

NORTH SHORE CITY DISTRICT PLAN



PROPOSED PLAN CHANGE 18

Network Utilities and Designations

Public notification: 6 April 2006 / 1 June 2006

Submissions open: 1 June 2006

Submissions close: 7 July 2006

This is a Council-initiated plan change

EXPLANATORY NOTE - This does not form part of the Proposed Plan Change

We are seeking your feedback on the proposed changes to the District Plan concerning network utilities. The changes include the following.

1. Introduce new objectives, policies and assessment criteria to guide the development and administration of utilities.
2. Reduce the permitted sizes of utility cabinets and introduce more detailed rules to deal with the location and proliferation of cabinets adjacent to roads.
3. Relax the controls on telecommunication cell sites in some zones. In the District Plan the current controls on this equipment are very strict. Introduce monitoring requirements for telecommunication cell sites.
4. Increase the level of control over private aerials and antennas. It is considered the current rules do not provide sufficient control over those structures which are unusually large or in undesirable locations.
5. Introduce the ability to monitor and control the radiofrequency radiation emitted by private telecommunication devices, and update the District Plan so that the current New Zealand Standard for radiofrequency emissions applies in North Shore City.
6. Introduce more stringent rules concerning new above ground electric and telecommunication lines.
7. Require all new subdivision that takes place 25m each side of the centre of high voltage transmission lines to require consent as a restricted discretionary activity.
8. Delete the permitted activity of 'upgrading', replace with a definition of 'maintenance' which is more limited in scope, and introduce new rules concerning changes to above ground electric and telecommunication lines and poles.
9. Introduce new policies and assessment criteria to guide decision makers and utility operators as to when it is appropriate to locate utilities on or under reserve land.
10. Amend the activity status for pipe bridges from controlled to restricted discretionary in some situations.
11. Amend the activity status for utilities in the Coastal Conservation Area and the Foreshore Yard to a permitted activity in certain situations.
12. Amend the activity status for excavation of underground utilities up to 3m deep for maintenance purposes, from a restricted discretionary activity to a permitted activity.
13. Amend the activity status for underground telecommunications and electricity utilities in Structure Plan zones from a discretionary activity to a permitted activity.
14. Introduce rules to provide that all activities in the road reserve are subject to an underlying zoning, and that the underlying zoning will apply to an area of road when it is stopped and the designation is uplifted.
15. Minor changes to other activities including the activity status of electricity substations, CCTV cameras belonging to network utility operators and inserting a new activity termed 'postal holding boxes'.

Material incorporated by reference (in hard copy see Appendices A1-A6)

- A1** The Code of Practice for Working in the Road
- Available at Council's offices and North Shore City Libraries at the addresses below.
- A2** North Shore City Infrastructure Design Standards
- Available by request at Head Office, Level 2 (Strategy and Policy) and on the internet at <http://www.northshorecity.govt.nz/IDSM/IDSM2006/index.htm>
- A3** NZECP 34 – New Zealand Electrical Code of Practice for Electrical Safe Distances
- Available at Council's offices and North Shore City Libraries at the addresses below and on the internet at http://www.ess.govt.nz/rules/pdf/nzecp34_2001.pdf
- A4** New Zealand Standard NZS 2772.1: 1999 Part 1 – Maximum Exposure Levels – 3kHz to 300GHz
- Available for inspection at Council's offices and North Shore City Libraries at the addresses below and for purchase from Standards New Zealand – 0800 782 632 or at <http://www.standards.co.nz> This document is subject to copyright and the copies at Council's offices and North Shore City Libraries must **not** be copied.
- A5** ICNIRP Guidelines – Guidelines for Limiting Exposure to Time-varying Electric, Magnetic and Electromagnetic fields (up to 300 GHz)
- Available at Council's offices and North Shore City Libraries at the addresses below and on the internet at <http://www.icnirp.de/documents/emfgdl.pdf>
- A6** Guidelines for visibility at driveways – RTS 6
- Available at Council's offices and North Shore City Libraries at the addresses below and on the internet at <http://www.ltsa.govt.nz/roads/rts/rts-06.pdf>

Address of Council offices

Head Office, Takapuna	- 1 The Strand, Takapuna - Level 2 (Strategy and Policy)
Area Office, Takapuna	- 2 The Strand, Takapuna
Environmental Services, Takapuna	- 521 Lake Road, Takapuna - Level 1
Birkenhead	- 33 Rawene Road, Birkenhead
Glenfield	- 90 Bentley Avenue, Glenfield
Devonport	- 3 Victoria Road, Devonport
East Coast Bays	- Cnr of Bute & Glen Roads, Browns Bay
Albany	- 30 Kell Drive, Albany

Address of North Shore City Libraries

Albany	- 30 Kell Drive, Albany
Birkenhead	- Leisure Centre, Mahara Ave, Birkenhead
Devonport	- Victoria Road, Devonport
East Coast Bays	- Bute Road, Browns Bay
Glenfield	- 90 Bentley Avenue, Glenfield
Mobile Library	- Ph 0274 921 501
Northcote	- Northcote Shopping Centre, off Ernie May St, Northcote
Takapuna	- The Strand, Takapuna

Proposed Plan Change 18 Provisions

These amendments are shown in two parts.

Part 1 – Page 3 - 31

This shows proposed changes to Section 14 Public Works and Network Utilities. As the proposed provisions replace all parts of Section 14 up to and including Rule 14.7, all new text in this part is shown as normal text.

Part 2 – Page 32- 38

This shows amendments to other sections of the Plan and consequential changes. In this section new text is shown as underlined and deleted text as ~~striketrough~~. Some existing text is shown to place the changes in context.

Part 1

Delete Section 14.1 to 14.7. Replace with the following text on pages 3 - 31.

14. Network Utilities and Designations

14.1 Introduction

The successful functioning of the city and its many services depends on a complex network of utilities and designations including water and wastewater reticulation; electricity transmission, distribution networks; telecommunication networks (including privately owned aerials and antennas); gas networks; the wastewater treatment plant; landfills; defence; public hospitals; and schools. Some of these network utilities are implemented by way of resource consent, and others by way of designation.

Network Utilities

Network utilities are provided for under the Act by way of Permitted activity or by resource consent. The part of this Section 14 comprising objectives, policies, rules and assessment criteria apply where network utility operators do not intend, or are unable, to operate under the designation procedures of the Act. Section 14 will also be used by Council to help assess any outline plans submitted for new network utilities or activities on designated sites, or where an area is designated but works are conducted which are not in accordance with the designation.

In managing the effects of network utilities, recognition should be given to the essential role that these networks play and the services they provide in the functioning of the city. It is also recognised however that the nature of some network utilities and works can detract from the amenity of an area and in some cases may impinge upon public health and safety. In some circumstances, the effects of network utilities are addressed by other instruments (for example, health and safety provisions, traffic safety and flow, construction). Where environmental effects are not fully addressed by other instruments, the District Plan supplements these and establishes a resource management framework for balancing these competing demands and conflicting requirements.

Designations

Public works and some private projects or works are provided for under the Act by way of designation. Certain organisations are able to 'require' land for the purposes of a designation. This is referred to as a requirement. The organisation making the requirement is referred to

as a 'requiring authority'. Organisations that are 'requiring authorities' include Ministers of the Crown, local authorities and also private bodies who are network utility operators and who have obtained status as a requiring authority under Section 167 of the Act. Status as a requiring authority provides the power to require land, including private land, to be set aside for designated activities for which the requiring authority is financially responsible.

Following Council assessment of the requirement, the requirement is included in the Plan and becomes a designation. The effect of designating land is to authorise the use of that land for a particular work (eg school, police station, electricity substation). Once a designation is in place it takes precedence over the zoning of the land, but it can only be used for the purpose for which it has been designated, unless a resource consent is sought and obtained. Nor may other people, without the prior written consent of the requiring authority, do anything in relation to the designated land that would impede the designated activity. The zoning of the land that is covered by the designation is then called the underlying zoning, and this zoning applies for works that are not in accordance with the designation or where a designation is removed. Any reference to 'network utilities' in this Section therefore may also apply to designations.

The provisions of this Section 14 apply to network utilities and designations throughout all parts of the city. Roads, as public works, have been addressed in this section but are dealt with further, and in more detail, in the Transportation Section.

14.2 Network Utilities and Designations: Issues

The following resource management issues relating to network utilities and designations have been identified:

14.2.1 The potential for adverse environmental effects and the degradation of landscape, streetscape and residential amenity values resulting from the construction, operation and maintenance of network utilities.

Many network utilities are part of a network system with operational requirements and design features that can cause adverse effects. The location, size and design of some buildings and structures can have an adverse visual effect on landscape, streetscape and residential and public amenity. Network utilities also have the potential to affect other amenity values through the emissions of noise, odour and vibrations.

14.2.2 Network utilities provide a network of services that are essential to the maintenance and enhancement of the quality of life of the community. Failure to facilitate the provision of an adequate network of network utilities has the potential to undermine this quality of life.

Network utilities are facets of the modern city that most of the community takes for granted. They are essential to the effective, efficient and safe operation of many activities throughout the city. Subject to the Act's requirement to avoid, remedy or mitigate any adverse effects from the network utilities themselves, it is essential that these services be provided in an efficient and effective manner, and to a standard that is adequate to support the many activities that rely on them.

14.2.3 The potential for adverse effects on the health and safety of the community resulting from the construction, operation and maintenance of network utilities.

There is potential for network utilities to adversely affect the health and safety of the community. Some network utilities in the road reserve present hazards to

vehicles and pedestrians. There are risks associated with accidental spillage or leakage of hazardous substances. Electricity transmission and distribution generates the risk of electrocution and also electric and magnetic fields which may be a risk to health. Telecommunication facilities generate radio frequency emissions which may, at levels above the New Zealand Standard, have detrimental effects on health.

14.3 Network Utilities and Designations: Objectives and Policies

The development of objectives and policies for network utilities and designations has been guided by the following resource management goals as set out in Section 6: Natural Environment, Built Environment, Employment and Economic Growth, and Managing Change. These goals enable and promote the purpose of the Act.

14.3.1 Objectives

14.3.1 The construction, operation and maintenance of an efficient and effective network of utilities that meets the needs of the community.

14.3.2 To avoid, remedy or mitigate any adverse environmental effects of network utilities, including effects on amenity, landscape, streetscape and heritage values, arising from the construction, operation, and maintenance of network utilities.

14.3.3 An environment where the health and safety of the community is not adversely affected by the construction, operation and maintenance of network utilities.

14.3.2 Policies

- 1 To have regard to the operational and technical requirements of network utilities in the assessment of resource consent applications for network utilities.**
- 2 Network utilities shall be designed, sited, operated and maintained in such a way that avoids, remedies or mitigates adverse effects on other network utilities.**
- 3 Network utilities shall be designed, sited, operated and maintained in such a way as to avoid, remedy or mitigate adverse effects on the environment of emissions of noise, light, vibration, odour or hazardous substances.**
- 4 Network utilities shall be designed, sited, operated and maintained so that they avoid, remedy or mitigate any adverse effects on the amenity values of the area.**
- 5 Network utilities shall be designed, sited, operated and maintained so that they avoid, remedy or mitigate any adverse effects on the amenity values of sites, buildings, places or areas of heritage and archaeological value.**
- 6 Network utilities shall be designed, sited, operated and maintained so that they avoid, remedy or mitigate any adverse effects on the amenity values of the landscape or streetscape.**
- 7 To recognise that reserve land, and land zoned Recreation 1 in particular, is intended to be open public space free from the adverse effects of**

buildings, structures and activities not linked to the purpose of the zone. Siting of network utilities must avoid, remedy or mitigate adverse effects on;

- (a) The amenity of the reserve, and
 - (b) Public use and enjoyment of the reserve, and
 - (c) The potential for future development of the reserve.
- 8 To encourage the co-location of structures, the shared use of structures, and the use of existing network utility corridors, subject to;
- (a) Technical and operational feasibility, and
 - (b) Recognition that the positive effects can be outweighed by the adverse cumulative effects.
 - (c) Avoiding, remedying or mitigating any adverse effects.
- 9 To encourage the location of aerials and antennas on buildings, and the location of antennas on streetlights, to reduce the need for masts and to avoid, remedy or mitigate the adverse visual effects of aerials and antennas.
- 10 To;
- (a) Require the undergrounding of electric and telecommunication lines in newly developing areas and for infill and redevelopment in established areas, and to encourage these outcomes in established areas, especially when other street improvement works make this aesthetically desirable, and
 - (b) Encourage the undergrounding of above ground network utilities in the road reserve.
- 11 Network utilities, and in particular those network utilities emitting radiofrequency fields or generating electric and magnetic fields, must be designed, sited, operated and maintained in such a way as to avoid, remedy or mitigate potential adverse effects on the health, safety and wellbeing of people and communities.

14.3.3 Methods

- Policies 1-11 will be implemented by rules
- Policies 1-6 will be implemented by the Code of Practice for Working in the Road
- Policy 10 will be implemented by Council initiatives
- Policy 11 will be implemented using Industry Standards to guide the administration of rules in the District Plan
- Policies 1-3,6,9,and 10 will be implemented using the North Shore City Council Infrastructure Design Standards to guide the administration of rules in the District Plan.

Explanation and Reasons

The primary means of achieving the objectives and policies of Section 14 is through the operation of the rules within the Plan. The rules are intended to ensure that network utilities are provided for and established but at the least environmental and amenity cost to the community. Development and Activity controls are baseline rules that apply to all network utilities to ensure that amenity values and the quality of the environment in the City are maintained. Development controls are specific controls that apply to network utilities and activity controls provide a cross reference to controls in other sections of the Plan to ensure that network utilities adhere to the baseline standards set out in those sections of the Plan. As well as these controls, the activity status of the various network utility activities may vary in

different zones of the City in recognition of the effects that each activity has on areas of different character and sensitivity.

The Council supplements the use of rules by using tools that lie outside the District Plan. These include Road Opening Notices and the Code of Practice for Working in the Road.

Many network utilities are located within the road reserve because legislation (for example the Telecommunications Act 2001, the Electricity Act 1992 and the Gas Act 1992) allows network utility operators access to Council administered roads to install and maintain the relevant network utilities. Any utility operator (or private individual) wishing to work in the road must submit to Council a Road Opening Notice. This provides Council with details of the planned work and enables Council to set 'reasonable conditions' (according to the terms of the relevant legislation) of access to the road reserve. These conditions are primarily related to 'operational matters' that concern the protection of Council's road asset and its primary function as a transport resource. Examples might include conditions relating to reinstatement of the road and the safe and efficient flow of traffic. Theoretically, such operational conditions should not directly address environmental effects such as amenity considerations, as these should be imposed through resource consents or District Plan provisions. Such operational matters often have the consequential effect of addressing amenity values, however. Although permitted activities in the road reserve are not heavily regulated in the District Plan – because they are judged to have few environmental effects – in the road reserve this ensures they are still subject to a process that that minimises any negative environmental effects on the amenity of the City.

