and planning processes, and benefits to the wider public through enabling a more efficient rollout of UFB, RBI and mobile network infrastructure.

100. There are two main costs associated with updating the NESTF. These are a removal in community participation in decision-making in the majority of areas for the activities that are proposed to be permitted, and the potential for adverse environmental effects.

101. The removal of public participation has been mitigated through the consultation process in developing these amendments, and the opportunity to participate in decision-making through district plan provisions relating to the proposed expanded scope of areas already subject to district plan rules.

102. Potential costs of environmental harm have been mitigated through specific conditions placed on proposals that are considered to have a significant adverse impact.

103. The proposed mitigations formed part of the public consultation process and were further discussed with the technical advisory group. It is considered that the mitigations are required to meet statutory requirements for inclusion of the activities in the updated NESTF and that the costs associated with the mitigations will not outweigh the benefits of including the new permitted activities.

104. Updating the NESTF will not impose additional costs on businesses, impair private property rights, market competition, or the incentives on businesses to innovate and invest, or override fundamental common law principles.

105. Therefore, we consider there is a net benefit to updating the NESTF to include telecommunications activities (with conditions) as proposed and recommend these activities be added to the NESTF.

Implementation

106. The Resource Management (National Environmental Standards for Telecommunications Facilities) Regulations 2008 regulations will need to be amended to add in the new activities.

107. An exposure draft of the amended regulations is intended to be circulated to the technical advisory group and a selection of councils for comment on workability prior to their finalisation.

108. The amended regulations will apply to new telecommunications activities from the day they come into force. This is intended to be late 2015 or early 2016.

109. MBIE and MfE are developing an implementation plan, which will involve working with local authorities to ensure council employees understand and can apply the regulations. As part of this, the Users' Guide that accompanies the NESTF will be updated in conjunction with industry, local government and other relevant stakeholders to ensure interpretation of the amended regulations is straightforward.

110. Councils will need to assess the impact of the updated NESTF on their district plans and made any amendments in accordance with the statutory requirements.

111. In addition, MfE typically carries out an implementation survey around 1-2 years after new regulations come into force, to determine whether there are any issues with interpretation. If the survey results showed any significant issues, this would instigate a review of the NESTF.

Monitoring, Evaluation and Review

112. Under section 24(f) of the RMA, the Minister for the Environment must carry out monitoring of the effect and implementation of the RMA, including any regulations in force under it.

113. A review will be carried out with the aim to evaluate the amended NESTF against its objective and assess if any amendment is required. The review is likely in 5 years after the updated NESTF comes into force.

114. An amended NESTF that has met its objectives would result in cost savings for industry and councils. New technology would have been rolled out to consumers ahead of the time it would have taken otherwise. Areas of special significance to local communities would have been appropriately protected.

115. The evaluation will canvas local council views including:

- Whether costs of consenting are reduced and, if so, by how much
- How much time was required to amend district plans
- Volume/nature of complaints from the public about permitted activities
- Effectiveness of environmental mitigation measures

116. In addition, industry will be separately surveyed at the same time on its views including:

- What the magnitude of cost savings was and where they were made
- Whether the NESTF has facilitated a faster rollout of new technology
- How easy it was to follow the NESTF and be certain of compliance
- Volume/nature of complaints from the public about permitted activities

117. Councils and industry will be advised of the data they need to collect to enable a successful review of the amended NESTF.

118. MfE will seek out iwi and community views on the amended NESTF through information provided to councils, as well as information provided directly to MfE.

Annex A: Table of councils that require consent for mobile and broadband structures and installation activities

Activity/Structure	Total councils	Consent required	Permitted subject to conditions	Permitted
Telecommunication Cables				
New above ground cables on existing infrastructure	54	21	11	22
New poles and overhead cables	54	24	13	17
Underground cables	54	0	2	52
Trenching	54	0	20	34
Micro-trenching	54	0	15	39
Drilling	54	0	14	40
Vegetation removal / trimming	54	1	15	38
Cabinets (road reserve)	54	3	33	18
Mobile Networks (Urban)				
Cabinets	54	4	33	17
Antenna (on streetlights, rooftops, etc.)	54	5	30	19
Micro cells (on streetlights, bus stops, signs, bridges, etc.)	54	1	12	41
Urban slim line monopoles	54	30	9	15
Mobile Networks (Rural)				
Cabinets	73	4	47	22
Rural mast and antenna (25m)	73	41	22	10
Earthworks	73	0	37	36
Access tracks earthworks	73	0	49	24
Vegetation clearance (installation site and access tracks)	73	2	31	40

Annex B: Examples of controls by councils

Permitted Activity Controls - the structure or installation activity is permitted subject to controls.

