Mount Reef Planning Feasibility Study

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ABSTRACT

The Mount Reef is New Zealand's first artificial surfing reef. Construction of the reef has been delayed, mainly due to budget and implications in law. However, almost half the reef sand bags are in and it will be up and running upon the securing final funding combined with favourable weather conditions. As it currently stands, the reef is being enjoyed by surfers and has created high quality surf on its day. Once complete, the reef will become a valuable community asset for Mount Maunganui that will have significant economic spin off's for the region. The surfing results upon full construction are what the community is really looking forward to; not to mention all the other recreational opportunities the multi-purpose reef creates offshore, on the beach and on the Tay Street Reserve.

This study is dedicated to protecting the Mount Reef. The current status of the reef is that it is not essentially protected by any statutory or non-statutory mechanisms. The reef could be considered 'free for all'. This is a significant issue due to the vulnerability of the reef to navigational hazards and because the Mount Reef Trusts goal is to protect the marine life inhabiting the reef.

This study has looked at ways of protecting the Mount Reef in terms of long and short term solutions. It has identified that in the short term, the preferred recommended option is a Rahui (or ban) to prevent the taking of marine ecology from the reef and that it is gazetted in coastal bylaws as a prohibited anchorage area. In the long term and in order to ensure the life of the geotextile bags (which make up the Mount Reef and have a 20 year life span) is utilised, it is recommended that resource consent for a coastal permit that ensures the life of the reef is maximized be obtained from the Regional Council under the Resource Management Act 1991.

ACKNOWLEDGEMENTS

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INTRODUCTION

The Mount Reef ('the reef') is located 250m offshore from Tay Street, Mount Maunganui. Refer to Figure 1a and 1b for location diagram including surrounding land uses. The reef itself is a coastal protection mechanism used for coastal management. The reef serves as a multi-purpose artificial surfing reef that can be used for surfing, snorkeling, diving and other recreational activities. As a coastal protection mechanism, the reef serves as a remedial coastal hazard device. It carries out this function by accreting sand in the lee of the reef, creating a salient that provides a buffer between land and sea. The salient is the noticeable accumulation of sand at Tay Street. The current status of this reef is that it is still under construction and adequate consents are in place to complete the reef.

The Mount Reef Trust in association with Hobec Lawyers and Harrison Grierson Consultants Ltd made this report possible. The objective of this study is to present to the Mount Reef Trust ('the Trust') future options for the protection of the reef, bearing in mind the purposes of multipurpose artificial surfing reefs. The report outlines possible protection and regulation of the reef and places it within the statutory context of Resource Management in New Zealand.

