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APPENDIX I

National Parks Act 1980

Part I: Principles to be applied to National Parks

Section 4: Parks to be maintained in natural state, and public to have right of entry

Section 8: Investigation of proposals to add parks or establish new parks

PART I

National Parks

Principles to be Applied in National Parks

4. Parks to be maintained in natural state, and public to have right of entry-

- (1) It is hereby declared that the provisions of this Act shall have effect for the purposes of preserving in perpetuity as national parks, for their intrinsic worth and for the benefit, use, and enjoyment of the public, areas of New Zealand that contain scenery of such distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest.
- (2) It is hereby further declared that, having regard to the general purposes specified in subsection (1) of this section, national parks shall be so administered and maintained under the provisions of this Act that-
 - (a) They shall be preserved as far as possible in their natural state;
 - (b) Except where the Authority otherwise determines, the native plants and animals of the parks shall as far as possible be preserved and the introduced plants and animals shall as far as possible be exterminated;
 - (c) Sites and objects of archaeological and historical interest shall as far as possible be preserved;
 - (d) Their value as soil, water, and forest conservation areas shall be maintained;
 - (e) Subject to the provisions of this Act and to the imposition of such conditions and restrictions as may be necessary for the preservation of the native plants and animals or for the welfare in general of the parks, the public shall have freedom of entry and access to the parks, so that they may receive in full measure the inspiration, enjoyment, recreation, and other benefits that may be derived from mountains, forests, sounds, seacoasts, lakes, rivers, and other natural features.

Cf. 1952, No. 45, s.3; 1972, No. 87, s.2

8. Investigation of proposals to add to parks or establish new parks-

- (1) The Authority may, after having advised the Minister of its intention to do so, request the Director General to investigate and report to it on any proposal that land should be declared to be a park or part of a park, or acquired for national park purposes.
- (2) Unless the Authority otherwise agrees, the Director General shall, on receiving any such request-
 - (a) Give notice of the proposal under investigation by advertisement published in daily newspapers circulating in the cities of Auckland, Hamilton, Wellington, Christchurch, and Dunedin, and in the area affected; and
 - (b) In that notice invite persons and organisations interested to send to the Director General written suggestions on the proposals under investigation.
- (3) The Director General shall, on receiving any such request, give notice to the Minister of Energy of the proposal under investigation.

APPENDIX II

General Policy for National Parks 1983: National Parks and Reserves Authority

Policy 7.: SELECTING NEW PARKS AND PARK BOUNDARIES

The purposes of national parks are set out in Section 4(1): "... for the purpose of preserving in perpetuity as national parks, for their intrinsic worth and for the benefit, use, and enjoyment of the public, areas of New Zealand that contain scenery of such distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest." This standard is a high one befitting a status which can be altered only by an Act of Parliament (S.11).

One of the functions of the National Parks and Reserves Authority is to consider and make proposals for the addition of land to national parks and the establishment of new national parks (S.18(e)). Boards also have a function of giving advice to the Commissioner or the authority in this context (S.30(f)).

Section 8 provides that the authority may after advising the Minister of Conservation request the Director-General of Conservation to investigate and report to it on any such proposals. The Director-General is required to give public notice of the proposal, inviting persons and organisations to make written suggestions on it. The Minister of Energy is also to be advised of the proposed investigation.

Before making a recommendation to the Minister of Conservation that land be added to a park, the authority is required to consult the appropriate board (S.7(2)). Certain classes of land cannot be added to a park without the recommendation of the appropriate Minister (S.7(3)-(6)).

The authority has a responsibility to consider the inherent suitability of land for preservation as national park in terms of Section 4(1). However, proposals for additions to parks or for new parks may sometimes have significant economic and/or social implications, and in requesting an investigation the authority will seek information on such impact. In reporting to the Minister on the suitability of land for national park status the authority will also inform him of the economic and/or social implications. The final decision made by the Governor General in Council on the recommendation of the Minister can then be made in the light of the available information and on the basis of the national interests.

Policy

7.1 The following criteria will be used to assess the suitability of areas suggested as new national parks. These criteria will also be applied to areas being considered for addition to existing parks where their addition is for purposes other than to improve the location of boundaries. Criteria for boundary adjustments and locations of boundaries are given at policy 7.3.

- (i) The statutory requirements of Section 4(1) for provision of national parks will be interpreted as follows:

Areas recommended for national park status must contain, for their intrinsic worth and for the benefit, use and enjoyment of the public, some or all of the following:

- (a) Scenery of such distinctive quality that its preservation is in the national interest; and/or
 - (b) Ecological systems so unique or scientifically important that their preservation is in the national interest; and/or
 - (c) Natural features so beautiful, unique, or scientifically important that their preservation is in the national interest.
- (ii) In addition to the requirement to assess areas as to their suitability for national park status in terms of Section 4(1) the following criteria will be considered:
- (a) In general, national parks should be relatively large, preferably in terms of tens of thousands of hectares and preferably comprising contiguous areas.
 - (b) In general, areas under consideration should be natural areas, but predominantly natural areas will be considered if they:
 - Contain modified areas which can be restored or are capable of regeneration, or
 - Contain features of significant historical, cultural, archaeological or scientific value, or
 - Contain features which have no equivalent in an unmodified area in a national park and which are so beautiful, unique or so scientifically important that they should be protected in a national park.

7.2 In addition to consideration of the above criteria, any investigation requested by the authority under Section 8 will be required to include an assessment of the likely economic and/or social implications at the local, regional or national levels for consideration by the Minister in conjunction with the authority's recommendation.

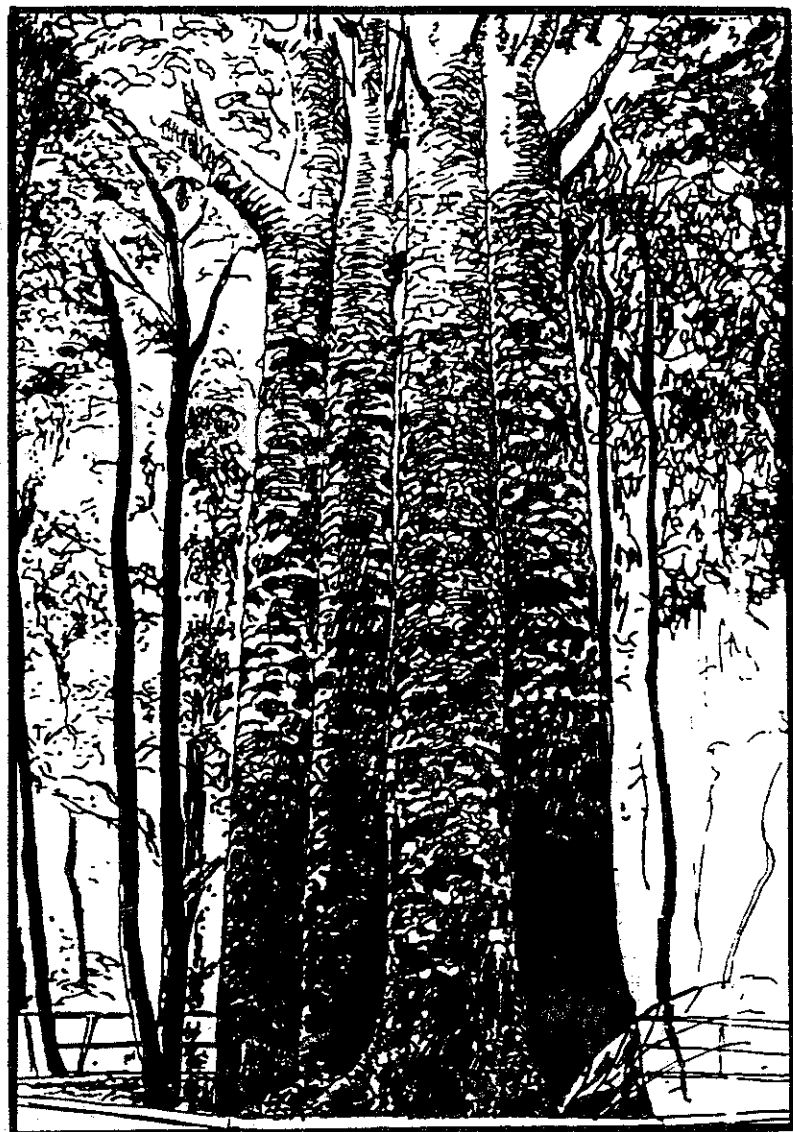
7.3 In fixing the boundaries of new parks or additions to existing parks the following criteria will apply and will also be used to assess proposals for changes to existing boundaries:

- (i) Ecosystems within the park should be able to withstand pressures from possible environmental change on lands adjacent to the park.
- (ii) Adjacent land uses should not detrimentally affect or dominate park values.
- (iii) Boundaries should encompass complete landscape units.
- (iv) Boundaries should allow the maximum possible right of access by the public consistent with the need to preserve park values.
- (v) Boundaries should be convenient for efficient management of the park and also for the occupier of adjacent land.
- (vi) Boundaries should where possible follow physical features such as ridgelines and streams as these are natural and

easily identifiable on the ground. Natural physical boundaries are normally preferable to vegetation boundaries, man-made features or straight line boundaries.

- 7.4 In coastal parks the addition of foreshore areas will be sought because they are ecologically part of the park and are required for efficient park management. Where appropriate, applications for grants of control in terms of the Harbours Act 1950 will be sought.
- 7.5 Exclusion of land from parks may be recommended either to make a more appropriate boundary or if land within a park does not comply with the criteria in policy 7.1 above and could more easily or more appropriately be administered by another authority. If the proposal to exclude land from a park has not been subject to the public participation procedures of the management plan, public comment will be sought unless the authority agrees that it is not necessary.
- 7.6 The landowner, or authority administering the land, and the regional authority or united council of the appropriate local authority region in which the land is situated will be consulted before an investigation into the potential of land for national park is proceeded with.

NORTHLAND KAURI NATIONAL PARK PROPOSAL SOCIAL AND ECONOMIC ASSESSMENT



**NORTHLAND
REGIONAL
COUNCIL**



Northland Kauri National Park Proposal

Social and Economic Assessment

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Preface

The New Zealand Conservation Authority has, under Section 8 of the National Parks Act 1980, requested the Department of Conservation to investigate the establishment of a new national park in Northland. It is proposed that it be based around the Crown-owned and protected kauri forests of the region. The Department of Conservation is responsible for preparing the "Section 8" report to the Authority, outlining the justification for the establishment of a new national park. The New Zealand Conservation Authority, having received the Section 8 report, then makes a recommendation to the Minister of Conservation regarding the establishment of the proposed park.

One of the requirements of the Section 8 report is an assessment of the likely social and economic impacts of the proposed park. The Northland Regional Council supports the concept of a kauri national park in the region and offered to prepare this social and economic assessment report for the Department of Conservation.

The Northland Regional Council hopes the report will assist the Department of Conservation and the New Zealand Conservation Authority in making their recommendations to the Minister of Conservation on the proposed national park.

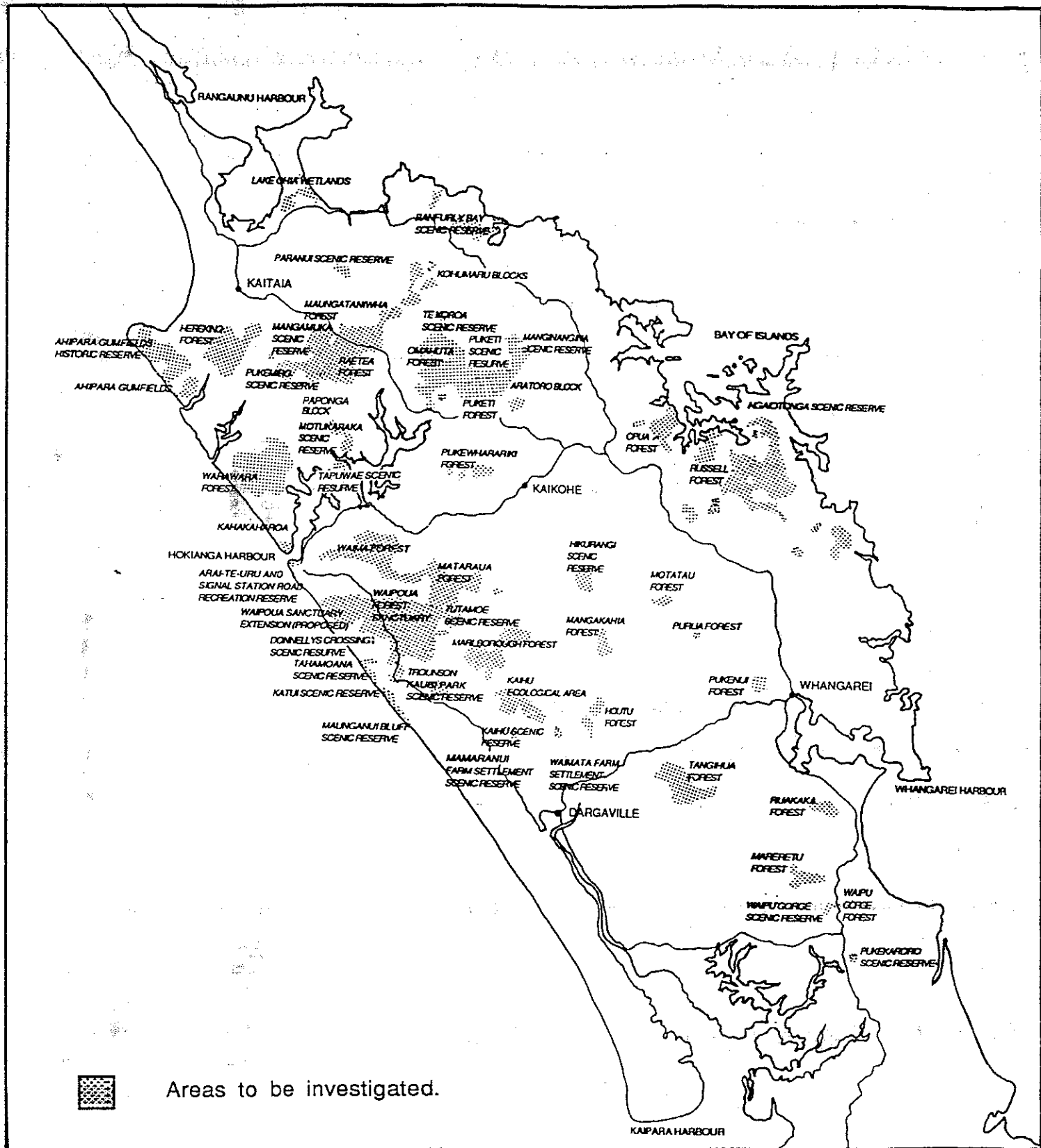
Michael Gross
Chairman
Northland Regional Council

December 1990

Cover illustration of Four Sisters, Trounson Kauri Park Scenic Reserve, used with permission of the Department of Conservation.

Enquiries on this report can be made to Max Dunn, Manager Planning and Policy,
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Figure 1: Proposed Northland Kauri National Park



1. Introduction

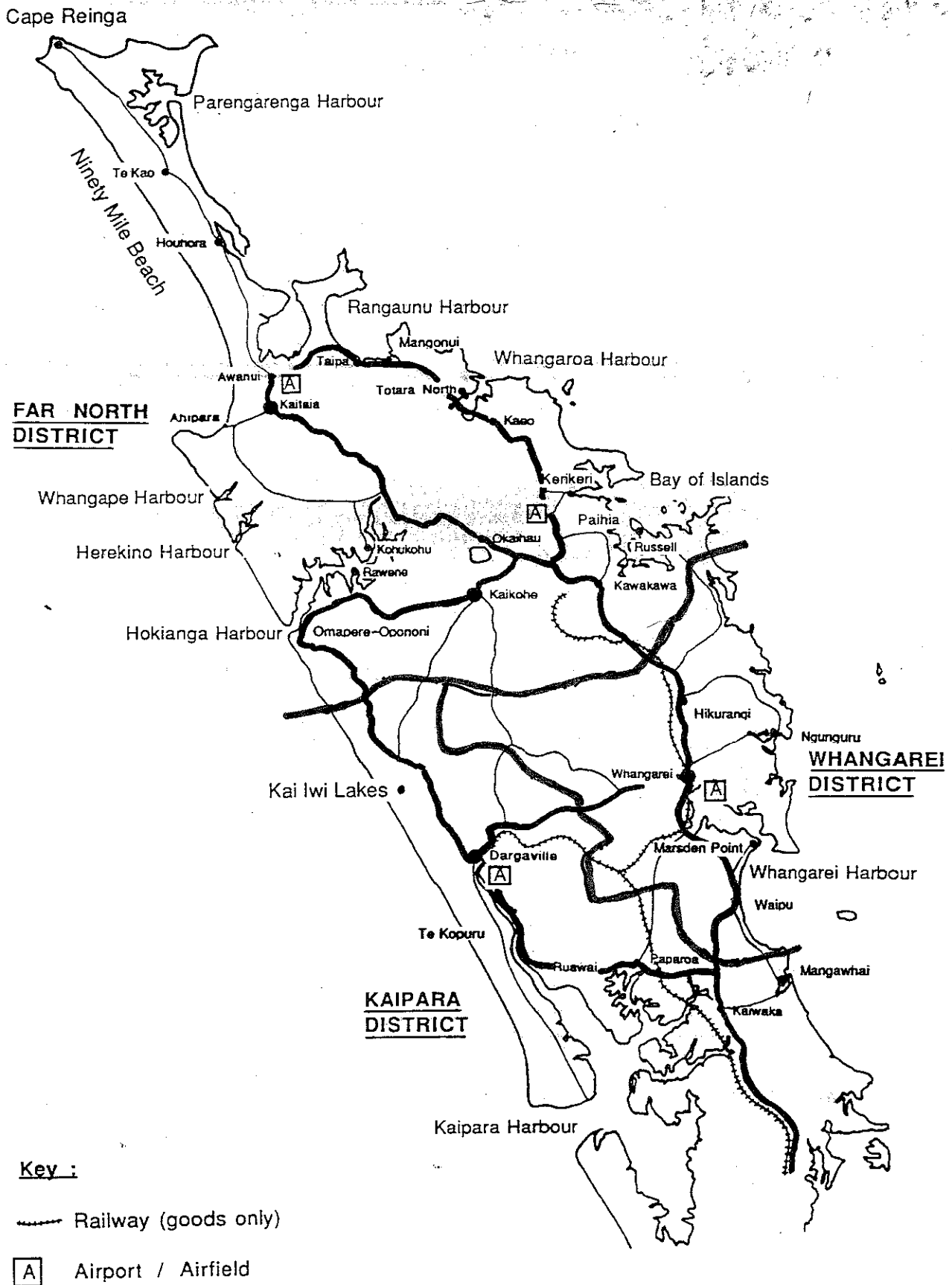
The proposed Northland Kauri National Park is a collection of more than 50 separate areas of Crown lands scattered throughout the region from Pukekororo Scenic Reserve near Kaiwaka in the south, to Lake Ohia near Cooper's Beach in the north (see Figure 1). These forests, wetland and dune remnants comprise the majority of the last remaining portions of a vast kauri forest, over a million hectares in extent, which covered most of Northland until the turn of the century. Early Maori settlement in the region had relatively minor effects upon the forests. However, extensive logging and farm development over the last 150 years has reduced the pre-European unmodified kauri forests to around 9,500ha. A further 60,000ha of secondary forest is regenerating.

Forest logging and subsequent farm development formed the basis of the regional economy from the late 1800s until the 1940s. Early European settlement of Northland by people of mainly British and Dalmatian extraction led to the utilisation of native forest resources and the establishment of livestock farming. After the 1940s there was a significant shift in the forestry industry from kauri and other native species to exotic species, particularly pine. Farming also assumed greater importance in the regional economy during this period, with dairying becoming the mainstay of the region's rural economy.

Northlanders remain reliant upon the rural economy and associated industry service sectors for their incomes. However, they are becoming increasingly urbanised. There has been a return of Maori people to their ancestral lands, retiree migration, and a general population drift to the northern and eastern coastal areas. Northland has also become the fifth most popular regional tourist destination in New Zealand. Its tourism is very seasonal and concentrated on the traditional summer holiday to the region's beaches and harbours. Some visitors also take in the kauri forests as part of their stay in the region.

