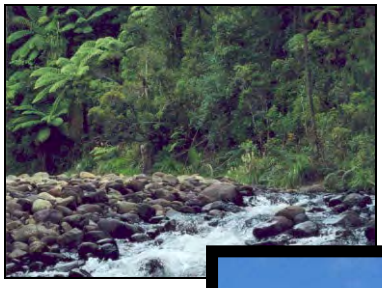
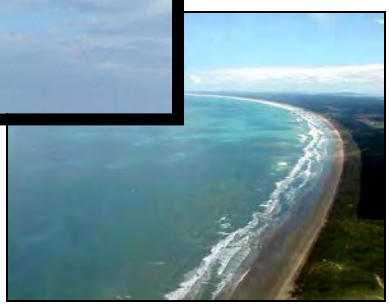
REGIONAL

AIR QUALITY PLAN

FOR NORTHLAND





NORTHLAND REGIONAL COUNCIL

CARING FOR NORTHLAND AND ITS ENVIRONMENT

Regional Air Quality Plan for Northland

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Cover Photo: Clouds at Baylys Beach
Susan Botting
Northland Regional Council

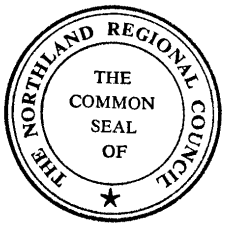
Resource Management Act 1991

APPROVAL OF THE REGIONAL AIR QUALITY PLAN (IN PART)

The Northland Regional Council by resolution dated 19 February 2003, approved and made operative in part the Regional Air Quality for Northland contained herein, with the exception of Rule 9.1.9 (a) – (f) and Rule 10.1.5 (a) – (f), pursuant to the powers and authorities vested in it by the First Schedule of the Resource Management Act 1991.

This approval will be publicly notified on 22 March 2003 and becomes operative on 31 March 2003.

The common seal of the Northland Regional Council was hereto affixed in the presence of:



Chief Executive Officer

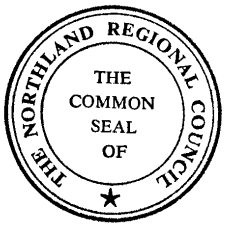
Resource Management Act 1991

APPROVAL OF THE REGIONAL AIR QUALITY PLAN

The Northland Regional Council by resolution dated 20 July 2005, approved and made operative in full the Regional Air Quality for Northland contained herein, pursuant to the powers and authorities vested in it by the First Schedule of the Resource Management Act 1991.

This approval will be publicly notified on 23 July 2005 and becomes operative on 1 August 2005.

The common seal of the Northland Regional Council was hereto affixed in the presence of:



Chief Executive Officer

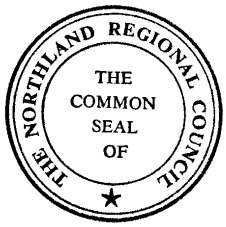
Resource Management Act 1991

APPROVAL OF REGIONAL AIR QUALITY PLAN CHANGES 1 AND 2

The Northland Regional Council by resolution dated 15 October 2008, approved and made operative Plan Changes 1 (Marsden Point Air Quality Strategy) and 2 (Backyard Burning) to the Regional Air Quality for Northland contained herein, pursuant to the powers and authorities vested in it by the First Schedule of the Resource Management Act 1991.

This approval will be publicly notified on 22 November 2008 and becomes operative on 1 December 2008.

The common seal of the Northland Regional Council was hereto affixed in the presence of:



Chief Executive Officer

"Whatungarongaro Te Tangata Toitu Te Whenua"

Ko te wehi ki a Ihowa te timatatanga o ngaa whakaaro nui
He maungaarongo ki te mata o te whenua.
He whakaaro pai ki ngaa taangata katoa.
Kia noho ai te aroha a Ihowa
ki runga ia taatou katoa.
Tihewa Mauri Ora!

E ngaa iwi, e ngaa tini karangaranga taangata,
Teenaa anoo taatou katoa.

E mihi tonu ana ki te tini o a taatou maatua tuupuna
kua wehe atu ki te poo.
Ngaa mate no teenaa iwi, no teenaa iwi;
"He raarangi maunga tuu te ao tuu te poo;
He raarangi taangata ka ngaro, ka ngaro, na e ngaro tonu nei."
Haere koutou, haere, haere, haere.

E ngaa huihuinga taangata
E noho mai raa i roto i te Tai Tokerau,
Teenaa koutou, teenaa koutou, teenaa anoo taatou katoa.

Ko eenei Ngaa Tikanga Mo Nga Hau a
Te Kaunihera Whaanui o te Taitokerau.
Kahore anoo i whakatuuturu eenei kaupapa,
heoi anoo maa te iwi whaanui e whakatutuki.
Kia tiaki ai taatou i eenei taaonga tuku iho;
Ngaa taaonga o Te Tai Ao, o Te Ao Tuuroa

Ko te tumanako, kia tau mai ngaa manaakitanga o te
Runga Rawa ki teenaa ki teenaa o taatou.

Teenaa koutou, teenaa koutou
Kia ora mai anoo taatou katoa.

"Man Will Pass, But the Earth Remains"

Greetings to all people of the Northland Region.

Firstly, we acknowledge those who have gone before us,
From whom we derive our heritage,
Farewell.

To us who remain,
Greetings.

We present here the Regional Air Quality Plan for Northland
In setting it down we look to you, the people of Northland,
For the mandate to carry it out,
So that together we may achieve the wise management of the environment.

May we be blessed in doing so,
Greetings to you all.

CHAIRMAN'S FOREWORD

It is with a great deal of satisfaction that Council now makes operative this Regional Air Quality Plan for Northland.

The Plan is the culmination of a lengthy, involved process that has involved significant resources and many years of diligent and careful work from staff and Councillors alike.

The wider Northland community has also played a vital role, with the Plan drawing heavily on the public's views and aspirations.

This Plan is a crucial one, providing the basis upon which the Northland Regional Council will carry out its responsibilities for managing the region's air quality. Northland's dispersed population and a relative lack of heavy industry means we are fortunate to enjoy air that is generally of high quality.

The Plan will ensure air quality parameters are known and will continue to be met in Northland in future. It abides by the framework set down in the Resource Management Act 1991 while at the same time affords Northlanders a welcome degree of certainty as to how air quality matters will be dealt with.

In developing this Plan, the Regional Council has always kept in mind the need to protect our environment yet still enable people to go about their lives with as little hindrance as possible.

The result is a permissive, dynamic document. Accordingly, if any unforeseen problems are found over time, the Council can initiate a plan change to correct them.

My sincere thanks to all who have played a part in the development of this Plan.

Mark Farnsworth, Chairman.

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PART I:

RESOURCE DESCRIPTION

This part provides a brief description of Northland's air resources.

1. NORTHLAND'S AIR QUALITY

Northland enjoys a high standard of air quality. This is partially attributed to prevailing southwesterly winds which quickly disperse air pollutants. It also reflects the region's dispersed population, low overall population numbers, the absence of heavy industrialisation throughout most of the region and the low concentrations of motor vehicles.

Approximately half of Northland's 140,000 people live in urban areas. Whangarei is the largest town with a population of just over 46,000. Other centres include Kaitaia (5200), Taipa-Mangonui (1600), Kerikeri (4800), Kawakawa (1400), Kaikohe (4000) and Dargaville (4500). The population is generally concentrated along the region's east coast, particularly in the Whangarei and Bay of Islands areas.

Whangarei is located at the head of a tidal estuary and the proximity of the surrounding hills provides conditions that could be conducive to high levels of air pollution at certain times of the year. This is currently offset by the relatively low overall mass of emissions.

Near the entrance to the Whangarei Harbour at Marsden Point, over 571 hectares of land is zoned for heavy industrial purposes. This land includes New Zealand's only oil refinery and related deep water port and the cargo port operated by Northport Limited. Other development at Marsden Point includes the LVL Plant (Laminated Vinea Lumber) and sawmills as well as small utilities and several light industrial operations. Most of the land is currently used for pastoral farming and appears significantly under-utilised for industrial purposes. Further industrial development of Marsden Point has the potential to significantly affect the air quality in the Whangarei Heads, Ruakaka and One Tree Point areas if not carefully managed.

Northland's economy is primarily based on the agricultural sector. Approximately 54% of the land is in pasture, while 10% (133000 ha) is planted in production forest, and 0.4% (5000 ha) is in orchards or crops. Mining is also a major contributor to the regional economy with ceramic clay, silica sand and limestone being important commercial resources.

There are a number of stand alone processing plants scattered throughout the region, including cement and fertiliser plants, meatworks, dairy factories, timber processing, and fibre board manufacture plants. Various activities and contaminants associated with these land uses have or may have localised adverse effects on air quality. These include effects arising from the agricultural production sector, oil refining and energy production, industrial manufacturing and processing, abrasive blasting, agrichemical spraying, domestic incinerators and fires.

Northland has one geothermal field centred at Ngawha Springs to the east of Kaikohe which provides a natural source of air discharges. Discharges of gas and steam occur through vents in the rock and seepages on the surface. The typical “rotten egg” smell of geothermal activity is evident in the vicinity of the Ngawha Domain baths but is only noticed on occasions in the surrounding area.

There is a desire to maintain the existing high air quality throughout Northland and to improve standards where air quality is degraded.

Environmental Results expected from the implementation of this plan are covered under Section 15.

PART II:

BACKGROUND

This part explains the purpose of the Regional Air Quality Plan. It sets out the statutory and administrative resource management frameworks within which the Plan is required to operate. It also includes a description of the iwi perspective of resource management.

2. INTRODUCTION

2.1 TRANSITIONAL PROVISIONS

With the enactment of the Resource Management Act, the responsibility for regulating air emissions moved from central government and territorial local authorities to regional councils.

The Northland Regional Council's Transitional Regional Plan contains no provisions relating to discharges to air, so when the Resource Management Act became law, all discharges of contaminants to air from industrial or trade premises became discretionary activities for which a resource consent was required. At the time of transition, all licences authorised under the repealed Clean Air Act were deemed to be air discharge permits under the Resource Management Act.

The Transitional Provisions of the Resource Management Act exempt those discharges from industrial or trade premises which did not require a licence or authorisation under the Clean Air Act until 1 October 1996, unless a regional plan provides otherwise. However, this does not apply to discharges from premises used for the storage, transfer, treatment or disposal of waste materials or other waste management purposes or for composting organic material, which commenced operation after 1 October 1991.

Air discharge permits for most other air discharges are not required unless a rule in a Regional Air Quality Plan provides otherwise.

2.2 PURPOSE OF THE PLAN

The Resource Management Act came into force on 1 October 1991. The Act aims to promote the sustainable management of New Zealand's natural and physical resources through, among other things, a framework of policy statements and plans. This includes the preparation of regional plans where the following circumstances or considerations arise or are likely to arise (Section 65):

(a) Any significant conflict between the use, development, or protection of natural and physical resources or the avoidance or mitigation of such conflict:

(b) Any significant need or demand for the protection of natural and physical resources or of any site, feature, place, or area of regional significance:

(c) Any threat from natural hazards or any actual or potential adverse effects of the storage, use, disposal, or transportation of hazardous substances which may be avoided or mitigated:

(d) Any foreseeable demand for or on natural and physical resources:

(e) Any significant concerns of tangata whenua for their cultural heritage in relation to natural and physical resources:

(f) The restoration or enhancement of any natural and physical resources in a deteriorated state or the avoidance or mitigation of any such deterioration:

(g) The implementation of a national policy statement or New Zealand coastal policy statement:

(h) Any use of land or water that has actual or potential adverse effects on soil conservation or air quality or water quality:

(i) Any other significant issue relating to any function of the regional council under this Act.

The purpose of the Regional Air Quality Plan is to assist the Northland Regional Council, together with the resource users of Northland, to promote the sustainable management of the region's air resources. This plan has been guided by the Regional Policy Statement for Northland (March 1999).

2.3 PLAN AREA COVERAGE

This Plan covers all land based discharges of contaminants to air for the Northland region. This extends northwards of a line between the Oruawharo arm of the Kaipara Harbour on the West Coast and a point just south of the Mangawhai Harbour on the East Coast, and extends inland from Mean High Water Springs (MHWS) and the agreed cross-river boundaries which are outlined in the Proposed Regional Coastal Plan. The Northland region is depicted in Figure 1.

This Plan does not have effect over discharges to air from the coastal marine area of the Northland region. Any air discharges in this area are covered by the Proposed Regional Coastal Plan.

2.4 PLAN PREPARATION PROCESS

This Plan has been prepared following a process of public consultation in accordance with the requirements of the First Schedule to the Resource Management Act.

A discussion paper entitled, "Towards Regional Plans for Water, Soil and Air Management" was prepared and released in December 1992. It was widely circulated to interested parties and the general public. The discussion paper set out the legislative framework for preparing the Plan, provided an overview of water, soil and air issues within the region, and asked for submissions on the direction of future water, soil and air management in Northland.

In July 1995 the Proposed Regional Air Quality Plan for Northland was publicly notified.

FIGURE 1: NORTHLAND REGION

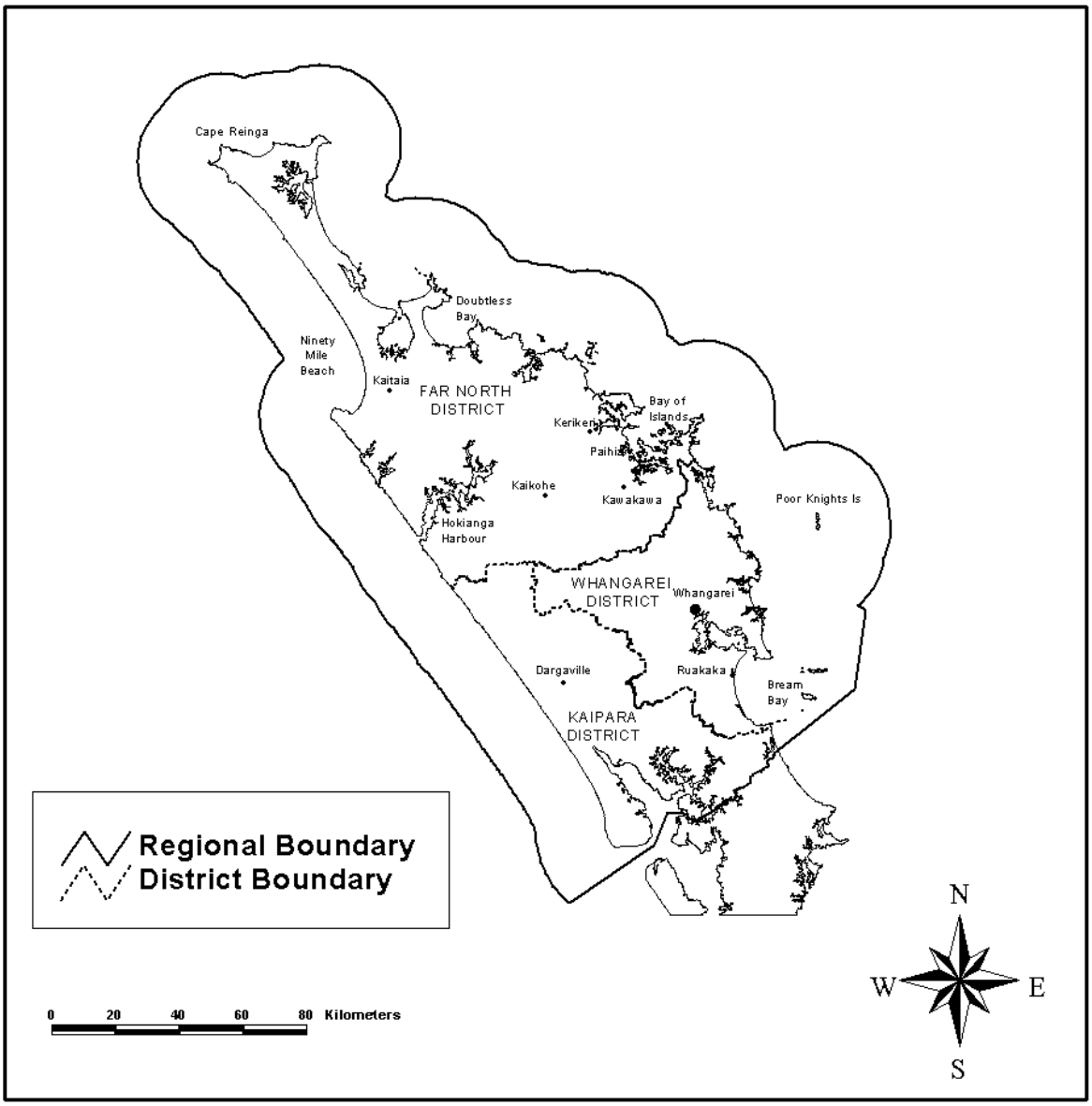
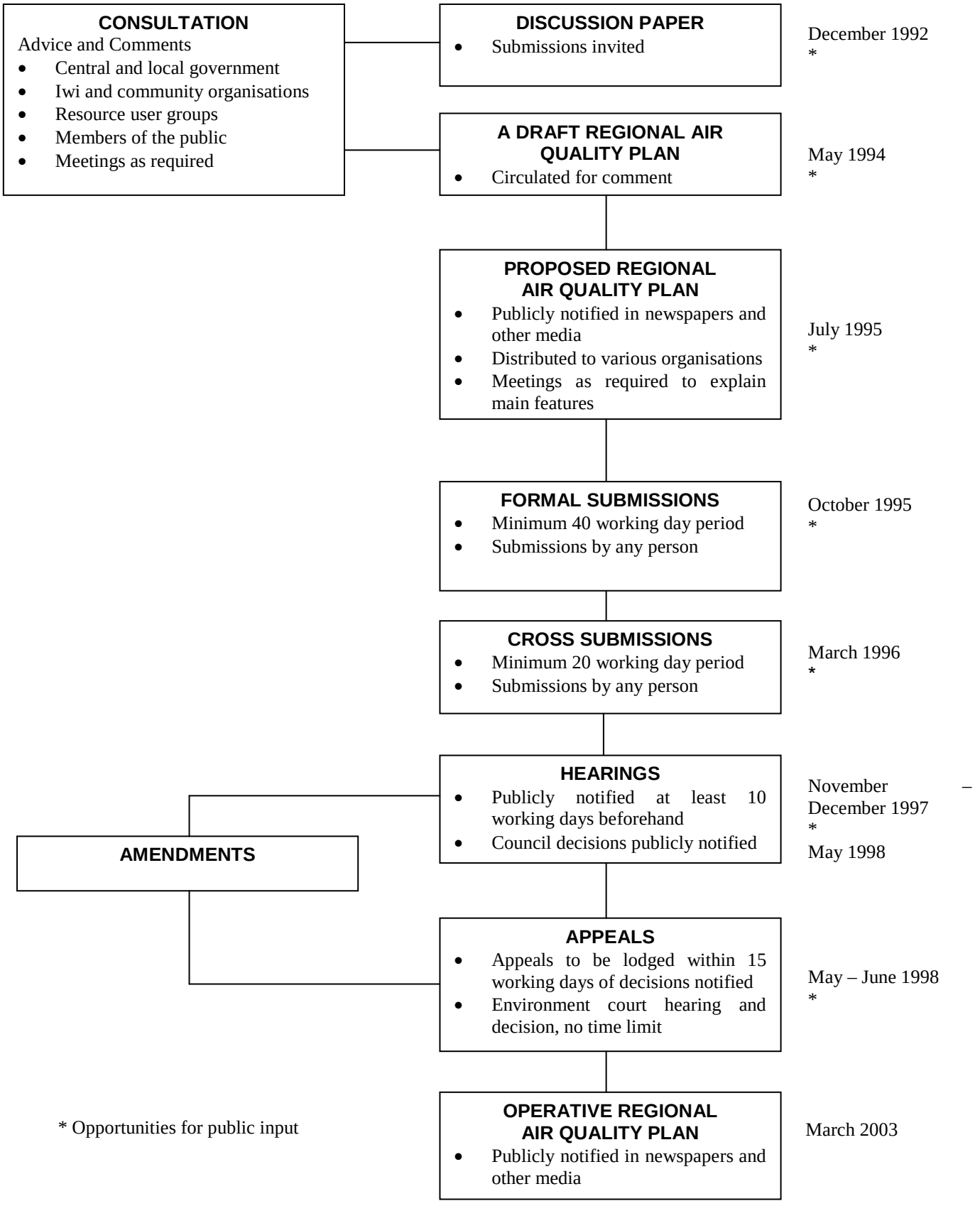


FIGURE 2: PROCESS FOR PREPARATION OF A REGIONAL PLAN



In total, 1534 submissions and 2378 cross submissions were received in relation to the Proposed Plan. These have been considered through the process set out in First Schedule of the Act, and where appropriate the plan has been amended to give effect to decisions made on the submissions and cross submissions.

Any party not satisfied with the Council's decision on their submission had the right of appeal to the Environment Court. In total, 10 appeals were received in relation to the Proposed Plan. These have been considered through the process set out in the First Schedule of the Act, and where appropriate the plan has been amended to give effect to the decisions of the Environment Court.

The preparation process up until the notification of the Plan is depicted in Figure 2, together with the other statutory steps required to be undertaken before this Plan is made operative.

2.5 PLAN STRUCTURE

The structure of this Plan is based upon the requirements for a regional plan as set out in Section 67(1) of the Resource Management Act. The Plan is divided into seven parts.

PART I - RESOURCE DESCRIPTION

Section 1 describes the region's existing air quality.

PART II - BACKGROUND

Section 2 sets out the purpose of the plan, its coverage area and the preparation process.

Section 3 details the legislative framework and the various policy statements and plans that the Act requires. It also details how cross boundary issues are to be addressed.

Section 4 outlines the iwi perspective on resource management.

PART III - MANAGEMENT APPROACH

Section 5 sets out the general approach being taken to implement the policies and to achieve the objectives specified in this Plan.

PART IV - RESOURCE POLICY

Section 6 sets out the issues, and the objectives, policies and methods of implementation to be used to address those issues. Section 7 gives the principal reasons for adopting the objectives, policies and methods.

PART V - RULES

Section 8 provides a summary of the rules and a guide to their use.

Section 9 sets out the rules for discharges of contaminants to air from industrial or trade premises.

Section 10 sets out the rules for discharges of contaminants to air from places or sources other than industrial or trade premises.

Sections 11 and 12 set out the information requirements and assessment criteria to be used in respect of applications for air discharge permits.

PART VI - ADMINISTRATIVE ISSUES

Section 13 details the procedures which relate to the processing of air discharge permits.

Section 14 provides details of key administrative issues including Council charges and transfer of powers and sets out objectives, policies and methods of implementation for the use of bonds and financial contributions.

PART VI - PLAN EFFECTIVENESS

Section 15 details the environmental results expected as a direct result of the implementation of this Plan.

Section 16 sets out the processes for monitoring, changing or reviewing this Plan to help ensure that the expected environmental results are achieved.

2.6 KEY TERMS

Throughout this plan, the terms "issue", "objective", "policy", "method of implementation" and "rule" are used.

For the purposes of this plan, the following definitions are used:

Issue:	A matter of concern over existing or potential effects of the protection, use or development of natural and physical resources within the Northland region.
Objective:	A measurable aim or an end result to which efforts to address an issue are directed.
Policy:	A general course of action to be followed in order to meet an objective.
Method of Implementation:	A practical action by which a policy is put into effect, and can include regulations or rules, provision of information, education and economic incentives or disincentives.

Rule:	A specific requirement to which a person or persons using or developing the region's resources must conform. A rule may be applied generally or in relation to a specific type of use or development. The provision of rules is important because Section 15 of the Resource Management Act generally prohibits discharges of contaminants unless expressly allowed by a rule in a regional plan or by a resource consent.

3. STATUTORY FRAMEWORK

3.1 INTRODUCTION

The policy framework for managing natural and physical resources under the Resource Management Act consists of a hierarchy of policy statements and plans which involve all levels of government - national, regional and district. The key elements in this structure of relevance to air quality are:

(a) The Purpose and Principles of the Resource Management Act

(b) A Regional Policy Statement for each region (compulsory)

(c) A Regional Coastal Plan for each region (compulsory)

(d) Regional Plans (voluntary)

(e) District Plans for each District (compulsory)

The voluntary regional plans may cover specific management issues. The relationship of these documents to the Regional Air Quality Plan is illustrated in Figure 3.

3.2 PURPOSE AND PRINCIPLES OF THE RESOURCE MANAGEMENT ACT

The purpose of the Act is to promote the sustainable management of the natural and physical resources of the region. Sustainable management of natural and physical resources is defined in the Act as meaning:

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 well being and for their health and safety while-

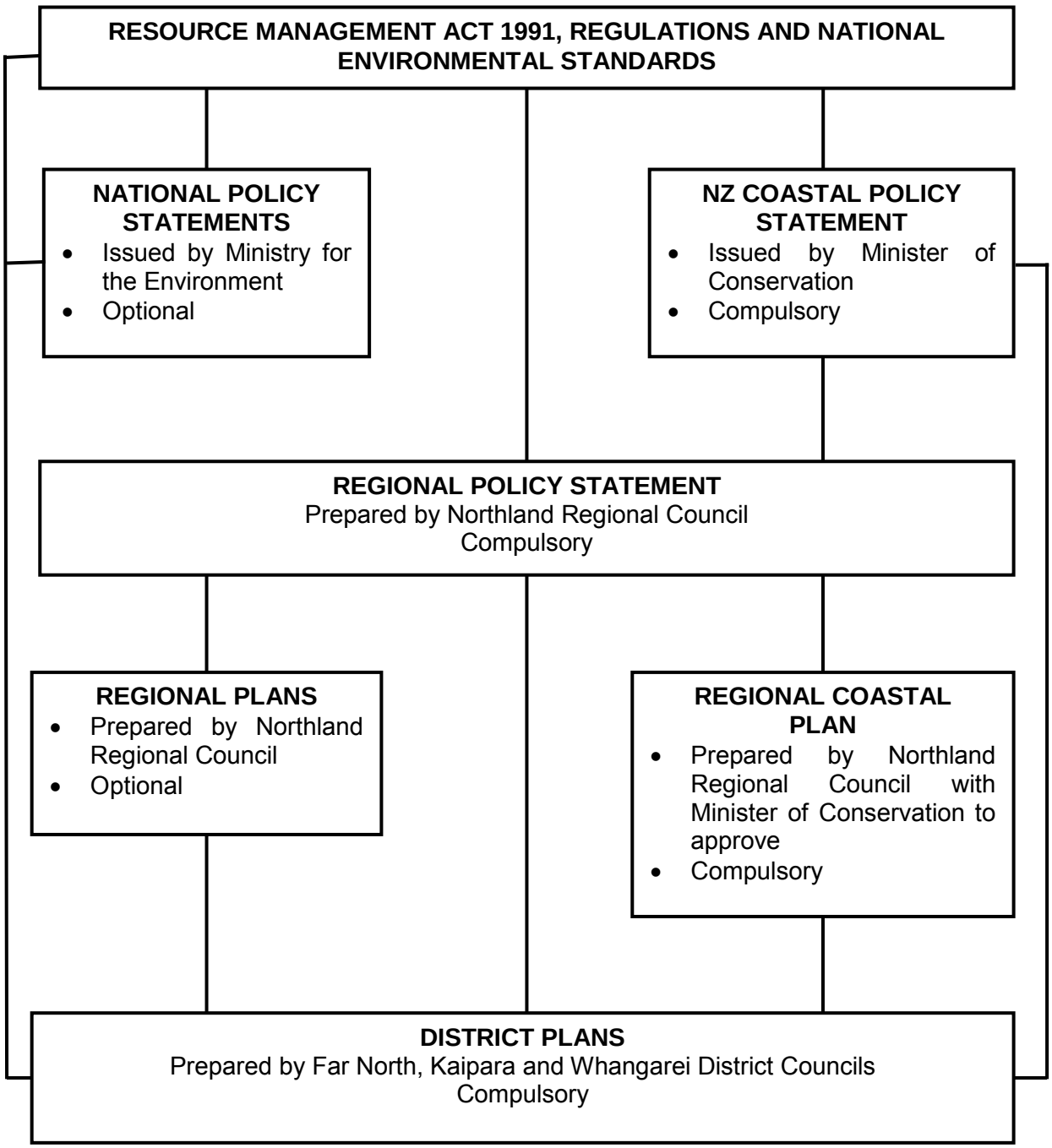
(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(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.

Sections 6, 7, and 8 of the Act specify a set of principles which are binding on all persons who exercise functions and powers under the Act and which, therefore, must be reflected in any policy statement or plan prepared under the Act.

FIGURE 3: POLICY STATEMENT AND PLANS FRAMEWORK



Section 6 of the Act requires that this Plan gives recognition to, and provision for, the following matters which are considered to be of national importance:

(a) The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins and the protection of them from inappropriate subdivision, use, and development:

(b) The protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:

(c) The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:

(d) The maintenance and enhancement of public access to and along the coastal marine area, lakes and rivers.

(e) The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.

Section 7 of the Act requires that this plan is developed, and is implemented and administered, with particular regard to:

(a) Kaitiakitanga:

(b) The efficient use and development of natural and physical resources:

(c) The maintenance and enhancement of amenity values:

(d) Intrinsic values of ecosystems:

(e) Recognition and protection of the heritage values of sites, buildings, places, and areas:

(f) Maintenance and enhancement of the quality of the environment:

(g) Any finite characteristics of natural and physical resources:

(h) The protection of the habitat of trout and salmon:

Finally, Section 8 of the Act requires that all persons exercising functions and powers under this Act, in relation to managing the use, development and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

3.3 FUNCTIONS OF THE REGIONAL COUNCIL

It is a function of the Regional Council to control the discharge of contaminants into air. Section 15 of the Act restricts the discharge of contaminants into the environment including the discharge of contaminants into the air.

