Aotea (Great Barrier) Marine Reserve Application

An application by the Director-General of Conservation

AUCKLAND CONSERVANCY

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Cover photo: Aerial view of Great Barrier Island's north-east coast
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1. Introduction

1.1 APPLICATION FOR A MARINE RESERVE AT GREAT BARRIER ISLAND

This is an application by the Director-General of Conservation for an Order-in-Council declaring an area of approximately 50,100 hectares on the north-east coast of Great Barrier Island a marine reserve. The boundaries would encompass the territorial sea and foreshore and all internal waters on the north-east coast of Great Barrier Island (except Whangapoua Estuary) between the Needles and a point north of Korotiti Bay from mean high water springs (except where the reserve is adjacent to private land in which case it will be at mean high water mark) to a boundary of the territorial sea at 12 nautical miles (see Figure 2).

This application includes a description of the proposed marine reserve, the background to the application, the natural values and an assessment of the effects a marine reserve may have on existing users of the area.

1.2 PURPOSE OF MARINE RESERVES

Section 3(1) of the Marine Reserves Act 1971 states that marine reserves are established: *"…for the purpose of preserving, as marine reserves for the scientific study of marine life, areas that contain underwater scenery, natural features, or marine life, of such distinctive quality, or so typical, or beautiful, or unique, that their continued preservation is in the national interest."*

In addition to scientific study, marine reserves also have a role in advancing public understanding and appreciation of the marine environment. The public has a right of access to a marine reserve. Section 3(2)(d) of the Act states: *"…the public shall have freedom of access and entry to the reserves, so that they may enjoy in full measure the opportunity to study, observe, and record marine life in its natural habitat."*

1.3 ROLE OF THE DIRECTOR-GENERAL OF CONSERVATION

Under section 5(1)(a)(v) of the Marine Reserves Act 1971 applications for the establishment of a marine reserve may be made by the Director-General of Conservation. Marine reserves are administered by the Director-General who manages and controls marine reserves in accordance with approved general policies, conservation management plans and strategies. The Director-General's management responsibilities include marking the boundaries (where necessary and feasible), informing the public of permitted and prohibited activities, biological monitoring, issue of scientific permits, and overseeing the enforcement provisions of the Act in relation to offences.

1.4 PROCESS FOR ESTABLISHING A MARINE RESERVE

Marine reserves are established by an Order-in-Council made by the Governor General following the process set out in section 5 of the Marine Reserves Act 1971 (see Appendix 1).

Currently the Marine Reserves Act 1971 is under review. Transitional provisions in the proposed new legislation will deal with any existing applications that are being considered under the Marine Reserves Act 1971.

1.5 RESPONSES INVITED

A public notice in the *Barrier Bulletin* and in national newspapers will call upon anyone wishing to object to this application to do so in writing no later than 2 October 2004. Any submissions in support that may be received will also be accepted, if in writing and

received no later than 2 October 2004. Objections and any submissions in support should at that time be addressed to:

Director-General of Conservation
Department of Conservation
Auckland Conservancy
Private Bag 68-908
Newton
AUCKLAND

Fax: (09) 377-2919

Email: greatbarrierisland@doc.govt.nz (Note: any objections or submissions in support that may be received by email will be accepted provided they contain the full name and residential address of the submitter.)

Under the Marine Reserves Act, the Director-General will refer any objections to the application to the Minister of Conservation, who is the decision-maker for marine reserve applications. The Director-General as applicant has the right to answer the objections in writing within three months from the date of first publication of the notice, and may include in his answer any submissions in support that may have been received.

Where any objections have been received the Minister must before considering the application decide whether any objection should be upheld. In doing so the Minister is required to take into account the applicant's answer and, in this case, because the Director-General of Conservation is the applicant, the independent report on the application and answer that the Minister may obtain.

2. The Application

2.1 THE APPLICANT

This is an application by the Director-General of Conservation.

2.2 LOCATION

The location of the application is between latitude 36º02' and 36º27' south and longitude 175º35' and 175º77' east, approximately ninety kilometres north-east of Auckland, New Zealand (see Figure 1).

2.3 NAME

The interim name of the proposed marine reserve is the Aotea (Great Barrier) Marine Reserve. This may change as the applicant intends to discuss the name of the proposed reserve with Ngati Rehua Ngati Wai ki Aotea Trust Board.

2.4 OBJECTIVE

The objective of this application is to give effect to the purpose of the Marine Reserves Act 1971, namely to preserve as marine reserves for the scientific study of marine life, areas of New Zealand that contain underwater scenery, natural features, or marine life, of such distinctive quality, or so typical, or beautiful, or unique, that their continued preservation is in the national interest.

2.5 BOUNDARIES

The boundaries of the proposed marine reserve are shown in Figure 2. The boundary commences at mean high water springs, except where the proposed reserve is adjacent to private land, in which case the boundary would commence at mean high water mark. The seaward boundary is at the 12 nautical mile limit of New Zealand's territorial sea. Although initially proposed to be included, as a result of consultation with residents, the Whangapoua Estuary does not form any part of the application.

Figure 1: Great Barrier Island

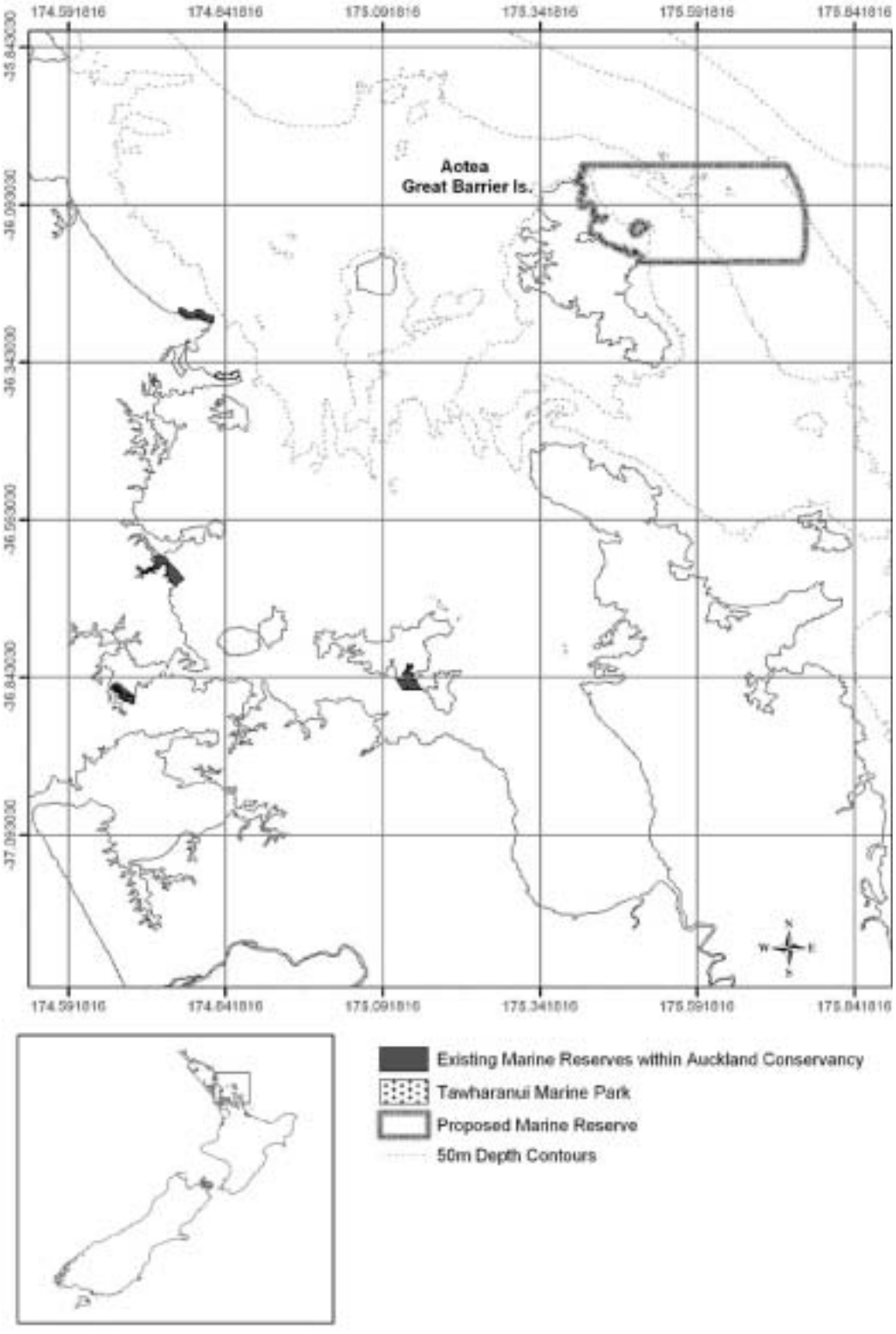
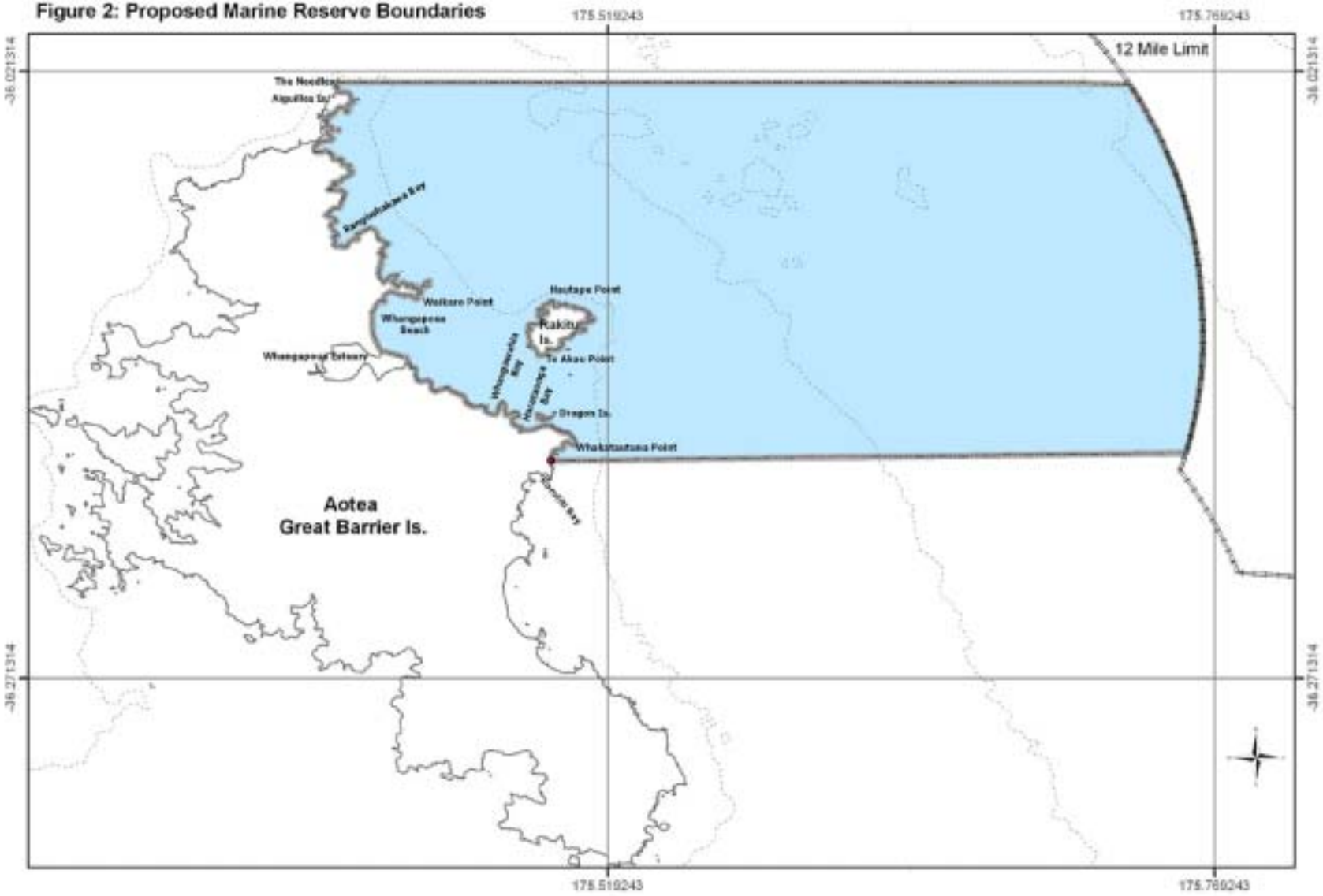


Figure 2: Proposed Marine Reserve Boundaries



3. Background to the Application

3.1 ORIGIN OF THE PROPOSAL

The terrestrial environment of Great Barrier Island enjoys considerable protection. More than 60 percent of the island is public land administered by the Department of Conservation. The majority of the land bordering the north-east coast of the island is public conservation land, protected within the Te Paparahi and Whangapoua Stewardship Areas. Rakitu (Arid) Island, located offshore from Whangapoua Beach, was purchased by the Government in 1993 and is now the Rakitu Scenic Reserve. A recreation reserve is located at Harataonga.

The Great Barrier Island marine area is part of the Hauraki Gulf Marine Park, which was established in 2000 under the Hauraki Gulf Marine Park Act. Fisheries regulations in the vicinity of Great Barrier Island apply to the management of fisheries and the impacts of fishing on the marine environment. However, current fisheries regulations in the vicinity of the proposed marine reserve are limited in the degree to which they manage the effects of fishing. Recognition of the potential of the north-east coast of Great Barrier for marine conservation and scientific study has led to various attempts to implement protective measures for the area.

In 1985, the Fisheries Management Division of the former Ministry of Agriculture and Fisheries (MAF) identified two areas on the north-east coast (one on the eastern side of Rakitu Island and one from Miners Head to the Needles) as warranting some form of marine protection (MAF, 1985).

Informal discussions with tangata whenua and local residents about protecting Great Barrier Island's coastal environments were initiated by the Department of Conservation in 1989. A public discussion document and questionnaire was circulated to every Great Barrier household, to visitors to the island and to other interested groups in February 1991. A total of 256 submissions were received. There was support from 75 percent of respondents for a marine reserve being established over an area of the north-east coast (Irving, Jeffs and Wood, 1991). Seventeen percent of respondents offered partial support and five percent were unsure. Three percent of respondents were totally opposed to any marine reserve (Irving, Jeffs and Wood, 1991).

Also in 1989, a steering committee of local residents was formed at a public meeting "to assist the Department with the development of the marine reserve concept" (Department of Conservation, 1994). The committee met a number of times between 1989 and 1993. It assisted with organising and undertaking two marine surveys in 1990 and 1991 and was consulted over the content and format of the February 1991 discussion document and questionnaire. In December 1992, before it had seen the report detailing the area's ecological diversity, the committee wrote to the Department indicating its preferred boundaries, which encompassed an area from the point south of the Whangapoua Estuary mouth, out to Rakitu Island, and down to Whakatautuna Point (Department of Conservation, 1994).

In July 1994, the Department produced a draft application for the Rakitu (Great Barrier Island) Marine Reserve. The proposed reserve included marine habitats along the coast from Waikaro Point to Whakatautuna Point, Rakitu Island, and the waters in between. The proposal also included a mahinga kaimoana (customary food gathering) area in Whangapoua Estuary. In light of a review of priorities for Auckland Conservancy, in 1994 the draft application was put aside and the marine reserve project postponed.

The Conservation Management Strategy for Auckland 1995 – 2005 identified a number of areas of significance that either had marine protected area status or warranted investigation for such status. One area proposed for investigation was Rakitu Island (Department of Conservation, 1995).