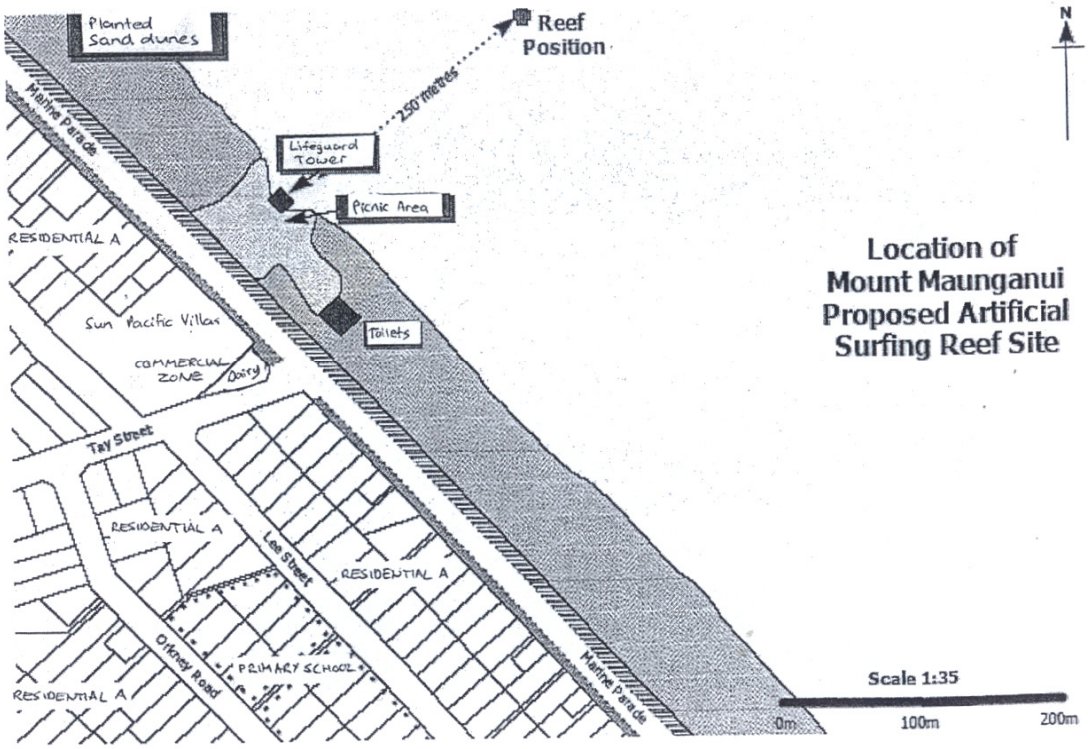


Figure 1a: Location of the Mount Reef

Figure 1b: Picture showing the location of the first half of the Mount Reef

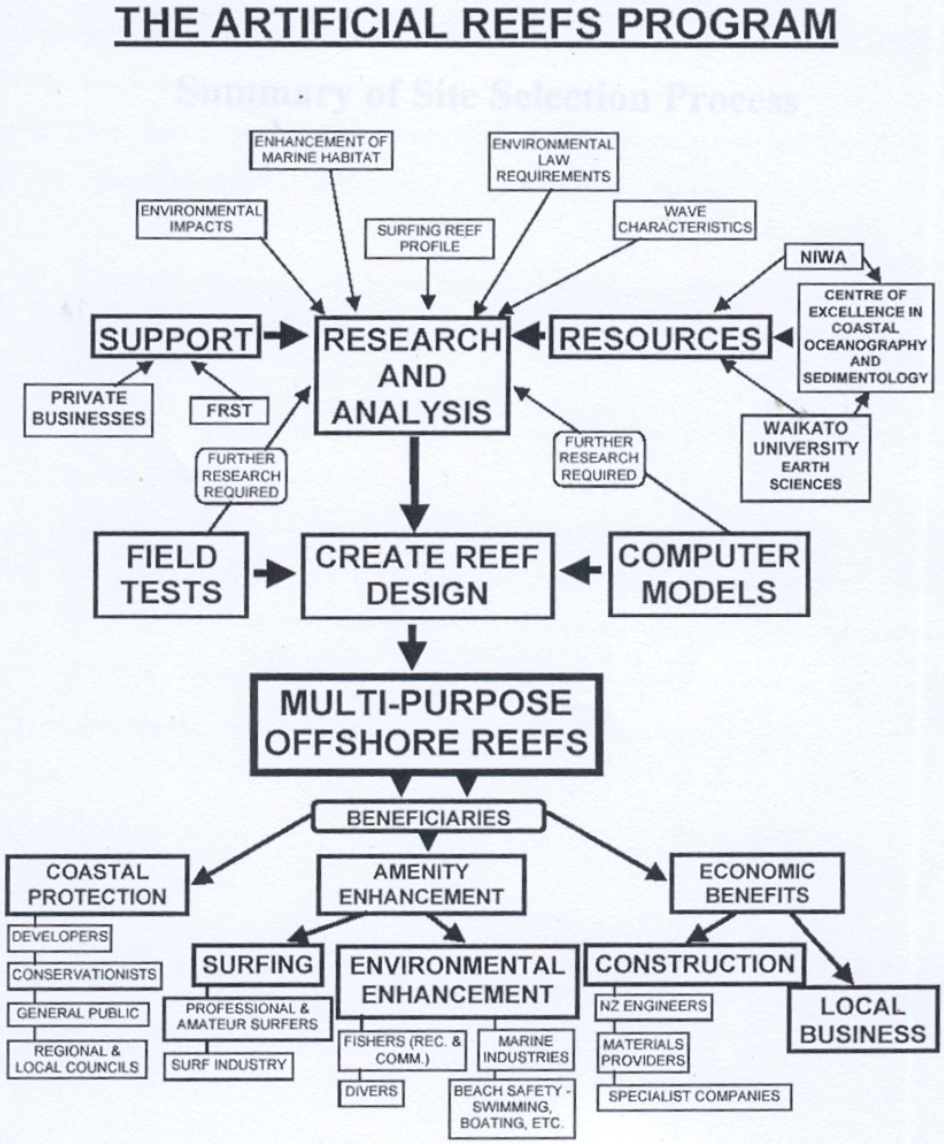
BACKGROUND

Brief History of Artificial Surfing Reefs

The idea of artificial surfing reefs originally came from the late Dr Kimo Walker (WALKER, 1974). Today the design of artificial surfing reefs (such as the Mount Reef) has been patented by ASR Ltd. The design of the Mount Reef came from the research carried out by Shaw Mead, a PhD student in coastal science from Waikato University (MEAD, 2000). The surf reef at Mount Maunganui was the first of its kind created by the artificial surfing reef programme established by the University of Waikato in the late 1990's (Figure 2). Refer to Figure 3 for a diagram outlining this programme.

Figure 2: Waves breaking on the Reef (source: www.surf2surf.com)

A partnership of Waikato University and the National Institute of Water and Atmospheric research[1].



[1] K. Black, S. Mead & J. Hutt, 1998d. *Reef design and physical and biological processes.* Annex IIId - assessment of environmental effects of an artificial surfing reef at Tay Street, Mount Maunganui (unpublished report, Department of Geography, University of Waikato).

Figure 3: Artificial Reef program - Waikato University

COASTAL RESOURCE MANAGEMENT IN NEW ZEALAND

Our country has adopted a strong approach to coastal management under the Resource Management Act 1991 (MINISTRY FOR THE ENVIRONMENT, 1991) via the national policy statement instrument, the New Zealand Coastal Policy Statement (DEPARTMENT of CONSERVATION, 2004). This is the highest form of policy under the statutory hierarchy of the Resource Management Act 1991 (RMA), sitting above Regional Policy Statements, Regional Plans and District Plans. New Zealander's commonly have a close affinity with our coastlines and as a result large demand is placed on this resource requiring good planning, hence the RMAs strong coastal focus.

In applying for resource consent under the RMA within the coastal environment consideration of the NZCPS is required, as well as any relevant proposed or operative Regional Policy Statement, Regional Plan or District Plan (refer to Figure 4 for a breakdown of the legislative process regarding applications for coastal permit resource consents). Resource consents have several forms that differ dependent upon the resource requiring consent. Land use consents and Subdivision consents are issued by District Councils (issued in perpetuity), whereas a suite of Permits (with a maximum life of 35 years) are issued by Regional Councils that relate to air, land, fresh water and coast. In terms of the Mount Reef Coastal Permits are required from Environment Bay of Plenty Regional Council.