Against this background, a case is being prepared to reserve the last remaining remnants of kauri forest and associated features in public ownership as a national park. The park will include elements of Maori and European history, in a region whose social and economic structure has changed markedly over less than four generations. It was once a frontier society, but is now becoming a more urbanised society, no less dependent on the region's natural resources. However the region's residents are now more aware of those resources' uniqueness, their fragility, and their intrinsic values. This, in the case of the remaining kauri forests of Northland, has led to the proposal for a Northland Kauri National Park.

FIGURE 2 : NORTHLAND REGION : PRINCIPAL FEATURES



2. Northland's Social and Economic Structure

2.1 Demographic Profile

The Northland region covers an area of 12,600km² extending from the townships of Kaiwaka and Mangawhai in the south to New Zealand's northernmost point at Cape Reinga (see Figure 2). It has a population of around 134,000 people. It was between 1981 and 1986 the fastest growing region in the country, recording an 11% population increase. Half of the region's population lives in urban areas of over 1,000 people. Around 40,000 people live in the main centre of Whangarei, with a further 15,000 in the townships of Dargaville, Kaikohe and Kaitaia. The remainder live in the small rural settlements and rural areas of the region.

The region is made of three local authority districts. Whangarei is the largest district with a population of 66,000, followed by the Far North with 50,000, and Kaipara with 17,000 (Department of Statistics 1990 population estimates).

The region's population is concentrated along its east coast where tourism and residential settlement, particularly by retired people, are driving the growth of many areas. Significant population centres are developing at places like Coopers Beach-Taipa, (Far North district), Ngunguru-Tutukaka (Whangarei district) and Mangawhai (Kaipara district) in this regard. Several coastal settlements recorded population increases of 20-40% between 1981 and 1986.

Northland has the highest proportion of Maori people resident in a region in the country. Currently around 25% of the population are Maori. Nearly half of the region's Maori population lives in urban areas. There has been over the past 5-10 years a trend towards Maori repopulation of ancestral lands, particularly in the Far North district. Tribal authorities are promoting papakainga (housing) schemes around marae settlements, as well as farming, forestry, and fishing ventures to employ local Maori.

The proportion of Maori people as part of the total population varies considerably throughout the region. Highest concentrations of Maori tend to be in the Far North, in areas like the Hokianga where, at the last census, over half the population was recorded as Maori. Urban concentrations of Maori in 1986 varied from Kaikohe (47% of the total population) to Kerikeri (0.6% of the total population).

Northland has a relatively young population. It has a higher proportion of young people, i.e. less than 14 years of age, and smaller proportions of people in the 15-29 and over 65 age groups. Migration figures show a substantial loss of teenage and young working people out of the region for education and employment opportunities. The Maori population has a more youthful age structure (average 25 years) than the non-Maori population (average age 32 years).

The region has a labour force of around 50,000 people (37% of the total population) of which 9,200 or 18% are currently registered as unemployed. Unemployment is highest amongst Maori. Household labour force surveys indicate that over 40% of the unemployed are Maori which is over twice that found nationally. Long term unemployment (i.e. for over a year) is also high in Northland compared to most other regions.

Agriculture is the principal source of employment in the region (21% of the labour force). Northland has twice as many people employed in this industry as the national average. It has a significantly lower proportion of people employed in manufacturing (15% of the labour force).

FIGURE 2 : NORTHLAND'S SOCIAL STRUCTURE

Population Distribution	Population Growth	Age Structure	Family Structure
<p>Northland</p> <p>Northland has a population of 134,000 people, with 50% living in urban areas. Major centres include Whangarei, Dargaville, Kaitiaki and Kaikohe.</p> <p><u>Population Distribution</u></p> <p><u>National Comparison</u> 4% of NZ's population.</p>	<p>The Far North and Whangarei Districts are experiencing significant growth rates, (2%/year).</p> <p><u>Population Projections</u></p> <p><u>Growth rates 2-3 times the national average.</u></p>	<p>Northland has a young population, which is aging due to a fall in the fertility rate and an influx of retiree migrants.</p> <p>Average Age : Maori 25 Years European 32 Years</p> <p><u>Age-Sex Distribution</u> Females (1986) Males</p> <p><u>Age Structure is becoming similar to NZ.</u></p>	<p><u>Family Type (1986)</u></p> <p>The majority of families in Northland have dependent children.</p> <p><u>Family structure similar to the nation.</u></p>
<p>Northland</p> <p><u>Ethnicity</u></p> <p>46% of the total Maori population is urban.</p> <p>Over half the Maori population lives in the Far North District, 37% in Whangarei District and 9% in the Kaipara District.</p> <p><u>National Comparison</u> High Maori population Northland (25%) NZ (12%)</p>	<p><u>Home Ownership</u></p> <p>Only 27% of homes are owned by Maori.</p> <p>Household density is high.</p> <p>Large number of temporary dwellings. Rural housing conditions in some areas are low.</p> <p><u>Low housing standards.</u></p>	<p>Current health issues include : Maori health Mental health Health of the elderly</p> <p>Deaths due to motor vehicle accidents are high in Northland, 30/100,000 people as compared to NZ, 22/100,000 people.</p> <p>Northland's death rate from diabetes is 20% higher than the national average.</p> <p><u>Some local health problems.</u></p>	<p>26% of the population receive welfare benefits (not including family benefit) which is largely due to the region's high unemployment and aging population.</p> <p><u>Benefits in Force (June 1990)</u></p> <p><u>High welfare dependency.</u></p>
<p>Northland</p> <p>Few adults with tertiary qualifications.</p> <p><u>Attainments of School Leavers 1988</u></p> <p><u>National Comparison</u> Many young people leaving school without formal qualifications.</p>	<p>Northland's labour force is currently 38% of the population and is expected to increase to 44% by 2011. Half the labour force is full-time and is predominantly male. Most part-time jobs are filled by women.</p> <p><u>Work Status</u></p> <p><u>High Unemployment. Rapid labour force growth.</u></p>	<p>Employment is dominated by the rural sector.</p> <p><u>Employment by Industry</u></p> <p>Recent job losses due to economic downturn. Women and Maori particularly vulnerable to job losses.</p> <p><u>Typical of a rural based economy.</u></p>	<p>Northlanders earn relatively low incomes, particularly those living in rural areas. A large number of people rely upon social welfare benefits.</p> <p><u>Income Sources (1986)</u></p> <p><u>Incomes lower than the national average.</u></p>

Northland saw a substantial growth in its workforce during the mid-1980s associated with expansion of the Marsden Point oil refinery. A peak work force of around 4,000 people was reached in 1984, a substantial number of whom came from other parts of the country and overseas. Many of these workers remained in the area following completion of the project. The region's labour force is growing annually at around 2.0% which is significantly above the national rate (1.4% per annum).

Family structures in Northland are similar to the rest of the country. The majority of families have dependent children, and 56% of families are two parent families. Northland has a regional average of just over three people per household, slightly higher than the national average.

By national standards, Northlanders have a lower standard of living, with high unemployment rates, high welfare dependency, lower incomes, and lower housing standards. The region's reliance on the rural sector and associated industries has meant that jobs are vulnerable to downturns in the economy, with women and Maori particularly affected by job losses. Lowest incomes and housing standards are found in rural areas.

The future demographic shape of Northland is expected to be influenced by several key factors. These are:-

- population growth is expected to decline, but still be substantially above the national average (1-2% annual growth is predicted over the next five years)
- population growth is expected to occur mainly in the Far North and Whangarei districts and have a strong Maori component.
- the population is expected to 'age' as fertility rates continue to decline and the number of people retiring to the region increase.
- the labour force is expected to generally expand but with significant subregional variations related to ethnicity, fertility and migratory factors.

2.2 Economic Overview

Northland's economic structure reflects its rural industry base, with farming, particularly dairying providing a large proportion of the region's income. Farming earns about \$1 billion a year for the region with dairying earning 63% of the total, beef 23%, and sheep 14%. Northland is the fourth largest farming region by developed area in New Zealand.

Dairy processing is carried out by the Northland Cooperative Dairy Co, with four factories at Kauri, Maungaturoto, Dargaville and Hikurangi, which is soon to close. The new \$100 million factory at Kauri (north of Whangarei) is one of the most sophisticated in the country. The company is the region's major primary products manufacturer and its largest private sector employer. The Company produces about 10% of the nation's milkfat, and in 1988 had a turnover of \$300 million, placing it in the nation's top twenty companies in this regard. Returns to dairy farmers in the region have fluctuated considerably over recent years. However the dairy industry is well established and a \$30 million extension to the Kauri factory is being undertaken.

The region has an established beef and sheep farming industry. Around 4.6 million stock units are farmed. It has a high beef to sheep ratio (1:3) compared to the North Island average (1:10). There are three meat processing plants in Northland, two in Whangarei, and one at Moerewa. They supply both domestic and international markets. Beef cattle numbers are rising at the expense of sheep numbers. There is also diversification into deer and other forms of farming.

Forestry, horticulture, and marine farming are also important contributors to Northland's economy. The region has around 121,000ha of exotic forest, 44,000 of which were planted by the State. The 19,400ha Aupouri forest in the Far North was one of the largest state forests developed in the country. It has recently been sold to Japanese interests. Five other state forests are currently subject to sale processes.

During the early 1980s, N.Z. Forest Products and Shell Oil Ltd initiated a joint venture forestry project in the Dargaville-Kaikohe-Whangarei area. Almost 30,000ha were planted, as part of a planned 50,000ha forest estate. Taxation related changes have slowed this and other forest planting projects. At present around 3,000ha are being planted annually compared to 11,000ha in 1987. The recent merger of Elders-N.Z. Forest Products with Carter Holt Harvey means this consortium owns around 53,000ha or 44% of the region's forest resources. There are significant farm-forestry operations in the region, particularly on the Pouto Peninsula.

The region's forests are relatively young, with an average age of 9 years (1989 estimate). However, the largest forest, Aupouri, is one of the oldest and is expected to produce substantial wood flows around the turn of the century. Around 1.0 million m³ per annum are expected initially, rising to 3.5 million m³.

Northland has traditionally had a small horticultural industry based on citrus crops in the Bay of Islands and kumara growing around Dargaville. In the 1980s it followed the Bay of Plenty region in the development of the kiwifruit industry. It now produces around 8% of the nation's kiwifruit crop which has a farm gate income of over \$35 million. Avocados, tamarillos and persimmons are also grown in significant quantities.

Around 2,300ha are planted in fruit crops and around 3,500ha in market gardens. Kumara and squash are the principal vegetable crops grown. A significant flower growing industry is also developing. Horticultural development has, however, slowed considerably over recent years, particularly in the kiwifruit industry as a result of low export prices. Cyclone Bola and other climatic events have also taken their toll on the industry.

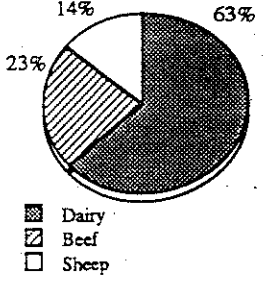
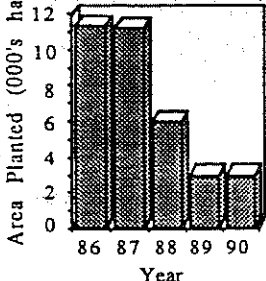
Northland's marine farming industry produces nearly half of the country's exports of Pacific oysters and three quarters of its green mussel stocks. It is concentrated in the Bay of Islands, Houhora, Whangaroa and Kaipara harbours. There are around 80 farms covering an area of approximately 260ha. Most of the region's 15 harbours have some potential for marine farming and there are currently around 60 applications for new farms under consideration.

Commercial fishing is concentrated on inshore fin species, especially snapper. There is also a substantial scallop and crayfish industry. No deep water fisheries operations are based in the region although tuna and other species are present.

Mining is a small contributor to the regional economy with no gold or other precious minerals presently being recovered. Some copper mining has taken place at Pakotai west of Whangarei, and investigations have been made into mercury mining in the Kaeo area. High quality ceramic clay and silica sand operations are based at Matauri Bay and in the Parengarenga harbour. Limestone is also recovered with the Golden Bay Cement Company's operation south of Whangarei being the largest in the country.

Most of Northland's manufacturing industry is based in Whangarei, including clothing, ship repair, boat-building, cement, plastics, glass, construction and maintenance industries. New Zealand's only oil refinery is based at Marsden Point, together with the oil-fired Marsden 'A' power station, and the non-commissioned Marsden 'B' station. Investigations are being made into commissioning of the latter station using either coal, gas or oil fuels.

FIGURE 3 : NORTHLAND'S ECONOMY

Agriculture	Forestry	Horticulture	Mining
<p>Northland Farming is Northland's major industry. It contributes about \$1b to the region's economy each year.</p> <p><u>Farm Gate Income (1990 estimate)</u></p>  <p>Over half of the total land area is in grass.</p> <p><u>National Comparison</u> Second largest farming region in North Island.</p>	<p>Northland has 200,000ha suitable for exotic forestry, currently 117,100ha are planted. There is a large potential for processing from 2000 onwards.</p> <p><u>Exotic Forest Planting Rates</u></p>  <p>10% of the nation's exotic forest resource.</p>	<p>About 5,800ha are planted in horticultural crops which are centred around Whangarei, Kerikeri, Dargaville and Ruawai.</p> <p>Major crops include kiwifruit, avocado, and citrus, whilst kumara, squash, tamarillos and flowers are minor crop types.</p> <p>Currently the industry is static although there has been increasing development of specialist crops such as flowers.</p> <p><i>Key producer of kiwifruit, citrus, tamarillos, avocados and kumara.</i></p>	<p>Mining is a relatively small contributor to the Northland economy.</p> <p>Limestone is used as fertiliser & for cement purposes. Ceramic Clay is exported to Japan and Europe. Silica sand is dredged from Parengarenga harbour for glass production.</p> <p>Rocktypes suitable for aggregate production occur throughout the region and are used for road construction and maintenance.</p> <p><i>Major supplier of high quality sand and ceramic clays.</i></p>
Fishing	Marine Farming	Energy	Tourism
<p>Northland This industry is concentrated on the inshore fishery.</p> <p>Snapper is the main species caught, although scallops and crayfish are also important.</p> <p>About 350 fishers are located in Northland, most fishing off the east coast.</p> <p>There is potential for developing skipjack and albacore tuna fisheries. Current issues are the individual transferable quota system & Maori claims over the fishery resource.</p> <p><u>National Comparison</u> Small community based industry.</p>	<p>Northland has a large area of marine farms, (260ha).</p> <p>The species cultivated are oysters and mussels, both of which are exported to Australia, the United States and Asia.</p> <p>Northland green mussel seed stocks 75% of Marlborough and Coromandel marine farms.</p> <p><i>Major part of NZ's marine farming industry.</i></p>	<p>NZ's only oil refinery is located at Marsden Point, together with the Marsden A oil fired power station and Marsden B station which has not been commissioned.</p> <p>The geothermal field at Ngawha, near Kaikohe, has potential for development.</p> <p>There is limited hydro-electric power potential.</p> <p>Interest is being shown in oil prospecting off the region's west coast.</p> <p><i>Nationally important energy industries.</i></p>	<p>Domestic tourism makes up 70% of Northland's tourism industry, which is largely summer based and focussed on the Bay of Islands.</p> <p>In 1989 there were 151,000 domestic visitors which spent about \$163m and 128,900 international visitors which spent around \$75m. Northland is the fifth highest regional tourist \$ earner in NZ.</p> <p>In 1989 3,689,000 person nights were spent in Northland. Visitor person nights are expected to increase by 4%/annum to reach 4,407,000 in 1993. <i>Major tourist destination, especially for Aucklanders.</i></p>
Manufacturing	Dairy & Meat Processing	Other Primary Processing	Business and Social Services
<p>Northland Manufacturing is largely based in Whangarei. It is orientated around clothing, ship repair, boat-building, cement, plastics, glass manufacture, construction and maintenance industries.</p> <p>These industries mostly service the domestic market, particularly Auckland.</p> <p><u>National Comparison</u> Typical of a rural based economy.</p>	<p>Dairy processing is carried out by one company - Northland Dairy Co. It has four factories at Kauri, Maungaturoto, Dargaville & Hikurangi. Further expansion is planned for the Kauri processing plant. The Company produces about 10% of the nation's milkfat.</p> <p>Northland has three meat processing plants, two in Whangarei and one at Moerewa.</p> <p>All agricultural processing plants supply domestic and international markets.</p> <p><i>Major producer of dairy products.</i></p>	<p>Several saw mills around the region process much of the forestry resource. A pulp mill has been proposed for the Dargaville area.</p> <p>There is a small processing fruit and vegetable processing plant at Te Hana.</p> <p>Small fish packing and freezer facilities are at most local fishing ports. There is a larger facility at Hikurangi.</p> <p>Some shellfish processing occurs on site and in Whangarei before exporting via Auckland.</p> <p><i>Small nationally.</i></p>	<p>Both business and social services are concentrated within Whangarei. Some government departments and agencies are also located in centres such as Kaitiaki, Kaikohe, Kerikeri, Kawakawa and Dargaville.</p> <p>Over 80% of the businesses in Northland are 'small businesses', i.e. employing 0-5 persons.</p> <p><i>Typical of a non-metropolitan region.</i></p>

Tourism contributes \$230 million per annum to the regional economy. Over 800,000 visitors come to Northland each year. Domestic tourism dominates with an 80/20 split of domestic to international visitors. Most domestic visitors are Aucklanders, and most international visitors are Australians. Over recent years, growth in the number of European, Japanese and American visitors has been noted.

Domestic tourism is concentrated on the seasonal summer holiday to the region's beaches and harbours, with a relatively small proportion of visitors taking in the forests and other inland features. Roading conditions are in some areas a major disincentive to tourism. One major concern is the unsealed portion of State Highway 12 through the Waipoua forest, which hinders attempts by the tourist industry to market a 'loop' road route around Northland.

Business and social services are concentrated in Whangarei. Most businesses are small, employing less than 5 people. There has been a small increase in the number of people employed in wholesale, retail and business services over recent years.

The future economic prospects for Northland are difficult to predict. They will be strongly influenced by national and international monetary and trading policies. The main points to note for the immediate future are:-

- agriculture is expected to remain the mainstay of the economy with some growth in the dairy, beef and deer farming industries.
- forestry has the potential to substantially boost the economy utilising the region's undeveloped land resources, favourable climate and transportation links.
- horticultural development is expected to be limited as the markets for kiwifruit, squash and other main crops weaken, although some diversification into specialist crops is possible.
- aquaculture can be expected to grow with some extension of oyster and mussel farming and possibly farming of new species, e.g. marron.
- tourism prospects are relatively bright with growth expected in the international visitor market.
- manufacturing industries will continue to serve mainly domestic needs with little expansion expected.

3. Economic & Social Impacts of the Park

3.1 Regional Tourism

Tourism is a key component of Northland's economy. However, the tourism industry is primarily based around the region's coastal attractions, especially the Bay of Islands. It is the most popular destination for visitors with around 55% of international visitors and 25% of domestic visitors going to the Bay. The principal features of the region's tourism industry are illustrated in Figure 5.

Visitor surveys in the region have consistently shown the high rating of the coast and water sports activities in general amongst visitors. For instance, in the Northland Travel Survey of 1987/88, the coast was the most highly rated attraction (86%). However, the region's inland forests, many of which are expected to comprise the proposed national park, are an important secondary attraction although few statistics are available on their visitor significance. Most visitor surveys are of a general nature and related to activities or attractions which are not specific to the proposed park areas.

The importance of forest areas to visitors has been indicated in some surveys. The 'wilderness' of the region was rated highly by 59% of the domestic visitors in the Northland Travel Survey of Summer 1987/88. The Northland Destination Survey of 1984/85 found relatively high rates of visitation to native forests. Of the 2,167 visitors interviewed, 28% had 'visited a native forest' within the previous 24 hours. The visitation rate was considerably higher for overseas visitors (30%) and domestic visitors from outside the region (24%) than for Northlanders (15%). It was also predictably high in the three former counties of Hobson (57%), Hokianga (43%) and Bay of Islands (29%) which contain the main native forest areas and are the focus of the proposed park. Visitation rates of between 5% and 11% were recorded for the other former local authority areas.

The reported attractiveness of native forests in Northland to visitors, especially from overseas, is consistent with other similar studies. The Westland National Park Economic Impact Study (1982) reported a survey of visitors showing 60% were from overseas. A 1985/86 Summer Survey of visitors to the Whakapapa area in Tongariro National Park found over one-third were from overseas. This contrasts with a winter survey in the ski season when only 3% of the visitors were from overseas. In this sense, the proposed national park has the potential to enhance the international visitor focus of Northland.