The relevant parts of Section 15 state:

15. Discharge of contaminants into environment-

(1) No person may discharge any-

(c) Contaminant from any industrial or trade premises into air;

unless the discharge is expressly allowed by a rule in a regional plan and in any relevant proposed regional plan, a resource consent, or regulations.

(2) No person may discharge any contaminant into the air, or into or onto land from -

(a) any place
(b) any other source, whether moveable or not, -

in a manner that contravenes a rule in a regional plan or proposed regional plan unless the discharge is expressly allowed by a resource consent or allowed by section 20 (certain existing lawful activities allowed)"

This means that the discharge of contaminants to air from all industrial or trade premises will only be allowed if it is authorised by a resource consent obtained from the Northland Regional Council, or by a rule in the regional plan or proposed regional plan or by regulations.

Discharges from any other source or place can be regulated only if provided for by a rule in this Plan. This applies to places that are not industrial or trade premises and would include farmland, residential properties and cars and trains.

Section 17 of the Resource Management Act imposes a general duty upon every person to avoid, remedy or mitigate any adverse effect arising from an activity that he or she is carrying out or that is being carried out on his or her behalf. This duty only arises when there is an adverse effect on the environment and applies even if the activity is conducted in accordance with any rule, plan or resource consent.

3.4 REGIONAL POLICY STATEMENT

As required under the Act, the Northland Regional Council has prepared a Regional Policy Statement (RPS). The RPS identifies the key regional resource management issues and objectives within Northland. It sets out the general policies, methods and approaches to be used in the Northland region to achieve integrated resource management.

As required under the Act this Regional Air Quality Plan is not inconsistent with the Regional Policy Statement.

3.5 OTHER REGIONAL PLANS

The Regional Air Quality Plan must not be inconsistent with any other regional plan. The Northland Regional Council has also prepared a Proposed Regional Coastal Plan and a Proposed Regional Water and Soil Plan (Section I). These plans cover the management of Northland's coastal resources, and land and fresh water resources respectively. The Proposed Regional Coastal Plan covers discharges to air and air quality management within the coastal marine area of the Northland Region. The policies within these plans must not be inconsistent with this Plan.

They will also play an important role in dealing with cross boundary issues such as the management of land or marine developments which affect air quality.

3.6 DISTRICT PLANS

District councils are required to prepare district plans to assist them to carry out their functions under the Act. Of particular relevance to this Plan are the functions of district councils to control the use of land, including subdivision. Land use controls can be an important air quality management tool.

District plans cannot be inconsistent with the Regional Policy Statement or Regional Plans.

3.7 CROSS BOUNDARY ISSUES

The Act requires this Plan to state the process to be used to deal with issues which cross territorial boundaries. The Northland Regional Council adjoins the Auckland Regional Council to the south and within the region there are three District Councils; the Far North District Council, Kaipara District Council and Whangarei District Council. There are also cross boundary issues at a regional to national level.

Cross boundary issues occur as air is a free medium and has the potential to adversely affect other regions and can adversely affect other resources such as water and soil. Some sources of air pollution, such as vehicles, can only be dealt with effectively at a national level.

By addressing cross boundary issues, the Northland Regional Council is working towards the integrated management of all natural and physical resources.

The Northland Regional Council will use the following methods to co-ordinate cross boundary issues:

1. National Issues

(a) Liaise with the Ministry for the Environment over air quality issues which are best dealt with or co-ordinated at a national level.

(b) Participate in central government initiatives such as national policy statements, guidelines and standards.

(c) Liaise with other regional councils on matters of air management allowing the exchange of information, development of a co-ordinated approach and effective use of the councils' combined resources.

2. Issues which cross Territorial Authority Boundaries

(a) Liaise as appropriate with the district councils within the region on cross boundary issues affecting air quality management.

(b) Advocate to the district councils that appropriate provisions be included in district plans to avoid, remedy or mitigate the adverse effects on the environment of the discharge of contaminants to air,

such as provisions on incompatible land uses and requirements for buffer zones.

(c) Consider the transfer of functions which may be more efficiently or effectively and appropriately carried out by other agencies.

(d) Ensure that district plans are consistent with the Regional Air Quality Plan.

(e) Liaise with public health authorities regarding public health issues that arise in carrying out the Northland Regional Council functions under the Act, such as the health consequences of abrasive blasting on operators and the effects of agrichemical spraydrift on neighbours.

3.8 STATUTORY ACKNOWLEDGEMENTS

A "statutory acknowledgement" is a formal acknowledgement by the Crown of the mana of tangata whenua over a specific area. It recognises the particular cultural, spiritual, historical or traditional association of an iwi or hapū with the site, which is known as a Statutory Area. Statutory Areas only relate to Crown-owned land and include areas of land, geographic features, lakes, rivers, wetlands and coastal marine areas.

It is a legal requirement set out in the relevant settlement legislation to attach statutory acknowledgements to regional plans. Rather than attaching statutory acknowledgements to every regional plan and the Regional Policy Statement, the approach taken by the regional council is to have a single companion document recording all statutory acknowledgement areas -*Te Ture Whakamana ngā Iwi o Taitokerau: Statutory acknowledgements in Northland*.

It is anticipated that further statutory acknowledgements will be agreed between the Crown and tangata whenua during the lifetime of this plan. These statutory acknowledgements will be recognised in *Te Ture Whakamana ngā Iwi o Taitokerau: Statutory acknowledgements in Northland* as they are enacted.

Statutory acknowledgements are for public information only, and are neither part of the plan nor subject to the provisions of the First Schedule to the Resource Management Act 1991.

4. IWI PERSPECTIVE

Tangata whenua have a holistic approach to the management of the environment and its resources. Fundamental to this approach is the principle of interconnectiveness of mankind to the natural world through whakapapa (genealogical ties). According to Maori tradition, Ranginui (Sky Father) and Papatuanuku (Earth Mother) are the primeval parents. Tanemahuta (God of the Forest), Tawhirimatea (God of the Winds), Tangaroa (God of the Seas) and others are their children. From this progeny came the creation of the living world and all its inhabitants.

The Maori pepeha “Tihei mauri ora!” means “Thus there is life”. This pepeha originates from the first breath of a newborn baby as it enters into the world. The symbolism of this saying encompasses the importance of life and all that is pertained within it.

The hongi is a further extension to the importance of life. To hongi is to impart one’s breath to another or to allow the mingling of one's life force.

To Maori the birthing of a child into the world is all important and very sacred. The environment that the child is born into must therefore be maintained in balance to acknowledge the gift of living.

Hence tangata whenua consider that air, soil and water are all integral elements of the environment which must be managed as one rather than as separate entities to ensure that a high quality of life is continually maintained and protected. This is also the approach advocated by the Resource Management Act.

Specific air quality issues identified by iwi as being of concern include:

- spraydrift
- dust from unsealed roads
- odour from community sewage treatment systems and fuel storage facilities
- discharges from crematoria and the Juken Nissho triboard mill in Kaitaia
- pollen from pine forests

These issues are addressed individually within this Plan, where appropriate.

PART III:

MANAGEMENT APPROACH

This part sets out key elements of the approach taken in this Plan towards the sustainable management of Northland's air resources.

5. MANAGEMENT APPROACH

5.1 INTRODUCTION

This section outlines the general approach taken in this Plan to sustainably manage air quality in Northland. It is included for explanatory purposes only and is not to be given any particular consideration in resource management decision making.

5.2 ROLE OF AMBIENT AIR QUALITY GUIDELINES

Ambient air quality is the general quality of the air that surrounds us, outside buildings or structures. Ambient air quality in a region reflects the cumulative effects on the air, of human activities (industrial, commercial and domestic) and natural sources.

Ambient air quality is generally assessed in relation to guidelines or standards which are a measure of the deviation of air quality from natural background levels.

5.2.1 National Ambient Air Quality Guidelines

National ambient air quality guidelines have been developed for the protection of the health and well-being of the general population but the fluoride guideline has been developed for the protection of vegetation. However, the focus of the Act has a broader base, with a requirement to safeguard the life-supporting capacity of air, water, soil and ecosystems, and to avoid, remedy or mitigate adverse effects on the environment. Therefore, air quality at the level of the guidelines may not meet the requirement of the Act to promote sustainable management of natural and physical resources.

The national ambient air quality guidelines are unlikely to provide for the maintenance and enhancement of amenity values (such as clear vistas) or take into account the finite characteristics of natural and physical resources. Where air quality is better than the guidelines, under Section 7(1) of the Act, the Council is required to have particular regard to the maintenance of that level of air quality. Air quality that meets the guideline levels for several pollutants may still result in additive, or synergistic effects, that cause adverse effects in sensitive subgroups of the population.

In this Plan, the national ambient air quality guidelines are included as a method only, acknowledging their current limitations.

5.2.2 Regional Ambient Air Quality Guidelines

The national guidelines are considered to be a basis from which to develop regional air quality objectives. To sustainably manage environmental quality, regional objectives will need to be based upon the integration of pollutant levels to protect ecosystems as well as humans. Recognising the data gaps in the guidelines, communities will need to determine the acceptable levels of air pollution for the various areas in their region.

The selection of air quality guidelines in the Northland region will therefore be influenced by the need to:

- Sustain the health and well-being of the region's communities including social, economic and cultural well-being;

- Protect sensitive ecosystems and their intrinsic values; and
- Maintain other values that are placed on the region's natural and physical resources, including cultural values and amenity values.

This Plan has taken into account the need, in the future, to introduce specific guidelines and controls for the Northland region to reflect these objectives (within the financial resources of the Council).

5.3 BEST PRACTICABLE OPTION

The Best Practicable Option (BPO) means the best method for preventing or minimising the adverse effects on the environment. The full definition is given in the Definitions.

Due to the complexities in evaluating environmental effects of proposed discharges with accuracy, it is important to evaluate the range of options to avoid, remedy or mitigate adverse effects prior to granting the discharge consent.

The adoption of the BPO as an approach to the management of discharges to air may be appropriate in the following circumstances:

(a) Where the discharge control technology is still evolving,

(b) Where the development of air quality standards to protect the receiving environment is not easily established or justified, or

(c) Where the maintenance or enhancement of the existing air quality is considered necessary.

The adoption of the BPO can either be by way of a rule in a regional plan, or as a condition on a resource consent. Before applying the BPO to a specific discharge the following need to be considered:

- The nature of the discharge and the receiving environment; and
- The financial implications for the applicant of including that condition; and
- Other alternatives, including a rule requiring the observance of minimum standards of quality of the receiving environment;

So that the application of the BPO can be shown to be the most efficient and effective means of preventing or minimising adverse effects on the environment. These requirements are set out in Sections 70(2), 108(2)(e) and 108(8) and in the definition of Best Practicable Option in the Resource Management Act.

The BPO approach is principally used as an alternative to air quality standards given the time and research required to develop regionally specific, scientifically credible and defensible standards for the protection of ecosystems, aesthetic and cultural values as well as human health. The use of the BPO approach is also integrally linked to the lack of air quality monitoring data available in Northland. As research into air quality standards which protect the environment progresses and air quality

monitoring becomes more comprehensive, the BPO approach may be able to be replaced by more effects-based conditions.

In many cases, the adoption of the Best Practicable Option may only require simple common sense precautions to be undertaken to achieve significant environmental protection. In other situations, the BPO requirements may mean additional control technology and management regimes. This will be determined on a case-by-case basis during the consent process, and in consultation with the applicant and affected parties.

Combined with the Best Practicable Option, a precautionary approach may be adopted when developing policy or deciding resource consents where the effects of activities are unknown or poorly understood but there is reason to believe that these may be significant. This method of environmental management is justified where there is a need to prevent serious or irreversible harm to the environment in situations of uncertainty. However, the Courts have determined that it should not be applied where the risk is insignificant. The adoption of the precautionary approach in resource consent decision-making may include shorter duration consents, incorporation of emission control or effects mitigation measures, and/or specific requirements for review and monitoring of the consents. If monitoring data ultimately demonstrates that the effects are in fact minor then the approach could be modified.

5.4 EDUCATION, PROVISION OF INFORMATION AND ADVICE

Education, and information on the health and environmental effects of discharges, and advice are used to complement the Best Practicable Option approach, particularly in relation to preventing or minimising any adverse effects of dust, smoke, odour or agrichemical spraydrift. Promotion of waste minimisation and cleaner production are also proposed.

Education will include school visits, seminars and field days and industry discussion group meetings, and the production and circulation of pamphlets and media releases on specific topics.

Providing information about significant point source discharges of contaminants to air can be achieved through the establishment of liaison groups. Such a group generally comprises representatives from the industry concerned (the consent holder), the Regional Council, community groups, local iwi and environmental groups. The purpose of the liaison group is to facilitate the circulation of relevant information, to discuss any aspects of the industry's process, monitoring results or compliance with consent conditions, and any other issues that may arise. This will ensure interested parties are better informed of the effects of the discharge on the environment, and how those effects are being managed.

5.5 CODES OF PRACTICE AND GUIDELINES

Many industries have developed Codes of Practice for the range of activities that they undertake and are reviewing those codes in light of the Resource Management Act.

Where these are consistent with the policy framework set out in this Plan, appropriate codes of practice will be adopted for use in this Plan by way of a plan change.

5.6 RULES AND ENVIRONMENTAL STANDARDS

Under Section 15(1) of the Act, no person can discharge contaminants to air from industrial or trade premises unless the discharge is allowed by a rule in a Regional Plan or a resource consent. Under Section 15(2), air discharges from any other location are allowed as of right unless there is a specific rule in a Regional Plan restricting them. Rules in this Plan therefore have two main functions:

(a) To permit activities that the Regional Council believes can be carried out without a resource consent, provided the appropriate environmental standards set out in this Plan are complied with. The Council can then be satisfied that any adverse environmental effects will be minor.

(b) To restrict activities where site specific environmental conditions are required to ensure that the actual and potential adverse effects of the activity on the environment are avoided, remedied or mitigated.

The actual and potential effects of many discharges are dependent on numerous site specific factors and, consequently, broad environmental standards cannot be given. For example, matters such as existing air quality, location of the actual discharge point, type and volume of contaminants contained in the discharge and the level of treatment of the discharge, all affect the level of impact of the discharge on the receiving environment. Through the resource consent process for these discharges, a monitoring programme will be prepared to check compliance with the conditions of the consent. Such programmes will be specific to the discharge.

On the other hand, there are numerous discharges which can be adequately controlled by ensuring adequate separation distances and other common sense mitigation measures. Wherever possible, these discharges are permitted by this plan.

Permitted activities will be monitored in a number of ways, including:

- The State of the Environment Report, which will assess regional changes in air quality.
- Council's monitoring staff.
- Environmental incidents reported, e.g. via Council services such as the Environmental Hotline.

A number of rules contain conditions or standards that require that the discharge does not result in any smoke, dust or odour nuisance that is offensive or objectionable beyond the property boundary. The courts have accepted that it is possible to legally determine (define) the terms "offensive" and "objectionable". These terms are therefore appropriate in conditions or rules.

Complaints from adjacent residents will generally make the Northland Regional Council aware of any discharge causing nuisance. An enforcement officer of the Regional Council will assess the circumstances surrounding the discharge that has been reported and, if necessary, advise the discharger that mitigation steps will be required.

PART IV:

RESOURCE POLICY

This part sets out the objectives, policies and methods of implementation for significant air quality issues in Northland. The objectives and policies provide part of the framework for resource management decision making.

6. DISCHARGES OF CONTAMINANTS TO AIR

6.1 INTRODUCTION

In general, Northland enjoys a high standard of air quality, although local variations are evident. This section gives background information on the discharges of contaminants to air that occur in Northland and the significant air quality issues. It sets the objectives, policies and methods for managing air resources in Northland.

6.2 CONTROLS UNDER THE RESOURCE MANAGEMENT ACT 1991

Under Section 30(1)(f) of the Resource Management Act, it is a function of the Regional Council to control the discharges of contaminants to air.

Under Section 15 of the Act, no person may discharge any contaminant from any industrial or trade premise into air, unless expressly allowed by a rule in a regional plan or proposed regional plan, a resource consent or regulation. For discharges to air from sources not on industrial or trade premises, Section 15 allows those discharges unless a rule in a regional plan or proposed regional plan states otherwise, or permits it with additional environmental standards.

6.3 DISCHARGES OF CONTAMINANTS TO AIR FROM INDUSTRIAL OR TRADE PREMISES

Industrial or trade premises are defined in the Act to mean:

(a) Any premises used for any industrial or trade purposes; or

(b) Any premises used for the storage, transfer, treatment or disposal of waste materials or for other waste management purposes or used for composting organic materials; or

(c) Any other premise from which a contaminant is discharged in connection with any industrial or trade process; but does not include any production land.

Some activities or processes which result in discharges of contaminants to air from industrial or trade premises around Northland include chemical, fertiliser and cement manufacturing, oil refining, energy production, metal industries, milk and meat processing industries, abrasive blasting, spray painting, wood processing, crematoria, drycleaning and fast food outlets, sewage and other waste treatment processes, and incinerators in institutions such as schools and hospitals.

In Northland, the largest areas of industrial or trade premises are located in the Whangarei District, namely the Whangarei city area and the industrial area along Port Road, and the Marsden Point industrial area. There is still land available within the Whangarei urban area for further industrial developments which may have associated air discharges, and there are large areas of flat land which have been zoned for heavy industrial use for many years at Marsden Point. Other settlements in Northland have smaller areas of industrial or trade premises, and there are many individual properties scattered around the region which also fall into this category.
A wide range of contaminants could be discharged from industrial or trade premises including potentially hazardous or toxic gases, dust, smoke, powders and metallic particles, odorous compounds and steam. The effects of these contaminants may

range from only having nuisance effects, to having significant adverse effects on human health. Some contaminants, such as dust and odour, are common to many activities and are therefore widespread. These contaminants are a significant issue in Northland. Many other contaminants are specific to particular processes and only have localised effects. The discharge of sulphur dioxide falls into this category. However it is a significant issue in Northland because of the large quantities that are discharged from one or two sources at Marsden Point.

6.3.1 Dust

Dust is commonly associated with quarrying operations, earthworks, the use of vehicles on unsealed surfaces, abrasive blasting and the loading and unloading of various materials such as sand, metals, woodchips, cement clinker and fertilisers. Generally, a number of practical steps can be taken to prevent or minimise the adverse effects, depending on the scale of these activities.

Abrasive blasting produces dust at much higher rates than the other activities listed and therefore requires more specific controls to avoid, remedy or mitigate actual or potential adverse effects. The type of abrasive being used can also affect the environmental impact. For example, the long term inhalation of dust from abrasives containing high free silica may cause silicosis, a lung disease.

Dust from abrasive blasting may also be contaminated with the material that is removed from the object being blasted. Often, it may include heavy metals such as lead, zinc and copper. Inhalation of this contaminated dust may also lead to adverse health effects. The heavy metals in the dust, when deposited into water, can accumulate in sediments, causing adverse effects on aquatic life. These discharges are managed under the Proposed Regional Water and Soil Plan and the Proposed Regional Coastal Plan.

6.3.2 Odour

Odour is the human perception of one or more chemical compounds in the air we breathe. Adverse effects occur when odours are perceived to be of such a character, intensity, or duration that causes annoyance, offence or ill health. As the perception of odour differs from person to person, the management of odour is very difficult.

The Ministry for the Environment has produced a publication entitled “Odour Management Under the Resource Management Act” (June, 1995), which recognises these difficulties and refers to five factors which will be used by the enforcement officer(s) as the basis from which the baseline nature of objectionable or offensive odour nuisances will be established. The factors are referred to as the FIDOL factors and are:

- Frequency - how often individuals are exposed to ambient odours;
- Intensity - the perceived strength of the odour;
- Duration - the amount of time people are exposed to the odour;
- Offensiveness - a subjective rating of an odour’s pleasantness; and
- Location of the odour.

Sources of odour discharges from industrial or trade premises may include those from landfills, oxidation ponds, to petrol stations, spray painting operations, fast food outlets and bakeries.

Objectionable and offensive odours can have a detrimental effect on amenity values and may also lead to health problems.

6.3.3 Sulphur Dioxide

While a number of chemical processes may produce sulphur dioxide, the combustion of fossil fuels is the main source. At certain concentrations, sulphur dioxide is a respiratory irritant.

When operating, the oil refinery at Marsden Point is the largest source of sulphur dioxide emissions in Northland.

Measured ambient concentrations of sulphur dioxide in the Marsden Point area are low and are typical of sulphur dioxide levels in the rural environment. The ambient concentrations are significantly less than the national guideline for sulphur dioxide.

Monitoring in mid-1992, when both industries were operating, indicated that the combined emissions during southwesterly winds can result in high ground level concentrations of sulphur dioxide in the Whangarei Heads area. These occurred for short periods of time and infrequently. On one occasion during this monitoring period, the ten-minute ambient air quality guideline for the protection of human health was exceeded, and the hourly and 24 hour guidelines were approached.

The amount of sulphur dioxide being emitted in the area has been reduced since then, through restrictions set out in the air discharge permit for the oil refinery. Thus, the air quality is improving, with no significant increases in ambient sulphur dioxide levels being recorded in the Whangarei Heads area.

This improvement, however, could be jeopardised if another industry generating significant sulphur dioxide emissions is established in the large industrially zoned area which currently exists without adequate consideration of the cumulative effects on ambient air quality.

6.4 DISCHARGES OF CONTAMINANTS TO AIR FROM ANY PLACE OR SOURCE (OTHER THAN INDUSTRIAL OR TRADE PREMISES)

Discharges of contaminants to air in this category may include:

- smoke from fuel-burning home heating appliances, and from burning of household refuse or waste vegetation on residential or production land,
- odours from normal farming activities such as dairy shed effluent and silage pits,
- dust from earthworks, unsealed roads and fertiliser applications,
- spraydrift from agrichemical application,
- emissions from motor vehicles.

This Plan deals with the discharges associated with dust generating activities, burning and agrichemical spraydrift.

6.4.1 Dust

The most common source of dust nuisance is from roadworks and the use of unsealed roads. Nuisance effects include dust deposits on flat surfaces in dwellings, soiled washing and irritation of eyes and the upper respiratory system. Dust dampening on roads using waste oil has been a common solution but this activity is now prohibited under the Proposed Regional Water and Soil Plan. Alternative materials are available.

The Regional Land Transport Strategy acknowledges that dust from roads is a significant air quality issue, particularly in rural areas. A policy in the Strategy requires that the effects of dust nuisance on key facilities are considered when setting priorities for road sealing. This is primarily the responsibility of the district councils and health authorities.

6.4.2 Smoke

There are three primary sources of smoke and associated odours - the use of domestic heating appliances that consume fuels, the use of backyard fires to dispose of domestic wastes, and the burning of waste vegetation.

A large number of dwellings in Northland contain a fuel burning home heating appliance. The discharges from these appliances are not usually significant on an individual basis, but may give rise to adverse effects on neighbours if not installed and operated in a proper manner. The cumulative effects of many individual domestic sources may give rise to more widespread effects. When inversion conditions exist over an urban residential area, where warm smoke-filled air is trapped beneath a layer of colder air, the cumulative effects are significant.

The main effects of burning domestic wastes in backyard incinerators or fires, are nuisance to neighbouring properties through emission of smoke, toxic gases, odour and fly ash. Significant localised effects can occur, such as respiratory irritation, offensive odour, soiling of property and reduced amenity values.

Burning of vegetation, particularly when it is green or damp, can give rise to considerable volumes of smoke with widespread adverse effects. Such effects are considered to be inconsistent with the objectives of this Plan, particularly within the Whangarei Urban Area, and will be managed by the NRC accordingly. These effects regionally may also include traffic hazards when gas (odour), smoke and/or particulate material from burning activities drifts over adjacent roads and state highways, reducing drivers' ability and/or visibility.

6.4.3 Agrichemical Spraydrift

The use of agrichemicals is widespread in Northland in the horticultural, agricultural and forestry sectors. Agrichemicals are also used by local government in public parks and reserves, and in domestic gardens. There has been increasing concern at the "off-target" or "off-site" effects of agrichemical use when spraydrift reaches sensitive environments other than the intended target. Spraydrift may have adverse effects on human health and plant and animal health. There may also be problems for adjacent land uses such as organic farming, horticulture and cropping.

Some types of equipment being used for agrichemical application, do not allow accurate calibration or give adequate directional control. Use of this equipment therefore increases the risk of adverse effects on the environment. Some agrichemicals are highly volatile or are extremely toxic, which also increase the risk of adverse effects. Users must give careful consideration to the appropriateness of the equipment and the agrichemical they use.

Only aerial applicators have been specifically regulated in the past. Ground based commercial applicators currently operate under a voluntary registration and qualification system with little or no auditing. The industries using agrichemicals recognise the need for better management and control over the use of agrichemicals and have established the New Zealand Agrichemical Education Trust. This Trust has developed a number of training certificates for various agrichemical users, and others involved in the agrichemical industry, and has also prepared an Agrichemical Users Code of Practice which is supported by this plan.

6.5 SIGNIFICANT AIR QUALITY ISSUES

The following is a summary of the general and specific air quality issues in Northland.

6.5.1 General Issues

1. The desire to maintain Northland's high standard of air quality whilst also allowing the use and development of the region's resources.

2. The drafting and application of regional air quality guidelines. This process is hampered by a lack of substantive air quality monitoring data for the region, as with most provincial regions in New Zealand. The "state of the environment" is therefore poorly defined.

3. The location of Whangarei (the largest urban area in the region) at the head of a harbour and almost surrounded by hills, provides conditions that could be conducive to high levels of air pollution at certain times of the year.

4. The actual and potential localised adverse effects of Northland's larger existing point source air emissions and the potential for adverse effects from synergistic mechanisms between contaminants.

5. The numerous sources of particulate matter in Northland, including unsealed roads, quarries, sandblasting, port operations, coal fired boilers, open fires and rural burnoffs, cement and fertiliser works and dairy factories. Particulate matter from these sources can cause adverse health effects, and amenity and visibility impacts.

6. The cumulative effects of smoke from domestic fires for home heating, in combination with motor vehicle emissions over Northland's urban areas. Particularly during calm winter nights, these emissions can have adverse health and amenity effects.

7. Loss of visibility due to "haze" is an important amenity issue, but may also have economic repercussions, as much of New Zealand's tourism and recreational industries are largely built around the pristine image of the environment.

8. The contribution that Northland's carbon dioxide (CO_2) emissions make to greenhouse gas emissions. It is a national objective to return net CO_2 emissions to their 1990 levels by the year 2000 and maintain them at that level.

9. The emission of carbon monoxide, oxides of nitrogen, hydrocarbons (including benzene) and particulates which can have a significant impact in localised areas. Monitoring in the central business district of Whangarei indicates that there are sufficient numbers of vehicles to produce emissions which exceed ambient air quality guidelines for oxides of nitrogen.

10. Exhaust fumes from cars settling on edible vegetation and in waterways in close proximity to roads, with potential adverse environmental effects and potential health effects for people who gather food from these areas.

6.5.2 Issues Relating to Dust

1. The discharge of dust from various activities such as quarrying, earthworks and lime stabilisation associated with roadworks, use of unsealed roads, loading and unloading of various materials such as sand, metals, wood chips, and other activities associated with industrial or trade premises, which can lead to adverse health, amenity and nuisance effects.

2. Dust emissions from unsealed roads which can impact upon private water supplies and horticultural crops.

3. Effects of dust and pollen on the health of the community and on community and individual water supplies.

4. The inhalation of contaminated dust by workers and occupants of properties adjoining dust sources which can cause serious health problems. Contaminated dust can also be deposited in nearby waterways or onto land and find its way into streams or the coastal marine area.

5. The actual and potential adverse health and amenity effects from high volumes and velocities of contaminants generated during open air abrasive blasting.

6. The risk of lung disease (silicosis) from the long term inhalation of abrasive blasting dust where the abrasive used contains high free silica.

6.5.3 Issues Relating to Burning

1. The production of noxious or poisonous substances from the burning of refuse can have significant health and amenity impacts, not only for people on the property where the activity is occurring, but also down wind.

2. The production of noxious or poisonous substances, the occurrence of significant smoke and odour nuisance from the burning of materials on residential, industrial and rural properties.

6.5.4 Issues Relating to Agrichemical Spray Application

1. Off-target exposure to Agrichemicals which can have adverse environmental, health and amenity effects and which can also lead to economic effects due to crop damage on properties near the area being sprayed. Inappropriate application methods and choice of agrichemicals can also increase the risk of adverse off-target effects.

2. The incompatibility of land uses arising from the spread of residential properties into horticultural areas, the diversification of mainstream farming into sustainable and less chemically dependent forms of agriculture, and the increase in rural-residential settlements in farming areas, where the use of agrichemicals is common practice. These concerns are raised by both users and non users of agrichemicals as well as by those residents and organic farmers seeking a "contaminant free" environment.

3. The use of agrichemicals of varying degrees of toxicity by applicators without adequate training.

6.5.5 Issues Relating to Odour

1. Nuisance effects of odour from activities such as burning of waste materials, and some farm practices on nearby dwellings and residents.

2. Nuisance effects of odour from premises used for food preparation, such as supermarkets and fast food chains, which can impact upon residential amenity and the quality and enjoyment of commercial and recreational areas nearby.

3. The potential for objectionable or offensive odour from landfills, abattoirs, municipal waste treatment ponds or factory farming, and the adverse effects on human health and upon the amenity of dwellings and public places.

6.5.6 Issues Relating to Marsden Point Industrial Area

1. Public concerns about possible effects on the Whangarei Heads arising from large emissions during certain weather conditions.

2. The potential for further industries, which may discharge large volumes of sulphur dioxide and other contaminants, to locate in this large industrial area and the potential for significant adverse cumulative, synergistic or interactive effects.

6.6 OBJECTIVES

1. The sustainable management of Northland's air resource including its physical, amenity and aesthetic qualities by avoiding, remedying or mitigating adverse effects on the environment from the discharge of contaminants to air.

