

Section 10 **Public Works And Services**

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10.1 General Features

10.1.1 Sewage Disposal

The settlements of Dargaville, Kaiwaka, Maungaturoto, and Te Kopuru are served by reticulated sewerage systems. They operate on the basis of wastewater being fed by gravity sewers to a series of pump stations and pumped to oxidation ponds for treatment. The oxidation ponds are situated on the edges of the respective settlements. Treated effluent from the ponds is discharged onto adjacent land or waterways. Conditions of the discharges are controlled under discharge permits issued by the Northland Regional Council. The sewerage systems are maintained by the Council with the costs being met by special rating charges over the properties concerned.

Part of the Glinks Gully settlement is also served by a reticulated sewerage system. It operates on the basis of septic tank wastes from some 20 properties being collected by gravity sewer and pumped to a common effluent field for treatment. A special rating area has been established over the properties concerned to pay for ongoing maintenance of the system.

The other settlements and most rural properties rely on individual septic tank systems. Septage from these systems is periodically collected by septic tank cleaning operators and disposed of at Council oxidation ponds and private trench facilities. Some industries, eg the Northland Co-operative Dairy Co Ltd's milk processing plant at Maungaturoto, along with community facilities like schools, have special waste treatment and disposal systems. These vary from large septic tank/effluent field systems to more sophisticated mechanical/land disposal systems. Wastes from these facilities are treated according to specified standards and discharged to ground or into water under discharge permits from the Regional Council.

10.1.2 Water Supplies

The settlements of Dargaville, Baylys Beach, Glinks Gully, Maungaturoto and Ruawai and a small part of Mangawhai are served with public water supplies. Dargaville obtains its water from a stream in the upper Kaihu Valley from where it is gravitated to the town's treatment plant and storage reservoirs in Hokianga Rd. During periods of high water demand a booster pump is used to increase the flow.

The Baylys Beach settlement and residences along Baylys Coast Rd are served by a special line from the Dargaville Borough water supply system. The water is treated and for domestic use only. The water supplies serving Glinks Gully, Maungaturoto and Ruawai come from springs, streams and bores respectively, and have varying forms of treatment. The Glinks Gully system has recently been upgraded with new treatment units installed.

In addition to the above mentioned settlements several rural areas are served by small water supply schemes. The areas concerned include:-

- Awakino Point - treated water from Dargaville supply.
- Kaihu Valley - untreated water from main line to Dargaville.
- Omana - treated water from stream.
- Rehutai - untreated water from streams.
- Turiwiri - treated water from Dargaville supply.
- Kaiwaka - untreated water from stream.

10.1.3 Refuse Collection and Disposal

The Council provides a range of refuse collection and disposal services throughout the district. It provides a regular weekly refuse collection service for the settlements of Dargaville, Baylys Beach, Te Kopuru, Ruawai, Maungaturoto and Kaiwaka. A special collection service is also provided in parts of Mangawhai during the Christmas holiday period. The services are provided on the basis of full cost recovery with special rating charges being applied to the properties concerned.

The Council currently operates two refuse disposal sites in the district, at Dargaville and Hakaru. The Dargaville site is subject of a designation (Ref. Map 32) whilst activities on the Hakaru site are subject of specific resource consents.

10.1.4 Electricity and Telecommunication Services

Electricity supplies in the district are provided by Transpower N.Z Ltd and Northpower. Transpower N.Z Ltd own and operate the national grid which includes the three high voltage transmission lines and associated substations at Dargaville and Maungaturoto. The high voltage transmission lines concerned are:-

- Henderson - Marsden Point 220 kv line
- Henderson - Maungaturoto 110 kv line
- Maungatapere - Dargaville 50 kv line

Northpower own and co-operate the other electricity supply lines in the district.

Telephone and other communication facilities are generally provided by Telecom and Broadcast Communications Ltd. The facilities concerned include telephone lines, telephone exchanges, telecommunication works including masts for cellular phones, mobile phones, paging antennae and masts for radio and television.

10.1.5 Natural Gas Supplies

The main natural gas pipeline between Auckland and Whangarei passes through the eastern part of the district. The lines are managed by Natural Gas Transmission Ltd. A feeder line comes off the main in the Hakaru area to serve the Northland Co-operative Dairy Co Ltd's milk processing plant at Maungaturoto.

10.2 Legislative Considerations

10.2.1 Resource Management Act

The various public works and utility services in the Kaipara district are important physical resources, and aspects of their operation come within the ambit of the Resource Management Act. Part VIII of the Act contains specific provisions which deal with the designation of sites used or proposed to be used for public works and other similar projects or works by requiring authorities.

The term public work is defined in Section 2 of the Act by reference to the Public Works Act 1981. It is essentially any work which the Crown or any local authority, including the Council, is authorised to establish and operate. Public works of the Crown include police stations and schools whilst those of local authorities include refuse tips, roads, sewerage treatment plants, and water reservoirs.

The other works or projects which can fall within the designation provisions in the Act are those established and maintained by network utility operators. Network utility operators are defined in Section 166 of the Act. They include those state owned enterprises and companies which provide facilities and services such as airports, railways, roads, electricity, gas and telecommunication links.

Any Minister of the Crown or any local authority can as a requiring authority serve a requirement notice on the Council seeking designation provisions in the district plan. The requirement can be served at any time but is subject to certain public notification, submission, hearing and appeal procedures. The requirement process can also be used by any network utility operator which has been approved as requiring authority under Section 167 of the Act. Such approval is required to be obtained from the Governor General under Order in Council.

The designation generally involves identification of the project or work concerned as a permitted activity on a particular site. It may also in some circumstances place restrictions on the use of adjacent land, water, subsoil or airspace where it is necessary for the safe and efficient operation of the project or work. The particular nature of designations in the Kaipara district are discussed in Section 10.3.1.

One other key provision of the Act as it relates to public works and utility services is the Second Schedule Part II. It deals with matters that may be provided for in district plans and includes:-

"The scale, sequence, timing, and relative priority of public works, goods, and services, including public utility networks and any provision for land used or to be used for a public work for which the territorial authority has financial responsibility."

The latter parts of this section discuss a number of public works and servicing issues. These include matters related to the scale, sequence, timing and relative priority of Council services in the key areas of:-

- refuse management
- sewage disposal
- stormwater control
- water supplies

10.2.2 Public Works Act

The Public Works Act 1981 deals with a number of specific matters related to public works. Part II outlines the procedures involved in the acquisition of land for public works purposes, including those where compulsory acquisition is sought. Part V deals with associated entitlements to compensation, claims, awards and grants of land in lieu of compensation.

Part VIII of the Act deals with the legalisation, stopping and exchanging of roads. Section 114 gives the Minister of Lands the powers to declare any land to be road having followed certain procedures. Sections 116-118 give the Minister similar powers in respect of the stopping of roads.

10.3 Management Issues

10.3.1 Designation of Land for Public Works and Other Purposes[#]

The Kaipara district contains a number of strategically situated sites which are used for public works and other similar purposes. The sites concerned are designated in the district plan in accordance with the enabling provisions in the Act. Most of the designations were in previous district schemes and have been carried over in accordance with requirement notices received from requiring authorities during preparation of this plan. Notices to this effect were received from the following requiring authorities:-

- Minister of Conservation - Conservation Areas and Reserves
- Minister of Justice - Courthouse
- Minister of Education - Educational Facilities
- Northpower - Electricity Substations
- Minister of Defence - Defence Facilities
- Minister of Police - Police Station and Police Centre Facilities
- N.Z Railways Corporation – Railway Lines
- Transit N.Z - State Highways
- Transpower N.Z Ltd - Electricity Substations

The Council itself has also retained designations over a number of facilities and sites that it uses for public works purposes. They include refuse tips, reserves, roads, sewage disposal facilities and water treatment plants.