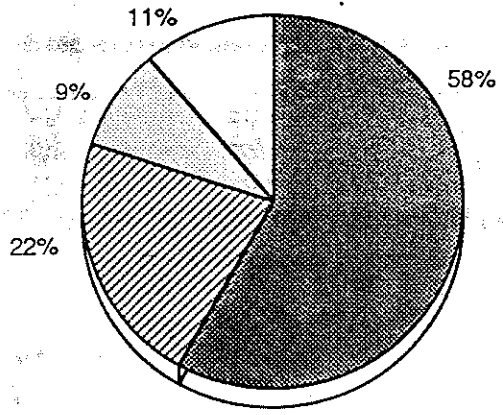
Although Northland is not served by international transport services, particularly air, it is reasonably accessible to Auckland, the country's main international arrival centre. Around 75% of all international visitor arrivals are made through Auckland airport. The Auckland region also contains 27% of the country's population and is the major source of domestic visitors. Its increasing importance as an international gateway and continued population growth provides a strong visitor base for the proposed Northland Kauri National Park.

The establishment of the national park in Northland can be expected to strengthen the region's tourism industry by making more visible and more marketable a secondary tourist product. Studies both in New Zealand and overseas show that national parks have high visitor status and with proper promotion can be expected to increase the number of visitors to their associated regions. For instance, a 1982 New Zealand survey found that 72% of residents and 70% of overseas visitors would like to visit a national park.

The term 'national park' has a strong worldwide visitor image based on unspoilt natural features, high standards of visitor tracks, information and interpretation. As a result a 'national park' generates a degree of public interest in excess of that experienced by 'park'

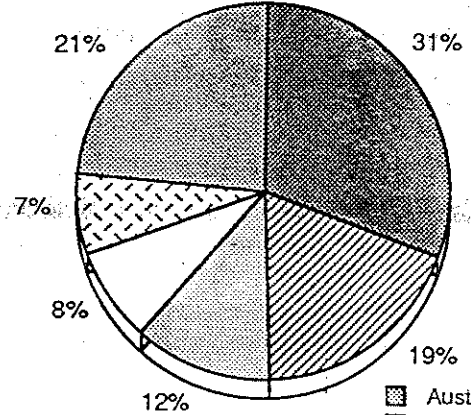
Figure 5 : Northland Region : Tourism Profile

Domestic Tourism (80% of Total)



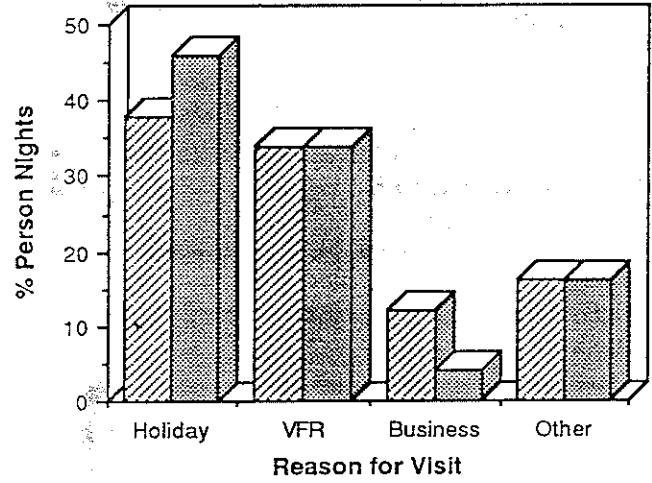
- Auckland
- Northland
- BOP/Waikato
- Other

International Tourism (20% of Total)



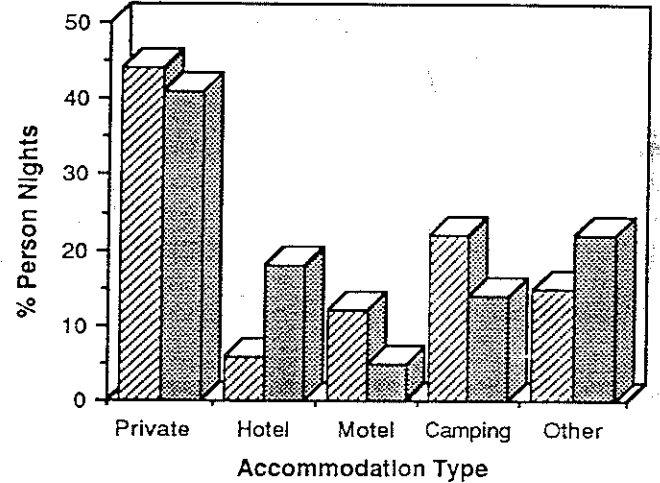
- Australia
- United States
- Great Britain
- Canada
- West Germany
- Other

Reason for Visit



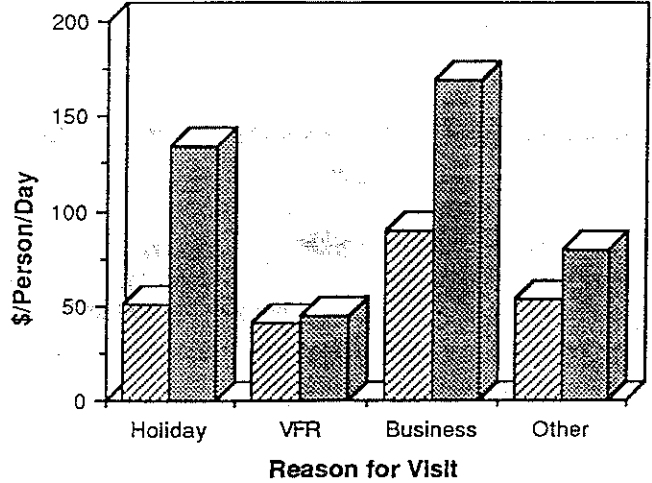
- Domestic
- International

Accommodation Type



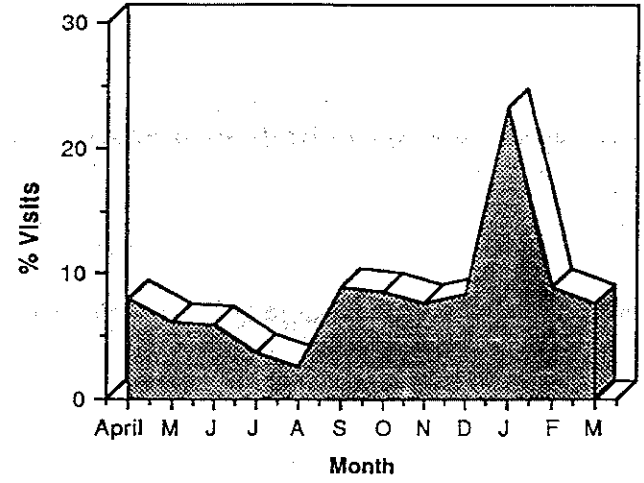
- Domestic
- International

Expenditure



- Domestic
- International

Seasonality of Domestic Tourism



* VFR Visiting Friends and Relatives

and 'reserve' and other similar land designations. A national park in Northland can be expected to heighten national and international awareness of the region and provide a 'second string' to tourism development.

The need for strengthening of Northland's tourism base and wider emphasis of its cultural and natural heritage has been recognised for some time. The region's 'coastal image' has several shortcomings including its east coast focus, highly seasonal nature and susceptibility to bad weather conditions. A 'national park' image which is less dependent on weather and seasonal visitor influxes has a lot to offer.

The establishment of a national park will fit in well with moves by the recently established Tourism Northland to promote a more all year round tourism image of the region, emphasising its diverse cultural, historical and landscape features. 'Heritage trails' and other non-coastal products are expected to be developed and promoted with the aim of broadening the visitor appeal of the region.

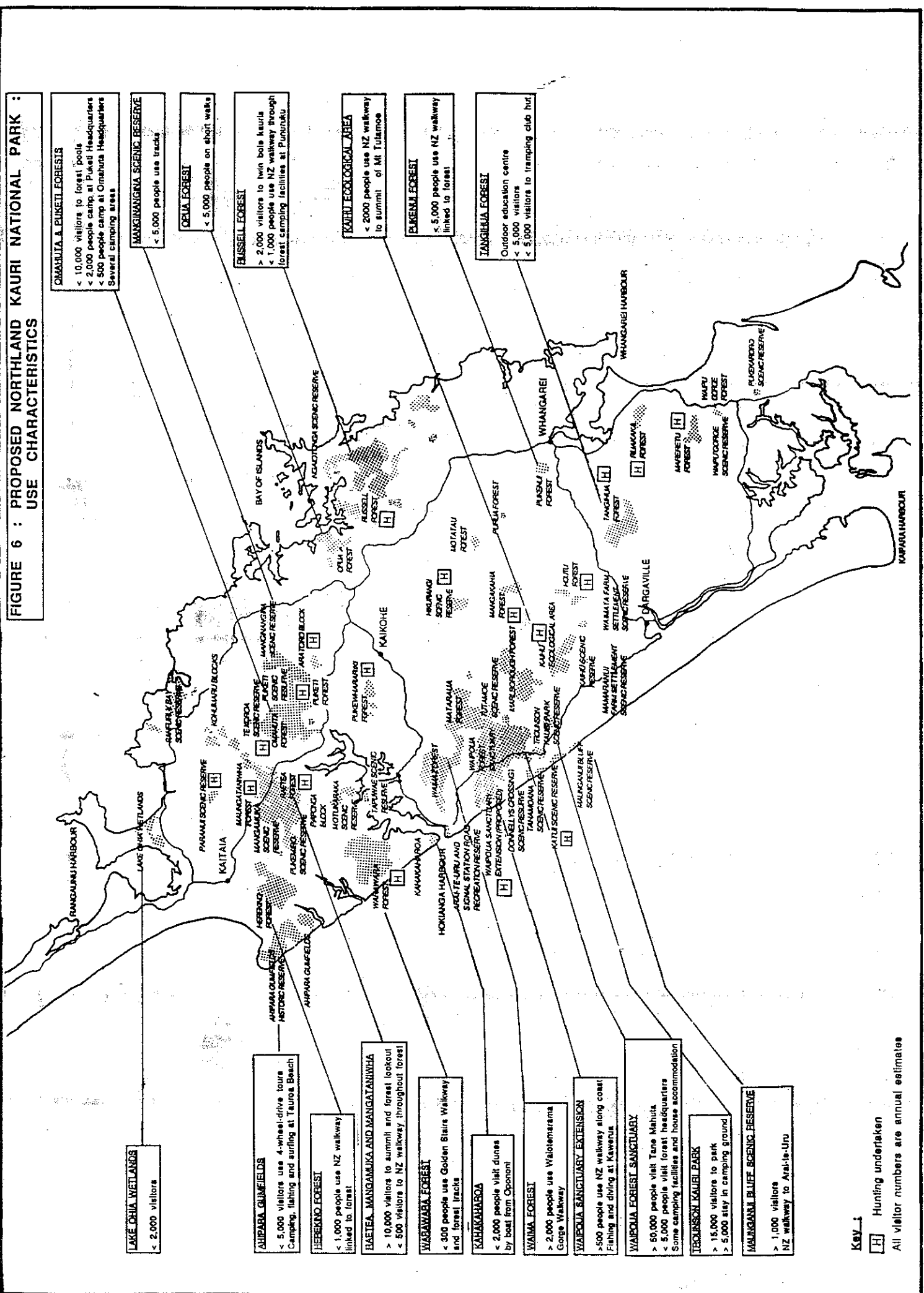
However, the extent to which the proposed park impacts on regional tourism is difficult to predict. Some of the park areas already attract a considerable number of visitors, e.g. Waipoua Forest (50,000 plus visitors per year), and are internationally recognised. The existing use characteristics of the proposed park areas are outlined in Figure 6. Whilst the Waipoua forest and other park areas have the potential to attract more visitors, their impact on regional tourism will be gradual. It will be several years after any park declaration and only with considerable promotion and provision of new facilities that the park itself can be expected to boost tourism in Northland.

Studies, particularly overseas, indicate that national parks like other major tourist attractions, go through a cycle of development. They evolve in stages, the principal ones being:-

- | | |
|-----------------------|---|
| Exploration: | Small numbers of tourists with individual travel arrangements and irregular visitation patterns. |
| Involvement: | Increasing numbers of tourists assuming some regularity of visitation. Some locals begin to cater specifically for tourists. |
| Development: | A well-defined tourist market area has evolved, shaped in part by advertising. Some locally provided facilities disappear, being replaced by larger, more elaborate and more up-to-date facilities, particularly accommodation. |
| Consolidation: | The rate of increase in visitor numbers begins to decline, although absolute numbers continue to increase. Few new additions will be made to the infrastructure. |
| Stagnation: | Peak numbers of visitors will have been reached. The area will be losing its fashionable status. |
| Decline/Rejuvenation: | Area will not be able to compete with newer attractions and may face a declining market unless new facilities and promotional packages are developed. |

This cycle is illustrated in Figure 7.

FIGURE 6 : PROPOSED NORTHLAND KAURI NATIONAL PARK : USE CHARACTERISTICS



OMAHUTA & PUKETEI FORESTS
 < 10,000 visitors to forest pools
 < 2,000 people camp at Puketei Headquarters
 < 500 people camp at Omahuta Headquarters
 Several camping areas

MAKONANGANA SCENIC RESERVE
 < 5,000 people use tracks

OPUNA FOREST
 < 5,000 people on short walks

RUSSELL FOREST
 > 2,000 visitors to twin bolts kaurea
 < 1,000 people use NZ walkway through forest
 camping facilities at Purotuku

KAHUI ECOLOGICAL AREA
 < 2,000 people use NZ walkway to summit of Mt Tulamoo

EMUREMA FOREST
 < 5,000 people use NZ walkway linked to forest

TANGIHERA FOREST
 Outdoor education centre
 < 5,000 visitors
 < 5,000 visitors to tramping club hut

LAKE OHIA WETLANDS
 < 2,000 visitors

AHIWAKA GUINEFIELDS
 < 5,000 visitors use 4-wheel-drive tours
 Camping, fishing and surfing at Tauroa Beach

HEKERINO FOREST
 < 1,000 people use NZ walkway linked to forest

BAIATEA, MANGAMUKA AND MANGATANIWAHA
 > 10,000 visitors to summit and forest lookout
 < 500 visitors to NZ walkway throughout forest

WAWAWARA FOREST
 < 300 people use Golden Stairs Walkway and forest tracks

KAHAKAHAROA
 < 2,000 people visit dunes by boat from Opononi

WAIMA FOREST
 > 2,000 people use Waiotemara Gorge Walkway

WAIPOUA SANCTUARY EXTENSION
 > 500 people use NZ walkway along coast
 Fishing and diving at Kawene

WAIPOUA FOREST SANCTUARY
 > 50,000 people visit Tare Mahuta
 < 5,000 people visit forest headquarters
 Some camping facilities and house accommodation

IRIRIHOE KAUREA PARK
 > 15,000 visitors to park
 > 5,000 stay in camping ground

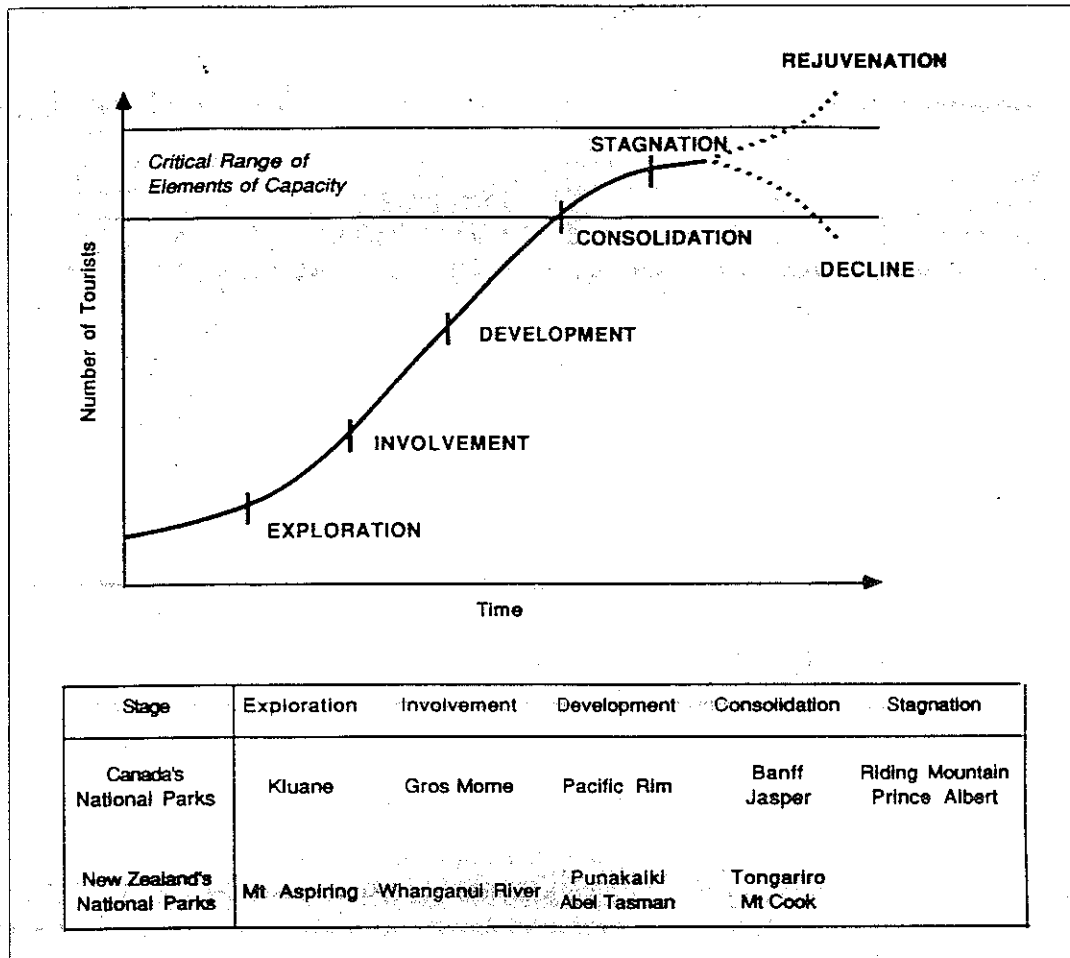
MANGAMUKA BLUFF SCENIC RESERVE
 > 1,000 visitors
 NZ walkway to Arai-te-Utu

Key:

[H] Hunting undertaken

All visitor numbers are annual estimates

Figure 7: National Park Development Cycle.



Source: K Thorn 1989: Tourism and National Parks - Relationships Impacts and Strategies for Management.

Some areas of the proposed Northland National Kauri Park are already at the 'involvement' or 'development' stage, e.g. Trounson Kauri Park and Waipoua Forest, whilst others, e.g. the Paponga Block, are not even at the 'exploration' stage. In this sense, there are difficulties in attempting to quantify at this stage the likely impact of the proposed park on tourism in Northland.

3.2 Expenditure and Employment Effects

The N.Z. Tourism Department estimates that tourism contributes around \$230 million in gross expenditure to Northland and supports around 4,500 jobs (full and part-time). The estimated regional gross expenditure is the fifth highest in the country. Domestic visitors are estimated to account for around 70% of the gross expenditure although they have a significantly lower per capita expenditure (\$56 per day) compared to international visitors (\$96 per day).

The proposed national park will have little direct impact on employment as it will be managed largely by existing Department of Conservation staff. However, it can be expected to create significant indirect employment opportunities in various tourist related servicing fields. Park visitors will spend money on a range of goods and services particularly accommodation, food, fuel and souvenirs. Income generated by this expenditure will in turn be spent on related goods and services creating what is known as a multiplier effect.

The impact of the new employment opportunities created may not be as significant as may first appear. Studies indicate that a relatively high proportion of any new jobs are likely to be filled by persons currently employed in the region or other parts of the country. Whilst there may be increased visitor expenditure in the region, the associated employment opportunities created are unlikely to markedly offset the region's high unemployment levels.

Several studies have attempted to quantify the expenditure associated with visitors to national parks and their impact on employment levels and local economics. The Westland National Park Economic Impact Study (1982) estimated that the 126,000 people who visited the park in 1980 contributed around \$4.0 million to the economies of the two associated tourist towns of Fox and Franz Joseph. This compared to direct park board expenditure of around \$0.2 million. Three quarters of the jobs in the towns were found to be tourism related with accommodation providing the main source of employment, particularly for women.