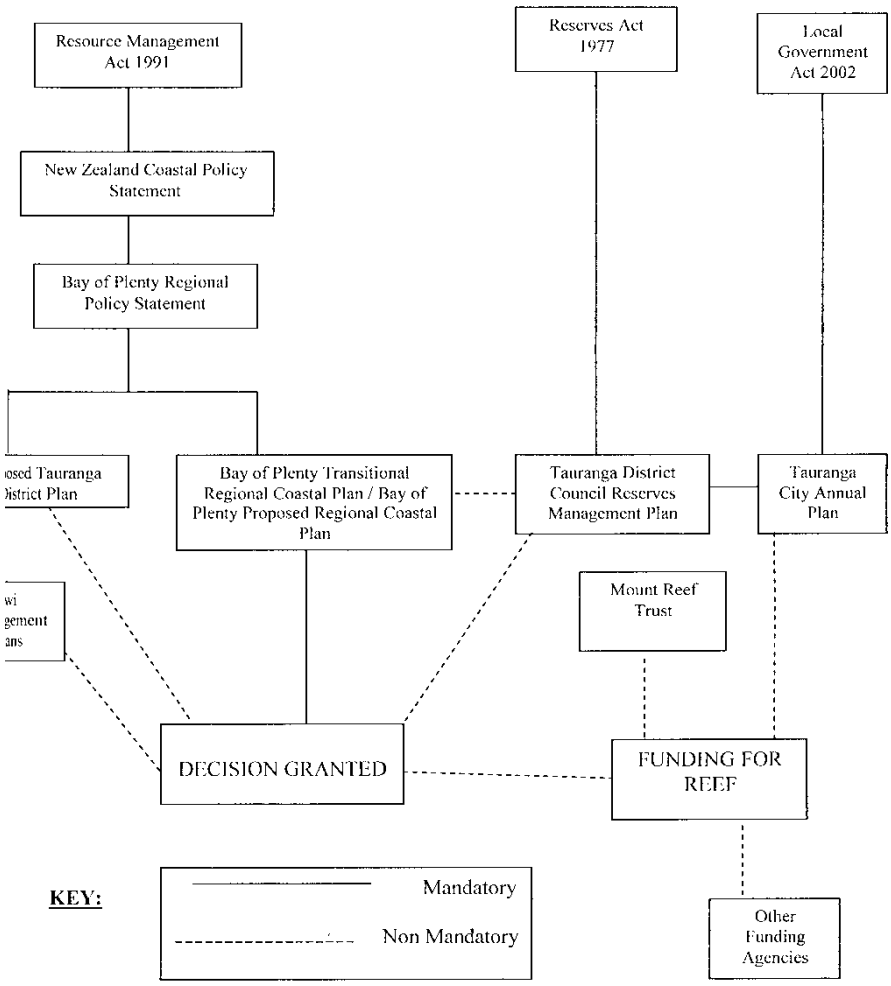


Figure 4: Hierarchy of Mandatory and Non Mandatory Planning Tools

Relevant to the Mount Reef

THE MOUNT REEF

Currently, a Resource Consent in the form of a short-term coastal permit has been issued by the Regional Council for a period of five years. However, there are no other protection mechanisms over the reef, nor are there any mechanisms in place to ensure the reefs life of approximately 20 years as a coastal protection device (which has been installed for research purposes) is achieved.

The Mount Reef Trust applied for Resource Consent in December 1998, which was supported by a robust planning application and Assessment of Environmental Effects (AEE). The application was lodged with the Regional Council and was peer-reviewed by Derek Todd of Canterbury University.

A short term five year coastal permit was issued in September 2000 subject to consent conditions. The purpose of the short term coastal permit was to essentially give the reef a trial period to monitor effects before applying for a long term coastal permit. This decision by the Regional Council was then appealed to the High Court in regard to the non-notification of the resource consent application. Judge Rodney Hansen upheld the Regional Council's decision to non-notify the consent, and the coastal permit was allowed to proceed in August 2002.

Since then, the Trust has been fundraising to construct the reef and has applied for and been granted the appropriate permits to complete construction of the reef.

SWOT ANALYSIS

This analysis identifies the strengths, weaknesses, opportunities and threats associated with the reef. The purpose of this assessment is to place the reef in context for the purposes of this study. This is in terms of its environmental, social, economic and cultural attributes.

Strengths

- High quality surfing waves
- Tourism driver for Mount Maunganui
- Snorkeling and Diving
- Coastal protection at Tay Street
- Ease of access
- Harbours marine ecology

Weaknesses

- Installation method susceptible to adverse weather conditions
- Lack of funding causing delay in installation
- Short-term coastal permit

Opportunities

- Higher quality surfing competitions
- Research and education in marine biology and coastal management
- Potential increase in visitor accommodation occupancy rates
- Increased revenue for local surf industry
- More focus on Tay St reserve as a 'hub' for beach goers
- Compliment proposed Mataitai Reserve

Threats

- Storm events effect on geotextile bags
- Geotextile bags being vulnerable to damage from mariners and fisherman
- Damage to marine ecology from divers, snorkellers or mariners
- Removal of marine life from the reef by divers

CONSULTATION

In carrying out this planning feasibility study, a number of organisations were consulted with to gain feedback and information to formulate this report. Below is a brief summary of findings from this consultation process.