All designated sites are specifically identified on the planning maps. Details on the sites including the designating authority responsible for them and their underlying zoning are given in Appendix 10A. Under Section 176 of the Act any land use which is in accordance with the designated purpose is a permitted activity. Rules have also been established making the subdivision of any designated site a controlled activity. The sites have been given an underlying zoning consistent with the surrounding area. This zoning will also come into effect should the designation be uplifted at any time.

10.3.2 Temporary Military Training Activities

The New Zealand Defence Force (N.Z.D.F.) operates throughout Northland from various military establishments which are designated for defence purposes in district plans. However at times the N.Z.D.F. needs to carry out training activities in areas not designated for defence purposes. The Kaipara District with its variety of land form and largely rural environment provides an attractive environment and numerous locations for such temporary military training activities.

[#] Updated August 2005

Temporary military training activities involve military exercises by regular and territorial force units. They are undertaken on a strictly temporary basis; as a general guide six training exercises may occur in a year in the Kaipara District. Each exercise in the main takes place over a few days. Past experience has shown such activities have little effect on the environment.

Temporary training activities are likely to involve the following:-

- Movement of groups of personnel on formed roads by foot, vehicle or both to undertake navigation and communication activities.
- Utilisation of overnight sites for tactical purposes. This entails minimum cutting and no clearing. Cooking is restricted to individual hexamine stoves.
- Firing of small arms blank ammunition.
- Training exercises in conjunction with the Royal New Zealand Air Force helicopter low level flying, landing and winching.

Live firing is only undertaken with land owner's consent.

To ensure temporary military training activities can be carried out throughout the Kaipara District provision has been made for temporary military training activities as a permitted use in all zones provided certain requirements are met.

10.3.3 Provision for Utility Services

Utility services such as electricity, sewer, telephone and water supply lines are found throughout the district. The former Town and Country Planning Act made provision for such utilities to be developed as of right on all sites. The new Act makes similar general provision but only for the transitional period, ie until the new district plan is constituted.

Utility services are considered by the Council to be essential services which generally have little or no impact on the environment. Most of the services are placed underground and those which are above ground can often be sited to have minimal impact on amenities. The lines, pipes and associated facilities generally emit no harmful substances and their installation and maintenance generally involves limited land disturbance. However as outlined in Section 10.3.4 there are some public health

concerns about high voltage electricity transmission lines. These structures along with some telecommunication masts can be 30-50 metres high and also have significant visual impacts in some areas.

The Council has on the above basis made provision for network utilities as permitted activities in the various zones. Those related utility services which may have the potential to have some adverse environmental impact, from either an amenity or human health perspective are listed separately as controlled or discretionary activities. The utility services separately listed are electricity transmission lines (high voltage), electricity substations, telephone exchanges and telecommunication works. This will give the Council the opportunity to examine proposals involving such services and if necessary place conditions on their siting and other aspects of their development. Public notification of proposals may be required in some circumstances in accordance with the provisions in Sections 93 and 94 of the Act.

10.3.4 Impacts of High Voltage Electricity Transmission Lines

Over recent years concerns have been expressed about the possible health risks to people who live or work in areas adjacent to high voltage transmission lines. The concerns have been related to claims that power frequency fields may be a potential cause of cancer. Whilst some studies have suggested an association between exposure to magnetic fields and the incidence of leukemia and other forms of cancer no firm conclusions have been reached. The Department of Health National Radiation Laboratory have produced an information brochure on Your Health and Fields from Electric Lines which supports this viewpoint. It concludes that any risk is likely to be very small compared with the other risks including those normally associated with cancer.

The other potential risk from the lines is that arising from storm damage to towers and lines. Although the risks are very small, the potential for damage to properties, especially in urban areas is significant. Electricity supply authorities like Transpower N.Z Ltd have powers under the Electricity Supply Regulations 1993 and associated codes of practice to control buildings and other structures near high voltage transmission lines. Relevant extracts from the N.Z. Electrical Code of Practice for Electrical Safety Distances (N.Z.C.P. 34:1993) are reproduced in Appendix 10B.

The code of practice also deals with excavations and structures near electric line supports. A copy of the code is available for inspection at the Council offices in Dargaville. The location of the three high voltage lines in the district are recorded on

the planning maps and associated references made to the principal requirements of the regulations in the relevant zone rules.

10.3.5 Protection of Radio Corridors

Radio corridors run through several parts of the district. The corridors concerned are from:-

- Dargaville Telephone Exchange to Maunu Mountain, Whangarei.
- Dargaville Telephone Exchange to Pouto;
- Brynderwyn Tower to Maungaturoto;
- Brynderwyn Tower to Tower at Kraaks Hill just north of Warkworth;
- Mt Hikurangi Tower to Waimatenui Mast.

The corridors are vulnerable to interference from buildings, trees and other objects. In some cases sustained interference can sever communications, including emergency links. The corridors are very small in area but often cross a large number of properties, especially in settlements like Dargaville. It is generally impractical to seek consents of other protective instruments over the properties concerned.

Under the former Town and Country Planning Act district scheme ordinances were introduced to protect strategic radio corridors in some major urban areas. However there have been problems with their implementation, particularly related to the potential liability of Councils for compensation claims. The situation has changed somewhat under the Resource Management Act where network utility operators such as Telecom could use the designation procedure to achieve similar purposes. At this stage Telecom and other interested parties have not fully determined how the matter should be generally dealt with under the new Act. They have also not assessed the particular need to protect parts of the radio corridors in the Kaipara district. This matter is to be further investigated and if necessary appropriate provisions introduced by way of requirement or change to the plan.

