

**Kaipara District Council**

**Roadside Weed Management**

**Strategy**

**2013/2018**



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## **1 Introduction**

This document seeks to satisfy the requirements of the Northland Regional Pest Management Strategies 2010/2015 for roading authorities to produce a five year management plan for progressively controlling plant pests within formed road corridors in the District. Its implementation is wholly dependent on funding being allocated through the Council's Long Term Plan and Annual Plan processes.

The Kaipara District Council is committed to meeting its obligations under the Regional Pest Management Strategies but it has to do so in a financially sustainable way which is acceptable to the communities which it serves. Kaipara District Council believes the following programme is achievable and seeks to make optimal use of the existing processes and resources available with which to meet its obligations under the Regional Pest Management Strategies. It also recognises the benefits of working with stakeholders, including individual communities, where resource efficiencies can be gained by working collaboratively to achieve the desired environmental outcomes.

## **2 Objective of the Roadside Weed Management Strategy**

Manage and control roadside plant pests in the Kaipara District in order to meet the requirements of the Northland Regional Pest Management Strategies, maintain and enhance the integrity of the District's roading assets, be a good neighbour and act in an environmentally sustainable way.

## **3 Background**

### **3.1 Legislation**

#### **3.1.1 Biosecurity Act 1993**

The Biosecurity Act gives Northland Regional Council the power to implement and enforce its Regional Pest Management Strategies. The Kaipara District Council is required to comply with these strategies that govern the management of noxious weeds in the road corridor.

### **3.2 Funding Allocation and Levels of Service**

#### **3.2.1 Long Term Plan 2012/2022 and Activity Management Plan (Transportation)**

Funding for weed management in the road corridor is allocated through the operational budgets included in the Long Term Plan. The Asset Management Plan for Transportation provides for the lifecycle management of Kaipara District Council's transportation assets to the required levels of service identified in the Long Term Plan.

The operational performance measures in the Asset Management Plan for the Environmental and Road Environments Activity includes the following performance measure in relation to noxious weeds:

Activity	Intervention Level	Road Group	Response Time	Notes
Spraying - Noxious Weeds	Any weeds indicated in NRCs Pest Management Strategy		On inspection	

### 3.3 The Kaipara District Roading Network

#### 3.3.1 Arterial roads

These are the major roads into and through the District (excluding State Highways) and roads servicing significant areas of development.

#### 3.3.2 Collector roads

These roads are those that collect traffic from specific areas, or link important roads or major traffic generators, such as industrial areas or tourist attractions.

#### 3.3.3 Local roads

These roads are not those classified into the above categories and whose major function is to provide access to property, rather than provide routes for traffic.

#### 3.3.4 High Maintenance

The remaining roads are those that do not fit within the above categories and where it is identified to have a higher need for maintenance.

#### Summary of Kaipara District Roading Network

Type	Sealed	Unsealed
Arterial	135.07	4.66
Collector	179.22	104.78
Local	131.41	854.96
High Maintenance	0.34	159.99
<b>Total (kilometres)</b>	446.04	1,124.39

## 4 Priorities and Actions

Kaipara District Council has developed, and will continue to enhance, its asset management systems which will enable it to gain further efficiencies and be proactive in its control of roadside weeds. The following section provides an overview of the Road Asset Management and Maintenance database, the primary system to be used in implementing of the Strategy.

### 4.1 The Road Asset Management and Maintenance Database

The Road Asset Management and Maintenance database (RAMM) is the foundation of the Asset Information System. It is used to store asset data and other information related to the

asset. This data forms the core of the information that is available on any asset and it is used in management information and decision support systems that are vital for good Asset Management. It is also a core system for managing the roading network in regards to development of work programmes.

Typical datasets consists of definitive data such as the length and width of an asset and the extent or quantity, spatial and relative location, materials and condition data. Additional functionality available is:

- Mapping
- Asset valuation
- Forward work programming
- Traffic counting
- Maintenance costs.

RAMM contains the Forward Work Programme and is used, for some assets, to determine which assets required renewal and to prioritise the works once they have been identified.

The maintenance needs of the roading network are primarily determined from regular inspections of the network with all observed defects logged into the maintenance defect pool within RAMM Contractor.