The Department of Conservation returned to the Great Barrier marine reserve proposal in 2000/01, consistent with the strategic directions set out in the Department's Statement of Intent which reflected the New Zealand Biodiversity Strategy objectives and government policy.

During 2001 and 2002, Department staff met with tangata whenua, interested parties and individuals from Great Barrier Island and the wider community in a renewed process to seek their views on a proposed marine reserve. Scientific investigations of deep water habitats off the north-east coast were undertaken and these helped shape a new proposal.

A discussion document and questionnaire outlining a proposal for a large area between the Needles in the north, Korotiti Bay in the south and out to the 12 nautical mile limit of New Zealand's territorial sea was released in March 2003.

3.2 INVESTIGATION PROCESS

In formulating this proposal, the applicant took into account the results of previous scientific marine habitat work including the inter-tidal, sub-tidal, wildlife and botanical ecosystem surveys and a review of existing information that was undertaken by the Department of Conservation in the early 1990s.

Additional scientific investigations were also carried out. Surveys of Whangapoua Estuary and Whangapoua Beach were undertaken. An acoustic survey of the seafloor habitats of north-east Great Barrier was undertaken by the National Institute of Water and Atmospheric Research (NIWA) in 2001 and a benthic (bottom) reef survey of the area between Waikaro Point and Needles Point was undertaken in 2002. Also in 2002, a remote operated vehicle (ROV), equipped with lights and underwater video, was used on two expeditions to investigate areas of deeper water off the north-east coast of Great Barrier. Dredge samples of sediment-dwelling marine life were also taken in deep water. The information gathered from the additional research led the applicant to extend the marine reserve proposal to the 12 nautical mile limit of the territorial sea, reflecting the value of the larger area for science.

3.3 PUBLIC CONSULTATION

A public discussion document entitled *'A Marine Reserve for Great Barrier Island? Your chance to have a say'* (Department of Conservation, 2003) was prepared by Auckland Conservancy and released in March 2003. Approximately 11,000 copies were distributed to people and organisations recognised as having an interest in the area or who expressed an interest in the area, including local residents, commercial fishers, recreational fishers, iwi agencies, marine scientists, commercial interests, conservation groups and others. A questionnaire was included with the document. The questionnaire asked people to indicate whether they supported or opposed the principle of a marine reserve somewhere on the north-east coast of Great Barrier Island. It also asked people to provide written comments on the proposal, including how they used the area. One thousand, eight hundred and sixty three (1,863) written submissions were received by the end of August 2003.

The proposal remains controversial and issues raised in the submissions and relating to the views of tangata whenua are contained in section 5 below. A summary of submissions is located in Appendix 2.

3.4 WIDER HAURAKI GULF CONTEXT

The Hauraki Gulf region contains four marine reserves: Cape Rodney to Okakari Point Marine Reserve at Leigh, Long Bay-Okura Marine Reserve, Motu Manawa (Pollen Island) Marine Reserve and Te Matuku Marine Reserve, at Waiheke Island. A no-take marine park is located at Tawharanui. These small areas of no-take marine protection together comprise only some 3,286 hectares, or 0.3 percent, of the Hauraki Gulf Marine Park, which covers 1.2 million hectares. Other mechanisms such as cable zones may provide some level of marine biodiversity protection in the Gulf.

The Department of Conservation is aware that the marine resources of the Hauraki Gulf are used in a number of different ways. Many activities are undertaken in the Gulf including: customary, commercial and recreational fishing; boating; marine farming; and shipping. Areas of the Gulf are designated for specific purposes including marine

reserves and other protected areas, aquaculture management areas, marinas, shipping lanes, cable and pipeline areas. All of these can contribute to competition for space.

The Department believes there is a need for integration between protection and use of the Hauraki Gulf's marine environments. Auckland Conservancy is proposing a strategic process designed to identify a network of areas to protect marine biodiversity in the Gulf within a wider framework that addresses and provides for a range of other uses and interests in the area. It is envisaged that other central and local government agencies (e.g. Auckland Regional Council) will be involved in the proposed process, along with tangata whenua and representatives of key Hauraki Gulf stakeholder and user groups.

This application document outlines the reasons for the proposed Aotea Marine Reserve and the values sought to be protected. It is the applicant's belief that the biological values and marine habitats contained within the proposed marine reserve area are such as to warrant protection.

4. Natural Values of the Proposed Marine Reserve

4.1 THE SETTING

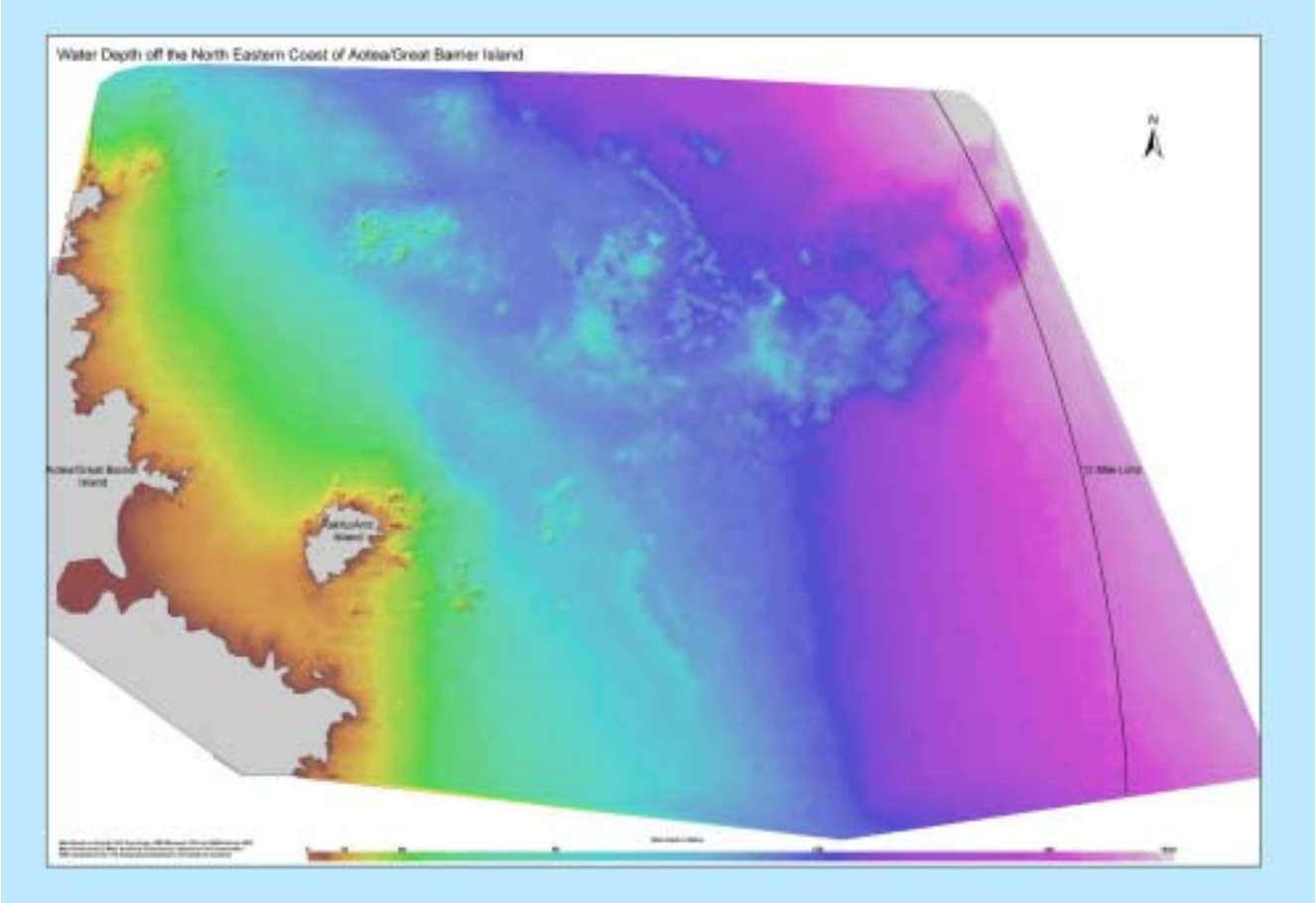
Great Barrier Island is the largest island off the coast of the North Island and New Zealand's fourth largest island. It lies in the outer Hauraki Gulf and its eastern side is exposed to the Pacific Ocean. The island, which includes 23 smaller associated islands and numerous islets and rocks, covers an area of approximately 285 square kilometres. Being only about 15 kilometres wide at its maximum width, the ocean is never far away.

South-west and north-east winds are the most common on Great Barrier Island, with the least wind from the south-east. Weather from the north-east quarter would affect virtually the entire north-east coastline. However, the coast is relatively sheltered from the south-west due to the steep relief of the surrounding land. The north-east coast is exposed to north-eastern storms with great wave fetch (Irving & Jeffs, 1993).

4.2 SEA FLOOR

Relatively shallow inshore waters occur around the entire coast of Great Barrier, unlike most other north-east offshore islands which normally rise up from the deeper (100-200 metre) waters of the continental shelf. In this way, Great Barrier is more similar to inner Hauraki Gulf islands.

However, Great Barrier's north-east coast has deep water reasonably close to the shore. Near the Needles the 30 metre contour is within 500 metres of the coast and the 60 metre contour comes within 2.5 kilometres of the coast. The situation is similar, but the gradient is even more marked, adjacent to the north-east coast of Rakitu Island. This allows clear oceanic water to come very close to the coast (Irving & Jeffs, 1993).



4.3 OCEAN CIRCULATION

The north-east coast of Great Barrier is influenced by three types of current; oceanic, wind and tidal.

The area experiences influxes of water from the sub-tropical East Auckland Current, an oceanic current which originates from the direction of Lord Howe Island between Australia and New Zealand and flows along the Northland coast (Irving and Jeffs, 1993). The East Auckland Current carries with it the larvae of many sub-tropical species and this has, over a long period of time, influenced the species composition of marine life on the north-east coast of Great Barrier Island (Grace pers. comm., 2004).

Local moderately-strong inshore currents are thought to prevail over much of the north-east coast, but little is known of their patterns or movements. The most regular and dominant water movement of most coastal areas is the daily tide cycle. Along the north-east coast the tidal range appears to be about three metres on average (Irving and Jeffs, 1993).

Water quality on the north-east coast is considered to be high, largely due to the adjacent catchment consisting of forested conservation estate (Kelly and Haggitt, 2002). The north-east coast is constantly bathed with clear oceanic waters and there are few sources of turbid runoff along the coast. However, turbid water occasionally flows into this area from the Hauraki Gulf (Irving and Jeffs, 1993).

4.4 COASTAL AND SUB-TIDAL GEOLOGY

Geologically, Great Barrier Island is an extension of the Coromandel Peninsula and similar rock types are found on both. Within the relatively short stretch of coastline between Needles Point and Whakatautuna Point three main types of rock can be found. Very old (165 million years) sedimentary rocks are found north of Whangapoua. Between Whangapoua and Whangawahia Bay the sedimentary rocks are more recent with very hard volcanic rocks on top of them. Rakitu Island is composed of relatively recent, soft volcanic rocks. This rich geology creates a varied coastline with many sea caves, rock stacks, 'guts', rocky reefs and soft shores (Irving and Jeffs, 1993).

Sand is the other major geological feature of the coast. The sediments of the Whangapoua Estuary come mainly from erosion of local catchment. Offshore, the fine quartzite sands are originally from the Waikato River, when it flowed out through the Hauraki Gulf (Irving and Jeffs, 1993).

Underwater, rocky reefs extend for some distance offshore. The erosion of seaward rock faces and subsequent underwater weathering of rubble has lead to the formation of beds of pebbles, cobbles, boulders and large blocks along parts of this coast (Irving and Jeffs, 1993). Morrison et al (2001) detected limited reef habitats in deeper waters (50 – 80 metres) on the north-east coast of Great Barrier. Reef patches are also present in the north-east Great Barrier area at depths in excess of 80 metres, with surveys undertaken in 2002 showing reef patches rising up to 20 metres above the surrounding sea bed (Sivaguru and Grace, 2004). At one of the sites surveyed, the rocks showed a clear signs of columnar jointing, indicating the rock is of volcanic origin.

4.5 INTER-TIDAL HABITATS

A large range of rock types and wave exposures influence the diversity of inter-tidal life on the north-east coast of Great Barrier Island (Grace pers. comm., 2004).

Shores at the northern end of Great Barrier Island and along much of the east coast are more exposed to waves generated by ocean swells than other parts of the island. Inter-tidal communities in protected bays, such as the inner parts of Rangiwhakaea Bay or the western side of Rakitu Island, are similar to those on the west side of the island, with species such as barnacles, oysters, turfing seaweeds, kelps, shore crabs, sea anemones and kina commonly occurring. The shore towards the outer headlands tends to be covered more by encrusting species, such as large acorn barnacles, mussels and a greater variety of large, bushy seaweeds. In the most exposed localities around the Needles and

Aiguilles Island, inter-tidal communities are encountered that resemble those found on offshore islands to the north (Creese and McDowall, 2001).

Overall, the ecology of the rocky inter-tidal shores on north-east Great Barrier is typical of northern or north-eastern New Zealand. These shores appear to be intermediate between 'mainland' north and north-eastern offshore islands, having characteristics of both habitat types (Irving and Jeffs, 1993).

4.6 SUB-TIDAL HABITATS

The physical character of the marine environment on the north-east coast of Great Barrier is very diverse, more so than any other north-eastern offshore island (Irving and Jeffs, 1993). This is the result of a combination of the diverse geology, the range of wave exposures and the presence of the estuary and smaller offshore islands and islets providing sheltered areas. The sub-tidal habitat structure and biological communities can change dramatically over very short distances of coastline.

An acoustic survey of the seafloor habitats of north-eastern Great Barrier detected six distinct acoustic classes (coarse sands, muds, fine sand/muds, fine sands, very fine sands, reef or cobbles), which generally correlated with depth (Morrison et al, 2001).

Kelly and Haggitt (2002) surveyed coastal reef habitats at eight sites between Waikaro Point and Needles Point on the north-east coast of Great Barrier and one site south-west of Needles Point. Nine distinct reef habitats were identified during the survey. They were: shallow *Carpophyllum*, mixed algae, turfing algae, urchin-grazed corallines, coralline encrusted loose rubble, *Ecklonia* forest, *Ecklonia/Plocamium/Caulerpa* mix, *Ecklonia/Caulerpa* mix, and sponge habitat.

In 2002, two surveys were undertaken by Roger Grace to investigate deeper reef and sediment habitats off the north-east coast of Great Barrier. The surveys were the first studies which dealt with deeper waters (greater than 80 metres) off this coast and they revealed the richness of the marine life in the area (Sivaguru and Grace, 2004).

Information gathered during these surveys showed deep reef patches off the north-east coast that are rich in biodiversity. A total of 56 species were recorded in the deep reef habitats including glass sponges, black coral species, gorgonian species and a sub-tropical fish species. In general, the findings suggest that the habitats surveyed are not subject to high levels of disturbance, although a fishing line tangled in a black coral tree was recorded at one site (Sivaguru and Grace, 2004).

A total of seventy-six benthic species were recorded in the deep sediment survey including 27 polychaetes, 18 species of crustacean, 22 mollusc species, 2 bryozoan species, 2 species of echinoderms and seven unidentified species (Sivaguru and Grace, 2004).

4.7 MARINE CLASSIFICATION

A number of marine classification systems have been described in New Zealand. These classifications divide the complex marine environment into similar units.