10.3.6 Refuse Management Services

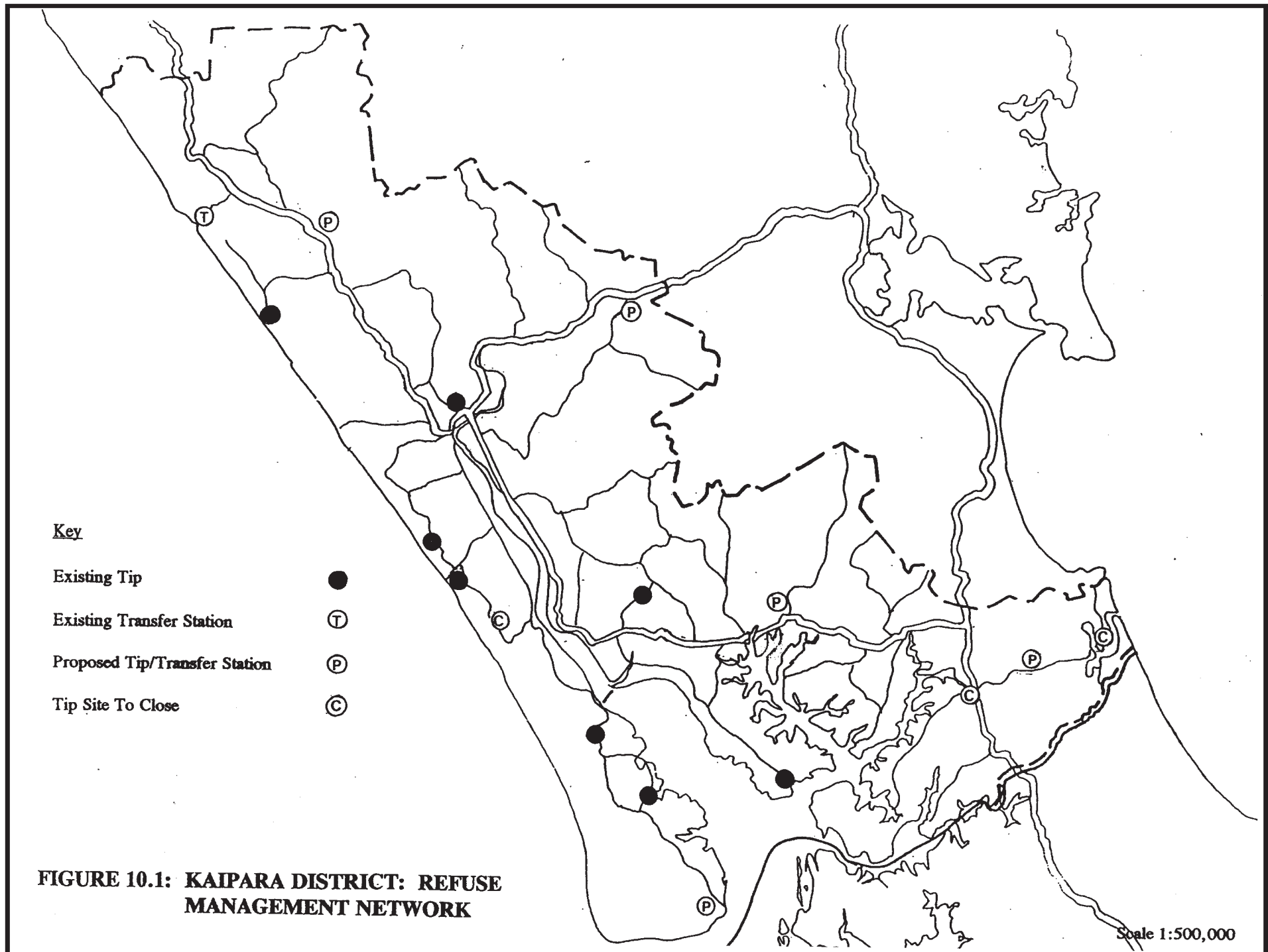
The Council manages a number of refuse disposal sites and provides the major settlements with a weekly refuse collection service. Over recent years concerns have been expressed about aspects of these services and in particular:-

- the siting and management of some existing disposal sites
- the lack of collection or disposal facilities in some areas
- the limited recycling facilities available throughout the district

Most of the disposal sites in the district have been in existence for ten years or more and were developed by former local authorities. The only 'new' site is that in Access Rd, Ruawai which was established in 1990. Extensions have been made to the landfill sites in Awakino Road (Dargaville) and Parawanui Road (Redhill) and associated upgrading works carried out in recent years. Several of the 'old' landfill sites are in environmentally sensitive coastal areas and being progressively replaced. The most significant site in Pahi Road, which served the Paparoa - Maungaturoto area, was closed in March 1993.

The Council has assessed the state and life expectancy of all landfill sites and developed an associated forward planning replacement programme. It will result in the 'worst' sites being replaced first. In this regard the Council has focussed its attention on a new landfill site for the Paparoa - Maungaturoto area. A property with a potential landfill site has recently been acquired and the necessary resource consents obtained. Investigations have also been made into a landfill at Hakaru which could serve the Kaiwaka and Mangawhai areas. A potential landfill site has been acquired for which resource consents are soon to be sought.

The Council in the longer term plans to develop an integrated network of landfills and associated transfer sections. It has prepared a solid waste management strategy which recognises that with present technology, landfill is the most appropriate refuse disposal method for a district like Kaipara. Major manned landfills are expected to be maintained in strategic locations, particularly near major population centres, and transfer stations or smaller unmanned landfills progressively replace some of the older tips. Transfer stations or small unmanned landfills are also expected to be established in some areas which are currently not serviced. The principal areas concerned are Donnellys Crossing, Kaihu, Tangiteroria, and Pouto Point. Figure 10.1 shows the



planned network. The objective of the network is to have all settlements and populated rural areas of within 20 km or 15 minutes travel of a disposal facility, so as to discourage illegal tipping.

The establishment of a network of tips and transfer stations is considered the key to an effective refuse management strategy for the district. This is because of the geographic spread of the population and the numerous small settlements which exist. Recycling will be encouraged but is expected to play a relatively minor role because of the low volumes of materials produced and the high costs of collection and sorting facilities. The Council will support recycling initiatives in the district and seek central government support for them through incentive schemes and the like. It will also support regional or national initiatives intended to reduce the production of 'problem' wastes at source.

The management of some landfills has been a problem over the years in part related to their small size and relative isolation. The Council has recently instituted a regular maintenance programme with greater emphasis on compaction and covering of refuse and control of leachate. It is also more stringently controlling certain activities on tip sites including:-

- the disposal of car bodies, fencing wire and other 'problem' wastes.
- the disposal of hazardous substances.
- the lighting of fires.

Signage and associated publicity material related to these matters is to be maintained.

The Council intends preparing management plans for all its tip sites. The plans will cover aspects of the day to day running of the sites and be used as a guide by their operators, some of which may be private contractors. The site management plans are expected to cover the following matters:-

- areas to be utilised and disposal methods
- cover and compaction operations
- access and directional signs
- drainage and leachate control

- litter and vermin control measures
- landscaping and screening
- facilities for storage of hazardous substances
- contingency procedures
- site rehabilitation

The plans will also serve to assist organisations like the Northland Regional Council and Northland Area Health Board who monitor some aspects of tip operations. The Regional Council in accordance with its responsibilities under the Resource Management Act monitors leachate discharges and associated contaminant control measures. Discharge permits have recently been sought from the Regional Council for all tip sites. The Northland Area Health Board monitors tips from a more general public health perspective, as refuse disposal is listed as an offensive trade under the Health Act.

10.3.7 Community Sewerage Systems

Reticulated sewerage systems serve the settlements of Dargaville, Te Kopuru, Maungaturoto and Kaiwaka and part of the Glinks Gully settlement. Sewage disposal in the other settlements is generally based around the use of individual septic tank type systems. As outlined in Section 3.3.4 concerns have been expressed about the potential environmental and public health risks arising from the extensive use of such systems in some settlements. Most attention in this regard has been focussed on the largest unserved settlements of Mangawhai, Ruawai and Baylys Beach.

Over recent years Mangawhai has been one of the fastest growing settlements in the region. Its usually resident population almost doubled between 1986 and 1996 to reach almost 1136 people. Added to this is a substantial summer holiday population which at times can reach 4000-6000 people. Several investigations have been made into the 'problems' associated with septic tank disposal in the two settlement areas and the feasibility of community sewerage systems. A 1991 District Council survey of household on-site systems found a significant number of pit privy systems and limited regular maintenance of septic tank systems, especially in terms of desludging. A 1997 Regional Council survey of water quality and conditions found relatively high median concentrations of faecal coliforms and enterococci in drains and streams with a likely cause being seepage from on-site sewage treatment systems. High

concentrations of enterococci were also recorded in cockles and wedge shells from several sites in the Mangawhai estuary.