#### **4.1.1 RAMM Mapping**

Spatially represents asset inventory and condition data on a map of the roading network held in RAMM. This form of visual data representation helps in assessing the current Level of Service of an asset component, such as roadside weed control. The inventory of noxious weed data can be plotted on the map. An example of this plotting is included as [Appendix 2](#). This gives an instant visual representation of the deficiency in service level and can be used to determine a programme to achieve the service level required. Pocket RAMM is an application that runs on mobile devices such as smartphones and allows users to update asset inventory in the field.

#### **4.2 Criteria used to identify priority sites**

Based on the strategic direction provided by the Long Term Plan and the Asset Management Plan for Transportation the following criteria have been developed to identify priority sites for roadside weed management control:

- a. Sites where safety is being compromised.
- b. Those sites where the integrity of the roadway is being compromised.
- c. Those roads with a high traffic volume use of the road; arterial and collector routes will be given priority over local roads.
- d. High visibility public spaces, generally these are also defined as being on arterial or collector routes.
- e. Those sites with complaints from public.
- f. Those roads with low incidence of the target weed species.

### 4.3 Priority Target Weed Species

Kaipara District Council's Noxious Weed Management Plan for road reserves focuses on the control of the following species included in the Regional Pest Management Strategies:

**Table 1: Target weed species included in the Regional Pest Management Strategies**

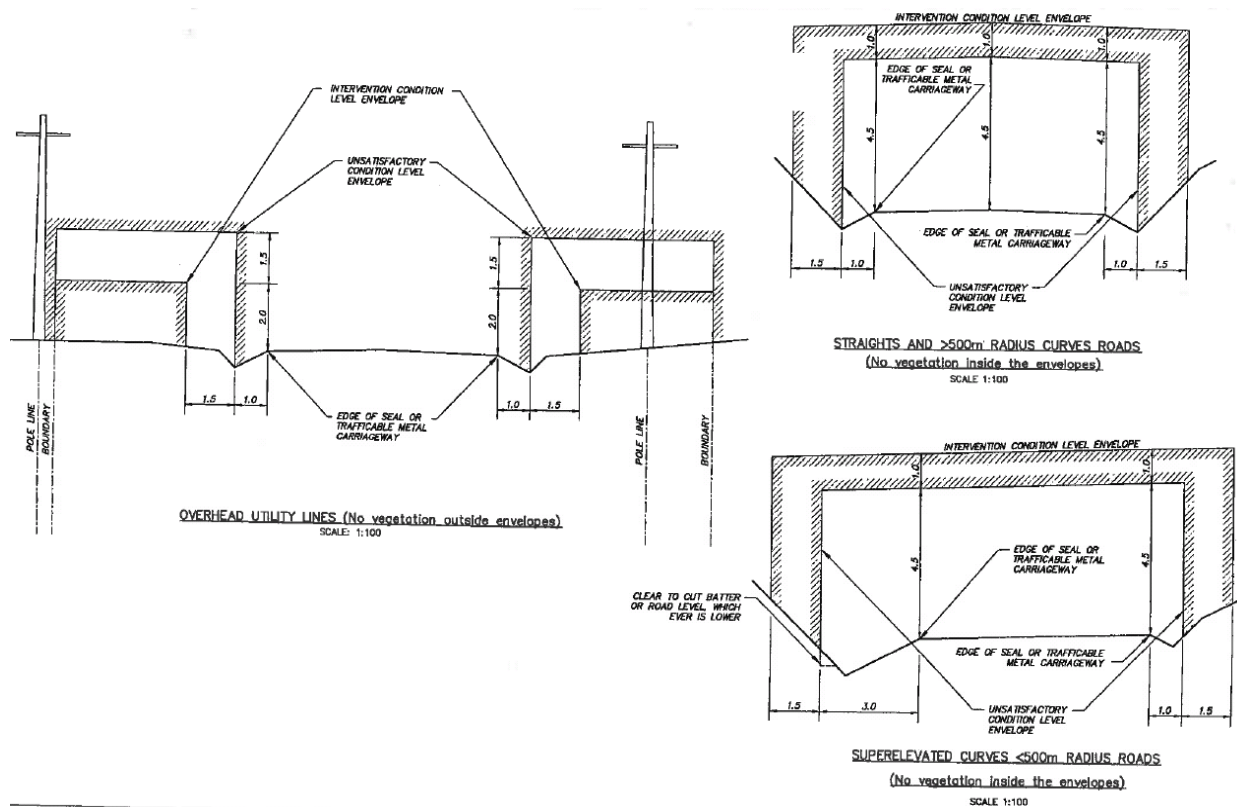
Species	Method of Control	Follow-up procedure
Wild Ginger	Spray programme	Annual inspection of treated roads
Privet	Spray programme	Annual inspection of treated roads
Broom	Spray programme	Annual inspection of treated roads
Pampas	Spot-spraying for visibility reasons or where interspersed with other noxious weeds	Annual inspection of treated roads
Gorse	Spot-spraying for visibility reasons or where interspersed with other noxious weeds	Annual inspection of treated roads
Wilding Pines	Spot-spraying for visibility reasons or where interspersed with other noxious weeds	Annual inspection of treated roads