Council has also agreed with network utility operators on the provisions of the Code of Practice for Working in the Road. This agreement is based on the concept of partnership and prioritises co-operation and working together in a dependable and trustworthy manner. It also sets out the technical standards to which work in the road reserve is to be carried out, including position of services, site construction and reinstatement. The engineering specifications contained in Council's Infrastructure Design Standards are also relevant to network utility activities, particularly those concerning the water supply, wastewater and stormwater, and those network utilities located in the road reserve.

Industry Codes and Standards can be useful tools for setting an acceptable benchmark for evaluating environmental effects. The rule relating to emissions of radio frequency fields and extremely low frequency electric and magnetic fields is set in the District Plan by reference to such Industry Standards. Another Industry Code to which the District Plan has regard is NZECP 34: 2001, a Code of Practice for Electrically Safe Distances.

14.3.4 Environmental Results Anticipated

The anticipated environmental results from the implementation of the above objectives, policies and methods are;

- A city with network utilities that do not have significant adverse environmental effects, as measured by resident perception surveys.
- Whether network utilities are considered to adversely affect amenity values in more sensitive areas such as recreation and coastal areas, and those containing cultural, built and natural heritage. This will be measured by resident perception surveys.
- Avoidance of the adverse effects of network utilities on the health and safety of people, as measured by regional health assessments.
- Increasing the quantity of network utilities that are undergrounded. This will be measured by the length of electric and telephone lines and the numbers of minor utility structures that are undergrounded.

14.4 Rules: Network Utility Activities

14.4.1 Underlying zoning

14.4.1.1 Activities within road reserve

In the case of any activities within road reserve, including designated road that is not yet legal road, the underlying zoning is deemed to be that of the immediately adjacent land extending to the mid point of the road.

14.4.1.2 Zoning on road stopping

Where roads or accessways are stopped and the designation is uplifted, the subject land will take on the underlying zoning that applied when the designation was in force.

Explanation and Reasons

Roads, proposed roads, road closures, accessways and service lanes are shown as designations on the District Plan maps, and accordingly, have underlying zonings.

14.4.2 Activity Status

The activity statuses of network utilities are set out in Table 14.1.

An activity status set out in Table 14.1 may be changed by provisions in other parts of the Plan (see 14.5.4).

Unless Structure Plan zones are separately referred to in this Section 14, all references to Residential zones include Structure Plan zones.

Explanation and Reasons

'Network Utilities' is defined in Section 21. This includes the works of network utility operators and for the purposes of this Plan also includes;

- those parts of the telecommunication networks that are privately owned, including privately owned aerials and antennas.*
- any activity emitting radio frequency fields, whether owned privately or by network utility operators.*

The activity status of the different network utilities is set out in Table 14.1. This activity status may be changed by provisions in other parts of the Plan. For example, although an activity may be listed in Table 14.1 as being a Permitted activity, if it does not comply with rules elsewhere in the Plan (eg noise), this activity status will change and a resource consent will be required.

The table is organised by the type of network utility activity (for example, Telecommunications, Electricity, Gas). There is also a Miscellaneous section that applies to those activities that do not fit under one of the types of network utility activity. Some activities which are generic in nature and apply across all types of network utilities are also contained in this section, including minor utility structures.

For some activities the rules that apply in the road reserve differ from those applying outside the road reserve. In these cases the rules state whether it applies to areas within the road reserve (RR) or outside the road reserve (Not RR). Where the road reserve is not mentioned, the rule applies to areas both in and outside the road reserve.

Each activity is specified as being Permitted, Controlled, Limited Discretionary, Discretionary or Non complying, with the following abbreviations being used;

P	Permitted activity
C	Controlled activity
LD	Limited Discretionary activity
D	Discretionary activity
NC	Non complying activity

In the Activity Table, those terms that are defined in Section 21 of this Plan are written in uppercase text.

Table 14.1 Activity Status					
	P	C	LD	D	NC
RR – Rules apply for activity in the road reserve NOT RR – Rules apply for activity outside the road reserve No reference – Rules apply for activity in all areas					
Miscellaneous					
The operation and MAINTENANCE of NETWORK UTILITIES in lawful existence	All Zones				
NOT RR - Underground NETWORK UTILITIES not covered in other sections of this Table 14.1	All zones other than Recreation 1			Recreation 1	
RR - Underground NETWORK UTILITIES not covered in other sections of this Table 14.1	All zones				
NOT RR - Any MINOR UTILITY STRUCTURE which complies with Rule 14.5.2-14.5.4	Business, Rural and Special Purpose 1-4 and 12 zones		All other zones	Recreation zones	
RR - Any MINOR UTILITY STRUCTURE, which has a total ground coverage not exceeding 0.5m ² in area and has a height not exceeding 1m above NATURAL GROUND LEVEL	All zones other than Recreation 1			Recreation 1	
RR - Any MINOR UTILITY STRUCTURE which <ul style="list-style-type: none"> • does not exceed 1.8m in height above NATURAL GROUND LEVEL, and • with a maximum length of 2.5m and maximum depth of 1.2m, and • which in any case do not exceed 3.5 cubic metres in total volume 	Rural zones and Business zones 7-10	All other zones		Recreation 1	

RR – Rules apply for activity in the road reserve NOT RR – Rules apply for activity outside the road reserve No reference – Rules apply for activity in all areas	P	C	LD	D	NC
RR - Any MINOR UTILITY STRUCTURE, which: <ul style="list-style-type: none"> exceeds the sizes for Permitted or Controlled activities, or does not comply with any of the Rules 14.5.2-14.5.4 			All zones other than Recreation 1	Recreation 1	
Temporary above ground SERVICE/ CONNECTION LINES to BUILDINGS and sites; <ul style="list-style-type: none"> for the period of construction only, or in an emergency 	All zones				
RR - Street furniture and street landscaping where approved by Council	All zones				
NOT RR - PUBLIC LETTERBOX	All zones other than Recreation zones		Recreation zones		
RR - PUBLIC LETTERBOX		All zones			
NOT RR - POSTAL HOLDING BOXES	All zones other than Recreation zones			Recreation zones	
RR – POSTAL HOLDING BOXES				All zones	
Any NETWORK UTILITY which is a Permitted or Controlled activity and does not comply with any of the Rules 14.5.2-14.5.4, where this circumstance is not specifically provided for				All zones	
Transport					
Parking areas associated with transport infrastructure such as bus stops, transfer stations and “park and ride” facilities		All Business zones except Business Local 1		All other zones including Business Local 1	
TRANSPORT EQUIPMENT	All zones				
NOT RR – Bus shelters	All zones				
RR - Bus shelters	All zones provided activity complies with Rule 14.5.3.8			All zones where activity does not comply with Rule 14.5.3.8	

RR – Rules apply for activity in the road reserve NOT RR – Rules apply for activity outside the road reserve No reference – Rules apply for activity in all areas	P	C	LD	D	NC
Telecommunications					
All ACTIVITY EMITTING RADIO FREQUENCY FIELDS	All zones provided activity complies with Rule 14.5.1				All zones where activity does not comply with Rule 14.5.1
NOT RR - Underground NETWORK UTILITIES for Telecommunication networks	All zones other than Recreation 1			Recreation 1	
RR - Underground NETWORK UTILITIES for TELECOMMUNICATION networks	All zones				
NOT RR - TELECOMMUNICATION KIOSKS	All zones other than Recreation zones		Recreation zones		
RR - TELECOMMUNICATION KIOSKS		All zones			
AERIALS	All zones provided activity complies with Rule 14.5.3.1		All zones where activity does not comply with Rule 14.5.3.1		
ANTENNAS attached to a BUILDING (excluding a MAST) that do not exceed; <ul style="list-style-type: none"> 0.6m² in area or 0.8m in diameter, or 1m² in area or 1m in diameter, are located in Residential, Recreation and Special Purpose 3-11 or 13 zones, and complies with Rule 14.5.3.2.1 b) 	All zones				
ANTENNAS attached to a BUILDING (excluding a MAST) that do not exceed; <ul style="list-style-type: none"> 1m² in area or 1m in diameter, or 1.5m² in area or 1.4m in diameter, are located in Business, Rural and Special Purpose 1,2 or 12 zones, and complies with Rule 14.5.3.2.2 b) 	All other zones	Residential, Recreation and Special Purpose 3-11 and 13 zones			
ANTENNAS attached to a BUILDING (excluding a MAST), not exceeding 2.5m ² in area or 2m in diameter.		All other zones	Residential, Recreation and Special Purpose 3-11 and 13 zones		

RR – Rules apply for activity in the road reserve NOT RR – Rules apply for activity outside the road reserve No reference – Rules apply for activity in all areas	P	C	LD	D	NC
ANTENNAS attached to a BUILDING (excluding a MAST), that are Permitted or Controlled activities and do not comply with Rule 14.5.3.2			All zones		
MASTS in accordance with the height limits in 14.5.3.3		Business zones 2-11 and Special Purpose 1,2 and 12 zones	All other zones (including Business 1 where not adjacent to Residential 3 zone)	Recreation zones	Residential 3 and Business 1 where adjacent to Residential 3 zone
ANTENNAS attached to a MAST that do not exceed 1m ² in area or 1m in diameter		Business 2-11, Special Purpose 1,2 and 12 zones	All other zones		Residential 3
ANTENNAS attached to a MAST, not exceeding 2.5m ² in area or 2m in diameter			Business 2-11, Special Purpose 1,2 and 12 zones	All other zones	Residential 3
ANTENNAS attached to street lights provided that; <ul style="list-style-type: none"> the ANTENNA does not exceed 1m² in area or 1m in diameter, and the height of the ANTENNA does not exceed the height of the existing structure by more than or 2.5m or 25 percent of the height of the structure, whichever is greater. 		Business 2-11 Rural zones and Special purpose 1,2 and 12 zones	All other zones	Residential 3	
Up to 3 ANTENNAS attached to a MAST or streetlight, provided that where there are 3 ANTENNAS, only one may be a dish ANTENNA and it may not have a diameter greater than 300mm		Business zones 2-11 and Special Purpose 1,2 and 12 zones	All other zones	Recreation zones	Residential 3
Up to 4 ANTENNAS attached to a MAST or streetlight, provided that where there are 4 ANTENNAS, only one may be a dish ANTENNA and it may not have a diameter greater than 600mm			Business zones 2-11 and Special Purpose 1,2 and 12 zones	All other zones	Residential 3
ANTENNAS, AERIALS and MASTS not otherwise provided for in this Table				All other zones	Recreation and Residential 3
Development of two or more RESIDENTIAL UNITS per BUILDING when not in accordance with Rule 14.5.3.4				All zones	

RR – Rules apply for activity in the road reserve NOT RR – Rules apply for activity outside the road reserve No reference – Rules apply for activity in all areas	P	C	LD	D	NC
Closed-circuit television cameras	All zones				
Telephone exchanges not exceeding 100m ² gross floor area		Business and Rural 1,3 and 3A zones		All other zones	
Telephone exchanges exceeding 100m ² gross floor area				All zones	
New above ground TELECOMMUNICATION SERVICE/CONNECTION LINES where the existing distribution service to which the connection is made is underground.			Rural zones	All zones other than Rural zones	
Other new above ground TELECOMMUNICATION SERVICE/CONNECTION LINES	Rural zones		All zones other than Rural zones		
Changes to above ground SERVICE/CONNECTION LINES	All zones provided activity complies with Rule 14.5.3.7		All zones where activity does not comply with Rule 14.5.3.7		
New above ground TELECOMMUNICATION LINES				All zones	
Changes to above ground TELECOMMUNICATION LINES (not including SERVICE/CONNECTION LINES)	All zones provided activity complies with Rule 14.5.3.7			All zones where activity does not comply with Rule 14.5.3.7	
Electricity					
All activities emitting extremely low frequency electric and magnetic fields	All zones provided activity complies with Rule 14.5.1				All zones where activity does not comply with Rule 14.5.1
NOT RR - Underground NETWORK UTILITIES for Electricity networks	All zones other than Recreation 1			Recreation 1	
RR - Underground NETWORK UTILITIES for Electricity networks	All zones				
Electricity SUBSTATIONS. For the purposes of this rule SUBSTATION does not include ‘transformers’ that are MINOR UTILITY STRUCTURES located within the road reserve.		Business 9 and 10, and Rural zones		All other zones	

RR – Rules apply for activity in the road reserve NOT RR – Rules apply for activity outside the road reserve No reference – Rules apply for activity in all areas	P	C	LD	D	NC
Electricity SUBSTATIONS which do not comply with Rule 14.5.2-14.5.4. For the purposes of this rule SUBSTATION does not include 'transformers' that are MINOR UTILITY STRUCTURES located within the road reserve.				All zones	
New above ground electricity SERVICE/CONNECTION LINES where the existing distribution service to which the connection is made is underground			Rural zones	All zones other than Rural zones	
Other new above ground electricity SERVICE/CONNECTION LINES	Rural zones		All zones other than Rural zones		
Changes to above ground electricity SERVICE/CONNECTION LINES	All zones provided activity complies with Rule 14.5.3.7		All zones where activity does not comply with Rule 14.5.3.7		
New above ground ELECTRIC LINES, excluding HIGH VOLTAGE TRANSMISSION LINES				All zones	
Changes to above ground ELECTRIC LINES (not including HIGH VOLTAGE TRANSMISSION LINES supported by steel tower structures or electricity SERVICE/ CONNECTION LINES)	All zones provided activity complies with Rule 14.5.3.7			All zones where activity does not comply with Rule 14.5.3.7	
MAINTENANCE and/or MINOR UPGRADING (as defined) of existing HIGH VOLTAGE TRANSMISSION LINES, supported by steel tower structures.	All zones				
Tower replacement on existing HIGH VOLTAGE TRANSMISSION LINES where replacement occurs wholly within that area defined in the diagram set out in Appendix 14K.		All zones			
Tower replacement on existing HIGH VOLTAGE TRANSMISSION LINES where any part of the replacement tower is outside that area defined in the diagram set out in Appendix 14K			All zones		
Changes to HIGH VOLTAGE TRANSMISSION LINES, supported by steel tower structures, not provided for as Permitted, Controlled or Limited Discretionary Activities				All zones	

RR – Rules apply for activity in the road reserve NOT RR – Rules apply for activity outside the road reserve No reference – Rules apply for activity in all areas	P	C	LD	D	NC
New above ground HIGH VOLTAGE TRANSMISSION LINES					All zones
Water Services, Wastewater, Stormwater					
NOT RR - Underground NETWORK UTILITIES for water networks except for all activities specifically addressed in this Water Services section of Table 14.1	All other zones			Recreation 1 and Structure Plan zones	
RR - Underground NETWORK UTILITIES for water networks excluding all activities specifically addressed in this Water Services section of Table 14.1	All zones other than Structure Plan zones			Structure Plan zones	
Pipe bridges			All zones other than Recreation 1	Recreation 1	
NOT RR - Pipe bridges where attached to an existing bridge or structure		All zones other than Recreation 1		Recreation 1	
RR - Pipe bridges where attached to an existing bridge or structure		All zones			
Stormwater ponds	Rural and Special Purpose 3	All other zones		Recreation 1	
Sewage pumping stations, water pumping stations and wastewater storage tanks, provided that; <ul style="list-style-type: none"> they are underground, and any above ground structure does not exceed 30m² area 	Special Purpose 1, 3	All other zones		Recreation 1	
Other sewage pumping stations, water pumping stations and wastewater storage tanks	Special Purpose 1, 3			All other zones	
WATER SUPPLY RESERVOIRS, provided they are completely underground		All other zones		Recreation 2 and 3	Recreation 1
Stormwater pumping stations and other WATER SUPPLY RESERVOIRS				All zones other than Recreation 1	Recreation 1