A 1984 study of the Mt Cook National Park estimated that 170,000 people visited the park over the year. Visitor expenditure in the associated McKenzie Basin area amounted to an estimated \$6.8 million of additional regional income over half of which was estimated to be in the form of indirect income. The expenditure by visitors was estimated to support just under 200 jobs in the McKenzie Basin.

The extent to which the proposed park will increase expenditure and employment in the region is difficult to predict, particularly in view of its scattered makeup. The number of visitors attracted to the park will depend on four key factors:-

- management of the park by the Department of Conservation, i.e. how many areas are developed as primary visitor attractions with information centres, interpretive trails and possibly accommodation, as opposed to wilderness areas with minimal tracks and facilities.
- park promotion by Tourism Northland and other organisations at regional, national and international levels.
- access improvements particularly to the state highway network. This is important if the potential coach tour and self drive camper van markets are to be fully realised.
- development of supporting services, especially accommodation, close to proposed park areas.

Should development occur in these four areas then significant economic benefits can be expected to accrue to the region. Studies indicate that 'national attractions' such as national parks can not only increase the number of visitors to a region but also extend their average length of stay. A 1980 study of the Westland National Park showed that about 40% of the visitors stayed more than one night in the immediate park area to undertake park associated activities. Most of these 'second night stayers' fall into the category of 'free independent travellers'. This is currently the one of the biggest visitor groups to the region and it is considered to have the greatest potential for growth.

No accurate predictions can be made on the likely economic impact of the proposed park. However the following hypothetical example can be used to illustrate the potential financial benefits. Last year, an estimated 694,000 domestic visitors spent on average \$56 a day in the region whilst around 128,900 international visitors spent on average \$96 a day. If the proposed park leads to one in every fifty visitors from both groups spending on average one additional day in the region then an additional \$1.0 million (in 1989 terms) would be injected into the economy.

The expenditure by park visitors on a variety of goods and services will create employment opportunities and in turn broaden the region's economic base, with associated 'benefits'. However as park areas become more popular and the communities surrounding them become more dependent on tourism, some 'costs' could be incurred. For instance, major companies can progressively control tourist facilities in an area as has happened in some national park developments around the world. Staff along with goods and services can be largely 'imported', with profits removed out of the local community. Concurrently local land values can also be driven up, and increased costs of living incurred to local residents.

This scenario is unlikely in respect of the proposed Northland Kauri National Park. It is simply linking together existing visitor attractions which are scattered throughout the region. The proposed park is based around lowland forests and associated informal recreational activities, and is much less vulnerable to commercial pressures than say an alpine park which can offer skiing and other formal sporting facilities.

3.3 Community Impacts

The establishment of the proposed national park will impact differently on the many local communities which make up the region. This is because of the scattered nature of the 50 or so park areas and their varying features, road access and level of visitor facilities. It is not possible to identify those particular communities which are likely to be most affected because of this and the fact that future facility development and promotional aspects of the proposed park have not been developed by the Department of Conservation.

However, it is possible to make some comments on the likely local impacts based on the division of the region into eight relatively large community areas which relate to the main park blocks. These community areas are shown in Figure 8.

3.3.1 Mangonui-Whangaroa Coast

This area comprises parts of the former Mangonui and Whangaroa counties and its economy is based mainly around farming and tourism. The area's population is concentrated in the numerous coastal settlements around Doubtless Bay and the Whangaroa harbour, especially Coopers Beach-Taipa, Mangonui, Totara North, Kaeo and Whangaroa. It has a well developed accommodation industry including motels, cabins and camping grounds capable of accommodating at least 1,200 people.

The coastal community is adapted to the summer influx of visitors who come mainly for recreational experiences, i.e. swimming, fishing, walking and picnicking. The addition of a small number of park visitors to the relatively underdeveloped Lake Ohia, Parauui and Ranfurly Bay areas is not expected to exert any significant demands upon the community that are discernible or different from those of the general holiday population.

3.3.2 Ahipara-Kaitaia

Kaitaia, the second largest urban area in the region, is the focal point of this community. It is the base for major tourist operations in the Far North including Cape Reinga and Ninety Mile Beach, and to a much lesser extent the Ahipara area. The area has accommodation for over 1,000 people, and is well equipped to accommodate any additional demands. These are likely to be small as the Ahipara gumfields and Herekino Forest do not have highly developed tracks and other visitor facilities. The four wheel drive tours to the Ahipara gumfields are however one of the few specialist tourist services currently associated with the proposed park.

3.3.3 Hokianga

The Hokianga is a relatively isolated rural community, with a social structure somewhat atypical of the region. It is one of the least populous and poorest areas of Northland. However, there is a very strong traditional Maori community based on marae in the area, and the community generally is more self-sufficient and less reliant on a cash economy than other areas. Holiday accommodation and other facilities are concentrated on the south side of the harbour in Rawene and Omapere-Opononi. Visitors to park blocks on the northern side of the harbour rely on a few camping sites on private property, or camp informally on public reserves or by the roadside. The five proposed park blocks in the area have, with more track development and promotion, the ability to supplement a unique visitor industry in the area.

3.3.4 Mid-North

The Mid-North is a relatively large farming area stretching from the Mangamuka Ranges to the settlements of Kaikohe, Ohaewai and Okaihau. It contains several major park blocks including the Raetea, Omahuta, and Puketi forests. The Kaikohe area including the nearby Ngawha Springs, is tourist oriented with substantial accommodation and commercial facilities. It is well adapted to the summer tourist trade which mainly passes through the area and is not expected to be significantly affected by the proposed park.

The area around the Puketi and Omahuta forests is more isolated with poorer roading. However, the forests are situated between the Bay of Islands and Hokianga Harbour-Waipoua Forest. If access to and facilities within the forests were improved, they could develop as stop-off points for visitors travelling between the two coasts or the Far North and Whangarei.

The impacts of park establishment on the Puketi-Omahuta area are likely to be primarily related to increased road use, with dust, and degraded road surface problems for local residents. The Far North District Council have plans to extend sealed road access in the area in 5-10 years time.

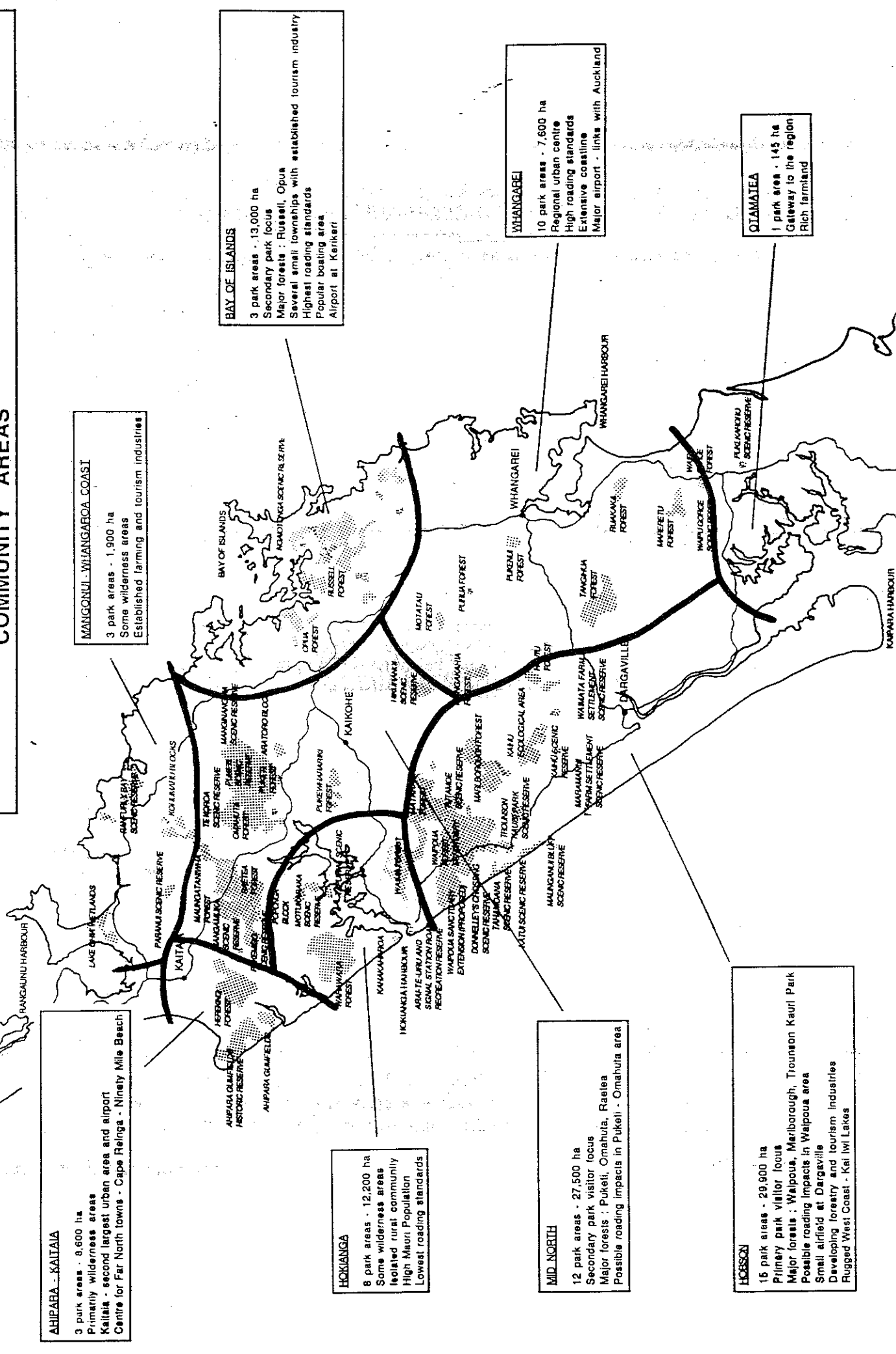
Little economic impact of park establishment is expected initially to occur in the community, since most visitors to park blocks in the area will probably be on day trips. The income derived from these visitors is likely to be largely captured by the well-developed Bay of Islands tourist industry. However, as the park develops, it is possible that some residents along the main access routes may develop farm stay, craft industries or commercial tours to diversify their earnings and catch some of the potential visitor market. The development of such operations will depend largely upon the promotional and park management policies of the Department of Conservation.

3.3.5 Bay of Islands

The Bay of Islands is the focal point of Northland's tourism industry with well developed visitor facilities. Accommodation ranges from tourist hotels to backpackers' hostels and camping grounds, which can cater for around 5,000 people. These and other visitor facilities are centred on the main towns of Kerikeri, Paihia, Opuia and Russell.

The proposed park is unlikely to exert much pressure on the community as it contains only three park areas - the Opuia and Russell forests and Ngaiotonga Scenic Reserve. It is however, close to the Puketi and Omahuta forests which are expected to be one of the main features of the proposed park. The Bay of Islands is also the centre of day tour operations in the whole Far North District. These could be extended or specifically developed to serve new park features. In this sense, the Bay of Islands can be expected to 'capture' a significant amount of the income generated by park visitors in the wider district. The proposed park will accordingly add some strength and diversity to the tourism industry in the area.

FIGURE 8 : PROPOSED NORTHLAND KAURI NATIONAL PARK : COMMUNITY AREAS



AHIPAPA - KAITIAKI
 3 park areas - 8,600 ha
 Primarily wilderness areas
 Kaitiaki - second largest urban area and airport
 Centre for Far North towns - Cape Reinga - Ninety Mile Beach

HOKIANGA
 8 park areas - 12,200 ha
 Some wilderness areas
 Isolated rural community
 High Maori Population
 Lowest roading standards

MID NORTH
 12 park areas - 27,500 ha
 Secondary park visitor focus
 Major forests : Puketi, Omahuta, Raetea
 Possible roading impacts in Puketi - Omahuta area

HOBSON
 15 park areas - 29,900 ha
 Primary park visitor focus
 Major forests : Waipoua, Meriborough, Trounson Kauri Park
 Possible roading impacts in Waipoua area
 Small airfield at Dargaville
 Developing forestry and tourism industries
 Rugged West Coast - Kai Iwi Lakes

MANGONUI - WHANGAREIA COAST
 3 park areas - 1,900 ha
 Some wilderness areas
 Established farming and tourism industries

BAY OF ISLANDS
 3 park areas - 13,000 ha
 Secondary park focus
 Major forests : Russell, Opua
 Several small townships with established tourism industry
 Highest roading standards
 Popular boating area
 Airport at Kerikeri

WHANGAREI
 10 park areas - 7,800 ha
 Regional urban centre
 High roading standards
 Extensive coastline
 Major airport - links with Auckland

OIAIMAIEA
 1 park area - 145 ha
 Gateway to the region
 Rich farmland

3.3.6 Hobson

The Hobson area is largely farming based, but with developing forestry and tourism industries. Tourism is centred on the Waipoua Forest-Trounson Kauri Park, (which form part of the proposed park), the Kai Iwi Lakes and Kaipara harbour. Visitor facilities, including accommodation, are largely in Dargaville but are being gradually established in the Waipoua-Kai Iwi Lakes areas as visitor demands increase. Visitor surveys show camping and cabin accommodation are popular in this area.

The Waipoua forest is expected to be managed by the Department of Conservation as the primary visitor area and possible centre of any park headquarters. It is also likely to be increasingly promoted by tourism interests as part of 'Heritage Trail' or 'Kauri Coast' products, particularly as road access to the area is improved. Upgrading of the two remaining unsealed sections of State Highway 12 (Whirinaki Hill and Waipoua Forest) is expected to be given high priority in future regional roading programmes. Completion of a sealed route through the forest will enable the 'Northland round route' to be more successfully promoted, leading to more visitor pressures on the area. With appropriate planning, these can be accommodated by the local community.

In addition to the already well recognised Waipoua Forest and Trounson Kauri Park, the Kaipara area contains some twelve other proposed park blocks. There are considerable opportunities for the local community to develop a unique tourist industry based on these park resources and other features. The establishment of a Northland Kauri National Park has probably more to offer the Hobson area than any other community in the region.

3.3.7 Whangarei

The Whangarei area has substantial rural industries principally farming and horticulture, along with manufacturing and business services. It has an extensive coastline, but it does not have the tourism base like the Bay of Islands.

Only eight of the proposed park blocks lie within the Whangarei area and only one, the Tangihua Forest, has significant visitor facilities. However most visitors to the region pass through the area and any growth in tourism arising from the proposed park will be felt in the Whangarei area. The city in particular has substantial accommodation, entertainment and shopping facilities which can readily serve a national park based tourism industry. This, together with the city's transport links with Auckland, mean that a stronger Whangarei park component may be worth considering.

3.3.8 Otamatea

This area is separated from Whangarei by the Brynderwyn Hills. Only one proposed park block - the Pukekaroro Scenic Reserve is situated within it. The establishment of the proposed park will therefore have little direct impact on the community. However, all visitors travelling by road (over 95% of the total) pass through the area, supporting commercial facilities along State Highway 1 in particular. The Otamatea area contains some of the most productive farmland in the region. This, together with residential development at Mangawhai and settlements around the Kaipara harbour, provides a relatively strong base to the local economy.

4. Alternative Uses of Proposed Park Areas

4.1 General Overview

The inclusion of the proposed blocks within a National Park will place considerable restrictions on their development for alternative uses. The National Parks Act 1980 requires that national parks be administered on the basis that native flora and fauna are preserved and introduced species removed or eradicated as far as possible. Whilst stock grazing and forest harvesting can be authorised within a national park, the provisions in the Act are intended to preclude significant farming and forestry operations.

Mining and other industrial activities are also generally incompatible with an area held for national park purposes. The National Parks Act 1950 does not specifically exclude mining activities from park areas. Such activities are subject to the provisions in the Mining Act 1971, Coal Mines Act 1925 and Petroleum Act 1937. Under these Acts the Minister of Conservation's consent is required to any mining privilege in a national park following consultation with the New Zealand Conservation Authority.

This section looks at the current extent of farming, forestry and mining activities in the proposed park areas and their future potential. It also examines the opportunities for hydroelectric power generation and other utility services to be established in park areas.

4.2 Agriculture

The proposed park generally comprises blocks predominantly in unmodified or regenerating native bush with little recent history of substantial farming use. It contains three non-forested areas, the Lake Ohia Wetlands, Ahipara gumfields and Kahakaharoa dunelands with a similar history.

The forested blocks mainly occupy ridge and tableland areas of a strongly rolling to very steep nature. Most of the land is identified on the N.Z. Land Resource Inventory worksheets as Class VII or VIII having poorly developed soils and severe erosion potential. Some of the blocks do however, contain significant areas of more productive Class III-VI land with farming potential. The areas concerned vary in size from small valley bottoms, e.g. in the Raetea forest, to more extensive broken hillsides, e.g. in the Pamonga block.

Most of the areas with farming potential are currently grazed. Seven grazing licences and two informal grazing arrangements are in existence in proposed park blocks. The grazed areas range from 2ha to 410ha. They total 730ha or less than 1% of the total 96,000ha proposed park. Details on the individual grazing licences and arrangements are given in Table 1. The proposed park blocks concerned are identified in Figure 10 (page 25).

Four of the proposed park blocks have potential for significant farming use. They are the Pamonga block, Trounson Kauri Park, Ahipara gumfields and Lake Ohia wetlands. The Pamonga block contains 143ha of relatively clear farmland in kikuyu and sedge grasses and around 280ha of manuka/scrub which is reverting. Both areas have been grazed for many years. They are generally identified on the N.Z. Land Resources Inventory worksheets as Class VIe6 and Class VIIe3 land suitable for extensive grazing despite their severe-extreme erosion potential.

Table 1: Proposed Park Blocks: Existing Grazing Licences

Park Block	Block Area	Grazing Area
Ahipara Gumfields Historic Reserve	4,200ha	80ha (informal)
Raetea Forest		12ha (informal)
Paponga Block	564ha	410ha (licence)
Puketi Forest		7ha (licence)
Waipoua Forest Sanctuary	12,800ha	5ha (informal)
Katui Scenic Reserve	295ha	2ha (licence)
Maunganui Bluff Scenic Reserve	451ha	18ha (licence)
Marlborough Forest	3,845ha	4ha (licence)
Trounson Kauri Park Scenic Reserve	586ha	190ha (licence)

Source: Department of Conservation records.

Trounson Kauri Park contains 190ha of well-developed farmland which is managed by Landcorp. It offers a degree of visual amenity and management protection to the block's main bush features. It could be excluded from the proposed national park.

The Ahipara Gumfields Historic Reserve contains approximately 80ha of land at its northern end which has traditionally been grazed. This land together with a further 2,200ha were identified in a 1984 study of the block by the former Department of Lands and Survey, as having 'low' potential for farming use. However, the study recognised that the block's predominantly sandy soils were prone to erosion and require high fertilizer inputs. It did not recommend extensive pastoral farming on the block because of these factors and the high development costs for roading, power and other services.

The Lake Ohia wetlands comprise Class III and IV lands with a predominantly lowland scrub cover. Much of the surrounding land was of a similar nature but has been progressively cleared and drained and developed into pasture. Several productive dairy and drystock farms have been established in the immediate vicinity of the block.

In a general sense, there is limited potential for farming within the proposed park. Economic as well as physical constraints are likely to preclude any major demand for agricultural use of proposed park areas. Northland has a long history of land clearance and development encouraged by government financial incentives. These have been progressively removed and little pressure is expected to be placed on development of the remaining marginal lands, including those in the proposed park. Farming resources in the future will be more directed at improving production from the existing cleared areas through increased stocking and other management programmes.

4.3 Forestry

No production forestry operations are currently carried out in the proposed park blocks. However, such operations have been carried out in some of the blocks including the Omahuta, Puketi, Russell and Waipoua forests up until the late 1970s. Greater recognition of the value of the forests and the impact of extraction activities effectively rule out future indigenous forestry operations in the forests.

The predominantly steep nature of the proposed park blocks and their dense vegetation cover also make them unattractive for exotic forestry operations. Northland has an extensive land resource which is available for afforestation. In 1981 the New Zealand Forestry Development Conference estimated the total area available as around 200,000ha. It comprised the existing exotic forests and land in scrub or poor pasture. It did not include

native bush areas. Although the estimate is now considered optimistic, it does indicate the area of land potentially available for exotic forestry. At present, the exotic forest resource stands at around 117,000ha with at least another 50,000ha potentially plantable. In such circumstances, there is likely to be little demand for utilisation of any proposed park areas.