Environment Bay of Plenty

In consultation with the Regional Council it was identified that the reef is not listed in coastal bylaws. Schedule 1of the Coastal Bylaws includes all Prohibited Anchorage Area's. It was also noted that the coastal permit granted is only for five years as of the date of commencing construction of the reef, which began in late 2005. It was also noted that the reef is not identified in LINZ Nautical Charts as a prohibited anchorage area yet (PERS. COMM. ENVIRONMENT BAY OF PLENTY HARBOUR MASTER, 2006).

Ministry of Fisheries

Enquiries were made to the Ministry to establish the possibility of including the reef within the boundaries the proposed Maitaitai reserve. Currently, there is an application within the ministry to create a Maitaitai Reserve administered by local iwi (native tribe), which serves to sustainably manage fisheries within the proposed designated area (PERS. COMM. MINISTRY OF FISHERIES, 2006).

Northland Regional Council

Correspondence with the Northland Regional Council was carried out to look at alternative ways of protecting the reef. This consultation provided background to the Mimiwhangata Marine Park, which was designated for protection with limited fishing, using the Fisheries Act and the Harbours Act. This was done in the early 1980's as a way to protect Mimiwhangata as a significant coastal resource (PERS COMM. NORTHLAND REGIONAL COUNCIL, 2006).

However, it should be noted that this example is of a much larger scale in comparison with the reef and there is currently a proposal for a Marine Reserve over Mimiwhangata.

Ngaiterangi Iwi

Correspondence with local Iwi was to initiate discussion about the future protection of the reef. It was identified that the reef was not protected and some discussion was made about its possible future protection options (PERS COMM. BRIAN DICKSON, 2006).

Findings

As it stands, the reef could be considered 'free for all'. This is because there are no statutory or non-statutory mechanisms in place to protect the reef from potential threats. The reef only has a short life in terms of its resource consent. However, the life of the reef is expected to be around twenty years or more, therefore will require a long term coastal permit (up to 35 years) to ensure its life is achieved. It is understood that the Bay of Plenty Polytechnic and the Waikato University are undertaking monitoring of the reef, including some bathymetric

surveys and beach profiling. This data measures any changes that the reef will have on the foreshore and seabed and could be used for a future resource consent application to the Regional Council for a long-term coastal permit

Navigational Protection

Part of the planning feasibility study included having the reef included within coastal bylaws. The Trust is in the process of formalizing its application to the Regional authority (Environment Bay of Plenty Harbour Master) to have the reef gazetted in local bylaws as a prohibited anchorage area. Ongoing publication and education of the status of the reef under these bylaws will be necessary to ensure that boaties and other users are aware of the reef's status, so that they are aware of the dangers associated with anchoring on the reef.

PROTECTION OF MARINE ECOLOGY

Introduction

As a multipurpose surfing reef the Mount Reef serves as a community asset for recreation, research and education, while promoting surfing as a sport and generating revenue for local businesses by acting as a tourism drawcard to the area. To ensure that this multipurpose facet of the reef is harnessed, it is desirable that the reef is protected from the taking of its marine ecology. Since the initiation of construction in November 2005, the reef has been colonised by an array of marine organisms (Figure 5). However, as it stands there are no mechanisms in place to prevent people from taking or damaging this marine ecology, beyond recreational catch limits. Also, due to the geotextile make up of the reef, although extremely durable the sand bags are threatened by mariners or fisherman from such things as outboard motors

Figure 5: Ecology on the Mount Reef.

Marine Reserve Status?