RR – Rules apply for activity in the road reserve NOT RR – Rules apply for activity outside the road reserve No reference – Rules apply for activity in all areas	P	C	LD	D	NC
Gas					
NOT RR - Underground NETWORK UTILITIES for Gas networks excluding HIGH PRESSURE GAS LINES	All other zones			Recreation 1 and Structure Plan zones	
RR - Underground NETWORK UTILITIES for Gas networks excluding HIGH PRESSURE GAS LINES	All zones other than Structure Plan zones			Structure Plan zones	
Gas gate stations		Business 9 and 10, and Rural zones		All other zones	Recreation and Residential
Gas gate stations which do not comply with Rule 14.5.2-14.5.4				All other zones	Recreation and Residential
Gas regulator stations not exceeding 20m ² gross floor area		All zones other than Recreation 1		Recreation 1	
Gas regulator stations exceeding 20m ² gross floor area				All zones	
HIGH PRESSURE GAS LINES, replacing low pressure gas lines with HIGH PRESSURE GAS LINES, and necessary incidental equipment for all gas networks, including compressor stations				All zones	
Meteorological Activities					
Meteorological activities provided that; <ul style="list-style-type: none"> the height of the anemometer mast does not exceed 10 metres the height of the ancillary building does not exceed 3 metres the total floor area does not exceed 5m², and the total site area of occupancy does not exceed 500m² 		Rural and Business zones		Residential and Special Purpose zones 1, 2, 3, 4, 8, 10	All other zones

14.5 Further Rules and Development and Activity Controls

14.5.1 Radio-frequency and Electric and Magnetic Fields

14.5.1.1 Report required before commencing activity

Any proposal to undertake a new activity emitting radio-frequency fields or extremely low frequency (ELF) electric and magnetic fields, or existing activity that proposes to increase existing levels, should submit a report as required in S 3.10.7.1.6.

14.5.1.2 Radio-frequency fields

- (a) Exposures to radio-frequency fields produced by any activity emitting radio frequency fields shall not exceed the maximum exposure level for the general public in the *New Zealand Standard NZS 2772.1: 1999 Part 1 – Maximum Exposure Levels – 3kHz to 300GHz* measured at all places reasonably accessible to the general public.
- (b)
 - (i) Any cell site or antenna shall be subject to random, independent monitoring of its emissions of radio-frequency fields to ensure that such emissions comply with the *New Zealand Standard NZS 2772.1: 1999 Part 1 – Maximum Exposure Levels – 3kHz to 300GHz*, measured at all places reasonably accessible to the general public.
 - (ii) The monitoring will take place at the applicant's cost.
 - (iii) Where the applicant is a network utility operator, no more than ten percent of the total number of operator's cell sites in North Shore City shall be subject to such monitoring in any one year. Where the network utility operator has less than ten sites, no more than two sites shall be subject to such monitoring in any one year.

14.5.1.3 Electric and Magnetic Fields

Exposures to ELF electric and magnetic fields shall comply with the guidelines specified by the International Commission on Non-Ionising Radiation Protection (ICNIRP) 1998.

Explanation and Reasons

An activity emitting radio-frequency fields includes activities such as radio and television broadcasting activities, cell phone sites and antennas. These are distinguished from the ELF electric and magnetic fields that are found around power lines and electrical cabling and equipment. Although they are both electromagnetic in origin, the way they interact with the body is fundamentally different as they operate at very different frequencies. For this reason, different standards apply to each type of field.

The accepted standard operating in New Zealand for radio-frequency fields is the New Zealand Standard NZS 2772.1: 1999 Part 1 – Maximum Exposure Levels – 3kHz to 300GHz. There is no independent New Zealand standard addressing exposure guidelines for the ELF electric and magnetic fields. Many countries have accepted the guidelines published by ICNIRP in 1998 and the Council also uses these guidelines in the District Plan as a health and safety benchmark.

The New Zealand Standard and the ICNIRP guidelines have established levels of exposure to radio-frequency fields and ELF electric and magnetic fields below which adverse effects are thought to be negligible. Activities that comply with these Standards and Guidelines are therefore deemed to have no significant environmental effects in respect of the health, safety and wellbeing of the community. To verify that activities that propose to emit radio-frequency or ELF electric or magnetic fields comply with the respective Standards and Guidelines, Rule 3.10.7.1.6 requires that applications for these activities should include a report verifying compliance with the New Zealand Standard or the ICNIRP guidelines. To ensure they operate within the New Zealand Standard, cell sites and antennas emitting radio-frequency fields are also subject to random, independent monitoring of their radio-frequency emissions.

14.5.2 Development Controls

These controls in 14.5.2 shall apply to all Permitted and Controlled activities in Table 14.1, provided that;

- a) any network utility located entirely within the road reserve shall not be required to comply with the following:
 - i) Landscaping controls in 14.5.2.2
 - ii) Parking, loading and access controls
 - iii) Height, height to boundary and yard controls, subject to the Coastal Conservation Area rules in 8.4.1.1 and the Foreshore Yard rule in 16.6.1.5A.
- b) minor upgrading and tower replacement on existing high voltage transmission lines shall not be required to comply with the following:
 - i) Landscaping controls in 14.5.2.2
 - ii) Height, height to boundary and yard controls in 14.5.2.4.

Explanation and Reasons

It is unnecessary for some of the following rules to apply to Permitted and Controlled activities in certain situations, for example, landscaping requirements in the road reserve for below ground network utilities and minor utility structures. It is considered that in some cases the coastal conservation area and foreshore yard controls are also unnecessary, for example, where underground network utilities in the foreshore yard are located under or immediately adjacent to the carriageway, as this area is already heavily modified. A similar argument applies to above ground network utilities within the coastal conservation area. It is not intended however that these coastal conservation area and foreshore yard exclusions apply to the areas of road reserve that have no formed carriageway, for example near the coast where the formed road ceases but the road reserve continues to the coastal edge. See Rule 8.4.1.1 and 16.6.1.5A for these rules.

14.5.2.1 Reinstatement

Where the establishment or maintenance of a network utility involves the disturbance of the ground, the body responsible for that work must reinstate the ground to at least the condition existing prior to commencement of the work taking place.

Explanation and Reasons

Reinstatement in the road reserve is an important goal of the Code of Practice for Working in the Road. For work carried out in the road reserve Council uses the principles of reinstatement as summarised in the Code as a standard to assess whether reinstatement has been sufficiently completed.

14.5.2.2 Landscaping

For amenity purposes, the visual impact of above ground structures must be remedied or mitigated by landscaping, screening or similar remedial measures.

Explanation and Reasons

The visual appearance of the buildings and structures of network utilities can have a detrimental effect upon the amenity values of an area. This rule has the purpose of enhancing the appearance of such buildings and structures as viewed from the road and neighbouring properties by requiring that landscaping be carried out.

14.5.2.3 Maintenance

Network utility operators shall maintain and regularly upkeep any above ground structures so as to protect the amenity of an area and prevent any health and safety issues arising. The operator must remove any graffiti or posters from the above ground structure within five working days of notification by the Council. Where minor utility structures located in the road reserve (whether above or below ground) are redundant or obsolete they must be removed.

Explanation and Reasons

Above ground network utilities are common activities and (particularly when located in a road reserve), they are highly visible. This rule has the purpose of ensuring that their appearance is maintained so that they do not detract from the amenity of an area. Those underground network utilities that are located in the road reserve are allocated their own corridors according to the provisions of the Code of Practice for Working in the Road. Where a pipe or wire is being replaced, the replacement should be located in the same corridor to avoid unnecessary cluttering of the underground road reserve.

14.5.2.4 Height, Height to Boundary and Yard Controls

For all activities located outside the road reserve and above ground, all structures greater than 1.8m high or 10m² shall comply with the development controls for the zones in which they are located.

14.5.3 Additional Controls for Specific Activities

14.5.3.1 Aerials

14.5.3.1.1 Aerials attached to a Building

All aerials identified as Permitted Activities in Table 14.1 Activity Status shall comply with the following;

- i) Height
The aerial shall not exceed the height of the point of attachment to the building or the height of the zone by more than the following;

Zone	Height
Residential and Recreation	3m
Rural	4m
Business	5m
Special Purpose 1,2 and 12	5m
Other Special Purpose zones	3m

Note – In S21 aerials are excluded from the definition of Height (in relation to any building). This rule is consistent with that definition as the height of the aerial is measured independently of building height.

- ii) Numbers
In Residential zones there shall be no more than 2 aerials per residential unit on any site, except that if there are more than 2 residential units on a single site, only 1 aerial per residential unit is permitted.
- iii) Dimensions
Any dimension of an aerial (excluding the mountings) shall not exceed 3m.

Explanation and reasons

These rules specify the controls for aerials attached to buildings in different zones. All proposed buildings containing multiple residential units must also comply with Rule 14.5.3.4 in respect of connecting each residential unit to a central aerial.

14.5.3.1.2 Aerials attached to a Mast

- i) Numbers
Only one aerial is permitted per mast.
- ii) Dimensions
Any dimension of an aerial (excluding the mountings) shall not exceed 1m.

14.5.3.2 Antennas attached to Buildings

14.5.3.2.1 Antennas in Residential, Recreation and Special Purpose 3-11 and 13 zones

- a) All antennas identified as Permitted and Controlled Activities in Table 14.1 and located in Residential, Recreation and Special Purpose 3-11 and 13 zones shall comply with the following;
 - i) Height
Where attached to a building, the antenna shall not exceed the height of the part of the building to which it is attached by more than 2m.
 - ii) Numbers
There shall be no more than 2 antennas per residential unit on any site, except that if there are more than 2 residential units that are physically joined together on a single site, only 1 antenna per residential unit is permitted.
 - iii) Yards
An antenna shall not be located closer than 1m to a site boundary.
- b) Placement
For any antenna required by Table 14.1 to comply with this rule and located in Residential, Recreation or Special Purpose zones 3-11 or 13;
 - i) where located on any residential unit or garage, it must be;
 - A. at a height lower than the peak of the roofline, and
 - B. not be sited on the façade of any wall or roof facing any road, reserve or public space, or on any part of a wall or roof within 2m of the front façade.
 - ii) where located on any other building or structure, the antenna should not be visible from any road, reserve or public space.

For the avoidance of doubt, nothing in this Rule excludes antennas from the controls contained above in a).

14.5.3.2.2 Antennas in Business, Rural Special Purpose 1,2 and 12 zones

- a) All antennas identified as Permitted and Controlled Activities in Table 14.1 and located in Business, Rural, Special Purpose 1,2 and 12 zones shall comply with the following;
 - i) Height
Where attached to a building, the antenna shall not exceed the height of the part of the building to which it is attached by more than the following;

Zone	Height
Business 2-11	5m
Special Purpose 1,2 and 12	5m
Business 1, Rural	3m

- ii) Numbers
There shall be no more than one antenna attached to the façade of each residential unit in the Business zones (not including the roof).
- iii) Yards
An antenna shall be subject to the yard controls for the zone in which it is located.
- b) For any antenna required by Table 14.1 to comply with this rule and located in any other zone, the antenna;
 - i) must be located lower than the peak of the roofline unless the building is more than 10m high, and
 - ii) must not be on the façade of any wall or roof facing any road, reserve or public space, or on any part of a wall or roof within 2m of the front façade.

For the avoidance of doubt, nothing in this Rule excludes antennas from the controls contained above in a).

Explanation and reasons

These rules specify the controls for antennas attached to buildings in different zones. All proposed buildings containing multiple residential units must also comply with Rule 14.5.3.4 in respect of connecting each residential unit to a central antenna.

Generally, in Table 14.1 antennas of a certain size have a certain activity status. In some cases however, where a particular antenna is located in a position where visibility from surrounding areas is minimised, a larger antenna is permitted under the same activity status.

For example, in Residential, Recreation and Special Purpose zones 3-11 or 13, where an antenna is located below the peak of the roofline and not on the front façade of the building, there is more opportunity for the bulk of the building to absorb the visual effects of the antenna. Where the antenna is located on a smaller building or structure, it is likely that there is not sufficient bulk to accommodate the antenna. In such a case the antenna should be located where it is not visible from public spaces.

14.5.3.3 Height of masts and antennas attached to masts

All masts (including any antennas and aerials but excluding lightening rods) in Table 14.1 Activity Status shall comply with the following height limits:

Zone	Height
Business 2-11	20m
Business 1	10m
Rural 1 zone	15m
Rural 2-4 zones	10m
Residential and Recreation zones	Height of zone
Special purpose zones 1,2 and 12	20m
Other Special purpose zones	10m

14.5.3.4 Development of two or more residential units per building

Any development that contains two or more residential units in a single building shall connect each individual residential unit to a central aerial and a central antenna. The connection, antenna and aerial shall enable the supply of free to air television and satellite television to each residential unit in the building, to avoid the need for each unit to have a separate aerial or antenna.

Explanation and Reasons

Television aerials are a standard fixture on free standing residential units, while the increasing popularity of satellite television has seen the number of satellite television dishes in North Shore City increase dramatically. Where residential units are intensively developed, locating an aerial or satellite dish antenna on the exterior of every residential unit is unsightly and unnecessary. It can be avoided by wiring up each residential unit in a single building envelope to a central aerial or satellite dish antenna at the time of construction of the development. This removes the need for each unit to have its own equipment and lessens the visual pollution that can occur on developments of this nature.

14.5.3.5 Location of minor utility structures

14.5.3.5.1 Minor utility structures within the road reserve

All minor utility structures located in the road reserve and identified as permitted or controlled activities in Table 14.1 Activity Status shall;

- a) be located where they;
 - i) Maintain vehicle access and pedestrian access to adjacent properties
 - ii) Maintain vehicle sightlines by complying with the Land Transport Safety Authority RTS6 "Guidelines for Visibility at Driveways"
 - iii) Do not, to the maximum extent possible, obstruct pedestrian traffic. To enable free pedestrian traffic there should be at least 1.4 m clear footpath width horizontally adjacent to the structure
 - iv) Do not obstruct access to underground network utilities or identified network utility corridors
 - v) Enable ease of maintenance in the area around the structure. In respect to the area between the road reserve boundary and the structure, it should be located either sufficiently close to the road reserve boundary so that the footings remove the need for maintenance, or there should be sufficient room to enable the area to be easily maintained or mowed.
- b) not be located more frequently than one structure every 50 metres. This rule excludes;
 - i) Minor utility structures that are permitted activities
 - ii) Business zones 7-10
 - iii) Those structures located on Primary arterials as identified in Appendix 1 of the District Plan maps, regardless of the underlying zoning.
- c) be of recessive colours that avoid, remedy or mitigate the visual impact of the structure.