[Appendix 1](#) indicates the above species identified per road that will be targeted as part of this strategy.

### 4.4 Definition of the Road Corridor and Vegetation Envelope

The road corridor can be defined as extending from the fence on one side of the road reserve to the fence on the other side and often reflects the legal boundaries of the road reserve.

The vegetation envelope extends between 1.5 and 2 metres (depending on roading conditions, alignment etcetera) out from the edge of the seal or formed carriageway (if the road is unsealed). The vegetation envelope tends to be wider on the inside of corners to provide greater visibility. The extent of these zones is shown in the figures below.



#### 4.5 Description of Vegetation Control Methods used in the Road Corridor

Kaipara District Council undertakes vegetation control in the road corridor to maintain the integrity of its roading assets and enhance road safety by providing clear sightlines and by ensuring that there is free water flow off the road surface and no water ponding on the road surface or in the wheel tracks. The following section describes the activities undertaken to control vegetation in the road corridor, including noxious weed control.

The use of herbicide sprays is limited to areas where it is not practical or economical to carry out manual, mechanical or other methods of vegetation control.

The road corridor is maintained by a combination of the following activities:

**Hydro-mowing:** This mowing is performed on scrub to ensure an obstruction-free state of visibility and to keep the road envelope clear of encroaching vegetation. Areas for sight visibility are maintained at all intersections and bridges.

**Pruning:** Selective limbing of trees in a horticultural trained manner is carried out so that they do not intrude or grow back within one year into the vegetation envelope of the road.

**Roadside boom spraying:** Spraying is carried out in three periods and repeated annually at an average of 2 metres from edge of seal, or edge of formed road and includes watertable or side drains. These spray periods are adjusted to suit growth and climate conditions.

**Noxious Weeds:** The Noxious Weed Management Plan for the road reserve in Kaipara District focuses on spraying selected weed species, as identified in the table in Item 4.3, growing in the road reserve. Bamboo, agapanthus, flax and bramble (blackberry and other prickly species) are also targeted at priority sites which meet the criteria identified above. The focus on target

species and priority sites is necessary to limit public expectations that all weed species growing in the road corridor will be treated.

#### 4.6 Contract Monitoring

All works involving spot-spraying use handheld spray equipment and is based on a pre-approved monthly contract programme of works. Council's contract is currently based on two methodologies, boom spraying and hand-spraying.

Contract monitoring involves visual inspections undertaken by Council's network inspectors. Kaipara District Council's network inspectors initially confirm the species and sites to be targeted and include them in the maintenance and weed control contract. The Network inspector who logs all roading defects has completed Northland Regional Council's 'Wise up to Weeds' workshop. Examples of inspections completed prior to and on completion of weed control activities are included in [Appendix 3](#).

#### 4.7 Funding for Roadside Weed and Vegetation Control

Kaipara District Council has had a programme in place for roadside vegetation maintenance for well over a decade. Between 2006/2007 and 2012/2013 Kaipara District Council spent over \$1.3 million controlling roadside vegetation. The table below illustrates Council's historical roadside vegetation control spending in the road corridor.