2. The maintenance and, where necessary, enhancement of the quality of the environment so that it is free from noxious, dangerous, offensive or objectionable adverse effects associated with discharges to air, such as odour, dust, smoke and poor visibility.

3. The reduction and minimisation of adverse effects from discharges of contaminants to air of global significance, such as greenhouse gases or ozone depleting substances, in agreement with government policy.

6.7 POLICIES

1. To maintain the existing high standard of ambient air quality in the Northland region, and to enhance air quality in those instances where it is adversely affected, by avoiding, remedying or mitigating adverse effects of activities discharging contaminants to air.

   Explanation. *This policy recognises that in most areas in Northland, existing air quality is high. It seeks to ensure that the existing high quality is not adversely affected by discharges of contaminants to air.*

   This policy provides for the maintenance and enhancement of regional ambient air quality. At present, the ambient air quality in the Northland region is high, and within the "Ambient Air Quality Guidelines" (MfE, 1994). It is considered important to maintain this air quality, rather than let it degrade to the levels set in the Guidelines, and to enhance air quality where it has been degraded to the point that the air resource is adversely affected.

2. To avoid, remedy or mitigate the adverse effects generated by discharges of contaminants to air including cumulative or synergistic/interactive effects.

   Explanation*. This policy ensures that the adverse effects, including cumulative or synergistic effects, generated by discharges of contaminants to air are avoided, remedied or mitigated.*

3. To recognise that many activities which discharge contaminants to air have a minor effect on the quality of Northland's air environment.

   Explanation. *Policy 6.7(3) notes that there is a need to adopt a level of control which is appropriate to the actual or potential effects of the discharge. Where there is a minor or insignificant effect on the environment, such discharges will be permitted activities. Such activities have previously been permitted in the region without any discernible adverse impact on the environment, and it is intended that this practice continues. In addition, such an approach enables the Northland Regional Council to efficiently administer*

and implement the Plan, by focusing on discharges and activities with significant adverse effects on the environment.

4. To manage the discharge of hazardous, noxious and dangerous contaminants to air in a manner that ensures any adverse environmental effects, including on human health, are avoided, remedied or mitigated.

Explanation. *There are many contaminants which are hazardous, noxious, or dangerous depending on the volume, concentration, the rate of discharge and the surrounding receiving environment. This policy ensures that such discharges should not result in hazardous, noxious, or dangerous effects.*

5. Where the effects of activities are unknown or not well understood, to adopt a precautionary approach to the granting of resource consent applications for the discharge of contaminants to air where it is considered that the effects of such discharges on the environment may be significant.

Explanation. *The adoption of a precautionary approach to resource management decision making is prudent when there is a lack of available data or understanding relating to the existing state of the environment and the impacts of any new discharges into that environment. However, there must be reason to believe that any effect may be significant for such an approach to be adopted. The precautionary or risk avoidance policy of the Resource Management Act is derived from section 104(1)(a), the definition of 'effect' in section 3 and the definition of 'environment' in section 2(1).*

6. Where necessary, apply the best practicable option to discharges of contaminants to air, while complying with the other policies in this Plan.

Explanation. *Adoption of the "best practicable option", as an approach to the management of discharges to air, is considered particularly applicable in situations where discharge control technology is still evolving, where standards establishing a level of protection for a receiving environment cannot easily be established or justified, where the maintenance or enhancement of the existing air quality is desirable, or where there is uncertainty over existing environmental quality.*

The best practicable option provides flexibility and allows progressive upgrading of plant processes and activities, rather than setting a level of air quality and allowing degradation of existing air quality to that level. Adoption of the best practicable option may involve reducing or minimising emissions at source, adopting specified treatment and disposal technology, or simply adopting good maintenance and operating procedures for existing activities, processes or waste treatment systems.

The implementation of the best practicable option does not necessarily mean that consent holders will be required to use expensive or complex technology. In many cases, simple and relatively inexpensive methods are all that are required to achieve significant environmental protection, and to comply with other policies in this Plan. The use of the BPO either in a rule in a regional plan, or as a condition on a resource consent, first requires the consideration of alternative methods, and whether particular minimum standards could be set. This requirement is set out in Sections 70(2), 108(1)(e) and 108(8) of the Resource Management Act. The conditions of the best practicable option will be determined by the Northland Regional Council in consultation with the

discharger and those affected. Implementation of the best practicable option will involve the weighing of costs to the discharger, benefits to the receiving environment and assessment of risk of adverse environmental effect arising from the discharge. By adopting a consultative approach to the implementation of the best practicable option in addition to in-house experience and expertise, the Northland Regional Council considers that sound decisions can be made in determining the best practicable option for use in any particular process or site.

7. To recognise that discharges of contaminants to air may adversely affect other receiving environments.

Explanation. *Many of the contaminants which are discharged into air eventually fall to the ground or into waterways. This is particularly true for dust and other larger particulate matter and agrichemicals. It is a function of the Regional Council to provide for integrated management of the natural and physical resources of the region, so, when assessing a discharge into air, discharges to other receiving environments must be considered.*

8. To support and implement national policies that seek to avoid, remedy or mitigate the adverse effects on the global environment of motor vehicle and greenhouse gas emissions and ozone depleting substances.

Explanation. *Motor vehicle emissions may contribute to adverse global atmospheric effects and may have localised effects on health and amenity values. Continued increasing emissions of greenhouse gases and ozone depleting substances is a global issue and the Northland Regional Council will rely on national guidance before implementing any specific policies at a regional level.*

9. To promote a consistent regional approach to avoid the adverse health and environmental effects from abrasive blasting operations.

Explanation. *It is specifically recognised that abrasive blasting discharges can generate adverse effects in terms of health and safety. Hence, an integrated approach to management is warranted and regular liaison with other government and territorial agencies will be necessary to avoid inconsistencies or duplication of effort.*

10. To promote the integrated management of natural and physical resources in order to avoid, remedy or mitigate the adverse effects of discharges of contaminants to air.

Explanation. *Some adverse effects of discharges, particularly odour and off-target spraydrift, may be better managed through land use planning tools such as buffer zones. It is important to recognise, for example, that changes in land use on one property, may result in a change to the effect of an odorous discharge from another property. Integration between Regional and District Councils is important to enable sustainable management to be achieved.*

6.8 METHODS OF IMPLEMENTATION

(for Policy 1)

1. Monitor and gather, through state of the environment monitoring and resource consent monitoring, information on the existing air quality of the Northland region.

2. Identify, through state of the environment monitoring, where adverse effects on air quality are occurring, or are likely to occur, as a result of further development. Through the annual plan process, prioritise areas for further investigation into appropriate air quality management approaches.

3. Use the following high priority and other ambient air quality indicators pertaining to the Northland region as a basis for setting monitoring priorities.

   High Priority Indicators

   - *atmospheric particulates - deposited particulate, inhaleable particulate (PM_{10})*
   - *sulphur dioxide*
   - *carbon monoxide*
   - *nitrogen oxides*
   - *atmospheric visibility*

   Other Indicators

   - *formaldehyde (as a site specific air toxic)*
   - *fluoride*
   - *hydrogen sulphide*
   - *ozone*
   - *lead*

   The reasons for the selection of these indicators are given in Appendix 1.

(for Policies 2-6)

4. Include rules which permit discharges of contaminants to air which have minor effect on air quality, subject to environmental standards.

5. Include rules which control discharges of contaminants to air which have, or are likely to have, adverse environmental effects.

6. Include rules which prohibit discharges of certain contaminants which can be hazardous to human health and the environment.

7. Use the Ambient Air Quality Guidelines as set out in Table 1 when assessing the likely effects of a discharge to air on human health, recognising that these guidelines are subject to future change.

8. Require an assessment of the potential cumulative, synergistic and interactive effects, where technically possible, of discharges to air, and possible mitigation measures, to be submitted with air discharge permit applications.

9. Apply the assessment criteria set out in Section 12 and the general and specific policies in this Plan, when considering whether or not to grant:

   (a) a discharge to air permit for discretionary or non-complying activities, or

   (b) when considering the conditions to set on a discharge permit to air for controlled, discretionary and non-complying activities.

(for Policy 7)

10. Require an assessment of discharges to other receiving environments (land, fresh water, coastal marine area) that may occur as a result of a discharge of contaminants to air, and a statement as to any other resource consents that are required for the activity.

(for Policy 8)

11. Require an assessment of the emission rates and volumes of any greenhouse gases or ozone depleting substances being discharged as part of the application for an air discharge permit and any proposed measures to avoid or minimise those emissions. This assessment shall be proportional to the potential effects of the activity for which the consent is sought.

12. Support central government initiatives for improvements in fuel efficiency and the reduction of contaminant emissions from motor vehicles, and the management or reduction of greenhouse gases and ozone depleting substances.

(for Policy 9)

13. To establish a Liaison Committee, with relevant groups (including the Labour Department's Occupational Safety and Health Officer, the Medical Officer of Health and abrasive blasting contractors), to review and develop standards and general practices, and to collate and distribute information on innovative alternative methods to abrasive blasting.

(for Policy 10)

14. Liaise with district councils to ensure that a consistent approach to resource management is adopted in relevant district plans.

15. Make submissions on district council's district plan changes and reviews.

TABLE 1: AMBIENT AIR QUALITY GUIDELINES FOR THE PROTECTION OF HUMAN HEALTH IN THE NORTHLAND REGION[1]

Indicator	Maximum Acceptable Level	Averaging Times	Techniques for Measurement
Particulates (PM_{10})	120 μg/m³ 40 μg/m³	24-hr annual	AS 3580.9.6-1990 AS 3580.9.7-1990
Sulphur dioxide	500 μg/m³ 350 μg/m³ 125 μg/m³ 50 μg/m³	10 min 1-hr 24-hr annual	AS 3580.4.1-1990
Carbon monoxide	30 mg/m³ 10 mg/m³	1-hr 8-hr	AS 2695-1984
Ozone	150 μg/m³ 100 μg/m³	1-hr 8-hr	AS 3580.6.1-1990
Nitrogen dioxide	300 μg/m³ 100 μg/m³	1-hr 24-hr	AS 3580.5.1-1993
Lead	0.5-1.0 μg/m³	3-month	AS 2800-1985
Fluoride - Special land use - General land use - Conservation areas	 1.8 μg/m³ 1.5 μg/m³ 0.8 μg/m³ 0.4 μg/m³ 0.25 μg/m³ 3.7 μg/m³ 2.9 μg/m³ 1.7 μg/m³ 0.84 μg/m³ 0.5 μg/m³ 0.1 μg/m³	 12-hr 24-hr 7-day 30-day 90-day 12-hr 24-hr 7-day 30-day 90-day 90-day	 AS 3580.13.1-1993 AS 3580.13.2-1991 AS 3580.13.1-1993 AS 3580.13.2-1991
Hydrogen sulphide	7 μg/m³	30-min	AS 3580.8.1-1990

μg/m³ - micrograms per cubic metre
mg/m³ - milligrams per cubic metre
AS - Australian Standard

Source: Ambient Air Quality Guidelines, Ministry for the Environment, July 1994

[1] Northland has in general a very high standard of air quality and there is a strong obligation to maintain and enhance the quality of the air environment. It is important that Table 1 (excluding fluoride) is only used as a guide to assessing adverse effects on the general human population. The guidelines should not be seen as standards nor as maximum levels to which pollution is allowed.

6.9 SPECIFIC POLICIES FOR DUST

1. To avoid, remedy or mitigate any noxious, dangerous, offensive or objectionable effects of discharges of dust into the air.

   Explanation. *The policy recognises that dust has the potential to generate significant nuisance effects, irritation to breathing passages and other adverse health effects, loss of amenity (or pleasantness) of the environment, inconvenience and disruption of outdoor activities, and soiling of property.*

2. To integrate policy contained in the Regional Land Transport Strategy with air quality policy to reduce significant nuisance generated by dust emissions from unsealed roads.

   Explanation. *Policy 6.9(2) recognises that integrated management of Northland Regional Council's various functions related to roading is necessary to ensure that the need to minimise significant dust nuisance is given sufficient weighting when setting road sealing priorities. Various methods are available to determine if significant dust nuisance is occurring in a particular situation. The most straightforward and cost effective method is a visual inspection of the dust discharges and their effects. In such an instance, the officer would assess visually the level of particulate in the air and deposited on surfaces, and take into account factors such as frequency plus duration of the dust discharges. If more quantitative information is required, atmospheric dust fall monitoring may be conducted. Only if there were significant concerns regarding health would monitoring for inhalable particulate (PM10, refer Table 1 pg. 38) be conducted.*

6.10 METHODS OF IMPLEMENTATION

(for Policy 1)

1. Provide advice to roading and earthworks contractors, farmers and horticulturists, quarry contractors and any other persons whose activities may generate dust, on methods of reducing and avoiding the generation of dust.

2. Include rules which permit, regulate or prohibit discharges of dust subject to environmental standards.

(for Policy 2)

3. Consult with district councils in the review of the Regional Land Transport Strategy in regard to unsealed roads.

6.11 SPECIFIC POLICIES FOR BURNING

1. To avoid or minimise the burning of waste materials.

   Explanation. *This policy seeks to avoid unnecessary burning of waste materials. The most effective mechanism for avoiding adverse effects from burning is to eliminate combustible waste materials at source through the encouragement of waste minimisation and recycling schemes, and by the*

provision of adequate refuse collection and disposal services, particularly in urban areas.

2. To avoid, remedy or mitigate the adverse effects of discharges to air generated from the burning of waste materials.

   Explanation. *This policy seeks to ensure that when burning of waste does occur, adverse effects and nuisance are avoided or mitigated.*

3. To ensure that burning of fuels or waste materials do not create noxious, dangerous, offensive or objectionable adverse effects from smoke, odour or particulate emissions or affect the general amenity of residences, public places and work places.

   Explanation. *Adverse effects will tend to be generated if materials which can produce noxious or toxic emissions are burned, or if burning occurs in densely settled areas such as suburban neighbourhoods and rural residential areas.*

6.12 METHODS OF IMPLEMENTATION

(for Policy 1)

1. Promote waste minimisation, including recycling, among manufacturers, agriculture and industries.

2. Make submissions on district councils Annual Plans relating to the provision of refuse collection services.

3. Educate Northlanders on the effects of burning materials contained in household rubbish by circulation of pamphlets and media releases and by school visits.

(for Policies 2 and 3)

4. Include rules which permit, regulate or prohibit the burning of waste materials. Rules will reflect the likely extent or severity of effects generated by burning.

6.13 SPECIFIC POLICIES FOR AGRICHEMICAL SPRAYDRIFT

1. To avoid, remedy or mitigate the adverse off-target effects of the discharge of agrichemicals to air.

Explanation. *The aerial and ground-based application of agrichemicals is a widespread and accepted practice in Northland. Hence, Policy 1 seeks to ensure that the potentially adverse effects of agrichemicals on 'off-target' areas are avoided, and where adverse effects have occurred, either remedied or mitigated, where practicable.*

2. To require all persons discharging agrichemicals to air to apply the best practicable option and good management practices to avoid or mitigate any actual or potential adverse effects of the discharge on off-target areas or places by taking into account:

(a) wind speed and direction,

(b) humidity and atmospheric stability,

(b) height of release of agrichemical,

(d) droplet size,

(e) volatility of the agrichemical,

(f) location of sensitive areas and places,

(g) any buffer zones and shelter belts,

(h) the effectiveness of pest control at that stage of the life cycle,

(i) toxicity of the agrichemical

(j) the use of drift control agents

and adopting a combination which represents the lowest risk of spraydrift.

Explanation. *The adoption of the combination which produces the lowest risk of drift hazard is considered to be the best practicable option for reducing the potential for adverse effects from application of agrichemicals.*

3. To recognise and provide for the protection of areas and places which may be sensitive (see definition of sensitive areas) to the off-target effects of agrichemical spraydrift.

Explanation. *Some areas, places or land uses are more sensitive to the off-target effects of spraydrift than others. A list indicative of such areas is included in the definition of sensitive areas. The proximity of these sensitive areas should be taken into account before undertaking any spraying activity.*

6.14 METHODS OF IMPLEMENTATION

(for Policies 1-3)

1. Make submissions on District Plans and applications for resource consents, to ensure that the potential for adverse effects of different land uses in relation to agrichemical use is addressed (including effects on sensitive areas and places).

2. Include rules which permit, prohibit and regulate the discharge of agrichemicals to air subject to environmental standards and notification requirements (including reference to sensitive areas and places).

3. Include rules which:

- permit the discharge of the herbicide 24D Ester excluding 2,4-D Butyl Ester by specified methods at certain times of the year, and control such discharges at other times of the year

- prohibit the use of 2,4-D Butyl Ester, following a phase-out period of 12 months from the date of this plan becoming operative

4. Provide information and advice to promote the prevention or minimisation of any adverse effects on the environment from the discharge of agrichemicals to air.

5. Require adherence to Part 5 of the New Zealand Standard 8409: Agrichemical Users Code of Practice, June 1995 prepared by the New Zealand Agrichemical Education Trust and Standards New Zealand.

6. Continue to support appropriate training of users in the correct use and application of agrichemicals discharged to air and the application of organic and biodynamic environmentally safe sprays.

6.15 SPECIFIC POLICIES FOR ODOUR

1. To ensure that the discharge of contaminants to air should not result in offensive or objectionable odours that could adversely affect people and communities.

Explanation. *This policy focuses attention on a specific effect of some contaminants. A community's perception and experience of air pollution is often reflected in its ability to identify odorous substances in the environment.*

This policy recognises that it may not be possible or desirable to completely avoid all detectable odours. The policy has been designed to avoid the release of "offensive" or "objectionable" odours that could adversely affect people and communities.

6.16 METHODS OF IMPLEMENTATION

(for Policy 1)

1. Include rules which permit discharges of odorous substances to air subject to environmental standards.

2. Include rules which control discharges of odorous substances to air which have, or are likely to have, adverse effects on the environment.

3. Review the Proposed Odour Guidelines when published by the Ministry of the Environment for their applicability to the Northland region and to consider their adoption through a change to this Plan.

4. Encourage district councils to recognise the need to avoid the incompatibility of land use activities when drafting district plans and considering resource consent applications.

5. Promote the use of industry and agricultural codes of practice as an appropriate and effective means of self-regulation for odorous emissions.

6.17 SPECIFIC POLICIES FOR MARSDEN POINT

1. The Marsden Point Air Quality Strategy shall be taken into account, when making decisions on air quality in the Marsden Point Area. While acknowledging it is a non-binding and non-statutory guideline document only.

   Explanation. *The presence of major industries in this area, which are of regional significance in terms of their air discharges; the availability of a deep water port; the availability of flat land suitable for the expansion of industrial development; and the existing industrial zoning in the area mean there is significant potential for industrial development and associated air discharges in this area. Implementing the Marsden Point Air Quality Strategy will result in consistent and equitable decisions on future air discharge permit applications.*

2. Not withstanding Policy 1, Air Quality in the Marsden Point Area shall be managed in a consistent way to allow for industrial development while ensuring that:

   (a) Ambient Air Quality is maintained in a state of compliance with any National Environmental Standards for Air Quality; and

   (b) Air Quality is managed with regard to the 'Ambient Air Quality Guidelines for the Protection of Human Health in the Northland Region' (listed in Table 1) and the latest version of the 'New Zealand Ambient Air Quality Guidelines', published by the Ministry for the Environment.

   Explanation. *This policy recognises that in most areas of Northland, existing air quality is high. It seeks to ensure that the existing high quality is not adversely affected by discharges of contaminants to air within the Marsden Point Area.*

3. When considering new land use activities regard shall be had to avoiding reverse sensitivity effects from incompatible and potential sensitive land uses on any other land use, including lawfully established industries, in the area.

   Explanation*. There are areas in which industrial development is allowed to occur in the District Plan. Therefore it is important that reverse sensitivity effects on any other land use, including lawfully established industries, in the area be avoided when considering applications for new incompatible and potentially sensitive land uses.*

6.18 METHODS OF IMPLEMENTATION

(for Policy 1 and 2)

1. A Marsden Point Technical Liaison Group appointed and chaired by Northland Regional Council, and compromising optional representation from each air discharge consent holder (or their nominated expert in each case), and other relevant parties as appropriate, shall be established to co-ordinate and make available input data for comprehensive dispersion modelling and recommend methods for making air discharge assessments, including the applicability of dispersion models and validity of input data sets.

2. An Air Quality Liaison group, appointed and chaired by Northland Regional Council, and compromising optional representation from local residents (or resident associations), local iwi, and industry (commercial and industrial) shall be established to:

   (a) Discuss findings of the Marsden Point Technical Liaison Group; and

   (b) Provide any other information or assistance to Northland Regional Council on air quality issues in the Marsden Point Airshed.

3. Applications for air discharge permits within the Marsden Point Airshed (refer Map 1) are required to be supported by a detailed assessment of the environmental effects, including cumulative, synergistic and interactive effects of multiple contaminants where technically practicable. A three-tiered approach (in accordance with Appendix 7) to the assessment of environmental effects shall be undertaken.

   If the need for a Tier-3 assessment is triggered, particularly in regard to the effects of discharges of sulphur dioxide, inhalable particulate (smaller than 10 microns in size) or nitrogen dioxide in the Marsden Point Airshed, the applicant shall undertake air dispersion modelling.

   Whenever air dispersion modelling is to be undertaken, applicants shall have regard to the modelling approaches set out in the Ministry for the Environment's Good Practice Guide for Atmospheric Dispersion Modelling, June 2004, or any updated versions of those modelling approaches.

   Prior agreement from the Northland Regional Council is recommended before adopting a particular modelling approach, including model type and input data. This may assist in reducing compliance costs and the potential for the use of section 92 (request for further information) in processing discharge permit applications.

   The Northland Regional Council will, in return, provide applicants with the necessary information gathered through Method 1 and 2 (above).

   In this context, the use of the term "technically practicable" is not intended to result in an applicant being required to undertake an all-encompassing assessment of synergistic and interactive effects simply because it is technically possible to do so. The term is to be interpreted in accordance with the Best Practicable Option approach as defined in Section 5.3 Management Approach and Section 17 Definitions and means to apply the current state of technical knowledge and scientific investigation to successfully identify synergistic and interactive effects to inform the Assessment of Environmental Effects taking into consideration:

   - The size and scale of the proposal
   - The prevalence of international literature on the topic
   - The atmospheric concentration of precursors
   - The probability of synergistic and interactive effects occurring
   - The environmental and/or human health risk if synergistic and interactive effects occur

4. In addition, applications for air discharge permits for activities outside the Marsden Point Airshed (refer Map 1) that have the potential for discharged air-borne contaminants to enter the Airshed and significantly add to the effects of discharges of sulphur dioxide, inhalable particulate (smaller than 10 microns in size) or nitrogen dioxide, shall be required to comply with Method 3 above.

   In this content 'significantly' means where the estimated contribution to air quality degradation, in terms of contaminant concentrations in ambient air, is more than 10% of the relevant guideline or standard.

5. Where it is uncertain whether the application for an air discharge permit has the potential to significantly add to the effects of discharges of sulphur dioxide, inhalable particulate (smaller than 10 microns in size) or nitrogen dioxide, a precautionary approach shall be taken. This will include requiring the applicant to undertake a Tier-3 assessment (in accordance with Appendix 7) including air dispersion modelling.

   Whenever air dispersion modelling is to be undertaken, applicants shall have regard to the modelling approaches set out in the Ministry for the Environment's Good Practice Guide for Atmospheric Dispersion Modelling, June 2004, or any updated versions of those modelling approaches.

   Prior agreement from the Northland Regional Council is recommended before adopting a particular modelling approach, including model type and input data. This may assist in reducing compliance costs and the potential for the use of section 92 (request for further information) in processing discharge permit applications.

   The Northland Regional Council will, in return, provide applicants with the necessary information gathered through Method 1 and 2 (above).

   In this content 'significantly' means where the estimated contribution to air quality degradation, in terms of contaminant concentrations in ambient air, is more than 10% of the relevant guideline or standard.

6. The Northland Regional Council will make the Marsden Point Air Quality Strategy available online and at the Regional Council office for interested parties/applicants.

(for Policy 3)

7. Where necessary, make submissions on District Plans and applications for resource consents to ensure that the potential for reverse sensitivity effects on any other land use, including lawfully established industries, are known about and addressed.

7. PRINCIPAL REASONS FOR ADOPTING THE OBJECTIVES, POLICIES AND METHODS

7.1 OBJECTIVES

Objective 6.6(1) reflects the obligation of the Northland Regional Council to address the adverse effects on the environment of the discharge of contaminants to the air. It recognises that air is a finite resource and that air quality is inevitably affected by human activity. The Northland Regional Council seeks to avoid, remedy or mitigate against any adverse effects on the environment from the discharge of contaminants to air.

Sustainable management of natural and physical resources is the over-riding purpose of the Resource Management Act, and accordingly, it is an objective of this Plan to give effect to that purpose in respect of Northland's air resources.

Objective 6.6(2) addresses the requirement under Section 7 of the Act for the plan to have regard to the maintenance and enhancement of the quality of the environment. It particularly addresses Section 7(c) of the Act, which requires that particular regard be given to the maintenance and enhancement of amenity values.

Objective 6.6(3) is considered necessary to address the need to be consistent with national policies on stabilising or reducing emissions of greenhouse gases and ozone depleting substances. Northland's efforts to control emission of greenhouse gases, when combined with similar initiatives around the world, will cumulatively support the enhancement of the global environment.

7.2 POLICIES

The principal reasons for adopting each policy are incorporated in the explanation of those policies in Sections 6.7, 6.9, 6.11, 6.13, 6.15 and 6.17.

7.3 METHODS OF IMPLEMENTATION

7.3.1 Rules and Environmental Standards

Discharges to air are not restricted by the Resource Management Act unless they originate from industrial or trade premises or are regulated in this Plan. There are many discharges to air from industrial or trade premises which have only minor effects. To permit these discharges subject to environmental standards, is an efficient method of managing such minor discharges which would otherwise require a resource consent.

Other discharges may have a wide range of actual and potential effects, which need to be assessed having regard to site specific factors. Requiring resource consents for these activities is considered to be the most effective method of managing air quality, when many of the effects are unknown. Listed information requirements and assessment criteria in this Plan provide clarity for potential applicants, by specifying how the application will be assessed, and therefore why the information is required. These also ensure a consistent approach to decision making.

Discharges of contaminants, such as dust and smoke and agrichemicals, from other sources and places are regulated in this Plan because they are significant issues in Northland which account for a large number of complaints from neighbouring residents. The rules permit these discharges subject to environmental standards to prevent or minimise the adverse effects of the activity. In many cases, adverse effects are prevented by practical, common sense measures.

It is considered that the most effective mechanism for the mitigation of adverse effects of discharges is via the implementation of rules which will provide more certainty for applicants, affected parties and the Regional Council, than alternative methods of control.

The following methods relate to rules, environmental standards, information requirements and assessment criteria:

- 6.8(4), (5), (6), (7), (8), (9), (10), (11)
- 6.10(2)
- 6.12(4)
- 6.14(2), (3), (4)
- 6.16(1), (2), (3)
- 6.18(10)

7.3.2 Education, Provision of Information and Advice

This method particularly complements the use of rules which permit activities on domestic, production or other non-commercial type land, such as dust generating activities, burning of wastes and agrichemical applications. Common sense measures and good management are required to comply with those relevant permitted activity rules. Dischargers and their communities need to be supported by information on up to date practices and general advice.

The promotion of Codes of Practice is also considered to be an effective approach, and can provide the basis for adopting the best practicable option for preventing or minimising adverse effects.

The following methods relate to education, provision of information and advice:

- 6.10(1)
- 6.12(1), (3)
- 6.14(5), (6), (7)
- 6.16(5)

7.3.3 Monitoring and Investigations

State of the environment monitoring, or ambient air quality monitoring, has been specifically stated as a method in this Plan because of the lack of data on air quality across the region. Localised monitoring around the Marsden Point area has been undertaken (as part of resource consent monitoring). The need for an air quality management strategy in this area has been identified as a priority. Ambient air quality monitoring in the region may indicate other areas where air discharges are having adverse effects, and which also require the development of air management strategies.

Monitoring of the individual and cumulative effects of discharges is required to assess whether the objectives are being achieved. The effects of permitted activities will be assessed through the State of the Environment monitoring programme. Specific monitoring programmes for resource consents will be prepared.

Air pollutants (indicators of ambient air quality) have been classified into two groups (high priority and other) to reflect the particular circumstances of the Northland region. High priority indicators are generally consistent with those listed in the Ambient Air Quality Guidelines, except for deposited particulate and visibility which relate to nuisance or aesthetic effects. The "other" indicators are either specifically associated with single industries in Northland, (for example, fluoride), or are currently not significant in Northland, (for example, ozone). In addition, other indicators will be monitored as a requirement of consent conditions for that source. The reasons for the selection of the key monitoring indicators are given in Appendix 1.

Monitoring will enable the Northland Regional Council to gauge the effectiveness of the policies and provisions of this Plan. It also provides relevant information on contaminants and their effects.

The following methods relate to monitoring and investigations:

- 6.8(1), (2), (3)
- 6.18(3), (4), (5), (6), (7), (8), (9)

7.3.4 Co-ordination and Liaison

The Resource Management Act promotes the integrated management of the natural and physical resources. It therefore requires co-ordination and liaison with other agencies such as district councils, central government and industry groups, to achieve the Plan's objectives.

The Department of Labour (Occupational Safety and Health) has responsibilities relating to worker health, therefore it can regulate discharges to air in the workplace. A consistent approach to the control of such discharges will result in certainty for the discharger. District councils control the effects of land uses. Land use planning is an effective tool for limiting the impact of air discharges, particularly nuisance odour effects. Liaison between Regional and District Councils will ensure that integrated management of land use and other types of development is achievable.