The table below sets out typical types of permitted activity controls related to the proposed structures and installation activities. The report noted that many of the controls are standard across districts, but the number of controls per district does vary and some districts have more specific controls.

Permitted Activity Controls

Permitted Activity	Conditions / Controls
Earthworks	- Maximum volume, area, height of cut / depth of fill - Minimum distance from a waterbody (e.g. 5 metres or 20 metres) - Require erosion, dust and sediment control measures - The maximum timeframe in which the ground must be reinstated (e.g. 48 hours)
Vegetation clearance (trimming or removal)	- The tree must not be indigenous - The tree must not be specified / listed - Vegetation must be reinstated / replaced - The height of the tree (e.g. can remove any tree under three metres) - The extent of pruning (e.g. can prune up to 30% of the tree) - Maximum circumference of the tree
Mast and antenna	- Requiring landscaping - Mast and/or antenna height - Maximum number of antenna per building - Maximum antenna dimensions - Colour restrictions - Specified minimal setbacks from dwellings, watercourses and zone boundaries
Other structures	- Requires screening (e.g. solid fences or landscaping) - Maximum size (heights, width, depth, area) - Colour restrictions - Minimum setback (of cabinets, new poles, etc.) from property boundaries

Consent Matters of Control or Discretion

The report noted that when an activity requires consent as a controlled or restricted discretionary activity, the matters that council considers are limited and the matters of control or discretion are specified within the district plan and may relate to the effects generated from that activity (for example earthworks). The table below sets out examples of matters of control/discretion in plans relevant to telecommunication cables and urban mobile infrastructure that require resource consent.

Matter of control and discretion for various activities requiring resource consent

Consent Activity	**Matter of Control / Discretion**
Earthworks	- Earthworks stability - Erosion, dust and sediment control - Visual amenity - The transport of material
Mast and antenna	- Location - External appearance - Access - Landscaping
Other structures	- Scale, bulk and form - Amenity and streetscape values - Public health and safety

Annex C: Changes to proposed new activities for the NESTF

Activity	Proposed as permitted activities in the discussion document	Final policy on permitted activities	Reasons for change
Aerial Cabling	Aerial placement of telecommunications cables by a telecommunications operator is permitted, including any necessary ancillary equipment, subject to the following conditions: • no additional poles are installed • there is existing aerial cabling using the poles to be used for the new telecommunications cables (for electricity or telecommunications or other utilities) • the diameter of the new cabling does not exceed 30 mm • cables use existing crossings and corridors Relocation and/or replacement poles where necessary for structural or safety reasons may be up to 3m from the original location.	A maximum size envelope for ancillary equipment has been introduced. Replacement utility structures may be 5m from original structure.	This manages visual amenity impacts of placement of the equipment required to support the technology and frequencies deployed for example cables, remote radio units, fibre access terminals, protection guards, ducting, aerial to underground connections or feeder breakout points. It keeps the envelope small. This allows the opportunity to relocate poles that are not positioned in the most appropriate place. 5m provides more flexibility with no additional impact.
Underground Cabling	Underground placement of telecommunications cables by a telecommunications operator is permitted, including any necessary drilling and trenching and associated earthworks and underground ancillary equipment.	No change.	-
Antennas on multistorey buildings	The placement of antennas on the roof or side of a building is permitted, subject to the following conditions: • the building is no less than 15 m high • rooftop antennas do not extend 5 m beyond the part of the building to which they are attached • the diameter of the antenna at its widest point does not exceed 0.8 m.	15 m minimum building height in residential zones, no minimum height in other zones.	Facilitates rollout and coverage, while ensuring visual impact managed in areas of visual sensitivity.