A number of options have been explored to protect the reef. The option of a Marine Reserve was assessed however the new Marine Reserves Act has a strong biological bottom line,

which does not fit well with the Mount Reef. While there is a strong push within government to increase the number of Marine Reserves in the country, the reef does not fit the ambit mainly because it is man made. It therefore is possibly not in keeping with the Act's biological bottom line. Therefore, the conclusion could be made that the reef would struggle to justify Marine Reserve Status at this time due to its 'artificial' nature. To justify this conclusion, a simple paradox that could be made here is the concept of sinking a ship for the purpose of diving and gazetting it as marine reserve.

However, it should be noted that marine reserve status could have been investigated more thoroughly. Due to time, cost and the new marine reserves act being such a large piece of legislation with lengthy submissions made this aspect as the study could have been more thorough. Therefore, it is not to say that there is no provision for an artificial structure gaining marine reserve status or other protection mechanism under this Act. However, this would require further investigation.

The Mimiwhangata Example

Despite the above, there are several options within our country for marine protection outside of Marine Reserves. These mainly relate in statutory terms to the Resource Management Act, Harbours Act and Fisheries Act. There are also other non-statutory mechanisms available that will be discussed.

Mimiwhangata is under the jurisdiction of the Northland Regional Council and was set up as a Marine Park in the early 1980's, which was an innovative example of marine protection that saw the Harbours Act and Fisheries Act combined to protect an area of significant marine ecology.

However, it is noted that Mimiwhangata is currently seeking Marine Reserve status. What can be taken from this example is that there are alternative ways under current legislation to seek protection of significant marine areas, such as the plan change process to the Regional Council's Coastal Plan under the RMA.

The Proposed Mataitai Reserve

Ngaiterangi Iwi have applied to the Ministry of Fisheries for a Maitaitai Reserve in the vicinity of the reef. This reserve ensures the sustainable management of fisheries in a designated area, with right to take some marine ecology at a rate that ensures fishery populations are managed sustainably. The Mount Reef is slightly outside the proposed area. In a letter from the Ministry of Fisheries to Glenn Harris Agent for Bob Clarkson of the National Party, there were discussions about extending the Mataitai Reserve. This presents the possible option of having the reef included in the Mataitai Reserve. However, in consultation with the Trust it was identified that this would not be a favourable option as the Trust seek to have the reef protected in entirety.

Cultural Protection

In consultation with local Iwi indicative support for the protection of the reef was gained from Chief Executive Officer for Ngaiterangi Iwi Brian Dickson. Mr Dickson's indicative support was related to the fact the reef could assist the proposed Mataitai proposal by harbouring marine ecology to provide an additional habitat for marine life to flourish. As mentioned above, the Trust does not perceive an extension to the Mataitai Reserve to be a favourable outcome for the reef, partly due to the fact that it would not be protected in its entirety, and

also as indicated in the letter from the Ministry of Fisheries, this would require a separate application, which would be a laborious process.

This aside, what has been identified as a real option for a cultural form of protection is by placing a Rahui over the reef. Rahui is a form of cultural protection administered by local Iwi and Hapu. Put succinctly a Rahui, is a ban of certain things from happening, which in this instance would be the ban over the damage of or taking of marine life over the reef.

STATUTORY CONTEXT

Application for resource consent under the RMA was made to Environment Bay of Plenty in 1998. Resource consent was required in the form of a coastal permit under section 12 of the RMA Restrictions on use of coastal marine area.

As explained earlier, the NZCPS is the highest form of policy under the RMA and sets criteria for Restricted Coastal Activities (RCA) within the Coastal Marine Area (CMA), which is defined as being land below the MHWS (mean high water spring). Applications not consistent with the NZCPS (RCA) criteria require public notification, meaning that a public hearing is required that is open for submissions for or against, to determine a decision by Council.

In applying for resource consent the Trust proposed an artificial reef that would not be a RCA, which in the case of the reef was a coastal structure not more than 100m wide from the shoreline. Therefore, public notification was not required for an RCA, and therefore rules under the Regional Plan would apply in the processing of the resource consent. This would then mean that notification (allowing for third party input into the decision making process) would be determined by the Regional Council.