The following methods relate to co-ordination and liaison:

- 6.8(12), (13), (14), (15), (16)
- 6.10(3)
- 6.12(2)
- 6.14(1)
- 6.16(4)
- 6.18(1)

PART V:

RULES

This part identifies those activities which will be allowed without a resource consent, and those activities which can only be undertaken with a resource consent. It also contains the Information Requirements for Resource Consent Applications and the Assessment Criteria that will be used by the Northland Regional Council to make decisions on applications for air discharge permits.

8. RULES FOR DISCHARGES OF CONTAMINANTS TO THE AIR

8.1 INTRODUCTION

This Section sets out the rules which apply to:

(a) Discharges of contaminants to air from industrial or trade premises, and,

(b) Discharges of contaminants to air from any other place or source (which is not an industrial or trade premise).

This distinction is made because, with respect to (a), all discharges to air from industrial or trade premises are prohibited, unless allowed by a rule in a plan, a proposed plan, or by a resource consent. With respect to (b), all discharges are allowed unless the discharge contravenes a rule in a regional plan or a proposed regional plan.

In these rules, an "activity" means the discharge of a contaminant to air. Each rule specifies activities which are permitted, controlled, discretionary or prohibited.

A **permitted activity** means an activity that is allowed by a plan without a resource consent if it complies in all respects with any conditions (including any conditions in relation to any matter described in section 108 or section 220) specified in the plan.

A **controlled activity** is an activity which:

(a) Is provided for, as a controlled activity, by a rule in a plan or proposed plan; and

(b) Complies with standards and terms specified in a plan or proposed plan for such activities; and

(c) Is assessed according to matters the consent authority has reserved control over in the plan or proposed plan; and

(d) Is allowed only if a resource consent is obtained in respect of that activity.

A **Discretionary Activity** is an activity:

(a) Which is provided for, as a discretionary activity, by a rule in a plan or proposed plan; and

(b) Which is allowed only if a resource consent is obtained in respect of that activity; and

(c) Which may have standards and terms specified in a plan or proposed plan; and

(d) In respect of which the consent authority may restrict the exercise of its discretion to those matters specified in a plan or proposed plan for that activity.

A **Prohibited Activity** is an activity which this Plan expressly prohibits, and for which no resource consent will be granted.

A **Non-complying Activity** means an activity (not being a prohibited activity) which -

(a) Contravenes a rule in a plan or proposed plan; and

(b) Is allowed only if a resource consent is obtained in respect of that activity.

8.2 HOW TO USE THE RULES

To determine whether a discharge of contaminants to air is permitted, or requires a resource consent, it is first necessary to determine whether the discharge is from an industrial or trade premise. If the property or activity falls under the definitions definition of industrial or trade premise, the rules for permitted, controlled, discretionary and prohibited activities in Section 9 are applicable. If the discharge is not from an industrial or trade premise, the rules in Section 10 are applicable. Additional resource consents or compliance with conditions on permitted activities on other regional plans may be required if any activity results in discharges of contaminants to other receiving environments.

Table 2 lists the rules in Sections 9 and 10 to assist in locating the relevant rule.

8.3 NOXIOUS, DANGEROUS, OFFENSIVE, AND OBJECTIONABLE EFFECTS

Several rules in the Plan use the terms "noxious", "dangerous", "offensive", and "objectionable". These terms are also included in Section 17 of the Resource Management Act 1991. They are not defined in the Definitions to this Plan because of the need to take account of case law precedent as it develops, i.e. the Plan cannot override interpretations decided by the judiciary. However, the following notes are intended to provide some guidance for interpreting these terms:

1. **NOXIOUS, DANGEROUS -** The Concise Oxford Dictionary defines "noxious" as "harmful, unwholesome". At the time of writing this Plan, the term "noxious" did not appear to have been defined or considered in case law pertaining to the Resource Management Act 1991. Noxious effects may include significant adverse effects on the environment (e.g. on plant and animal life) even though the effects may not be dangerous to humans.

   "Dangerous" is defined as "involving or causing exposure to harm". Dangerous discharges include those that cause, or are likely to cause adverse physical health effects, such as discharges containing toxic concentrations of chemicals**.**

2. **OFFENSIVE, OBJECTIONABLE** - "Offensive" is defined as "... giving or meant to give offence ... disgusting, foul-smelling, nauseous, repulsive ..." . "Objectionable" is defined as "open to objection, unpleasant, offensive". Case law has established that what may be offensive or objectionable under the Resource Management Act 1991 cannot be defined or prescribed except in the most general of terms. Each case will depend upon its own circumstances. Key considerations include:

   (a) **Location of an activity and sensitivity of the receiving environment** - What may be considered offensive or objectionable in an urban area, may not necessarily be considered offensive or objectionable in a rural area;

(b) **Reasonableness** - Whether or not an activity is offensive or objectionable should be determined by a reasonable ordinary person who is representative of the community at large and neither hypersensitive nor insensitive, deciding whether the activity is disgusting, nauseous, repulsive or otherwise objectionable. Accordingly, the views of the complainants or a particular enforcement officer are not determinative but can be the trigger for further investigation and will be considered when applying the test.

(c) **Existing uses** - It is important to consider what lawfully established activities exist in an area, i.e. if a new activity requires a permit, the effect of existing discharges of contaminants into air should be considered.

Each investigation of a complaint concerning noxious, dangerous, offensive or objectionable discharges will depend upon the specific circumstances.

In responding to a complaint relating to a breach of condition concerning odour (for a resource consent or permitted activity rule), what may be "offensive or objectionable" will generally be determined by a Council officer, or officers, who have experience in odour assessment. In such assessments, officers will generally follow the relevant case law principals and take into account the FIDOL factors, as well as location and time. This approach aims to promote consistency in the assessment of odour.

FIDOL factors will be considered in combination, as no single FIDOL factor determines how offensive or objectionable an odour is. For example a low frequency, high intensity odour may be objectionable, as may be a high frequency, low intensity odour. If the odour is assessed as being offensive or objectionable, the discharger may be asked to take whatever action is necessary to avoid, remedy or mitigate the effects of the discharge and/or provide further information. Where circumstances warrant, enforcement action may be taken in the form of an abatement notice, infringement notice, enforcement order, application of prosecution pursuant to the Resource Management Act 1991.

Where further information regarding the odour may be appropriate, monitoring and assessment of odours can occur through a number of approaches which include:

- The use of odour diaries kept by people living and working in the subject area;
- Additional odour assessors;
- Independent odour monitoring; and
- Technical olfactometry measurement methods.

TABLE 2: SUMMARY OF THE RULES FOR DISCHARGES OF CONTAMINANTS TO AIR

CLASS OF ACTIVITY	INDUSTRIAL OR TRADE PREMISE		ANY OTHER PLACE OR SOURCE	
	Type of activity/process	**Rule No.**	**Type of activity/process**	**Rule No.**
Permitted[2]	Fuel burning equipment for heating	9.1(1) 9.1(2)	Fuel burning equipment for heating	10.1(1)
	Burning of wood/ paper/vegetation	9.1(3)		
	Certain dust generating activities	9.1(4)	Certain dust generating activities	10.1(2)
	Wet abrasive blasting	9.1(5)	Wet abrasive blasting	10.1(3)
	Small sewage treatment systems	9.1(6)		
	Closed landfills	9.1(7)		
	Other waste management processes	9.1(8)		
	Agrichemical application	9.1(9)	Agrichemical application – domestic user	10.1(4)
			Agrichemical application - commercial user or contractor	10.1(5)
	Food and beverage manufacturing	9.1(10)	24D Ester application	10.1(6)
	Motor fuel storage	9.1(10)		
	Drycleaning facilities	9.1(10)		
	Spray coating	9.1(10)		
	Air conditioning	9.1(10)		
	Refrigeration systems	9.1(10)		
	Exhaust systems	9.1(10)		
	Combustion of fuels for fire fighting training	9.1(10)		
			Factory farming	10.1(7)
			Burning waste outside the Whangarei Airshed	10.1(8)
			Burning waste within the Whangarei Airshed (properties greater than 1ha)	10.1(9)
			Bonfires associated with community events	10.1(10)
Controlled	Closed landfills and other existing waste management processes	9.2(1)	None	
Discretionary	Abrasive blasting	9.3(1)	Activities not complying with Rules 10.1(1) to (10)	10.3(1)
	Any activity not complying with permitted activity rules	9.3(2)	Burning waste within the Whangarei Airshed (Properties smaller than 1ha)	10.3(2)
Prohibited	Open burning of certain wastes	9.4(1)	Open burning of certain wastes	10.4(1)
	Open burning of wastes at landfills	9.4(2)		
	Abrasive blasting using >2% free silica abrasive	9.4(3)		
	Certain open air abrasive blasting activities after 1 July 2000	9.4(4)		
	Deregistered, unregistered or banned agrichemicals	9.4(5)	Deregistered, unregistered or banned agrichemicals	10.4(2)
	Nuclear power stations	9.4(6)		
	Application of 2,4-D butyl ester from 12 months of plan becoming operative	9.4(7)	Application of 2,4-D butyl ester from 12 months of plan becoming operative	10.4(3)

2 All permitted activities in this plan are subject to conditions that must be adhered to.

9. RULES FOR DISCHARGES OF CONTAMINANTS TO AIR FROM INDUSTRIAL OR TRADE PREMISES

9.1 PERMITTED ACTIVITIES

The following discharges of contaminants to air from industrial or trade premises are permitted activities:

1. The discharge of contaminants to air from the operation of fuel burning equipment using coal, fuel oil, diesel oil, natural gas, LPG, untreated wood for heating purposes, and/or electricity generating purposes with the following heat capacity:

   (1) Coal and oil burning equipment having a rate of heat release less than 5 MW

   (2) Natural gas and LPG burning equipment having a rate of heat release less than 10 MW

   (3) Untreated wood burning equipment having a rate of heat release less than 2.5 MW

   is a **Permitted Activity** provided that:

   (a) The discharge does not result from the burning of waste, waste oil or solvents.

   (b) The discharge shall not result in offensive or objectionable odour, or any noxious or dangerous level of gases, beyond the boundary of the subject property.

   (c) The discharge of particulates is less than 250 mg/m³ of non toxic particulates, corrected to $0^{o}C$, 12% CO_2, 1 Atmosphere, and a dry gas basis.

   (d) The stack height is calculated in accordance with the "Requirements for Chimney Heights" (see Appendix 2 pg. 109).

   (e) The stack vertical efflux velocity is not less than 5 m/s.

   (f) The opacity of the discharge to air when measured visually in accordance with AS 3543-1989 shall not be as dark as or darker than Ringlemann Shade No. 1 for more than 2 minutes continuously or for an aggregate of 4 minutes in any period of 60 minutes. These limits may be exceeded for a maximum of 30 minutes when starting the fuel burning equipment from cold, and for soot blowing providing that the opacity of the discharge is reduced as far as practicable.

   (g) The opacity of the discharge to air when measured by photoelectric means in accordance with AS3543-1989 shall not equal or exceed 52% for more than 2 minutes continuously or for an aggregate of 4 minutes in any period of 60 minutes. These limits may be exceeded for a maximum of 30 minutes when starting the fuel burning

equipment from cold, and for soot blowing providing that the opacity of the discharge is reduced as far as practicable.

***Explanation**. The discharge of contaminants to air permitted in Rule 9.1(1) does not apply to those discharges from fuel burning equipment such as direct fired dryers, foundry furnaces, incinerators or other fuel burning equipment associated with industrial processes. These activities are dealt with via the discretionary activity rules.*

Rule 9.1(1) provides for the permitted use of small and medium sized fuel burning equipment to provide heat. Such equipment, if managed properly, does not result in significant adverse effects on the environment. The standards of Rule 9.1(1) ensure the equipment is managed appropriately to minimise effects.

2. Notwithstanding Rule 9.1(1), the discharge of contaminants to air from the operation of fuel burning equipment using coal, fuel oil, diesel oil, natural gas, LPG or untreated wood with a heat capacity of less than 40 KW is a **Permitted Activity** provided that:

   (a) The installation and operation of the device complies with all relevant Building Act requirements.

3. The discharge of contaminants to air from the burning of untreated wood, vegetation, paper and cardboard is a **Permitted Activity** provided that:

   (a) The discharge shall not result in any offensive or objectionable odour, smoke or dust deposition, or any noxious or dangerous levels of gases, beyond the boundary of the subject property.

   (b) The incineration takes place in an incineration device.

   ***Explanation**. The rule allows the burning of wood, paper and vegetation in an incineration device, be it commercially manufactured or home-made. An incineration device promotes better combustion and lowers nuisance from smoke and ash.*

4. The discharge of dust into the air arising from:

   (1) Quarrying operations, earthworks, clean fill operations; or

   (2) Road construction and maintenance, or the use of unsealed roads; or

   (3) Railway line construction and maintenance; or

   (4) The loading, unloading and on-site movement of materials having a dust producing capacity;

   is a **Permitted Activity** provided that:

   (a) The discharge shall not result in any offensive or objectionable dust deposition, or any noxious or dangerous levels of airborne particulate matter, beyond the boundary of the subject property.

***Explanation**. This rule permits the discharge of dust from a wide range of activities. The rule permits dust discharges from the use of unsealed roads on industrial or trade premises. Without this permitted activity status dust discharges from these roads would require a resource consent. The rule does not apply to dust emissions from unsealed roads not located on industrial or trade premises as these are already permitted under Section 15(2) of the Resource Management Act.*

5. The discharge of contaminants to air from wet abrasive blasting (including water blasting) is a **Permitted Activity** provided that:

   (a) The discharge (including overspray, mists or chemical additives) shall not result in any noxious, dangerous, offensive or objectionable levels of airborne contaminants, and any resulting deposition, beyond the boundary of the subject property.

   (b) All working and surrounding areas must be kept substantially free of accumulations of used abrasive blasting mediums and other debris. As far as practicable, areas are to be cleared of used blasting mediums and other debris at the end of each blasting session and by the end of each working day.

   (c) The abrasive blasting medium shall contain no greater than 2 % by dry weight free silica.

   (d) The abrasive blasting medium shall contain no greater than 2 % by dry weight fine material able to pass through a 15.0 micron sieve.

   (e) The discharge shall not contain lead, arsenic, chromium, cadmium, copper, asbestos or tin, or compounds containing these substances.

   ***Explanation**. Wet abrasive blasting (as defined in the definitions) is permitted subject to the stated conditions. The rule applies to stationary and mobile sources. Use of wet abrasive blasting methods significantly reduces the amount of contaminants emitted into the air and their effects on the environment. Any discharges of contaminants onto land or into water, resulting from the activity, must be authorised in accordance with the Proposed Regional Water and Soil Plan and the Proposed Regional Coastal Plan.*

6. The discharge of contaminants to air from effluent storage, treatment, transfer and disposal systems is a **Permitted Activity** provided that:

   (a) The effluent discharge volume does not exceed 3 cubic metres per day, averaged over the month of greatest discharge and/or the maximum effluent discharge volume does not exceed 6 cubic metres over any 24 hour period; or

   (b) The discharge is from a pit privy;

   and there is no offensive or objectionable odour, or any noxious or dangerous levels of gases at or beyond the property boundary.

7. The discharge of contaminants to air from any closed landfill at the date this Plan is notified is a **Permitted Activity** provided that:

   (a) The discharge shall not result in any offensive or objectionable odour, or any noxious or dangerous levels of gases, beyond the boundary of the subject property.

8. The discharge of contaminants into air from industrial or trade premises used for the transfer, treatment or disposal of solid waste materials or other solid waste management purposes, or for composting organic material which:

   (1) Is a transfer station or recycling depot; or

   (2) Was existing and operational as at 1 April 1995; and

   (3) Was authorised by a resource consent on or before 27 July 1995 (the date of notification of the Proposed Regional Air Quality Plan);

   is a **Permitted Activity** provided that:

   (a) The discharge shall not result in any noxious, dangerous, offensive or objectionable levels of airborne contaminants, beyond the boundary of the subject property;

   until such time as the earliest expiry date of any associated resource consents; thereafter Rule 9.2(1)(ii) applies.

   ***Explanation**. This rule includes the storage, transfer, treatment, and disposal of solid waste, and the composting of organic materials. It allows such discharges to continue until such time as associated resource consents expire. Then an application for a resource consent to discharge contaminants to air will be required, along with applications to replace the expired consents, in accordance with Rule 9.2(1)(ii). All new processes, with the exception of transfer stations (including skips) and recycling depots, will be required to apply for a resource consent to discharge contaminants to air pursuant to Rule 9.3(2).*

9. The discharge of contaminants to air from agrichemical application by commercial users or contractors is a permitted activity provided that:

(a) The person who will apply the agrichemicals has the following valid qualifications:

(i) For a commercial user, a qualification that meets the requirements of Appendix 6. Examples of qualifications that meet these requirements include the GROWSAFE® Introductory Certificate, or a GROWSAFE® Applied Certificate.

(ii) For a commercial contractor using ground based application techniques, a qualification that meets the requirements of Appendix 6. An example of a qualification that meets these requirements is the GROWSAFE® Registered Chemical Applicators Certificate.

(iii) For a commercial contractor using aerial application techniques, a qualification that meets the requirements of Appendix 6. An example of a qualification that meets these requirements is the GROWSAFE® Pilot Agrichemical Rating Certificate.

(b) The application is undertaken in a manner that does not exceed any rate, or contravene any other requirement, specified in the label instructions and published application recommendations.

(c) The application shall be undertaken in accordance with all mandatory[3] requirements set out in Sections 5.1, 5.2, 5.5, 5.6, 5.7, 5.8 and 5.9 and with reference to the introduction to the Appendices, and Appendices[4] N, T, V, Y, DD, HH and JJ of New Zealand Standard 8409:1999, Code of Practice for the Management of Agrichemicals, in order that the Best Practicable Option is implemented to avoid, remedy or mitigate any adverse effects of spraydrift beyond the target property. If there is any conflict between the Regional Air Quality Plan and any provisions of the NZ Standard 8409: 1999, the former shall apply.

(d) The property owner or manager shall keep records of agrichemical use with reference to Appendix C of New Zealand Standard 8409:1999, Code of Practice for the Management of Agrichemicals, and shall make such records available to the Northland Regional Council on request. In addition the property owner shall keep relevant records of dilutent and chemical rates.

(e) Notification is given in accordance with clause 9.1 or 9.2 of this Rule.

[3] Note: In general, mandatory requirements are those that include the word “shall”. Non-mandatory requirements are those that include the word “should”.

[4] Appendices contain descriptive and supporting information designed to help understand and comply with the Code requirements.

9.1 Where agricultural chemicals will be applied, in accordance with Rule 9.1.9 above, to more than two hundred metres of public road, rail or public place, continuously or intermittently, notice of intention to spray must be given in local newspapers or by door-to-door advice and appropriate street signage, excluding railway verges, to occupiers of properties or premises within 30 metres of the area to be sprayed at least eighteen hours and not more than 14 days before application and must include the following information:

(a) The property and area to be sprayed;

(b) The date(s) and general time(s) of the spraying, and in case of poor weather conditions, any alternative dates and general times for spraying;

(c) The brand name and chemical name to be used;

(d) Method of application;

(e) Safety precautions to be taken; and

(f) The contact name, address and telephone number of the owner/manager of the area to be sprayed.

Vehicles or equipment applying agrichemicals must display a sign stating "agrichemical (herbicide/insecticide/fungicide) application in progress"' and name of the contractor. A record of this notification must be kept and made available to the Northland Regional Council on request.

9.2 Where agrichemical application is undertaken by either ground based or aerial application, the owner or occupier of the property being sprayed shall notify the owners or occupiers of sensitive areas adjacent to the area that is to be sprayed.

For the purpose of this rule, "adjacent to" means contiguous with or separated only by a stream, transport corridor or similar narrow margin not more than 30m wide.

Notice shall be given either orally or in writing, not less that eighteen hours and not more than two weeks before the proposed commencement of the work. Notice should include information on where the property spray plan is available.

An annual or seasonal property spray plan shall be prepared, and must include but is not limited to the information described in Appendix 4 of this Plan. Additionally, the annual or seasonal property spray plan shall include the procedures for giving notice of intention to spray as required above.

Explanation*. This rule is consistent with the requirement that ground and aerial based operators be registered and trained. GROWSAFE® Certificates have been developed and are readily available in Northland.*

The Code of Practice for the Management of Agrichemicals, which is now a New Zealand Standard, can be an effective means of preventing or minimising the adverse effects of discharges of agrichemicals to air and

therefore implementing the best practicable option. Agrichemical applicators should adopt practices recommended by these codes, including the recording of spray diaries and the preparation of property spray plans. The Code also contains a list of areas or places which are considered to be "sensitive", as well as a Drift Hazard Rating Chart. This enables users to actively select weather conditions, equipment and types of spray to prevent or minimise off-target effects. The application of best practicable option will increase awareness and understanding of the nature of the effects of the discharge on the receiving environment.

Notification can allow mitigating steps to be taken by adjacent land users to minimise the potential adverse effects of agrichemical applications. In order for notification to be an effective tool, early consultation and discussions between neighbours in the preparation of documents such as annual spray plans or seasonal spray plans is considered to be good practice.

Definitions of the terms domestic user, commercial user, commercial contractor, sensitive areas, ground based application methods and aerial application are detailed in the definitions.

10. Subject to Rules 9.1(1) to 9.1(9) the discharge of contaminants to air from activities contained in Appendix 5 is a **Permitted Activity** provided that:

    (a) The discharge shall not result in any offensive or objectionable odour or dust, or any noxious or dangerous levels of gases, beyond the boundary of the subject property.

***Explanation**. The listed activities currently take place with little or no significant adverse effects on the environment. This rule permits the activities to take place without a resource consent, provided general performance standards for discharge of contaminants are met.*

11. Aircraft

The discharge of products of combustion into air from aircraft that conform to the operation and maintenance requirements of the Civil Aviation Act 1990 and amendments is a **Permitted Activity**.

Explanation. *This rule ensures that aircraft are able to operate without undue regulation provided that they meet the safety and operational standards of the Civil Aviation Act 1990 and any amendments to that Act. It is considered unreasonable to impose additional regulation through the RMA as the effect of non-compliance with the Civil Aviation Act 1990 is the suspension of all operations for that aircraft.*

9.2 CONTROLLED ACTIVITIES

The following discharges of contaminants to air from industrial or trade premises are controlled activities:

1. The discharge of contaminants to air from

(1) any closed landfill which fails to comply with permitted activity Rule 9.1(7),

(2) any existing waste management process (except as provided for in Rule 9.1(8)),

is a **Controlled Activity** provided that:

(a) The discharge shall not result in any offensive or objectionable odour or dust, or any noxious levels of gases, beyond the boundary of the subject property.

(b) The discharger, at all times, adopts the best practicable option to avoid, remedy or mitigate any adverse effects on the environment.

Matters subject to control

The matters over which the Northland Regional Council will exercise its control are:

(1) The adequacy of any measures with respect to landfill gas management, dust control and odour control,

(2) The adequacy of any measures to avoid, remedy or mitigate adverse ecological effects arising from carbon dioxide or methane discharges,

(3) Whether the measures taken are considered to be the best practicable option to prevent or minimise odour, soiling, damage to property or loss of amenity value,

(4) Information and monitoring requirements.

An application in respect of a controlled activity for a closed landfill will be non-notified unless the Regional Council considers that special circumstances exist to require notification. The Council will require that written approvals are obtained from all landowners/occupiers whose property adjoins the property on which the closed landfill is located.

An application in respect of a controlled activity for an open landfill in accordance with 9.2(1)ii will generally be notified along with the other associated resource consents, unless the provisions of Section 94 of the Resource Management Act are complied with; see Section 13 of this Proposed Plan.

2. The discharge of contaminants to air from buildings within which abrasive blasting activities occur is a **Controlled Activity** provided that:

   (a) The activity occurs within a purpose built blasting both with emission control technology.

Matters subject to control

The matters over which the Northland Regional Council will exercise its control are:

(1) Discharge location,

(2) Control technology, e.g. collection system, filters used,

(3) Discharge concentration,

(4) Discharge composition, e.g. heavy metal component,

(5) Ambient concentration of contaminants,

(6) Monitoring,

(7) Construction, maintenance and operation of containment facility.

9.3 DISCRETIONARY ACTIVITIES

The following discharges of contaminants to air from industrial or trade premises are discretionary activities:

1. The discharge of contaminants to air from abrasive blasting activities that do not comply with rules 9.1.5 and 9.2.2 and which is not prohibited under rules 9.4.3 and 9.4.4 is a **Discretionary Activity**.

***Explanation**. This rule applies to all abrasive blasting activities, whether undertaken at the operator's permanent base, or in situ using mobile equipment. Conditions will be placed on resource consents requiring that objects be screened, restricting the fines content of the abrasives and requiring regular clearing of blasting debris to prevent significant levels of dust leaving the site. For any object which must be blasted in situ, the need for complete screening will depend on, among other things, the contaminants*

being removed from the object, and the proximity of water bodies and dwellings.

2. Any discharge of contaminants to air which is not permitted, controlled or prohibited or fails to comply with, Rules 9.1(1), (2), (3), (4), (6), (7), (8), (9), (10) and Rule 9.2(1) is a **Discretionary Activity**.

***Explanation**. There are many discharges of contaminants to air which could potentially occur in Northland with a range of adverse environmental effects. It is considered to be an effective air quality management strategy to address non specified discharges by the resource consent process using the assessment criteria in Section 15 of this Plan. However, the Northland Regional Council considers provision of information and advice will initially be more effective where Rules 9.1(2). (3) and (4) are not complied with. However, enforcement action will be taken where necessary.*

Applications for a resource consent in respect of these discretionary activities will be publicly notified unless the provisions of Section 94 of the Resource Management Act are complied with; see Section 13 of this Plan.

9.4 PROHIBITED ACTIVITIES

The following discharges of contaminants to air from any industrial or trade premise are prohibited activities:

1. The discharge of contaminants to air from the open burning of the following waste materials is a **Prohibited Activity**:

   (a) Rubber, including tyres,

   (b) Plastic agrichemical containers and any halogenated plastic products from 12 months of this plan becoming operative,

   (c) Hazardous substances or containers of hazardous substances,

   (d) Coated metal cable,

   (e) Motor vehicles or parts of motor vehicles (except in emergency situations),

   (f) Timber treated with CCA or organochlorine substances.

   ***Explanation.** This rule prohibits the open burning of substances which result in the emission of a variety of combustion products which are offensive and may be hazardous to human and environmental health. Open burning is defined in the definitions and includes burning in open drums where the combustion process is uncontrolled. Hazardous substance is defined in the definitions. These substances must be incinerated in a purpose designed incineration facility.*

2. The discharge of contaminants to air from the open burning of waste material in an operating or closed landfill is a **Prohibited Activity**.

Explanation. *The open burning of wastes (of all kinds) at landfills is prohibited because the wide variety of substances being burned results in emissions which are offensive, and may be hazardous to human and environmental health. Landfill burning produces large quantities of smoke, deposited particulate and odour that can cause nuisance. Highly toxic materials such as dioxins, polyaromatic hydrocarbons (PAHs) and hydrogen chloride may be released. Fires at landfills also increase the risk of an explosion of landfill gas, and can be very difficult to control.*

3. The discharges of contaminants to air from abrasive blasting activities using high free silica abrasives (>2% free silica) is a **Prohibited Activity**.

Explanation*. The use of high free silica abrasives poses a health risk to workers and occupiers of adjoining properties. There are suitable low free silica sands and commercially manufactured sands available as alternatives.*

The maximum of 2% free silica has been adopted as this is the lowest level which can be detected by current analytical methods and is the percentage recommended by the Department of Labour (Occupational Safety and Health).

4. Notwithstanding Rule 9.3(1), after 1 July 2000, the discharge of contaminants to air from open air dry abrasive blasting of objects capable of being fitted into a purpose built blasting booth with emission control technology is a **Prohibited Activity**.

Explanation. *Until 1 July 2000, the Regional Council, through the resource consent process, will specifically use its discretion in considering discharge permit applications for dry abrasive blasting in the open air on permanent sites. Conditions requiring partial or complete screening of the object to be blasted are likely to be placed on the consent. After 1 July 2000, all dry abrasive blasting on permanent sites shall be conducted within a properly constructed blasting booth. Only articles that cannot fit in or be transported to a blasting booth, or articles that must be blasted in situ, will be allowed to be dry abrasive blasted in the open air. In such circumstances, dust mitigation measures will be required depending on the sensitivity of the receiving environment.*

5. The discharge of contaminants to air from the application of agrichemicals which have been deregistered, unregistered, or for which registration has expired in New Zealand or banned by International Agreement is a **Prohibited Activity**.

Explanation. *Particular agrichemicals may be banned from use for a number of reasons, such as toxicity or long term environmental effects, or because trading countries have prohibited the import of products to which a particular agrichemical has been applied. The use of agrichemicals which have been banned places the applicator and environment at risk and has the potential to threaten the livelihood of exporters. Rule 9.4(5) prohibits the use of such agrichemicals.*

6. The discharge of contaminants to air from nuclear power stations is a **Prohibited Activity**.

7. The discharge of contaminants to air from the application of 2,4-D butyl ester 12 months after the date of this plan becoming operative is a **Prohibited Activity**.

10. RULES FOR DISCHARGES OF CONTAMINANTS TO AIR FROM ANY OTHER PLACE OR SOURCE

10.1 PERMITTED ACTIVITIES

The following discharges of contaminants to air from any other place or source (which is not an industrial or trade premise) are permitted activities:

1. The discharge of contaminants to air from the operation of fuel burning equipment using coal, fuel oil, diesel oil, natural gas, LPG or untreated wood, with a heat capacity of less than 40 KW is a **Permitted Activity** provided that:

   (a) The installation and operation of the device complies with all relevant Building Act requirements.

