COAST CARE PROGRAMME

Independent Review

Boffa Miskell

Coast Care Programme

Independent Review

Prepared for

Environment Bay of Plenty

by

Boffa Miskell Limited

July 2008

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1.0   EXECUTIVE SUMMARY

The Bay of Plenty Coast Care programme is a multi-agency, community-based coastal enhancement initiative established in 1994.

This report is a review of the programme in terms of its effectiveness in meeting its goals and objectives, and to consider recommendations for improvements.

Information on the programme was collected through data requests to Environment Bay of Plenty and interviews with partner agencies and key stakeholders.

The broad goals and objectives of the programme are well established in the statutory plans and policy. However, long term operational planning has not been formalised and the current operational targets are not well specified.

The programme has been highly successful in terms of goals relating to dune restoration, community participation and partnership with the key agencies. Consequently, there is a high level of support for the programme. From the information provided, it is reasonable to conclude that the programme is effective and has made a significant positive contribution to integrated coastal management.

Little evidence of monitoring was available, apart from a relatively comprehensive photographic record of restoration sites. With limited monitoring of programme inputs and outputs, it has not been possible to provide a quantifiable evaluation of the programme's actual effectiveness and efficiency over time.

The organisational structure and the roles and responsibilities of the partner agencies have evolved over time but have not been formally updated since establishment.

29 community Coast Care Groups are understood to be currently operational, with further groups waiting to be initiated. Groups typically comprise local resident networks or schools, but can also include individuals.

The Coast Care Coordinator has played a significant role in successfully anchoring community participation. The coordinator is perceived by many participants as an essential component of the Coast Care "brand".

The partner agencies are represented in the form of an Advisory Group, which provides advice and support to the Coast Care Coordinator.

As a "partner" to Coast Care, Environment BOP has become the lead agency rather than being the support agency as originally conceived. This has occurred incrementally and appears to have occurred without any deliberate decision-making by the programme partners. Environment BOP have financial commitment that is far greater than the other partners and hence a greater accountability for the programme being delivered effectively and efficiently.

It is recommended that the programme continues largely in its current form, but with identified weaknesses addressed and opportunities for enhancement followed up. Key recommendations relate to:

- Clarification of the roles and responsibilities of the various parties involved with the programme.

- Development of a long term implementation plan for the programme.

- A greater emphasis on data collection and management

2.0 BACKGROUND

The Bay of Plenty Coast Care programme is a multi-agency, community-based coastal enhancement initiative. The partner agencies are Environment Bay of Plenty (EBOP), Tauranga City Council (TCC), Western Bay of Plenty District Council (WBOPDC), Whakatane District Council (WDC), Opotiki District Council (ODC) and the Department of Conservation (DoC). Since its inception in 1994 the Coast Care programme has grown to include more than 25 community groups[1] and has resulted in the restoration of dunes over a considerable length of the region's coastline.

Boffa Miskell Ltd (BML) has been engaged by EBOP to undertake a review of the Bay of Plenty Coast Care Programme. The goal of this project is to review the effectiveness of the programme in meeting its goals and objectives and to recommend improvements to the programme and its goals and objectives, if needed.

This project was initiated due to the limited review and alterations to the programme since inception and because of the growing concerns regarding coastal development and the implications of climate change.

Five main tasks were identified in the project brief and are covered in this review:

1. Review the progress of the programme in achieving its goals and objectives;

2. Review the effectiveness of the existing organisational structure and the management systems and processes of the programme;

3. Make recommendations for amendments as a result of problems/opportunities identified in task 1;

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[1] Depending on how groups are classified and whether they are deemed to have ceased operating. There are current inconsistencies on the number of participating groups with reports of 27, 29 and 30. 29 is cited in the Annual Plan

4. Make recommendations for any changes as a result of problems/opportunities identified in task 2; and

5. Make recommendations on how the programme could strengthen community participation/education and involvement in coastal protection as a whole.

This report is separated into the following sections:

- Methodology – outlines the approach undertaken for the review

- Description of Coast Care – outlines the current form, function and achievements of the programme

- Identified issues – summarises the views expressed by interviewees

- Evaluation – provides an analysis of the key issues

- Conclusions – summarises the key findings of the review

- Recommendations – suggests suitable approaches to improve the programme

3.0 METHODOLOGY

The approach taken for this review comprised three main parts: interviews with key stakeholders, information collection and review, and information analysis.

3.1 INTERVIEW APPROACH

Interviews were conducted with people currently or previously involved with the Coast Care programme and included EBOP coast care programme staff, Partner Agency representativeness, Coast Care community group coordinators and other parties. A full list of those people interviews is provided in Appendix 1.

3.1.1 Partner agencies

As part of the brief, EBOP provided BML with a list of key partner agency contacts. E-mails were sent on 30 May 2008 to each of these contacts, which was soon after finalisation of the review contract between EBOP and BML. These emails requested the participation of the agency contacts through a phone interview in the week starting the 9th of June 2008 and a workshop proposed to be held on the 13th of June 2008.