Explanation and Reasons

These rules set benchmarks for where minor utility structures can be placed so that they do not impinge on the amenity and functionality of the road reserve. Ease of access to neighbouring properties should be maintained and pedestrian safety should not be put at risk by poorly placed structures that impinge on vehicle driver's views. Pedestrians should have at least 1.4m clearance on any footpath to enable all users to use the footpath without obstruction. Minor utility structures should not obstruct access to underground network utilities nor should they impinge on underground network utility corridors. Minor utility structures also create maintenance problems in the road reserve, as poorly located structures increase the expense of maintaining the area around it. Structures should either be close

enough to the boundary so the concrete footing precludes the need for maintenance of the area between the structure and the road reserve boundary, or they should leave enough room for a mowing strip in this area.

Where they are located in close proximity to each other minor utility structures can create a 'wall' of structures that is visually unattractive. Requiring utility companies to space out the structures will help to reduce this phenomenon. This rule does not apply in areas where amenity is of less importance, such as Business 7-10 zones and on Primary arterials.

14.5.3.5.2 Minor utility structures that serve only one site

Where a minor utility structure (excluding permitted activities) is designed to service only one site it must not be located in the road reserve.

Explanation and Reasons

For some industrial activities one minor utility structure may be required to service only the one site. In these situations the benefit of the minor utility structure is only for that site and should be located on that property rather than in the road reserve.

14.5.3.6 Underground service/connection lines

For all underground service/connection lines that are connected to above ground distribution lines, the colour of the above ground portion of the service/connection line shall be recessive. The line may be tagged with coloured markers to indicate the type of line.

14.5.3.7 Changes to existing above ground Telecommunication lines and Electric Lines

All changes to existing above ground Telecommunication lines and Electric Lines, (including service/connection lines, but not including high voltage transmission lines supported by steel tower structures) shall comply with the following;

- (a) changes to above ground equipment and wires;
 - i) Any above ground equipment shall be of the same or lesser dimensions as that which exists, and shall be in the same or similar position.
 - ii) The number of above ground conductors or wires shall not exceed the existing number and shall be arranged horizontally rather than vertically.
 - iii) Conductors or wires shall be the same or lesser diameter.
 - iv) Cross arms must be of the same or lesser overall dimensions.
- (b) changes to poles;
 - i) Replacement poles shall not exceed the height of the existing pole
 - ii) Where the existing pole is located in the road reserve, any replacement pole shall be located or relocated as the case may be;
 - to a position in the road reserve as close to the boundary with adjacent sites as possible, although the boundary edge of the pole shall be not more than 0.4m from the boundary line between two sites, at a perpendicular angle to that boundary line, or
 - in the berm between the footpath and the road provided that the pole is 0.6m from the formed road, or
 - closer than 0.4m to the existing pole, provided that the replacement pole is at least 0.6m from the formed road.

Provided that in any of these situations the proposed replacement pole shall not be located in a position where;

- it obstructs vehicle or pedestrian access to adjacent properties

- it fails to comply with Land Transport Safety Authority RTS06 “Guidelines for Visibility at Driveways”
- it presents a safety hazard to vehicle traffic
- if, in any circumstances, it is necessary for the replacement pole to be located on the footpath, the minimum clear footpath width horizontally adjacent to the replacement pole is less than 2 m in Business zones 1-6 and 11 or 1.4 m in all other zones.

14.5.3.8 Bus Shelters

All bus shelters identified as Permitted Activities in Table 14.1 Activity Status shall comply with the following standards, terms and conditions:

- a) Advertising and passenger information: Bus shelters must not contain any general commercial advertising. Display cases (or similar) containing timetables or other passenger transport services information may be electronic (variable message type) and may contain commercial symbols provided the display is only readable by users of the shelter or pedestrians passing by (and not by motorists or occupiers of properties in the vicinity).
- b) Bus shelter siting and design: Bus shelters must conform to the following:
 - Shelters shall be a maximum height of 2.7 metres and a maximum coverage often (10) m² measured one (1) metre above the pad;
 - The shelter structure design, finishes and colour shall, when viewed as a whole, not generate any significant detraction from the visual amenities of the immediate locality nor be a distraction to motorists, and no part of the structure shall have a reflectivity greater than 37% with the reflectivity of any glass component of the shelter being measured at a normal angle of incidence;
 - Shelters shall only contain or employ lighting sufficient for illuminating passenger transport services information and creating a sense of security for users. The nature of the lighting shall not detract from the existing amenity of the area and must not compromise road safety. The downlit lighting standard shall be up to a maximum of 40 lux as measured at the floor of the shelter, with no more than 4 lux light spill at any private property boundary;
 - Shelters shall be located so there is generally a maximum of 10 metres distance between the shelter and the head (front) of the bus stop;
 - Shelters shall have sufficient unobstructed space for safe and convenient pedestrian and passenger movement around the shelter. In general bus shelters should be located a minimum of 1.4 metres from any vehicle crossing or roadside kerb. However, in high intensity pedestrian or vehicular traffic areas, greater setbacks should be achieved to respond to the increased need for safety and convenience. There should wherever practicable be a minimum of 1.4 metres of unobstructed footpath and a continuous paved surface between the shelter and the kerb at the head of the bus stop.
- c) Prior bus stop approval: Bus shelters shall only be positioned adjacent to bus stops authorised by the Council acting as road controlling authority.
- d) Bus shelter approval under other legislation: Bus shelters must have prior approval under the Local Government Act or such other legislation as may apply to their establishment.

Explanation and Reasons

Council has a bus shelter policy (Policy 4.2.9 Bus Shelters) that outlines an approval process for bus shelters under local government legislation. Included in the policy is a process for

consideration of any objections to proposed bus shelters. Council's policy provides for appeals to the relevant standing committee of Council by persons not satisfied with the first decision on their objection. Policy 4.2.9 Bus Shelters also includes criteria for the siting and design of bus shelters and these will be upheld unless there are unusual circumstances.

The policy will be reviewed from time to time, through reports to committee meetings that are open to the public, and specifically if Local Government legislation changes. Policy 4.2.9 Bus Shelters can be found in the Council Policy Manual. Further information is available from Council's Transportation and Roading Group.

The above rule has been written in a way which sets out the standards, terms and conditions which need to be achieved and two of these are complemented by technical controls. This format has been followed to ensure both clarity and certainty of expected environmental outcome. The technical controls are explained below.

The reflectivity maximum of 37% is to ensure that the shelter is not a significant detraction from the visual amenity of the immediate locality nor be a distraction to motorists. A key aspect of achieving this is to limit the amount of reflection from the shelter and therefore a reflectivity maximum of 37% has been set. The maximum of 37% reflectivity is, by way of example, about the same as reflection from a caucasian skin tone. Since part of the shelter may be glass and at certain acute angles the reflectivity may exceed 37% from the glass, the reflectivity for the glass will be measured at a normal angle of incidence. Normal incidence of entry is light entering at right angles to the surface it is entering and reflecting off. Light striking the glass at anything other than normal incidence of entry does not therefore have to meet the 37% reflectivity limit.

The rule also sets maximum lighting lux levels. The intention of the rule is to ensure sufficient lighting for illuminating passenger services information and creating a sense of security. In addition consideration must be had for the bus drivers being able to see waiting passengers in the shelter and the level of lighting for waiting passengers which must not be too bright as this can create disorientation and limit visibility from within the shelter. In addition to the passenger considerations the lighting levels must not compromise road safety and detract from the existing amenity of the area. To achieve this, maximum lighting levels (illuminance) in the shelter and at property boundaries have been set. This has been set at up to 40 lux as measured at the floor of the shelter and no more than 4 lux light spill at any private property boundary. Illuminance is the term for the amount of light falling on something. Light levels are generally specified on a horizontal plane usually at ground level. The unit for illuminance is Lux. By way of comparison a full moon has an illuminance of 0.1 lux, twilight an illuminance of 10 lux and direct sunlight an illuminance of 100 000 lux.

14.5.4 Activity Controls

All Permitted and Controlled activities shall comply with relevant rules specified in the following General Sections. The rules contained in these Sections may change any activity status specified in Table 14.1.

Section 8: Natural Environment

Section 9: Subdivision and Development (including Soil and Water Protection)

Section 10: Pollution and Waste Management (including Noise, Hazardous Substances, Air Emissions, Odour, Dust, Vibration, Lighting)

Section 11: Cultural Heritage

Section 12: Transportation

Section 13: Signs

14.6 Controlled Activities – Reservations and Assessment Criteria

Controlled activities must comply with all relevant controls of the Plan, including the Development and Activity controls in 14.5. In addition, the Council may impose conditions under Section 108 of the RMA and for this purpose reserves control over the matters specified below for General and Specific Controlled activities.

14.6.1 Reservations and Assessment Criteria for General Controlled Activities

14.6.1.1 Reservations for General Controlled Activities

The Council reserves control over the following matters for all Controlled activity resource consent applications;

- a) Design, external appearance and scale
- b) Siting and height,
- c) Visual impact including landscaping and screening
- d) Effects on streetscape and amenity
- e) Cumulative effects
- f) Natural and built heritage values
- g) Noise, vibration, odour, glare, dust, air emissions, lighting
- h) Vehicle movements, access and parking
- i) Risk of contamination or other hazards
- j) Effects on overland flow paths and/or water courses
- k) Land stability and ground conditions
- l) Technical constraints and operational considerations
- m) Safety and convenience of road users
- n) Appropriateness of activities within recreation zones

14.6.1.2 General Assessment Criteria

The Council shall assess applications using the following criteria;

- i) The nature of the locality in which the activity is located. This includes consideration of the streetscape of the area, the character of the coastal or rural environment, any significant landscape values of the area (including the natural form and character of visually prominent ridgelines and landforms), and the amenity values of the surrounding area.
- ii) Whether the design and external appearance of buildings and structures for network utilities are sympathetic to the character of the locality. This will include assessment of the extent to which the network utility dominates, or is overbearing in relation to adjacent activities.
- iii) Whether the proposed siting, landscape design, screening and site layout will internalise or mitigate the effects of the network utility to the site as far as practicable.
- iv) The effect on any significant views will be avoided or mitigated, including those from the Coastal Marine Area.
- v) Whether the heritage values of any identified buildings or places would be adversely affected by the structure.
- vi) All adverse effects on amenity values of an area from potential nuisance factors including noise, vibration, odour, glare, dust, air emissions and lighting will be avoided, remedied or mitigated.

- vii) Whether the effects on the overland flowpath and/or watercourse are more than minor and whether the proposal may impede the flow of water in the 1% AEP Stormwater Event.
- viii) Whether the potential for contamination or hazards resulting from equipment failure, accidents or discharges have been addressed, including taking into account the nature of adjoining land use activities.
- ix) Whether it is technically, economically and practically reasonable to co-locate structures.
- x) The extent to which these criteria are constrained by operational or technical issues.
- xi) Whether structures located in the road reserve will be sited so that;
 - the potential for traffic and pedestrian safety problems is avoided and recommended clearance distances for pedestrian thoroughfare is preserved (as detailed in North Shore City Council's Infrastructure Design Standards). This assessment must take account of any likely proposed upgrading or improvements of the road
 - there is sufficient space in the road reserve for the planting and maintenance of street trees, the provision of lighting, street furniture, parking, and access to the road reserve
 - the area surrounding the structure can be easily maintained, particularly in the area between the structure and the site boundary
 - the structure, including any footings, will allow practical access to any existing in ground equipment or structure, and not occupy space above identified network utility corridors
 - the stability of any adjacent property will not be undermined by the installation of the structure.
- xii) For any activity that is proposed to take place on reserve land;
 - Whether the activity can readily be provided outside the reserve
 - Whether locating the network utility on recreation land is consistent with the objectives and policies of the relevant Recreation zone
 - The anticipated impact on the amenity of the reserve, including natural and recreational amenity
 - Whether the proposed location of the activity has potential to limit or prevent options for the development of the reserve in the future
 - Any potential interference with the public use and enjoyment of the reserve
 - Recognising that land zoned Recreation 1 possesses high natural amenity and is regarded as suitable for the location of network utilities only in unusual circumstances
 - Recognising that land in the road reserve that is zoned Recreation, especially in areas of natural amenity, provides a transition zone between the public open space and the carriageway.

14.6.2 Reservations and Assessment Criteria for Specific Controlled Activities

14.6.2.1 Replacement of Electricity Transmission Towers

The Council reserves control over the height, location and appearance of the replacement tower.

The Council shall assess applications for tower replacement in terms of any additional or changed effects using the following criteria;

- i) the extent to which alternatives to a proposed tower replacement siting have been evaluated and a comparison of each alternative undertaken, taking into account the operational efficiency and technical requirements of the network utility and the financial implications to the applicant.
- ii) the extent to which there are any significant mitigating factors or significant adverse effects that can be avoided or remedied with an alternative tower siting proposal.
- iii) the extent to which the streetscape of the area, the character of the coastal or rural environment, the significant landscape values of the area (including the natural form and character of visually prominent ridgelines and landforms), or the amenity values of surrounding properties or public spaces, would be affected.
- iv) the likely impacts on the security of North Shore's electricity supply in the event of the applicant proceeding or not proceeding with the principal alternative tower relocation proposal.
- v) the extent to which a pole structure or a tower of an alternative design or colour would have a lesser or greater environmental effect.
- vi) the extent to which the location of tower structures will have adverse effects on the safety of road users.
- vii) whether the location would have adverse effects on conservation, cultural or archaeological values.
- viii) whether there are native bush or wildlife habitats that could be adversely affected by the proposal.

14.6.2.2 Gas Regulator Stations

The Council reserves control over the matters specified in 14.6.1.1.

The Council shall assess applications for those gas regulator stations identified as Controlled activities in Table 14.1 using the criteria identified in 14.6.1.2, and the following:

- i) All such facilities shall be housed in a secure, enclosed building or compound and should be of a colour that will minimise the visual intrusiveness of the building.
- ii) The area surrounding the facility should be landscaped with the purpose of screening the facility from surrounding activities.

14.6.2.3 Minor utility structures, public letterboxes and telecommunication kiosks within the road reserve

The Council reserves control over the matters specified in 14.6.1.1 and the following;

- a) The necessity for the structure to locate in the road reserve, depending on the user that the structure will service
- b) Any proposed road alterations
- c) Whether the structure can be located underground

The Council shall assess applications for minor utility structures, public letterboxes and telecommunication kiosks within the road reserve identified as Controlled activities in Table 14.1 using the criteria identified in 14.6.1.2, and the following;

- i) Who the structure is designed to serve. Where the structure is designed to serve only one site it must not be located in the road reserve.

- ii) The proposed location of the equipment or structure in relation to any planned road widening, or vertical and / or horizontal realignment of the road.
- iii) Whether there are difficult ground conditions or technical constraints that make placement underground impracticable.
- iv) Whether the proposed location of the structure has been considered in relation to any existing structure already in the vicinity.