##### Roadside Vegetation Control Expenditure 2006/2007 – 2012/2013

Description	Actual 2008/2009	Actual 2009/2010	Actual 2010/2011	Actual 2011/2012	Budget 2012/2013
Vegetation Control	\$83,467.13	\$58,607.81	\$110,018.20	\$120,693.39	\$126,900.00

In 2012/2013 Kaipara District Council has allocated \$126,900 of its operational spending to roadside vegetation management targeting the species and priority sites as identified in this Strategy and requiring vegetation control through the Regional Pest Management Strategies. This spending excludes additional noxious weed control undertaken on Council-owned properties and assets, including parks and reserves.

Through its Roding Asset Management Plan 2013 Kaipara District Council has allocated funds for the next ten years for roadside vegetation including weedspraying and noxious weed control which includes weed species identified in the Regional Pest Management Strategies, and vegetation requiring control to ensure public safety and the integrity of the roading asset.

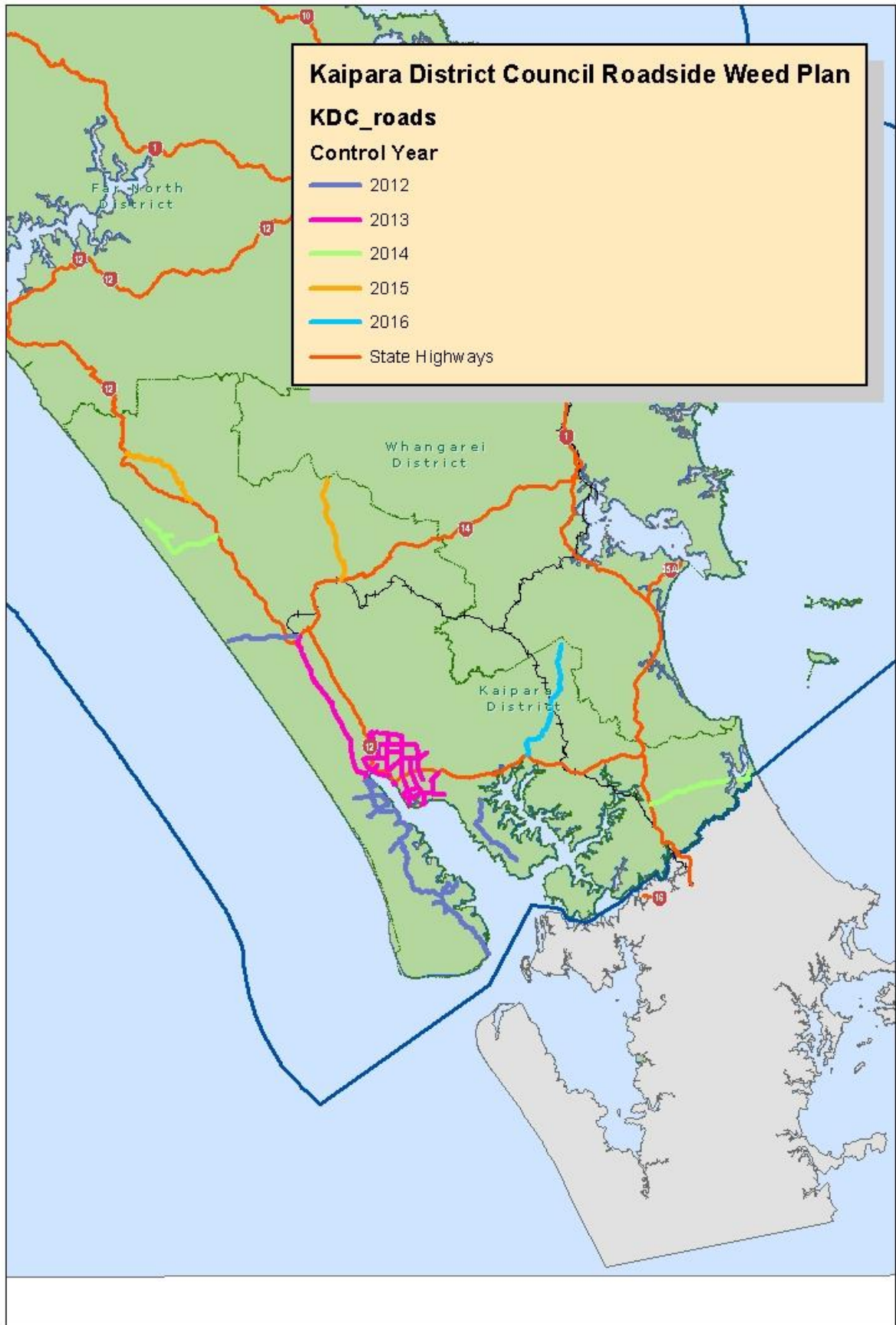
It is recognised through the Roding Asset Management Plan 2013 that this level of funding does not meet best practice and additional funding would enable the programme to be extended to include control of sites which are identified by the public and therefore likely to be of high community interest. This would be managed using RAMM which would align public complaints with Council's Forward Works Programme and prioritise works according to the criteria included in this Strategy. Essentially it would enable Council to continue to implement its programme but to a higher Level of Service and more effectively and proactively implement the requirements of the Regional Pest Management Strategies.