Interviews were loosely based around a "SWOT"[2] analysis structure with the aim of recording the most important issues as each contact saw them. Care was taken to not strongly lead the interview and to let the interviewee determine the direction of the interview and the issues raised. It was intended that the workshop would have provided a collegial format, which would have concentrated on the main themes identified during the interview phase. However, given the tight timeframes, most contacts could not attend the workshop and as a result it was cancelled. Instead, a follow up phone interview was initiated to discuss a written summary of issues. Not all of the Partner Agency contacts were available for the follow-up interview.

3.1.2   Community groups

Key representativeness from community groups within each sub-region were interviewed. A list of suitable contacts was provided by EBOP and a subset[3] was selected to receive a notification letter requesting their participation in the review. Fifteen letters were sent out. One letter was returned because the address details provided were incorrect. Eleven interviews were conducted, as contact was unsuccessful with three of the contacts supplied. Interviews were conducted using the same general approach as for the partner agency contacts.

3.1.3   Other parties

Further interviews were conducted with other people who were or have been involved in the Coast Care programme either directly or indirectly. A list of key contacts was supplied by EBOP and comprised current Coast Care contractors, EBOP technical staff (coastal monitoring and biodiversity) and former Coast Care officers.

3.2   DATA COLLECTION

3.2.1   Statutory review

Relevant statutory documents were searched for policies, objectives and methods that related directly or indirectly to the coast care programme.

3.2.2   Literature and internet review

Literature relevant to the Coast Care programme was reviewed. This mostly included council commissioned reports or council websites. Climate change reports produced for international, national and local contexts were reviewed. Internet searches were used to identify domestic and international examples of programmes similar to Coast Care.

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[2] Strengths Weaknesses Opportunities Threats (SWOT).

[3] It was agreed with EBOP that an average of 3-4 key contacts per sub-region (Opotiki, Whakatane, Otamarakau/Pukehina and Waihi Beach) were to be approached for an interview.

3.2.3   Data review

Requests for all relevant Coast Care data files were made to EBOP, including hardcopy files, electronic databases and Geographic Information Systems (GIS) files. A site visit was also made to the Mount Maunganui EBOP office to view and obtain additional Coast Care information. GIS data was also obtained from Tauranga City Council.

Data was checked for relevancy or errors where possible.

3.3   DATA ANALYSIS

Information was analysed using three main approaches:

1. Gap analysis

2. SWOT analysis

3. GIS analysis

Gap analysis was performed by critically assessing the information supplied by EBOP and partner agencies. Gaps were identified by comparing the information obtained with references to work undertaken and the stated goals and objectives of the programme.

SWOT analysis was conducted in an informal manner during the interview process. Identified issues were then addressed with proposed alterations to the programme.

GIS analysis involved review of current information and also modelling of potential priority areas for the programme. Some ground-truthing of the GIS data was undertaken with an inspection of a 5 km stretch of beach to the northwest of Harrison's Cut, Papamoa.

4.0   DESCRIPTION OF COAST CARE

4.1   GOALS AND OBJECTIVES FOR COAST CARE BOP

"Goals and objectives" for Coast Care are included in a range of publications and formal policy documents.

4.1.1   Statutory Policies and Plans

Issues relating to dune management and Coast Care are addressed in statutory policy statements and plans of the Coast Care partners including:

- Bay of Plenty Regional Coastal Plan
- District Plans
- Reserve Management Plans

Local dune management issues are also included within the Bay of Plenty Conservation Management Strategy, which guides DoC's involvement with coastal management in the Bay of Plenty.

In combination, these documents contain the formally adopted "goals" (objectives and policies) and methods for the Coast Care partnership.

The contents of the key policy documents are summarised in Appendix 2. The outcomes for dune management generally, and Coast Care in particular, are included in these plans and relate variously to:

- Preserving the natural character of coastal environment
- Maintaining outstanding and regionally significant landscapes (including landscape qualities of beaches and coastal margins).
- Protecting areas of significant indigenous vegetation and habitats in the coastal environment.
- Maintaining and enhancing public access to and along coastal marine area
- Minimising the threat of natural hazards to human life and environment

The range of implementation methods includes:

- Community involvement
- Education
- Works and services
- Biodiversity enhancement
- Advocacy
- Rules

For EBOP, TCC and ODC the focus is across a range of sustainable management outcomes under the Resource Management Act (natural character, landscapes, biodiversity , public access and coastal hazard mitigation). For WBOPDC and WDC, there is a stronger emphasis on the outcomes from Coast Care related to coastal hazard mitigation. The DoC focus is on the management of biodiversity threats and enhancement.

All partner agencies have made a stated a commitment to support the Coast Care Programme as a component of their integrated coastal management.

All council partners have enabled approved Coast Care programme works as "permitted activities" in District and Regional Plan rules.

4.1.2   Operational Plans

The Environment BOP Annual Plan is the formally adopted statement of operational goals and objectives for the programme.

The "Key Performance Target/Measure" for Coast Care is stated in the draft Environment BOP Annual Plan 2008/2009 as:

"Maintained or increased length of coast in active care by Coast Care Groups".

For 2008/2009, Environment BOP intends to:

"Continue to support the voluntary work of Coast Care (29) and Estuary Care (15) groups."

Annual plans of partner Councils do not include any specific information on the Coast Care Programme.

There is no long term plan in place.