1A. The discharge of contaminants to air from the operation of fuel burning equipment using coal, fuel oil, diesel oil, natural gas, LPG, untreated wood for heating purposes, and/or electricity generating purposes with the following heat capacity:

   (1) Coal and oil burning equipment having rate of heat release less than 5 MW,

   (2) Natural gas and LPG burning equipment having rate of heat release less than 10 MW,

   (3) Untreated wood burning equipment having a rate of heat release less than 2.5 MW.

   is a **Permitted Activity** provided that:

   (a) The discharge does not result from the burning of waste, waste oil or solvents,

   (b) The discharge shall not result in offensive or objectionable odour, or any noxious or dangerous level of gases, beyond the boundary of the subject property,

   (c) The discharge of particulates is less than 250 mg/m³ of non toxic particulates corrected to 0^{o} C, 12% CO_2, 1 Atmosphere, and a dry gas basis,

   (d) The stack height is calculated in accordance with the "Requirements for Chimney Heights" (see Appendix 2 pg. 111),

   (e) The stack vertical efflux velocity is not less than 5 m/s,

   (f) The opacity of the discharge to air when measured visually in accordance with AS 3543-1989 shall not be as dark as or darker than Ringlemann Shade No. 1 for more than 2 minutes continuously or for an aggregate of 4 minutes in any period of 60 minutes. These limits may be exceeded for a maximum of 30 minutes when starting the fuel burning equipment from cold, and for soot blowing providing that the opacity of the discharge is reduced as far as practicable,

(g) The opacity of the discharge to air when measured by photoelectric means in accordance with AS3543-1989 shall not equal or exceed 52% for more than 2 minutes continuously or for an aggregate of 4 minutes in any period of 60 minutes. These limits may be exceeded for a maximum of 30 minutes when starting the fuel burning equipment from cold, and for soot blowing providing that the opacity of the discharge is reduced as far as practicable.

Explanation. *The discharge of contaminants to air permitted in Rule 10.1(1A) does not apply to those discharges from fuel burning equipment such as direct fired dryers, foundry furnaces, incinerators or other fuel burning equipment associated with industrial processes. These activities are dealt with via the discretionary activity rules.*

Rule 10.1(1A) provides for the permitted use of small and medium sized fuel burning equipment to provide heat. Such equipment, if managed properly, does not result in significant adverse effects on the environment. The standards of Rule 10.1(1A) ensure the equipment is managed appropriately to minimise effects.

2. The discharge of dust to air from activities associated with earthworks, road and rail construction or maintenance is a **Permitted Activity** provided that:

(a) The discharge does not result in any dust nuisance that is offensive or objectionable to neighbouring landowners/occupiers, including their properties.

Explanation. *Many activities have the potential to produce dust nuisance. These may be of a temporary nature or are sufficiently remote that dust may never reach the property boundary or neighbouring dwellings, or are of such a small scale that it is unlikely dust will be produced in quantities that result in adverse environmental effects. For these reasons, provided that environmental standards are met, dust producing operations are permitted activities.*

For road and rail construction or maintenance where the property boundary may be only metres away from the activity, it may not be practical to require that no offensive or objectionable dust nuisance occurs beyond the boundary. The environmental standard therefore allows greater quantities of dust to be discharged beyond the boundary provided there is no objectionable or offensive dust nuisance to neighbouring residents or damage or degradation of their properties.

3. The discharge of contaminants to air from wet abrasive blasting (including water blasting) is a **Permitted Activity** provided that:

(a) The discharge (including overspray, mists or chemical additives) shall not result in any noxious, dangerous, offensive or objectionable levels of airborne contaminants, beyond the boundary of the subject property,

(b) All working and surrounding areas must be kept substantially free of accumulations of used abrasive blasting mediums and other debris. As far as practicable, areas are to be cleared of used blasting

mediums and other debris at the end of each blasting session and by the end of each working day,

(c) The abrasive blasting medium shall contain no greater than 2 % by dry weight free silica,

(d) The abrasive blasting medium shall contain no greater than 2 % by dry weight fine material able to pass through a 15.0 micron sieve,

(e) The discharge shall not contain lead, arsenic, chromium, cadmium, copper, asbestos or tin, or compounds containing these substances.

Explanation. *Wet abrasive blasting (as defined in the definitions) is permitted subject to the stated conditions. The rule applies to stationary and mobile sources. Use of wet abrasive blasting methods significantly reduces the amount of contaminants emitted into the air and their effects on the environment. Any discharges of contaminants onto land or into water, resulting from the activity, must be authorised in accordance with the Regional Water and Soil Plan and the Regional Coastal Plan.*

4. The discharge of contaminants to air from agrichemical application by a domestic user is a **Permitted Activity** provided that:

(a) The application is undertaken in a manner that does not exceed any rate, or contravene any other requirement, specified in the label instructions and published application recommendations,

(b) All necessary steps are taken to avoid, remedy, or mitigate any possible adverse effects beyond the boundary of the property.

5. The discharge of contaminants to air from agrichemical application by commercial users or contractors is a permitted activity provided that:

(a) The person who will apply the agrichemicals has the following valid qualifications:

(i) For a commercial user a qualification that meets the requirements of Appendix 6. Examples of qualifications that meet these requirements include the GROWSAFE® Introductory (Standard) Certificate, or a GROWSAFE® Applied Certificate.

(ii) For a commercial contractor using ground based application techniques, a qualification that meets the requirements of Appendix 6. An example of a qualification that meets these requirements is the GROWSAFE® Registered Chemical Applicators Certificate.

(iii) For a commercial contractor using aerial application techniques, a qualification that meets the requirements of Appendix 6. An example of a qualification that meets these requirements is the GROWSAFE® Pilot Agrichemical Rating Certificate.

(b) The application is undertaken in a manner that does not exceed any rate, or contravene any other requirement, specified in the label instructions and published application recommendations.

(c) The application shall be undertaken in accordance with all mandatory[5] requirements set out in Parts 5.1, 5.2, 5.5, 5.6, 5.7, 5.8 and 5.9 and with reference to the introduction to the Appendices, and Appendices[6] N, T, V, Y, DD, HH and JJ of New Zealand Standard 8409:1999, Code of Practice for the Management of Agrichemicals, in order that the Best Practicable Option is implemented to avoid, remedy or mitigate any adverse effects of spraydrift beyond the target property. If there is any conflict between the Regional Air Quality Plan and any provisions of the NZ Standard 8409: 1999, the former shall apply.

(d) The property owner or manager shall keep records of agrichemical use with reference to Appendix C of New Zealand Standard 8409:1999, Code of Practice for the Management of Agrichemicals, and shall make such records available to the Northland Regional Council on request. In addition the property owner shall keep relevant records of dilutent and chemical rates.

(e) Notification is given in accordance with clause 5.1 or 5.2 of this Rule.

5.1 Where agricultural chemicals will be applied, in accordance with Rule 10.1.5 above, to more than two hundred metres of public road, rail or public place, continuously or intermittently, notice of intention to spray must be given in local newspapers or by door-to-door advice and appropriate street signage, excluding railway verges, to occupiers of properties or premises within 30 metres of the area to be sprayed at least one week and not more than one month before application and must include the following information:

(a) The property and area to be sprayed,

(b) The date(s) and general time(s) of the spraying, and in case of poor weather conditions, and alternative dates and general times for spraying,

(c) The brand name and chemical name to be used,

(d) Method of application,

(e) Safety precautions to be taken, and

(f) The contact name, address and telephone number of the owner/manager of the area to be sprayed.

Vehicles or equipment applying agrichemicals must display a sign stating “agrichemical (herbicide/insecticide/fungicide) application in progress”’ and

[5] Note: In general, mandatory requirements are those that include the word “shall”. Non-mandatory requirements are those that include the word “should”.

[6] Appendices contain descriptive and supporting information designed to help understand and comply with the Code requirements.

name of the contractor. A record of this notification must be kept and made available to the Northland Regional Council on request.

5.2 Where agrichemical application is undertaken by either ground based or aerial application, the owner or occupier of the property being sprayed shall notify the owners or occupiers of sensitive areas adjacent to the area that is to be sprayed.

For the purpose of this rule, "adjacent to" means contiguous with or separated only by a stream, transport corridor or similar narrow margin not more than 30m wide.

Notice shall be given either orally or in writing, not less that eighteen hours and not more than two weeks before the proposed commencement of the work. Notice should include information on where the property spray plan is available.

An annual or seasonal property spray plan shall be prepared, and must include but is not limited to the information described in Appendix 4 of this Plan. Additionally, the annual or seasonal property spray plan shall include the procedures for giving notice of intention to spray as required above.

Explanation. *This rule is consistent with the requirement that ground and aerial based operators be registered and trained. GROWSAFE® Certificates have been developed and are readily available in Northland.*

The Code of Practice for the Management of Agrichemicals,, which is now a New Zealand Standard, can be an effective means of preventing or minimising the adverse effects of discharges of agrichemicals to air and therefore implementing the best practicable option. Agrichemical applicators should adopt practices recommended by these codes, including the recording of spray diaries and the preparation of property spray plans. The Code also contains a list of areas or places which are considered to be "sensitive", as well as a Drift Hazard Rating Chart. This enables users to actively select weather conditions, equipment and types of spray to prevent or minimise off-target effects. The application of best practicable option will increase awareness and understanding of the nature of the effects of the discharge on the receiving environment.

Notification can allow mitigating steps to be taken by adjacent land users to minimise the potential adverse effects of agrichemical applications. In order for notification to be an effective tool, early consultation and discussions between neighbours in the preparation of documents such as annual spray plans or seasonal spray plans is considered to be good practice.

Definitions of the terms domestic user, commercial user, commercial contractor, sensitive areas, ground based application methods and aerial application are detailed in the Definitions.

6. Subject to Rule 10.1(5) and 10.4(3), the discharge of contaminants to air from the application of 24D Ester:

(1) by hand held methods at any time of the year, or

(2) between 1 May and 31 August, using ground based equipment specifically designed for agrichemical application, or aerial application, and

(3) adhering to label recommendations for water rates.

is a **Permitted Activity**.

Explanation. *24D Ester is widely used in Northland and the effects of its use are the most common reason for complaints about spraydrift, due to its distinctive odour and its volatility. Its volatility makes it unpredictable under different weather conditions. Rule 10.1(6) seeks to allow the use of 24D Ester by methods which provide for good management practices at the times of the year when the control of plant pests, such as ragwort, carrot weed, thistle, and buttercup by this type of agrichemical is most effective, and weather conditions are most suitable. Controlling these pests outside the specified time, using 24D Ester, is less effective so some changes to farm management will be required. Alternatively, other products of lower volatility could be used.*

7. The discharge of odour or particulates to air from activities associated with factory farming of animals, namely:

(1) poultry, rabbits and fitches or

(2) intensive pig farming up to 30 September 1998, and then

(3) from 1 October 1998 for intensive pig farming with not more than 25 pigs at any one time.

is a **Permitted Activity** provided that:

(a) The discharge shall not result in any offensive or objectionable odour or dust, beyond the boundary of the subject property.

Explanation. *This rule permits odour and dust discharges from most factory farming operations, including the disposal of effluent and waste materials generated as a result of the factory farming, providing no offensive or objectionable odour or dust occur beyond the boundary of the subject property. Intensive pig farming operations with greater than 25 pigs at any one time are permitted until 30 September 1998 in order to allow them to apply for the necessary consent required from 1 October 1998.*

8. The discharge of contaminants into air from the burning of any material – excluding the combustion of certain waste materials listed in Rule 10.4.1 – by open burning, or burning within an incineration device outside the Whangarei Airshed (as shown in Map 2), is a **Permitted Activity** provided that:

(a) All other alternative methods for disposal, for example composting, mulching or transport to a refuse station, have been considered; and

(b) The discharge shall not result in any offensive or objectionable odour or any noxious or dangerous levels of gases, beyond the boundary of the subject property as determined by a suitably qualified and experienced enforcement officer of the Northland Regional Council; and

(c) The material to be burned shall not contain any tyres or other rubber, waste oil, any waste products containing mineral hydrocarbons, wood treated with chemicals, painted wood, chip board, plastic, asbestos, medical waste, chemical waste, or any combination of metals and combustible materials, except where the burning is:

(i) For the purpose of disease control or quarantine control in accordance with Section 7A and Part VII of the Biosecurity Act 1993; or

(ii) For the purpose of fire training; and

(d) The discharge shall not result in any smoke that adversely affects traffic safety (i.e. interferes with normal driving task), including on state highways or, reduces visibility within recognised flight paths in the vicinity of airports; and

(e) The discharge shall not result in any objectionable deposition of particulate matter on any land or structure beyond the boundary of the subject property as determined by a suitably qualified and experienced enforcement officer of the Northland Regional Council.

9. The discharge of contaminants into air from the burning of any material – excluding the combustion of certain waste materials listed in rule 10.4.1 – by open burning, or burning within an incineration device on properties greater than 10,000m^2 (1ha) within the Whangarei Airshed (as shown in Map 2), is a permitted activity provided that:

(a) The activity is undertaken in accordance with the conditions (a) to (e) of rule 10.1.8; and

(b) The activity does not occur during the months of June, July and August except where material is being burned for the purposes of disease and pest control.

10. The discharge of contaminants into air from a bonfire associated with community events is a **Permitted Activity** within the Whangarei Airshed, provided that:

(a) The activity is undertaken in accordance with the conditions (b) to (e) of rule 10.1.8 and;

(b) The bonfire is organised by a community controlled organisation and;

(c) The Northland Regional Council is notified 5 working days prior to the event.

10.2 CONTROLLED ACTIVITIES

There are no controlled activities for discharges of contaminants to air from any other place or source (which is not an industrial or trade premise).

10.3 DISCRETIONARY ACTIVITIES

1. The discharge of contaminants to air which fail to comply with the conditions in Rules 10.1(1) to 10.1 (10) is a **Discretionary Activity**.

   Explanation. *It is not expected that there will be many applications for discretionary activities in accordance with this rule, as most of the activities permitted in Section 10.1 can be complied with, provided all reasonable steps are taken to prevent or minimise any adverse effect. When the Regional Council becomes aware of a permitted activity causing nuisance, it will require additional mitigation steps to be taken. If mitigation measures are not taken, enforcement action would be instigated. Enforcement is considered to be more effective and efficient than requiring the discharger to obtain a resource consent. Such consents are likely to have similar mitigation measures to those required by abatement notices. Given the costs associated with resource consents, it is most likely that the discharger would want to avoid applying for a consent.*

   An exception to this, however, is Rule 10.1(6) relating to the use of 24D Ester outside the specified dates. Where users wish to spray 24D Ester outside the periods specified in Rule 10.1(6), the Regional Council will assess the appropriateness of the timing, the application method and the actual and potential effects of the activity. However, the Regional Council will initially provide advice to the farmer on the most effective time of the year to control the plant pest to be sprayed, and suggest alternative products that may be more suitable.

2. The discharge of contaminants into air from the burning of any material – excluding the combustion of certain waste materials listed in Rule 10.4.1 – by open burning, or burning within an incineration device on

   (a) properties less than 10,000m^2 (1ha); and

   (b) on properties greater than 10,000m^2 (1ha) during the months of June, July and August

   within the Whangarei Airshed (as shown in Map 2), excluding:

   - Barbeques
   - Hangi
   - Umu
   - Wood-fired kilns (provided that these are being used for their designed purpose and with their intended fuel).
   - Outdoor fires for food cooking purposes (provided that these are being used for their designed purpose and with their intended fuel).

   is a **Restricted Discretionary** Activity.

   The matters of discretion are restricted to:

   (a) The adequacy of the assessment of alternative methods of disposal and whether or not disposal by burning is the best practicable option; and
   (b) The method of disposal (open burning or incineration or other); and

(c) The nature of the receiving environment and proximity to any sensitive areas; and

(d) The timing, frequency and duration of the disposal activity; and

(e) The wind speed, wind direction and atmospheric conditions that are likely to prevail during burning; and

(f) The type and quantity and proportions of different types of material to be disposed and its moisture content; and

(g) The nature and design specifications of any incineration device; and

(h) The likely combustion temperature of waste material; and

(i) Location of the fire, including setbacks from property boundaries; and

(j) Whether the material to be disposed can be extinguished once lit in the event of a change in wind conditions; and

(k) Whether the activity is proposed to occur during the months of June to August; and

(l) Whether the activity has the potential to result in adverse environmental effects. Specifically effects on human health and amenity (odour, particulate and visibility) values will be considered; and

(m) The potential for smoke and/or odour and/or particulate material to be offensive or objectionable at or beyond the property boundary; and

(n) The nature of the surrounding topography, including proximity to hills, low lying areas etc; and

(o) Whether consultation has occurred with, and written consent has been obtained from, all immediately adjoining neighbours and those within 100m of the boundary of the property on which the activity is proposed; and

(p) The current status of the Fire Season managed by the WDC or any Bylaw developed by the WDC.

10.4 PROHIBITED ACTIVITIES

The following discharges of contaminants to air from any other place or source are prohibited activities:

1. The discharge of contaminants to air from the open burning of the following waste materials is a **Prohibited Activity**:

   (1) Rubber, including tyres,

   (2) Plastic agrichemical containers and any halogenated plastic products from 12 months of this plan becoming operative,

   (3) Hazardous substances or containers of hazardous substances,

   (4) Coated metal cable,

   (5) Motor vehicles or parts of motor vehicles (except in emergency situations),

   (6) Timber treated with CCA or organochlorine substances.

   Explanation. *This rule prohibits the open burning of substances which result in the emission of a variety of combustion products which are offensive and may be hazardous to human and environmental health. Open burning is defined in the definitions and includes burning in open drums where the combustion process is uncontrolled. Hazardous substance is defined in the definitions. These substances must be incinerated in a purpose designed incineration facility.*

2. The discharge of contaminants to air from the application of agrichemicals which have been deregistered, unregistered, or for which registration has expired in New Zealand or banned by International Agreement is a **Prohibited Activity**.

   Explanation. *Particular agrichemicals may be banned from use for a number of reasons, such as toxicity or long term environmental effects, or because trading countries have prohibited the import of products on which a particular agrichemical has been used. The use of agrichemicals which have been banned places the applicator and environment at risk and has the potential to threaten the livelihood of exporters. Rule 10.4(2) prohibits the use of such agrichemicals.*

3. The discharge of contaminants to air from the application of 2,4-D butyl ester 12 months after the date of this plan becoming operative is a **Prohibited Activity**.

11. INFORMATION REQUIREMENTS

This section sets out the information which is required to accompany applications for Air Discharge Permits. Section 88 and the Fourth Schedule of the Resource Management Act also contain general information requirements and outline what should be included in an Assessment of Environmental Effects. These sections of the Act are given in full in Appendix 3. More specific information requirements for discharge permits are set out here.

If the information supplied with a resource consent application does not adequately explain the nature of the activity or its effects, further information will be requested in accordance with Section 92 of the Act.

11.1 SPECIFIC INFORMATION REQUIREMENTS FOR AIR DISCHARGE PERMIT APPLICATIONS

The information supplied with an air discharge permit application should include:

(a) Full description of the works to be constructed, including design specifications, processes from which the discharge originates, and the type of treatment facility.

(b) Description of the nature of the proposed discharge, that is, name and quantify the contaminants in the discharge and describe its physical characteristics, e.g. temperature, plume height, opacity, particulate size.

(c) Frequency, duration and estimated volume of the proposed discharge:

- number of hours per day that discharge will occur.
- maximum daily volume and maximum discharge rate.

(d) Site plan(s) showing the location of the discharge source/s, and site contours, property boundaries, separation distances between nearby dwellings, occupied buildings, natural or cultural features and water bodies.

(e) Description of any seasonal or time related variation in discharge strengths and volumes expected (if applicable).

(f) Demonstration that the best practicable option has been chosen and an evaluation of the alternatives considered.

(g) A description of adverse cumulative, synergistic and interactive effects which may arise over time or in combination with other discharges.

(h) A description of any impacts the discharge is expected to have on receiving air quality and visual clarity, plant and animal life, and human health.

(i) A description of the prevailing weather patterns of the area, including wind direction, rain and temperature.

(j) Identification of any wildlife habitats and cultural, historic, recreational, scientific or scenic features in the vicinity of the discharge and how these are likely to be affected.

(k) An assessment of the risks to the environment from the use of any hazardous substances or equipment used.

(l) Details of management, monitoring and maintenance programmes to control and monitor the effects of the activity (where appropriate).

(m) A report outlining the consultation undertaken, the information supplied and any response to the views of those consulted. Consultation should be undertaken with at least the following:

(1) Landowners and occupiers adjoining the site of the proposed activity,

(2) The local iwi,

(3) Any parties who may be affected by the proposal,

(4) Other relevant groups or statutory agencies.

(n) Data describing the ambient air quality of the area.

11.2 SPECIFIC INFORMATION REQUIREMENTS FOR MARSDEN POINT AIR DISCHARGE PERMIT APPLICATIONS

In addition to the requirements set out in 11.1, applications for air discharge permits in the Marsden Point Airshed (refer Map 1) shall undertake a three- tiered approach (in accordance with Appendix 7) to the assessment of environmental effects. If the need for a tier-3 assessment is triggered in regard to the effects of discharges of sulphur dioxide, inhaleable particulate (smaller than 10 microns in size) or nitrogen dioxide, the applicant shall undertake dispersion modelling.

Whenever air dispersion modelling is to be undertaken, applicants shall have regard to the modelling approaches set out in the Ministry for the Environment's Good Practice Guide for Atmospheric Dispersion Modelling, June 2004, or any updated versions of those modelling approaches.

Prior agreement from the Northland Regional Council is recommended before adopting a particular modelling approach, including model type and input data. This may assist in reducing compliance costs and the potential for the use of section 92 (request for further information) in processing discharge permit applications.

The Northland Regional Council will, in return, provide applicants with the necessary information gathered through Method 1 and 2 (above).

In addition to the requirements set out in 11.1, applications for air discharge permits for activities located outside the Marsden Point Airshed (refer Map 1) but which:

a) have the potential for discharged air-borne contaminants to enter the Airshed; and

b) significantly add to the cumulative effects of discharges of sulphur dioxide, inhalable particulate (smaller than 10 microns in size) or nitrogen dioxide; and,

c) Trigger the need for a tier-3 assessment (in accordance with Appendix 7) in regard to the effects of discharges of sulphur dioxide, inhaleable particulate (smaller than 10 microns in size) or nitrogen dioxide;

Shall undertake air dispersion modelling.

In addition the applicant shall have regard to the modelling approaches set out in the Ministry for the Environment's Good Practice Guide for Atmospheric Dispersion Modelling, June 2004, or any updated versions of those modelling approaches.

Prior agreement from the Northland Regional Council is recommended before adopting a particular modelling approach, including model type and input data. This may assist in reducing compliance costs and the potential for the use of section 92 (request for further information) in processing discharge permit applications.

The Northland Regional Council will, in return, provide applicants with the necessary information gathered through Method 1 and 2 (above).

11.3 ASSESSMENT OF ENVIRONMENTAL EFFECTS

An assessment of effects on the environment is to be included with an application for a resource consent. The assessment of effects must be in such detail as corresponds with the scale and significance of the actual or potential effects which the activity may have on the environment and must be prepared in accordance with the Fourth Schedule of the Resource Management Act.

The assessment of effects for a controlled activity or a discretionary activity over which the Northland Regional Council has restricted the exercise of its discretion, need address only those matters over which the Council has retained control or the right to exercise its discretion (as the case may be). Those matters are specified in the relevant rules of this Plan.

Applicants should note that in considering an application for a resource consent and any submissions received, the Northland Regional Council is required to have regard to any objectives, policies, rules and other provisions of this Plan. Applicants should therefore take particular note of these, in addition to the matters set out in the Fourth Schedule of the Act, when preparing an assessment of effects.

12. ASSESSMENT CRITERIA

12.1 INTRODUCTION

This section sets out matters in respect of which the Northland Regional Council may exercise its discretion when making decisions on resource consent applications.

The primary criteria for assessing and deciding on applications for resource consents are listed in the Resource Management Act under Section 104 - Matters to be considered, and Section 105 - Decisions on applications. This includes having regard to any objectives, policies, rules and other provisions of this plan. Additional general assessment criteria, and specific activity or effects criteria, which will be applied in the consideration of applications for discretionary and non-complying activities for discharges to air, are detailed below.

12.2 ASSESSMENT CRITERIA FOR AIR DISCHARGE PERMIT APPLICATIONS

Applications for Air Discharge Permits for Discretionary Activities and Non-complying Activities will be assessed in accordance with Sections 104 and 105 of the Act and having regard to the following matters:

(a) Whether the applicant has proposed the best practicable option to avoid, remedy or mitigate adverse effects on the environment and whether the applicant has considered a range of alternative options for mitigation.

(b) Whether the applicant has proposed good management practices to avoid, remedy or mitigate adverse effects arising from discharges.

(c) The adequacy of any proposed monitoring programme to assess the effects of the discharge.

(d) Any actual or potential adverse effects on human health, safety and well-being.

(e) Any actual or potential adverse effects on the health and functioning of ecosystems and plants and animals, including those of commercial significance.

(f) Any actual or potential adverse effects on cultural, scenic, amenity, recreational or heritage values of any areas, places, sites or features.

(g) Any actual or potential adverse effects on other receiving environments.

(h) Where technically possible the extent to which the proposal will add to the synergistic, interactive or cumulative adverse effects of discharges on ambient air quality.

(i) Whether there are sensitive adjoining land activities or features such as public places, water bodies, dwellings.

(j) Any effects of low probability but high potential impact.

(k) Surrounding environmental conditions that may affect the frequency, duration, intensity and degree of environmental effects, including topography, wind speed and direction, and other climatic conditions.

(l) The extent to which the proposal provides compensating environmental benefits.

(m) The degree to which the discharger adopts the best practicable option.

(n) The extent to which the proposal contributes or may contribute to economic, social and cultural wellbeing of the people and the communities.

12.3 ADDITIONAL CRITERIA FOR ABRASIVE BLASTING

(a) Whether it is feasible to carry out the blasting within a purpose built facility or booth.

(b) Whether the applicant has considered alternative methods to dry sand blasting.

(c) Whether the abrasive blasting activity complies with relevant national regulations and standards.

12.4 ADDITIONAL CRITERIA FOR DISCHARGES OF DUST

(a) Whether it is reasonable to permit frequently used yards and accessways of industrial and trade premises to be left unsealed.

(b) Whether the proposal incorporates dust prevention or mitigation measures such as buffer areas or screen planting.

12.5 ADDITIONAL CRITERIA FOR BURNING OF WASTE

(a) Whether the proposal addresses the potential for waste minimisation and recycling.

(b) Whether the proposal incorporates smoke prevention or mitigation measures such as increased chimney stack heights.

12.6 ADDITIONAL CRITERIA FOR AGRICHEMICAL SPRAY APPLICATION

(a) The nature of any training for the use and spray application of agrichemicals undertaken by the contractors and users.

(b) Type and performance of the spray equipment to be used.

(c) Weather conditions including wind speed and direction, temperature and humidity.

(d) Whether all “sensitive areas” have been identified.

(e) Whether the applicant has considered alternative methods or timing of application.

(f) Whether there are sufficient buffer areas and/or screening from adjacent land uses.

(g) Spraydrift avoidance measures proposed.

(h) Whether the activity complies with the relevant national regulations, standards and codes of practice and manufacturer's recommendations specified in label instructions and published application recommendations.

12.7 ADDITIONAL CRITERIA FOR ODOUR DISCHARGES

(a) Whether the activity complies with the relevant national regulations, standards and codes of practice.

(b) Whether there are sufficient buffer areas and/or screening from adjacent land uses.

(c) Whether measures have been taken to ensure that there will be no discharge of odour which is offensive or objectionable at or beyond the property boundary.

(d) The frequency, intensity, duration and offensiveness of the odour associated with the discharge.

PART VI:

ADMINISTRATIVE ISSUES

This Part provides details of the statutory resource consent process including notification, joint hearings, duration of consents, review of conditions and objection and appeal provisions.

The following administrative matters are also covered:

(a) Council charges,

(b) Financial contributions (objectives, policies and methods), and Bonds, and,

(c) Transfer of powers

13. RESOURCE CONSENT APPLICATION PROCEDURES

13.1 INTRODUCTION

In preparing a Regional Plan, the Resource Management Act provides flexibility in identifying how particular activities are considered, i.e. as permitted, controlled, discretionary, prohibited or non-complying activities. These are specified in Section 8 of this Plan.

For controlled or discretionary activities, a resource consent is required. Resource consents are also required for non-complying activities.

In some circumstances region wide consents will be considered.

13.2 NOTIFICATION AND NON-NOTIFICATION OF APPLICATIONS

Resource consent applications can be processed with or without public notification.

13.2.1 Controlled Activities

Applications for those controlled activities specified in this Plan will be non-notified where written approvals from specified affected parties have been gained. However, if the Regional Council considers that special circumstances exist in relation to any application for a controlled activity, the application may be publicly notified. Special circumstances will be assessed on a case-by-case basis.

13.2.2 Discretionary and Non-complying Activities

When processing applications for discretionary or non-complying activities, the Regional Council must determine whether the application is able to be dealt with as a non-notified application. An application for a discretionary or non-complying activity can only be non-notified if it meets the tests contained in Section 94(2) of the Act, specifically:

(a) the consent authority is satisfied that the adverse effect on the environment of the activity for which consent is sought will be minor; and

(b) Written approval has been obtained from every person whom the consent authority is satisfied may be adversely affected by the granting of the resource consent unless the consent authority considers it unreasonable in the circumstances to require the obtaining of every such approval.

To determine whether the effect of the activity will be minor, the Regional Council will consider the activity as submitted in the application, including any further information that the Council may request under Section 92 of the Act, and will apply the appropriate assessment criteria listed in Section 12 of this Plan. It must also consider Section 94(4) of the Act regarding approval from persons who would otherwise be "affected". In assessing the level of effect on the environment, the Regional Council will also consider how practicable any mitigation measures proposed by the applicant would be, and the long term management and monitoring requirements of the proposed activity.