Under the RMA if the effects of the proposal are considered to be minor and the written approval of all those parties considered to be potentially adversely effected by the proposal an application may be non-notified and determined by a Council officer with delegated authority. In the case of the Mount Reef written approval was sought and obtained by all the parties the Council considered to be potentially adversely affected by the proposal and the Council concluded that effects on the environment from the reef would be minor. Therefore the proposal was non-notified.

However, the decision by the Regional Council to non-notify the application was challenged by the an adjacent Timeshare Resort, as it was considered that they would be an adversely affected party, therefore should have been notified by the Council so they could partake in the decision making process. . High Court appeals are based on points of law, and in this case it was the Council Officer's decision under the notification provisions of the RMA where the Council was challenged. It was found by the Judge that the Regional Council's decision not to notify the public was valid. The appellant made no further appeal.

Once this appeal was resolved the permits originally approved by the Regional Consent were allowed to proceed. In issuing these permits the Council took a precautionary approach to the management of the Tay Street coast by issuing a short-term coastal permit for five years. This was mainly due to unknown effects on the foreshore and seabed that may result from placing the reef on the seabed, given that this was pilot project.

Therefore the right to occupy the seabed expires in October 2009, requiring a new coastal permit at this time to avoid having the reef removed prematurely.

RECOMMENDATIONS: *SHORT TERM*

Preferred Option: Navigational Protection via Coastal Bylaws

In order to protect the reef from navigational hazards, it is strongly suggested that the reef be gazetted via the Regional Council in Coastal Bylaws as a Prohibited Anchorage Area. Ongoing education for mariners is also encouraged. This could be in the form of establishing signage at local wharves, publication in Regional Council Mariners guides, advertisements in Mariner magazines and via education at local Boat Shows.

Preferred Option: Protection of Marine Habitat via Rahui

Considering options in the short term, a non-statutory prohibition of taking of marine life from the reef is such as a Rahui (or ban) is recommended. This would be enacted by local Iwi and Hapu. It is the recommendation of this report that negotiations by the Trust are entered into with these groups to carry out a Rahui over the reef.

Other Option A: Inclusion of Mount Reef in Mataitai Reserve

Although less favourable, the Trust could enter into negotiations with local Iwi and Hapu regarding the possible inclusion of the reef into the proposed Mataitai reserve. This would see the sustainable management of the reefs resources carried out, however may not result in a complete protection of its marine habitat, if not provided for via the Mataitai Reserve process.

Other Option B: Regional Council

Much like the Mimiwhangata example, there may be a plan change process the Trust could enter into to have the area of CMA occupied by the reef zoned for protection, possibly utilising certain pieces of legislation. This would require further research if the Trust should choose to initiate this option.

LONG TERM OPTION

Preferred Option: Long Term Coastal Permit with Section 12.2 Component

Upon completion of construction of the reef, and with subsequent monitoring data becoming available, a long term coastal permit with a occupation right under 12.2 of the RMA is required to ensure the life of the sand bags are met. Although some time off, it is advised that a party acting as applicant with an adequate Assessment of Environmental Effects will be required for this (in order to meet the requirements of the RMA) when lodging an application with the Regional Council. It is also advised (as was carried out with the original application) that wide public consultation is carried out to gather community feedback in regard to having the reef being kept for its life of twenty years. Also, written approvals should be revisited, to ensure that the process is carried out on a non-notified basis..

CONCLUSIONS

The Mount Reef has been an on-ongoing community project lead by the Mount Reef Trust in association with the relevant territorial authorities, sponsors and all its community support. The initiation of construction of the reef is underway and will be completed upon securing of final funding required. With a short-term coastal permit in place the reef will require re-consenting in the long run to ensure enforcement action is not carried out to remove the bags.

In the short term, this paper presents feasible recommendations for the Mount Reef Trust to ensure that the reef is protected. This will ensure that the multipurpose aspect of the reef is attained and will help in protecting the reef from navigational hazards. By carrying out these

recommended methods of protection, the Mount Reef will safely achieve its intended purpose of being New Zealand's first Artificial Surfing Reef.

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