The draft Interim Nearshore Marine Classification uses available biological and physical data and expert advice to divide the nearshore marine environment into biogeographic regions, coastal units and shelf units (Walls, in prep., 2004). The coastal unit provides a general description of the nearshore marine environment to approximately two nautical miles offshore, or between 50 and 100 metres depth. The shelf unit extends to the shelf break at approximately 200 metres depth (after King et al, 1985). Great Barrier Island is located within the North Eastern Marine Biogeographic Region and the north-west and east coasts of the island and Rakitu Island have been identified together as a separate coastal unit. The proposed marine reserve is located within the shelf unit and incorporates a portion of the coastal unit.

4.8 FISH

A list of species found in the area is contained in Appendix 3.

Work carried out by Roberts et al (1986), Kelly and Haggitt (2002) and the results of surveys in the 1990s (Irving and Jeffs, 1993) and in 2002 (Sivaguru and Grace, 2004) have shown that the fish fauna of Great Barrier Island is both rich and diverse. By 1993, 77 species of fish had been recorded in the coastal waters off north-eastern Great Barrier Island and neighbouring Rakitu Island (Irving and Jeffs, 1993). An additional three species (yellow weever, fox fish and Lord Howe Island coral fish) were recorded during surveys of deep water habitats off the north-east coast in 2002, increasing the total number of species recorded in the area to 80 (Sivaguru and Grace, 2004).

The fish fauna is typical of the north-east coast of New Zealand, with species such as red moki and leatherjacket abundant. However, there is also a component of the fish fauna which reflects the occasional influence of the sub-tropical East Auckland Current. The black spotted goatfish and notch-head marblefish are both recorded on the north-east coast in small numbers and both are much more common around the Kermadec Islands, approximately 500 nautical miles to the north-east. Other species found on Great Barrier's north-east coast (e.g. toadstool groper, clown toado and rainbow wrasse) are restricted to areas influenced by the East Auckland Current, (Irving and Jeffs, 1993; Grace pers. comm., 2004).

There are relatively few locations in north-eastern New Zealand where sub-tropical fish species are present in reasonable numbers, as they are on the north-east coast of Great Barrier. Other locations that are also influenced by the East Auckland Current and support reasonable numbers of sub-tropical fish species include Cape Karikari, Poor Knights Islands, Mokohinau Islands, Cape Brett and possibly Mayor Island and Volkner Rocks. The proposed Aotea Marine Reserve, including the waters around Rakitu Island, provides an important link between the aforementioned sites.

As well as species more normally associated with the entire north-east coast of New Zealand there are a few which are more normally associated only with offshore islands. These species such as two spot demoiselles and black angelfish are found in high numbers at several locations along the north-east coast of Great Barrier Island (Irving and Jeffs, 1993).

Roberts et al (1986) concluded that the diversity of fish fauna, plus the presence in low numbers of several subtropical species, is characteristic of an island off north-eastern New Zealand which is weakly influenced by the East Auckland Current.

Although the north-east coast is relatively small, it shows quite a diverse range of species groupings within it. At least eight different habitat types were identified in the area, where the fish species variety and abundance are significantly different from one another (Irving and Jeffs, 1993).

4.9 INVERTEBRATES

A number of studies have indicated that inter-tidal marine invertebrates on the north-east coast of Great Barrier are typical of northern or north-eastern New Zealand. For example, a survey of marine life on Whangapoua Beach indicated small numbers of organisms typical of northern New Zealand open sand beaches (Grace, 2002). Snails such as the vermetid snail (*Novostoa lamellose*) and black shore snail (*Nerita atramentosa*) are found in inter-tidal and wave exposed shores of the north-east coast respectively. These species are characteristic to offshore islands (Irving and Jeffs, 1993). Some species found on the north-eastern coast of Great Barrier are typical of more sheltered areas of the Hauraki Gulf e.g. the common rock oyster (Irving and Jeffs, 1993).

A diverse range of invertebrate species has been identified off the north-east coast of Great Barrier. Information on some of the more conspicuous species is listed below.

Coelenterates (e.g. corals, sea anemones, gorgonians, etc)

Species of coral are present on the north-east coast of Great Barrier. Brook (1982) identified four species of coral around Rakitu Island. Brook found that *Flabellum*

rubrum and *Culicia rubeola* live attached to rocky substrates and extend from the immediate sub-tidal to depths greater than 30 metres and that *Sphenotrochus ralphae* and *Kionotrochus suteri* have a largely non-overlapping range on sediment substrates to the west and north-east of Rakitu Island.

At least three black coral or bamboo coral species were recorded in surveys undertaken in deep water habitats in 2002 (Sivaguru and Grace, 2004). The coral trees, some over two metres high, supported ophiuroids (brittle stars) and dead sections of the coral were covered in pink jewel anemones. Identification of the black or bamboo coral trees recorded in the study was not possible as characteristics of this species are microscopic and samples are necessary for identification.

A large gorgonian (*Keratoisis* sp.) was also recorded in deep waters off the north-east coast. It is distinctive as it is likely to be a new genus which is endemic to New Zealand (Sivaguru and Grace, 2004). It is also likely that this is the first shallow record of this gorgonian species, making the find scientifically important. While a few gorgonian species are found in shallow waters around New Zealand and on seamounts throughout New Zealand's Exclusive Economic Zone (EEZ), most gorgonians are normally found in deep waters, at depths in excess of 650 metres (Sivaguru and Grace, 2004).

Sponges

In a survey using underwater video on a benthic sled, Morrison et al (2001) noted a diverse range of sponge species on reefs of 50-80 metres depth on the north-eastern side of Great Barrier. Densities of sponges were estimated to range up to 10-30 individuals per square metre at some points. The majority of sponges in the area appear to be quite typical of offshore island faunas including those of the north-east coast in the outer Hauraki Gulf, the far north, and the offshore islands of Northland. It was noted that the sponge density, dispersion and diversity was reminiscent of offshore areas in the Leigh Marine Reserve, Takatu Point, and other areas that have not been physically disturbed. However, in comparison to each of these areas the sponge diversity in areas of north-east Great Barrier was high which is unusual in the Hauraki Gulf (Morrison et al, 2001).

Sivaguru and Grace (2004) noted that sponges were the dominating community at all sites surveyed during investigations of deep water habitats (greater than 80 metres) undertaken in 2002. A total of 22 sponge species were identified including two unusual glass sponge species (*Symplectella rowi* and *Rossella ijimai*). The presence of *Symplectella rowi* in relatively shallow water (around 90 metres) is not unusual for the north-eastern New Zealand locations where it occurs but is globally important as glass sponges in general are found only below 250 metres and typically at 1,000-3,000 metres. However, the abundance of the species on the reefs off Great Barrier is unusual. A notable character of the sponges on the deep reefs surveyed is their large size, which indicates they are old, perhaps up to a century or more.

Crayfish

The broken reefs on the north-east coast provide excellent habitat for crayfish. While the red rock lobster (*Jasus edwardsii*) is the most common, two other species, Spanish lobster (*Arctides antipodarum*) and packhorse crayfish (*Jasus verreauxi*), are patchily distributed but regularly seen (Creese and McDowall, 2001). The packhorse crayfish, New Zealand's largest crustacean, is restricted mainly to northern areas of the country. Up to four packhorse crayfish per 100 square metres were recorded in underwater surveys at Harataonga Bay in the early 1990s – much higher than found in similar surveys on the adjacent mainland coast. In the early 1900s they were even more plentiful – and bigger, with specimens over a metre long and more than 20 kilograms in weight commonly encountered (Creese and McDowall, 2001).

Urchins

As well as the common kina (*Evechinus chloroticus*), three species of warmer-water sea urchins have been reported in shallow waters around Great Barrier – *Centrostephanus rodgersi, Heliocidaris tuberculata* and the long-spined, tropical *Diadema palmeri* (Creese and McDowall, 2001). The presence of these urchins is characteristic of north-eastern offshore islands influenced by the East Auckland Current (Irving and Jeffs, 1993).

Irving and Jeffs (1993) noted that kina are found in similar densities and patterns of distribution as at other sites along the north-eastern coast of New Zealand where they

have been studied. However, in a study of benthic reefs between Waikaro Point and Needles Point, Kelly and Haggitt (2002) noted that kina densities were generally low and urchin grazed coralline habitat (or urchin barrens) were not found in most of the transects they surveyed.

4.10 ALGAE

Francis and Grace (1986) studied the algal ecology of Rangiwhakaea Bay, identifying and mapping four sub-tidal algal zones. The four algal zones were dominated by *Carpophyllum angustifolium*, coralline turf and paint, *Ecklonia radiata*, and *Hummbrella hydra* respectively.

In total, Francis and Grace (1986) identified 66 species of marine algae. This is likely to be an under-estimate of the true amount of algae species present in the area (Irving and Jeffs, 1993; Grace pers. comm., 2004). Most of the algal species encountered by Francis and Grace (1986) were common to north-eastern New Zealand in moderately exposed to exposed conditions.

The north-eastern coast of Great Barrier is one of the few locations within the Hauraki Gulf where the bull kelp seaweed (*Durvillea antarctica*) has been recorded (Irving & Jeffs, 1993). This species is normally found in southern waters but is present in some very exposed areas on the north-east coast of the North Island.

In a benthic reef survey of the area between Waikaro Point and the Needles, algal diversity was found to be high, particularly in the mixed weed zone (Kelly and Haggitt, 2002). Species associations were similar to those found in the algal communities of other offshore islands in north-eastern New Zealand.

4.11 OTHER MARINE SPECIES

Sperm whales (*Physeter macrocephalus*) and long-finned pilot whales (*Globiocephala meleana*) often pass by the island, and strandings of both species have been documented. Bryde's whale (*Balaenoptera edeni*) is also present around Great Barrier Island. Other marine mammals commonly seen around the island are the large orca (*Orcinus orca*), the bottlenose dolphin (*Tursiops truncates*) and common dolphin (*Delphinus delphis*). Other protected species such as the leopard seal, New Zealand fur seal, and large sea turtle may be seen along Great Barrier's coastline (Armitage, 2001). The Marine Mammals Protection Act 1978 protects all marine mammals in New Zealand waters.

5. Economic, Social & Cultural Implications for Tangata Whenua, Current Users & Other Groups

5.1 TANGATA WHENUA

The Department of Conservation is responsible for implementing conservation legislation and achieving the Government's conservation management goals. In doing this, the Department must so interpret and administer the Conservation Act 1987 as to give effect to the principles of the Treaty of Waitangi. The Marine Reserves Act 1971 is one of the Acts referred to in the First Schedule of the Conservation Act 1987 and consequently in interpreting and administering the Marine Reserves Act and any regulations made under that Act the Department must give effect to the principles of the Treaty to the extent that the provisions of the Marine Reserves Act are not inconsistent with the principles.

The Maori name for Great Barrier Island is Aotea. Ngati Rehua, a hapu of Ngati Wai, is tangata whenua and kaitiaki of the island. Ngati Maru has ancestral and historical links to parts of Great Barrier and shares some wahi tapu with Ngati Rehua, particularly in the Harataonga area (Maori Land Court, 1998). In 1998, the Maori Land Court determined that Ngati Rehua were the owners of all the islands and rock outcrops in the environs of Aotea to which title had not been previously determined. Tangata whenua resident on Aotea are Ngati Rehua hapu and Ngati Wai iwi.

The establishment of a marine reserve on the north-east coast of Aotea (Great Barrier) has the potential to impact on the customary fishing rights of tangata whenua. Tangata whenua have customarily undertaken customary fishing. These rights have been recognised and provided for by the Crown. The Fisheries (Amatuer Fishing) Regulations, specifically regulation 27, allows authorisation for the taking of fish for the purposes of hui or tangi to be granted.

The Customary Fishing Regulations provide tools to devolve the management of customary non-commercial fishing to tangata whenua through the Tangata Kaitiaki/Tiaki appointment process, the issuing of customary fishing authorisations, and the establishment of mataitai reserves over traditional fishing grounds. If the proposed marine reserve prevents tangata whenua from exercising customary fishing rights, then this could potentially create a Treaty of Waitangi grievance.

The Ngati Rehua Ngati Wai ki Aotea Trust Board has been informed and consulted throughout the process of proposing a marine reserve at Great Barrier Island. The Ngati Wai Trust Board and Ngati Maru Runanga have also been consulted in regards to the proposal.

While no formal response has been received from the Ngati Rehua Ngati Wai ki Aotea Trust Board, the applicant understands from consultation it has undertaken that the Board has some concerns about the proposed reserve. Concerns raised to date relate to the time available for consultation, the size of the proposed reserve, potential loss of access to unspecified traditional fishing grounds, displaced fishing effort as a result of the reserve, and that a reserve may bind future generations. In addition, the Board has expressed concern that the applicant had prematurely decided to consider a marine reserve for the north-east coast of Great Barrier before consultation began.

A submission from Ngati Maru Runanga opposed the proposal. A number of submissions were received from individuals who identified themselves as tangata whenua. These submissions reflected a range of views on the proposal.

Whangapoua Estuary was an area that Ngati Rehua specifically identified during early consultation as being of customary significance. The estuary is used frequently by tangata whenua, by residents from all over Great Barrier and by visitors to the island for shellfish gathering and other non-commercial fishing. The estuary is the only place on the island where cockles and pipis can be gathered in any significant numbers.

The estuary was considered in the marine reserve proposal to be an important due to its large size, its high diversity of species, its near-pristine state, and as a habitat for species such as the brown teal (pateke) (Cromarty, 1996). Despite the high natural values of the estuary, the applicant has excluded it from the proposed reserve. The applicant has not however been provided with information from Ngati Rehua about any other customary fishing areas. The applicant will accordingly continue to consult Ngati Rehua with regard to the proposal, to ensure that the iwi's views on the proposal are fully recorded and communicated to the Minister of Conservation before any decision is made on the application for the proposed reserve.

Although not included in this marine reserve proposal, the Department would advocate for and support other protective mechanisms for the estuary, were they to be sought by iwi or the community, if such mechanisms were likely to provide protection for the significant biodiversity values of the estuary.

Without wanting to pre-empt the outcome of the proposed foreshore and seabed legislation in any way, so far as any customary (non-fishing) rights are concerned the establishment of a marine reserve will not necessarily preclude the exercise of those customary (non-fishing) rights.

It is proposed that a marine reserve management committee be established in respect of which Ngati Rehua would be invited to contribute one half of the members in order to ensure there is a strong partnership approach to the management of the proposed reserve. The balance of the committee would be made up of representatives of the wider local Great Barrier community and key stakeholders.

Further, it is proposed that a review of the reserve status be undertaken after the elapse of 25 years from its legal creation. The review would determine whether the marine reserve was still meeting its purpose. In this way, the application for the reserve addresses inter-generational issues.

5.2 ADJOINING LANDOWNERS

While much of the land adjoining the proposed marine reserve is public conservation land, several private properties are adjacent to the proposed reserve. Section 5(1)(d) of the Marine Reserves Act 1971 states that land adjoins a marine reserve when *"it is separated from it by the foreshore or by any road, or that is at a distance of not more than 100 metres from the proposed marine reserve if separated from it by any other reserve of any kind whatsoever or any marginal strip within the meaning of the Conservation Act 1987".*

The establishment of a marine reserve on the north-east coast of Great Barrier may have a limited impact on adjacent landowners, especially those who reside in the area. For example, landowners may have to travel to other parts of the coast of Great Barrier in order to fish and gather seafood. The Mabey family, who reside on their land which adjoins the proposed reserve, have fished in the area for three or more generations. The imposition of a prohibition on fishing may in this case be regarded as interfering unduly with their interests. Accordingly, the applicant is proposing that the immediate members of the Mabey family be permitted to take a specified amount of fish from a defined portion of the proposed marine reserve, which would be not larger than an area 200 metres seaward from the boundary of their land adjoining the proposed reserve. Normal daily amateur catch limits would apply. The right would extend only to members of the Mabey family and be extinguished upon any transfer or sale or testamentary disposition of title of their adjoining land.