However, consideration has in the past been given to utilising some of the proposed park blocks for forestry purposes. The 1984 study of the Ahipara Gumfields areas by the former Department of Lands and Survey identified 2,000ha with 'low' potential and 200ha with 'medium' potential for exotic forestry. The report generally favoured development of the latter area but considered the bulk of the land was unattractive for forestry because of 'physical limitations' (principally erosion prone sandy soils) and high establishment costs (roading, etc).

The Paponga block is the other main area with potential for afforestation. Over 70% of the block is in rough pasture and scrub and is grazed. The block is reasonably accessible and similar private land in the vicinity has been developed for forestry purposes. Some of the other park areas which are also grazed could alternatively also be planted in small wood lots.

4.4 Mining and Quarrying

Northland was the centre of the country's first substantial mineral extraction industry - based around kauri gum. Today, it is relatively a minor mineral producer with most activity related to rock aggregate, clay, limestone and sand extraction. No metallic minerals, e.g. copper gold or silver are currently mined.

The most recent metallic minerals to be extracted were copper in the Pakotai-Parakao area and bog iron in the Kamo (Whangarei) and Okaihau areas. All three operations ceased in the 1960s. Coal was also mined in the Kamo area until 1955. In the mid-1980s, a kauri gum extraction and processing plant was established in the Kaimaumau area. It subsequently went into receivership and the plant was sold off. A more recent proposal to mine mercury in the Kaeo area has also not been proceeded with.

Mining interest has however, continued to be shown in the region. There are currently thirteen exploration licences covering around over 3,400 square km or a quarter of the region. The general extent of the licences is shown in Figure 9. Seven of the licences cover one or more of the proposed park blocks. Some 24 blocks in total including the Herekino, Raetea, Warawara, Russell and Marlborough forests are within exploration licence areas. Details on the licences are given in Table 2.

Exploration licences are the initial or preliminary form of mining privilege issued. They permit only very limited impact investigations and surveys to be carried out over large areas. The licences can cover areas of 40-500km² and are generally issued for a period of two years.

Prospecting, as opposed to exploration, activities in the region are very limited. There are only three prospecting licences in existence, although another five areas are subject of applications, as shown in Figure 9. One of the licences covers a small area (70ha) of the Manginangina Scenic Reserve. Two cover land on the southern fringes of the Russell Forest.

The likelihood of potentially exploitable mineral resources being found in one of the park areas is unknown. However, the region does not have a strong mining history and no mining activities (other than kauri gum extraction) are known to have occurred in the proposed park blocks.

FIGURE 9 : NORTHLAND REGION : MINING INTERESTS



Table 2: Mining Privileges Covering Proposed Park Blocks

General Location	Licence Holder	Licence Area	No. of Park Blks Affected
<u>Exploration Licences</u>			
Ahipara	ACM (N.Z.) Ltd	355km ²	5
North Hokianga	Mineral Resources Ltd	200km ²	1
Maungataniwha	City and Suburban Gold (N.Z.) Ltd	489km ²	5
Russell	BP Oil (N.Z.) Ltd	100km ²	1
Mangakahia	City and Suburban Gold (N.Z.) Ltd	455km ²	5
Houtu	ACM (N.Z.) Ltd	470km ²	5
Puhipuhi	BHP Minerals (N.Z.) Ltd	75km ²	2
<u>Prospecting Licences</u>			
Waiare	Aust Marine Resources Ltd	14km ²	1

Source: Ministry of Commerce records.

Considerable aggregate extraction takes place in the region with over 80 commercial quarries in operation. A small number of these quarries are situated in the immediate vicinity of proposed park blocks, e.g. the Puketi and Warawara forests. It is likely that potentially recoverable aggregate resources exist in some of the proposed blocks especially those with a greywacke or volcanic underlying geology. However, the region has to date been able to meet its aggregate needs without encroaching into such sensitive areas and this is expected to continue.

4.5 Water Supply and Other Utility Services

The proposed park comprises several blocks of land which contain the headwaters and associated catchments of the region's major rivers and streams. These catchment areas have important water supply functions, particularly for some urban areas.

The Pukenui forest near Whangarei contains catchment areas which contribute to the city's Whau Valley storage dam whilst Kaitaia obtains its water from the Okahu Stream in the Herekino forest. The Pukekaroro forest is also of significance containing some of the catchment areas for Kaiwaka township's water supply. Other proposed park blocks have water resources which could be utilised although most are distant from the region's major population centres and horticultural districts.

Over the years, there have been various investigations into new water supply schemes in the region some of which have related to the proposed park areas. One of the most recent concerned the Ruakaka settlement and water resources in the nearby Ruakaka Forest. A 1987 report commissioned by the former Whangarei County Council identified four possible new storage facilities, one of which the Springfield upper dam - storage reservoir, would have flooded the western fringes of the forest. An alternative site identified in the report to the east of the forest is now to be developed.

No major water supply facilities are situated within the proposed park blocks, and there are no current investigations being made in this regard. Similar comments apply in respect of waste disposal or other services which would impinge on the proposed park.

4.6 Electricity Generation

Northland is not a major electricity producing region. The only power station in the region, at Marsden Point, operates on oil and is used mainly for backup in the national grid. The only hydroelectric power generation facility in the region is a small 3.2MW private scheme on the Wairua River.

The rivers in Northland are small and of even slope compared to those in major power producing regions like Waikato-Tongariro and Otago. In 1978 the N.Z. Energy Research and Development Committee made a preliminary study of the region's hydroelectric potential. It identified nine potential power schemes on six rivers. Two possible schemes were identified on the Kerikeri, Kaihu-Waima and Wairua Rivers and single schemes on the Punakitere, Uakura and Waitangi Rivers.

Around this same time, the North Auckland Electric Power Board made a more detailed investigation into a multi-purpose flood control-irrigation-power generation scheme on the Kaihu and Waima Rivers. A proposal was developed to construct a dam on the Waima River and a reservoir between Aranga and the Trounson Kauri Park Scenic Reserve. The reservoir would have flooded the western side of the park. This factor, together with other environmental and economic considerations lead to the scheme being abandoned in the late 1970s.

Over the last ten years, there have been no new proposals to establish hydroelectric power facilities in the region. Investigations are being made into the possible development of a small power station utilising the Ngawha geothermal field near Kaikohe.

5. Summary

Northland is a population growth region close to Auckland, the country's major metropolitan area. It has a relatively young population, a sizeable labour force and high unemployment. The region has a large Maori community and a unique cultural and natural heritage. This heritage is very much related to the extensive kauri forests which once existed in the region.

The region is a predominantly farming one but with developing horticultural, forestry and tourism industries. It has like many other regions been affected by recent changes in New Zealand economy and international trading markets. Tourism is seen as a potential growth area.

The proposal to establish a national park in Northland is expected to boost the region's tourism industry. The park should form the basis of a 'forest' or 'heritage' visitor attraction which compliments the region's predominantly 'coastal' image and visitor patterns. It should encourage holiday makers visiting the coast and other areas to extend their stay in the region. With national promotion and some facility development the park also has the potential to create its own small niche of predominantly park based visitors. Surveys show that national parks have particular appeal to people from overseas who presently make up 20% of the visitors to the region.

The extent to which the park boosts tourism will depend largely on the management policies of the Department of Conservation in terms of track development and other facilities. The degree of promotion undertaken by the Department Tourism Northland and major tourist operators will also be important. Formal establishment of the park will not in itself have a major impact as most of the key attractions, e.g. the Waipoua Forest and Trounson Kauri Park, already attract considerable numbers of visitors.

The impacts of the park upon the various communities in Northland will vary because of its scattered makeup. The greatest impacts are likely to be felt in the Hobson area. It contains a quarter of the park blocks including the Waipoua Forest which is expected to be the primary focus of the park and possible site of its headquarters. The Mid-North and in particular the communities around the Omahuta-Puketi forest blocks are also likely to be affected. Some roading impacts can be expected in these areas with park development.

Most urban communities, especially in the Bay of Islands, are well adapted to the tourist trade and are likely to pick up much of the additional park based business. The major park blocks are within an hour's drive of established tourist towns like Kaitaia, Paihia, Kerikeri and Dargaville. However there are likely to be some opportunities for people in rural areas adjacent to the major park blocks to establish small accommodation and tour guide businesses.

The proposed park blocks generally have very little potential for alternative uses, with the possible exception of mineral extraction. The blocks are mainly in dense native bush and not suitable for extensive farming or forestry operations. Whilst grazing operations are carried out on parts of the proposed blocks the areas concerned are generally small. Only the Pamonga block and Trounson Kauri Park have substantial grassed areas and a history of grazing. Parts of the Ahipara Gumfields and Lake Ohia wetlands which have a scrub cover have some physical potential for farming. However such development is unlikely to be financially attractive.

Forestry is like farming not a significant alternative use, apart from possibly on the Paponga block and parts of the Ahipara Gumfields. The development costs would be very high and there are many more physically suitable areas available in the region.

Mining is also not considered a major alternative use of the proposed park areas even though a quarter of the blocks are within current exploration licence areas. Whilst there has over recent years been exploration interest in the region there is little prospecting or mining currently taking place. The region is not a major mineral producer, apart from aggregate and other construction related materials. None of the proposed park blocks or adjacent areas have a mining history, apart from kauri gum extraction. However exploration licences cover about a quarter of the region including several of the major park areas. There is also a prospecting licence over a small part of the Manginangina Scenic Reserve. The discovery of large and economically accessible precious metals in a proposed park area is a possibility.

Several of the park areas contain major rivers and streams which are important water supply sources for some farming and urban communities. However there are no water storage or supply facilities in any of the proposed park areas and none of the rivers are known to have potential for hydro-electric power generation. The inclusion of the major forest areas within a national park is consistent with their water and soil conservation values.

The establishment of the proposed Kauri National park will add a unique northern park to New Zealand's present network of twelve national parks. It will not involve 'locking up' a significant area of land which has potential for alternative uses. It will however add another dimension to the region's already established tourism industry and should be of positive economic and social benefit to the region.

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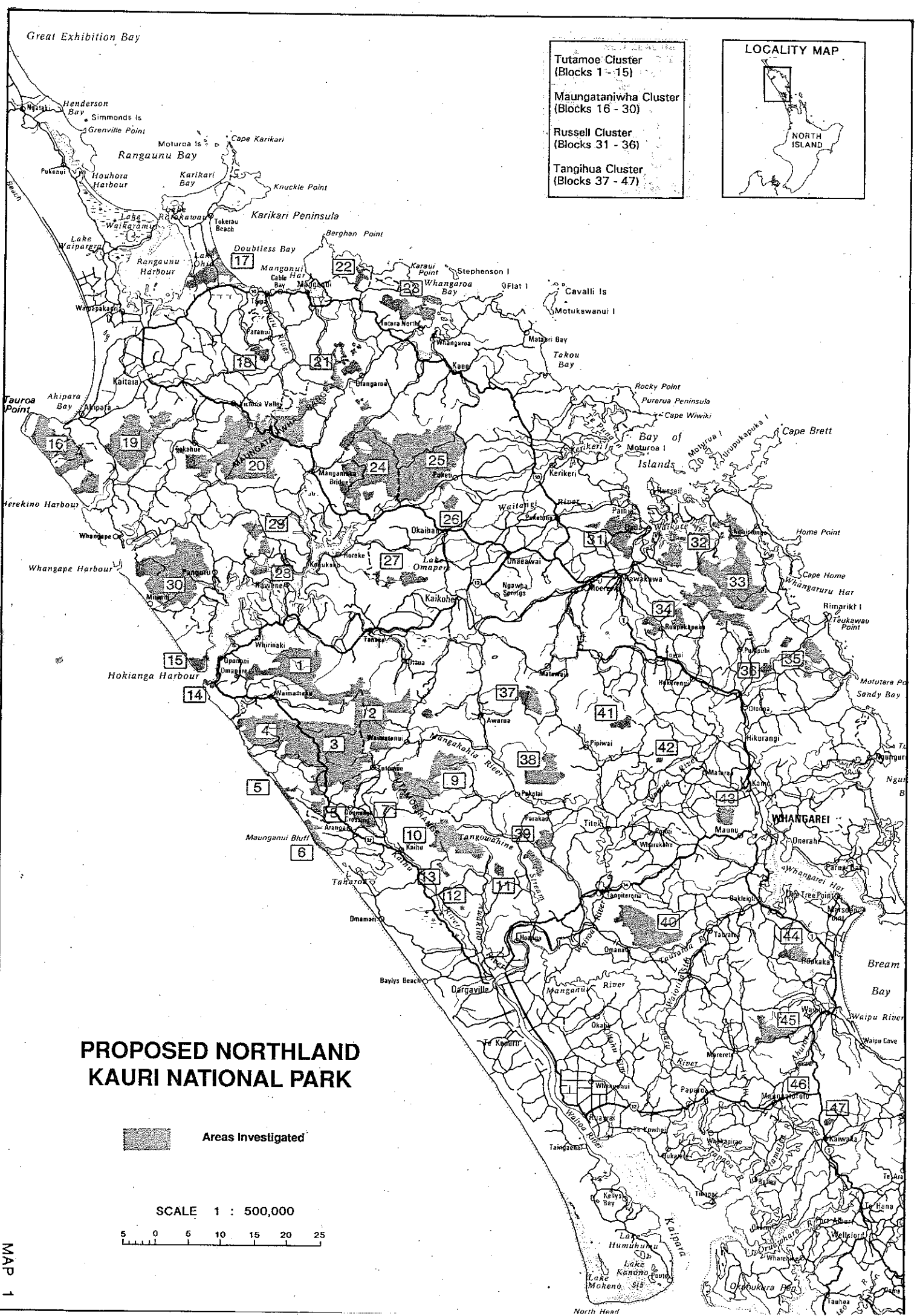
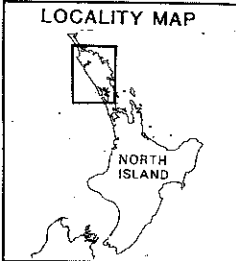
Great Exhibition Bay

Tutamoe Cluster
(Blocks 1 - 15)

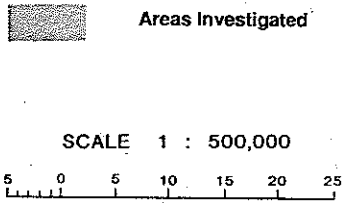
Maungataniwha Cluster
(Blocks 16 - 30)

Russell Cluster
(Blocks 31 - 36)

Tangihua Cluster
(Blocks 37 - 47)



PROPOSED NORTHLAND KAURI NATIONAL PARK



APPENDIX IV

**SCHEDULE OF LANDS IN PROPOSAL
BY NAME, STATUS AND AREA (HECTARES)**

No.	Block Name	Conservation Act		Reserves Act		
		S.61	S.62	Scenic Res.	Other Res.	Total
	Tutamoe Cluster					
1	Waima Forest	4218				4218
2	Mataraua Forest	5411				5411
3	Waipoua Forest Sanctuary	8925				8925
4	Waipoua Sanctuary Extension	3880	322	37		4239
5	Kawerua/Muriwai/Tahamoana		455	125		580
6	Maunganui Bluff SR			495		495
7	Trounson Kauri Park SR			573		573
8	Katui SR			298		298
9	Marlborough Forest	3978		2		3980
10	Kaihu Ecological Area	2425				2425
11	Waimata SR			154		154
12	Mamaranui SR			92		92
13	Kaihu SR			123		123
14	Arai Te Uru				48	48
15	Kahakaharoa		424			424
	Maungataniwhai Cluster					
16	Ahipara Gumfields		4074		226	4300
17	Lake Ohia		1560			1560
18	Paranui SR			365		365
19	Herekino Forest	4344				4344
20	Maungataniwha Range Forests	7808	65	3046		10919
21	Te Koroa/Otangaroa		928	168		1096
22	Paikauri		248			248
23	Ranfurly Bay			1489	43	1532
24	Omahuta Forest	7412				7412
25	Puketī Forest	8458		155		8613
26	Aratoro		387			387
27	Pukewharariki		816			816

No.	Block Name	Conservation Act		Reserves Act		
		S.61	S.62	Scenic Res.	Other Res.	Total
28	Tapuwae SR			202		202
29	Motukaraka/Paponga		564	333		897
30	Warawara Forest	6931				6931
	Russell Cluster					
31	Opu Forest	1932				1932
32	Waikino Forest	977				977
33	Russell/Ngaiotonga	7247		1209		8456
34	Hukerenui	705		90		795
35	Kaiikanui	1190				1190
36	Opuawhanga				290	290
	Tangihua Cluster					
37	Hikurangi SR			1066		1066
38	Mangakahia Forest	910	427			1337
39	Houtu Forest	938				938
40	Tangihua Forest	3240				3240
41	Motatau Forest		325			325
42	Purua SR			73		73
43	Pukenui Forest	592				592
44	Ruakaka/McKenzies		295	384		679
45	Mareretu		1377			1377
46	Waipu Gorge SR			230		230
47	Pukekaroro SR			145		145
Totals		81521	12267	10854	607	105249

APPENDIX V ASSESSMENT OF INDIVIDUAL AREAS.

1. WAIMA FOREST - 4,218 HA

Scenic Two parallel ranges which form the northern section of Tutamoe range, rising abruptly from the rolling hill country of the South Hokianga. Contains the highest points in Northland, Te Raupuha (776m) and Mt Misery (774m). Whirinaki river meanders through a broad, steep-sided valley between the two ranges.

Vegetation Hardwood/podocarp forest with emergent rimu, miro, totara, northern and southern rata with towai, hinau, tawari, makamaka and tawa. Pockets of mature kauri with associated podocarps and hardwoods. 19 threatened species including *Olearia waima* and *Coprosma waima*.

Wildlife Ranked outstanding values for wildlife.

Geology Cretaceous Tangihua volcanic basalt and dolerite. On southern margin cretaceous sandstones, limestone and mudstone.

Soils Moderately leached Te Kie steepland stoney clay with Waimatenui clay and Tutamoe friable clay.

Natural Features Steep bluffs, waterfalls, highest point in Northland.

Historic

Archaeologic Numerous pa sites on surrounding hills. Burial grounds probably present.

Recreation/Access Waiotemarama Gorge walk to waterfall which continues on up to Hauturu and along range to Waoku Coach Road walkway. Tracks from Mountain Road to Hauturu, and Tiata Road to main range track.

Modification Largely unmodified with small areas regenerating on margins.

Boundaries F40 P8. Several thousand hectares of high value hardwood/podocarp forest on eastern side in private and Maori ownership. Negotiations for purchase/covenant of part in progress.

Linkages Contiguous with Waipoua/Mataraua Forest.

2. Mataraua Forest - 5,411 HA

.....
Scenic Forest occupies a broad tableland at an altitude of 600m on the southern margins of the Hokianga catchment. Highly visible and distinctive feature of Kaikohe district.

.....
Vegetation Hardwood/podocarp forest with emergent rimu over a canopy of rata, miro, towai, makamaka, pukatea, hinau and maire tawake. Areas of regenerating shrubland on previous farmland. A wet plateau type forest. 6 species locally distributed in Northland recorded including *Ascarina lucida* and southern rata.

.....
Wildlife Outstanding value with kokako, kaka, red crowned parakeet, kiwi, pied tit, fernbird, kauri snail and bats.

.....
Geology Massive flows of Waipoua basalt interbedded with minor areas of tuff scoria and breccia. Small areas of mudstone and sandstone and Cretaceous Tangihua volcanics.

.....
Soils Moderately to strongly leached Tutamoe friable clay on plateau with Te Kie steepland soils on peripheral slopes. Small areas of Waimatenui clay and Waimamaku bouldery complex at top of Wekaweka Valley.

.....
Natural Features Wet upland swamp forest. Waterfalls in Wekaweka Valley.

.....
Historic Waoku Coach Road constructed during early 1900's with coach service between Kaihu and Taheke. Road closed in 1930 following completion of Waipoua Forest Road in 1926. 9,000 acres in attempted farm settlement in 1893 but extremely high rainfall forced abandonment. Small area in north east forest logged about 50 years ago.

.....
Archaeologic

.....
Recreation/Access Waoku Coach Road - part of NZ Walkway system from Waima to Tutamoe. Links with tracks through Waima Forest to Wekaweka Valley.