When considering whether or not to notify an application for an existing activity for which there is already a resource consent but which is due to expire, the Regional Council will consider:

(a) any change in the scale of activity (either as proposed by the applicant or as required by a policy in this Plan), and,

(b) the record of compliance during the term of the previous consent, and,

(c) any adverse effects that may have occurred during the term of the previous consent.

Where there is doubt about whether the effects will be minor, the application will be notified.

Where it can be demonstrated that an application does meet the tests for non-notification, but the Council considers special circumstances exist in relation to the proposal, the application may be notified. While those special circumstances are specific to the application, the following proposed activities will be considered for notification:

(a) any discharges of contaminants which are toxic, persistent or bioaccumulative,

(b) any activity which may adversely affect the wider community including any socio-economic and cultural effects,

(c) any activity which may be a risk to the neighbourhood, the wider community or the environment through the use of hazardous substances or hazardous installations.

Persons who may be adversely affected can only be identified on an application-specific basis. Where written approvals are required, in order for an application for a resource consent for a controlled, discretionary and non-complying activity to be non-notified, the written approval must clearly identify the information provided to the affected person, upon which the assessment of the effects and subsequent approval was made.

13.3 JOINT HEARINGS

A number of proposed developments include activities which may require consents from both the Regional Council and the relevant district council. In these circumstances, joint hearings are usually held, in which all consent applications are heard together, thus avoiding unnecessary duplication of effort and delay for the applicant and any other interested parties.

Depending upon the nature of a proposal, either the district or regional council can act as the lead agency for a joint hearing. The lead agency is required to provide all administrative services for the joint hearing.

A joint decision is required from the Hearings Committee unless:

(a) one of the resource consent applications is for a restricted coastal activity, or,

(b) the consent authorities consider "on reasonable grounds" that it is inappropriate, (Section 102(1) of the Act).

13.4 DURATION OF RESOURCE CONSENTS

The Act provides the consent authority with the power to determine the duration of a consent. The maximum period for a resource consent is thirty-five years.

In determining the term of a particular consent, Council may have regard to matters including:

(a) The sustainable nature of the resource affected by the activity proposed,

(b) Knowledge of the environmental effects associated with the activity,

(c) The Northland Regional Council's Regional Monitoring Strategy,

(d) The life of the operative Air Quality Plan

(e) The anticipated `life' of any structure which is the subject of the application,

(f) The expiry date of other air discharge permits in the same area where comprehensive reviews of all permits within that area are desirable,

(g) Satisfactory compliance with the terms and conditions of the expired consent for the same activity.

13.5 REVIEW OF RESOURCE CONSENT CONDITIONS

Opportunity exists under section 128(1)(a) of the Act for the Regional Council to review conditions of resource consents (other than the term), in order to:

(a) Deal with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage, or,

(b) Require the adoption of the best practicable option; or any other purpose such as adverse effects that were not foreseen at the time of the application.

However, provision for the Regional Council to exercise this power must be specified as a condition of the resource consent. Conditions relating to review should be specific in relation to time and the purpose of the review.

Section 128(1)(b) allows conditions to be reviewed when an operative Regional Plan sets rules relating to minimum air quality standards. Significant inaccuracies in plans supporting an application could lead to cancellation of a resource consent, or review of the conditions.

13.6 OBJECTIONS AND APPEALS

Once a decision has been made by the Council on an application, there is provision in the Act for either the applicant, or any person who made a submission, to contest the decision. These provisions are briefly summarised below.

13.6.1 Objections

Generally, for resource consents which were non-notified, or were notified but did not attract any submissions, the applicant has the right of objection to the decision. The objection is either formally heard by the Council's Hearings Committee or is resolved through variations to the conditions if this is agreed to by all parties involved. If unresolved, appeal provisions then apply.

13.6.2 Appeals

For non-notified applications where the objections to the decision have not been resolved, and for notified resource consent applications, the Act provides rights of appeal to the Environment Court of the Justice Department against the Council's decision. The determination of the Environment Court on an appeal is generally final, although it may be challenged in the High Court on points of law.

14. OTHER MATTERS

14.1 REGIONAL COUNCIL CHARGES

Section 36 of the Resource Management Act provides for the Regional Council to fix charges in respect of:

(1) Applications for resource consents, including:

- applications for controlled, discretionary, or non-complying activities,
- applications for changes to, or cancellation of, resource consents,
- applications for an extension of the period for a resource consent which has lapsed because the holder has failed to exercise it.

(2) Administration, including:

- applications to the Regional Council for a change to this Plan,
- providing information in respect of this Plan or resource consents.

(3) Monitoring functions, including:

- monitoring, and supervision of resource consents,
- carrying out state-of-the-environment monitoring,
- monitoring the effectiveness of this plan

However, when fixing charges such as these, the Regional Council must have regard to the following criteria:

(a) The sole purpose of the charge is to recover the reasonable costs incurred by the Regional Council in respect of the activity to which the charge relates.

(b) A particular person or persons should only be required to pay a charge:

(1) to the extent that the benefit of the Regional Council's actions to which the charge relates is obtained by those persons, as distinct from the region as a whole; or

(2) where the need for the Regional Council's actions to which the charge relates is occasioned by the actions of those persons; or

(3) in a case where the charge is in respect of the regional council's monitoring functions under Section 35 (2)(a) (which relates to 'state of the environment' monitoring), to the extent that the monitoring relates to the likely effects on the environment of those persons' activities, or to the extent that the likely benefits to those persons of the monitoring exceeds the likely benefits of the monitoring to the region as a whole.

14.2 BONDS AND FINANCIAL CONTRIBUTIONS

14.2.1 Introduction

Section 108 of the Resource Management Act provides for financial contributions and bonds to be included as a condition of a resource consent.

"Financial contributions" are defined in the Act and include money and land for the purposes specified in a plan. The principal reason for using financial contributions in this Plan is to provide a mechanism to avoid, remedy, or mitigate and/or offset adverse effects on the environment that may result from the discharge of contaminants to air. Financial contributions are aimed at meeting the costs to the public and the environment and should be fair and reasonable.

Bonds provide a mechanism for the recovery of costs of cleaning up or completing, failed or incomplete projects where the effects on the environment are unacceptable. Similarly, a condition can be included which requires the consent holder to take out adequate insurance to cover clean up costs in the event of equipment or structure failure.

14.2.2 Objectives

1. The securing of fair and reasonable financial contributions on activities involving discharges of contaminants to air, which represent a justifiable proportion of the public costs generated by any such activity.

2. The securing of adequate financial resources to cover costs of avoiding, remedying or mitigating adverse effects on the environment resulting from uncontrolled discharges to air.

14.2.3 Policies

1. To provide for financial contributions to be a condition of a resource consent where:

   (a) Quantifiable significant adverse effects on the environment cannot be expressed as environmental standards, except as provided for under controlled and discretionary activities, and a financial contribution is required towards the public cost of avoiding, remedying or mitigating and/or offsetting the adverse effects, or

   (b) Significant indirect effects cannot be dealt with through project design and a financial contribution is required to offset significant adverse effects.

   Explanation. *Financial contributions can only be required if they are specifically provided for in a Regional Plan. This policy gives the criteria where financial contributions may be warranted.*

2. To ensure that the assessment of environmental effects for an activity shall:

   (a) as far as possible identify any adverse effects for an activity which are not readily quantifiable, and

   (b) indicate how these have been addressed, and

   (c) as far as possible indicate any residual effects for which a financial contribution shall be appropriate.

   Explanation. *This policy ensures that sufficient information is supplied with an application to determine whether it fits the criteria in Policy 14.2.3(3).*

3. To ensure that the maximum amount of the financial contribution shall not exceed the actual fair and reasonable cost of avoiding, remedying or mitigating the adverse effects and/or providing environmental compensation necessary to offset the adverse effects caused or likely to be caused by the activity.

   Explanation. *The Act requires that the financial contribution does not exceed the maximum amount specified in the Regional Plan. This policy specifies that the actual cost of addressing the adverse effects or providing environmental compensation will be the maximum amount.*

4. The amount of the financial contribution shall be determined with reference to the following principles -

   Justifiable - The financial contribution must be fair and reasonable and directly relate to avoiding, remedying or mitigating significant adverse effects on the environment and/or contribute to a positive effect which provides some compensation/relief for the significant adverse effect caused or likely to be caused by the activity. The financial contribution must be the most appropriate means of achieving the purposes set out in clause 14.2.6.

   Proportion - The amount of the contribution shall take into account:

   - The significance of the adverse effect, and
   - The extent to which the activity causes or is likely to cause the effect identified above; and
   - The positive effects of the activity on the environment.

   Explanation. *This policy provides the test of the reasonableness of a financial contribution. The justifiable proportion test is made up of two parts. The first part requires that a connection be demonstrated between the financial contribution, the adverse effect of the activity and the benefit (to the activity or the community) which is proposed to offset the effect. It also provides that a financial contribution should only be used where it is the most appropriate means of mitigating the effect. Clause 14.2.6 sets out a number of purposes for which financial contribution may be sought. In some cases these activities or works would reasonably be a condition of consent, or funded by way of a charge under section 36 to the Resource Management Act (e.g. state of the environment monitoring charge). The second part states that*

the new activity pay only its proportional share of the cost of new facilities or mitigation.

4(a) To provide a Council contribution towards the costs of carrying out the works or activities set out in clause 14.2.6 where the proportional principle set out in policy 4 above results in less than full cost recovery.

4(b) To recover Council contributions towards the costs of carrying out the works and activities set out in clause 14.2.6 where an applicable resource consent is granted after the commencement of those works and activities.

4(c) To require a financial contribution only where it is the most appropriate means of achieving the purposes set out in 14.2.6 as compared with other means.

Explanation. *Financial contributions on a resource consent may not be sufficient to provide the mitigating work or activity, without a "top-up" contribution from public funds. This may be because of the proportional principal which means that the full cost cannot be reasonably charged to a particular activity. In some cases a later resource consent (e.g. an expansion of an activity or a new activity in the general location) may also justify a financial contribution. In these cases it is reasonable for the Council to recover a proportional share of the public costs, subject to the above policies. Financial contributions should only be required where it is the most appropriate means of funding the purposes in 14.2.6 as compared with other means such as conditions of consent or charges under section 36 of the Resource Management Act.*

5. To use bonds to enable recovery of Council's costs where it is necessary for Council to undertake any of the following action(s) in the event of a consent holder's failure to avoid, remedy or mitigate adverse effects of the consent holder's activity:

(a) to install mitigation or control equipment,

(b) take measures to decrease or cease any air emission,

(c) completion of any works or structures,

(d) operation of any works or structures,

(e) alteration or removal of structures and any restoration works following any works or activity being completed or ceasing,

(f) completion or compliance with any other conditions of the consent granted.

Explanation. *Section 108(1)(b) provides for a condition to be placed on a resource consent, requiring that a bond be given in respect of the performance of any one or more conditions of the consent, including any condition relating to the alteration or removal of structures on the expiry of the consent. The Council will assess the likelihood of its needing to undertake the actions specified in the policy when considering and deciding on any application for a resource consent.*

6. To provide for a bond as a condition on a resource consent to ensure there are adequate financial resources for remediation and mitigation to be undertaken in the event of equipment breakdown or structure failure.

Explanation. *Where a significant adverse effect may occur as a result of equipment failure, such as the failure of emission reduction equipment or failure of pipe work or stacks resulting in an excessive discharge of contaminants to air, a bond may be required.*

14.2.4 Methods Of Implementation

(for Policies 1 to 4)

1. The Regional Council may impose a condition on a resource consent requiring a financial contribution subject to the circumstances, purposes and assessment criteria specified in Section 14.2.5.

2. In determining whether to impose a condition requiring a financial contribution, the Regional Council shall take into account whether reasonable effort has been made to avoid, remedy, or mitigate and/or offset adverse effects through project design and negotiation with affected parties, and whether overall the benefits outweigh the residual effects.

3. Financial contributions on particular activities for resource consents shall take the form of money, works, land or services, or any combination thereof.

(for Policies 5 and 6)

4. The Regional Council may impose a condition on a resource consent requiring a bond subject to Method 14.2.4(5).

5. In determining whether to impose a condition requiring a bond in the event of the Consent Holder being unwilling or unable to carry out the conditions of the consent, the Regional Council shall take into account the actual and potential effects on the environment, and the likely costs (inflation adjustable) of carrying out the works.

6. In determining whether to impose a condition requiring a bond to cover the costs of remedial works in the event of equipment or structure failure, the Council shall take into account the risk of failure, and the potential effects on the environment.

14.2.5 Circumstances Where Financial Contributions May Be Required

Circumstances where a financial contribution may be required include where a use or development authorised under a resource consent will cause adverse effects on the environment. The circumstances and the underlying effects are set out in the table below.

Circumstances where financial contribution may be required	**Underlying effect on the environment including people and communities**
Emission of any contaminant with health or nuisance effects.	Long and short term adverse effects on the environment including human health.
Impacts on visibility, clarity and other amenity effects.	Adverse amenity effects on the appearance of the atmosphere (localised).
The nuisance that arises from the release of dust, odour or smoke and other particulates.	Long and short term adverse effects on the environment including human health. Amenity effects on the appearance of the atmosphere (localised).
Adverse impacts on flora and fauna and the intrinsic value of ecosystems.	Long and short term effects on the physical health and diversity of ecosystems.
Disturbance or degradation of any archaeological or culturally significant site.	Adverse effects on the intrinsic quality of archaeological or culturally significant sites.

14.2.6 Purposes For Which Financial Contributions May Be Required

Subject to the objective and policies of section 14.2 above the purposes for which a financial contribution may be required to avoid, remedy or mitigate and/or offset the adverse effects listed above, may be applied by:

- installation of monitoring and testing equipment,
- planting or habitat restoration aimed at off setting adverse effects,
- provision of screening, planting or buffers,
- protecting, maintaining, restoring or enhancing archaeological or culturally significant sites affected by the discharge,
- works required to avoid, remedy or mitigate any adverse effects on the environment resulting from an activity for which a consent is granted.

14.2.7 Financial Contribution Assessment Criteria

In deciding whether or not to impose financial contributions, the types of contribution and their value, the Council will have particular regard to the following matters:

(a) The extent to which adverse effects resulting from the activity can and should be mitigated by way of works carried out on or near the site.

(b) The extent to which a financial contribution may offset or provide compensation to the community, or environment, for adverse effects caused or contributed to by the activity**,** and not otherwise mitigated by the consent holder.

(c) The extent to which a contribution is required to achieve objectives and policies of this Plan.

(d) In deciding the actual value of the financial contribution required, the Council shall have particular regard to:

(1) the significance of the effects attributable to the activity,

(2) where such effects are contributed to by other activities, the extent to which those effects can be reasonably attributed to the activity for which consent is granted,

(3) the extent to which any positive effects of the activity offset any adverse effects.

(e) Financial contributions should relate to the effects of the activity for which consent is granted and be reasonably proportionate to the significance of any adverse effects.

(f) Financial contributions may not be appropriate in every case even where there are adverse effects.

14.3 TRANSFER OF POWERS

Both the Resource Management Act 1991 and the Building Act 1991 provide local authorities with the ability to transfer their functions, powers, and duties to other authorities. Section 25 of the Building Act gives the Regional Council the ability to transfer its powers, duties and functions under that Act to a territorial authority. However, this may only be done on grounds of efficiency and technical or special capability or expertise.

Under Section 33 of the Resource Management Act, regional councils can transfer their functions, powers and duties to other public authorities which include other local authorities, iwi authorities, Government departments, statutory authorities or joint committees. However such transfer can only be exercised by the Regional Council if:

(a) a special consultative procedure specified in section 716A of the Local Government Act 1974 is used; and

(b) before using the special consultative procedure, notice is given to the Minister for the Environment of the proposal to transfer the function, power, or duty; and

(c) both the Regional Council and the authority to which the transfer is being made, agree that the transfer is desirable on all of the following grounds:

(1) the authority to which the transfer is made represents the appropriate community of interest relating to the exercise of the function, power or duty.

(2) efficiency.

(3) technical or special capability or expertise.

Functions which cannot be transferred include the approval of a policy statement, or plan or any changes to a policy statement or plan.

In any event, the Regional Council still retains responsibility for the exercise of the function, power or duty, and the transfer has effect only within the statutory boundaries of the agency concerned.

PART VII:

PLAN EFFECTIVENESS

This Part sets out the Environmental Results expected from the implementation of this Plan, the monitoring procedures for determining whether the Environmental Results have been achieved and the plan change and review provisions that may be used.

15. ENVIRONMENTAL RESULTS EXPECTED

15.1 INTRODUCTION

Under Section 67(1) of the Resource Management Act, this Plan is required to state the environmental results anticipated from the implementation of the policies and methods specified in this Plan. This essentially requires a judgement of the extent to which the objectives stated will be achieved within the ten year term of this Plan.

15.2 AIR QUALITY

This section sets out the environmental results that are anticipated ten years from the implementation of this Regional Air Quality Plan.

- The maintenance of existing high air quality across Northland and enhancement of air quality where it is adversely affected.
- Air quality that has a high amenity value with no discernible decrease in visibility.
- Air quality that has no significant adverse effects on the health of people, animals and plants.
- A decrease in nuisance effects associated with odour, smoke and dust discharges.
- All users of agrichemicals are properly trained and consequently there are less off-target adverse effects arising from spray application of agrichemicals.
- Discharges to air of contaminants of global significance are at a level which is consistent with New Zealand's international obligations.
- Increased knowledge and understanding of air discharges and effects in Northland.

16. PLAN MONITORING, CHANGES, AND REVIEW

16.1 INTRODUCTION

In order to ensure that the environmental results set out in Section 15 are achieved, there needs to be an on-going process of monitoring the effectiveness of this Plan and, if necessary, changing relevant policies and rules. The Act also requires that the whole Plan be periodically reviewed.

16.2 MONITORING OF PLAN EFFECTIVENESS

Under Section 35 of the Act, the Northland Regional Council is required to undertake monitoring and keep records of any information necessary to effectively carry out its functions. The Regional Council must monitor:

- the state of the whole or part of the regional environment (to the extent necessary to carry out the Council's functions under the Act);
- the suitability and effectiveness of this plan,
- the exercise of any transferred functions, powers or duties,
- the exercise of discharge to air permits,

and to take any action appropriate in the circumstances.

The following methods will be used to monitor the effectiveness of the Plan:

(a) Implementation of a regional and localised monitoring programmes,

(b) Development of a regional emission inventory,

(c) Compliance monitoring carried out in relation to individual discharge consents. Where appropriate to the nature and scale of effect of an activity, individual consent monitoring programmes will be designed and implemented in conjunction with the consent holder,

(d) Continued recording and evaluation of unauthorised discharges to air,

(e) To use when appropriate, monitoring and research programmes carried out by other agencies,

(f) To use when appropriate, information from iwi, district councils, other agencies, liaison working groups and the public.

16.3 PLAN CHANGES

If the Regional Council's monitoring of the effectiveness of the Plan reveals the need for changes to this Plan, then these will be initiated by the Council and carried out in accordance with the First Schedule of the Act.

As more information is obtained about air quality and in particular Northland's air quality, the Regional Council's ability to set appropriate policies for air quality will improve. Accordingly, the Regional Council will regularly review the policies and methods of the plan in order to better achieve the objectives of this plan.

Review of the Plan may also be required in response to:

- the identification of any significant new air quality issues in the region,
- any national initiatives,
- relevant changes to the Regional Policy Statement,
- the development of an air quality management strategy for the Marsden Point area.

Notwithstanding the above, changes to this Plan can be proposed by any person in a written request to the Regional Council.

16.4 PLAN REVIEW

Notwithstanding any changes which may be made to this Regional Air Quality Plan, the Regional Council will commence a full review of this plan not later than 10 years from the date that it becomes operative.

17. DEFINITIONS

This Definitions Section provides the meanings of words used in this Regional Air Quality Plan. The use of italics indicates that meanings have been taken directly from the Resource Management Act 1991.

Abrasive blasting - The cleaning, smoothing, roughening, cutting or removing of part of the surface of any article by the use of an abrasive jet of sand, metal shot, or grit or other material propelled by a blast of compressed air or steam or by a wheel.

Act - The Resource Management Act 1991 and its amendments.

Agrichemical - Any substance, whether inorganic or organic, manufactured or naturally occurring, modified or in its original state, that is used in any agricultural, horticultural, forestry, or other industrial activity, management of public amenity areas or related activity, to eradicate, modify or control flora or fauna (modified from NZ Standard 8409:1995). For the purposes of this Plan, it does not include animal remedies or fertilisers.

Air - All zones and components of the atmosphere and stratosphere which contribute to the functioning of the global environment.

Air blast application - The use of high velocity air from specialised equipment to apply the agrichemical to the target.

Ambient air quality - The general quality of the surrounding air, reflecting the cumulative effect of all activities, both anthropogenic and natural.

Amenity values - *Those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence and cultural and recreational attributes.*

Anthropogenic discharges - Discharge from human activities.

Best practicable option - *In relation to a discharge of a contaminant or an emission of noise, means the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to:*

(a) The nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and

(b) The financial implications, and the effects on the environment, of that option when compared with other options; and

(c) The current state of technical knowledge and the likelihood that the option can be successfully applied.

Burning - to consume or be consumed by fire.

Commercial Contractor - Any person or organisation who, by agreement with owner, occupier or manager of any land, applies or causes to be applied, any agrichemical in an agricultural, horticultural or related situation for hire or reward. It does not include an employee or an owner, occupier or manager.

Commercial User - Any person, group or organisation applying agrichemicals on their own in the course of their business activities. It includes farmers, horticulturalists and foresters, and any local authority staff. It does not include any Local Authorities Trading Enterprise (LATE) (modified from NZS8409: 1995, Agrichemical User's Code of Practice). For the purpose of this Plan, LATE's are considered to be contractors.

Community Controlled Organisation – includes, but is not limited to: not-for-profit corporations, incorporated societies, charitable bodies, organised clubs, sports clubs, religious groups and education providers.

Contaminant - *Includes any substance (including gases, liquids, solids and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar or other substances, energy or heat:*

(a) When discharged into water, changes or is likely to change the physical, chemical or biological condition of water; or

(b) When discharged onto or into land or into air, changes or is likely to change the physical, chemical or biological condition of the land or air onto or into which it is discharged.

Controlled activity - *means an activity which -*

(a) Is provided for, as a controlled activity, by a rule in a plan or proposed plan; and

(b) Complies with standards and terms specified in a plan or proposed plan for such activities; and

(c) Is assessed according to matters the consent authority has reserved control over in the plan or proposed plan; and

(d) Is allowed only if a resource consent is obtained in respect of that activity.

Cross media effects - Effects that cross resource boundaries, e.g. between air, land and water.

Discernible - Able to be made out with the senses, able to be distinguished apart. In respect of odour - a concentration of odour above the background level which can be detected by the population.

Discharge - *Includes emit, deposit and allow to escape.*

Discretionary activity - *An activity*

(a) Which is provided for, as a discretionary activity, by a rule in a plan or proposed plan; and

(b) Which is allowed only if a resource consent is obtained in respect of that activity; and

(c) Which may have standards and terms specified in a plan or proposed plan; and

(d) In respect of which the consent authority may restrict the exercise of its discretion to those matters specified in a plan or proposed plan for that activity.

Domestic User – Any person, group or organisation using agrichemicals in a private capacity and not using agrichemicals in the course of their business activities.

Dust - All solid particulate matter that is suspended in the air, or has settled after being airborne.

Ecosystem[7]- Any system of interacting terrestrial or aquatic organisms within their natural and physical environment.

Effect - *Unless the context otherwise requires, the term "effect" includes:*

(a) Any positive or adverse effect; and

(b) Any temporary or permanent effect; and

(c) Any past, present, or future effect; and

(d) Any cumulative effect which arises over time or in combination with other effects -regardless of the scale, intensity, duration or frequency of the effect and also includes -

(e) Any potential effect of high probability; and

(f) Any potential effect of low probability which has a high potential impact.

Environment *includes –*

(a) Ecosystems and their constituent parts, including people and communities; and

(b) All natural and physical resources; and

(c) Amenity values; and

(d) The social, economic, aesthetic and cultural conditions which affect the matters stated in paragraphs (a) to (c) of this definition or which are affected by those matters.

Environmental results expected - Intended outcomes or results on the environment, which the community can expect to see or experience as a consequence of the implementation of policies and methods. It provides a means of assessing the success of the objectives, policies and methods.

Factory farming - Means any production of primary produce which is carried out predominantly within buildings or fenced outdoor areas where the stocking

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density precludes the maintenance of pasture or ground cover, including activities such as:

- poultry farming
- intensive pig farming
- rabbit or fitch farming
- feedlots

but excluding horticultural production within buildings.

Greenhouse gases – means those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation, for example, carbon dioxide and methane. (This definition is taken from the United States Framework Convention on climate Change, 1992).

Ground based application methods - Any method of application where the equipment from which the agrichemical is emitted is on the ground and is not held by the person applying the agrichemical.

Handheld application methods - Any method of application where the applicator holds that part of the equipment from which the agrichemical is emitted.

Hapu - Sub-tribes, usually a number of whanau with a common ancestor.

Hazardous Substance - Means, unless expressly provided otherwise by regulations, any substance –

(a) With one or more of the following intrinsic properties:

(1) Explosiveness:

(2) Flammibility:

(3) A capacity to oxidise:

(4) Corrosiveness:

(5) Toxicity (including chronic toxicity):

(6) Ecotoxicity, with or without bioaccumulation; or

(b) Which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any one or more of the properties specified in paragraph (a) of this definition:

Incineration - the burning of waste in an incineration device.

Incineration device - a device specifically designed to control the burning process of waste.

Industrial or Trade Premises – *means*

(a) Any premises used for any industrial or trade purposes; or

(b) Any premises used for the storage, transfer, treatment or disposal of waste materials or for other waste management purposes, or used for the composting of organic materials; or

(c) Any other premises from which a contaminant is discharged in connection with any industrial or trade process -

but does not include any production land.

Industrial or Trade Process - *Includes every part of a process from the receipt of raw material to the dispatch or use in another process or disposal of any product or waste material, and any intervening storage of the raw material, partly processed matter or product.*

Intensive pig farming - Means pig farming carried out predominantly within buildings or fenced outdoor areas where the stocking density precludes the maintenance of pasture or ground cover.

Intrinsic values - *In relation to ecosystems, means those aspects of ecosystems and their constituent parts which have value in their own right, including:*

(a) Their biological and genetic diversity; and

(b) The essential characteristics that determine an ecosystem's integrity, form, functioning and resilience.

Iwi authority - *The authority which represents an iwi and which is recognised by that iwi as having authority to do so.*

Kaitiaki - Guardian, steward: the meaning of kaitiaki in practical application may vary between different hapu and iwi.

Kaitiakitanga - *The exercise of guardianship; and, in relation to a resource, includes the ethic of stewardship based on the nature of the resource itself.*

Local Authority - *A regional council or territorial authority.*

Mana Whenua - *Means customary authority exercised by an iwi or hapu in an identified area.*

Natural and physical resources - *Includes land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to New Zealand or introduced), and all structures.*

Non-complying Activity - *Means an activity (not being a prohibited activity) which –*

(a) Contravenes a rule in a plan or proposed plan; and

(b) Is allowed only if a resource consent is obtained in respect of that activity.

Non point (diffuse) source discharge - Involves diffuse discharges and smaller point source discharges such as vehicle emissions, smoke from open fires discharging to air.

Open burning - burning in the open without a container to control the burning process.

Permitted activity - *Means an activity that is allowed by a plan without a resource consent if it complies in all respects with any conditions (including any conditions in relation to any matter described in section 108 or section 220) specified in the plan.*

Plan - *A regional plan or a district plan.*

PM_{10} - Particles with an aerodynamic diameter of less than 10 μm, which are able to penetrate the respiratory tract.

Point source discharge - A discharge from a specific and identifiable outlet such as an industrial or trade premise, onto or into land, air, water body or the sea.

Production land –

(a) Means any land and auxiliary buildings used for the production (but not processing) of primary products (including agricultural, pastoral, horticultural and forestry products);

(b) Does not include land or auxiliary buildings used or associated with prospecting, exploration or mining for minerals or used for factory farming.

Property boundary – means the surveyed boundary encompassing all contiguous allotments (as defined in section 218 of the Resource Management Act 1991) owned or leased by the discharger, that are associated with the property on which the discharges occur, and which abut another property under separate title.

Public Costs - The significant restriction or likely restriction of the opportunities of people and communities to use public resources, e.g. water, soil, air.

Quarrying - The open surface extraction of weathered or unweathered rock material from the ground, the stacking, storing, depositing or treatment of the excavated material and the removal of debris tailings or unwanted materials.

Region - *In relation to a regional council, the region of the regional council as determined in accordance with the Local Government Act 1974.*

Regional coastal plan - An environmental management plan or plans for the Coastal Marine Area of a region, prepared by the Regional Council and approved by the Minister of Conservation.

Regional council - *Has the same meaning as in Part I of the First Schedule of the Local Government Act 1974.*

Regional Plan - A plan or plans approved by the Regional Council under the First Schedule of the Act, for managing the use and/or protection of resources (e.g.

within the region - coastal, water, air) and includes all operative changes to such a plan (whether arising from a review or otherwise).

Regional policy statement - An operative regional policy statement approved by the Regional Council under the First Schedule to the Act.

Regional rule - Means a rule made as part of a regional plan in accordance with Section 68 of the Act.

Resource consent - A consent to do something that is not otherwise permitted by a Plan or the Act.

Reverse Sensitivity - Describes the effect that development of one kind may have on activities already occurring in an area. It usually results from the people involved in an activity that is newly established, complaining about the effects of existing activities in an area.