The Council commissioned consultants to undertake an infrastructure study of the Mangawhai area. The report on the study is known as the Mangawhai Infrastructural Assets Study (1999). The Council is committed to a community wastewater scheme in Mangawhai. A project manager was engaged in 2000/2001 to implement the study and a Community Wastewater Advisory Group was also established. The Council received proposals in April 2002 and is considering the type of system to be developed.

The Council has no current wastewater servicing initiatives for Ruawai and Baylys Beach. Residential development in the two settlements has slowed over recent years and limited future expansion is envisaged. Whilst some vacant land has been zoned for future residential needs it is expected to be developed on the basis of special package treatment systems being installed. The provision of such systems is likely to be required as a condition of subdivision consent. In terms of the existing developed areas the Council considers that greater attention needs to be paid to the regular maintenance of individual septic tank systems and their upgrading and replacement where necessary. Surveys of the settlements are to be carried out by the Council and actions taken under the Building Act and associated health related statutes where necessary.

Most of the sludge from on-site wastewater systems from the eastern and southern parts of the district is disposed of at sites in the adjoining Whangarei and Rodney districts. Sludge from the northern and western parts of the district is generally disposed of at a site on the Pouto Peninsula. The Council will work with the Regional Council and waste disposal contractors on the planning for any new sites required.

10.3.8 Stormwater Services

Several of the settlements in the district have public stormwater drainage systems which are maintained by the Council. Dargaville is the only settlement to have a fully reticulated system with the others relying mainly on open drains and other similar facilities. The Council carries out various upgrading works to the systems as part of its forward works programme. Most of the recent work has been undertaken in Dargaville from special rates collected. This has included a new system for the Gladstone St area which was prone to localised flooding, and extension of

stormwater services in the Pirika St, Haimona St area. Upgrading of stormwater services has also been carried out in Mangawhare as part of a three stage programme due to be completed in 1994.

The maintenance and future upgrading of stormwater services is carried out in accordance with special catchment management plans. These plans outline the extent of stormwater control required and show the location of major stormwater services and associated flood protection works. They also define the standards of design and construction of new stormwater systems required for subdivisions in the respective catchments. The Council has catchment management plans covering most of the Dargaville and Mangawhai urban areas. A draft plan has recently been prepared for the Baylys Beach settlement. It is expected to be finalised this year and serve as a basis for the preliminary design and costing of a new stormwater system for this settlement. Catchment management plans are expected to be prepared covering other settlement areas as demands and finances permit over the next few years.

10.3.9 Water Supplies

The water supplies serving the settlements of Dargaville, Baylys Beach, Glinks Gully, Mangawhai (part only), Maungaturoto and Ruawai are maintained by the Council. All of the systems, with the exception of that at Glinks Gully, operate on the basis of metered water supplies being provided to individual property owners. The costs of maintenance and any upgrading works are met through associated water charges. Over the years various upgrading works have been carried out aimed at providing supplies of sufficient quality and quantity for each settlement's needs. Particular attention has focussed in ensuring the security of the raw water supply line to Dargaville and improving storage facilities and service lines in the township. A new reservoir has recently been completed and mains replaced to reduce leakage and improve pressures in various areas. The latter works will continue as part of a comprehensive upgrading programme.

Work planned over the next few years in other settlements include:

- Renewal of water mains at Glinks Gully
- Upgrading of the pumping system at Maungaturoto and replacement of all old imperial meters.
- Installation of new treatment units for the Mangawhai supply

- Design and costing of various improvements to the Ruawai water supply

Further details on the proposals are contained in the Council's Annual Plan.

10.4 Objectives Policies and Methods Of Implementation

10.4.1 Objectives - Public Works and Services

Objective 1: To plan for and promote the development of public works and utility services in a co-ordinated, cost effective and environmentally sensitive manner.

Objective 2: To provide for the needs of the New Zealand Defence Force (N.Z.D.F.) so as to maintain military operational capability and to enable N.Z.D.F. to meet the purposes of the Defence Act, provided adverse effects are avoided, remedied or mitigated.

Explanation: The Council is one of several authorities responsible for providing public works and utility services in the district. Such works and services need to be developed within the framework of the Act with particular attention given to the protection and enhancement of amenity values and the quality of the environment. Parts of the Kaipara District are used for temporary military training activities. By providing for temporary military training activities and ensuring adverse effects do not materialise the Council is acting in accordance with the provisions in the Act.

10.4.2 Policies and Methods of Implementation

(1) Works of Requiring Authorities

Policy 1: To provide for the effective operation of public works and related facilities and limit any associated environmental impacts.

Methods of Implementation

- 1 Designate on the planning maps land used or proposed to be used for public works or other similar purposes as sought by requiring authorities
- 2 Rules which list the subdivision of designated land as a controlled activity.

Explanation: The development of designated land is to be controlled in a manner consistent with the wider land use planning objectives and policies of the Council.

(2) Temporary Military Activities

Policy 1: To enable areas not designated for defence purposes to be used for military exercises by regular and territorial force units.

Method of Implementation

- 1 Rules which list temporary military activities as permitted activities in all zones.

Explanation: Past experience has shown and mitigation measures ensure that the effects of temporary military activities on the environment are minor.

(3) Utility Services

Policy 1: To enable utility services to be developed and maintained whilst controlling the environmental impacts of major structures.

Policy 2: To recognise the adverse impact that some land use and subdivision activities can have on the operation of utility services.

Methods of Implementation

- 1 Rules which list public utilities (ie pipes, lines and similar minor services) as permitted activities in all zones
- 2 Rules which list telephone exchanges, telecommunication works and transmission lines (high voltage) as controlled or discretionary activities in zones depending on the purposes of the zones.
- 3 Utilise the provisions in the Act for public notification of applications for land use consent involving major structures in areas with high amenity values

- 4 Identify the location of major high voltage transmission lines on the planning maps and highlight the associated provisions of the Electricity Supply Regulations which control activities near them
- 5 Identify the location of major natural gas distribution lines on the planning maps and highlight the associated provisions of the Natural Gas Supply Regulations which control activities near them
- 6 Advise electricity and gas supply authorities of applications for land use or subdivision consent which may affect their interests
- 7 Liaise with telecommunication interests on the identification and protection of radio corridors

Explanation: Most utility services have minimal environmental impact although some control is required over large and potentially visually dominant structures in sensitive areas. Recognition also needs to be given to the impact that some land use and subdivision activities can have on the operation of such services.

(4) Refuse Management

Policy 1: To ensure that refuse collection and disposal services are available to meet the needs of individual communities and safeguard amenity and conservation values.

Policy 2: To encourage waste minimisation and recycling amongst the community.

Policy 3: To ensure that appropriate controls and management systems are in place relating to the use of refuse disposal sites.