Activity	Proposed as permitted activities in the discussion document	Final policy on permitted activities	Reasons for change
	Lightning rods may extend beyond the height of the antennas. Associated cabinets with a footprint of no more than 2 m^2 and no more than 2 m high are permitted. All other equipment necessary for the operation of the antenna, such as the mast or other support structure, feeder cables and ancillary antennas, is permitted.		
Antennas in rural areas	The placement of an antenna in an area zoned rural in the relevant district plan is permitted, subject to the following conditions: • the total height (of the mast and antenna) does not exceed 25 m • the diameter of the structure at its widest point (excluding the concrete plinth) does not exceed 6 m • the site is not a scheduled site or area subject to any special rules (eg, landscape provisions for outstanding natural landscapes or outstanding natural features) • the antenna is not located closer than 50 m from the boundary of an area zoned residential • the antenna is not located closer than 50 m from the closest external wall of a dwelling in a sensitive land-use area Lightning rods may extend beyond the height of the antenna all equipment necessary for the operation and security of the antenna, such as the mast or other support structure, casing or coverings, feeder cables, ancillary antennas, cabinets, security equipment, fences, handrails, and steps or ramps, is permitted • the support structure is coloured recessive grey or recessive green • if any earthworks are required to prepare the site: • the earthworks do not occur closer than 20 m from the nearest water body • the ground must be reinstated within 72 hours • if any vegetation clearance (trimming or removal) is required to prepare the site: • the tree(s) must not be scheduled • any indigenous vegetation must be reinstated or replaced within the practicable vicinity of the site.	Setback from residential zones is removed. Colour specification for masts in rural areas has been removed. Reference to 'indigenous' has been removed for conditions around vegetation clearance.	50 m setback from dwellings, childcare and residential facilities is sufficient to manage any potential adverse visual impact. All masts are coloured recessive grey. This is sufficient to manage any potential adverse visual impact. To mitigate visual impact.

Activity	Proposed as permitted activities in the discussion document	Final policy on permitted activities	Reasons for change
New masts to carry antennas in the road reserve	The installation of a new mast with antennas attached in the road reserve is permitted, subject to the following condition: • the total height and width of the mast and antenna is no larger than it would have been if installed in accordance with Regulation 7 (of the existing NESTF) on an existing utility structure within 100 m of the installation site. If there are multiple poles in the 100 m radius, operators must take the average of the poles.	No change.	-
Location of replacement utility structures	A replacement utility structure may be moved to within a 3 m radius of the original utility structure location, provided the structure is still located on the road reserve.	Replacement utility structures may be 5m from original structure.	This allows the opportunity to relocate poles that are not positioned in the most appropriate place. 5m provides more flexibility with no additional impact.
Size envelope for antennas	The antenna(s) – 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 mast (original utility structure or replacement utility structure), is not more than 3.5 m high and no more than 0.7 m in diameter. The height of the replacement utility structure must be no more than the original utility structure's highest point, plus the lesser of 3.5 m or 35 per cent.	No change.	-
Size of replacement utility structure (including the antenna and the mast)	The replacement utility structure must not have a diameter that is more than the original utility structure's diameter at its largest point, plus 100 Per cent.	No change.	-
Replacement of existing antennas to improve service or operate on additional or new spectrum bands such as the new 700 MHz spectrum band	Replacing an existing antenna with a larger antenna capable of operating over additional or new spectrum bands is permitted, subject to the following conditions: • the total height of the replacement infrastructure (mast and antenna) is no more than 2 m higher than the total height of the existing infrastructure • the diameter of the replacement antenna is no more than the diameter of the existing antenna, plus 50 per cent • the diameter of any existing mast is extended no more than the diameter of the existing mast, plus 30 per cent	No change.	-

Activity	Proposed as permitted activities in the discussion document	Final policy on permitted activities	Reasons for change
	• the existing mast and antenna are lawfully established (ie, authorised by a regulation, plan or consent under the RMA). Lightning rods may extend beyond the height of the antenna. An additional cabinet with a footprint of no more than 2 m^2 and no more than 2 m high housing the necessary equipment of the additional telecommunications operator(s) may be installed at the site. Additional ancillary equipment (such as feeder cables) on the outside of the support structure is permitted.		
Additional antennas at existing sites to improve service or operate on additional or new spectrum bands such as the new 700 MHz spectrum band	Installation of additional antennas at a telecommunications operator's existing site (ie, on an existing mast on which a telecommunications operator has an existing antenna) to ensure the site is capable of operating over additional or new spectrum bands is permitted, subject to the following conditions: • the total height of the replacement infrastructure (mast and antenna) is no more than 2 m higher than the total height of the existing infrastructure • the total diameter of the head frame of the structure at its widest point is no more than the diameter of the existing structure plus 100 per cent • the diameter of any existing mast at its widest is extended no more than the diameter of the existing mast, plus 30 per cent • the area is not zoned residential in the relevant district plan • the existing mast and antenna are lawfully established (ie, authorised by a regulation, plan or consent under the RMA). Lightning rods may extend beyond the height of the antenna. An additional cabinet with a footprint of no more than 2 m^2 and no more than 2 m high housing the necessary equipment of the additional telecommunications operator(s) may be installed at the site. Additional ancillary equipment (such as feeder cables) on the outside of the support structure is permitted.	Road reserves have also been excluded.	Visual impact will be managed on a per site basis under the district plan.