4.1.3   Other Publications

A "vision and goals" for Coast Care are identified in the 2004 review of the programme (Jenks and O'Neill, 2004). The "Vision" for Coast Care is identified as:

"Working with communities to protect and enhance the natural coastal environment"

The "Goals" for Coast Care are identified as:

"To restore a naturally functional dune ecosystem throughout the region that is regarded as valuable and stable (within natural parameters), and contains a diverse range of indigenous plant and animal species.

- *Be a fully inclusive voluntary community care programme, providing an easy avenue for all interested people to help care for the Bay of Plenty coast.*
- *Effectively involve and inform or community members so they understand the natural processes at work, and value their enhanced coastal environment.*
- *Continue to seek and encourage the spark of passion that ignites community voluntary action.*
- *Ensure there are always opportunities for volunteers to have a bit of fun along the way!*
- *Ensure on-going full cooperation and involvement of the District council partners and DOC in the Coast Care BOP Programme.*
- *Improve community awareness of natural coastal processes, and the importance of natural dune function and biodiversity.*
- *Provide further pertinent educational information to children through primary and secondary school information kits.*
- *Ensure continuing access to focussed research information.*
- *Attempt to resolve the escalating problem of indiscriminate use of vehicles on beaches and dunes.*
- *Ensure the dunes restoration and protection ethos remains prominent into the future, as coastal land is being persistently targeted for housing development."*

Implementation methods are identified as:

- *Community involvement*
- *Education*

- *Monitoring and research*
- *Physical works outcomes*
- *Biodiversity enhancement*
- *Advocacy*

There is no known formal adoption for the vision, goals and methods identified above. In this context, these statements can best be regarded as informal tools for communicating the Coast Care purpose and scope to the community. They are not valid as formal criteria for measuring programme effectiveness

4.2   ORGANISATIONAL STRUCTURE AND RELATIONSHIPS

4.2.1   Initial Establishment

The Coast Care programme was established in 1994. The founding principle was stated as:

> *"The coast care concept is about community groups and local government working together to protect and enhance the coastal environs of the Bay of Plenty Coast"*

The initial concept for the Coast Care organisation emphasised the role of community Coast Care Groups at all levels, including a Coast Care Joint Committee made up of elected members and Coast Care Group representatives.

The programme's organisational structure was simplified for its initial establishment (Internal Memorandum Hall/Pemberton 15 August 1994) the main difference being the removal of the separate governance components (Joint Committee/Steering Group). This is the structure shown below.

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    Coast Care Groups
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              ¦
┌─────────────────────────┐
│   Coast Care Coordinator │
└─────────────────────────┘
              ¦
┌─────────────────────────┐
│  Coast Care Technical Group │
│   Technical staff of Councils │
│  Technical representatives: dune │
│  ecologist, vegetation specialist │
└─────────────────────────┘
              ¦
┌─────────────────────────┐
│   Participating Councils │
│   EBOP, WBOPDC, TDC, ODC │
└─────────────────────────┘
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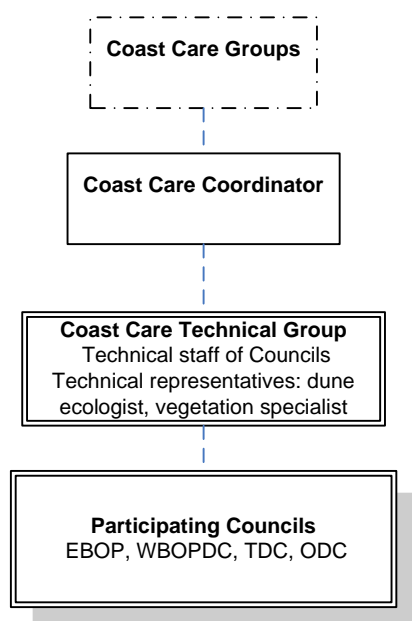
In comparison to the usual format for structure diagrams, the chart is inverted showing Coast Care Groups at the top. The reason for this are not stated but may be intended to reflect the

primacy of the Coast Care Groups in the programme. The management and support arrangements from EBOP are not shown. However EBOP undertook to provide vehicle, office accommodation and administrative support. Financial management occurred under the EBOP annual plan (Sub-programme 553).

Coast Care Groups were described as:

- Any group interested in the Coast.

- To have an appointed leader.

- Encouraged and assisted by Coast Care coordinator to set up and operate.

A "Coast Care Coordinator" had the following functions:

- Primary responsibility for facilitating the establishment and successful operation of Coast Care Groups

- Developing educational material to support Coast Care groups;;

- Developing an annual plan in association with the Technical group

- Attending all Technical Group meetings;

- Making recommendations to the Technical Group;

- Receiving direction from the Technical Group.

The Coast Care Technical Group had the following functions:

- Overseeing the Coast Care programme;

- Developing annual plans and objectives for coast care;

- Reporting on progress twice yearly to partner agencies;

- Providing an Annual Report.

Salary costs for the coordinator were funded on an agreed formula by partners.

The partnership was also extended to include DoC, given its advocacy responsibilities for the coastal environment. However, DoC does not have a significant land management function in the coastal margin. Three DOC offices (Tauranga, Opotiki and Rangitaiki) and two conservancies (Bay of Plenty and East Cape/Hawkes Bay) are involved with the Coast Care programme.