.....
Modification Attempted farm settlement abandoned - forest regenerating well. Small area in northwest logged 60 years ago.

.....
Boundaries F26.6 P5.5 E11. Large area of private forest on northern side.

.....
Linkages Contiguous with Waima and Waipoua Forest. Central to forests of the Tutamoe Range.

3. WAIPOUA FOREST SANCTUARY - 8,925 HA

Scenic Extensive unmodified forest with emergent kauri and rata on ridge systems extending from Mataraua Plateau (600m) towards coastal lowlands. SH12 passes through dense overhanging forest with large kauri on road edges.

Vegetation Largest tract of mid-altitude mature kauri forest associations with large area of hardwood/podocarp forest dominated by taraire. Higher altitude hardwood/podocarp with emergent rimu and rata over towai, tawa and pukatea. Small areas of manuka shrubland with regenerating kauri and podocarps. 28 threatened species.

Wildlife Outstanding wildlife habitat with kokako, kaka, fernbird, pied tit, bat, kauri snail, red crowned parakeet and geckos and skinks.

Geology Massive flows of lower miocene Waipoua basalts with interbedded tuff, scoria and breccia.

Soils Plateau area is Hihi, Aranga, Okaka and Waipoua clays. Rolling hills are Waimatenui and Tutamoe friable clays. Parataiko silt loam and Whirinaki clay loam also present. Eggecup podzols under mature kauri.

Natural Features Four of largest kauri. Waterfalls. The largest wild and scenic river in Northland. Part of continuous sequence of forest from coast to highest point in Northland.

Historic Gazetted as a sanctuary in 1952 following controversy over protection/production of kauri forests. Road through forest completed in 1926. Research in silviculture and kauri management began in 1920's. James Maxwell first caretaker from 1890-1920.

Archaeologic Extensive evidence of early Maori occupation in lower Waipoua Valley with numerous pa sites, urupa, pits, terraces, middens, stone heaps and terraced garden systems, wahi tapu.

Recreation/Access Short tracks at Tane Mahuta, Te Matua Ngahere, Rickers Stand and Toatoa Stand. 2-3 hour walk from Yakas tree to HQ. Picnic sites, lookout point over forest, accommodation and visitor centre at HQ. SH12 main access through forest.

Modification Small area of fire induced regenerating shrubland.

Boundaries F22.5 P16.6 E5.5. Forest Restoration Trust reserves on south side.

Linkages Contiguous with Waima and Mataraua Forest and western Northland coast.

4. WAIPOUA SANCTUARY EXTENSION - 4,239 HA

Scenic Broad, rolling ridges with deep valleys falling to the sea, scattered clumps of mature kauri above low manuka/towai and gumland scrub.

Vegetation Gumland scrub, modified coastal pohutukawa/karaka forest, podocarp/hardwood forest with Northern rata, kahikatea, taraire and kohekohe. Podocarp/hardwood on steeper slopes with Halls totara and miro. Stands of mature and immature kauri with associated hardwood, kauri/silverpine/monoa remnant, small area of high altitude plateau forest.

Wildlife Moderate value gumland scrub habitat with fernbird. Hardwood forest north of Wairau river outstanding habitat. Contiguous with largest tract of kauri/hardwood/podocarp forest in Northland.

Geology Underlaid by Waipoua basalts which outcrop above 250 metres in Wairau river valley and in Ohae stream catchment and form an extensive rocky reef below MHW. Pleistocene coastal sands and beach deposits overlie basalt.

Soils Parataiko silt loam and Hihi, Aranga and Okaka clay and silty clays and Waipoua clay on basalt. Te Kopuru sand and Tangitiki sandy loam and Redhill sand on sands. Small areas of Whirinaki clay loam and Awapuku clay loam in north.

Natural Features Mature kauri on coastal sands. *Chionochoa conspicua* (tussock) and *Pittosporum pimeleoides* - rare plants. *Loxoma cunninghamii* (Northland fern). Waterfalls in Wairau river valley. Cockayne kauri - 19th largest.

Historic Gumdigging in 1900's lead to construction of hotel, gumstore, Post Office at Kawerua. House and fire lookout built at Pawakatutu in 1930's. Kauri logged for war purposes in 1940's. Kauri research sporadically from 1929. Kauri planting and silviculture 1976-1986.

Archaeologic Coastal pa, pits, terraces, moddens associated with earliest Maori occupation up to 1000 years ago.

Recreation/Access Access via internal forest roads to Kawerua and NZ Walkway along coast.

Modification Extensively modified by farm settlement, burning, logging and gumdigging.

Boundaries F12.5 P5.5 E10 C3.

Linkages Part of continuous sequence of forest from coast to highest point in Northland.

5. **KAWERUA/MURIWAI/TAHAMOANA - 580 HA**

Scenic Long stretch of unbroken coast backed by dunes with spectacular rocky reefs at Kawerua and wetlands/dunelakes at Muriwai.

Vegetation Marram grass, tree lupin, manuka, koromiko, flax and pohutukawa, with an area of pines at Kawerua.

Wildlife High value coastal habitat.

Geology Semi consolidated quaternary sand.

Soils Tangitiki sandy loam and sand, Te Kopuru sand podzol and organic Parore peaty sandy loam.

Natural Features Coastal values not represented elsewhere in proposal, also includes wetland and dune lakes.

Historic Kawerua Hotel and gumdigging area.

Archaeologic Pa, middens, wahi tapu and urupa.

Recreation/Access NZ Walkway from Hokianga to Kai Iwi Lakes traverses these areas. Road access at Kawerua and Waikara Road. Camp sites at Kawerua and Waikara.

Modification Pine plantings.

Boundaries P6 E6 C11.

Linkages An important coastal link between Waipoua Forests and Maunganui Bluff Scenic Reserve.

6. MAUNGANUI BLUFF SCENIC RESERVE - 495 HA

Scenic An outstanding feature of the western Northland coastline which rises as a 400m bluff from long unbroken stretch of exposed coast.

Vegetation Coastal forest on bluff of rimu, kahikatea, totara, kauri, taraire, puriri, tawa, hinau with rewarewa, towai, pukatea, kohekohe and pohutukawa. Flax/Astelia on steep slopes and ice plant on sea cliff talus. *Hebe speciosa* and *Cotula rotunda*, very restricted distribution.

Wildlife High value habitat with pied tit.

Geology Bluff formed of late tertiary basalt thickly interbedded with tuff, scoria and minor breccia in places.

Soils Te Kie steepland reddish clay loam and Katui clay loam.

Natural Features 400m high cliff exposed to coast.

Historic Radar station erected in 1942 for military purposes.

Archaeologic Site of significance to Te Roroa Ngati Whatua, recorded sites include middens, pits and pa.

Recreation/Access NZ Walkway passes across Bluff from Hokianga to Kai Iwi Lakes.

Modification Logged for kauri, some grazing.

Boundaries P9 C5.

Linkages Visible from Waipoua, Trounson and other forests of Tutamoe Range.

7. TROUNSON KAURI PARK SCENIC RESERVE - 573 HA

Scenic A significant remnant of mature kauri forest associations amongst farmlands in the upper Kaihu/Waima Valley. Distinctive emergent mature kauri tree crowns. 'One of the world's greatest sights' (Hon. George Fowlds December 1921).

Vegetation Seven vegetation types are recognised; mature dense kauri forest with taraire; podocarp-kauri-broadleaf; kauri-totara; mature totara with taraire; kahikatea-rata; large taraire with kohekohe, karaka and nikau; pole totara. Rare orchids *Thismia rodwagi*.

Wildlife High value habitat with kiwi, long-tailed bats, kauri snails and red and yellow crowned parakeets.

Geology Waipoua basalt of late Miocene-Pliocene overlying interbedded Waitemata swamp sandstone and siltstone (Miocene), in turn underlaid by lower tertiary calcareous mudstones and limestones.

Soils Whatoro clay.

Natural Features

Historic Gifted to Crown in 1920's by Mr James Trounson. Nearby Donnellys Crossing railway station and Kaihu valley railway.

Archaeologic

Recreation/Access Camping ground, picnic areas, loop walk through reserve. Easily accessible from SH12.

Modification Virgin mature forest surrounded by pine shelter belt, regenerating shrubland and farmland.

Boundaries F9.

Linkages Important recreational component within the orbit of Waipoua/Marlborough, Kaihu forests as a low-mid altitude mature kauri remnant.

8. KATUI SCENIC RESERVE - 298 HA

Scenic Reserve occupies a deep valley in a high level plateau which faces towards the sea. Visible from SH12 it appears to link the Maunganui Bluff Scenic Reserve with the Waipoua Sanctuary.

Vegetation Secondary manuka/kanuka forest with abundant kāuri and kahikatea regeneration. Few large kāuri, small areas of rimu-kahikatea/taraire-puriri forest.

Wildlife Moderate value forested wildlife habitat.

Geology Waipoua basalt.

Soils Katui clay loam.

Natural Features

Historic

Archaeologic Unrecorded urupa, store structures and storage pits.

Recreation/Access Adjacent SH12.

Modification Partially milled.

Boundaries P6.

Linkages Almost contiguous with southern end of Waipoua sanctuary and links closely with Maunganui Bluff Scenic Reserve.

9. MARLBOROUGH FOREST - 3,980 HA

Scenic Forest occupies the central Tutamoe Range on a gently sloping plateau, which drops steeply away on the edges. Appears as a continuous front of upland plateau forest from Mt Tutamoe in the south to Mataraua through Waima in the north.

Vegetation Modified mature kauri and hardwood/podocarp forest on margins contains towai dominated scrub with remnant pole and mature kauri and regenerating pole podocarps. Central area of unmodified hardwood/podocarp with emergent rimu and Northern rata over Halls totara, towai, maire, kohekohe, kawaka, rewarewa. Six uncommon species.

Wildlife High value habitat with kiwi, pied tit and possibly kokako.

Geology Upper Miocene Waipoua basalt.

Soils Tutamoe friable clay on plateau with Te Kie steepland clay loams and Waimatenui clay on slopes.

Natural Features Large waterfall in Waiokumurau stream.

Historic Old logging roads, skids and steam haulers.

Archaeologic

Recreation/Access Short walk to waterfall but no marked tracks through forest interior.

Modification Extensive logging in 1950's. Regenerating well.

Boundaries F14 P17.5 E12.5.

Linkages Almost contiguous with Kaihu Forest to the south and Mataraua/Waipoua to the north.

10. KAIHU FOREST ECOLOGICAL AREA - 2,425 HA

Scenic A high altitude plateau which rises to Mt Tutamoe (774m). A dominant and easily visible feature of the Northland landscape. The plateau edge is distinct and falls away steeply to the rolling hills of Northern Wairoa.

Vegetation Swamp plateau forest with emergent rimu (30m), Northern rata, pukatea, maire, tawake and Southern rata. Rimu-rata-tawa-taraire and mixed hardwoods on parts of the plateau and on steep slopes. Isolated groups of kauri below Mt Tutamoe. Approximately 300ha of regenerating manuka/kanuka shrubland with podocarps and toatoa. Seven uncommon species in Southern rata and *Blechnum colensoi*.

Wildlife High value forested habitat with North Island brown kiwi, pied tit and kauri snails. Kokako and kaka were once present.

Geology Plateau is a hard basaltic basement with interbedded tuff, scoria and breccia. Lower slopes are micaceous sandstones with areas of mudstones in the east.

Soils Tutamoe friable clay on plateau with Te Kie steepland clay loams on faces. Lower slopes, strongly leached Waimatenui clay and Omu clay loam with weakly podzolized Okaka clay and Hukerenui clay loam on southern fringes.

Natural Features Canyons and numerous waterfalls on plateau sides. Boulders of fossilized marine animals of Mesozoic age. Highest altitude mature kauri stand in Northland (640m), with associated kawaka.

Historic Kairaru, largest ever recorded kauri, grew near Kairaru stream, south-east of Mt Tutamoe, destroyed by fires in 1899-1901. Surrounding area logged extensively in 1910 for kauri. Old logging roads, timber workings and camp, and possibly an old kauri dam still present.

Archaeologic

Recreation/Access New Zealand walkway starts at Karaka/Tutamoe Road and crosses farmland to enter forest. Track climbs to Tutamoe trig with spectacular views of Northern Wairoa and Central Northland.

Modification Small area of regenerating shrubland from past fires and logging on south-eastern side.

Boundaries F7.5 P2.5 E16.

Linkages Contiguous with unmodified Dargaville water supply reserve forest and private forest on south side.

11. WAIMATA SCENIC RESERVE - 154 HA

.....
Scenic Reserve covers steep hillsides and large valley in headwaters of Avoca Stream.

.....
Vegetation Occasional kauri with rimu/rata over taraire, tawa, kohekohe, hinau, rewarewa, pukatea and puriri. Pockets of miro, totara, tanekaha and fernland.

.....
Wildlife Moderate-high value forested habitat.

.....
Geology Micaceous sandstone.

.....
Soils Waiotira clay loam and Omu clay loam.

.....
Natural Features

.....
Historic

.....
Archaeologic

.....
Recreation/Access No access.

.....
Modification Logged and burned areas regenerating.

.....
Boundaries F2 E1.

.....
Linkages Kaihu Forest nearby.

12. MAMARANUI SCENIC RESERVE - 92 HA

Scenic A small reserve surrounding a local high point Pukewharariki (294m) in rolling hill country north of Dargaville.

Vegetation Puriri-taraire-kohekohe-rewarewa forest with emergent rimu, rata, totara, kahikatea and occasional kauri with numerous ferns.

Wildlife Moderate-high value forested habitat.

Geology Calcareous shales and argillaceous limestone.

Soils Takitu gravelly clay loam and Waimatenui clay.

Natural Features

Historic

Archaeologic

Recreation/Access No access.

Modification Large kauri milled.

Boundaries F0.5 P2.0.

Linkages Proximity to Kaihu Forest and other small reserves.

13. KAIHU SCENIC RESERVE - 123 HA

.....
Scenic Forest occupies western slopes of a long ridge rising to Hangihangi (440m) in the foothills of Mt Tutamoe.

.....
Vegetation Rimu, Northern rata with taraire, tawa, kohekohe, puriri and hinau, pukatea and rewarewa. Occasional miro, totara and tanekaha. Notable absence of towai.

.....
Wildlife Moderate-high value forested habitat with kiwi and possibly short-tailed bat.

.....
Geology Early tertiary basalt and dolerite.

.....
Soils Te Kie steepland stony clay loam and Waimatenui clay.

.....
Natural Features

.....
Historic

.....
Archaeologic

.....
Recreation/Access Access via Maropiu Road.

.....
Modification

.....
Boundaries F1 E5.

.....
Linkages In close proximity to Kaihu Forest and several other small reserves.

14. ARAI TE URU - 48 HA

Scenic The seaward termination of long ridge system forming the south head of the Hokianga Harbour with steep sandstone bluffs and exposed rocky reefs. Dramatic views of Hokianga Harbour mouth and coast north to Warawara.

Vegetation Low windswept manuka and flax with coprosma species, cabbage trees and a small area of puriri, kowhai, karaka forest.

Wildlife High coastal/estuarine habitat values.

Geology Waitemata group sandstones and mudstones with interbedded andesitic tuff and conglomerate.

Soils Tangitiki sandy loam and Humoke stony clay loam.

Natural Features Steep cliffs to rocky reefs and harbour entrance.

Historic Once contained a signal station used to guide ships over the Hokianga bar. Numerous shipwrecks in vicinity.

Archaeologic A sacred landmark of the Ngapuhi people. Ruanui's wharekura was built here. Middens, terraces and burial cave.

Recreation/Access Views of harbour and Tasman Sea, fishing and swimming. Tracks to beaches.

Modification Partially burned but regenerating.

Boundaries P4.5 C3.

Linkages Complements Kahakaharoa on north side of harbour mouth.

15. KAHAKAHAROA - 424 HA

Scenic Sand dunes rising to 200m forming the north head of the Hokianga Harbour mouth contrasting with the steep, dark plateau forest of Warawara behind. Extensive views up the harbour and of the rugged western coastline.

Vegetation Small areas of manuka shrubland.

Wildlife High coastal/estuarine wildlife values.

Geology Kaihu series late quaternary sands, quartz and feldspar with minor areas of dark minerals and clay with minor areas of swamp deposits forming fixed and active dunes. Unconsolidated beach deposits. A small area of micaceous sandstone and muddy limestone at highest point. Beach outcrops of basalt and diorite conglomerate.

Soils Drifting or recently stabilised sand with small areas of Omanaia clay loam and Arapohue clay Rendzina.

Natural Features Very large sand dune.

Historic Frequent shipwrecks on coast and harbour mouth sand bar during kauri exploitation era.

Archaeologic Numerous midden, pit, terrace sites and several pa. Sacred landmark of Hokianga tangata whenua.

Recreation/Access Accessible by boat from Opononi for surfing on coast.

Modification

Boundaries F2.5 C6.

Linkages Important archaeological and historic links with Hokianga harbour.

16. AHIPARA GUMFIELDS - 4,300 HA

Scenic A gently sloping plateau 200-300 masl at southern end of Ninety Mile Beach. Extensive areas of golden coloured sand dunes which contrast with the dark vegetation of the plateau and forested gullies with their steep faces and bluffs. Spectacular vistas of western coastline - large rocky reef exposed at low tide. Desolate, isolated, feeling of open space in coastal setting.

Vegetation Gumland shrub communities dominated by manuka with rushlike sedges. Extensive orchid population with sundews. Gullies contain coastal hardwood forest - puriri/kohekohe/karaka/taraire. Dunes with kanuka, flax, shrub hardwoods, spinifex, pingao.

Wildlife Wide variety of native and exotic birds: NZ dotterel, NZ fernbird, cattle egret, native snails and geckos.

Geology Very resistant cretaceous basalt/diorite, Tangihua volcanics on plateau overlain by a layer of alluvium, mud, sand, gravel, carbonaceous sandstone and mudstone, pleistocene quartz and feldspar sands forming mobile and semi consolidated dunes.

Soils Te Kopuru sand podzol and moderately to strongly leached Rangiuru and Mangonui clays on plateau and gullies. Drifting sand on dunes.

Natural Features Rare/endangered mosses, hibiscus, pittosporum, olearia and orchid species. Waterfalls off plateau edge. Semi permanent dune lakes, windblown kauri logs uncovered during storms. Kauri roots emergent through alluvium on plateau.

Historic Extensive well preserved evidence of gumdigging activities including dams, sluicing, drains, gumholes, ponds, culverts, machinery, tracks, fruit trees and grape vines. Occupied by Yugoslavian and Maori gumdiggers from 1800's-1930's.

Archaeologic Pa, urupa, terraces, middens, field systems present on plateau edge and coastal valleys. Middens (archaic) on beach foredunes.

Recreation/Access Tracks through historic reserve and throughout area. Beginning of NZ Walkway along Ninety Mile Beach. Camping sites on coastal margins. Proposed museum of gumfields illustrating historic values.

Modification Highly modified by Maori occupation, gumdigging and frequent fires. Vegetation is fire induced with good example of succession sequences.

Boundaries F28 P11 C13.

Linkages Adjacent to Herekino Forest of similar size linked by corridor of private and Maori owned forest and shrubland.

17. LAKE OHIA - 1,560 HA

.....
Scenic A broad band of gumland scrub, low manuka vegetation extending from Rangaunu Harbour to Tokerau Beach with a large shallow lake. Local high point (64m) gives views of harbour and wetlands. Extensive evidence of gumdigging and gumholes.

.....
Vegetation Gumland scrub, manuka, sedgeland, peat gumlands, baumea sedgeland, sedgerush field.

.....
Wildlife High value wetland habitat with New Zealand dotterel, bittern, fernbird and green gecko. Contiguous with Rangaunu Harbour of international significance as estuarine habitat. Very diverse bird fauna.

.....
Geology Quaternary, unconsolidated quartz-feldspar beach deposits, moving and partially fixed dunes, carbonaceous swamp peat deposits with mud and sand, alluvial mud and sand.

.....
Soils Lake (when drained) is a B horizon of an eroded Te Kopuru sand podzol with kauri roots and stumps. Also an organic Ruakaka peaty sandy loam, strongly leached Pinaki and Ohia sand, Te Kopuru sand podzol and weakly saline Takahiwai clay and peaty clay loam grey soil.

.....
Natural Features Shallow lake with stumps of 30,000 year old kauri.