The existence of a marine reserve does not confer any right of access onto or across private land by the Department of Conservation or the public to the proposed reserve. The boundaries of the proposed reserve would be at Mean High Water Mark in all areas adjacent to private land.

5.3 RAKITU ISLAND LESSEES

Rakitu Island was bought from the Rope Family Trust by the Department of Conservation in 1993. At the time of purchase, the Trust was granted a 20 year farm lease (commencing 25 November 1993) over the farmed area of the island and members of the families belonging to the Trust were granted the right for life to "pass and repass" over the island and to occupy two dwellings on the island.

Rakitu Island is visited often by the former owners and is inhabited by resident farm managers, who occupy a third dwelling on the island. The island is only accessible by boat and would be completely enclosed by the proposed reserve. Residents of the island currently fish and collect shellfish around the island for sustenance. While residents do not solely rely on the seafood collected for nourishment, periods of bad weather can restrict access for delivery of food to the island, and the seafood collected is therefore a welcome addition to their diet. Residents will have no easy alternative place to fish if the marine reserve is established.

The applicant is therefore proposing that members of the Rope Family Trust who have a life interest on the island and those who are resident on the island be permitted to take a specified amount of fish from within an area not larger than 200 metres seaward from the shore of Rakitu Island. Normal daily amateur catch limits would apply.

5.4 COMMERCIAL FISHING

The Ministry of Fisheries is the government agency responsible for the sustainable management of fisheries in New Zealand. The purpose of the Fisheries Act 1996 is to provide for the utilisation of fisheries resources while ensuring sustainability. The Quota Management System (QMS) is one of the tools used by the Ministry to ensure sustainable management of commercial fisheries. In submissions to the Great Barrier marine reserve proposal, many people made a general comment to the effect that the QMS adequately protects New Zealand's marine environments and that marine reserves were therefore not needed. However, the QMS alone does not operate to protect marine environments from the adverse effects of some fishing methods, nor provide a high level of protection to smaller areas. Marine reserves by contrast fully protect biodiversity and the complete natural ecosystem. The additional protection of the environment from the adverse effects of fishing can be provided for through various regulations including method restrictions and area closures.

For each commercial fish species managed under the QMS, New Zealand's Exclusive Economic Zone is divided into Quota Management Areas, Fisheries Management Areas and Statistical Areas. These management areas are used by the Ministry of Fisheries to record where fish are commercially caught and to administer the QMS.

Information on commercial fishing catch and effort data was provided by the Ministry of Fisheries in a summarised format (confidential information for each individual boat was not provided by the Ministry) and a report was compiled by the applicant (Department of Conservation, 2004)[1]. The proposed Aotea (Great Barrier) marine reserve is located in statistical fishing area 008, which applies to all species, and area 905, which is for rock lobster. The proposed reserve makes up only a very small part of statistical areas 008 and 905.

Commercial set netting is prohibited on the eastern side of Rakitu Island, from Hautapu Point in the north to Te Akau Point in the south and extending out 0.5 nautical miles. The reason for this prohibition is to prevent 'ghost fishing' by lost set nets. Extensive deep rocky reef areas north-east of Rakitu Island make some methods of commercial fishing such as trawling in this area difficult or impossible. However, other fishing methods may be utilised on the reef areas and other habitats within the proposed reserve are not protected from the potential impacts of commercial fishing. All commercial fishing within the boundaries of the proposed reserve would be prohibited.

The waters within the proposed marine reserve are currently subject to some commercial fishing. Information from submissions to the 2003 Great Barrier marine reserve proposal indicates that commercial crayfish potting, longlining, purse seining

[1] This report is available on the Department's website (www.doc.govt.nz).

and diving are undertaken in the area and that the main species targeted include rock lobster, snapper, tarakihi, trevally and kina. Other submissions stated that the following species were caught commercially within the proposal area: packhorse rock lobster, garfish, pilchard, anchovy, tuna, John Dory and gurnard. The establishment of the proposed reserve will have some impact on existing commercial fishing activity. However, the proposed reserve makes up a very small part of Quota Management Areas and the majority of these areas will continue to be available for commercial fishing. Further consultation with commercial fishers is proposed.

Several commercial fishers use anchorages on the north-east coast of Great Barrier for shelter when fishing offshore. This activity would not be affected as anchoring is not prohibited under the Marine Reserves Act 1971.

5.5 VESSELS AND NAVIGATION

Marine reserves do not affect rights of navigation. Commercial fishing vessels and other vessels use parts of the north-east coast of Great Barrier for shelter. The Marine Reserves Act 1971 and the Marine Reserves Regulations 1993 make provision for the rights of vessels in distress to seek shelter or anchorage. The Marine Reserves Regulations provide for anchoring in a marine reserve as long as damage to the reserve does not occur or is kept to a minimum.

The Marine Reserves Act and Marine Reserves Regulations allow the Director-General of Conservation to restrict anchoring in some parts of marine reserves, other than in times of emergency, if this was necessary to protect vulnerable marine life or habitats. However, there are no plans to restrict anchoring in the proposed marine reserve.

Tourist and recreational vessels also anchor whilst visiting. The Marine Reserves Act may have an effect on aspects of the operation of these vessels. For example, the Act prohibits among other things the introduction of a living organism into a marine reserve and also the depositing of rubbish within the reserve boundaries.

Commercial and recreational vessels with catch on board that was legitimately caught outside the proposed marine reserve are able to anchor and transit the marine reserve legally, without fear of prosecution. It is proposed that for the avoidance of doubt about the operation of the of the Fisheries Act compliance regulations and practices that either transiting the proposed reserve, or sheltering and anchoring in the reserve, with catch on board provides no sufficient basis for prosecution. This would ensure that vessels may continue to use the area in bad weather without risk of compliance activity interfering with their activities.

It is likely that large vessels would, including those carrying oil or other potential marine pollutants, travel through the proposed reserve from time to time. The Maritime Safety Authority, which undertakes activities that promote a safe maritime environment and provide effective marine pollution prevention, has developed marine protection rules which are aimed at preventing pollution of the sea from ships and the disposal of waste.

5.6 CHARTER BOAT OPERATORS

At least five charter boat operators visit the north-east coast of Great Barrier. Charter trips are aimed primarily at recreational fishers, but sightseeing and diving are also catered for. Discussions with individual charter operators indicate that they commonly visit the general Great Barrier Island area between eight and 20 times per year but that frequency of visitation is very weather dependent. Charter operators state that weather conditions are always a factor when trying to fish off the north-east coast of the island and that they visit the north-east coast less because of this. The main species targeted are snapper, kingfish and hapuka but a number of other species are caught.

It is acknowledged that some charter operators will be inconvenienced by the proposal. However, the proposed reserve only covers approximately 18 percent of the island's coastline, meaning that alternative sites for boat and land-based fishing do exist elsewhere around Great Barrier Island and elsewhere in the Hauraki Gulf.

The presence of a marine reserve in the vicinity of Great Barrier Island may enhance non-extractive charter operations. Charter boats that run dive trips to the area might benefit from the combination of a marine reserve and nearby areas for recreational fishing.

5.7 RECREATIONAL FISHING

Great Barrier residents and visitors to the island use the north-east coast of the island for recreational or non-commercial fishing from the shore and from boats. In addition, people travel by boat from the greater Auckland and Coromandel areas to fish off the north-east coast.

It is acknowledged that some recreational or amateur fishers, particularly those resident on the island, may be affected by the proposal. Fresh fish is not readily available for sale on Great Barrier Island so some island residents and visitors rely on their ability to catch fish and gather shellfish in their local area to supplement their diet. However, numerous alternate sites for boat and land-based fishing exist elsewhere around Great Barrier Island and in the wider Hauraki Gulf and Coromandel Peninsula areas.

The north-east coast of Great Barrier is a very exposed coastline, especially when wind and sea conditions are from the north-west through north to south-east. There is a large proportion of the time that wind and sea conditions would not be suitable for small to medium-sized recreational vessels to use the north-east coast.

A survey of boats visible on the north-east coast of Great Barrier was undertaken in December 2003 and January 2004. At a single time each day, boats were counted at three locations: Okiwi – looking along Whangapoua Beach (point A), Okiwi – looking towards Harataonga (point B) and Harataonga (point C) (Department of Conservation, 2004)[2].

The results showed that on most days, despite favourable weather conditions during this period, only low to moderate (between 0 and 20) numbers of boats per day were visible on the north-east coast. The table below shows the number of boats recorded each day during the survey.

Boat count survey – December 2003 to January 2004			
Date	**Number of boats**		
	Point A	**Point B**	**Point C**
24/12/03	1	0	Not recorded
25/12/03	0	0	Not recorded
26/12/03	1	0	Not recorded
27/12/03	3	0	4
28/12/03	22	1	5
29/12/03	21	0	1
30/12/03	9	1	24
31/12/03	5	1	11
01/01/04	1	2	16
02/01/04	41	0	20
03/01/04	32	3	3
04/01/04	Not recorded	Not recorded	4
05/01/04	11	1	5
06/01/04	18	3	4
07/01/04	14	0	4
08/01/04	17	1	0
09/01/04	11	0	1
10/01/04	2	0	2
11/01/04	0	1	1
12/01/04	1	0	1
13/01/04	3	1	0
14/01/04	2	2	0
15/01/04	0	1	Not recorded

A repeat survey undertaken in April 2004, which included the Easter period, showed low numbers of boats (5 or less) visible on the majority of days in the survey area (Department of Conservation, 2004). The table below shows the number of boats recorded each day during the survey.

[2] This report, which includes a map showing the area surveyed, is available on the Department's website (www.doc.govt.nz).

Boat count survey – April 2004			
Date	**Number of boats**		
	Point A	**Point B**	**Point C**
04/04/04	Not recorded	Not recorded	3
05/04/04	Not recorded	Not recorded	1
06/04/04	0	0	1
07/04/04	0	0	0
08/04/04	1	0	0
09/04/04	0	0	1
10/04/04	1	0	4
11/04/04	4	3	7
12/04/04	0	5	6
13/04/04	1	0	1
14/04/04	1	1	0
15/04/04	0	0	0
16/04/04	0	0	1
17/04/04	0	0	1
18/04/04	1	0	Not recorded
19/04/04	0	0	Not recorded

It should be noted that the surveys do not quantify the number of people fishing in the proposal area. All boats visible in the area surveyed were counted, not just those boats that were seen to be engaging in fishing activities.

Many recreational fishers are concerned that a marine reserve would adversely impact the safety of those boating in the area as they would be forced to detour around the boundaries of the reserve if they had fish on board their boat or else risk prosecution. As mentioned in section 5.5, commercial and recreational vessels with catch on board that was legitimately caught outside the proposed marine reserve would be able to anchor and transit the marine reserve without fear of prosecution.

5.8 DIVING

Divers currently visit the north-eastern coast of Great Barrier Island for both extractive purposes (e.g. spear fishing, crayfishing etc) and non-extractive purposes (e.g. observing marine life, viewing underwater scenery, underwater photography etc).

Those who spear fish and dive for crayfish on the north-eastern coast of Great Barrier Island may be affected by the proposed marine reserve. Non-extractive divers will not be affected by the proposed reserve. The proposed marine reserve may enhance the quality of the diving experience for others on the north-eastern coast of Great Barrier Island by increasing the abundance of previously fished marine life.

5.9 OTHER RECREATIONAL USERS

In addition to fishing and diving, visitors to the north-east coast of Great Barrier undertake a number of other recreational activities. Whangapoua Beach is used for surfing and this beach and Harataonga Beach are used for swimming, walking, picnicking and appreciation of the above-water scenery.

The knowledge that the area is a marine reserve may enhance the experience of some visitors to the area, even if they are not able to directly experience the underwater habitats. Dolphins and Bryde's whales are commonly seen within the proposed reserve. Birds, including the New Zealand dotterel, nest along the north-east coast.

Only recreational activities that involve the extraction or disturbance of marine life or the habitat of marine life would be restricted. Recreational activities such as swimming, surfing, picnicking and walking would not be affected by the proposed reserve. Activities involving the observation of marine life such as snorkelling, scuba diving and underwater photography will not be affected by the proposed reserve and may be enhanced if the marine life in the area increases in abundance, as has happened in other marine reserves around New Zealand.

5.10 SCIENTIFIC AND EDUCATIONAL INTERESTS

The establishment of a marine reserve on the north-east coast of Great Barrier Island would be of great significance to the scientific community. A number of scientific and educational institutions and groups have used the area for scientific research in the past including the Offshore Islands Research Group and the Bay of Plenty Polytechnic. Research undertaken in the proposed reserve to date has included studies of macro-fauna in both inter-tidal and sub-tidal habitats and surveys of marine algae and fish. The proposed marine reserve has great potential for further scientific study (see section 6.1 for further detail).

Any individual or group wishing to conduct scientific research in the proposed marine reserve would require the prior approval of the Director-General of Conservation, and any necessary approvals under the Fisheries Act 1996. All scientific research and educational activities in the proposed reserve would also have to be consistent with the purposes and principles of the Marine Reserves Act 1971 and the management objectives of the reserve.

6. Justification

6.1 MEETS PURPOSE OF MARINE RESERVES ACT 1971

The purpose of the Marine Reserves Act 1971 is set out in section 3(1) which states (emphasis added):
*"It is hereby declared that the provisions of this Act shall have effect for the purpose of preserving, as marine reserves for the **scientific study of marine life**, areas of New Zealand that contain **underwater scenery, natural features, or marine life** of such **distinctive quality**, or so **typical**, or **beautiful**, or **unique** that their continued preservation is in the **national interest**."*

To qualify for reserve status the proposed area must contain at least one of the criteria (i.e. underwater scenery, natural features or marine life). It may contain any or all of those features in combination. In turn, one of the descriptive criteria (i.e. distinctive quality, typical, beautiful or unique) must apply to one or more of the features. The applicant is satisfied that the application meets the requirements under Section 3(1) of the Act.

'Underwater scenery, natural features, or marine life'

As set out in chapter 4 of this application, the proposed reserve contains a range of natural features, marine life and underwater scenery.

'Of such distinctive quality'

The north-east coast of Great Barrier Island is distinctive because, in combination, the diversity and representativeness of the area give it special value. There are few, if any, other locations within the Auckland region, and perhaps New Zealand, with as many different landforms, habitats and species in such close proximity (Irving and Jeffs, 1993). In addition, the area retains much of its original natural character, due primarily to a low impact of development and change to the margins and catchment of the area.

At around 50,100 hectares, the proposed reserve will allow for the protection of a range of different habitat types, some of which are not well represented in other marine reserves around mainland New Zealand (e.g. deep water reefs and deep water sediment areas). The large size of the proposed reserve will provide for connectivity of habitats and may be of benefit to some marine species that utilise a range of habitats and depths for various stages of their life history. In addition, the large size of the proposed reserve may provide an opportunity for study of the "edge effects" of fishing and other disturbance around the proposed reserve.