4.2.2 Current Establishment

The Coast Care programme has evolved since its establishment but updated formal documentation of the current programme structure was not available.

The following chart is derived from information provided to the reviewers by Council staff. This illustrates the "matrix" nature of the programme with partners engaged via the Coast Care Advisory Group (CCAG) and EBOP providing overall corporate support.
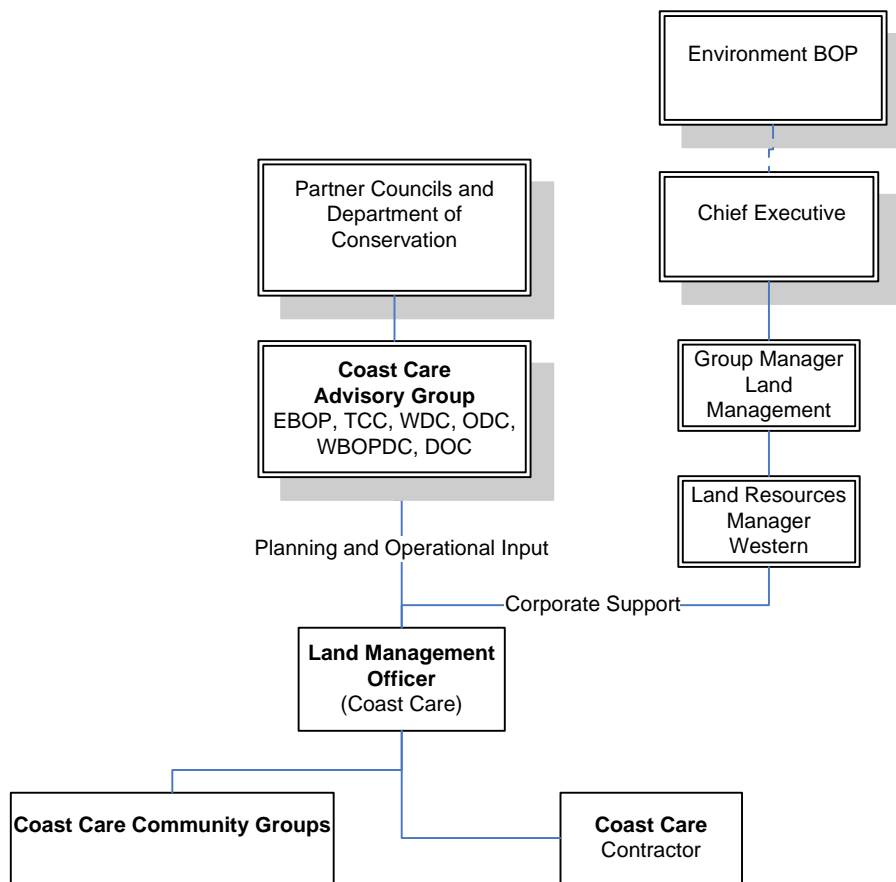
4.2.3 Community Coast Care Groups

There are currently 29 Coast Care Community Groups currently in operation. These groups are shown on the plan in Appendix 3. This includes 1200 volunteers providing an estimated 6000 hours of work each year (Jenks, 2006)[4].

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[4] The accuracy of this data could not be verified and it should be considered as a personal estimate only.

At least one of these groups has become inactive over the last 2-3 years. The current Coast Care Officer advised that there are twelve new Coast Care groups pending, but this figure is not supported by any documentation provided to the reviewers.

The groups have no formal terms of reference and they vary considerably in their makeup and operation. However some generalisations can be made:

- They are self organizing and self managing.

- They are typically comprised of local of residents or schools, but individuals may also participate separate of any group.

- Many groups evolved out of previously established networks, such as Lions clubs, beautification societies or other community groups.

- A "leader" is identified for each group who is the primary point of contact for the Coast Care coordinator and provides coordination with the wider group[5].

- Typically groups are made up of a few dedicated individuals who enlist the help of further volunteers.

- Groups do not commonly advertise for volunteers, preferring to rely on word-of-mouth.

The primary operation of groups is planting. However, they also assist with weed control, trial plantings and pest control in some circumstances. In one case (Bryans Beach) the Coast Care group has taken over the rabbit control contract management as a result of dissatisfaction over previous rabbit control operations.

For Coast Care groups and individuals involved in Coast Care, the Coast Care Coordinator provides coaching, guidance and encouragement. The Coordinator or a contractor is almost always present to supervise planting. Coast Care provides all plants, fertiliser and implements for planting days.

4.2.4   Land Management Officer (Coast Care)

The job title has been changed from "Coast Care Coordinator".

The purpose of the position is stated as:

> "...supervise, coordinate and undertake the planning and implementation of projects that give effect to Council's strategies and policies for the sustainable management of land and the coastal environment within the Bay of Plenty region. This position is also to promote and support community and Council initiatives aimed at implementing coastal

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[5] "Leadership" appears to change regularly within groups and is poorly recorded on EBOP contact databases.

enhancement and protection practices and in particular to deliver the Bay of Plenty Regions Coast Care programme". (Position Description, EBOP, June 2007).

Although not explicitly stated in the position description, the position has two formal lines of accountability: to the Coast Care Advisory Group and to the EBOP Manager: Land Resources (Western). However, primary accountability is clearly to the Manager: Land Resources (Western)

In the past the Coast Care Coordinator has occasionally undertaken an advocacy role on wider coastal matters including comment on resource consent matters.