## 5 Implementation Programme 2013/2018

Implementation of the Roadside Weed Management Strategy 2013/2018 requires funding allocated through the Council's Long Term Plan and subsequently through the Rooding Asset Management Plan 2013. This has to be balanced alongside the other operational activities required to maintain Council's roading assets.

The previous decade of funding has enabled Council to initiate control of weeds on arterial and collector roads in the District. These roads are high priority for noxious weed control as they include many high visibility public spaces, including the town entranceways, and are high traffic volume roads. Local roads, whose main function is to provide access to properties, will be surveyed on an on-going basis as resources allow, following public complaints and during regular network inspections. The use of the RAMM database will enable integration across work programmes. The following figure shows the staged implementation of Council's weedspraying strategy over the four years from 2012 to 2016.



## **6 Movement of Soil from Rehabilitation Sites or Other Roadwork Sites**

Kaipara District Council recognises that transferring soil from rehabilitation sites or other roadwork sites (other than deep buried landfill) has the potential to move noxious weed species to other sites in the District or region potentially spreading the problem to other sites that then require control. Continued education of Council's network inspectors to recognise weed species and provide for their control and eradication prior to the transfer of any soil from sites will assist in preventing this from occurring. Kaipara District Council staff will work towards ensuring that Contractors are also made aware of requirements to ensure soil is free of noxious weeds before its movement.

## **7 Working with Northland Regional Council**

Kaipara District Council recognises that there are considerable benefits to working collaboratively with the Northland Regional Council to control noxious weeds in our road corridors. We would welcome any opportunity to combine resources to more effectively implement the Regional Pest Management Strategies and achieve the objective of this Roadside Weed Management Strategy.