Recent studies of the north-east Great Barrier area clearly indicate the presence of deep reef patches that are rich in biodiversity and support a significant number of species, including some that are distinctive (Sivaguru and Grace, 2004). Distinctive features noted were the presence of two species of glass sponge and a large gorgonian. The presence of the sponge species is globally important due to the relatively shallow depth at which they were recorded off Great Barrier. A further distinctive feature of the sponge fauna was the large size of many of the sponges, indicating they may be of great age. The presence of the large gorgonian is of national importance as it is likely to be a new genus which is endemic to New Zealand (Sivaguru and Grace, 2004).

A range of other features on the north-east coast of Great Barrier can be described as distinctive. For example, Morrison et al (2001) commented that sponge diversity in areas of north-east Great Barrier was high which is unusual in the Hauraki Gulf. In addition, populations of packhorse rock lobster around the Harataonga area are distinctive as they were found to be much higher in numbers in this location than in similar surveys on the adjacent mainland coast (Creese and McDowall, 2001).

'Or so typical'

A number of elements of the north-east coast of Great Barrier are typical. The rocky inter-tidal shores of north-eastern Great Barrier and Rakitu Island are typical of northern shores. Of the species restricted to the northern warm current area, North Cape to East

Cape, virtually all are recorded on the north-east coast of Great Barrier. There is a great variety of inter-tidal habitats, including a range of rock types and virtually the full range of wave exposure indices for rocky inter-tidal shores (Irving and Jeffs, 1993).

Along the north-east coast of Great Barrier there are fish species assemblages and individual species which reflect a number of northern New Zealand conditions e.g. the sub-tropical influence, offshore islands and coastal north-east New Zealand (Irving and Jeffs, 1993). The diversity of fish fauna, plus the presence in low numbers of several subtropical species, is typical of an island off north-eastern New Zealand which is weakly influenced by the East Auckland Current (Roberts et al, 1986). The proposed reserve is one of a small number of locations in north-eastern New Zealand that are influenced by the East Auckland Current and where sub-tropical fish species are found in reasonable numbers. However, it is typical of such locations.

Studies have indicated that the inter-tidal marine invertebrates of the area are typical of northern or north-eastern New Zealand, with many species characteristic to offshore islands and some typical of more sheltered Hauraki Gulf areas (Irving and Jeffs, 1993). The majority of sponges recorded in the area are typical of offshore island faunas of north-east and northern New Zealand (Morrison et al, 2001) and urchin species are characteristic of north-eastern offshore islands influenced by the East Auckland Current (Irving and Jeffs, 1993).

Most of the algal species recorded in the area are typical of north-eastern New Zealand in moderately exposed to exposed conditions (Francis and Grace, 1986). Kelly and Haggitt (2002) found that mixed-algal assemblages were characteristic or typical of exposed coastal reefs.

The north-east coast of Great Barrier therefore meets the criteria of section 3(1) as being 'typical'.

'So beautiful'

While beauty is a subjective criterion, there is no doubt that the scenery of north-east Great Barrier, both above and below water, is attractive to people who use and visit the area. The geology of the area creates a varied coastline with sea caves, rock stacks, 'guts' and rocky reefs. These, and the clear oceanic water in the area, add to the beauty of the underwater scenery. Some areas in the proposed reserve, such as Rakitu Island and its surrounding reefs, represent an attractive area for divers. In addition, the deepwater reefs and species that live on them are arguably beautiful. While these are beyond diving depth using currently available technology, photographs and video can convey their beauty to people.

'So unique'

While the available biological information has identified some unusual or distinctive features in the north-east Great Barrier area, it is not known whether any elements in the proposed reserve are unique.

'For the scientific study of marine life'

The scientific study of marine life is of national importance because evaluating the state of New Zealand's marine and coastal biodiversity is difficult due to our very limited information. The proposed Aotea (Great Barrier) marine reserve will provide an excellent opportunity to undertake scientific study to improve our understanding of the structure and functioning of the marine environment. Scientific studies in the proposal area may also contribute to a better understanding of how the impacts of human use and development on marine environments can be managed.

A great variety of scientific studies could be undertaken in the proposed reserve area and areas likely to be of interest are listed below.

- The presence of gorgonian and sponge species at unusually shallow depths is of considerable scientific interest. Studies of the biophysical aspects of the ecosystems containing these species may provide important information about why these species are present at shallow depths.

- The wide range of habitats included in the proposed reserve offers an opportunity to study population dynamics and community structure in a relatively undisturbed environment. This is a significant opportunity as other

mainland New Zealand marine reserves do not include such a wide range of habitats.

- There is the potential that species new to science will be discovered in some of the deeper areas of the proposed reserve as more scientific studies of the area are undertaken. The proposed reserve will improve the chances of survival of marine species by minimising disturbance of their habitat. The proposed reserve will also offer an opportunity to describe any new species discovered in a protected environment free from disturbance.
- The proposed reserve covers a range of habitats from inter-tidal to Continental Shelf to approximately 100 – 150 metres in depth and this raises the possibility of studies of the inter-connectivity of different marine habitats in a relatively undisturbed environment.
- The north-east coast has significant populations of packhorse crayfish and the reserve would present an opportunity to study this species in a protected environment, an opportunity not available elsewhere.
- The proposed reserve would be of great value to scientific study as it would provide a control area against which changes elsewhere could be studied and measured.

'Continued preservation is in the national interest'

The Marine Reserves Act is an enabling statute that provides for areas to be set aside for scientific study. It is a matter of national interest that marine areas are set aside for the protection of marine biodiversity and their continued preservation. This is outlined in the New Zealand Biodiversity Strategy 2000 which has as one of its objectives: *"Protect a full range of natural marine habitats and ecosystems to effectively conserve marine biodiversity, using a range of appropriate mechanisms, including legal protection."*

The proposed reserve will protect a range of marine habitats, allowing current and future generations of marine life to be preserved and provide a relatively undisturbed area rich in natural values for people to enjoy.

6.2 MEETS OTHER LEGISLATIVE REQUIREMENTS

Under section 4(1) of the Marine Reserves Act 1971, no area for which any lease or licence under the Marine Farming Act 1971 is in force can be declared a marine reserve. With respect to this application no marine farming lease or licence has been issued for any part of the proposed marine reserve area.

The area of the proposed marine reserve forms a remote part of the Hauraki Gulf Marine Park, which was established to, among other things, recognise and protect in perpetuity the international and national significance of the land and the natural and historic resources within the Park. The inter-relationship between the Hauraki Gulf, its islands and catchments and the ability of that inter-relationship to sustain the life-supporting capacity of the environment of the Hauraki Gulf and its islands were recognised as matters of national significance in the Act. The life-supporting capacity of the environment of the Gulf and its islands includes the capacity to provide for: the historic, traditional, cultural and spiritual relationship of tantaga whenua with the Gulf and its islands and coastal areas; and the social, economic, recreational and cultural well-being of people and communities.

The use of the resources of the Gulf by the people and communities of the Gulf and New Zealand for economic activities and recreation are recognised in the Act. This marine reserve proposal seeks to address the need to effectively provide protection for part of the ecosystem of the Hauraki Gulf Marine Park and meet the management objectives of the Hauraki Gulf Marine Park Act 2000.

6.3 CONSULTATION

As mentioned in chapter 3 of this application, the applicant has carried out pre-notification consultation in relation to this proposal. This consultation, although not

required under the Marine Reserves Act 1971, is carried out to enable the Director-General of Conservation as applicant to ascertain the views of tangata whenua, the local community and other interested parties to the proposal.

A number of concerns relating to the potential impact of the proposed reserve were raised by submitters during the pre-notification consultation that has led up to this application. A summary of submissions received is attached as Appendix 2. While there is some general support for marine protection in the area, the proposal remains controversial amongst some groups. Despite the range of views apparent, the applicant believes the proposed area is an appropriate location for a marine reserve for the reasons outlined in chapter 4 and section 6.1. Some issues raised in earlier consultation have been taken into account and boundaries have been modified.

While extractive users may well be impacted by marine reserves, the area of this application is remote and subject to light use compared to areas within the inner Hauraki Gulf. Establishing marine reserves involves a balance between the wider public interest of marine protection against potential interference on the users or interest groups identified in section 5(6) of the Marine Reserves Act 1971. The legislative test relates to whether this interference is "undue" or in the case of section 5(6)(d) would "adversely effect" and this involves a balancing of interests.

The pre-notification consultation process is distinct from the statutory notification process that is required under section 5 of the Marine Reserves Act and which calls for objections. If any person who has already made known his or her views and wishes that those views be taken into account by the Minister he or she must make a further formal objection within the time provided under section 5 of the Act (two months).

It is proposed to further consult with interested groups in order to provide advice to decision makers, taking into account the interests of these groups and individuals. A summary of the consultation undertaken to date can be found in Appendix 4.

6.4 BOUNDARY SELECTION

The length of coastline included in the proposed reserve incorporates a number of distinctive ecological marine areas including sandy beaches and exposed and semi-sheltered rocky coasts. Locating the northern boundary at the Needles incorporates areas of deep rocky reef that occur east and south-east of the Needles, to at least nine nautical miles offshore (Grace, 2002). Locating the southern boundary at a point north of Korotiti Bay and the seaward boundary at the edge of the territorial sea allows for a range of habitats including rocky shore, and inshore and deep-water sediment areas to be included in the proposed reserve.

The southern boundary of the proposed reserve has been altered slightly from the one proposed in the discussion document in 2003. The proposed southern boundary is now located at a point which will enable it to be more easily identified. This will result in a reduction in the amount of rocky coastline and marine area included in the proposed reserve. The area excluded contains habitats already represented within the proposed reserve.

The applicant has chosen the 12 nautical mile limit of New Zealand's territorial sea as the seaward boundary of the reserve as this allows for a sequence of marine habitats that include deep water habitats beyond 100 metres in depth to be incorporated in the proposed reserve. At these depths, the establishment of the reserve boundaries at a consistent point – i.e. the 12 nautical mile limit of New Zealand's territorial sea – is considered to be a readily identifiable and practicable boundary from a navigational and enforcement perspective and, as the area encompasses the deep reefs to the east of the Needles and a sufficient area of deep sediment habitat, to be of scientific value.

7. Proposed Management

7.1 LEVEL OF PROTECTION

The objective of this application is to protect a range of distinctive and typical marine habitats. Therefore, no extraction or disturbance of marine life, other than for approved scientific and management purposes or for specific affected parties, would be permitted in the reserve. This is in keeping with Department of Conservation policy and section 3(2) of the Marine Reserves Act 1971 which states that:
"…marine reserves 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) The marine life of the reserves shall as far as possible be protected and preserved
(c) The value of marine reserves as the natural habitat of marine life shall as far as possible be maintained."

7.2 DURATION

It is proposed to establish the marine reserve with a condition to the effect that the Department will initiate a review of the reserve 25 years after its legal creation.

7.3 PUBLIC ACCESS AND NAVIGATION

Section 3(2)(d) of the Marine Reserves Act 1971 provides that:
"Subject to the provisions of this Act and to the imposition of such conditions and restrictions as may be necessary for the preservation of marine life or for the welfare in general of the reserves, the public shall have freedom of access and entry to the reserves, so that they may enjoy in full measure the opportunity to study, observe and record marine life in its natural habitat."

Public access to the proposed reserve will be via road or foot access from the island, or via marine craft.

There are three road access points to the proposed reserve: Mabeys Road which ends just short (100 metres) of Whangapoua Beach, Okiwi Road at Whangapoua Estuary and Harataonga Road which runs to Harataonga Beach. Public camping grounds are located adjacent to Whangapoua Beach and at Harataonga. At low tide, it is possible to walk from the Whangapoua camping ground across the estuary to Whangapoua Beach. The Harataonga/Okiwi Coastal Track, which runs from the main road near Whangapoua Estuary to Harataonga Bay, provides excellent views of the proposed reserve.

The north-eastern coast of Te Paparahi Stewardship Area can be accessed by boat or foot. There are no restrictions to landing and walking on the coast of the Stewardship Area. However, weather can often prevent safe landing. Rangiwhakaea Bay, on the north-eastern coast, can be accessed by a tramping route from Burrill Track, which runs from Mabeys Road to Tataweka, a peak in the north of the island.

Rakitu Island is only accessible by boat. The island is a scenic reserve and visitors are free to land and walk around the island. There is a working farm on the island so it is important that people respect gates, fences and stock etc. Overnight camping is prohibited on the island, as are dogs and the lighting of fires.

Limited boat launching opportunities exist along the coastline adjoining the proposed reserve. Dinghies can be launched within the Whangapoua Estuary and at Harataonga when weather and sea conditions permit. Trailer boats can be launched at boat ramps at Port Fitzroy, Whangaparapara and Tryphena on the island, although weather and sea conditions do not always permit safe access by trailer boats to the north-east coast from the west coast of the island.

A large number of boats with the potential to safely navigate to Great Barrier are moored in and around Auckland (approximately 90 kilometres from the proposed reserve) and the Coromandel. Many do visit the west coast of the island during summer, particularly over holiday periods. However, relatively few venture around to the north-east coast because of the infrequency of suitable weather and sea conditions and the lack of safe anchorages.

7.4 BOUNDARY IDENTIFICATION

It is not feasible to mark the seaward boundary of the marine reserve. The distance of 12 nautical miles from the coast of Great Barrier Island would enable boats equipped with Global Positioning System (GPS) to determine whether they are inside or outside the proposed marine reserve. The landward boundaries of the reserve will be marked.

The Department of Conservation will arrange for the reserve boundaries to be defined on a Survey Office Plan. Land Information New Zealand (LINZ) and the Navy Hydrographer (Royal New Zealand Navy) will be requested to include the boundaries in the relevant navigation charts.

7.5 COMPLIANCE AND LAW ENFORCEMENT

It is the Department of Conservation's policy to ensure that compliance and law enforcement within each marine reserve is effective (Department of Conservation, 1995). A compliance and law enforcement plan will be prepared for the marine reserve. The Government is encouraging a multi-agency approach to a range of compliance and law enforcement issues in New Zealand so it is possible that agencies such as the New Zealand Customs Service, Ministry of Fisheries, and the Royal New Zealand Airforce and Navy, as well as the Department of Conservation, may be involved in compliance and law enforcement of marine reserves. Under section 17 of the Marine Reserves Act, the Director-General of Conservation may appoint any suitable person to be a ranger in an honorary capacity for the purposes of the Act.

7.6 MONITORING AND SCIENTIFIC RESEARCH

The Department of Conservation has a policy to encourage appropriate scientific research in marine reserves (Department of Conservation, 1995). Organisations such as universities, Crown Research Institutes, government agencies and individuals may conduct scientific research in marine reserves provided they first obtain the necessary approvals from the Director-General of Conservation. The Aotea (Great Barrier) Marine Reserve will be an outstanding resource for the scientific community.

Any monitoring carried out by the Department of Conservation in the proposed marine reserve will be focused on management issues such as the preservation of the marine reserve's marine life and habitats.

7.7 EDUCATION AND INTERPRETATION

Marine reserves are places where people can experience first hand the benefits of protecting the marine environment. The Department of Conservation will provide opportunities for the public to learn about the marine life and habitats of the marine reserve through the production of a pamphlet, interpretative signs, and where appropriate public talks, displays and media features. Educational initiatives that are in keeping with the purpose of marine reserves will be encouraged.

7.8 MARINE RESERVE MANAGEMENT

The day-to-day management of marine reserves is the responsibility of the Department of Conservation. However, as in the case of some marine reserves, advisory committees have been established to enable the local community to become involved in management issues and the administration of the marine reserve. The applicant would

like to see the local community and iwi be involved in the ongoing administration of the reserve and is therefore proposing that a marine reserve management committee be established, comprising one half tangata whenua representation together with representatives of the local community and other significant stakeholders.