4.2.5   Coast Care Advisory Group

A current "terms of reference" for the Coast Care Advisory Group was not available.

The CCAG is represented by all Partner Agencies.   This representation is flexible and no formal CCAG membership lists have been created. Currently EBOP is not represented on the CCAG, other than through the Coast Care Coordinator.   Each Partner Agency appoints representatives to the CCAG, with DoC appointing members from its three offices.

The staff attending the CCAG is determined by each partner. The personnel on the CCAG are mostly at an operational level. At least one person attends the meeting for each of the partners. The membership of the group is relatively stable but has been affected by the turnover of staff within Councils and DoC.

The Advisory Group has a role in the operational planning of Coast Care work that occurs in conjunction with the Coast Care Coordinator.

The CCAG currently meets quarterly (previously 6 weekly). The location of the meetings is rotated. Attendance at meetings is flexible, particularly for DoC, who coordinates attendance between its three offices. Guest attendees from the councils or DoC are brought along to contribute specialist knowledge not typically represented within the CCAG, such as coastal planning and biodiversity. Meetings are typically run informally.

The CCAG receives a report from the Coast Care Coordinator at each meeting. The reports provide information on activities of the programme over the previous quarter Quarterly reports have previously been delivered to the EBOP Evaluation and Monitoring Committee although this procedure was in abeyance at the time of the review. CCAG members report back to their parent organisations as they see fit.

CCAG contribution is made to preparation of the Annual Report for EBOP. No Annual Report goes to the CCAG.

4.3   RESOURCES

At the time of this review the incumbent "Coast Care Coordinator" had recently resigned and the recruitment process to fill the vacancy was underway.

A subordinate Coast Care officer position was dis-established approximately two years ago. Contractors have been engaged to provide additional support during peak work periods. This involvement is on an operational basis to work with Coast Care groups primarily in implementing planting, but includes other roles, such as liaising with community groups and coordinating pest and weed control.

No record of time spent on tasks is kept. A typical split of task on a time basis has been estimated by the Coast Care Coordinator[6]:

Tasks	Planning	Operations	Administration	Education/Publicity	Miscellaneous	Total
Days	60	180	100	75	37	452
%	13	40	22	17	8	

This data is an estimate from the Coast Care Coordinator and is not supported by formal time-keeping data. The proportionate breakdown provides some indication of where recent efforts have been directed.

The Coast Care Programme gains its corporate support from EBOP. This includes office space, information technology, vehicles, financial management, corporate communications and other management systems and procedures.

EBOP directly contributes $294,000 per annum and indirectly at least $8,000 per annum through other departments (e.g. rabbit control).

The salary contributions (per annum) from the Partner Agencies are as follows:

	WBOPDC	TCC	WDC	ODC	DOC	TOTALS
Salaries	$15,000	$45,000	$5,000	$6,000	NIL	$71,000

The Partner Agencies also contribute materials, estimated to be as follows[7]:

	WBOPDC	TCC	WDC	ODC	DOC	TOTALS

[7] This information was supplied by the Coast Care Coordinator and needs to be confirmed by the Partner Agencies.

Materials	$15,000	$25,000	$10,000	$6,000	$1,000	$57,000

It appears that several councils make financial contributions to Coast Care objectives additional to their set financial contributions, by 'piggybacking' on other council projects. This was not quantified.

Contributions are also made by Ballance Agri-Nutrients (urea estimated at $6,000.00 pa) and Port of Tauranga (supply of land for a plant storage depot estimated at $5,000 pa).[8]

On this information, the total financial inputs for the programme are estimated to be at least $430,000.00 per year.

EBOP provide 70% of the direct financial inputs to the programme.

4.4   OPERATIONAL PLANNING

No long term implementation plan for the Coast Care programme was identified through the review.

The focus of effort through work programmes are to an extent a response to the initiatives of the Coast Care Groups, although this has been strongly guided by the Coast Care Coordinator. The Coordinator considers that the involvement of Coast Care Groups is well aligned with areas under greatest pressure[9]. Coast Care groups tend to be most active in areas where there is obvious stress to the dune environment.

The planning of planting areas is considered to have become easier as the areas under critical pressure have been addressed. Priorities have shifted toward the back dune areas, focussing on elimination of weed species and for providing greater indigenous biodiversity.

Coast Care programmes are planned through the EBOP Annual Plan process as a component of the Sustainable Coastal Management programme. There is a strong seasonal pattern to the Coast Care programme that dictates work patterns and resourcing needs.

Key periods in the Annual programme are:

Period	Key Tasks
January-February	Seed gathering
March - April	Organisation Coast Care Group

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[8] This information was supplied by the Coast Care Coordinator and needs to be verified

[9] No evidence was found that described where these areas were or whether any analysis of these pressures had been undertaken.

| May - August | Planting season |
| September - December | Planning, education programmes. |

Planning occurs one year ahead in order to have the required plant material available for community planting days.

Sites that need to be planted are identified with loose plans made for each area. Plans are reviewed with the council partners (CCAG) for sign off.

The level of planting is guided by maintaining expenditure generally consistent with the previous year's budgets.