14.6.2.4 Water Supply Reservoirs, Wastewater Storage Tanks and Pumping Stations

The Council reserves control over the matters specified in 14.6.1.1.

The Council shall assess applications for Water Supply Reservoirs, Wastewater Storage Tanks and Pumping Stations identified as Controlled activities in Table 14.1 using the criteria identified in 14.6.1.2 and the following;

- i) Whether the structure will be located and designed to harmonise with the natural or built features of the area in which it is situated by one or more of the following means:
 - Undergrounding the structure
 - Partial or complete backfilling of reservoir walls
 - Screening using earth mounding and planting
 - Locating the reservoir so that it is not visible from a Residential or Recreation zone
- ii) Where the above treatments are not possible for hydraulic, topographical or other reasons, visual impacts will be avoided, remedied or mitigated through:
 - Appropriate screening and/or planting
 - Colour treatment to reduce visual dominance; or
 - Design modifications such as domed roofs where reservoirs are situated on hills

14.6.2.5 Pipe Bridges

The Council reserves control over the matters specified in 14.6.1.1 and also the location of pipe bridges in respect of the risk of failure.

The Council shall assess applications for Pipe Bridges identified as Controlled activities in Table 14.1 using the criteria identified in 14.6.1.2, and the risk of failure of the pipe bridge, including the risk of the footings of the pipe bridge, or the pipe bridge itself, being undermined by flooding.

14.6.2.6 Antennas and Masts

The Council reserves control over the matters specified in 14.6.1.1.

The Council shall assess applications for Antennas and Masts identified as Controlled activities in Table 14.1 using the criteria identified in 14.6.1.2 and the following:

- i) The extent to which any adverse visual effects of the mast or antenna can be avoided or mitigated by:
 - screening or landscaping
 - alternative siting
 - alternative colour or finish selection
 - re-configuration or design of antennas or other attachments to the mast
 - re-design of the mast shape or profile.

- ii) Where antennas are proposed to be sited on a building, the extent to which they can be designed, screened or sited so that they form an integral part of the total building design.
- iii) The extent to which the mast or antenna can be co-located with similar structures or other buildings to avoid, remedy or mitigate their visual impact, and the extent to which the potential for co-location has been addressed.

14.7 Limited Discretionary Activities – Restrictions and Assessment Criteria

14.7.1 Restrictions and Assessment Criteria for Specific Limited Discretionary Activities

Council may grant or refuse consent for Limited Discretionary activities, and if granted may impose conditions under Section 108 of the RMA. For the purpose of making these decisions Council has restricted the exercise of its discretion in respect of the activities identified below.

14.7.1.1 Restrictions and Assessment criteria for minor utility structures

The Council restricts its discretion to the matters identified in 14.6.2.3.

The Council shall assess applications for minor utility structures using the criteria identified in 14.6.2.3.

14.7.1.2 Restrictions and Assessment criteria for public letterboxes and telecommunication kiosks

The Council restricts its discretion to the matters identified in 14.6.1.1.

The Council shall assess applications for public letterboxes, postal holding boxes and telecommunication kiosks using the criteria identified in 14.6.1.2.

14.7.1.3 Restrictions and Assessment criteria for above ground service/connection lines

The Council restricts its discretion to the matters identified in 14.6.1.1.

The Council shall assess all applications for above ground service/connection lines using the criteria identified in 14.6.1.2 and the following;

- i) The adverse visual effect with respect to neighbouring dwellings primarily when viewed from habitable rooms should be avoided, remedied or mitigated.
- ii) Any potential for co-location, subject to technical limitations, should be pursued so as to minimise the number of structures.
- iii) The extent to which technical and physical constraints and their associated costs restrict the ability to underground the service/connection line.

14.7.1.4 Restrictions and Assessment criteria for Replacement of Electricity Transmission Towers

The Council restricts its discretion to the height, location and appearance of the replacement tower.

The Council shall assess applications for tower replacement using the criteria identified in 14.6.2.1.

14.7.1.5 Restrictions and Assessment criteria for Pipe Bridges

The Council restricts its discretion to the matters identified in 14.6.2.5 and to the following;

- The availability of alternative locations and options to a pipe bridge, and amenity effects.

The Council shall assess applications for pipe bridges using the criteria identified in 14.6.2.5 and the following;

- i) The suitability of alternative locations for the pipe bridge
- ii) The suitability of alternatives to a pipe bridge including locating the pipe bridge under the stream bed using trenchless technology, using other devices or possible re-routing to avoid the need for a bridge
- iii) The effect on the amenity of the surrounding area and the integration of the pipe bridge into the surrounding environment by the use of neutral colours, vegetation for screening, and the potential for co-location with existing or proposed bridges or other infrastructure.

14.7.1.6 Restrictions and Assessment criteria for Aerials, Antennas and Masts

The Council restricts its discretion to the matters identified in 14.6.2.6 and to the following;

- a) The maximum height of the mast, the area or diameter of any aerial or antenna, and the numbers of antennas or aerials attached to masts, buildings or streetlights

The Council shall assess all applications for aerials, antennas and masts using the criteria identified in 14.6.2.6 and the following;

- i) If the aerial, antenna or mast is likely to result in an adverse effect on the environment, whether the location and scale are appropriate having regard to alternative locations or other options.
- ii) Structures are discouraged on prominent ridgelines and hilltops. Where the proposed aerial, mast or antenna is so located and where significant adverse effects are likely, whether the aerial, antenna or mast can be placed elsewhere without a disproportionate loss in functionality. Where it is considered necessary that the proposed aerial, antenna or mast be located on a ridgeline or hilltop, Council encourages the co-location of network utilities to help reduce the effect on visual amenity.

Part 2

New text is shown as underlined and deleted text as ~~strikethrough~~. Some existing text is shown to place the changes in context.

Section 1 – A Guide to Using the District Plan

Consequential amendment as follows - Section 1.3

1.3 How to Use the District Plan

Table 1.2 provides guidance on the use of each section of the Plan.

Table 1.2 How to use the District Plan	
Section	When Required
...	
14. Public Works and Network Utilities and Designations	Use to determine how infrastructure relating to network utilities and designations public works and network utility operations are provided for.
...	

Section 3 – Procedures and General Rules

A Consequential amendment as follows - Section 3.10.1

3.10.1 Rules for Permitted Activities

Section 14: ~~Public Works and~~ Network Utilities and Designations

B Amend Section 3.10.7.1: General

3.10.7.1 General

6 For any proposal to undertake an activity emitting radio-frequency fields, a report prepared by an appropriately qualified person as to whether the maximum exposure level for the general public prescribed in the *New Zealand Standard NZS 2772.1: 1999 Part 1 – Maximum Exposure Levels – 3kHz to 300GHz*, measured at all places reasonably accessible to the general public, will be complied with.

For activities that propose to emit extremely low frequency electric and magnetic fields, a report prepared by an appropriately qualified person containing a prediction as to whether the guidelines specified by the International Commission on Non-Ionising Radiation Protection 1998 will be complied with.

C Amend Appendix 3A: Schedule of Effects, as follows

(1)(B)(k) Effect on public health and safety of any radio-frequency fields or ~~electromagnetic radiation~~ extremely low frequency electric and magnetic fields, or from ~~electromagnetic waves~~ resulting which may be generated from an activity. Refer to Rule 14.5.1 for the standards used in North Shore City.

Section 8 – Natural Environment

A Amend Section 8.4.1.1: Controlled Activities, as follows

8.4.1.1 Controlled Activities

All buildings and structures in the Coastal Conservation area shall be Controlled activities, provided that:

a) for the Chelsea sugar refining industrial site the following are exempt from this requirement:

“Buildings and structures, including ‘accessory buildings’, wholly within the Special (Chelsea) Exemption Area, that are or will be an integral part of the sugar processing industry of the Chelsea Sugar Refinery (see Appendix 11D – Special (Chelsea) Coastal Conservation Control Exemption Area)”.

b) except for stormwater infrastructure, the following network utilities are exempt from this requirement:

i) any underground network utility, and

ii) any aboveground network utility that is located entirely within road reserve that is fully formed (but not including any part of the road reserve that is not fully formed).

The status of an activity may change according to controls in other sections of the Plan.

...

B Consequential amendment as follows - Section 8.4.6.8: Conditions

....

Section 9 Subdivision and Development

Section 14 ~~Public Works and~~ Network Utilities and Designations

Section 16 Residential

...

Section 9 – Subdivision and Development

A Add new item ‘d)’ to Section 9.3.2: Wellbeing, Heath and Safety, as follows

...

Policies

...

c) Utility services that have sufficient capacity to absorb the effects of development and maintain human health and safety.

d) Allotments that enable building platforms and other associated activities to achieve adequate separation distances from high voltage transmission lines.

....

B Amend Section 9.4.1.1: Permitted Activities, as follows

...

b) Site works for underground network utilities located within the road reserve, except for in the Foreshore Yard. In the Foreshore Yard site works for underground network utilities are permitted only in areas of road reserve under or immediately adjacent to the carriageway, or for which a resource consent has been obtained, or to which existing use rights apply, or which are Permitted activities in accordance with Section 14 – Network Utilities and Designations and the provisions of this Plan.

- c) Site works for above ground network utilities located in the road reserve for which a resource consent has been obtained, or to which existing use rights apply, or which are Permitted activities in accordance with Section 14 – ~~Public Works & Network Utilities and Designations~~ and the provisions of this Plan.
- d) Site works for the provision, maintenance or repair of roading located in the road reserve.
- e) Excavations, except in the foreshore yard, no greater than;
 - 1.5 metres in depth, or
 - 3 metres in depth for the maintenance of existing underground network utilities.

as measured by the vertical distance from the top to the bottom of the excavation.

~~Excavations no greater than 1.5 metres in depth (measured by the vertical distance from the top to the bottom of the excavation), except in the foreshore yard.~~

...

C Add new item 'q' to Section 9.4.1.3: Limited Discretionary Activities, as follows

...

- v) Subdivision in the 2A Chelsea Special zone that is demarcated within, and in accordance with, an 'approved integrated development scheme'.
- q) Subdivision creating an allotment that lies within 25 metres of high voltage transmission lines, as measured from the centreline at ground level.

....

D Amend Section 9.4.4.2: Building Platforms, as follows

- a) The location of the building platform shall:
 - i) avoid creating an impediment to the 1% AEP flow; and
 - ii) provide a minimum of 500mm freeboard above the 1% flood level if for a habitable building; and
 - iii) ensure that subsequent permitted development could comply with yard, access, arterial setbacks, building line restrictions, NZECP 34:2001, and
- b) For the purposes of Rule 9.6.1 a suitable platform shall:
 - i) Meet the standards of 9.4.4.2(a); and
 - ii) Have regard to the adopted NSCC engineering/infrastructure standards as then current.
 - iii) Comply with the specific foundation design requirements determined by a registered engineer experienced in soil mechanics (or other similarly qualified and experienced person).

Explanation and Reasons

The need to identify an area suitable for the construction of a building on each lot ensures that the design of the subdivision takes account of the particular characteristics of the land in the layout of the lots. It also enables the Council to be satisfied that a suitable building area can be provided, in accordance with the requirements of the zone in which the land is located, prior to any approval of the subdivision.

The location of building platforms in the 1% AEP flood plain creates problems for the property owner, downstream properties and receiving environments, and therefore all effort to avoid buildings in the flood plain should be taken. It is expected that in determining an appropriate building platform consideration be given to any current adopted NSCC engineering/infrastructure standards.

Note:

The location of building platforms may be influenced by the location of electricity supply lines. The owner of any such lines should be consulted by the subdivider or developer regarding separation distances and similar requirements.

....

E Add new item '18' to Section 9.5.2: Restrictions - Limited Discretionary Activity, as follows

...

17. Site works within the secondary flow path or 1% AEP flood plain.

18. In accordance with 9.4.1.3 v), where subdivision proposes to create an allotment that lies within 25 metres of a high voltage transmission line;

- i) the extent to which compliance with NZECP 34:2001 will be achieved, and
- ii) the location and probable future height of any associated tree planting, and
- iii) the extent of proposed earthworks in and around the line and support structures of the high voltage transmission lines
- iv) retention of emergency and maintenance access

...

F Add new item '9.7.2.12: Subdivision in the vicinity of High Voltage Transmission Lines', as follows

...

9.7.2.12 Subdivision in the vicinity of High Voltage Transmission Lines

In addition to the general assessment criteria in Rule 9.7.1.1, the Council shall assess any proposal to create an allotment that lies within 25 metres of high voltage transmission lines against the following:

- i) The extent of compliance with NZECP 34:2001 and the potential effects on users or occupiers of land
- ii) Location of building platforms and whether there are alternative building platforms available
- iii) The nature and location of any proposed earthworks and/or vegetation to be planted in the vicinity of transmission lines.
- iv) The ability of the line owner to retain access to the high voltage transmission line for inspections and maintenance and emergency purposes

...

Section 11 – Cultural Heritage

Consequential amendment as follows – Section 11.3.1 Buildings, Objects and Places of Heritage Significance

Explanation and Reasons

...

Any heritage orders applying within North Shore City are scheduled in Appendix 11D: Schedule of Heritage Orders, and in Section 14: Public Works and Network Utilities and Designations.

...

Section 16 – Residential

Amend Section 16.6.1.5A: Foreshore Yard, as follows

...

AND

In those areas where Appendix 21E specifies that a foreshore yard reference line is to be applied, for the foreshore yard area between Mean High Water Springs and the foreshore

yard reference line, 'building' means any structure and includes any decks, terraces, steps, fences, retaining walls and coastal protection measures.

Provided that:

For the purposes of the foreshore yard and excluding stormwater infrastructure, 'building' does not include underground network utilities where they are located entirely within road reserve that is fully formed (but not including any part of the road reserve that is not fully formed), provided they are Permitted or Controlled activities in Section 14 of the Plan.

Control Flexibility

...

Note:

The foreshore yard overlays any reserves or roads along the same section of coastline. Where the foreshore yard width is less than the width of a reserve or road at the same site, the adjoining property inland of the reserve has to comply with the rear or side yard requirements in order to separate development from the reserve or road. Where the foreshore yard is wider than a reserve or road, the yard extends past the reserve and on to the adjoining property. Where the foreshore yard overlays another yard, it replaces that yard. If a coastal boundary is not parallel to the coast and the foreshore yard only applies to part of the boundary, the rear or side yard applies to the remainder of the boundary.

Excluding stormwater infrastructure, the Foreshore Yard does not apply to underground network utilities where they are located within road reserve that is fully formed (but not including any part of the road reserve that is not fully formed), provided that they are Permitted or Controlled activities in Section 14 of the Plan. Areas of the road reserve where there is no formed carriageway, such as areas near the coast where the carriageway ceases but the road reserve continues to the coastal edge, are still subject to the Foreshore Yard. Network utilities are also required to comply with any siteworks controls in Section 9 of the Plan.