## **8 Working with Industries and Network Utility Operators**

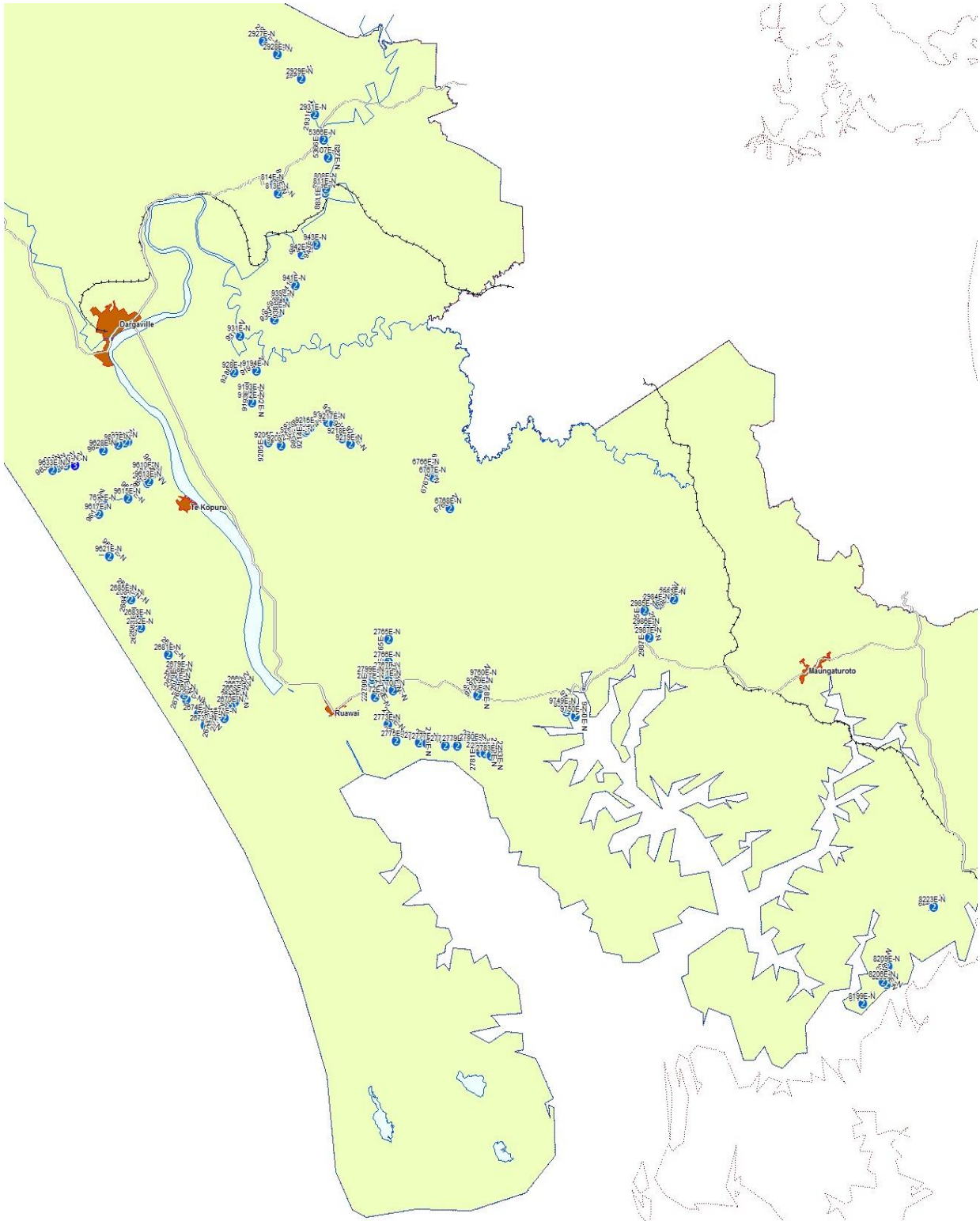
Kaipara District Council has limited funding available to work with industries and network utility operators unless the target sites also meet the criteria defined in this Strategy. At priority target sites where there are mutual benefits for Kaipara District Council, industries and/or network utility in working in partnership on revegetation of weed-prone land, Kaipara District Council will consider the benefits of the proposed project in the context of the funding available in that particular year for weed control activities.

## 9 Appendices 1 - 3

### 9.1 Appendix 1: Pest Plants and the Roads

Area	Pest Plants					
	Pampas	Gorse	Ginger	Broom	Privet	Wilding Pines Small Trees
Kaiwaka-Mangawhai Road						
Mangawhai Heads Rd						
Cove Road						
Brown Road						
Tara Road						
Garbolino Road						
Walker Terrace						
West Coast Road						
Redhill Cemetery Road						
Te Maire Road						
Sarich Road						
Pouto Road						
Redhill Road						
Kellys Bay Road						
Turkey Flat Road						
Bradleys LDG East Road						
Lutrell Road						
Baldrock Road						
Molesworth Drive						
Brown Road						
Mountain Road						

**9.2 Appendix 2: A sample from the RAMM database that shows roads that have at least three areas where noxious weeds are identified**





9.3 Appendix 3: Examples of weeds growing in the watertable that require targeted spraying



Pampas to be treated in watertable



Pampas in watertable effectively treated





Pampas growing in watertable



Flax growing in watertable





Pampas, Gorse, and Pines growing in watertable



Ginger growing in watertable





Pines growing in watertable



Gorse and Pampas growing on the roadside





Multiple weeds



Privet on roadside