Sensitive areas – Sensitive areas are:

- Residential buildings and surrounds.
- School buildings.
- Amenity areas where people congregate.
- Public water-supply intakes.
- Water bodies, and associated riparian vegetation.
- Certified Organic Farms certified by BIO-GRO, CERTENZ, DEMETER or an equivalent auditable standard.
- Herbicide sensitive crops such as grapes, tomatoes and kiwifruit.
- Insecticide sensitive crops that require pollination during flowering.
- Production forests.
- Areas of indigenous vegetation, habitat areas and reserves.
- Public roads.

Smoke - Means any product of combustion, complete or incomplete, other than water vapour, which is or could be, visible in daylight or artificial light.

Sustainable management - *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 well-being 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.

Synergistic/Interactive - Combined effects of contaminants, for example individual contaminants may be well below guideline levels, but when discharged together may have adverse environmental effects.

Tangata whenua - *In relation to a particular area, means the iwi, or hapu, that holds mana whenua over that area.*

Treaty of Waitangi - *Has the same meaning as the word `Treaty' as defined in Section 2 of the Treaty of Waitangi Act 1975.*

Territorial authority - *Any District or City Council as defined by the Local Government Act 1974.*

Waste or other matter - Means materials and substances of any kind, form or description.

Wet Abrasive Blasting - Involves the use of an abrasive such as sand, or bicarbonate soda, which is forced out of a blasting nozzle at high pressure. Water is injected into the air stream forming what is effectively a slurry of the abrasive.

APPENDICES:

1. KEY MONITORING INDICATORS

2. REQUIREMENTS FOR CHIMNEY HEIGHTS

3. SECTION 88 AND THE FOURTH SCHEDULE OF THE RESOURCE MANAGEMENT ACT 1991

4. PROPERTY SPRAY PLANS

5. ACTIVITIES FOR WHICH DISCHARGES ARE PERMITTED UNDER RULE 9.1(10)

6. PERFORMANCE REQUIREMENTS FOR QUALIFICATIONS TO APPLY AGRICHEMICALS

7. THREE TIERED ASSESSMENT FOR ASSESSING DISCHARGES TO AIR FROM INDUSTRY

APPENDIX 1: KEY MONITORING INDICATORS

The indicators listed in Method 6.8(3) have been selected as key monitoring indicators for the following reasons:

- **Sulphur dioxide** is a significant contaminant in the Marsden Point area and it also comes from many other industrial processes utilising sulphur containing fuels,

- **Inhaleable particulates** (PM_{10}) have significant adverse effects on human health,

- **Carbon monoxide** is a significant indicator of the effects of motor vehicle emissions, particularly in urban areas,

- **Lead** has been adopted because of its association with leaded petrol. Its effects on human health are well documented. It is a significant indicator of the impact of unleaded fuel use,

- **Nitrogen oxides** are important precursors of photochemical smog in urban areas. They affect human health but are also significant indicators in terms of their effects on sensitive ecosystems,

- **Visibility** is an important amenity value in the Region,

- **Fluoride, formaldehyde and hydrogen sulphide** are currently associated with specific sources,

- **Ozone** is an indicator of photochemical reactions resulting from nitrogen oxides and volatile organic components. It is frequently associated with vehicle emissions.

APPENDIX 2: REQUIREMENTS FOR CHIMNEY HEIGHTS

PART I - INTRODUCTION

Scope Of The Requirements

1. This appendix is intended to provide a relatively simple method of calculating the approximate chimney height commonly desirable in normal circumstances.

2. This method is regarded as a general guide rather than a mathematically precise and absolute way of reaching a decision on chimney height. It may need to be modified in the light of particular local circumstances, such as a chimney in a narrow valley or near tall buildings.

3. The requirements are not applicable to all chimneys. In respect of this plan, it is applicable only to discharges from the operation of fuel burning equipment covered by Rule 9.1(1). The Northland Regional Council shall have regard to these requirements when assessing `best practicable option' in respect of Rule 9.1(1)(f).

General Requirements

4. The method of calculation is based on the amount of flue gases which the chimney is expected to emit as a function of the maximum rate of emission of sulphur dioxide. Modification of the result obtained may be necessary where there is a potential for pollution by gaseous emissions other than normal products of combustion.

5. Prejudice to health or nuisance from smoke, grit and dust should not occur where chimney heights are so calculated and where the other relevant requirements of the Resource Management Act are given effect to. It should be noted that non-compliance with grit and dust requirements cannot be avoided solely by increasing the height of a chimney. Dust arrestment plant may also be necessary in order to achieve compliance with rules in this Plan.

6. For small and medium sized oil fired boilers experience has shown that an insulated stack is necessary to avoid acid smut problems.

7. In these nomograms (Figures 1 to 6 in Part II), the chimney height has been calculated to ensure dispersion of the gases to achieve a theoretical maximum ground level concentration of $400\mu g/m^3$ (about 0.16 ppm by volume) of sulphur dioxide. This is less than the generally accepted threshold of odour for this gas of $1.1mg/m^3$ (about 0.5 ppm by volume).

   It will also be taken by the Northland Regional Council as demonstrating compliance with exposure levels for sulphur dioxide of 500 $\mu g/m^3$ (ten minute time - weighted average exposure), 350 $\mu g/m^3$ as the hourly average of 10 minute means, 125 $\mu g/m^3$ as the 24 hour average and 50 $\mu g/m^3$ as the annual average. These figures are guideline air quality values for sulphur dioxide in New Zealand.

Efflux Velocity

8. The diameter of a chimney top should be as small as possible in order to increase the efflux velocity of the flue gases. If the efflux velocity is insufficient, the plume tends to flow down the outside of the stack on the lee side and the effective chimney height is thus reduced. Efflux velocities of about 15 m/sec will avoid this downwash.

9. Such a velocity is impracticable for small boilers, but boilers equipped with forced draft fans only should have a chimney efflux velocity of not less than 5 m/sec at full load. Boilers equipped with induced draft fans should have a chimney efflux velocity of not less than 8 m/sec at full load for boilers rated up to 13,600 kg/hour increasing to a maximum of 15 m/sec at full load for boilers rated at 204,000 kg/hour.

10. The method of calculation assumes that the appropriate efflux velocity will be achieved.

Combining Of Emissions

11. Where there are several adjacent furnaces in the same works, there are advantages in combining the waste gases, if possible, and discharging them through a common chimney. The larger volume from the combined emissions has a higher thermal rise than the discharges from separate chimneys and the concentration of the flue gases reaching the ground is smaller.

Fuel Types

12(a) For liquid or solid fuels, including untreated wood, the calculations of chimney height should be based on the maximum sulphur content of any fuel to be burned. It is also recommended that the minimum sulphur content of any fuel used in the calculations be 0.5%.

12(b) For natural gas and manufactured gas with zero or very low sulphur content it is recommended that emission data for nitrogen oxides (NO_X) be applied and substituted for sulphur dioxide in the nomographs. For furnaces using gas fuel in the aggregate not exceeding a rate of 5 MW, the main consideration is to avoid local downdraught effects. It is recommended that the height of the building containing the furnace, or buildings within 30 metres be taken as the "uncorrected stack height", and the nomograph of Figure 6 or 3 metres (whichever is the greater) be used to reach "corrected height". Usually no correction will be required for taller buildings 30 metres or more distant.

For furnaces or aggregates of furnaces of larger size, guidance as to uncorrected heights in typical situations would be approximately as follows:

HEAT RELEASE (MW)	REQUIRED HEIGHT (metres)
6	9
9	12
10	13

12(c) For processes receiving mixed fuels, the height should be based on 1% sulphur in the absence of further consideration of fuel types.

Dust Emissions

13. The stack height is also based on the assumption that little dust or grit is produced in combustion or that an effective grit arrestor is fitted. It should be noted that when grit arrestors are fitted to wood burning plants, performance is likely to be less effective than on solid fuels because of the lower density of the material to be collected.

PART II - METHOD OF CALCULATING CHIMNEY HEIGHTS

"Uncorrected Chimney Height" And "Final Chimney Height"

14. The first stage is the calculation of the "uncorrected chimney height". This is the height appropriate for the relevant maximum rate of sulphur dioxide emission when account has been taken of neighbouring sources of pollution, the local background level of pollution and the general character of the district.

15. The second stage is the calculation of the "final chimney height". This is the uncorrected chimney height amended if necessary to allow for the dispersal from the chimney being affected by the supporting building and by neighbouring buildings.

Calculation Of Uncorrected Chimney Height

Consideration of Locality

16. The initial step is to consider the character of the surrounding district which for this purpose should be regarded as falling into one of the following categories:

A. Rural area, where background pollution is low, and where there is no industrial development within 1 kilometre of the new chimney.

B. A partially developed area with scattered houses, low background pollution, and no other comparable industrial emissions within 1 kilometre of the new chimney.

C. A built up residential area with only moderate background pollution and without other comparable background emissions.

D. An urban area of mixed industrial and residential development, with considerable background pollution and with other comparable industrial emissions within half a kilometre of the new chimney.

E. Heavy industrial or dense residential areas.

Note: Of the categories listed above, categories A, C and D are those considered to be generally applicable in Northland, covering rural, urban residential and industrialised areas respectively. Category E is applicable in areas where comparable emissions occur in close proximity and cumulative effects are significant.

In situations of existing significant air quality degradation, the Northland Regional Council may choose to apply the more stringent requirements of category E to prevent or minimise further degradation.

Amount Of Sulphur Dioxide Emissions

17 The amount of sulphur dioxide likely to be emitted will be calculated as follows:

(1) Coal or Solid Fuel

Weight of sulphur dioxide emitted = 18 x W x S kg/hr

where W = maximum burning rate ('000 kg/hr)
S = % sulphur content

(2) Oil Fuel

Weight of sulphur dioxide emitted = 20 x W x S kg/hr

where W = maximum burning rate ('000 kg/hr)
(1 tonne oil = 1,050 litres)
S = % sulphur content

(3) Natural Gas or LPG

Weight of NO_X emitted = 3.2 x G kg/hr

where G = maximum burning rate ('000 m^3/hr)

Note: Weight of NO_X emission is substituted for SO_X emission in nomographs

18. When it has been decided into which of the categories the surrounding district falls, reference is then made to the relevant chart in Figures 1 to 4, which relate to various mass emission rates of discharges. A line starting from the relevant sulphur dioxide emission on the left hand side of the appropriate chart and produced through the points A, B, C, D or E (representing the category into which the district falls) will indicate on the right hand side of the chart the appropriate uncorrected chimney height so indicated in order to allow for the average reduction in thermal lift compared with that of a similar emission of sulphur dioxide from coal firing.

Example 1

A new chimney is needed for a plant burning coal and emitting 127 kg sulphur dioxide per hour. What is the uncorrected chimney height in a district category C and district category E? Reference to Figure 3 will show that the respective uncorrected chimney heights are 33 metres and 37.5 metres.

CALCULATION OF FINAL CHIMNEY HEIGHT

19. An uncorrected chimney height not less than 2.5 times the height of the building to which the chimney is attached or of any other building in the vicinity does not need to be corrected to allow for the effect of the building. In that case, the final chimney height is the same as the uncorrected chimney height, and no further calculation is necessary.

20. Corrections for the effects of buildings are, however, necessary when the uncorrected height is less than 2.5 times the height of such buildings and these establish in the final chimney height.

21. The correction is partly based on the ratio between the greatest length and height of the building (to the ridge), since the relationship between the greatest length and height influences the effect of down-draughts.

22. In a closely built up area where the plant building is lower than adjacent buildings, the chimney should be regarded as being attached to an infinitely long building whose height is the average level of the roof tops in the immediate vicinity.

23. Reference is then made to the chart in Figure 5. A line starting from the relevant uncorrected chimney height on the left handed side is produced through the point representing the building height to the reference line. From this point on the reference line, another line produced through a point representing the height of the building or its greatest length, whichever is lower, will indicate on the right handed side of the chart the final chimney height, subject to any adjustment that may be necessary to ensure that this is never less than 3 metres above the ridge of the building, nor less than the uncorrected chimney height.

Example 2

A chimney whose uncorrected height is 37 metres is attached to a building 31 metres in height to the ridge of the roof. What will the final chimney height have to be if the maximum width of the building is (a) 31 metres or more, (b) 15 metres and (c) 7 metres? Reference to Figure 5 will show the three cases represented by dotted lines and the corresponding final heights are 52 metres, 43 metres and 38 metres.

Example 3

A chimney whose uncorrected height is calculated as 18 metres is associated with a building 24 metres in height to the ridge of the roof. What should the final chimney height be if the maximum width of the building is (a) more than 24 metres and (b) 9 metres? Reference to Figure 5 will show the

corresponding final heights to be 34 metres and 25 metres. The final heights are therefore 34 metres and 27 metres respectively, since they must be at least 3 metres above the ridge of the roof.

Figure 1: **Uncorrected Chimney Heights for Very Small Discharges of Sulphur Dioxide (up to 14 kg/hour)**

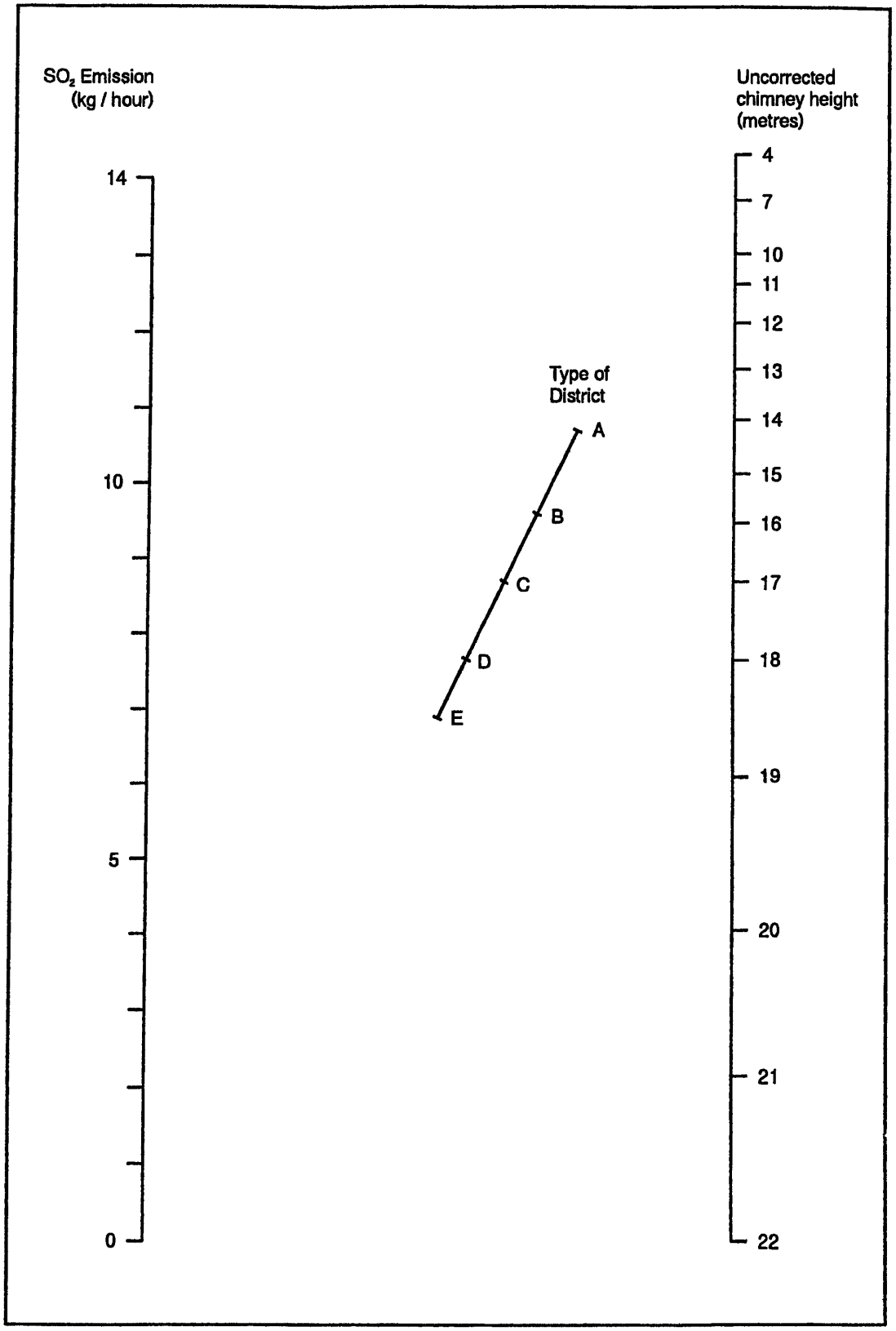


Figure 2: **Uncorrected Chimney Heights for Small Discharges of Sulphur Dioxide (15 – 45 kg/hour)**

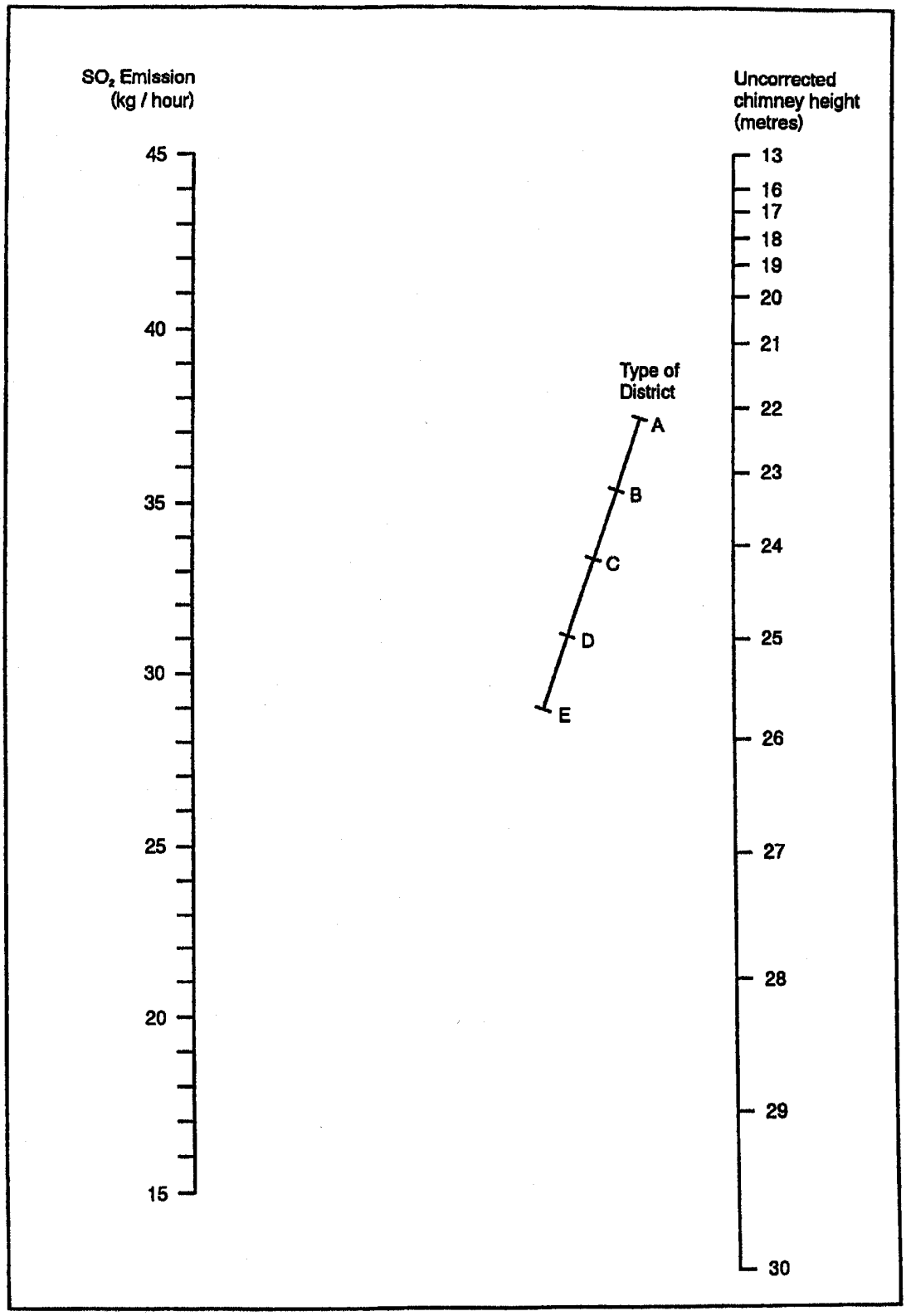


Figure 3: **Uncorrected Chimney Heights for Medium Discharges of Sulphur Dioxide (50 – 180 kg/hour)**

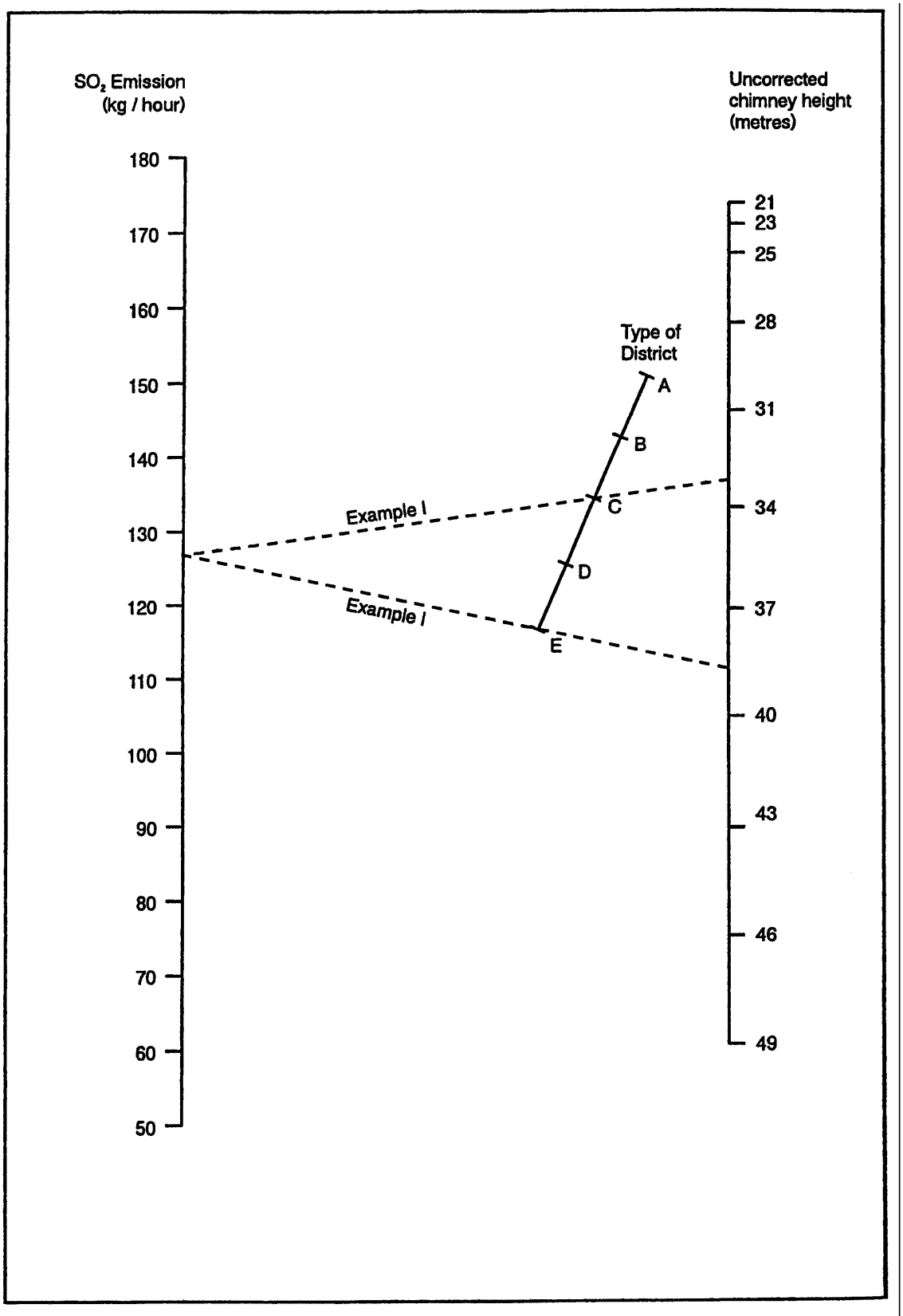


Figure 4: **Uncorrected Chimney Heights for Large Discharges of Sulphur Dioxide (200 – 800 kg/hour)**