Explanation

The foreshore yard is required to protect the natural character of the coastal environment. The foreshore yard ensures that buildings are set back from the coastline, do not dominate the coastal landscape, adversely affect coastal ecological features, or are likely to contribute to coastal erosion. Assessment criteria have been set to ensure that where limited development is provided for within the foreshore yard, it does not affect the environmental qualities of the coast. Greater restriction is placed on certain beach areas and walkways because of the importance of retaining the natural character and landform of these areas, and the pressure they are under from coastal development. This approach reflects the emphasis of the RMA on protecting the coastal environment and generally held public opinions that beaches should be free of structures. Foreshore yard controls are not limited to those structures above ground but include underground structures because they may become exposed in the future due to erosion processes.

Where network utilities are located underground in the road reserve and under or immediately adjacent to the carriageway, the foreshore yard rule does not apply. This is because these areas are already heavily modified so there seems little point in applying the rule. In some areas of the foreshore yard however, there are areas in the road reserve (such as those immediately adjacent to the Coastal Marine Area) where the carriageway is unformed. In these areas the foreshore yard rule does apply as they are often clear of structures and possess some of the original natural character of the coastal environment.

...

Section 21 – Definitions

Amend definitions as follows

Activity emitting radio frequency fields

Means an activity or equipment which is capable of transmitting or emitting electromagnetic energy for communication purposes with frequencies in the range of 3 KHz to 300 GHz but excluding

- a) common residential based radiofrequency devices such as baby monitors, radio controlled toys, electronic door openers, cell phones, and mobile phones; and

b) hand held amateur radio transceivers operating on the amateur UHF and VHF bands.

Aerial

means the yagi or whip type device that is part of a radio communication facility or telecommunication facility that is used or intended for transmission or reception including the aerial mountings but not any supporting mast. No part of any aerial excluding the mountings shall be greater than 80mm diameter. This definition excludes any antenna.

Antenna

means any device including any dish or panel, excluding aerials, that receives or transmits radio communication or telecommunication signals. This includes the antenna's mountings (including any support structure or head arrangement) and radio frequency unit or similar device, but excludes any mast. The diameter or area of an antenna means:

- In relation to any panel antenna or any other type of antenna that has a length and a width, the area measured by calculating the largest surface area;
- In relation to any other antenna, the diameter measured by taking the cross-section of the widest part of the antenna;

The mountings of any antenna and any radio frequency equipment or similar device is not included in the measurement of area or diameter of each antenna, provided that the radiofrequency unit or similar device is smaller in area or diameter than the antenna itself. (Note: any antenna only need meet the area or diameter measurement, as appropriate to the type of antenna, and the measurement is of each individual antenna and is not a cumulative measurement.)

Electric (or Electricity) Line or Lines

Means an electric line as defined in the Electricity Regulations 1993.

Electric (or Electricity) Line or Lines

means all conductors (including fittings supporting, or connected to, those conductors), whether above or below ground, that are used, or intended to be used, in, or in connection with, the supply of electricity from the outgoing terminals of a generating station, a building, enclosure, or other structure to—

- (a) the incoming terminals of any other building, enclosure, or other structure; or
- (b) an electrical appliance, in any case where the electrical appliance is supplied with electricity other than from a terminal in a building, enclosure, or other structure.

High pressure gas line

Any gas line with the capacity to operate at a gauge pressure of more than 2000 kilopascals.

High voltage transmission line

Means an electric line of 110 kV or greater.

Maintenance

Means the protective care of a resource.

Mast

Means any pole, tower or similar structure designed to carry aerials or antenna to facilitate telecommunications, radio-communications and broadcasting and which is fixed to the ground (and not on a building or structure).

Minor utility structure

Means any above ground box like structure or cabinet associated with a network utility or that receives or transmits to or from any part of a network utility. It does not include electric or telecommunication lines, aerials, antennas, masts, transport equipment, street furniture, bus shelters, public letterboxes, postal holding boxes or telecommunication kiosks.

Network Utility

Means the same as Network Utility Operation.

Network Utility Operation/Operator

These have the same meaning as in section 166 of the RMA.

NZEC 34:2001

Means the New Zealand Electrical Code of Practice for Electrical Safe Distances 2001.

Postal Holding Boxes

Means any receptacle provided by a postal operator (as defined in the Postal Services Act 1998) for the purpose of storing postal articles temporarily, and which are not used by the public.

Public Letterbox

Has the same meaning as in S2 of the Postal Services Act 1998 - any receptacle that is provided by a postal operator for the purpose of receipt of postal articles for conveyance by that postal operator.

Radio Communication

Has the same meaning as in the Section 2(1) of the Telecommunications Act 1987 means any transmission, emission or reception of signs, signals, writing, images, sounds or intelligence of any nature by electromagnetic waves of frequencies between 9 kilohertz (kHz) and 3000 gigahertz (GHz), propagated in space without artificial guide.

Service/Connection Lines

Means any line that connects a network utility to the end user.

Telecommunication

Has the same meaning as in the Section 2(1) of the Telecommunications Act 1987

means the conveyance by electromagnetic means from one device to another of any sign, signal, impulse, writing, image, sound, instruction, information, or intelligence of any nature.

Telecommunication kiosk

Means any structure intended for public use to facilitate telecommunication and includes boxes or booths for telephone, video or internet services.

Telecommunication line

Means the same as 'line' in the Telecommunications Act 2001.

Transport Equipment

Street lights, traffic lights and traffic control structures, road signage, traffic and pedestrian monitoring cameras, parking control devices and real time passenger information displays.

Upgrading

~~Upgrading of existing network utilities means the maintenance, replacement or increase in carrying capacity utilising the existing or similar structure or structures, provided that the effect of the upgrade is of the same or similar character, intensity and scale to that which is being upgraded.~~

Network utilities

means those works undertaken by network utility operators as defined in Section 166 of the Act and for the purpose of the District Plan also includes:

- a) navigation and survey aids, beacons and meteorological activities
- b) services reticulation networks of local authorities
- c) all structures necessary for the operation of the network utility
- d) privately owned aerials and antennas; and
- e) the operation of the network utility.

Water supply reservoir

Means a reservoir of water intended for community supply and does not include private raintanks.

Section 32 Report

Proposed Plan Change 18 – Network Utilities and Designations

May 2006

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1 Introduction

The North Shore City District Plan was notified in 1994. Since that time a number of utilities issues have developed that need to be addressed. This Section 32 report explains why it has been resolved that the primary method of addressing these issues will be by amending the utilities provisions of the District Plan, and why they are proposed to be amended as attached.

The Report initially provides a background to the utilities discussion and provides a brief description of some of the sub-issues that have surfaced over time. A broad issue statement and consequent objective that arise from the sub-issues are developed, followed by an outline of the statutory framework that is required by the Resource Management Act 1991 (the Act). For the purposes of this Section 32 discussion, this framework requires a two-tiered approach. The first examines what method is the most appropriate to achieve the objective and concludes that an amendment to the District Plan is the approach that will be most efficient and effective. The second tier then discusses the efficiency and effectiveness of the proposed amendments (objectives, policies, rules) and why they are considered the most appropriate tools for achieving the purpose of the Act.

2 Background

The successful functioning of North Shore City depends on a complex web of utilities. These utilities include water and wastewater reticulation, electricity and gas transmission and distribution, and telecommunications facilities. Historically, these services have been provided either by Council or state owned companies.

The trend over the last two decades has been to fragment the provision of some of these utilities, particularly in the retail sector. The trend has been most obvious in the area of telecommunications, where service provision has not only been fragmented in the retail sector (as shown by the numbers of internet providers that use Telecom's copper network, and the recently announced central government unbundling proposals) but also in the provision of infrastructure. Companies such as TelstraClear and Vector have provided alternatives to Telecom's fibre optic networks, and operators such as Woosh are building wireless networks to provide internet and voice capable services that challenge Telecom's dominant market position. This fragmentation has been accentuated by improvements in technology that have enabled the creation of wireless internet and the exponential growth in mobile phone use, but also by regulation and the break up of state owned monopoly companies.

These trends have increased both the range of utilities and their frequency, and have become particularly evident since the North Shore City Proposed District Plan was notified in 1994. It seems fair to say that the District Plan did not anticipate the changes and the level of growth in this sector and does not deal with some of the new technology (particularly in the telecommunications area) as well as it could do.

To provide their services, most utilities need access to every household and business. To avoid the need to navigate through many different private properties utilities are generally located within the road reserve. Statutes such as the Electricity Act, the Gas Act and the Telecommunications Act provide the statutory right for utilities to locate within the road reserve, subject to the Road Controlling Authority's right to impose 'reasonable conditions' on that access. While this makes the widespread provision of utilities possible, it also concentrates the majority of the environmental effects of the increasing range and frequency of utilities in this area. Some of the issues identified stem from the need to address the increasing potential for adverse environmental effects in the area.

2.1 Utilities concerns

The following investigations have been carried out to identify what the utilities issues facing North Shore City:

- Consultation with the major utility companies to determine any areas of concern with the provision of utilities.

- Consultation with Community Boards to find out what issues are troubling from the community perspective.
- Research into the statutory framework and relevant literature that deals with utilities, the technological and market trends within the industry, and approaches taken by other territorial authorities.
- Consultation with industry advisory groups such as the National Radiation Laboratory and the Auckland Utility Operators Group.
- Consultation with Council officers to determine what desired outcomes are not currently being achieved – in some cases administration of rules in the District Plan have not always had optimum environmental outcomes.
- Examination of the rules in the District Plan to determine why some of them have not had optimum environmental outcomes.

These investigations have uncovered the following issues confronting the provision of utilities in North Shore City:

- The size and increasing number of utility cabinets that are located in the road reserve.
- There is a concern that radio frequency radiation and electro magnetic fields are detrimental to public health and safety.
- Large antennas (eg antennas receiving satellite television from other countries) are being erected on private land and the effects of these are not being adequately mitigated.
- There is a proliferation of smaller antennas (eg Sky dishes) that are having visual impacts when located on buildings containing intensive residential housing.
- For certain utilities there is a perception that in some areas the environmental effects of the activity do not warrant the bureaucracy required to obtain consent for that activity, for example telecommunication cellsites, utilities in the foreshore yard and coastal conservation area, maintenance of underground utilities and underground utilities in Structure Plan areas. In some areas the bureaucracy has obstructed the provision of utilities to the extent that the services are not provided.
- The presence of high voltage transmission lines can be detrimental to new subdivision and development and trees.
- There is strong pressure from the community to underground electric and telecommunication lines.
- As owner and administrator of reserve land, Council is under increasing pressure to allow the location of utilities that may not be beneficial or appropriate to these areas.
- The use and location of stormwater ponds are not always integrated with current objectives of stormwater management.

2.2 Issue

These concerns can be summarised in the following generic issue;

“Physical utility structures have a significant potential to cause adverse environmental effects on North Shore City”

2.3 Objective

To resolve this issue, the following objective is appropriate;

“A city where adverse environmental effects of utility structures are avoided remedied or mitigated, whilst maintaining a network of utilities that meet the needs of the community”.

3 What is the most appropriate method to achieve the objective?

There are a range of methods that may best achieve the purpose of the Act, and the efficiency and effectiveness of each is examined briefly below. The methods include;

- Keep the status quo
- Improve processes and powers of Road Controlling Authority
- Improve relationships with network utility operators
- Amend the District Plan

3.1 Keep the status quo

This is a low cost option in terms of saving the costs associated with pursuing a District Plan change. As the issues in the utilities sector are not considered an issue of 'significance' as defined in the Local Government Act 2002, these issues are not considered top priority and the current situation could be sustained. Furthermore, there is the possibility that national environmental standards may be introduced that could affect some of the sub-issues that have been identified. Retaining the status quo would conserve resources in respect of those sub-issues which may be affected by the standards, should they eventuate.

While the utilities issues are not all considered 'significant' they are experienced on a city wide basis and do have adverse effects on the amenity of the city. If other, more significant, projects were considered to be a priority, keeping the status quo would be an attractive option. However, many of the sub-issues have been present for some time but their resolution has been precluded by the need to complete more important projects. Now that resources have become available the 'do nothing' option is less acceptable. Deficiencies in the District Plan have been identified as a primary reason for many of the issues identified, and doing nothing will not effectively address those issues.

3.2 Improve processes and powers of the Road Controlling Authority

North Shore City Council is the Road Controlling Authority (RCA) for all roads in its boundaries (excluding those administered by Transit). The road is a corridor for transport purposes but it also serves as a utility corridor because it is an efficient place for most utilities to locate. As a large percentage of utilities locate in the road reserve, one possible method to improve environmental outcomes is to use the tools available to Council as RCA.

The presumption with respect to most utilities is that network utility operators have the right to access the road reserve and locate utility infrastructure, free of charge. These rights stem from statutes such as the Electricity Act, the Gas Act and the Telecommunications Act. Council's capacity to control the structures that are located within its roads are limited to two avenues - the right to impose 'reasonable conditions' on the access (although there is no right to refuse access) and the right to regulate environmental effects under the Act.

In its capacity as RCA Council's imposition of reasonable conditions should be related to the protection of the road reserve as an asset and the primary function of the road as a transport resource. This might include reinstating the road surface or avoiding damage to the assets of other utility operators. Considerations in respect of environmental effects such as amenity are not designed to be addressed in Council's capacity as RCA (although they can have the consequential effect of addressing amenity), but are to be considered under the provisions of the Act. These operational and amenity considerations are interrelated but the focus of Council as RCA should be on the former. This means that improving processes as RCA will potentially touch on the majority of utilities (excepting those outside the road reserve), but it will not provide a tool to effectively address many of the amenity issues that have been identified. For example, an important sub-issue concerns the adverse environmental effects of antennas, aerials and masts, and this will not be dealt with if this method is relied upon.

As an example, Council has recently implemented an online Road Opening Notice (RON) system which has made applications for RONs easier and has enabled Council to better monitor the impact of utility work in the road reserve. Council used to have problems with determining responsibility for poor reinstatement of the road, but the online system now

enables the utility operator responsible to be identified. This has saved Council money and improved the integrity of the road asset, but does not address the wider amenity issues that have been identified as part of this review.

Furthermore, utility operators in North Shore City have been known to ignore the RON system. This means that Council may not get a chance to assess the logistics of the utility in its role as RCA until after it has been installed, at which time it is a fait accompli. This has implications not only for operational matters but also for the amenity of the city. Strengthening the provisions of the District Plan supplements the RON system as well as providing more scope to deal with the environmental effects of utilities in the road reserve.

3.3 Educate and work with utility operators

This option may take the shape of a partnership approach - North Shore City has recently entered a Partnering Charter with Vector that highlights common goals and ways to work together. The Code of Practice for Working in the Road, signed between utility operators and Councils in the Auckland region, is another example of an effort to achieve a shared vision between Council and utility operators to promote environmental benefits whilst reducing the everyday costs of doing business. It may also take the shape of guidelines - Manukau City has recently completed design guidelines for wireless telecommunication infrastructure.

This option has some attraction as it can help each party understand the outcomes that the other is trying to achieve in the utilities sector. It is considered however that they are important complements to good rules, but do not replace them. The Code of Practice for Working in the Road addresses some amenity issues but not the full range of utilities issues that North Shore faces – it is more focused on the operational considerations of the road corridor rather than amenity considerations. The Vector Partnering Charter is in the process of being signed at present.