Methods of Implementation

- 1 Maintain a network of transfer stations and refuse disposal sites throughout the district
- 2 Provide refuse collection services to major settlements on a cost recovery basis
- 3 Investigate the establishment of new collection and disposal services in key areas, as demands and finances permit

- 4 Support the establishment of community based recycling initiatives and provide associated facilities where practicable
- 5 Designate land used or proposed to be used for refuse disposal purposes on the planning maps
- 6 Administer a bylaw controlling activities on refuse disposal sites, and associated publicity material
- 7 Prepare management plans for all major refuse disposal sites and ensure that associated discharge permits are in place

Explanation: The maintenance of refuse collection and disposal services is a key area of Council responsibility. It requires ongoing planning and management control which is aimed at ensuring high levels of service and environmental protection.

(5) Sewerage, Stormwater and Water Supply Services

Policy 1: To ensure that effective and environmentally acceptable sewerage, stormwater and water supply services are provided in settlement areas.

Methods of Implementation

- 1 Maintain sewerage, stormwater and water supply services in existing settlements and plan for their upgrading and extension as demands dictate
- 2 Investigate the establishment of community sewerage services for the settlements of Mangawhai and Ruawai
- 3 Monitor septic tank use and associated ground conditions in key settlements and develop publicity material and if necessary bylaws relating to their maintenance and desludging
- 4 Investigate requests for provision of sewerage, stormwater and water supply services in settlements.
- 5 Prepare management plans for major catchment areas in settlements and develop standards for stormwater control facilities and services within them

Explanation: The Council will continue to upgrade sewerage stormwater and water supply services in the main settlements. The specific nature of the major works planned each year are outlined in the Council's annual plan. In addition several longer term initiatives in the areas of sewerage reticulation and stormwater management are planned.

10.5 Rules - Designated Sites

10.5.1 Land Use Activities on Designated Sites

Under Section 176 of the Act a requiring authority may carry out on a designated site any land use activity which is in accordance with the designation, subject to the following provisions in the Act.

- Section 9 (3) (Restrictions on Land Use in Regional Plans)
- Section 11 (Restrictions on Subdivision)
- Section 12 (Restrictions on Use of Coastal Marine Area)
- Section 13 (Restrictions on Certain Uses of Beds of lakes and Rivers)
- Section 14 (Restrictions Relating to Water)
- Section 15 (Discharge of Contaminants into Environment)

10.5.2 Subdivision Activities on Designated Sites

The subdivision of any designated site shall be deemed a controlled activity. Any associated application for subdivision consent should be dealt with in accordance with the relevant requirements in Part VI of the Act. It shall be considered by the Council having regard to the general assessment criteria relating to applications for subdivision consent in Section 13.3.5.

10.6 Rules - Network Utilities

10.6.1 Environmental Standards For Network Utilities

The following environmental standards shall apply to network utilities which are listed as permitted activities in the Rural, Coastal, Maori Purposes, Residential, Commercial and Industrial zones. The standards in this section do not apply to any other permitted activities unless otherwise specifically stated.

(1) Reinstatement

Where the construction or maintenance of a network utility involves disturbance to the ground, at the completion of the work the ground shall be reinstated as far as practical to the condition existing prior to commencement of the work.

(2) Height of Structures

No structure shall exceed a height of 30 metres above ground level provided that no structure shall exceed 20 metres in height above ground level where the road, reserve or site on which it is situated adjoins a site used principally for residential purposes.

(3) Size of Structures Adjoining Sites Used Principally For Residential Purposes

No structure shall exceed a gross floor area of 50m² where the road, reserve or site on which it is situated adjoins a site used principally for residential purposes.

(4) Location of Structures (Yards)

No above ground structure shall be located closer than 1.5 metres to the boundary of any site which is used principally for residential purposes, except that for electricity substations a minimum 5.0 metre yard or distance to the site shall be provided.

(5) Landscaping

For above ground structures, (excluding lines and support structures for lines and above ground pipes and associated structures):

- (a) Those areas not used for buildings, structures, operation of the facility, access, or parking shall be planted for amenity purposes.
- (b) In addition to (a) above for substations a minimum 5m wide strip of amenity planting shall be provided around the outside of facilities which together comprise a substation. Amenity planting shall include trees or shrubs designed to achieve substantial screening of the equipment (excluding pylons, poles, or termination structures) at maturity while not compromising electrical security and/or safety.

(6) Floodlighting

Any floodlighting shall be directed so that spill of light will be contained within the boundaries of the site where that site is used principally for residential purposes. This rule does not apply to the road frontage boundary of sites fronting roads or street lighting on roads.

(7) Noise Emissions

The noise emission standards for the zone in which the network utility is located shall apply.

(8) Radiofrequency Radiation

Telecommunications facilities shall comply with the provisions of NZS 6609.1 and 2 1990 Radiofrequency Radiation

(9) Parking

On site parking shall be provided for manned sites at the rate of one space for every person normally working at the site.

The rules relating to access and size of parking spaces in Section 9.5 Access Parking and Loading shall also apply.

10.7 Rules - Financial Contributions

10.7.1 General Requirements for Financial Contributions as Conditions of Land Use or Subdivision Consent

The Council may in accordance with the provisions in Section 108 of the Act require a financial contribution towards the installation and/or upgrading of any network utility including sewerage, stormwater, water supply, electricity and telephone services as a condition of land use consent or subdivision consent. Such contributions may be sought in the following circumstances:

- where new network utilities are required to meet the needs of people expected to be employed and/or live on the lots or sites
- where existing network utilities are required to be upgraded to meet the needs of people expected to be employed and/or live on the lots or sites.

Where network utilities are to be provided for or in connection with the construction of a building, then that work is controlled by the Building Act 1991.

10.7.2 Form and Maximum Amount of Financial Contributions

The Council will assess financial contributions on an application by application basis having regard to the environmental effects of the proposed activity and the extent to which any adverse effects can be avoided, remedied or mitigated.

Any financial contribution required as a condition of land use consent or subdivision consent may be in the form of:

- (i) land to be set aside and vested in the Council for sewage treatment, stormwater disposal, or water supply purposes.
- (ii) land to be set aside and vested in any network utility operation for electricity or telecommunications supply purposes.
- (iii) easements to be registered over pipes lines and other network utilities and services

- (iv) a cash contribution be paid to the Council or network utility operator for it to carry out specified works related to the installation or upgrading of a network utility.

Where a financial contribution is required towards the upgrading of any sewerage, stormwater or water supply service it shall be determined in the following manner:

<u>Additional No. of Service Connections</u>	x	Estimated
Existing and Additional No. of Service Connections		Upgrading Cost

No condition imposed under the above mentioned provisions shall require the carrying out of works or cash contributions which exceed the extent to which the network utility serves or is intended to serve the land use or subdivision.

10.7.3 Sewerage and Stormwater Services - Design and Construction Guidelines

Refer to the standards in the recently revised Engineering Code of Practice for Land Subdivision and Development 2000.

10.7.4 Water Supply Services - Design and Construction Guide-lines

Refer to the standards in the recently revised Engineering Code of Practice for Land Subdivision and Development 2000.