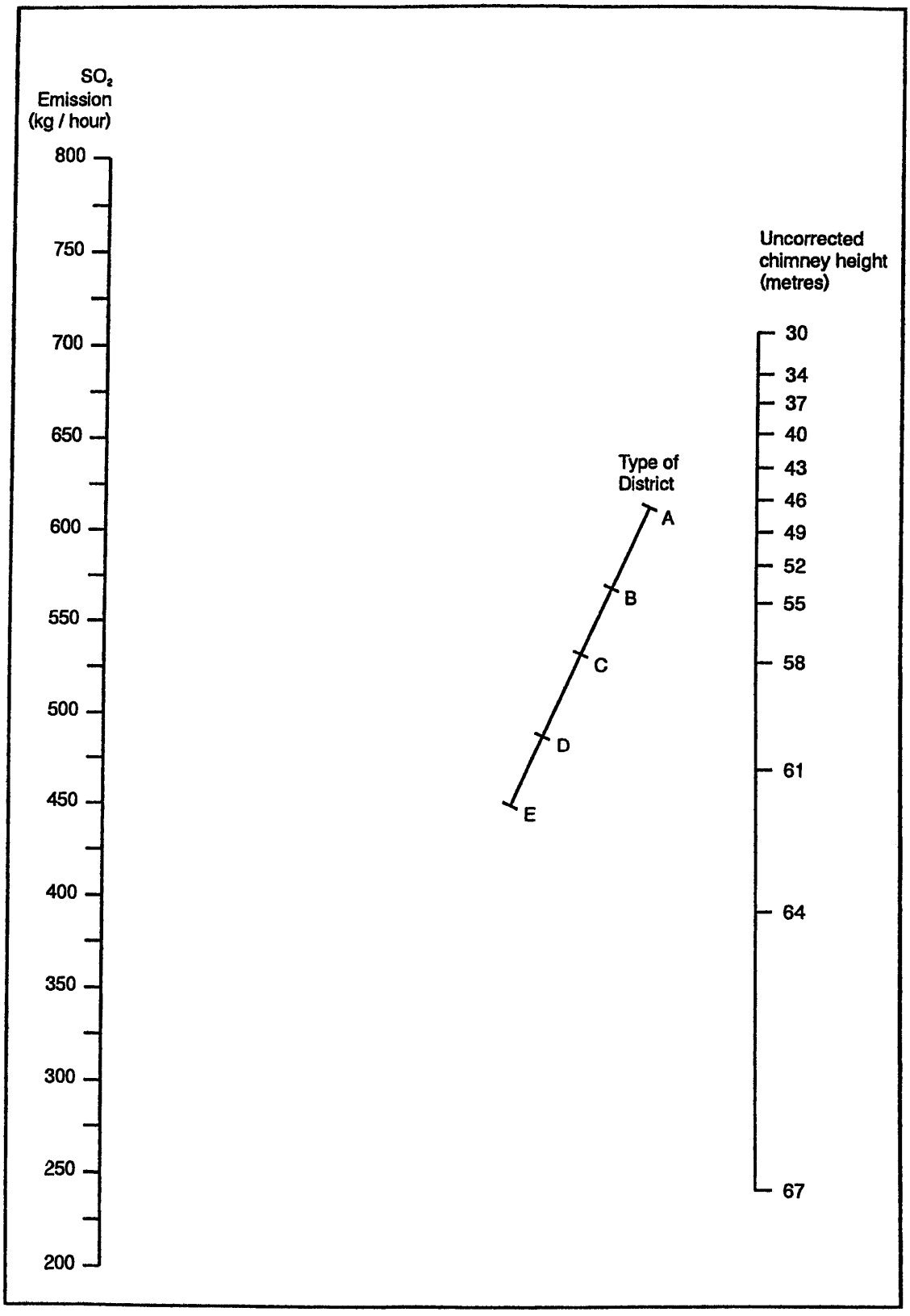


Figure 5: Final Chimney Heights

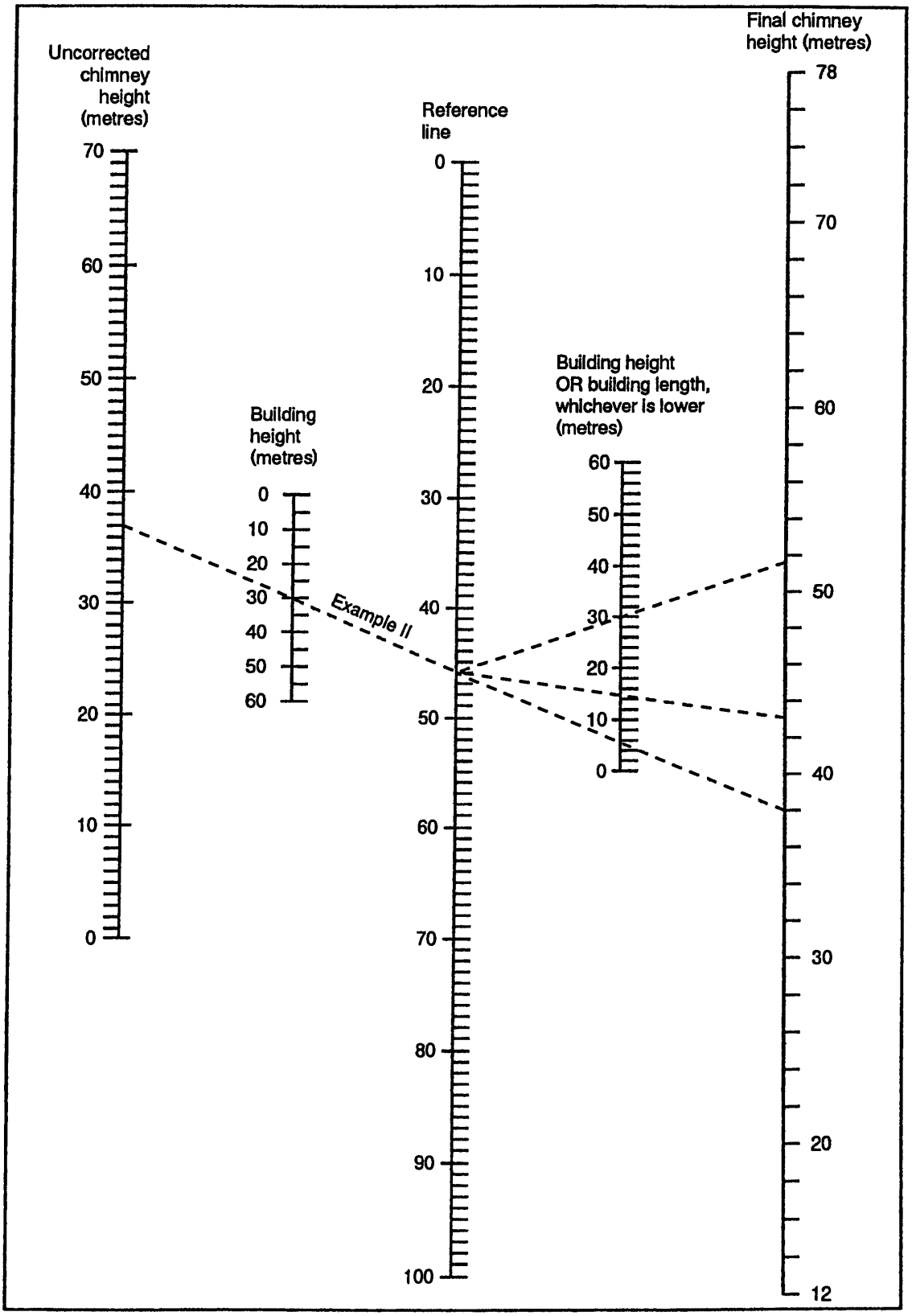
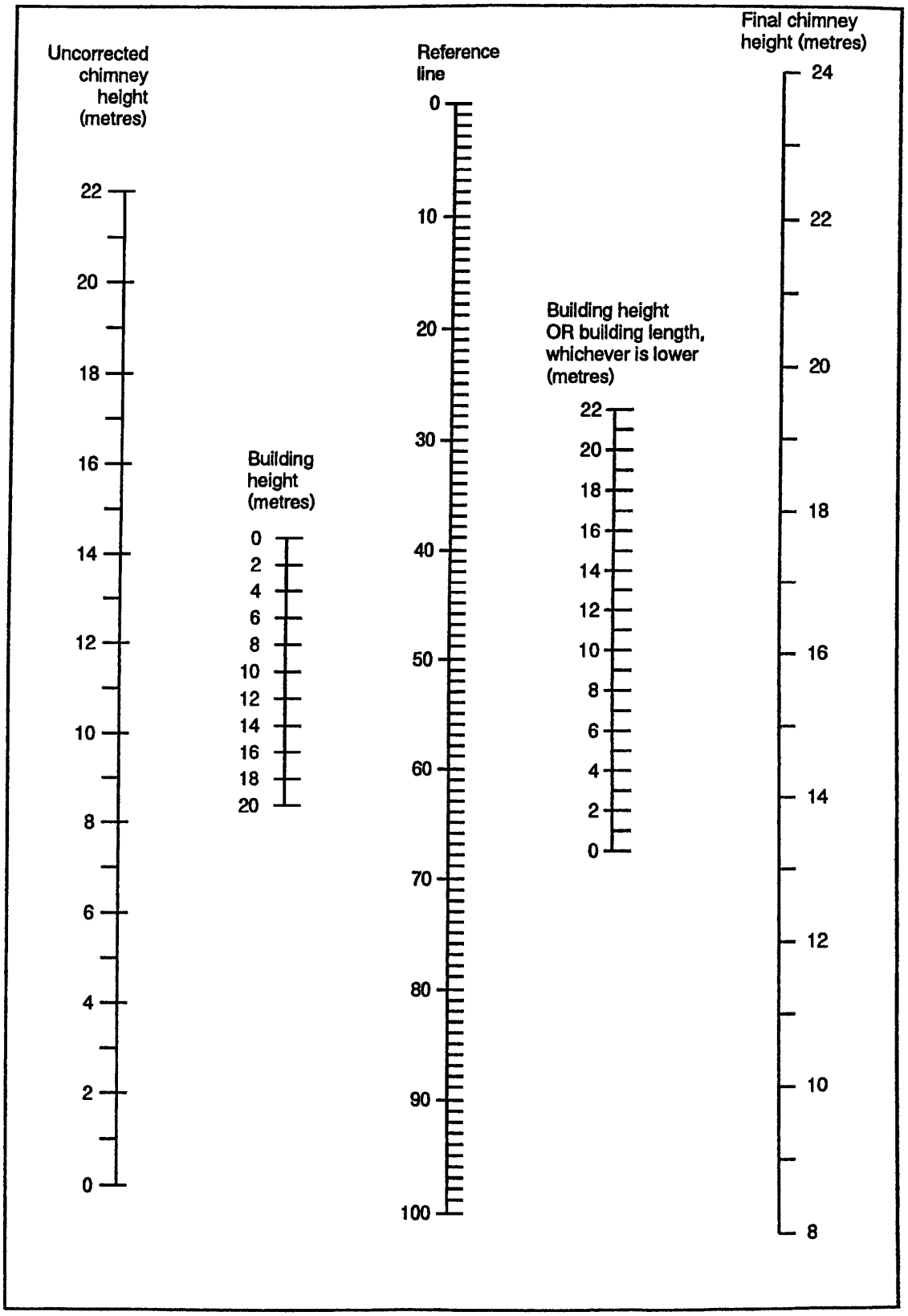


Figure 6: Final Chimney Heights for Gas-fired Processes



APPENDIX 3: SECTION 88 AND THE FOURTH SCHEDULE OF THE RESOURCE MANAGEMENT ACT 1991

1. MAKING AN APPLICATION (SECTION 88)

(4) [Subject to subsection 5], an application shall be in the prescribed form and shall include:

(a) *A description of the activity for which the consent is sought and its location; and*

(b) An assessment of any actual or potential effects that the activity may have on the environment and the ways in which any adverse effects may be mitigated; and

(c) Any information required to be included in the application by this plan or by regulations; and

(d) A statement specifying all other resource consents that the applicant may require from any consent authority in respect of the activity to which the application relates and whether or not the applicant has applied for such consents.

2. MATTERS THAT SHOULD BE INCLUDED IN AN ASSESSMENT OF EFFECTS ON THE ENVIRONMENT (FOURTH SCHEDULE)

Subject to the provisions of any policy statement or plan, an assessment of effects on the environment for the purposes of Section 88 (6)(b) of the Act should include:

(a) *A description of the proposal:*

(b) Where it is likely that an activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:

(c) Repealed by Section 225 of the Resource Management Amendment Act 1993:

(d) An assessment of the actual or potential effect on the environment of the proposed activity:

(e) Where the activity includes the use of hazardous substances and installations, an assessment of any risks to the environment which are likely to arise from such use:

(f) Where the activity includes the discharge of any contaminant, a description of -

(i) The nature of the discharge and the sensitivity of the proposed receiving environment to adverse effects; and

(ii) Any possible alternative methods of discharge, including discharge into any other receiving environment:

(g) A description of the mitigation measures (safeguards and contingency plans where relevant) to be undertaken, to help prevent or reduce the actual or potential effect:

(h) An identification of those persons interested in or affected by the proposal, the consultation undertaken, and any response to the views of those consulted:

(i) Where the scale or significance of the activity's effect are such that monitoring is required, a description of how, once the proposal is approved, effects will be monitored and by whom.

3. MATTERS THAT SHOULD BE CONSIDERED WHEN PREPARING AN ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

Subject to the provisions of any policy statement or plan, any person preparing an assessment of the effects on the environment should consider the following matters:

(a) Any effect on those in the neighbourhood and, where relevant, the wider community including any socio-economic and cultural effects:

(b) Any physical effect on the locality, including any landscape and visual effects:

(c) Any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity:

(d) Any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual or cultural, or other special value for present or future generations:

(e) Any discharge of contaminants into the environment, including any unreasonable emission of noise and options for the treatment and disposal of contaminants:

(f) Any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations.

APPENDIX 4: PROPERTY SPRAY PLANS

The development of a property spray plan can minimise the off-target effects of agrichemical use, and reduce potential conflicts between landowners.

Such a plan shall include:

(a) A list of immediate neighbours, and their contact phone numbers,

(b) Details of road boundaries, especially for roads used by school children,

(c) The crops to be sprayed and list of the chemicals (Trade names) likely to be used during the year or season,

(d) Identification of sensitive area (location and type), and the strategies employed to avoid contamination of those areas (e.g. Specific application techniques, buffer zones, manning boundaries),

(e) The identity of those carrying out the agrichemical application, and confirmation of their current GROWSAFETM certification,

(f) Particular weather conditions which may increase potential drift hazard to identified sensitive areas,

(g) Indication of agrichemicals to be used that may present a specific hazard (e.g. Bee toxicity).

APPENDIX 5: ACTIVITIES FROM WHICH DISCHARGES ARE PERMITTED UNDER RULE 9.1(10)

(a) Premises for the manufacture or preparation or cooking of food or beverages for human consumption but excluding:

- the extraction, distillation, or purification of animal or vegetable oil or fat otherwise than as a process incidental for the cooking of food,
- any process for the rendering or reduction or drying of animal matter (including feathers, blood, bone, skin or offal),
- any processes for the drying of milk or milk products.

(b) The refilling, storage, dispensing and sale of fuels.

(c) The operation of drycleaning facilities consuming solvents at a rate less than 30 litres per day.

(d) The operation of spray coating facilities with a rate of consumption of coating materials not exceeding 30 litres (or 30kg) per day.

(e) The operation of air conditioning systems and ventilation systems.

(f) The operation of industrial and commercial refrigeration systems.

(g) Moving or stationary engine exhaust systems.

(h) Combustion of fuels for fire fighting training or emergency fire fighting purposes.

(i) Premises used as or associated with funeral parlours, chapels, or stonemasons, but excluding crematoria.

(j) Premises used for the application of surface coatings, including printing or manufacture of packaging materials and the printing of paper, but excluding spray coating facilities as detailed in (d).

(k) Premises used for processes involving dyeing, printing, or finishing of yarns, threads, woven, non-woven or knitted fabrics or garments, but excluding: chemical reactions of monomers for the production of synthetic threads, fellmongery, tanning, the curing of leathers or wool scouring.

(l) Premises used for the sale, servicing, or repairs to motor vehicles, trailers, boats or like equipment, including body and engine repairs, panel beating and fibre-glassing.

(m) Yards used to hold stock and/or buildings used solely for animal slaughtering and skinning.

(n) Premises used for saw milling, joinery, cabinet making, furniture restoration and finishing, wood craft manufacture, but excluding the production of any form of particleboard, hardboard, medium density fibreboard or similar product.)

(o) Premises or activities where water vapour or steam are released.

(p) Premises used for fumigation for quarantine purposes.

(q) The construction, repair, maintenance and demolition of buildings.

(r) The refilling, storage and dispensing of tallow.

APPENDIX 6: PERFORMANCE REQUIREMENTS FOR QUALIFICATIONS TO APPLY AGRICHEMICALS

Training requirements for Permitted Activity conditions in Rules 9.1 & 10.1 – Application of Agrichemicals. These requirements are based on Sections 8.3 and 8.4, NZS 8409: 1999, The Code of Practice for the Management of Agrichemicals

Commercial User

The minimum training programme for applicators of agrichemicals working under supervision and direction shall include:

a. Awareness of the requirements of NZS 8409: 1999 The Code of Practice for the Management of Agrichemicals;
b. Safety Precautions;
c. The basic principles of application equipment.

For applicators working without supervision or direction the minimum training requirements shall be extended to include:

a. Transport, storage and disposal of agrichemicals;
b. Product label and interpretation;
c . Environmental effects and spray drift minimisation;
d. Principles of agrichemical use including weed, pest and disease identification;
e. Calibration of agrichemical equipment.

Commercial Contractor

The minimum training requirements for contract use of agrichemicals (animal and plant health products), where agrichemicals are applied for hire or reward (both ground and aerial application) shall include:

a. First aid, health and safety, and emergency response;
b. Environmental effects, include spray drift minimisation;
c. Notification requirements, including signage;
d. Product label interpretation;
e. Protective equipment selection and use;
f. Transport, storage and disposal of agrichemicals;
g. Selection, calibration and operation of application equipment for specific operations.

APPENDIX 7: THREE TIERED ASSESSMENT FOR ASSESSING DISCHARGES TO AIR FROM INDUSTRY

Introduction

1. The basis for the three-tiered assessment has been sourced from the Ministry for the Environment "Good Practice Guide on Assessing Discharges to Air from Industry" (June 2006).

2. The three-tiered approach is considered an appropriate way of assessing the effects of discharges to air within the Marsden Point Area. The intent of this approach is that the level of assessment undertaken reflects the level of effect from the proposed discharge. A three-tiered approach assists in achieving section 88 of the RMA which requires an assessment of environmental effects to be provided "in such detail as corresponds with the scale and significance of the effects that the activity may have on the environment".

Brief Overview

3. The following gives a brief overview of what each tier intends to achieve:

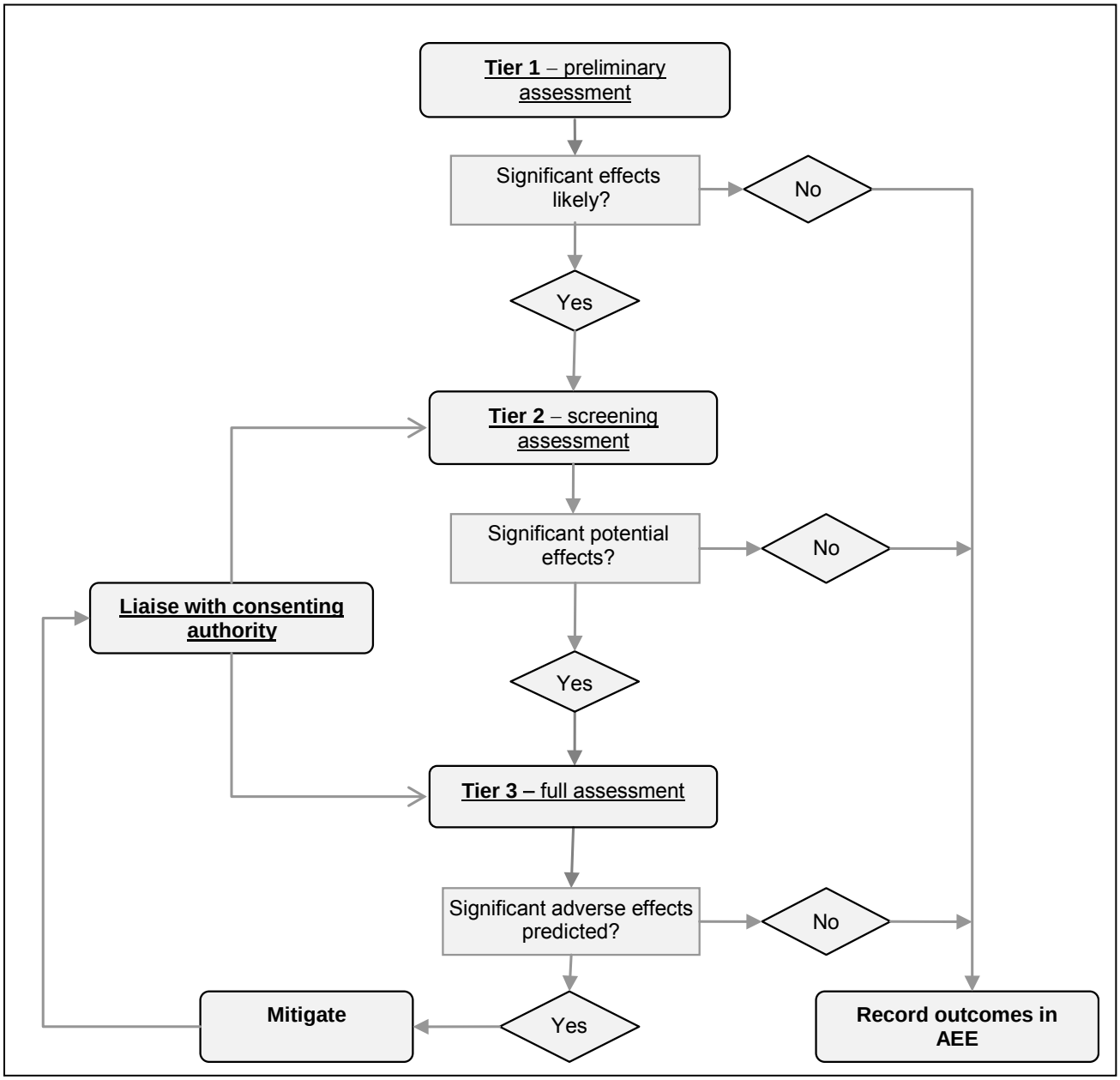
- Tier-1 is a preliminary assessment used to identify any likely significant air quality effects
- Tier-2 is a qualitative assessment with screening-level modelling
- Tier-3 is a quantitative assessment with increased complexity in modelling and site specific data.

Factors affecting the level of assessment required

4. There are a number of factors affecting the level of assessment to be undertaken, these include the:

- scale of the development
- adoption of pollution prevention measures
- complaints/compliance record
- nature of the pollutions released to air
- airshed designation under the Standards (National Environmental Standards for Air Quality)
- existing air quality
- physical geography of the receiving environment
- land use of the receiving environment
- type of consent required

Figure 1: The air quality assessment process



Tier-1 assessment

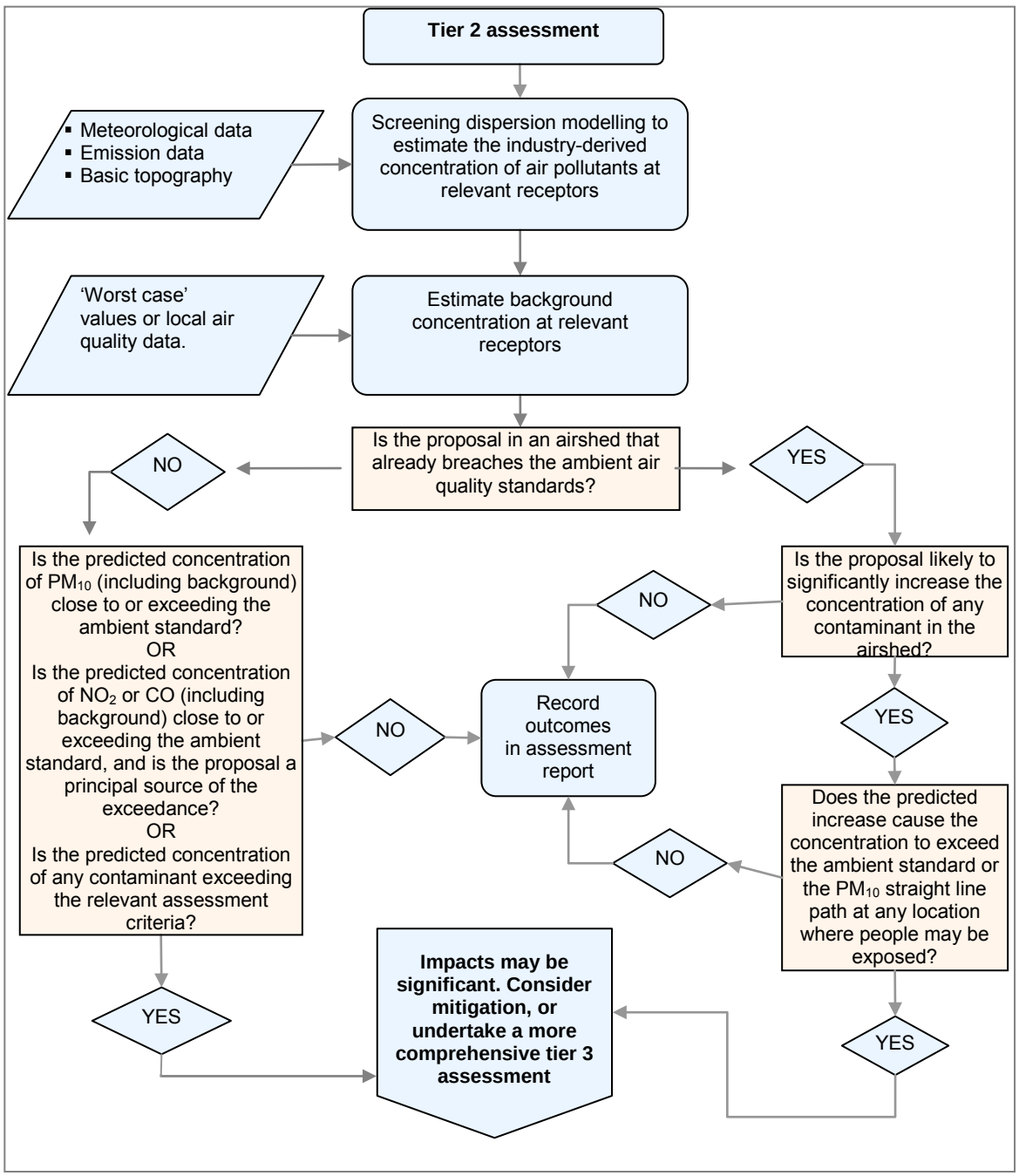
Tier-1 is considered to be a qualitative assessment. The intention being to compile background information, identify any relevant issues, and to determine the appropriate level of assessment to be undertaken. For some proposals, this assessment may be all that is required (i.e. permitted and possibly controlled activities). However the level of detail required for this will vary depending on the proposal. The Tier-1 assessment should consider the receiving environment and the nature and scale of the proposal, focusing on the:

- scale of the development
- nature of the pollutants released to air
- adoption of pollution prevention measures
- alternatives
- complaints/compliance record
- existing air quality including any airshed designation under the standards
- physical geography of the receiving environment
- type of consent required
- any relevant objectives, policies or rules in the regional or district plan

Tier-2 assessment

Tier-2 focuses on a qualitative approach (but not exclusively). The design and operation of the development are taken into account. This approach also relies on a screening modelling assessment of the potential effects. If this assessment indicates the potential for adverse impacts or non-compliance with air quality criteria then a Tier-3 approach (below) may be necessary.

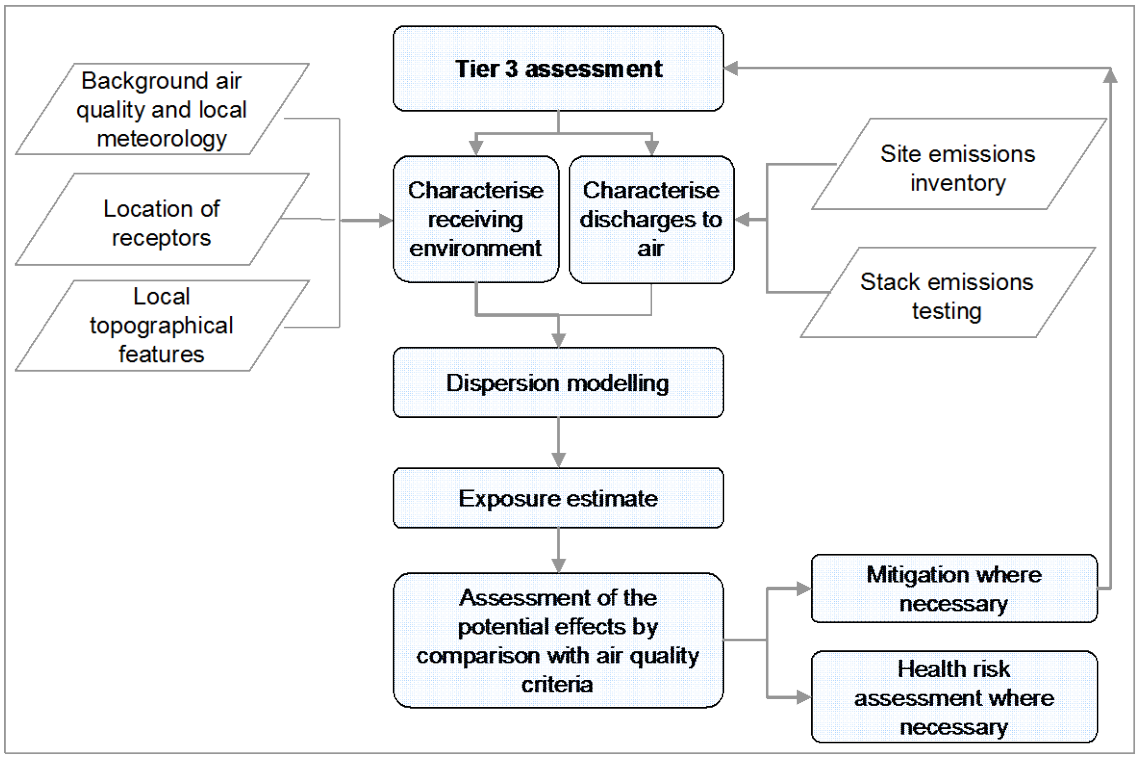
Figure 2: Tier-2 assessment process



Tier-3

Tier-3 involves a more comprehensive quantitative assessment of the potential effects on air quality. It usually requires emission testing, and dispersion modeling.

Figure 3: Tier-3 assessment process

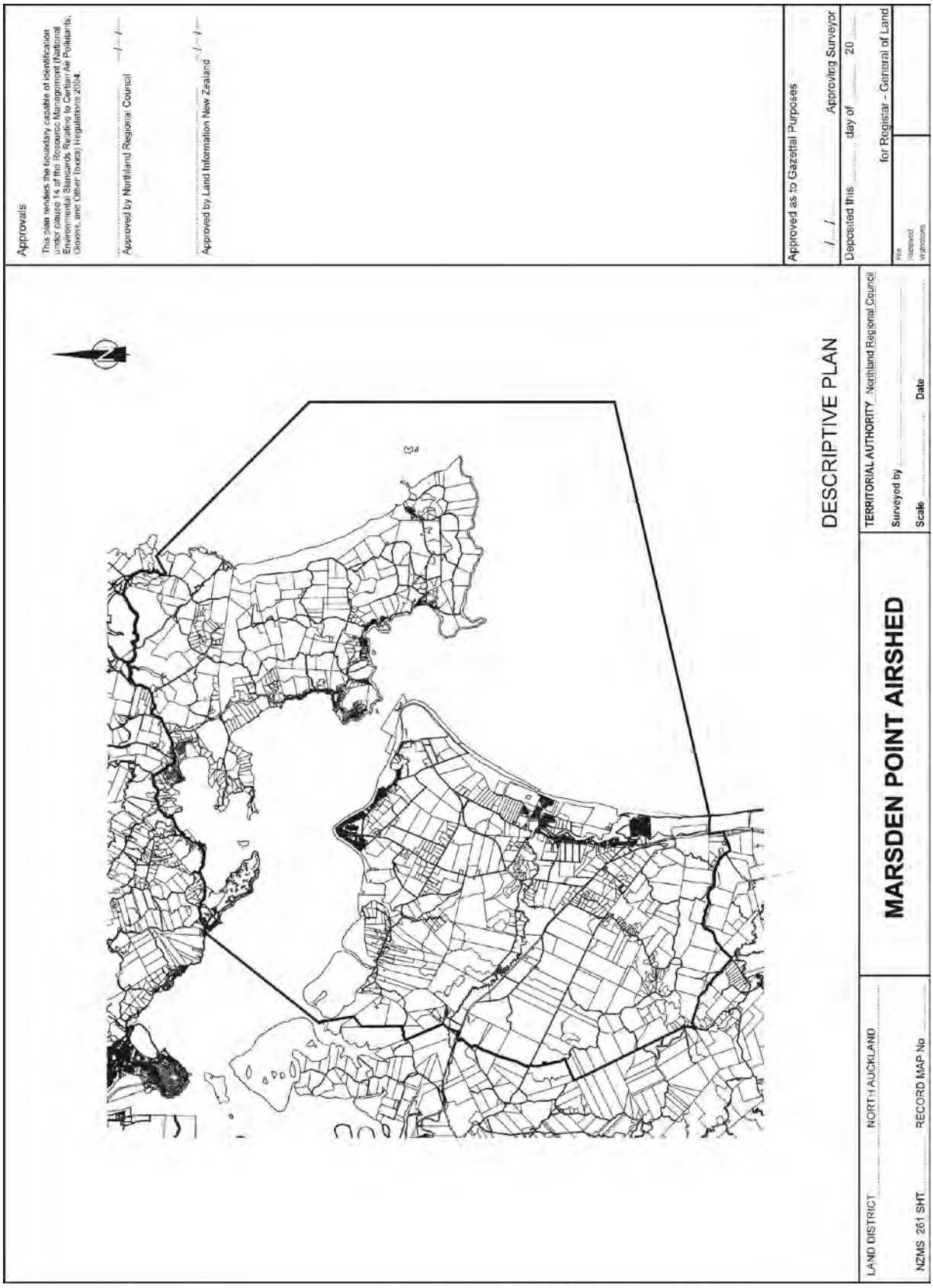


MAPS:

1. MARSDEN POINT AIRSHED

2. WHANGAREI AIRSHED

MAP 1 – MARSDEN POINT AIRSHED



MAP 2 – WHANGAREI AIRSHED