Such approaches rely on common understanding and goodwill between parties but they have little effect if the rules underpinning the relationship are not adequate. The utility sub-issues that have been identified in North Shore are primarily to do with rules that do not achieve the optimum environmental outcome. Education and working with utility operators is an essential tool and is currently being actively pursued, but do not replace a suitable regulatory framework. A District Plan change is therefore seen as the more effective method for addressing the sub-issues that have been identified.

3.4 Amend the District Plan

It is considered that amending the District Plan is the most efficient and effective method of resolving the issue. Many of the sub-issues that have been identified are a direct result of objectives, policies and rules in the District Plan that are not functioning adequately. Others however, need more than simple District Plan adjustment. For example, undergrounding electric and telecommunication lines can be influenced and encouraged by policies and rules in the District Plan, but to fully address the issue Council would have to fund the undergrounding of existing lines. This sub-issue would therefore not be fully addressed by a District Plan change, but it is a relatively efficient way of resolving part of the issue when compared with the huge cost of undergrounding lines.

A District Plan change would not be entirely effective across all the sub-issues therefore, but in terms of resolving the generic issue (see 2.2) that has been identified it is considered more efficient and effective than any of the other methods. Other methods that are already being utilised have been identified, and these will need to continue to be used in tandem with a District Plan change.

There are some costs of the approach, such as officer resource cost and budget costs for consultant's review of any proposed changes. As mentioned previously there is also the possibility that national environmental standards may be introduced that may affect some of the sub-issues that have been identified. The mooted standards deal with telecommunication structures (eg cabinet size, noise and vibration and radio frequency standards) and electricity transmission. At this stage however it is unclear if the standards will eventuate and if so, what

form they will take. The outcome is not considered certain enough to delay the proposed plan change, and any standard will not deal with all the sub-issues identified.

Conclusion

It is considered that a District Plan change is the most efficient and effective method to achieve resolution of the issue. It is noted that this is considered only the primary method however – other methods will continue to be used in addition to the Plan change. As described above, these other methods are already in use and it is considered that an appropriate Plan change will supplement these to better achieve the purpose of the Act.

4 Statutory Framework

The Council must ensure that prior to adopting an objective, policy, rule or other method in the District Plan, an assessment of matters outlined in Section 32 of the Act is carried out to ensure that the proposed provisions meet the requirements of the Act. This report must be publicly available from the date of notification. The relevant matters set out in Section 32 are reproduced below.

- (3) *An evaluation must examine –*
- (a) *the extent to which each objective is the most appropriate way to achieve the purpose of this Act; and*
 - (b) *whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives.*

And;

- (4) *For the purposes of the examinations referred to in subsections (3) and (3A), an evaluation must take into account –*
- (a) *the benefits and costs of policies, rules, or other methods; and*
 - (b) *the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods.*

As set out in 3(a), the analysis must examine whether each objective is the most appropriate way to achieve the purpose of this Act. The purpose of the Act is set out in S5;

- (1) *The purpose of this Act is to promote the sustainable management of natural and physical resources.*
- (2) *In this Act, “sustainable management” means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while –*
- (a) *Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
 - (b) *Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
 - (c) *Avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

5 Does the proposed District Plan change achieve the purpose of the Act?

It has been explained that a District Plan change is necessary to supplement other methods that are already being used to administer the provision of utilities. This necessitates a discussion as to whether the objectives, policies, rules and/or other methods (including those that have been discussed above) are the most appropriate to achieve the purpose of the Act.

5.1 Proposed objectives

S 32 (3) (a) requires an examination of the extent to which each objective is the most appropriate way to achieve the purpose of the Act. Although the current objectives in the District Plan relating to utilities go some way toward fulfilling the purpose of the Act, they do

not adequately reflect the importance of some aspects of the effects of utilities. The generic objective identified above in 2.3, namely *“A city where adverse environmental effects of utility structures on North Shore City are avoided remedied or mitigated, whilst maintaining a network of utilities that meet the needs of the community”* is considered to meet the purpose of the Act as it specifically emphasises that utilities need to be provided to meet the needs of the community, but that the adverse effects of those utilities need to be addressed. For the proposed Plan change, it is proposed to split the generic objective into three separate objectives that represent the utilities issues in more detail. The objectives are discussed below.

“The construction, operation and maintenance of an efficient and effective network of utilities that meets the needs of the community”.

Utilities are the infrastructural elements of North Shore City that underpin the ability of the city to function as a modern metropolis. They provide energy (electricity and gas networks), provide communication links (telecommunication systems), enhance sanitation and hygiene (stormwater and wastewater networks) and provide necessary ingredients for survival (the potable water network). The road network is also enabled through the designation powers provided to Council. The provision of utilities is crucial to economic development and standard of living. This objective recognises that utilities are not luxuries, but are essential to North Shore and its future. Council's role in this objective is twofold. It is responsible for the provision of some utilities (wastewater, stormwater, drinking water and the road network), but it also needs to ensure that in its regulatory role it does not create unnecessary barriers to a network of utilities.

“To avoid, remedy or mitigate any adverse environmental effects of utilities, including effects on amenity, landscape, streetscape and heritage values, arising from the construction, operation, and maintenance of utilities”.

While utilities are an essential part of the City's infrastructure, they do have effects that are undesirable. The construction, operation and maintenance of utilities can have adverse impacts on the streetscape, landscape and residential amenity of the city through visual and other effects such as noise, odour and vibration. Some of the sub-issues that have been identified are particularly concerned with the visual impact of utilities in North Shore City. Impacts on the environment also arise through sediment and runoff during construction and leaking stormwater and wastewater pipes. Council's role in promoting this objective is to ensure that the adverse effects of utilities are mitigated as far as possible, using both its regulatory role and other methods that have been outlined previously.

“An environment where the health and safety of the community is not adversely affected by the construction, operation and maintenance of utilities”.

The environmental effects of utilities include potential effects on health and safety of the community. For example, in some areas of the community there is substantial concern that radio frequency and electro magnetic fields pose risks to health. Whilst most scientific studies have concluded that the risk is relatively low, the concern within the community is such that it is considered prudent to recognise these risks to health and safety with a separate objective. The objective will be supported by rules that will effectively address the majority of concerns within the community.

5.2 Are the proposed policies and rules the most appropriate for meeting the objectives?

The evaluation above demonstrates that the objectives are an appropriate way to achieve the purpose of the Act. S 32 (3)(b) and S32 (4) require an examination as to the efficiency and effectiveness of the proposed policies and rules (or other methods) in achieving the objectives, including an assessment of the benefits and costs of the proposals. As the proposed policies and rules deal with a number of different sub-issues, the policies and rules relating to each sub-issue will be discussed individually. This will provide an analysis of each sub-issue that will also provide an indication of the efficiency and effectiveness of the proposed plan change overall.

5.2.1 Above ground cabinets in the road reserve

The District Plan allows, as permitted activities, above ground cabinets in the road reserve with a ground coverage not exceeding 10m² and 1.8m high. Currently, the Road Maintenance team (through the RON system) supervises the construction of approximately 40-50 cabinets in North Shore roads each year. As the numbers of different utility operators are expected to increase, it is also expected that the numbers of cabinets will rise and their adverse environmental effects will become more evident. As permitted activities the location of cabinets are monitored by the Road Maintenance team. As discussed previously, the team can only consider operational matters to do with the road, and not environmental effects. However the experience of the team has been that they are forced to try to consider these matters, as they are, at present, the only 'check' on the utility operator's ability to locate cabinets in the road.

The proposed changes insert policies regarding mitigating adverse effects on the environment and undergrounding cabinets, insert new rules reducing the permitted sizes for cabinets so that resource consents are required for most of them, whilst also adding more development controls (for example, only one cabinet that as a controlled activity can be located every 50m) and assessment criteria. The change also takes account of the zone in which the cabinet is located. For example, cabinets will be treated more permissively in the industrially focused business zones and in the rural zones than in residential and recreation zones, as the amenity of the areas are different.

These changes will provide Council with the opportunity to consider the purpose of the Act and reduce the impact of cabinets on the amenity of the surrounding area by ensuring that they are placed in the most appropriate location.

Benefits	Costs	Risk	Efficiency & Effectiveness
<ul style="list-style-type: none"> • Should achieve better environmental outcomes as professionally trained planners dealing with applications • Engineers continue to deal with operational matters • Consent required only in areas where preservation of amenity is of most importance • Helps address the increasing concerns in North Shore city about streetscape and urban design 	<ul style="list-style-type: none"> • Creates more 'hoops' for utility operators • Cabinets are necessary infrastructure and most have a statutory right to locate in the road anyway – simply requiring utility operators to incur more compliance costs 	<ul style="list-style-type: none"> • Although it is not clear that the numbers of cabinets in the road will increase, it is expected (eg Telecom are expecting to rely less on central exchanges and more on roadside cabinets) so there is a risk in not acting • There is a risk that the rules may not achieve better outcomes, as it is probable that cabinets that have a statutory right to locate in the road will rarely be refused permission on the grounds of sustainable management. Refusal is not always considered necessary for better environmental outcomes however as the rules will enable most of the problematic aspects of the applications to be better addressed • There is a possibility that national environmental standards may affect any proposed rules 	<ul style="list-style-type: none"> • Effective provided there is a 'streamlined' system to ensure that planners, engineers and utility operators work together to achieve prompt and best results • Efficient as resource consent required only in areas where amenity is an important consideration, and will supplement the RON system

5.2.2 Aerials, antennas and masts

In the context of the proposed Plan change, aerials are such structures as the normal lattice shaped television aerials and the Sky UHF (ultra high frequency) aerials. Antennas are structures such as Sky dishes and those of similar shapes, and the commercial panel antennas that are attached to streetlights and masts in some locations in the city. There are a number of concerns that have been raised with these structures. These are discussed below.

Private aerials and antennas

Currently, the bulk and location of private aerials and antennas (eg Sky satellite dishes) and aerials are not specifically regulated in the District Plan. To provide some degree of regulation the Council has the choice of dealing with them as non complying activities or instead as accessory buildings. The latter strategy has been followed as to require a non complying consent for all aerials and antennas would call the integrity of the Plan into question. In recent times large satellite dishes have been installed on private properties around North Shore City. Where these do not infringe bulk and location issues Council has been allowing these dishes, but it is considered that where they are not sensitively located they have undue effects on the amenity of the immediate area.

Antennas and aerials on intensive residential buildings

Concern has been expressed about the proliferation of Sky dishes and aerials on multi unit residential buildings.

Commercial aerials, antennas and masts

Rules dealing with these structures in the current District Plan are distinguished by zone - in Business zones the rules are more lenient than in other zones. Utility operators have often been frustrated in their attempts to roll out cellsite infrastructure outside of the Business zones as many of the activities will be non complying. This is problematic as much of North Shore is residentially zoned. The cell phone market is continuing to grow and provide increased competition to fixed landlines, and wireless internet is expected to become a more important sector of the internet market in the medium term (although this sector may be less important than previously thought now the government is regulating to unbundle the copper network). The structures are of real benefit to the City and it is considered inequitable to require non complying applications for structures that have such a positive impact yet often have a minimal environmental effect.

To take account of these issues, the plan change proposes policies, rules and assessment criteria that will apply to all aerials, antennas and masts.

- Effects based rules are proposed that take into account the size, number, height and location of aerials and antennas to determine whether resource consent is required. Small Sky dishes are permitted, but as the dishes get bigger, resource consent may be required depending on their location. New assessment criteria are proposed to ensure that antennas are suitably located and screened where possible.
- The rules with respect to cellsites are proposed to be more lenient in certain zones. Non complying consents will not be required except in some situations in Residential 3 and Recreation zones. It is considered that this will be more consistent with the environmental effects of cellsites. The rules concerning antennas in Business zones will be similar to those currently in the Plan.
- A new policy will be introduced encouraging the location of commercial antennas on buildings and streetlights, and the structure of the rules will also encourage the location of antennas onto buildings and streetlights rather than masts. Buildings have more bulk in which to mitigate the visual effects of an antenna, and it is considered better to place antennas on an existing streetlight rather than erect a new mast.
- To combat the problems with the proliferation of aerials and antennas on multi unit residential development, a rule is proposed that requires new residential development to connect each residential unit in the building to a central aerial and antenna. To accommodate this each residential unit will have to be wired up to the antenna and aerial at the time of construction.

Benefits	Costs	Risk	Efficiency & Effectiveness
<ul style="list-style-type: none"> • The rules relating to activities will be effects based and will be more consistent with their environmental effects • In new buildings the potential for antennas to be attached to the façade of every residential unit is negated • Encouraging antennas on buildings and streetlights helps to reduce the need for more utility structures • Utility companies will be able to roll out their networks more easily • The environmental effects of private antennas and aerials will be better addressed, with consent required for those that have greater effects 	<ul style="list-style-type: none"> • Creates increased compliance costs in some areas • Cost of processing cellsite applications if there is a community backlash against the more lenient rules • Costs of the plan change process if there are drawn out appeals concerning these issues 	<ul style="list-style-type: none"> • There is potential for community backlash against more lenient cellsite rules • There is potential for community backlash against regulation of the numbers, height location and size of private aerials and antennas • The rule regarding proliferation of antennas only applies to new buildings so does not address the problem in existing residential buildings • There is a possibility that national environmental standards may affect any proposed rules • There is a risk that the rules may be overly complex 	<ul style="list-style-type: none"> • Efficient and effective method of addressing the issues as they are created predominantly by deficiencies in the current Plan

5.2.3 Radiofrequency fields

The District Plan has provisions that regulate the emission of radiofrequency radiation (RF) from commercial cell sites. It does not currently regulate private emissions of radiofrequency fields. There is potential for private 'radio hams' to emit levels of radiofrequency that are many times higher than a standard commercial cell site antenna. The proposed changes introduce the capacity for Council to measure private radiofrequency emissions to ensure they are in line with the New Zealand Standard *NZS 2772.1: 1999 Part 1 – Maximum Exposure Levels – 3kHz to 300GHz*.

There is a lot of community concern that public health has the potential to be harmed by RF. The proposed changes require all activities that emit radiofrequency fields to be subject to random, independent monitoring to ensure they comply with the New Zealand Standard. Such monitoring would be completed at the cost of the owner.