APPENDIX 10A: SCHEDULE OF DESIGNATIONS

<u>Designation</u>	<u>Requiring Authority</u>	<u>Underlying Zoning</u>	<u>Planning Maps</u>
Waipoua Forest	Minister of Conservation	Rural	1, 2, 3, 4
Mataraua Forest	Minister of Conservation	Rural	2
Waimatenui Cemetery (Closed) Local Purpose Reserve	Kaipara District Council	Rural	2
Marlborough Forest	Minister of Conservation	Rural	2, 4
Muriwai Conservation Area	Minister of Conservation	Coastal	3
Taha Moana Scenic Reserve	Minister of Conservation	Coastal	3
Katui Scenic Reserve	Minister of Conservation	Rural	3
Katui Cemetery Reserve	Minister of Conservation	Rural	3
Maunganui Bluff Scenic Reserve	Minister of Conservation	Coastal	3, 6, 27
Tutamoe Cemetery Local Purpose Reserve	Kaipara District Council	Rural	4
Tutamoe Domain Recreation Reserve	Kaipara District Council	Rural	4
Tutamoe Primary School and House	Minister of Conservation	Rural	4
Tutamoe Scenic Reserve	Minister of Conservation	Rural	4
Donnellys Crossing Scenic Reserve	Minister of Conservation	Rural	4
Awatuna Cemetery (Closed) Local Purpose Reserve	Kaipara District Council	Rural	4
Trounson Kauri Park Scenic Reserve	Minister of Conservation	Rural	4
Aranga Primary School and House	Minister of Education	Rural	4
Whataro Scenic Reserve	Minister of Conservation	Rural	4
Local Purpose (Water Supply Catchment) Reserve	Kaipara District Council	Rural	4, 6
Kaihu Forest	Minister of Conservation	Rural	4, 5, 6
Marlborough Cemetery Conservation Area	Minister of Conservation	Rural	4
Former Marlborough School Conservation Area	Minister of Conservation	Rural	4

APPENDIX 10A: SCHEDULE OF DESIGNATIONS#

<u>Designation</u>	<u>Requiring Authority</u>	<u>Underlying Zoning</u>	<u>Planning Maps</u>
Houto Forest	Minister of Conservation	Rural	5
Houto Quarry Conservation Area	Minister of Conservation	Rural	5
Kaihu Valley Primary School and House	Minister of Education	Rural	6
Maropiu Bush Scenic Reserve	Kaipara District Council	Rural	6
Former Kaihu Railway Line Conservation Area	Minister of Conservation	Rural	6, 28
Omamari Wildlife Management Reserve	Minister of Conservation	Rural	6
Refuse Disposal Purposes (Omamari Landfill)	Kaipara District Council	Coastal	6, 29
Kaihu Scenic Reserve	Minister of Conservation	Rural	7
Kairara Conservation Area	Minister of Conservation	Rural	7
Taraire Scenic Reserve	Minister of Conservation	Rural	7
Mamaranui Farm Settlement Scenic Reserve	Minister of Conservation	Rural	7
Waimata Settlement Scenic Reserve	Minister of Conservation	Rural	7
Avoca Conservation Area	Minister of Conservation	Rural	7
Houto Forest	Minister of Conservation	Rural	7
Tangowahine Primary School	Minister of Education	Rural	7
Railway Purposes	NZ Railways Corporation	Rural	7, 8, 10, 11, 15, 19, 23
Paerata Wildlife Management Reserve	Minister of Conservation	Rural	8
Waitotama Conservation Area	Minister of Conservation	Rural	8
Pukehuia Conservation Area	Minister of Conservation	Rural	8, 11
Tangihua Forest	Minister of Conservation	Rural	8

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APPENDIX 10A: SCHEDULE OF DESIGNATIONS

<u>Designation</u>	<u>Requiring Authority</u>	<u>Underlying Zoning</u>	<u>Planning Maps</u>
Rehutai Conservation Area	Minister of Conservation	Coastal	9
Awakino Wildlife Management Reserve	Minister of Conservation	Rural	10, 7
Tangowahine Scenic Reserve	Minister of Conservation	Rural	10
Turiwiri Bush Scenic Reserve	Kaipara District Council	Rural	10
Hamlyns Bush Scenic Reserve	Kaipara District Council	Rural	10
Local Purpose Cemetery Reserve (Mt Wesley)	Kaipara District Council	Rural	10
Omana Hall Local Purpose Reserve	Kaipara District Council	Rural	11
Curnow Rd (Gemstone) Conservation Area	Minister of Conservation	Rural	11
Mititai Rd Conservation Area	Minister of Conservation	Rural	11
Manganui River Wildlife Management Reserve	Minister of Conservation	Rural	11
Curnow Rd Conservation Area	Minister of Conservation	Rural	13
Local Purpose (Cemetery) Reserve (Arapohue)	Kaipara District Council	Rural	13
Arapohue Primary School and House	Minister of Education	Rural	13
Montgomeries Memorial Bush Scenic Reserve	Kaipara District Council	Rural	13
Whakahara Conservation Area	Minister of Conservation	Rural	13
Local Purpose Cemetery Reserve (Tokatoka)	Minister of Conservation	Rural	13
Repia Conservation Area	Minister of Conservation	Rural	13
Kopuru Beach Domain	Kaipara District Council	Coastal	13, 42
Refuse Disposal Purposes (Parawanui Landfill)	Kaipara District Council	Rural	13
Aratapu Hall Local Purpose Reserve	Kaipara District Council	Rural	13
Redhill Cemetery Local Purpose Reserve	Kaipara District Council	Rural	13

APPENDIX 10A: SCHEDULE OF DESIGNATIONS#

<u>Designation</u>	<u>Requiring Authority</u>	<u>Underlying Zoning</u>	<u>Planning Maps</u>
Tokatoka Scenic Reserve	Minister of Conservation	Rural	14
Naumai Domain Recreation Reserve	Kaipara District Council	Rural	14
Whenuanui Scenic Reserve	Minister of Conservation	Rural	14
Whenuanui Domain Recreation Reserve	Kaipara District Council	Rural	14
Parahi Scenic Reserve	Minister of Conservation	Rural	14
Omaru River Conservation Area	Minister of Conservation	Rural	14
Pukekohe Hill Scenic Reserve	Minister of Conservation	Rural	15
Mareretu Forest	Minister of Conservation	Rural	15
Dodd Rd Conservation Area	Minister of Conservation	Rural	15
Collins Scenic Reserve	Minister of Conservation	Rural	15
Electricity Substation	Transpower NZ Ltd	Rural	15
Waipu Gorge Scenic Reserve	Minister of Conservation	Rural	15
Robert Hastie Memorial Scenic Reserve	Minister of Conservation	Rural	16
Wainui Lake Conservation Area	Minister of Conservation	Rural	17
Local Purpose (Te Maire Community Hall) Purposes	Kaipara District Council	Rural	17
Refuse Disposal Purposes (Te Maire Landfill)	Kaipara District Council	Rural	17
Tikinui Conservation Area	Minister of Conservation	Coastal	17
Pouto North Conservation Area	Minister of Conservation	Coastal	17, 21
Matanginui Conservation Area	Minister of Conservation	Coastal	17
Ruawai Conservation Area	Minister of Conservation	Coastal	17

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APPENDIX 10A: SCHEDULE OF DESIGNATIONS