Summary

The Aotea (Great Barrier) Marine Reserve application seeks to establish a 50,100 hectare marine reserve (approximately), encompassing the territorial sea and all internal waters (except Whangapoua Estuary) on the north-east coast of Great Barrier Island between the Needles and a point north of Korotiti Bay from mean high water springs (except where reserve is adjacent to private land) to the boundary of the territorial sea at 12 nautical miles.

The proposed marine reserve would completely protect a range of both distinctive and typical marine habitats and species assemblages. The application satisfies the requirements of the Marine Reserves Act 1971, and would make a significant contribution to the establishment of a marine reserve network, incorporating representative examples of the full range of habitats and ecosystems found in New Zealand's marine environment.

References

Armitage, Don (ed). 2001: Great Barrier Island. Canterbury University Press.

Ayres, B. 2003: Analysis of written public submissions on "A Marine Reserve for Great Barrier Island? – Your Chance to Have Your Say". Report for Department of Conservation, Auckland Conservancy, Auckland.

Brook, F.J. 1982: The Scleractinian Coral Fauna of Rakitu Island, North-East New Zealand. Tane 28: 163-173.

Creese, Bob and McDowall, Bob. 2001: Marine and Freshwater Life. In: Great Barrier Island, edited by Don Armitage, Canterbury University Press, 2001.

Cromarty, Pam. 1996: A Directory of Wetlands in New Zealand. Department of Conservation.

Department of Conservation. 1994: Draft Application for the Rakitu (Great Barrier Island) Marine Reserve. Department of Conservation, Auckland Conservancy, Auckland.

Department of Conservation. 1995: Implementation of Legal Protection: Marine Areas. Conservation Management Strategy for Auckland 1995 – 2005. Auckland Conservancy Conservation Management Planning Series No. 2.

Department of Conservation. 1995: Marine reserves: a Department of Conservation Information Paper. Published Department of Conservation, Wellington.

Department of Conservation. 2002: Marine Reserves Handbook for the Department of Conservation – Working Draft. Published Department of Conservation, Wellington.

Department of Conservation. 2003. A Marine Reserve for Great Barrier Island? Your chance to have a say. Published Department of Conservation, Auckland Conservancy, Auckland.

Department of Conservation. 2004: Great Barrier Island Marine Reserve Proposal Boat Count Survey – December 2003 to January 2004. Department of Conservation, Auckland Conservancy, Auckland.

Department of Conservation. 2004: Great Barrier Island Marine Reserve Proposal Boat Count Survey – April 2004. Department of Conservation, Auckland Conservancy, Auckland.

Department of Conservation. 2004: Great Barrier Island Marine Reserve Proposal – Analysis of commercial fishing (Catch & Effort). Department of Conservation, Auckland Conservancy, Auckland.

Francis, M.P. and Grace, R.V. 1986: Marine algal survey of north-eastern Great Barrier Island, New Zealand. Journal of the Royal Society of New Zealand 16: 335-346.

Grace, Roger. 2002: Field Report on Second Deep Reef Expedition, Great Barrier Island, December 2002. Report for Department of Conservation, Auckland Conservancy, Auckland.

Grace, Roger. 2002: Great Barrier Island Marine Reserve Proposal - Field report on deep survey, 6 to 9 May 2002. Report for Department of Conservation, Auckland Conservancy, Auckland.

Grace, Roger. 2002: Marine fauna of Whangapoua Beach, Great Barrier Island. Report prepared for Department of Conservation, Auckland Conservancy, Auckland.

Grace, Roger. 2004. Marine ecologist, Auckland. Personal communication.

Hayward, B.W. 1982: Offshore Islands Research Group trip to Rakitu (Arid) Island, north-east New Zealand, New Year 1980-81. Tane 28: 79-84.

Hayward, B.W., Grace, R.V. and Francis, M.P. 1986: Sediments and benthos of north-eastern Great Barrier Island, New Zealand. Journal of the Royal Society of New Zealand 16: 347-355.

Irving, Paul, Jeffs, Andrew and Woods, Karen. 1991: A Marine Reserve for Great Barrier Island? An Analysis of Public Submissions. Department of Conservation: Auckland Conservancy Technical Report Series No. 4, Auckland.

Irving, Paul and Jeffs, Andrew. 1993: The North-Eastern Coast of Great Barrier Island. A Report on Surveys of the Coastal Environment and a Review of Existing Information. Executive

Summary. Department of Conservation: Auckland Conservancy Technical Report Series No. 5, Auckland.

Kelly, Shane and Haggitt, Tim. 2002: Benthic Reef Survey of Waikaro Point to Needles Point – Great Barrier Island. Report prepared by Coastal & Aquatic Systems Limited for Department of Conservation, Auckland Conservancy, Auckland.

King, K.J., Bailey, K.N. and Clark, M.R. 1985: Coastal and Marine Ecological Areas of New Zealand. Department of Lands and Survey, Wellington.

Maori Land Court. 1998: Decision on application to determine the status of certain islands and rock outcrops in the environs of Aotea and application to investigate the title and ownership of Maori customary land in the environs of Aotea. Auckland.

Ministry of Agriculture and Fisheries. 1985: Auckland Region Marine Reserves Plan. A discussion paper. MAF, Fisheries Management Division, Auckland.

Moore, P.R. and Kenny, J.A. 1985: Geology of north-eastern Great Barrier Island (Needles Point to Rangiwhakaea Bay), New Zealand. Journal of the Royal Society of New Zealand 15: 235-250.

Morrison, M., Drury, J. and Shankar, U. 2001: An acoustic survey of the seafloor habitats of Tiritiri Matangi Island and of the north-eastern side of Great Barrier Island. Consultancy report prepared by NIWA for the Department of Conservation.

Roberts, L.I.N., Ward, C., and Francis, M.P. 1986: Fishes of north-eastern Great Barrier Island, New Zealand. Journal of the Royal Society of New Zealand. Volume 16, Number 4: 357-362.

Sivaguru, Kala and Grace, Roger. 2004: Habitat and species diversity of deep reefs and sediments at Great Barrier Island. Auckland Conservancy, Department of Conservation, Auckland.

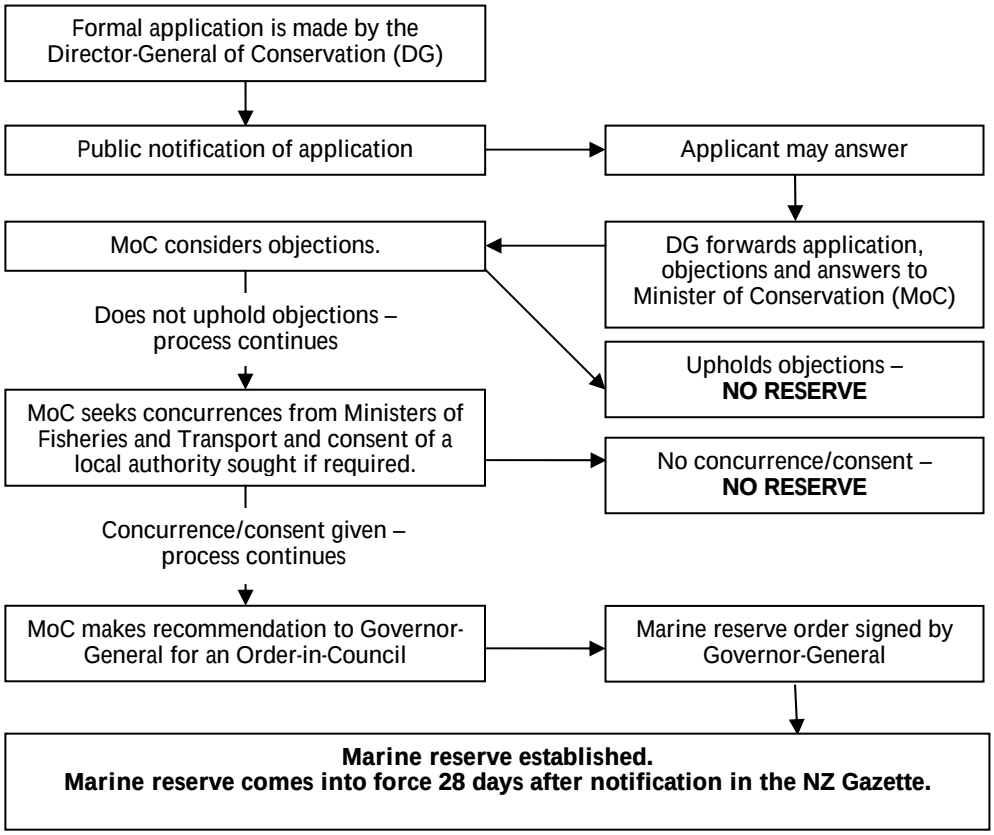
UMR Research. 2003: Department of Conservation Omnibus Results – Favourability Rating and Support for Marine Reserves, January 2003. UMR Research, Wellington.

Walls, Kathy. 2004: Interim Nearshore Marine Classification. A tool to assist establishing a New Zealand network of protected marine areas. In preparation. Department of Conservation, Wellington.

Appendix 1

THE STATUTORY PROCESS FOR ESTABLISHING A MARINE RESERVE

See section 5 of the Marine Reserves Act 1971 for more detail.



Appendix 2

SUMMARY OF SUBMISSIONS TO 2003 GREAT BARRIER MARINE RESERVE PROPOSAL

In March 2003 the Department of Conservation released a document entitled *"A Marine Reserve for Great Barrier Island? – Your chance to have a say"*. This proposal document identified the area of interest for a marine reserve, and outlined the history of the proposal and the ecological values of the area of interest. Accompanying this document was a questionnaire in which the Department stated: "We want to know your opinions and ideas before we prepare a formal application for a marine reserve on the north-east coast of Great Barrier Island (GBI). Your views are important, so make sure you have your say!"

The closing date for receipt of comments on the proposed area of interest was initially 30 June 2003, but was later extended to 31 July 2003 to ensure that all interested parties had adequate time for this stage of the process. Comments received after 31 July were also accepted.

The Department received 1,863 responses and most of these (1,212) were returned on the questionnaire provided. One petition, opposing the proposal, was received with about 400 signatures. Some responses had letters attached in which the writers elaborated points made in the questionnaire. Five hundred and fifty-seven (557) responses were received via email and all but four were on website forms distributed by Option4, a recreational fishing advocate group. Some letters and faxes were also received.

The questionnaire asked *"Do you support the principle of a marine reserve somewhere on the north-east coast of Great Barrier Island?"* Of the 1,863 submissions received, 446 (24%) were supportive in principle of the creation of a marine reserve on the north-eastern coast of Great Barrier Island. Nineteen (1%) submissions neither supported nor opposed the proposal and 25 (1%) did not state a view. The remaining 1,373 (74%) opposed in principle the establishment of a marine reserve on the north-east coast of Great Barrier Island (Ayres, 2003).

Issues and Concerns

A number of the submissions raised specific concerns relating to the proposal. The most commonly raised issues are detailed below.

Whangapoua Estuary

Many submissions (735) expressed concern about the inclusion of the Whangapoua Estuary in the proposal. The main reason given was the potential loss of access to the estuary for shellfish gathering and, to a lesser extent, for fishing. In addition, some submitters stated that they exercised customary rights in the area. Mitigation suggested in submissions ranged from excluding all or part of the estuary to allow for use to having seasonal closures on shellfish gathering.

Recreational fishing

A large number (1,439) of submissions stated they used the north-east coast for recreational fishing. Of these submissions, 84 percent opposed the proposal either outright or with qualifications, and the remainder supported the principle of a marine reserve on the north-east coast of Great Barrier. Approximately 30 percent of submissions received on the proposal were on forms distributed by Option4.

A number of submissions expressed concern about the likely restriction on recreational fishing. These submissions stated that access to various favoured fishing locations was vital to recreation and that if any restrictions were to be imposed, they should apply to commercial fishing activities only. There was a strong feeling from many submitters that commercial fishing activities have a detrimental impact on marine environments whereas recreational fishing activities do not.

Of those submissions that opposed in principle the establishment of a marine reserve at Great Barrier and stated that the area was used for recreational fishing: four percent stated they never visited the area, 53 percent stated they occasionally visited the area, 38 percent stated they often visited the area and 5 percent did not state how frequently they visited the area.

Another often mentioned concern was that a marine reserve would adversely impact on the safety of those boating in the area as they would be forced to detour around the boundaries of the reserve if they had fish on board their boat or else risk prosecution.

Area already sufficiently protected

Many submissions stated that the area is already sufficiently protected by the island's distance from mainland New Zealand and the often inhospitable weather and sea conditions that the north-east coast area is subject to. In addition, many submissions felt the area was sufficiently protected by fisheries legislation, including the Quota Management System and recreational catch regulations, and did not require additional protection.

Boundaries

Many submissions made comments about the boundaries of the proposed reserve. A range of suggested changes were made which varied from those who felt the reserve was too large to those who wanted it extended past the 12 nautical mile limit. A large number of submissions stated that specific areas of the proposed reserve should be excluded for various reasons.

Lack of scientific evidence of benefits of marine reserves

A number of submissions believed there was a lack of scientific evidence supporting the benefits of marine reserves and that no more marine reserves should be established as a result.

Lack of consultation

Some submissions expressed concern that the applicant had not consulted sufficiently in relation to the marine reserve proposal. A summary of consultation undertaken to date is located in Appendix 4.

Anchoring

Some submissions expressed concern that a marine reserve would lead to restrictions on anchoring. These submissions stated that access to sheltered anchorages was essential to the safety of vessels that venture around to the north-east coast of Great Barrier Island.

Adjacent landowners

The Department received responses from several parties who own land adjacent to the proposed reserve. One landowner and family, who are resident on the north-east coast, opposed the proposal in a number of submissions. One non-resident landowner who occasionally visits the also area opposed the proposal and another non-resident landowner supported the proposal with qualifications.

Rakitu Island lessees

Two submissions were received from members of the Rope Family Trust, which has an interest in Rakitu Island. One opposed the proposal. The other supported in principle the idea of a marine reserve but stated that seafood collected and caught around the island was a prime requirement for the sustenance and well-being of the people who live on the island.

Commercial fishers

Submissions were received from commercial fishing companies, industry organisations and a number of individual commercial fishers. The majority of the submissions received from the commercial fishing sector opposed the establishment of a marine reserve because of the potential impact on commercial fishing operations.

Some other points raised by those who opposed the proposed reserve unconditionally or with qualifications were: the need for a strategy to create a marine protected areas network rather than an *ad hoc* approach; the same rules should apply to everyone with regards to the harvesting of shellfish; provision could be made for tangata whenua to take shellfish from the estuary; greater restrictions should be placed on commercial fishing, including banning it; the area is too big; the Navy area is a no-fishing zone already; if fish protection is needed, increase policing of the Quota Management System and fishing regulations; fish do not need protection because they are not at risk; at the greater water depths in the proposed reserve people cannot dive; marine reserves should only be in accessible areas; marine reserves should only be in inaccessible areas, not good recreational fishing spots; fishing pressure would increase elsewhere; and the difficulty of policing such an area.

Support

A number of organisations and individuals supported the proposal including conservation groups, local authorities and educational organisations. Some of the points raised by those who supported the proposed reserve unconditionally or with qualifications were: it is a step towards achieving the ten percent target outlined in the New Zealand Biodiversity Strategy 2000; it will be a good basis for educational and scientific studies; it will preserve the unique natural character of the area; fish life will increase/improve; it will provide for value-added tours; it will contribute to ecological preservation; it would enhance snorkelling and diving; it will benefit future generations; it will protect marine biodiversity; it will improve the Great Barrier Island economy; the area is too big; expand the area (Ayres, 2003).