Benefits	Costs	Risk	Efficiency & Effectiveness
<ul style="list-style-type: none"> • Private 'radio hams' can emit high levels of RF and it is important to have the ability to ensure they comply with the New Zealand Standard • Monitoring commercial cell sites will provide a 'check' and will also help to ensure that their emissions are kept below the relevant standard • Helps to alleviate public concern about these issues • Costs to operators limited as Council may only monitor up to 10% of commercial cell sites in a given year 	<ul style="list-style-type: none"> • Could be regard as overly vexatious to monitor private emissions of RF • Could be significant cost to utility operators depending on how often monitoring undertaken • Vodafone has a private independent monitoring programme with the National Radiation Laboratory so may be paying twice for monitoring 	<ul style="list-style-type: none"> • Likely that utility operators and private 'radio hams' will perceive the ability to randomly monitor RF at their cost to be unfair and unnecessary. For example, commercial cellsites are usually well inside the limits imposed by the New Zealand Standard • May be difficult to monitor private emissions of RF 	<ul style="list-style-type: none"> • Effective way of subjecting all utility operators to monitoring programmes. Although Vodafone has an arrangement to monitor their cellsites, other operators are not parties to this arrangement so these rules ensure their emissions are measured • Efficient way of measuring emissions rather than setting up a separate monitoring programme

5.2.4 Undergrounding of above ground lines

Council generally requires new electric and telecommunication lines to be laid below ground and only in special circumstances are new above ground lines permitted. The existing policy requiring undergrounding of new lines is repeated, and it is proposed to make the rules that deal with this area even more stringent. New above ground lines supported by poles will change from a restricted discretionary activity to discretionary. In all zones except for rural, new above ground service/connection lines where the distribution service is also above ground are no longer permitted but require a restricted discretionary activity consent.

Benefits	Costs	Risk	Efficiency & Effectiveness
<ul style="list-style-type: none"> • Encourages new lines to be undergrounded except in special circumstances • Minimises new visual and safety effects of above ground lines • Prevents more above ground 'existing uses' being created that will have effects in the future • Catches up with current practice for service/connection lines where in new infill subdivision, existing lines are undergrounded where possible 	<p>Increased service/connection line regulation will place more compliance and/or development costs on private homeowners</p>	<ul style="list-style-type: none"> • Does not address existing lines that are above ground, so does not address the whole problem • Rural areas are still permitted activities for above ground service connection lines. If these areas intensify in the future these above ground lines will be more of a problem 	<ul style="list-style-type: none"> • Alternative method is to pay for undergrounding of existing lines but this would be a great cost to Council. Increased regulation to encourage undergrounding of new lines prevents the creation of new above ground lines in an efficient manner. • Is not an effective solution in the context of existing above ground lines, but it is for new electric and telecommunication lines

5.2.5 Upgrading and Maintenance

In the current rules 'upgrading' is a permitted activity which allows utility operators to maintain or increase the capacity of their assets provided the effect of doing so is the same or similar in character, intensity and scale to those being upgraded. In some cases this rule works well but on occasion it results in a utility company avoiding the consent process when, to mitigate environmental effects it would be preferable if a new consent were sought. It is proposed to remove this definition and replace with a definition of 'maintenance' which is more restrictive and will require 'upgrades' of equipment to obtain a resource consent where relevant.

When utility operators replace poles and lines in the road reserve they often rely on the 'upgrading' definition and replace poles without considering where the best location for the pole might be. The road and the area around poles change over time and the poles can create traffic hazards, obstacles for pedestrians and obstruct views. The Road Maintenance Group has experienced difficulties in getting replacement poles put in the optimum places. In some cases the RON system has been ignored by utility operators and even when the correct procedure is followed the problems getting the poles in the best location continue. To assist in resolving the issue a clause in the proposed change specifically details the situations in which replacement of poles and lines will be permitted and when they will require a resource consent.

These proposed changes will create more resource cost for utility operators but will help to create certainty about what can and cannot be done as permitted activities.

Benefits	Costs	Risk	Efficiency & Effectiveness
<ul style="list-style-type: none"> • Will require utility operators to consider optimum pole location, rather than simply replacing in exactly the same place • Resource consents required for changes to lines and conductors which is consistent with Council policy on undergrounding • The 'abuse' of the upgrading provision will cease • Greater certainty in outcome 	<ul style="list-style-type: none"> • Greater compliance costs • The tool is relatively blunt - where a utility operator is outside the narrow parameters of the permitted activity status a discretionary resource consent will be required • The flexibility of the upgrading provision will be lost 	<p>Provision may infringe the existing use rights of existing poles which may make rule ineffective</p>	<ul style="list-style-type: none"> • Method will supplement the RON system and the Code of Practice for Working in the Road to provide more effective regulation of environmental effects • May create more paperwork but it is an efficient way of achieving better environmental outcomes

5.2.6 Electricity issues

(a) Separation distances

IN 2001 the NZ Electrical Code of Practice for Electrical Safe Distances was introduced. The Code specifies safe distances to enable utility companies to have adequate access to lines and towers and to keep households free of electrical danger. It has effect as a regulation and although so far no party has attempted to enforce it, compliance with the Code is mandatory.

The Plan currently has assessment criteria in the Subdivision Chapter discussing separation distances between building platforms and high voltage transmission lines, but does not have any rules concerning development around high voltage transmission lines. The location of residential units near transmission lines reduces amenity and contributes to poor quality housing. It is considered a positive step to reduce this phenomenon and/or encourage good design of subdivisions in proximity to lines. To ensure compliance with the Code and for health and safety reasons, it is proposed to require subdivision for all sites that occupy an area within 25m each side of the centre of a high voltage transmission line to obtain consent as a restricted discretionary activity. New policies and assessment criteria are also proposed.

(b) Tree trimming

During consultation with utility operators it was requested by Transpower that North Shore City allow the trimming of trees as a permitted activity when required in an emergency. This would extend the scope of utility operator’s rights to cut trees as a permitted activity (the emergency provisions are currently limited to where it is required to maintain or restore power, or safeguard life or property). It is not considered that enlarging Transpower’s ability to trim trees without consent will contribute to positive environmental outcomes. Aside from the fundamental need to ensure a secure energy supply, Council and Transpower have different concerns – Council’s is the aesthetic values and health of the tree and Transpower’s is to keep them clear of the power lines. A preferred method is for Council to negotiate with Transpower for a blanket tree trimming consent, which enables Council to monitor the work and ensure best environmental outcomes over time.

	Benefits	Costs	Risk	Efficiency & Effectiveness
(a)	<ul style="list-style-type: none"> Ensures subdivision takes account of location of high voltage transmission lines Will preserve access for utility companies, take account of Electrical Code of Practice and preserve amenity 	Increased subdivision costs around these lines	Doesn’t address wider issue of new development around high voltage transmission lines in areas that are already subdivided	<ul style="list-style-type: none"> Effective as alerts subdividers of what they need to take account of when developing next to high voltage transmission lines Most efficient method of achieving the objective
(b)	<ul style="list-style-type: none"> Negotiating a blanket consent for tree trimming provides Council with the ability to monitor the trimming and ensure best outcomes, including the assessment of cumulative effects of tree trimming across the city Transpower can still trim in an emergency 	Significant time and cost in negotiating a blanket tree trimming consent		Negotiating a blanket consent is a effective method as it preserves Council’s regulatory ability to monitor and enforce best tree trimming outcomes, whilst preserving Transpower’s right to trim in a genuine emergency

5.2.7 Reserves and Utilities

One sub-issue that has been identified is that reserves are attractive places for utility operators to locate their assets. In some situations this is entirely appropriate – many recreation buildings need power and a phone, and in some cases open areas of land are suitable locations for stormwater management devices. In many situations however, locating utilities on reserve land is not consistent with the purpose of the zone or intended use of the land. Although Council is the landowner or administrator and can ‘veto’ applications, it is not always well equipped to deal with the large number of applications that are made.

The activity status of many utilities in Recreation zones is non complying or discretionary. However, there are currently no specific policies or assessment criteria with which to assess an application. The proposed change introduces a policy and some assessment criteria that specifically deal with utilities in reserves. It is considered that this will provide clearer guidance as to when utilities in reserves will be acceptable both to decision makers and those wanting to locate their utilities in reserves.

Benefits	Costs	Risk	Efficiency & Effectiveness
<ul style="list-style-type: none"> Provides guidance to decision makers and utility operators Will assist in keeping reserves free from unwanted utility activities 	Reserves often seen by utility operators as efficient location for utilities – compliance costs and effects elsewhere may increase	Low risk associated with method	<ul style="list-style-type: none"> Effective when used in conjunction with landowner approval Efficient method of reinforcing Council stewardship of reserve land

5.2.8 Water infrastructure

There are several issues concerning water infrastructure that have been examined as part of this Plan change.

(a) Pipe bridges and stormwater ponds

Currently the Plan allows pipe bridges and stormwater ponds as controlled activities in most zones. It is considered that this status is not satisfactory as it does not provide Council with the right to refuse the bridges and ponds.

To provide more ability to control their location in sensitive areas it is proposed to introduce a restricted discretionary activity status for pipe bridges that are not attached to an existing bridge or structure. As the proposed rule is directly about controlling environmental effects, it is the most appropriate method to resolve the issue.

Since the introduction of the District Plan, methods of controlling the quantity and quality of stormwater runoff have changed. Stormwater ponds are no longer considered a primary tool. It is considered that this activity status should be changed but it will not be completed as part of this plan change. The concurrent 'Integrated Stormwater Planning Project' is revising how stormwater should be approached in North Shore City, and it is appropriate that this project should address the topic of stormwater ponds.

(b) Utilities in the Foreshore Yard and Coastal Conservation Area

The Foreshore Yard (FY) and Coastal Conservation Area (CCA) require careful management as they are sensitive areas of the coastline. Utilities in these areas generally require a controlled activity consent (CCA) or restricted discretionary consent (foreshore yard). It is considered that in some areas, these locations are not as sensitive as is suggested by these activity status classifications.

Underground utilities that are located in the road reserve have only temporary visual effects and are located in areas that are already modified, so even when they are in the FY, they are of minimal effect. It is proposed that these should be permitted activities. The exception to this suggestion is where the road is unformed – which is common in areas adjacent to the coast – and in these areas the requirement for a restricted discretionary activity consent should remain.

Underground utilities in the CCA also have only temporary visual effects. It is proposed that underground utilities in this area should be permitted activities. It is also proposed that any above ground utility that lies within the road reserve and adjacent to formed road (again, this does not include areas of unformed road) shall not be required to comply with this rule. The most sensitive areas are covered by the FY rule, and under the proposed changes only relatively small cabinets in the road reserve will be permitted as of right, so any additional effects will be minimal.

This proposed change excludes stormwater infrastructure from these rules. This is because Plan Change 17 – Addressing the Effects of Infill Housing on the Character of Residential Areas – has proposed a rule requiring restricted activity consent for all stormwater infrastructure in the Coastal Conservation Area and the Foreshore Yard. This proposal is to address the issue of stormwater drains and outlets having an adverse visual effect on the natural character of the coastal area.

(c) Depth of excavation rule

Currently, for underground utilities lying deeper than 1.5 m, the Plan requires a limited discretionary activity consent for excavation for maintenance purposes. The Health and Safety Act applies to excavations over 1.5m, and the effects of maintaining underground utilities are minimal – as the ground has already been disturbed – so it is proposed to allow excavation for maintenance of underground utilities up to 3m deep as a permitted activity.

	Benefits	Costs	Risk	Efficiency & Effectiveness
(a)	Better visual outcomes and less risk of failure as can refuse pipe bridges that are not appropriate to their location	Higher compliance costs	None	Method directly addresses the environmental issue, and efficient way of doing so
(b)	<ul style="list-style-type: none"> Less unnecessary bureaucracy In environmentally sensitive areas, resource consent is still required Removing controlled activity consent in CCA for above ground utilities in road reserve is of minimal effect as only small structures are permitted under proposed rules 		<ul style="list-style-type: none"> There is some risk as foreshore yard is relatively small in some areas Only a small risk as few utilities locate in coastal area as it is the 'end of the line' 	Method directly addresses the environmental issue, and efficient way of doing so
(c)	Reduces unnecessary bureaucracy		Risk small as excavation deeper than 1.5m covered by other legislation	Method directly addresses the environmental issue, and efficient way of doing so

5.2.9 Utilities in Structure Plan areas

In most areas of North Shore City underground utilities are generally permitted activities. One of the exceptions is in Structure Plan zones, where they are discretionary activities. Development in Structure Plan zones is based on the need to take account of urban expansion issues, including integrated planning and the protection of environmental, landscape and cultural values. Requiring underground activities to obtain a discretionary resource consent ensures that Structure Plan objectives are taken into account when the underground utilities are designed.

This is important where the underground utility in question has the capacity to shape how an area develops. For example, the location of water and sewer mains can affect where and how development takes place. Not all underground utilities have this characteristic. Only the bulk water services and gas have the potential to guide development in a real way – telecommunication and electricity services are installed as a response to development. The proposed changes allow underground telecommunication and electricity lines as permitted activities in Structure Plan zones.

Benefits	Costs	Risk	Efficiency & Effectiveness
<ul style="list-style-type: none"> Reduces unnecessary bureaucracy Reduces compliance costs for utility operators 		Low risk	<ul style="list-style-type: none"> Efficient way to achieve fairer and more balanced regulatory framework

5.2.10 Underlying zoning

When roads are vested as 'road' under the Local Government Act they are zoned road and shown as such in the District Plan maps. As a result, they lose the zoning that applied to the subject land. This poses two issues in the District Plan.

(a) Currently, the activity status of utilities in the road reserve is determined on the basis of underlying zoning. The underlying zoning is deemed to be the zoning of the immediately adjacent land, extending to the midpoint of the road. Currently there is no specific rule that deals with the zoning of other activities in the road reserve. These are dealt with as non complying activities as this land has no zoning, although practically, some activities are treated as if they have the zoning of the adjacent land. For example, in some zones

verandahs that extend into the road reserve are required by Council and these are generally treated as being part of the building and having the adjacent zoning. The proposed changes extend the application of underlying zoning from network utilities to all activities in the road reserve.

(b) When roads are stopped and the designation is uplifted, the Plan does not provide for how the area should be zoned. This requires Council to initiate a Plan change to zone the area of land every time a road is stopped. This creates unnecessary time delays and costs for both the Council and relevant parties. To resolve this, a rule is proposed so that when the designation is uplifted, the zoning of the subject land will default to the underlying zoning that applied when the designation was in force. This precludes Council from having to complete a Plan change every time a road is stopped. In some circumstances the underlying zoning may not be appropriate and a Plan change will have to be initiated.

	Benefits	Costs	Risk	Efficiency & Effectiveness
(a)	<ul style="list-style-type: none"> Ensures that all activities in the road reserve have a zoning and do not technically default to non complying activities As road controlling authority, Council has the power to refuse activities it does not want in the road reserve, regardless of the provisions of the Plan 	May encourage applications for activities that are not appropriate in the road reserve	Possible impact on a tree in the road reserve where road is stopped and the tree loses its protection that it had under the rules in respect of trees located in the road reserve	<ul style="list-style-type: none"> Effective when used in conjunction with landowner approval Efficient way of ensuring that the characteristics of the area are taken into account for activities in the road reserve, and that time delays and costs are avoided
(b)	Simplifies procedure and saves costs when road is stopped	Plan change may still be required when underlying zoning is not appropriate		Efficient and effective way of achieving administrative simplicity

6 Conclusion

This report analyses the proposed Plan change 18 as required by S 32 of the Act. The benefits and costs of each sub-issue have been examined and it is demonstrated that the proposed change is the most efficient and effective method of achieving the purpose of the Act and of addressing the issues identified.

To supplement these proposed policies and rules, the alternative methods that have been identified will continue to be used in tandem with the proposed changes.