<u>Designation</u>	<u>Requiring Authority</u>	<u>Underlying Zoning</u>	<u>Planning Maps</u>
Awaroa Conservation Area	Minister of Conservation	Rural	17
Ruawai Primary School and House	Minister of Education	Rural	17
Ruawai College and House	Minister of Education	Rural	17
Mapau Domain Recreation Reserve	Kaipara District Council	Rural	17
Whakatu Conservation Area	Minister of Conservation	Rural	18, 17
Kauri Bushman's Memorial Scenic Reserve	Minister of Conservation	Rural	18
Matakohe River Scenic Reserve	Minister of Conservation	Rural	18
Paparoa Creek Conservation Area	Minister of Conservation	Rural	18
Huarau Conservation Area	Minister of Conservation	Rural	18
Rabbit and Goat Island Scenic Reserve	Minister of Conservation	Rural	18
Lower Pahi Scenic Reserve	Minister of Conservation	Rural	18
Upper Pahi River Scenic Reserve	Minister of Conservation	Rural	18
Hukatere Scenic Reserve	Minister of Conservation	Rural	18
Hukatere Hall Recreation Reserve	Kaipara District Council	Rural	18
Arapaoa River Scenic Reserve	Minister of Conservation	Rural	18
Whakapirau Scenic Reserve	Minister of Conservation	Rural	18
Te Kowhai Creek Scenic Reserve	Minister of Conservation	Rural	19
Te Ope Scenic Reserve	Minister of Conservation	Rural	19
Whakapirau Creek Conservation Area	Minister of Conservation	Rural	19
Hokorako Conservation Area	Minister of Conservation	Rural	19
Takahoa Wildlife Management Reserve	Minister of Conservation	Rural	19

APPENDIX 10A: SCHEDULE OF DESIGNATIONS#

<u>Designation</u>	<u>Requiring Authority</u>	<u>Underlying Zoning</u>	<u>Planning Maps</u>
Pukekaroro Scenic Reserve	Minister of Conservation	Rural	19
Te-Uri-O-Hau Scenic Reserve	Minister of Conservation	Rural	19
Cooks Stream Scenic Reserve	Minister of Conservation	Rural	19
Louis Wintle Bush Nature Reserve	Minister of Conservation	Rural	20
Molesworth Conservation Area	Minister of Conservation	Rural	20, 55, 56
Mangawhai Wildlife Refuge	Minister of Conservation	Rural	20
Hakaru Domain Recreation Reserve	Kaipara District Council	Rural	20
Tomb Pt Conservation Area	Minister of Conservation	Rural	21
Tangitiki Conservation Area	Minister of Conservation	Rural	21
Rototuna Lake Conservation Area	Minister of Conservation	Rural	21
Punahaere Creek Conservation Area	Minister of Conservation	Rural	21
Rotopouua Lake Conservation Area	Minister of Conservation	Rural	21, 24
Refuse Disposal Purposes (Mosquito Gully Landfill)	Kaipara District Council	Rural	21
Refuse Disposal Purpose (Tinopai Landfill)	Kaipara District Council	Rural	22
Topuni Scenic Reserve	Minister of Conservation	Rural	23
Pouto Conservation Area	Minister of Conservation	Rural	24
Kanono Conservation Area	Minister of Conservation	Rural	24
Kahuparere Conservation Area	Minister of Conservation	Coastal	24, 63
Pukekura Historic Area	Minister of Conservation	Coastal	24, 63

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APPENDIX 10A: SCHEDULE OF DESIGNATIONS#

<u>Designation</u>	<u>Requiring Authority</u>	<u>Underlying Zoning</u>	<u>Planning Maps</u>
Kaipara Northhead Lighthouse Historic Reserve	Minister of Conservation	Coastal	24
Ureti Camping Reserve	Minister of Conservation	Coastal	25
Taharoa Domain Recreation Reserve	Kaipara District Council	Coastal	25
Maunganui Bluff Recreation Reserve	Kaipara District Council	Rural	27
Aranga Beach Conservation Area	Minister of Conservation	Coastal	27
Local Purpose (Recreation) Reserve	Kaipara District Council	Rural	28
Tangiteroria Primary School and House	Minister of Education	Rural	30
Baylys Beach Recreation Reserve	Kaipara District Council	Coastal	31
Thorne Plantation Scenic Reserve	Kaipara District Council	Residential	31
Baylys Beach Camping Ground Recreation Reserve	Kaipara District Council	Residential	31
Refuse Disposal Purposes (Dargaville Landfill)	Kaipara District Council	Rural	32
Railway Purposes	N.Z. Railways Corporation	Rural	34, 37, 38, 64, 65
Water Supply Purposes (Dargaville Reservoir and Treatment Plant)	Kaipara District Council	Rural	34
Montgomery Ave Recreation Reserve	Kaipara District Council	Residential	34, 35
Dargaville High School	Minister of Education	Residential	35
Dargaville Intermediate School	Minister of Education	Residential	35
Selwyn Park Primary School	Minister of Education	Residential	35
Selwyn Park Recreation Reserve	Kaipara District Council	Residential	35
Kauri Court Recreation Reserve	Kaipara District Council	Residential	35

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APPENDIX 10A: SCHEDULE OF DESIGNATIONS

<u>Designation</u>	<u>Requiring Authority</u>	<u>Underlying Zoning</u>	<u>Planning Maps</u>
Electricity Substation	Transpower NZ Ltd	Residential	36
Local Purpose Reserve	Kaipara District Council	Residential	36
Local Purpose Reserve	Kaipara District Council	Residential	36
Local Purpose Reserve	Kaipara District Council	Industrial	36
Finlayson Park Recreation Reserve	Kaipara District Council	Industrial	36
Sewage Treatment Purposes (Dargaville Oxidation Ponds)	Kaipara District Council	Industrial	36
Dargaville Primary School	Minister of Education	Residential	38, 65
Proposed Recreation Reserve (Memorial Park)	Kaipara District Council	Residential	38
Proposed Local Purpose Reserve	Kaipara District Council	Residential	38
Harding Park Local Purpose Reserve	Kaipara District Council	Rural	40
Mt Wesley Cemetery Local Purpose Reserve	Kaipara District Council	Rural	40
Pou-Tu-Ote-Rangi-Pa Historic Reserve	Kaipara District Council	Rural	40
Te Kopuru Domain Recreation Reserve	Kaipara District Council	Residential	41
Sewage Treatment Purposes (Te Kopuru Oxidation Ponds)	Kaipara District Council	Rural	41
Te Kopuru Primary School and House	Minister of Education	Residential	41
Refuse Disposal Purposes (Glinks Gully Landfill)	Kaipara District Council	Coastal	42
Sewage Treatment Purposes (Glinks Gully Treatment Area)	Kaipara District Council	Coastal	42
Ruawai Recreation Reserve	Kaipara District Council	Residential	43
Police Purposes	Minister of Police	Residential	43
Paparoa Primary School	Minister of Education	Residential	44