4.5   DATA MANAGEMENT/MONITORING

The Coast Care programme has the potential to produce large amounts of data relating to planting events, pest and weed control, budgeting, planning and communication between stakeholders. However, data management and collection does not appear to have been a strong focus of the programme.

4.5.1   Data storage/retrieval

To help manage the spatial component of this data, EBOP had a GIS database developed. This divided the regional sandy coastline into discrete units typically relating to Coast Care group activity areas, which allowed recording of key attributes against the various Coast Care groups. These attributes recorded past activity, but also identified factors such threats and opportunities. It is unclear how the database was populated with data, but it is suspected that this was done from the knowledge of the Coast Care Coordinator, rather than from direct region-wide measurements.

4.5.2   Coast Care Programme specific monitoring

It has been reported that details of plant numbers, species and location is recorded for all planting sites. However a copy of this information has not been made available to the reviewers and it is unclear whether it is complete or what format it is in (e.g. electronic spread sheet, file notes, reports etc).

Before and after photos are generally taken at each site, but not always from the exact same position.

In some cases rabbit populations are monitored using the modified McLean scale, but it is unclear how this information is stored, how regularly it is obtained and where it is taken from.

No regular follow-up monitoring of plantings is performed, but plantings are visited on an ad hoc basis.

Sand depth poles have been established at some sites to illustrate sand level changes over time.

It is likely that community groups monitor the condition of their plantings, but it is not known if these observations are recorded and stored in any consistent and regular way.

4.5.3   Other relevant EBOP monitoring

EBOP initiated a coastal monitoring programme in 1990 as part of the wider Natural Environmental Regional Monitoring Network (NERMN) programme.   This involves dune morphology monitoring at 53 sites on sandy beaches within the region (see Appendix 4). Monitoring sites are generally spaced 2-3km apart. Several occur in areas where Coast Care plantings have occurred. Dune profiles at each site are typically recorded every year by EBOP Environmental Data Officers, but in some erosion prone areas this is done quarterly.

The Emery technique has been used to record dune profiles, which is a simple, robust and easily repeatable method (Iremonger, 2007).   More recently a Total Station surveying instrument has been used to measure the profiles (Iremonger, 2007).

Since 1994 vegetation information at each site has also been collected. This includes the species present, an estimate of the proportion of each species occupying a metre wide strip either side of the profile line, the horizontal distance to the seaward edge of the vegetation and the position of the recent high water mark at the profile site (Iremonger, 2007).

In addition to this profiling and associated data collection, LIDAR[10] and high quality aerial imagery is collected every few years.

The biodiversity component of NERMN is still being developed. EBOP has contracted a study which will provide baseline mapping of dune condition and will make recommendations on appropriate monitoring approaches (N. Willems pers. comm.). The information obtained is expected to include maps of broad vegetation types[11] throughout dunes within the region, as well as more specific information obtained from transects (N. Willems pers. comm.).   It is expected that these transects will be monitored every three years (N. Willems pers. comm.).

4.5.4   Reporting

Reporting on the Coast Care programme has included:

- Case study examples – several good examples of dune restoration works have been reported on through descriptions and photo comparisons.

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[10] Light Detection and Ranging

[11] Derived from aerial photo interpretation and ground-truthing

- Newsletter – typically two produced per year from 1999-2006, but none produced recently. Generally reporting on current activities and also supplying new information as it became available (e.g. staff, pests, weeds, native fauna and flora, publications,

- Informal reporting to CCAG – updates on activities occurring within the region and other matters of interest to the CCAG.

- Reviews – four separate reviews have been conducted by various partners

- Reporting to council meetings – typically done prior to annual plan production

- Presentations by Coast Care coordinator at national conferences – several have been made, typically at the former Coastal Dune Vegetation Network conferences.

- Journal Publications – at least one has been produced by Coast Care coordinators

There is no evidence of a standard annual reporting procedure.

The data made available by EBOP was insufficient to undertake a quantitative assessment of the areas of dunes restored through the Coast Care programme. However, the GIS database developed by the Coast Care Coordinator shows that the Coast Care programme has been successful in establishing indigenous fore-dune plants throughout the region. Of the c.190 km of sandy coastline within the region, 21% are under "advanced management", 34% are under "active management" and 45% are not managed[12]. These classifications are explained in Table 1.

There is strong photographic evidence of site specific dune recovery/accretion as a result of this management.

Coast Care groups have also established stream-mouth protection works in some areas.

Table 1. Criteria for management area classification (from Jenks, 2006)

Advanced management	Active Management	No Management
These are areas where:	These are areas where:	Areas where the constraints identified are preventing commencement
1. planting native fore-dune species was completed at least 3 years prior, and	1. foredune planting has commenced, but not been completed, and	and/or where Coast Care groups are yet to be formed e.g. Rogers Road.
2. growth rates are sufficiently rapid to ensure	2. plantings are not yet naturally colonising the	

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[12] This information should be considered as a rough estimate only until it can be corroborated by more robust monitoring data.

the plants are now naturally colonising any bare sand, and 3. where established plants have restored an incipient fore-dune, and 4. the dune is now more resilient to wave attack, and 5. the dune is now sufficiently wide to self-repair following normal erosion episodes. Frequently groups have commenced back-dune planting.	areas and the fore-dune is not yet as fully resilient as above.	In some cases this is due constraining factors such as ongoing vehicle damage, stock or rabbit grazing, or that existing erosion does not allow current foredune re-vegetation techniques. This latter problem can be overcome with time and careful management.