Independent research shows high support for marine reserves generally, with 86 percent support for the establishment of further marine reserves shown in a national survey undertaken in January 2003 (UMR Research, 2003). Note that this research asked whether people supported or opposed the establishment of further marine reserves and did not relate specifically to the proposed Great Barrier marine reserve.

Appendix 3

ANNOTATED SPECIES LIST FOR THE PROPOSED AOTEA (GREAT BARRIER) MARINE RESERVE

Fish Species

From: surveys of north-east Great Barrier Island and Rakitu Island in early 1980s (Roberts et al, 1986); a survey of north-east Great Barrier in the early 1990s (Irving and Jeffs, 1993); and a survey of deep water habitats of north-east Great Barrier Island in 2002 (Sivaguru and Grace, 2004).

SCIENTIFIC NAME	COMMON NAME
Acanthistius cinctus	yellow-banded perch
Aldrichetta forsteri	yellow-eyed mullet
Allomycterus jaculiferus	porcupinefish
Amphichaetodon howensis	Lord Howe coralfish
Aplodactylus arctidens	marblefish
Aplodactylus etheridgii	notch-head marblefish
Arripis trutta	kahawai
Atypichthys latus	mado
Bellapiscis medius	twister
Bodianus unimaculatus	red pigfish
Bodianus vulpinus	fox fish
Caesioperca lepidoptera	butterfly perch
Canthigaster callisterna	clown toado
Caprodon longimanus	pink maomao
Centroberyx affinis	golden snapper
Cheilodactylus ephippium	painted moki
Cheilodactylus spectabilis	red moki
Chironemus marmoratus	hiwihiwi
Chromis dispilus	two spot demoiselle
Chromis hypsilepis	single-spot demoiselle
Conger wilsoni	northern conger eel
Coris sandageri	Sandager's wrasse
Dasyatis brevicaudata	short tailed stingray
Dasyatis thetidis	Long-tailed stingray
Decapterus koheru	koheru
Dellichthys morelandi	urchin clingfish
Forsterygion flavonigrum	yellow/black triplefin
Forsterygion lapillum	common triplefin
Forsterygion malcolmi	banded triplefin
Forsterygion varium	variable triplefin
Girella cyanea	bluefish
Girella tricuspidata	parore
Gymnothorax nubilus	grey moray
Gymnothorax obesus	speckled moray
Gymnothorax prasinus	yellow moray
Helicolenus percoides	sea perch
Hypoplectrodes huntii	red banded perch
Hyporhamphus ihi	piper
Karalepis stewarti	scaly-headed triplefin
Kyphosus sydneyanus	silver drummer
Lotella rhacinus	rock cod
Myliobatis tenuicaudatus	eagle ray
Nemadactylus douglasii	porae
Nemadactylus macropterus	tarakihi
Notoclinops segmentatus	blue-eyed triplefin
Notoclinus sp.	blue-dot triplefin
Notoclinops caerulepunctus	blue dot triplefin
Notoclinops yaldwyni	Yaldwyn's triplefin
Notolabrus celidotus	spotty
Notolabrus fucicola	banded wrasse
Notolabrus inscriptus	green wrasse
Obliquichthys maryannae	oblique swimming triplefin
Odax pullus	butterfish
Optivus elongatus	slender roughy
Parablennius laticlavius	crested blenny
Parapercis colias	blue cod
Parapercis gilliesi	yellow weever
Parika scaber	leatherjacket
Parma alboscapularis	black angel fish
Parupeneus spilurus	black-spotted goat-fish
Pempheris adspersa	big eye

SCIENTIFIC NAME	COMMON NAME
Pseudocaranx dentex	trevally
Pagrus auratus	snapper
Pseudolabrus luculentus	orange wrasse
Pseudolabrus miles	scarlet wrasse
Pseudophycis breviuscula	southern bastard cod
Ruanoho whero	spectacled triplefin
Scorpaena cardinalis	northern scorpion fish
Scorpaena papillosus	dwarf scorpionfish
Scorpis lineolatus	sweep
Scorpis violaceus	blue maomao
Seriola lalandi	kingfish
Stigmatopora sp.	piper
Suezichthys aylingi	crimson cleaner
Trachypoma macracanthus	toadstool grouper
Trachelochismus sp.	roughies
Trachurus sp.	yellowtail, jack mackerel
Trachurus novaezelandiae	horse mackerel
Upeneichthys lineatus	goatfish
Zeus faber	John dory

Deep reef species

From: a survey of deep water habitats of north-east Great Barrier Island in 2002 (Sivaguru and Grace, 2004).

PORIFERA (Sponges)

SCIENTIFIC NAME	COMMON NAME
Symplectella rowi	glass sponge
Rossella ijimai	glass sponge
Ancorina stalagmoides	cup sponge, red strip
Stelletta crater	
Stelletta columna	
Stelletta maori	cup and frilly
Stelletta n.sp (Polymastia Crocea)	
Aciculites pulchra	
Spongia (Heterofibria) mokohinau	
Dendrilla rosea	
Trachycladus stylifer	
Callyspongia ramose	
Euplacella n	trumpets
Siphonochalina latituba	
Petrosia coralloides	
Orina petrocalyx	
Vagocia imperialis	
Axinella australiensis	
Hymeniacidon spherodigitata	
Biemna rufescens	
Raspailia inequalis	
Isodictya cavicornuta	cup sponge

FILTER FEEDERS

SCIENTIFIC NAME	COMMON NAME
Black coral species 1	
Black coral species 2	
Hydriods	
Corynactis sp.	jewel anemones
A strobrachion constrictum Ophiuroids (Black)	
A strobrachion constrictum Ophiuroids (Yellow)	
Gorgonian (Keratoisis sp) (callogorgia)	

Invertebrates

From 'The North-Eastern Coast of Great Barrier Island – A Report on Surveys of the Coastal Environment and a Review of Existing Information', edited by Andrew Jeffs and Paul Irving, February 1993.

PHYLUM PORIFERA (Sponges)

SCIENTIFIC NAME	COMMON NAME
Ancorina alata	
Aaptos aaptos	dull brown spherical sponge
Axociella confragosa	
Callyspongia latituba	finger sponge

Callyspongia ramosa	branched subtidal finger sponge
Clathrina coriacea	
Clathrina sp.	
Cinachyra sp.	
Ciocalypta sp.	
Cliona celata	boring sponge
Darwinella rosea	
Darwinella sulphurea	
Halichondria sp.	breadcrumb sponge
Halichondria sp. (purple)	breadcrumb sponge
Hymeniacidon hauraki	
Ircinia novaezealandiae	
Ircinia sp.	keratose sponge
Leucettusa lancifer	
Lithistida (Order only)	
Lucinda sp.	
Microciona sp.	
Pararaphoxya pulchra	
Petrosia hebes	
Polymastia fusca	
Polymastia granulosa	
Pronax sp. (red)	
Raspailia agminata	
Raspailia topsenti	
Spongosorites sp.	
Stelletta conulosa	
Stelleta snadalinum	
Suberites perfectus	spherical sponge
Tethya aurantium	orange golfball sponge
Tethya ingalli	pink golfball sponge
Tethya unid. sp. A	
Tethya unid. sp. B	

PHYLUM CNIDARIA or COELENERATES (Hydroids, jellyfish, sea anemones, corals)

CLASS Anthozoa (Sea anemones, corals, soft corals)

SCIENTIFIC NAME	COMMON NAME
Actinia tenebrosa	dark red beadlet anemone
Actinothoe albocincta	
Alcyonium aurantium	soft coral
Corynactis haddoni	jewel anemones
Culicia rubeola	cup coral
Flabellum rubrum	cup coral or fan coral
Kionotrochus suteri	
Phlyctenactis tuberculosa	wandering sea anemone
Sphenotrochus ralphae	
Kelp anemone	

CLASS Hydrozoa (Hydroids)

SCIENTIFIC NAME	COMMON NAME
Unid. orange hydroid	orange sea fir
Solanderia sp.	

PHYLUM NEMERTEA

SCIENTIFIC NAME	COMMON NAME
Orange	ribbon worms
Brown	

PHYLUM BRYOZOA or POLYZOA or ECTOPROCTA

SCIENTIFIC NAME	COMMON NAME
Beania sp. A	
Beania sp. B	
Celleporaria agglutinans	
Cribricellina cribraria	
Otionella sp. (Syn: Selanaria squamosa)	
Steginoporella novaezelandiae	lace coral
Watersipora cucullata	

PHYLUM BRACHIOPODA

SCIENTIFIC NAME	COMMON NAME
Terebratella inconspicua	small red lamp shell

PHYLUM POLYCHAETA (Bristle worms)

SCIENTIFIC NAME	COMMON NAME
Aglaophanus macroura	bristle worm
Ampharete sp.	
Boccardia sp.	
Branchiomma sp.	
Filograna sp.	
Galeolaria hysterix	
Glycera sp.	
Hyalinoecia sp.	
Lumbriconereis sp.	
Magelona papillocornis	
Owenia fusiformis	
Pectinaria australis	
Pomatoceros caeruleus	
Sigalion sp.	
"Spirobis" sp.	
Euricidae	
Maldanidae	
Nereidae	ragworms
Phyllodocidae	
Sabellidae	
Serpulidae	
Spionidae	
Syllidae	
Terebellidae	
Unid. sp.	

PHYLUM MOLLUSCA (Coat-of-mail shells, marine snails, clams, squids, octopods)

CLASS Amphineura (Chitons)

SCIENTIFIC NAME	COMMON NAME
Acanthochitona zelandica	
Amaurochiton glaucus	green chiton
Callochiton crocinus	
Chiton pelliserpentis	
Cryptoconchus porosus	butterfly chiton
Eudoxochiton nobilis	
Ischnochiton maorianus	active chiton
Notoplax violacea	
Onithochiton neglectus	
Rhyssolplax sp.	
Terenochiton inquinatus	

CLASS Bivalvia

SCIENTIFIC NAME	COMMON NAME
Atrina zelandica	horse mussel
Austrovenus stutchburyi	
Cardita brookesi	small dog's foot cockle
Chlamys zelandica	small fan scallop
Corbula zelandica	
Crassostrea glomerata	rock oyster
Cuspidaria fairchildi	
Cuspidaria trailli	
Cuspidaria willeti	
Divaricella huttoniana	
Dosinia subrosea	
Felaniella zelandica	
Gari hodgei	
Gari lineolata	pink sunset shell
Gari stangeri (valves)	purple sunset shell
Glycymeris laticostata	large dog cockle
Haliris setosa	
Hiatella arctica	
Limaria orientalis	
Limatula maoria	little file shell
Modiolus neozelanicus	
Myadora antipodum	
Myadora boltoni	
Myadora novaezelandiae	
Nemocardium pulchellum	
Notocallista multistriata	
Nucula hartvigiana	nut shell
Nucula nitidula	
Nuculana (Sacella) bellula	
Paphies subtriangulatum	tuatua
Pecten novaezelandiae	common scallop
Perna canaliculus	green-lipped mussel
Pleuromeris zelandica	

SCIENTIFIC NAME	COMMON NAME
Scalpomatra scalpellum	
Tawera spissa	tawera, morning star
Tellina huttoni	
Tellina charlottae	
Thracia veglandis	
Thracia australica novozelandica	
Xenostrobus pulex	little black mussel

CLASS Gastropoda (One shell, slugs and snails)

SCIENTIFIC NAME	COMMON NAME
Acteon cratericulatus	
Agnewia tritoniformis	
Amalda novaezealandiae	
Antisolarium egenum	
Aphelodoris luctuosa	
Astraea heliotropum	star shell
Atalacmea fragilis	fragile limpet
Austrodiaphana maunganuica	
Austrofusus glans	
Buccinulum lineum	
Buccinulum pallidum powelli	
Buccinulum vittatum	
Cabestana spengleri	Spengler's trumpet shell
Caecum digistulum	
Calliostoma osbornei	
Calliostoma punctulata	
Calliostoma tigris	
Cantharidus opalus	opal top shell
Cantharidus purpureus	red top shell
Cellana ornata	ornate limpet
Cellana radians	radiate limpet
Cellana stellifera	
Charonia lampas capax	triton shell
Chromodoris amoena	
Clanculus peccatus	
Cominella adspersa	mud whelk
Cominella glandiformis	
Cominella quoyana	
Cominella virgata	
Cookia sulcata	
Crepidula monoxyla	
Cylichna thetidus	
Daphnella cancellata	
Dendrodoris gemmacea	
Duplicaria tristis	
Eatoniella huttoni	
Epitonium minora	
Eulima perspicua	
Haliotis australis	pink paua
Haliotis iris	common large paua
Haliotis virginea	paua
Haustrum haustorium	dark rock shell
Homalopoma fluctuata	
Lepsiella scobina	oyster-borer/barnacle drill
Liotella rotula	
Liratilia conquista	
Liratilia sinuata	
Liratoniella crassicarinata	
Littorina unifasciata	
Macrozafra subabnormis	
Maoricolpus pygmaea	
Marginella (Haloginella) mustelina	
Maginella (Volvarinella) cairoma	
Mayena Australasia	
Melagraphia aethipos	common spotted shell
Micrelenchus dilitatus	small opal tops
Muricopsis octogonus	
Nepotilla nitidula	
Nerita atramentosa	snail
Notoacmea daedala	greenish-brown limpet
Notoacmea helmsi	
Notoacmea parviconoidia	tiny conical limpet
Notoacmea pileopsis	open shore limpet
Notoacmea scopulina	
Novostoa lamellosa	
Onchidella nigricans	small tough-skinned slug
Patelloida corticata	acmeid limpet
Peculator hedlayi	
Philippia lutea	
Philippia radiata	
Polinices tawhitirahia (hermit)	

SCIENTIFIC NAME	COMMON NAME
Pupa kirki	
Rissoina fucosa	
Rissoina larochei	
Scutus breviculus	ducksbill limpet
Sigapatella novaezelandiae	circular slipper limpet
Siliquaria maoria	
Siphonaria australis	
Siphonaria zelandica	common pulmonate limpet
Socienna exaltatus	
Splendrilla larochei	
Thais orbita	white rock shell
Triphora fascelina	
Triphora infelix	
Trochus tiaratus	brown top shell
Trochus viridis	green top shell
Tugali elegans	
Turbo granosus	
Turbo smaragda	common cat's eye
Umbraculum sinicum	
Waimatea obscura	
Veprecula cooperi	
Xenophalium labiatum (hermit)	
Xenophora neozelandica	
Xymene traversi	trophon
Zeacolpus pagoda	
Zeacolpus vittatus	
Zegalerus tenuis	
Zerotula ammeonitoides	

CLASS Cephalopoda (Cuttlefish, squid, octopus etc)

SCIENTIFIC NAME	COMMON NAME
Octopus maorum	common octopus

PHYLUM ECHINODERMATA (Starfishes, sea urchins, brittle stars, sea cucumbers)

CLASS Asteroidea (Starfish)

SCIENTIFIC NAME	COMMON NAME
Astropecten polyacanthus	comb star
Coscinasterias calamaria	low-tidal star
Patiriella regularis	cushion star

CLASS Crinoidea (Sea lilies and feather stars)

SCIENTIFIC NAME	COMMON NAME
Comanthus sp.	yellow feather star

CLASS Echinoidea (Sea urchins)

SCIENTIFIC NAME	COMMON NAME
Apatopyrgus recens	
Centrostephanus rodgersi	long-spined sea urchin
Diadema palmeri	bright red urchin
Echinocardium cordatum	heart urchin
Evechinus chloroticus	kina
Heliocidaris tuberculata	

CLASS Holothuroidea (Sea cucumbers)

SCIENTIFIC NAME	COMMON NAME
Cucumaria sp.	
Ocnus sp.	
Stichopus mollis	common sea cucumber
Trochodata sp.	
Unid. Holothurian	

CLASS Ophiuroidea (Snake or brittle stars)

SCIENTIFIC NAME	COMMON NAME
Amphiura sp.	brittle star
Pectinura cylindrical	
Pectinura maculata	snaketail star

PHYLUM ARTHROPODA

CLASS Crustacea SUB CLASS Cirripedia (Barnacles)

SCIENTIFIC NAME	COMMON NAME
Balanus trigonus	

Chamaesipho brunnea	brown barnacle
Chamaesipho columna	acorn/column barnacle
Elminius modestus	modest barnacle
Epopella plicata (Syn: Elminius plicatus)	plicate barnacle
Tetraclita sp.	