.....
Historic Extensive evidence of gumdigging and gumholes.

.....
Archaeologic Middens on beach foredunes and pa adjacent to lake. Canoe portage route from Tokerau Beach to Rangaunu Harbour.

.....
Recreation/Access Track through gum digging, beaches of Doubtless Bay. Road passes through area to Karikari.

.....
Modification Lake land altered by gumdigging activities and adjacent farming practices.

.....
Boundaries F10.5 P7.5 C3.

.....
Linkages Contiguous with Rangaunu Harbour of international significance.

18. PARANUI SCENIC RESERVE - 365 HA

.....
Scenic Occupies strongly rolling steep country south of Taipa with conspicuous emergent mature kauri on north ridges and rimu/rata on the slopes.

.....
Vegetation Mixed kauri forest. Mature emergent kauri, rata, rimu and totara over puriri-kohekohe-taraire forest with titoki, karaka and towai. Secondary manuka forest with regenerating totara and kahikatea.

.....
Wildlife High values with kauri snail and kiwi.

.....
Geology Cretaceous calcareous sandstone as quartz-feldspar sandstone with high calcium carbonate. Thickly bedded and moderately fractured with interbedded calcareous mudstone.

.....
Soils Weakly to moderately leached Taumata clay loam.

.....
Natural Features One of the northern-most stands of low altitude unmodified kauri forest associations. Significant tract of remnant forest in sparsely vegetated tablelands east of Kaitaia - typical of original mixed kauri forests of area.

.....
Historic

.....
Archaeologic Contains sites of significance to Ngati Kahu.

.....
Recreation/Access No recreational facilities, Paranui Valley Road passes along northern boundary.

.....
Modification Peripheral burnt areas regenerating.

.....
Boundaries P9.

.....
Linkages

19. HEREKINO FOREST - 4,344 HA

Scenic A dominant forested backdrop to Kaitaia and surrounding lowlying districts of Diggers Valley and Manakau. Highest point is Taumatamahoa (558m). A steeply dissected plateau falls west/southwest to precipitous bluffs on western forest edge capped by stands of mature kauri. Main dividing ridges run north east to south west separated by deep gullies.

Vegetation Stands of mature virgin, mature modified and second growth kauri and modified and virgin hardwood/podocarp forest with areas of fern and manuka shrubland. Taraire and kohekohe dominant in gullies. Rare plants - *Pittosporum virgatum*, *Pomaderris rugosa*, *Dracophyllum virides* and a new liverwort *Dumortiera* recently found. 15 threatened or regionally uncommon species. High number of undescribed endemic mosses and liverworts.

Wildlife High value wildlife habitat with pied tit, kiwi, parakeets, kaka, fernbird, shining cuckoo and long-tailed bat.

Geology Cretaceous Tangihua volcanics, basalt/dolerite with interbedded sediments and breccia.

Soils Weakly to moderately leached Te Kie steepland stony and reddish clay loam.

Natural Features Bluffs, waterfalls, steep gorges.

Historic Long history of kauri logging and gum bleeding. Several large quite intact kauri dams in Waitotoki Stream and other major water courses.

Archaeologic Surrounding land was intensively occupied by Maori especially Pukepoto wetlands and Herekino Harbour. Several pa sites on ridges on forest boundary. Urupa on Orowhano. Requires further survey. Orowhano and Maungataiko of significance to Manukau tangata whenua (Te Rarawa).

Recreation/Access Numerous tracks and walkways throughout. Private lodge on forest edge for public use. Walkway from lodge across forest to Diggers Valley.

Modification Forest extensively modified by successive logging. Most recently several logs extracted for cultural material uses.

Boundaries F22.5 P12.5 E2.

Linkages Adjacent to Ahipara gumfields of similar size and linked by a corridor of private and Maori-owned kauri forest across Herekino gorge. Kaitaia water supply catchment.

20. MAUNGATANIWHA RANGE FORESTS - 10,919 HA

Scenic One of the few places where SH1 passes through steep densely forested country in the North Island. Steep forested range forms a distinctive barrier between the rolling hill country of the mid north and the flatter tombolo sands of the coastal far north region. Distinctive large emergent rimu and rata.

Vegetation A few small mature kauri stands amongst a full altitudinal range of unmodified hardwood/podocarp forest. Emergent rimu with a canopy of taraire, kohekohe, tawa, miro, Halls totara, hinau, rata and rewarewa. Northern limit of several plants. Northern-most block of virgin forest in New Zealand. Five regionally and one nationally threatened species.

Wildlife Outstanding habitat value. Highest bird diversity and numbers of the seven major forest tracts in Northland with pied tit, pigeon, tui, kaka, kiwi, kokako, bats, kauri snails and parakeet.

Geology Upper cretaceous Tangihua volcanics (basalt and dolerite) with minor areas of interbedded sedimentary rocks.

Soils Te Kie steepland stony clay and reddish clay loam with Awapuku clay loam and Mangonui clay in gorge.

Natural Features Soda springs next to SH1, gorges and waterfalls.

Historic

Archaeologic Maungataniwha of particular significance to tangata whenua of Mangamuka and Mangataipa.

Recreation/Access Picnic/camping area in Mangamuka Gorge and Victoria Valley. Forest lookout. New Zealand walkway traverses range from Takahue to SH1 and on to Maungataniwha summit.

Modification Margins partially logged but regenerating.

Boundaries F31 P55 E1.

Linkages

21. TE KOROA/OTANGAROA - 1,096 HA

.....
Scenic A fragmented group of forest areas at the north eastern end of the Maungataniwha range in headwaters of Mangonui Harbour.

.....
Vegetation Rimu-rata, taraire, kohekohe, tawa forest with occasional miro, towai, mapou, hinau, rewarewa, pukatea and puriri. Scattered pole and mature kauri emergent through mixed broadleaf forest.

.....
Wildlife High value forested habitat.

.....
Geology Upper cretaceous Tangihua volcanics with interbedded sediments.

.....
Soils Moderately leached Awapuku clay loam and Mangonui clay.

.....
Natural Features

.....
Historic

.....
Archaeologic

.....
Recreation/Access Fern Flat and Kohumaruru Roads.

.....
Modification

.....
Boundaries F5 P10 E15.

.....
Linkages Linked to forests of Maungataniwha range as form part of same ridge system.

22. PAIKAURI - 248 HA

.....
Scenic Forest occupies a local high point (363m) overlooking rugged indented coast between Whangaroa and Mangonui.

.....
Vegetation Regenerating kauri/podocarps amongst secondary kanuka shrubland with small pockets of puriri/kohekohe forest.

.....
Wildlife High value forested habitat with kiwi near northern limit.

.....
Geology

.....
Soils Moderately leached Huia steepland stony silt loam and Rangiuru clay.

.....
Natural Features

.....
Historic

.....
Archaeologic Gumdigging pits and sites in vicinity. Peak significant to tangata whenua.

.....
Recreation/Access Stony Creek Farm settlement road passes through reserve.

.....
Modification Logged and burnt but regenerating.

.....
Boundaries P9.

.....
Linkages Close to Ranfurly Bay Scenic Reserve.

23. RANFURLY BAY SCENIC RESERVE - 1,532 HA

Scenic Forest occupies a steep rounded ridge system on northern side of Whangaroa Harbour with numerous rocky bluffs and unusually shaped rock outcrops.

Vegetation Puriri, taraire, rata, rewarewa and kowhai in gullies with extensive areas of regenerating manuka/kanuka shrubland and pole kauri/podocarps. Recently discovered colony of *Pseudopanax gilliesii* and an undescribed *Corposma* (Whangaroa).

Wildlife High value forested habitat with abundant kiwi and many coastal birds including reef heron, gulls, terns, shags and little blue penguin.

Geology Late tertiary andesite breccia in a matrix of tuff interbedded with minor lava flows. Small areas of micaceous sandstone and alluvial mud, sand and gravel.

Soils Hui steepland stony silt loam and Bream clay loam with Rangiuru clay and Manaia clay loam.

Natural Features Bluffs, rock outcrops, waterfalls.

Historic

Archaeologic Pa, terraces, middens, wahi tapu.

Recreation/Access Three short walks. Hut. Boat anchorages.

Modification Extensively logged and burned.

Boundaries F10 P12.5 C10.

Linkages Part of Bay of Islands Maritime and Historic Park.

24. OMAHUTA FOREST - 7,412 HA

Scenic Forest on low but dissected tableland with emergent rata prominent on ridges. Road in sanctuary at centre of forest passes through a variety of vegetation types. Broad views of north Hokianga landscape.

Vegetation Low altitude dense mature kauri forest; low-mid altitude podocarp hardwood forest with rimu and rata emergent over taraire, kohikohe and rewarewa; kauri-podocarp-hardwood forest with kauri as scattered emergents with rimu, rata, miro, tawa and taraire; kauri-podocarp-hardwood-hardbeech with large pole kauri, tanekaha, totara and rata with hardbeech; manuka shrubland with regenerating kauri and podocarps; towai/heketara shrubland. Nine threatened species including *Hebe acutiflora* and King fern.

Wildlife Outstanding habitat with kaka, kokako, red crowned parakeet, pied tit, kiwi, kauri snails and bats.

Geology Mesozoic greywacke and argillites (compacted mudstone and sandstone), minor chert and quartzite interbedded with basic marine volcanics. Mudstone interbedded with fine sandstone and limestone interbedded with minor green sand.

Soils A wide diversity of moderately leached to weakly podzolized yellow brown earths and related steepland soils such as Rangiora clay, Marua clay loam, Te Ranga steepland clay, Aponga clay, etc. Also Wharekohe fine sandy loam with pan (podzol).

Natural Features Some of the largest mature kauri. Waterfalls.

Historic Extensive gumdigging and logging throughout forest during 1940's. Remains of old logging camps, sawmills, driving dams, roads and bridges.

Archaeologic Numerous sites found in peripheral areas.

Recreation/Access Camping and picnic sites, tracks throughout forest and old logging roads forming part of NZ Walkway system. Short high quality walk through forest sanctuary with viewing platforms accessed by well formed road to centre of forest. Secondary road linking Mangamuka with Kaeo passes through forest.

Modification Extensively logged but regenerating vigorously.

Boundaries F30 P10 E22.5.

Linkages Contiguous with Puketi Forest.

25. PUKETI FOREST - 8,613 HA

Scenic Waipapa River flows through centre of forest and is bounded by irregular and broken spurs and ridges with steep bluffs and numerous waterfalls. Forest is visible from SH1 through Okaihau, Puketi Road and Mokau Ridge Road. It forms a distinctive and dominant feature of the upper Hokianga Harbour.

Vegetation Mature kauri stands emergent over a diverse podocarp canopy of monoao, miro, rimu, Halls totara, kawaka, tanekaha; with hardwood subcanopy of tawa, taraire, kauri pole stands with frequent podocarps; low altitude podocarp hardwood forest with rimu and rata emergent over tawa, taraire, pukatea, puriri, hinau; manuka pole podocarp shrubland, gumland/acid bog. Floristically very diverse.

Wildlife Outstanding habitat with kokako, kaka, red crowned parakeet, kiwi, kauri snails, geckos, kokopu, mullet and freshwater mussels.

Geology Waipapa group sedimentary greywacke and argillite of Permian/Jurassic age, Cretaceous mudstone with sandstone - locally calcareous and micaeous sandstone. Waihoanga fault on south-east edge.

Soils A range of strongly leached to podzolized yellow brown earths including Te Ranga steepland soils, Rangiora clay loam, Mount Rex clay and Tikitohe gravelly silt loam. Also an area of Wharekohe sandy loam podzol and Waiotu friable clay. Brown loam.

Natural Features Waterfalls, steep bluffs and cliffs at Waiohanga and in Waipapa River gorge.

Historic 1860 - Canadians logged small amount of kauri for British Navy; logging on edges of forest till 1920's; road constructed up Waipapa river with three major bridges; gumbleeding throughout forest; 1951 logging of podocarp and mature kauri began continuously; logging stopped in 1979 due to kokako publicity.

Archaeologic

Recreation/Access Tracks following Waipapa River and throughout along major ridge systems. Nature trail and camping at HQ. Loop walk at Waiohanga gorge and through Manginangina. Camping at forest pools. Good road access to most edges of forest Mokau Ridge. Old logging roads in some areas. Rafting down Waipapa River.

Modification Logged over areas regenerating.

Boundaries F15 P15 E11.

Linkages Contiguous with Omahuta Forest, Native Forest Restoration Trust reserve on Mokau Ridge.

26. ARATORO - 387 HA

Scenic The block falls away from a central ridge with a steep scarp face to form a plateau on the northern side and a large basin to the south which is connected to steeply dissected plateau ridge and gully systems extending to Puketi Forest. Overlooks upper reaches of Hokianga Harbour.

Vegetation Mature broadleaf/podocarp forest containing Northern rata, puriri, kahikatea, kauri, miro, totara, hinau, taraire; manuka shrubland with mixed podocarp regeneration; manuka/kiwi fern shrubland; grassy clearings with manuka.

Wildlife High value freshwater wetland habitat on wet plateau of manuka-sedge-fern with fern bird, kiwi, bittern, brown teal.

Geology Early quaternary basalt flows over late cretaceous micaceous sandstone.

Soils Wharekohe silt loam podzol and Aponga clay.

Natural Features

Historic Lies across an old route from Bay of Islands to Hokianga. Gumdigging, logging, burning and grazing.

Archaeologic

Recreation/Access Access via unformed legal roads.

Modification Regenerating from previous logging, burning and grazing.

Boundaries F2.5 P5.5.

Linkages Close to Puketi Forest linked by an area of privately owned native forest and scrub to Puketi Scenic Reserve.

27. PUKÉWHARARIKI FOREST - 816 HA

.....
Scenic Forest occupies a ridgeline to 360m overlooking catchments draining into upper Hokianga Harbour.

.....
Vegetation Mature and second growth hardwood dominated forest with emergent mature kauri and podocarps. Areas of regenerating manuka shrubland. Low altitude kauri podocarp hardwood forest poorly represented in Hokianga ecological district.

.....
Wildlife Moderate-high value forested habitat.

.....
Geology Late cretaceous micaceous sandstone in places calcareous with mudstone and carbonaceous material. Local calcareous concretions.

.....
Soils Example of sequence of yellow brown earth (Waiotira clay), podzolized yellow brown earth (Puketitoti and Riponui sandy loam) and podzol (Wharekohe sandy loam).

.....
Natural Features

.....
Historic Adjacent to extensive areas of land once dug over for gum.

.....
Archaeologic

.....
Recreation/Access

.....
Modification Areas logged for kauri now regenerating.

.....
Boundaries F7.5 P12.5 E0.5.

.....
Linkages

28. TAPUWAE SCENIC RESERVE - 202 HA

.....
Scenic Set on hill slopes in a tidal inlet overlooking the Hokianga Harbour opposite Rawene. Complete sequence of estuary mangrove forest with low altitude, coastal hardwood and kauri forest types.

.....
Vegetation Kahikatea/puriri-taraire forest with totara common. Scattered ricker kauri and pole stands with secondary kanuka forest. Mangroves present in tidal creek. A vegetation sequence very rare in Hokianga Harbour.

.....
Wildlife High value forested habitat contiguous with high value coastal/estuary habitat.

.....
Geology Cretaceous mudstone, interbedded sandstone and mudstone in places carbonaceous and calcareous.

.....
Soils Moderately to strongly leached Waiotira clay loam.

.....
Natural Features

.....
Historic

.....
Archaeologic Several middens and pa nearby.

.....
Recreation/Access No road access but can be viewed from harbour.

.....
Modification Partly logged.

.....
Boundaries E3 C2.5.

.....
Linkages Part of Hokianga Harbour, opposite Motukaraka Scenic Reserve and close to Warawara Forest. Contiguous with proposed marine protected area in Tapuwae Inlet.

29. MOTUKARAKA/PAPONGA - 897 HA

Scenic Occupies the upper sections of two catchments which drain into the Hokianga Harbour from a locally dominant hill Rakautapu. Impressive example of low altitude forest in Hokianga.

Vegetation Kauri forest stands with rimu-miro-kahikatea/puriri-taraire forest. Large areas of kanuka/manuka shrubland with regenerating podocarps-pole totara common. Patches of grassland reverting.

Wildlife High value forested habitat with kiwi and tui.

Geology Cretaceous interbedded sandstone and mudstone and sandstones with carbonaceous and calcareous concretions.

Soils Moderately to strongly leached Waiotira clay loam, white cone sandy clay loam and Autea clay loam on slopes with recent Whakapapa silt and mottled clay loam in gully bottoms.

Natural Features

Historic

Archaeologic

Recreation/Access No recreational facilities but Motukaraka in particular easily visible from Motukaraka/Panguru Road.

Modification Logging and grazing.

Boundaries F2.5 P10.5 E3.

Linkages Blocks joined by area of private forest.

30. WARAWARA FOREST - 6,931 HA

Scenic Occupies steep elevated country dominated by a plateau in the west up to 490m, and four peaks rising to 730m. Numerous steep rock bluffs and faces along the forest margins. Appears as an island rising above rolling hill country between Hokianga and Whangapae Harbours. A dominant feature of the Hokianga Harbour landscape.

Vegetation High altitude kauri (500m) on swampy plateau, short-boled with interlocking crowns. Taraire notably rare; low-mid altitude kauri; kauri-podocarp-hardwood forest with emergent rimu and Northern rata; low altitude podocarp - hardwood with scattered kauri ricker below 300m; mid to high altitude podocarp-hardwood. Strong coastal element in forest on western faces. Largest stand of high altitude kauri in New Zealand. 17 threatened species.

Wildlife Outstanding wildlife habitat with kaka, kiwi, pied tit, red crowned parakeet and bats. Kokako last reported in 1965. Ranked second in Northland for bird diversity. Gecko, *Hoplodactylus granulatus* found.

Geology A massif of Tangihua volcanics composed of basalt and dolerite with imbedded breccia and rare blocks of sandstone, mudstone and limestone.

Soils Moderately to strongly leached Tutamoe friable clay on plateau with Awapuku clay loam and Te Kie steepland stony and reddish clay loam on steeper faces.

Natural Features Four of the largest kauri, Moetangi 1, 2, 3 and Ward Kauri. Sheer rock bluffs, waterfalls numerous on coastal flanks.

Historic Gumbleeding throughout; forest caretaker stationed at Mitimiti, logging of mature kauri.

Archaeologic Numerous pa, pits, terraces, middens on coastal land below forest. Urupa and wahi tapu.

Recreation/Access Gold Stairs walkway at mouth of Whangapae Harbour. Logging roads used as tracks. Remote, wilderness experience forest.

Modification 500ha logged between 1967-1974, regenerating in shrub hardwoods.

Boundaries F35 P5.5. Forest almost completely surrounded by buffer of private mature and regenerating steepland forest.

Linkages An isolated forest but focal point of north Hokianga region.

31. OPUA FOREST - 1,932 HA

.....
Scenic Forest occupies gently rolling to steep country behind Paihia-Te Haumi area. Important forested visual backdrop to tourist area at Bay of Islands.

.....
Vegetation Extensive areas of regenerating manuka and kanuka shrubland. Second growth hardwood/podocarp forest as tanekaha, rimu, totara and kauri with rewarewa, rata, taraire, puriri, kohekohe and tawa. Low altitude mature kauri with stands of poles and rickers.

.....
Wildlife Moderate/high value.

.....
Geology Waipapa group greywacke and argillites with mudstone and interbedded basic massive volcanics. River valleys with undifferentiated alluvium.

.....
Soils Moderately to strongly leached Te Ranga steep land clay loam and Manganese silt loam in central area with Marua clay loam and Rangiora clay.

.....
Natural Features Mangrove-kauri forest sequence.

.....
Historic Large scale logging in early 1900's - 1940's. Early fires by gumdiggers from 1920-1925.

.....
Archaeologic Pits, middens and terraces in or adjacent to forest.

.....
Recreation/Access Accessible mainly from Opuā-Oromahoe Road. Several short walks to large kauri and track across forest to Paihia.

.....
Modification Extensively logged and burned but good regeneration.

.....
Boundaries F16 P5 C2.5.

.....
Linkages Integral part of Bay of Islands Maritime and Historic Park concept.

32. WAIKINO FOREST - 977 HA

.....
Scenic Forest covers part of low ridge systems forming the Waikare and Waikino Inlets of the innermost Bay of Islands. Scenic backdrop to Opuia.