In addition to this physical work, the Coast Care programme has also created considerable educational and promotional material. The 'Life's a Beach' educational resource was produced by the Coast Care programme and has been used in many schools throughout the region. Many educational signs and flyers have also been produced and are used for community education purposes.

4.6 COMPARISON WITH SIMILAR PROGRAMMES

4.6.1 Domestic examples

Several other Coast Care programmes are run throughout New Zealand. Areas with Coast Care or Beach Care programmes include:

- Northland Region

- Environment Waikato

- Auckland Region

- New Plymouth District

- Manawatu-Wanganui Region (Horizons)

- Greater Wellington Region

- Tasman District

- Nelson City

- Christchurch City

Most of these are loosely based on the Bay of Plenty system, but many do not comprise a collaboration of partner agencies. One of the exceptions is the Northland Region coast care programme which has an agency partnership identical to the Bay of Plenty model. Northland also appears to specifically engage iwi in the coast care programme, which the Bay of Plenty programme does not appear to do.

Most of the examples above use a council officer or contractors to liaise with partner agencies and community groups. Some of the examples have tied coast care objectives into specific coastal management plans. No evidence was found that suggests that any of these examples are more advanced than the EBOP coast care model. However, there may be aspects of these examples that could be adopted by the Bay of Plenty Coast Care programme, such as specific Iwi involvement and forward planning using coastal management plans.

Another example that may hold inferences for the Coast Care programme is the New Zealand Landcare Trust. Some details of the trust are as follows:

- It is a NGO

- Primarily Funded by MfE

- Also receive grants from corporates

- Has 7 trustees

- Employ national and regional coordinators – national administration support

- Formed as a result of recognition of threats on the environment and economy (rabbit issues in the SI high country)

- Fostered research into key environmental issues

- Community empowerment

- Community education

- Development of networks and collaboration

- Environmental protection/enhancement advocacy

- Developed a strategic plan (1997)

- Have a clear vision

In many ways the Coast Care programme is similar to this model, with perhaps the biggest difference being the development of a strategic plan by the New Zealand Landcare Trust. However, the national context of the trust means that a strategic direction is essential.

4.6.2   International examples

Australia was one of the pioneers of the Coast Care / Beach Care movement and has one of the most advanced networks for dune management on a national perspective. This 'umbrella' network[13] supports and helps find funding for local Coast Care programmes.

A specific example of a relatively advanced Coast Care programme is run by the Gold Coast City Council. Some details of this programme are as follows:

- A relatively small area of sandy beach (c. 50km, compared to c. 190 km[14] in the BOP region)

- They contract to Griffiths University Centre for Coastal Management to facilitate the beach management programmes

- Has clear aims

- Has a clear vision

- Employs a BeachCare officer (technical and planning support) to coordinate with community groups

- Supplies equipment and plants

- Produces educational material for primary and secondary schools

- Seems to have few cross-agency relationships

- Currently developing the "Gold Coast Shoreline Management Plan", which will guide management of sandy shores within the Gold Coast for the next 50 years

This programme appears similar to Coast Care in many regards, but appears to have divided roles up into separate streams. It appears to have produced more comprehensive educational material and is further advanced with strategic planning.

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[13] Landcare Australia Ltd is the sponsorship and marketing arm for the Coast Care movement Across Australia (http://www.coastcare.com.au).

[14] From the EBOP website

4.6.3   Summary of comparisons

The EBOP Coast Care Programme appears to be at the forefront of dune management within New Zealand and appears to be at least as advanced as international best practice examples. The partner agency relationship within BOP Coast Care is a clear differentiator with domestic and international examples. However many of the programmes reviewed have aspects that might be adopted for the coast care programme, such as specific involvement of iwi and a greater focus on longer term planning.

5.0   IDENTIFIED ISSUES

This section outlines the general issues raised during the interview process.   The following is a summary of the general responses of interviewees. A more detailed account is provided in Appendix 1.

5.1   POLICY FRAMEWORK

There appears to be a consistent understanding of the broad objectives of Coast Care, being:

1) Education and advocacy of dune function and value

2) Community participation

3) Physical restoration of dune systems

The programme goals and objectives have evolved over time. Hazard mitigation and enhancing biodiversity have gained prominence in more recent times. Differing views exist on what the overall rationale for Coast Care.

5.2   PROGRAMME STRUCTURE AND RELATIONSHIPS

5.2.1   General approach and issues

Respondents were unanimously supportive of the current general approach of the programme. There is a strong belief from all stakeholders that the Coast Care programme is highly successful and produces highly tangible results.   Furthermore, the perception of many respondents is that Coast Care is 'cutting edge' and is a leader nationally and perhaps internationally.

It is viewed as a highly successful programme that delivers significant environmental gains and well as excellent public relations opportunities. Many attribute a large proportion of the success of the programme to the incumbent Coast Care coordinator.

Many respondents stressed that it is important to maintain Coast Care in its current form.