APPENDIX 10A: SCHEDULE OF DESIGNATIONS#

<u>Designation</u>	<u>Requiring Authority</u>	<u>Underlying Zoning</u>	<u>Planning Maps</u>
Scenic Reserve	Minister of Conservation	Rural	45
Paparoa Recreation Reserve	Kaipara District Council	Residential	45
Matakohe Primary School	Minister of Education	Rural	46
Matakohe Recreation Reserve	Kaipara District Council	Rural	46
Local Purpose (Cemetery) Reserve	Kaipara District Council	Rural	46
Coates Memorial Church Local Purpose Reserve	Kaipara District Council	Rural	46
Pahi Domain Recreation Reserve	Kaipara District Council	Residential	47
Local Purpose (Cemetery) Reserve	Kaipara District Council	Residential	48
Water Supply Purposes	Kaipara District Council	Rural	49
Local Purpose (Community Hall) Reserve	Kaipara District Council	Residential	49
Recreation Reserve	Kaipara District Council	Residential	49
Sewage Treatment Purposes	Kaipara District Council	Rural	50
Maungaturoto Primary School	Minister of Education	Residential	51
Nikau Grove Scenic Reserve	Minister of Conservation	Residential	51
Railway Purposes	N.Z. Railways Corporation	Rural	52
Sewage Treatment Purposes (Maungaturoto)	Kaipara District Council	Rural	52
Sewage Treatment Purposes (Kaiwaka)	Kaipara District Council	Rural	53
Refuse Disposal Purposes (Kaiwaka Landfill)	Kaipara District Council	Rural	53
Kaiwaka Domain Recreation Reserve	Kaipara District Council	Residential	53
Kaiwaka Primary School and House	Minister of Education	Residential	53
Mangawhai Heads Recreation Reserve	Kaipara District Council	Coastal	55

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APPENDIX 10A: SCHEDULE OF DESIGNATIONS#

<u>Designation</u>	<u>Requiring Authority</u>	<u>Underlying Zoning</u>	<u>Planning Maps</u>
Recreation Reserve	Kaipara District Council	Residential	55, 56
Recreation Reserve	Kaipara District Council	Residential	57, 58
Recreation Reserve	Kaipara District Council	Residential	58
Mangawhai Primary School	Minister of Education	Residential	59
Kellys Bay Recreation Reserve	Kaipara District Council	Residential	60
Tinopai Recreation Reserve	Kaipara District Council	Residential	61
Tinopai Primary School and House	Minister of Education	Residential	61
Recreation Reserve	Kaipara District Council	Residential	61, 62
Local Purpose (Community Hall) Reserve	Kaipara District Council	Residential	63
Proposed Local Purpose Reserve	Kaipara District Council	Residential	63
Proposed Service Lane	Kaipara District Council	Commercial	64, 65
Service Lane	Kaipara District Council	Commercial	64
Police Purposes	Minister of Police	Commercial	65
Justice Purposes	Minister of Justice	Commercial	65
Community College Outpost	Minister of Education	Residential	65
Local Government Purposes	Kaipara District Council	Commercial	65
State Highway 1	Transit N.Z.	Rural	16, 19 and 23
State Highway 12	Transit N.Z.	Rural	3, 6, 7, 9, 10, 13, 14, 17, 18 and 19
State Highway 14	Transit N.Z.	Rural	7, 8 and 10
Electricity Substation (Mareretu)	Northpower	Rural	15

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APPENDIX 10B: EXTRACTS FROM N.Z. ELECTRICAL CODE OF PRACTICE FOR ELECTRICAL SAFETY DISTANCES (N.Z.E.C.P.34 1993)

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NZECP 34

SECTION 4

DISTANCES OF CONDUCTORS FROM BUILDINGS, SCAFFOLDING AND RAILWAY LINES

4.1 CONSTRUCTION OF BUILDINGS, SCAFFOLDING AND OTHER STRUCTURES, ETC. NEAR CONDUCTORS

- 4.1.1 No person shall erect or cause or permit to be erected any building, structure, scaffold, or any other thing, or part of any building, structure, scaffold, or any other thing, at a distance in any direction from the conductor of an overhead electric line of less than that shown in Table 5.

TABLE 5

MINIMUM DISTANCE IN ANY DIRECTION FOR CONSTRUCTION OF BUILDINGS, SCAFFOLDING AND OTHER STRUCTURES NEAR CONDUCTORS

Line voltage	Minimum distance under normal conditions
Not exceeding 66 kV (maximum span 125 m)	4.0 m
Exceeding 66 kV (maximum span 125 m)	5.0 m
Any voltage (span greater than 125 m but less than 250 m)	6.0 m
Any voltage (span greater than 250 m but less than 500 m)	8.0 m
Any voltage (span exceeding 500 m)	As agreed with owner of the line but not less than 8.0 m

- 4.1.2 If any building, structure, scaffold, or other thing, or any part of a building, structure, scaffold, or other thing, is erected at a distance from any conductor of an electric line less than that permitted by clause 4.1.1 either:
- The building, structure, scaffold, or other thing, or the part of the building, structure, scaffold, or other thing, shall be so removed or altered by the persons responsible for its erection that the prescribed minimum distances are obtained; or
 - The owner of the overhead electric line may remove the line to a new position that will provide the prescribed minimum distance at the cost of the said person responsible.

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- 4.1.3 Low voltage conductors shall be installed at a height of more than 5.0 metres above any diving platform or structure on which a person may stand or climb, and in any case more than 5.0 metres above the water level of a swimming pool.
- 4.1.4 High voltage conductors shall not be installed above a pool area.
- 4.2 LOCATION OF CONDUCTORS NEAR BUILDINGS AND OTHER STRUCTURES**
- 4.2.1 The minimum distance from any structure, building, post or line support (other than a support to which the line under consideration is attached or a support of another overhead line which crosses the line under consideration) to any position to which a conductor in an overhead line may swing under the influence of wind or sag, load current or solar radiation, shall not be less than those specified in Table 6.
- 4.2.2 Subsection 4.2 does not apply to cable systems supported along the facade of a building, conductors insulated to full working voltage or to traction systems.
- 4.2.3 The distances specified in A and B of Table 6 shall also be maintained above an imaginary horizontal line extending outward for the distance specified in C.

APPENDIX 10B: EXTRACTS FROM N.Z. ELECTRICAL CODE OF PRACTICE FOR ELECTRICAL SAFETY DISTANCES (N.Z.E.C.P.34 1993)

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4.3 EXCAVATIONS OR CONSTRUCTION NEAR ELECTRIC LINE SUPPORTS

- 4.3.1 Except with the prior written consent of the owner, and subject to such conditions as may be specified in the consent, no person shall, in the case of any pole supporting any conductor, excavate or otherwise interfere with any land:
- (a) Within 2 metres of the pole; or
 - (b) At a greater depth than 750 mm between 2 metres and 5 metres of the pole; or
 - (c) In such a way as to create an unstable batter.
- 4.3.2 In the case of any tower or pylon supporting any conductor, no person shall without the written consent of the owner of the tower or pylon:
- (a) Excavate or otherwise interfere with any land:
 - (i) within 6 metres of the outer edge of the visible foundations of the tower or pylon; or
 - (ii) at a depth greater than 3 metres, between 6 metres and 12 metres of the outer edge of the tower or pylons; or
 - (iii) in such a way as to create an unstable batter; or
 - (b) Build any structure within 12 metres from the foundation of the tower or pylon.
- 4.3.3 Excavated or other material shall not be deposited under or near an overhead electric line so as to reduce the conductor distance to ground to less than those distances required by this Code.
- 4.3.4 Nothing in clauses 4.3.1 and 4.3.2 of this clause shall apply in respect of normal agricultural cultivation or the repair, sealing, or resealing, of the existing surface of any road or footpath.
- 4.3.5 Except with the prior written consent of the line owner, conductive fences shall not be constructed within 5 metres from any tower, pylon, or metal pole. As part of the consent the line owner may prescribe the design of any such fence within this 5 metre distance.