CLASS Malacostraca

SCIENTIFIC NAME	COMMON NAME
Arctides antipodarum	spanish lobster
Jasus edwardsii	red rock lobster
Jasus verreauxi	packhorse lobster
Leptograpsus variegates	purple crab
Ovalipes catharus	swimming crab
Paranthura sp.	
Petrolisthes elongatus	half crab
Pilumnus novaezelandiae	hairy crab
Plagusia chabrus	
Amphipoda	hoppers
Cumacea	
Isopoda	sea lice
Tanaidacea	
Unid. Anomura	

PHYLUM CHORDATA

CLASS Ascidacea (Sea squirts)

SCIENTIFIC NAME	COMMON NAME
Agnesia sp.	
Aplidium scabellum	
Cnemidocarpa bicornuta	sea potato
Corella eumyota	transparent sea squirt
Didemnum candidum	
Hypsistozoa fasmeriana	
Pseudodistoma aureum	
Pseudodistoma novaezealandiae	

Plants

From 'The North-Eastern Coast of Great Barrier Island – A Report on Surveys of the Coastal Environment and a Review of Existing Information', edited by Andrew Jeffs and Paul Irving, February 1993.

PHYLUM CHLOROPHYTA (Green algae)

SCIENTIFIC NAME	COMMON NAME
Caulerpa flexilis (syn. hypnoides)	sea rimu
Caulerpa geminate	
Codium adhaerens	rock velvet
Codium cranwellae	
Codium fragile	branching velvet
Enteromorpha sp.	
Halicystis sp.	
Pedobesia clavaeformis	
Ulva sp.	sea lettuce

PHYLUM PHAEOPHYTA (Brown algae)

SCIENTIFIC NAME	COMMON NAME
Carpomitra costata	
Carpophyllum angustifolium	coralline turf and paint
Carpophyllum flexuosum	flexible flapjack
Carpophyllum maschalocarpum	common flapjack
Carpophyllum plumosun	
Colpomeria sp.	air cushion
Cystophora retroflexa	slender zigzag seaweed
Cystophora torulosa	bladder zigzag seaweed
Dictyota sp.	
Durvillea antarctica	bull kelp
Ecklonia radiata	small kelp/paddle weed
Ectocarpoid sp.	
Glossophora kunthii	rough tongue weed
Halopteris sp.	
Hormosira banksii	Venus' necklace
Landsburgia quercifolia	
Leathesia diformis	golden brown algae
Lessonia variegate	strap kelp

Perithalia capillaries	
Sargassum sinclairii	
Scytothamnus australis	straggling brown algae
Tinocladia novaezealandiae	
Xiphophora chondrophylla	
Zonaria turneriana	fan weed

PHYLUM RHODOPHYTA (Red algae)

SCIENTIFIC NAME	COMMON NAME
Acrosorium uncinatum	
Acrosymphyton firmum	
Ahnfeltia sp.	
Apophloea sinclairii	
Asparagopsis armata	
Bostrychia arbuscula	
Callophyllis sp.	
Catenellopsis oligarthra	
Ceramium sp.	
Chaetangium pulvinatum	
Champia novaezealandiae	
Champia sp.	
Chondria macrocarpa	
Cladhymenia oblongifolia	
Corallina sp.	
Curdiea codioides	
Curdiea coriacea	
Delisea compressa	
Gelidium sp.	
Gigartina alveata	
Gigartina atropurpurea	
Gigartina laingii	
Gigartina macrocarpa	
Glaphrymenia pustulosa	
Grateloupia intestinalis	
Helminthocladia australis	
Hildenbrandtia sp.	
Hummbrella hydra	
Jania sp.	
Laurencia thyrsifera	
Liagora harveyana	
Lithophyllum sp.	
Lithothamnion calcareum	
Lophurella caespitose	
Melanthalia abcissa	
Nemastoma ferredayae	
Nemastoma oligartha	
Pachymenia himantophora	
Pachymenia lusoria	
Plocamium costatum	
Polysiphonia sp.	
Porphyra columbina	karengo
Pseudoscinaia sp.	
Pterocladia lucida	Comb weed
Ptilonia mooreana	
Ralfsia sp.	
Vidalia colensoi	

CYANOBACTERIA

SCIENTIFIC NAME	COMMON NAME
Oscillatoria sp.	

Appendix 4

SCHEDULE OF KEY PRE-STATUTORY CONSULTATION AND KEY EVENTS

The table below lists key events and consultation relating to the 2003 proposal. The history of all work on the 2003 proposal and previous marine reserve proposal for north-east Great Barrier Island is documented in Department of Conservation files.

DATE	ACTION
21 Dec 2000	Fax sent to Ngatiwai Trust Board.
22 Jan 2001	Letter sent to Ngati Rehua Trust Board.
31 Jan 2001	Meeting with Ministry of Fisheries (Auckland).
11 Mar 2001	Letter received from CRA2 Rock Lobster Company. Email to CRA2 Rock Lobster Company (15 Mar 2001). A later fax (26 Mar 2001) to CRA2 requested a list of crayfishers working in proposal area.
28 Mar 2001	Letter to New Zealand Defence Force (NZDF). Response from NZDF (03 May 2001), stating that their submission to marine reserve proposal in 1994 remained extant.
28 Mar 2001	Email from Karen-Mae Beazley (Ngati Rehua) thanking DOC for attending a meeting regarding the marine reserve proposal.
03 May 2001	Letter to Ian Clow, President of the CRA2 Rock Lobster Company, asking for comment on draft commercial fishing questionnaire & thanking him for meeting with DOC in Whitianga. Letter from Ian Clow (03 May 2001) provided views on questionnaire.
08 May 2001	Meeting with members of Hauraki Maori Trust Board (HMTB). Letter to HMTB (14 May 2001) provided further information about proposal.
18 May 2001	Letter to Ngati Maru Iwi Authority. Letter from Ngati Maru (29 May 2001), requested further information. Letter to Ngati Maru (28 Jun 2001) provided further information.
06 Jun 2001	Letter received from CRA2 Rock Lobster Company.
22 Jun 2001	Great Barrier Island Community Board meeting.
03 Sep 2001	Letter received from Leigh Fishermen's Association. Email to Leigh Fishermen's Association (18 Sep 2001) advised current status of the marine reserve proposal.
06 Nov 2001	Fax received from Auckland Regional Recreational Fishing Association (ARRFA).
13 Dec 2001	Meeting with Ministry of Fisheries (Auckland).
14 Dec 2001	Meeting with Royal Forest & Bird Protection Society.
22 Dec 2001	Letter received from CRA2 Rock Lobster Company. Letter to CRA2 Rock Lobster Company (09 Jan 2002) advised current status of the marine reserve proposal.
11 Apr 2002	Letter sent to Ngati Rehua Ngati Wai ki Aotea Trust Board. Letter advised of marine reserve proposal and asked for comment.
30 May 2002	Letter sent to Ngati Rehua Trust Board. Letter advised of marine reserve proposal and asked for comment.
03 Jun 2002	Letter received from Leigh Fishermen's Association. Letter to Leigh Fishermen's Association (24 Jun 2002) advised current status of marine reserve proposal.
19 Sep 2002	Meeting with NIWA scientists. Scientist viewed video footage from scientific expedition undertaken in May 2002.
01 Oct 2002	Meeting with Ministry of Fisheries (Auckland).
24 Oct 2002	Meeting with Ministry of Fisheries (Auckland).
14 Dec 2002	Hui with Ngati Rehua, Motairehe, Great Barrier Island.
14 Jan 2003	Letter to Ngati Rehua Trust Board. Provided further information about proposal.
January 2003	Letters to Ngati Rehua Trust Board, Motairehe Marae, Ngatiwai Resource Unit and Rachel Rapira-Davies (15 & 31 Jan). Provided scientific information relating to marine reserve proposal.
January 2003	Visits to some north-Barrier residents. Proposal discussed.
21 Jan 2003	Meeting with Ngati Rehua Trust Board.
14 Feb 2003	Letter received from CRA2 Rock Lobster Company. Letter to CRA2 Rock Lobster Company (24 Feb 2003) advised current status of the marine reserve proposal.
17 Feb 2003	Meeting with Ministry of Fisheries (Auckland).
26 Feb 2003	Meeting with Ngatiwai Trust Board. Email to Ngatiwai Trust Board responded to some specific questions (06 Mar 2003). Fax received from Ngatiwai Trust Board (11 Mar 2003).
05 Mar 2003	Phone call & letter (06 Mar 2003) to Hauraki Maori Trust Board. Advised status of Great Barrier Island marine reserve proposal & offered meeting to discuss. Copy of proposal document sent.
08 Mar 2003	Hui with Ngati Rehua, Papakura, Auckland.
10 Mar 2003	Phone call to Bernie Ward, Chair of Auckland Regional Recreational Fishing Association. Later meeting (18 Mar 2003) held with Bernie Ward. Department provided with contact list for some recreational fishing organisations.
10 Mar 2003	Email to 13 Auckland-based charter fishing companies. Advised status of marine reserve proposal & offered meeting to discuss. Responses received. Phone call to The Charter Company (11 Mar 2003). Meeting with Extreme RnR Fishing Charters (01 Apr 2003).
11 Mar 2003	Email to Auckland-based recreational fishing clubs (information sourced from www.fishing.net.nz). Advised status of marine reserve proposal & offered meetings to discuss. Meetings with: Auckland Lady Anglers Club (29 Apr 2003), Counties Sports Fishing Club (30 Apr 2003), Laingholm Fishing Club (26 May 2003).
20 Mar 2003	Phone call to Moana Pacific Company Limited.

DATE	ACTION
24 Mar 2003	Letter to Hauraki Maori Trust Board. Scientific information provided.
March 2003	Great Barrier Island proposal document, entitled 'A marine reserve for Great Barrier Island? Your Chance to Have a Say', distributed.
28 Mar 2003	Media release – 'Great Barrier Island Marine Reserve Proposal'.
14 Apr 2003	Meeting with the Coromandel Commercial Fishers Association, Whitianga.
15 Apr 2003	Great Barrier Island Community Board meeting.
23 Apr 2003	Memo to Royal Forest & Bird Protection Society.
10 May 2003	North Barrier Residents & Ratepayers meeting, Port Fitzroy, Great Barrier Island.
17 May 2003	Public meeting at Claris, Great Barrier Island.
18 May 2003	Public meeting at Tryphena, Great Barrier Island.
28 May 2003	Meeting with representatives of Option4 & others.
30 May 2003	Meeting with Ministry of Fisheries (Auckland).
10 Jun 2003	Meeting with Ministry of Fisheries (Auckland).
12 Jun 2003	Public meeting (called by the Leigh Fishermen's Association), Warkworth.
01 Jul 2003	Meeting with representatives of the Great Barrier Island Community Board & Auckland City Councillors.
03 Jul 2003	Media release – 'Consultation on marine reserve proposal extended'.
09 Jul 2003	Public 'drop-in' meeting, Devonport.
15 Jul 2003	Public 'drop-in' meeting, Auckland.
31 July 2003	Great Barrier Island marine reserve proposal document submission closing date. Received 1,863 submissions (including late submissions).
07 Aug 2003	Meeting with the Boating Industry Association.
28 Aug 2003	Meeting with Ngati Rehua Trust Board.
01 Oct 2003	Meeting with Ngati Rehua Trust Board.
15 Oct 2003	Letter to Ngati Rehua Trust Board. DOC/Ngati Rehua Working Group established.
05 Nov 2003	Meeting with Ngati Rehua Trust Board.
10 Nov 2003	Letter to all submitters. Advised status of marine reserve proposal. Submission analysis report attached.
11 Nov 2003	Press release to media.
4 Mar 2004	Ngati Rehua/DOC Working Group meeting.
05 Apr 2004	Ngati Rehua/DOC Working Group meeting.
May 2003	Letters to all submitters sent (18 – 22 May). Advised status of marine reserve proposal. Addressed the issues raised in individual submissions.
24 May 2004	Ngati Rehua/DOC Working Group meeting.
14 Jul 2004	Ngati Rehua/DOC Working Group meeting.
28 Jul 2004	Adjoining landowners informed that Great Barrier Island marine reserve proposal is to be publicly notified.
31 Jul 2004	Letter to all submitters. Advised that Great Barrier Island marine reserve application to be notified. Copy of application attached.
02 Aug 2004	Public notification of Great Barrier Island marine reserve proposal.

In addition to the specific events listed above, the applicant provided email information updates and had much email correspondence with individuals and groups relating to the proposal.

Appendix 5

COPY OF THE FORMAL NOTICE OF INTENTION TO APPLY FOR A MARINE RESERVE AT GREAT BARRIER ISLAND

Notice Under Section 5 of the Marine Reserves Act 1971

Pursuant to Section 5 of the Marine Reserves Act 1971 I hereby give notice of my intention to apply for an Order-in-Council declaring an area of approximately 50,100 hectares on the north-east coast of Great Barrier Island a marine reserve. The boundaries would encompass the territorial sea and foreshore and all internal waters on the north-east coast of Great Barrier Island between the Needles and a point north of Korotiti Bay, except for the Whangapoua Estuary, from mean high water springs (except where the reserve is adjacent to private land) to the boundary of the territorial sea at 12 nautical miles.

A plan of the proposed reserve showing all tidal waters coloured blue and the boundaries and the extent of the area sought to be declared a marine reserve, together with a full copy of the application, may be inspected free of charge at the following Department of Conservation offices: Auckland, Great Barrier Island and Warkworth during ordinary office hours, or by writing to the applicant whose address is given below. Copies of the application are also available for viewing at the Auckland Visitor Information Centre and at the Auckland Public Library. The application can also be viewed at the DOC website www.doc.govt.nz.

Any person or organisation may object to the making of an Order-in-Council establishing the marine reserve by specifying the grounds of the objection in writing and submitting it to the Director-General of Conservation within two months from the date of first publication of this notice.

The date of first publication of this notice is 2 August 2004.

The closing date for objections is 2 October 2004. Any objections or submissions in support received after that date will not be considered.

This notice of intention to apply for a marine reserve is given by the applicant the Director-General of Conservation whose address for service is: Auckland Conservator, Department of Conservation, Private Bag 68-908, Newton, Auckland, New Zealand; or email greatbarrierisland@doc.govt.nz or fax (09) 377-2919. Note: any objections or submissions in support that may be received by email will be accepted provided they contain the full name and residential address of the submitter.

Hugh Logan
Director-General of Conservation