Activity	Proposed as permitted activities in the discussion document	Final policy on permitted activities	Reasons for change
Co-location of multiple telecommunications operators' antennas	Increasing the total height of an existing mast and antenna by up to 5 m is permitted, subject to the following conditions: • one or more additional telecommunications operators place an antenna on the existing mast at the time the height is increased • the area is not zoned residential in the relevant district plan • the existing mast and antenna are lawfully established (ie, authorised by a • regulation, plan or consent under the RMA) • this provision is not applied to a single site more than once • telecommunications operators cannot exercise this right of activity until they have disclosed their co-location agreement with the relevant local authority and the Ministry of Business, Innovation and Employment. Lightning rods may extend beyond the height of the antenna. An additional cabinet with a footprint of no more than 2 m^2 and no more than 2 m high housing the necessary equipment of the additional telecommunications operator(s) may be installed at the site. Additional ancillary equipment (such as feeder cables) on the outside of the support structure is permitted.	A total height maximum of 25 m has been added.	To mitigate visual amenity impacts.
Small-cell units	Installation of a small-cell unit on a structure (eg, bus stops, cabinets, traffic poles, signage, light poles) and all ancillary equipment necessary for the operation of the small-cell unit (eg, mounts, cables, combiner / junction boxes) by a telecommunications operator within the road reserve is permitted, subject to the following condition: • the small-cell unit and the ancillary equipment do not exceed a volumetric dimension of 0.11 m^3(eg, 700 mm high x 500 mm wide x 300 mm deep).	No change.	-
Clarification of per 'site' terminology	'Site' will be defined as an area where cabinets are located. The requirement that each site must be located a minimum of 30 m from another site will remain unchanged.	No change.	-

Activity	Proposed as permitted activities in the discussion document	Final policy on permitted activities	Reasons for change
Time for cabinets to be replaced	Two cabinets on the same side of the road may be located within 30 m of each other, but more than 500 mm apart, as a permitted activity subject to the following conditions: • the replacement cabinet is being installed to replace the existing cabinet • the existing cabinet must be removed no later than 12 months following installation of the replacement cabinet.	The time period has been reduced to 3 months.	Reduce time period of visual amenity impacts.
Additional cabinets	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 2 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 1.8 m.	No change.	-

Table B: Amendments to the current NESTF

Issue	Proposed as amendments to the current NESTF	Final policy on permitted activities	Reasons for change
Expanding conditions under Section 6 to include telecommunications facilities outside the road reserve	Conditions protecting trees and vegetation, historic heritage values, visual amenity, coastal marine areas, and natural hazard zones will apply to all activities under the NESTF.	No change.	-
Adding 'natural hazard zones' to section 6	Conditions managing infrastructure in natural hazard zones in the relevant district plan will prevail over the NESTF where they are more stringent than the NESTF requirements.	Natural hazard zones will not be added to the special areas protected through regulation 6 of the current NESTF.	Professional processes and legislation such as the Building Act is sufficient to manage the placement of facilities in these areas.
Incorporation by reference	Replace reference to NZS 6609.2:1990 *Radiofrequency Radiation – Principles and* *Methods of Measurement – 300 kHz to 100 GHz* with reference to AS/NZS 2772.2:2011 *Radiofrequency Fields Part 2: Principles and Methods of* *Measurement and Computation – 3 kHz to 300 GHz*.	No change.	-

Table C: Additional proposals to those in the discussion document

New Proposals	Reason for inclusion
Adding 'natural areas' to section 6	Allowing the activity status in these areas to be managed through district plans rather than an NES gives an appropriate balance between national consistency and consideration for areas protected for their ecological significance.
Adding as a permitted activity, new or replacement dish antenna of up to 1.2m diameter	The current allowance is 0.38m. Modern satellite antenna are now a minimum of 0.80m and are numerous in the environment. The impact of telecommunications dish antenna is less than minor.
Conditions for earthworks	Some of the proposed activities will have earthworks involved (cabling and activities in rural areas). The effects to be mitigated are sediment, erosion and dust.