.....
Vegetation Predominantly kanuka and manuka shrubland with regenerating kauri, tanekaha, and other podocarps. Small pockets of mature puriri/hardwood forest. Mangrove sequences on tidal boundaries.

.....
Wildlife Moderate/high value forest and coastal habitat.

.....
Geology Early Mesozoic greywacke and argillite deeply weathered.

.....
Soils Strongly leached to weakly podzolized Marua light brown, Te Ranga steepland and Rangiora clay loam.

.....
Natural Features Sequences of mangrove and coastal forest.

.....
Historic Probable site of early logging.

.....
Archaeologic

.....
Recreation/Access No formal access via road or track but able to be visited by boat.

.....
Modification Extensively logged and burned but regenerating.

.....
Boundaries F15 C7.5.

.....
Linkages Linked by large area of Maori owned forest to Russell Forest.

33. RUSSELL/NGAIOTONGA - 8,456 HA

Scenic The main block of this forest track is broken precipitous country with finely dissected ridge system forming dramatic scenic backdrop to the Bay of Islands and Whangaruru Harbour.

Vegetation Forest in a mosaic reflecting past logging and burning. Large area of mature kauri in Waikare basin. Ridges occupied by dense second growth kauri poles, rickers with kanuka, totara, tanekaha, taraife and tawa. In gullies hardwood/podocarp forest with taraife, kohekohe, puriri, occasional rata, totara, rimu and kahikatea. Extensive areas of manuka, kanuka shrubland with variable amounts of regeneration. Eleven species of regionally or nationally threatened plants.

Wildlife High values with pied tit, kaka, kiwi, NZ falcon and brown teal in some streams.

Geology Mesozoic interbedded sandstone and mudstone (greywacke and argillite) fractured and quartz-veined locally siliceous with minor chert, quartzite and spilite beds.

Soils Central steep are of Te Ranga steepland clay loam. Peripheral areas of Marua light brown clay loam with patches of Rangiora clay and Waiotu friable clay - all strongly leached to weakly pdozolized. Gully bottoms of recent Whakapara silt loam.

Natural Features Large kauri 'Horowehiwehi'. Largest area of second growth kauri in New Zealand. Full vegetation sequence from coastal mangrove to highest point in district (400m).

Historic Large scale logging began in 1877 which continued up to 1955. This logging was associated with recurrent fires and gumbleeding. Some valley areas cleared for farming but allowed to revert. NZFS carried out extensive planting, silviculture and trial logging of kauri from 1950's - 1985.

Archaeologic Pa, terraces, middens, urupa and wahi tapu present in forest. ARea was a centre of high population associated with coastal harbours and sheltered bays.

Recreation/Access NZ Walkway from Ngaiotonga saddle to Punaruku Valley. Numerous short walks in Punaruku Valley with several camping areas. Russell/Oakura Road passes through Ngaiotonga which contains a short walk to a twin-boled kauri.

Modification Extensively logged and burned but very vigorous regeneration which is main feature of forest.

Boundaries F82.5 P1 E7.5. Extensive margins of regenerating shrubland.

Linkages Significant historical and scenic links with Bay of Islands Maritime Park and several smaller forests in region including Opuia, Waikino and Kaikanui forests.

34. HUKERENUI - 795 HA

.....
Scenic Part of low rolling hill country dissected by steep narrow gorges bordered by dense kauri and podocarp regeneration.

.....
Vegetation Secondary kanuka and manuka shrubland with dense stands of regenerating kauri, tanekaha, totara and rimu. Some areas of mature hardwoods and large kauri, rimu and rata in gullies.

.....
Wildlife Moderate-high value forested habitat with kakariki, pied tit, kiwi and brown teal.

.....
Geology Mesozoic greywacke and argillite with pockets of quaternary basalt, all deeply weathered.

.....
Soils Strongly leached-weakly podzolized Rangiora clay loam and Marua light brown clay loam with areas of podzols and podzolized yellow brown earths such as Wharekohe silt loam, Omu clay loam and Waiotu friable clay.

.....
Natural Features Steep narrow gorges.

.....
Historic Nearby Ruapekapeka pa of historic significance.

.....
Archaeologic

.....
Recreation/Access Borders Kawakawa-Ruapekapeka Road but no tracks.

.....
Modification Extensively logged and burned but vigorously regenerating.

.....
Boundaries F12.5 P6.

.....
Linkages Similar to other forests in Russell area and Bay of Islands Maritime and Historic Park.

35. KAIKANUI - 1,190 HA

.....
Scenic Locally prominent forest covering Hansens Hill as backdrop to Mimiwhangata Marine Park.

.....
Vegetation Secondary podocarp/hardwood forest with kauri, several stands being large mature trees.

.....
Wildlife High value forested habitat with kiwi, tomtit, red crowned parakeet and long tailed cuckoo.

.....
Geology Mesozoic greywacke and argillite with quaternary basalt deeply weathered.

.....
Soils Strongly leached-weekly podzolozed yellow brown earths including Te Ranga steepland, Marua and Rangiora clay loams with Omaiko gravelly silt loam.

.....
Natural Features Very steep sided gullies.

.....
Historic

.....
Archaeologic Surrounding coastal areas with abundant sites present.

.....
Recreation/Access Accessible via Whakapara/Mimiwhangata/Whananaki Road although no tracks.

.....
Modification Logged and burned but regenerating.

.....
Boundaries F15 P6. Several large areas of private forest on boundary.

.....
Linkages Linked with reserves of the Mimiwhangata Marine Park.

36. OPUAWHANGA - 290 HA

.....
Scenic Forms upper part of catchment below local high point (335m).

.....
Vegetation Kauri/podocarp-broadleaf forest.

.....
Wildlife High value forest habitat with kiwi, cuckoo and pied tit.

.....
Geology Mesozoic greywacke and argillite with quartzite outcrops.

.....
Soils Strongly leached to weakly podzolized Marua light brown clay loam and Rangiora clay with Waiotu friable clay.

.....
Natural Features

.....
Historic

.....
Archaeologic

.....
Recreation/Access Access from Whakapara/Opuawhanga Road.

.....
Modification Some logging.

.....
Boundaries F4 P1.

.....
Linkages Peripheral forests of Russell nearby, especially Kaikanui.

37. HIKURANGI SCENIC RESERVE - 1,066 HA

Scenic Rising to 626m the reserve is a local high point and easily visible throughout the mid-north.

Vegetation Broadleaf/podocarp forest with kauri, rata, rimu, miro, rewarewa, taraire, tawa and kohekohe.

Wildlife High value habitat with kiwi, long tailed cuckoo and tomtit.

Geology Early tertiary basalt and dolerite in a matrix of tuff with minor blocks of sandstone, mudstone and limestone and an area of micaceous sandstone.

Soils Te Kie steepland stony clay loam and Tautoro steepland clay loam. Tokawhero stony clay and Purua clay loam on southern side.

Natural Features Hydrologically unique as water flows either to Hokianga Harbour, Bay of Islands or Kaipara Harbour from summit.

Historic

Archaeologic Important spiritual significance to Ngati Hine, also known as Whawha nunui.

Recreation/Access Road to summit telecommunications tower.

Modification Small areas logged but regenerating.

Boundaries F3 P6 E4.5.

Linkages Contiguous with large area of privately owned native forest.

38. MANGAKAHIA FOREST - 1,337 HA

.....
Scenic Forest occupies the upper slopes of a prominent extremely steep peak which is a feature of the Mangakahia River valley and surrounding rolling hill country of Pipiwai - Te Tarahiorahiri (697m).

.....
Vegetation A large remnant of unmodified mature kauri and broadleaf/podocarp forest with modified kauri/podocarp/hardwood containing scattered pole and ricker kauri and podocarp regeneration. Large altitudinal sequence with lower altitude puriri, tararue, rata, rimu and kahikatea grading into high altitude totara, miro, tawa. Three threatened species.

.....
Wildlife Moderate-high value habitat with pied tits, kiwi and kauri snail.

.....
Geology Late Mesozoic Tangihua volcanic basalt and dolerite with breccia and tuff and minor blocks of sandstone, mudstone and limestone.

.....
Soils Te Kie steepland stony clay with areas of Waimatenui clay and Taketu gravelly clay loam.

.....
Natural Features Rocky bluffs and razor-back ridges.

.....
Historic

.....
Archaeologic A sacred mountain to all people who claim descent from Rahiri of Ngapuhi. Burial caves present.

.....
Recreation/Access Access via Omani Road. Old logging tracks suitable for tramping. Spectacular views of mid-north from summit.

.....
Modification Some areas logged but regenerating.

.....
Boundaries F10.5 P5 E4.

.....
Linkages Adjacent to areas of private and Maori protected forest.

39. HOUTU FOREST - 938 HA

Scenic The forest occupies two blocks, one of which crowns the northern section of the steep Mangaru Range while the other clothes an isolated steep dissected hill amongst rolling country below the Kaihu Forest and Mt Tutamoe. Visible along SH14 from Dargaville to Whangarei.

Vegetation Modified hardwood/podocarp dominated by taraire with scattered puriri, hinau, rewarewa, totara and puriri also occur.

Wildlife Moderate-high value with kiwis.

Geology Tangihua volcanics as fine-medium grained crystalline basalts and dolerite of cretaceous age.

Soils Te Kie steepland stony clay loam and reddish clay loam.

Natural Features

Historic

Archaeologic

Recreation/Access Access via Kirikopuni Valley Road and Tangowahine Valley Road.

Modification Previously logged over.

Boundaries F3 P15.5.

Linkages Close to Kaihu Forest and southern end of Tutamoe Range.

40. TANGIHUA FOREST - 3,240 HA

Scenic A steep long narrow spine of an ancient dissected volcanic massif which rises abruptly from the flat and rolling country of the Wairoa Valley. Steep stream heads open up into wide-floored peripheral valleys. Highly visible and distinctive feature on SH14 from Whangarei to Dargaville.

Vegetation Largest forest tract in Tangihua ecological district. Small stand of mature kauri; kauri/podocarp/hardwood forest with emergent mature kauri, miro and kahikatea and scattered pole kauri over a canopy of taraire and tawa; low-mid altitude podocarp/hardwood forest with podocarps, Northern rata emergent over taraire, tawa and kohekohe; high altitude hardwood forest and coastal forest species - kowhai, karaka, puriri. Five regionally/nationally threatened species.

Wildlife High value habitat with kaka, pied tit, kauri snails.

Geology Cretaceous Tangihua volcanics (basalt/dolerite) with a rare block of micaceous sandstone, mudstone and muddy limestone. South-western boundary has a region of unconsolidated volcanic breccia. A small intrusion of grandiorite and gabbro.

Soils Moderately leached Te Kie steepland stony clay loam with an area of Takitu gravelly clay loam and Waimatenui clay on southern side.

Natural Features Waterfalls.

Historic Logging for kauri and podocarps from 1911-1934. Kauri dam site.

Archaeologic Terraces, pa, rock shelters and pits.

Recreation/Access Outdoor education centre, tracks to summit of range. Road to telecommunications station on Horokaka.

Modification Logging in stream basins and on forest periphery.

Boundaries F4 P26.

Linkages A relatively isolated area of forest but range forms a focal point to landscape of Whangarei/Dargaville hinterlands.

41. MOTATAU FOREST - 325 HA

Scenic Forest occupies a prominent steeply dissected ridge (567m) in the Kaikou River valley surrounded by extensive areas of second growth shrubland.

Vegetation Mature podocarp/hardwood forest with taraire, kahikatea, kohekohe and tanekaha.

Wildlife High value with kiwis.

Geology Late Mesozoic - early Tertiary basalt and dolerite with minor blocks of sandstone, mudstone and limestone.

Soils Te Kie steepland and Tokawhero stony clay with Purua clay loam and Waiotira clay loam.

Natural Features

Historic

Archaeologic Area of spiritual significance to Ngati Hine with wahi tapu. Peaks up Te Kiekie important. Resting place of spirits before departure to Te Reinga.

Recreation/Access No legal acces.

Modification

Boundaries F1 P5.

Linkages One of a group of forests occupying prominent isolated peaks in mid-north.

42. PURUA SCENIC RESERVE - 73 HA

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Scenic Occupies a small but prominent peak (387m) in rolling hill country of the Wairua River valley.
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.....
Vegetation Unmodified podocarp/broadleaf forest with occasional kauri.
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Wildlife High value with kauri snail.
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.....
Geology Tertiary basalt and dolerite.
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Soils Tokawhero stony clay and Puru clay loam with Te Kie steepland reddish clay loam.
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Natural Features
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Historic
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Archaeologic
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Recreation/Access
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Modification
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Boundaries P4.
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Linkages
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43. PUKENUI FOREST - 592 HA

Scenic Contiguous with a much larger area of forest. Occupies rolling-moderately steep hill country which forms a scenic backdrop to the western side of Whangarei City.

Vegetation Mature kauri forest as occasional large trees over tanekaha, totara, rimu, towai, rewarewa and taraire; unmodified hardwood/podocarp on river flats with large rimu, miro and kahikatea as well as taraire, tawa, puriri, pukatea and kohekohe; secondary hardwood/podocarp with young stands of pole kahikatea with rimu, totara and scattered manuka and kanuka. Four regionally/nationally threatened species.

Wildlife High values with kaka, yellow crowned parakeet, pied tit and kiwi.

Geology Waipapa group greywacke and argillite with a small area of basalt.

Soils Marua clay loam.

Natural Features

Historic

Archaeologic

Recreation/Access NZ Walkway loop track through forest.

Modification Partially logged.

Boundaries F4.5 P5.

Linkages Major forest remnant adjacent to Whangarei City.

44. RUAKAKA/MCKENZIES - 679 HA

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Scenic Forest occupies a long low ridge system behind the Ruakaka flats visible from SH1.

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Vegetation Kauri-hard beech forest with tanekaha and rimu. Rimu-rata/taraire, kohekohe, towai, tawa, puriri forest with secondary manuka-kanuka containing dense tanekaha regeneration.

.....
Wildlife High value habitat with kiwi.

.....
Geology Mesozoic greywacke with some mid tertiary mudstone and sandstone.

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Soils Rangiora clay loam and Waikare silt loam.

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Natural Features Important for presence of hard beech/kauri association.

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Historic

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Archaeologic

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Recreation/Access Access via Kukumui Road.

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Modification Extensively logged and burned but vigorously regenerating.

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Boundaries F5 P7.5.

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Linkages

45. MARERETU FOREST - 1,377 HA

Scenic The main ridge of the forest is a conspicuous feature of the Waipu/Maungaturoto landscape. Visible from all sides but best viewed from the lookout point on Pilbrows Hill SH1.

Vegetation Broadleaf podocarp forest dominated by taraire and rimu with totara, tanekaha, tawa, rata and kohekohe; manuka/kanuka shrubland with residual taraire and kohekohe, kauri and podocarp regeneration; small clumps of semi mature kauri.

Wildlife High value habitat with pied tit, green gecko and kiwi. Northern limit of Hochstetters frog.

Geology Greywacke and sandstone with outcrops of limestone and calcareous sandstone.

Soils A range of moderately leached to weekly podzolized yellow brown earths including Te Ringa steepland clay loam, Marua clay loam, Waiotira clay loam with White Cone sandy clay loam and Riponui sandy clay loam.

Natural Features

Historic

Archaeologic

Recreation/Access Accessible via Millbrook and Finlayson Brook Roads between Waipu and Mareretu. No formal tracks.

Modification Some areas logged but regenerating.

Boundaries F5.5 P7.5 E6.

Linkages Core area of forest in southern part of Northland.

46. WAIPU GORGE SCENIC RESERVE - 230 HA

Scenic Forest occupies steeply falling gorge slopes on northern side of Ahuroa River and straddles completely the western end of the Brynderwyn Range. Striking direct views of native forest canopy on the steep gorge slope.

Vegetation Three broad forest types are recognisable; a diverse range of podocarps and kāuri emergent over taraire mixed broadleaf; taraire-mixed broadleaf forest with hinau, tawa, kohekohe, pukatea and kowhai; mixed broadleaf, manuka, kanuka shrubland with young emergent tanekaha and totara.

Wildlife High value habitat with fantail, pigeon, grey warbler, grey duck, kiwi and Hochstetters frog.

Geology Mesozoic greywacke and argillite with chert.

Soils Mainly Marua clay loam with small areas of podzolized Wharekohe sandy loam, Rangiora clay and Mata clay.

Natural Features Conspicuous large kauri, totara and rimu. Cataracts present on tributary of Ahuroa River.

Historic

Archaeologic

Recreation/Access Easily accessible via Waipu Gorge Road which follows the Ahuroa River and via Durham Road on the northern side. A small section of forest abuts SH1.

Modification Small areas logged and burned but regenerating vigorously in podocarps.

Boundaries F3 P2.5 E4. Western side contiguous with large area of discontinuous native forest.

Linkages Linked by narrow corridors to larger areas of privately owned native forest on Brynderwyn Range.

47. PUKEKARORO SCENIC RESERVE - 145 HA

Scenic An isolated steep volcanic dome rising 250m above surrounding country, clad in prolific kauri regeneration as mosaics of various aged stands. Easily visible from SH1.

Vegetation Taraire-kohekohe-puriri, tawa-rata forest; pole and ricker kauri in dense stands with tanekaha, *Phyllocladus glaucus*, rimu, rewarewa and kanuka forest with emergent pole kauri and podocarps with shrub hardwoods. Leptospermum shrubland with occasional emergent rewarewa.

Wildlife Moderate-high value.

Geology Miocene parahaki volcanics and dacite tuffs.

Soils Mainly weakly podzolized Pukekaroro steepland clay loam with peripheral Maungaturoto clay (Rendzira) and Aponga/Koniti clay.

Natural Features

Historic

Archaeologic Well preserved pa with tranches and pits on summit of special significant to Ngati Whatua.

Recreation/Access No public access.

Modification Extensively modified during Maori occupation but vigorously regenerating.

Boundaries Q5. Surrounded by farmland.

Linkages Gateway forest to proposal by virtue of proximity to SH1.

APPENDIX VI: SCHEDULE OF GROUPS AND ORGANIZATIONS MAKING
SUBMISSIONS

Ministry of Forestry, Wellington
Transit New Zealand, Auckland
Ministry of Commerce Energy Resources Division, Wellington
Manatu Maori, Wellington
Department of Conservation Science and Research Division, Wellington
Department of Scientific and Industrial Research, Wellington
University of Otago Botany Department, Dunedin
University of Waikato Politics Department, Hamilton
Hillary Commission for Recreation and Sport, Wellington
Kaipara District Council, Dargaville
Far North District Council, Kaikohe
Northland Regional Council, Whangarei
Federated Mountain Clubs of NZ Inc, Wellington
Queen Elizabeth National Trust, Wellington
New Zealand Archaeological Association, Dunedin
Royal New Zealand Institute of Horticulture, Lincoln
Environment and Conservation Organizations of NZ Inc, Wellington
NZ Native Forests Restoration Trust, Auckland
National Council of Women, Wellington
Greenpeace New Zealand, Auckland
Kauri Coast Promotion Society, Dargaville
Camp and Cabin Association of Northland, Paihia
Otamatea Kauri and Pioneer Museum, Matakoho
Auckland War Memorial Museum, Auckland
Auckland Conservation Board, Auckland
Genesis Reforestation Project, Napier
Auckland Botanical Society, Auckland
Wellington Botanical Society, Wellington
University of Canterbury Environmental Council, Christchurch
Epicenter Collective, Christchurch
Auckland University Environment Group, Auckland
Awatapu College Environment Committee, Palmerston North
Okaihau College, Okaihau
Maruia Society, Kaitaia
Maruia Society, Russell
Caring Citizens, Mount Maunganui
Otorohanga Zoological Society, Otorohanga
Tihoi Venture School, Mangakino
Auckland University Tramping Club, Auckland
North Shore Tramping Club, Auckland
Howick Tramping Club, Auckland
Auckland Baptist Tramping Club, Auckland
Auckland Tramping Club, Auckland
Rotorua Tramping and Skiing Club, Rotorua
Taupo Tramping Club, Taupo

Kaumatua Tramping Club, Lower Hutt .

Tararua Tramping Club, Wellington

Victoria University Tramping Club, Wellington

Royal Forest and Bird Protection Society, Head Office and Far North, Northern, Mid-North,
Central Auckland, West Auckland, Tauranga, Te Puke, Rotorua, King Country, Gisborne,
Upper Hutt, South Canterbury, and Otago branches.