Some council respondents indicated that Coast Care represents very good value for money and that they would be unlikely to achieve the same results if they were to operate independently with the same budget as they currently contribute to Coast Care. However, there is some concern that changes to the structure and function of Coast Care may reduce the efficacy of the programme. In this scenario some partner agencies felt they may need to consider the cost/benefit implications of forming their own locally-focused Coast Care programme.

DoC representatives indicated that without Coast Care, DoC would have only performed basic coastal management such as weed control and NZ dotterel management. This is largely because DoC has relatively few coastal reserves.

Most council respondents indicated that support within the councils was high and that there was general recognition that Coast Care is valuable.

Several respondents indicated that there is a widespread perception that EBOP run Coast Care and that other partners are not getting full recognition.

Several respondents felt that all employment issues relating to the Coast Care Coordinator should be dealt with solely by EBOP.

Many respondents believed that Coast Care could assist with resolving vehicle and horse access on beaches. There is widespread concern over the ad hoc management of beach vehicle and horse access within district bylaws. It is believed that Coast Care should be involved with the formation of bylaws and council policy, and that Coast Care may be able to assist with a region-wide policy for beach access issues.

5.2.2   Community Coast Care Groups

Generally coast care groups are satisfied with the level of contact and support they have received. The ease of participation was commonly cited as strength of the programme. Many praised the enthusiastic and participatory approach taken by the Coast Care coordinator. However, at least one group has become inactive due to a lack of contact since the time the second coast care officer position was disestablished.

Rabbit control has been identified as a community group concern. In one case substandard poison laying practices led to the local community group taking over the rabbit control contract management. There have also been unconfirmed reports of pets being poisoned by toxic baits or from eating poisoned carcasses. Furthermore, rabbit control signage was seen as having substandard visibility and was not up-to-date.   This is clearly seen as being a potential conflict between Coast Care works and community groups, which could threaten local participation in the programme.

Several of the partner agency representatives indicated that there were opportunities to enhance community participation by fostering relationships between Coast Care groups. This might involve a wider forum for groups to meet other groups in order to share information and experiences. This could also be extended for other environmental community groups not

involved with Coast Care. There are many groups within the region that operate with similar objectives to Coast Care groups, but there does not appear to be any overarching coordination between these groups. Greater coordination could facilitate more holistic environmental enhancement. However, the sole local focus of some community groups is seen as a strength by some.

It was also suggested that Iwi could be encouraged to become involved in the Coast Care programme in a more targeted manner.

5.2.3   Coast Care Coordinator

Most respondents were satisfied with the role of the current Coast Care coordinator. Key attributes listed by respondents included a high level of enthusiasm, a fully consultative approach and regular contact with all parties. Many respondents expressed a fear that the programme would be affected by the loss of the current coordinator. In particular, the loss of institutional knowledge was a common concern.

There is a general perception that the coordination role requires more than one person can provide. The Coast Care Coordinator considered that more than one full time position is required to support the programme. The previous Coast Care officer job holder considered that a permanent part time position (20 hours/week) is required, except during the three month planting season where fulltime employment (40 hours/week) is required.

It appears that the role of the coordinator has changed since the start of the programme, with an increasing leadership role being evident. This is not seen as a negative, but instead reflects the maturing of the programme and the assimilation of knowledge and expertise by the coordinator. It is expected that the CCAG will initially need to provide stronger guidance for the new coordinator, but that this requirement will decrease over time.

5.2.4   Coast Care Advisory Group

The collaborative approach of the advisory group was frequently cited as a strength of the programme.

One respondent felt that the CCAG structure/approach was very effective early on, as it allowed all parties to gain common understandings and to raise the collective knowledge of the group. However, more recently the CCAG approach has become less effective for established members, but still provides an effective forum for bring new members 'up to speed'. In effect, the CCAG benefit in terms of information sharing and collaboration appears to have plateaued.

One respondent suggested that it might be worth considering disbanding the CCAG, given that the purpose and function of the CCAG has changed considerably. Nevertheless, many

recognise the risk of vesting most of the 'institutional knowledge' with an individual and recognise the role of the advisory group to maintain this knowledge within the system.

The general perception is that over time the CCAG became, in effect, led by the Coast Care Coordinator. There was a high degree of trust from the CCAG that the coordinator 'knew best'. The CCAG meetings then became a forum for the partner agencies to keep abreast of activities, rather than for the AG to direct them.

Many respondents would like to see fewer meetings and none think there should be more frequent meetings. However, some advocate for meetings on a needs basis. One suggestion was for quarterly meetings, with potential for further meetings as and when they are needed (e.g. ahead of the planting season).

One respondent suggested that the Chair role for the CCAG meetings should not be rotated and that the EBOP Land Resources Manager should chair all meetings. Furthermore, it was suggested that meeting agendas need to be circulated early to the CCAG, so that members had time to modify or add to the agenda.

5.3 PLANNING

Currently the perception is that the Partner Agencies have little control over the future directions of the programme. This is not unanimously seen as a bad thing. However a degree of longer term planning is seen by many as desirable and would allow more effective management of resources.

Respondents indicated that the development of annual work plans with contributions from the Partner Agencies would help partners manage and prioritise internal effort and that the formulation of a long term plan for Coast Care could help focus Coast Care effort towards key areas that require management.

Some respondents indicated that any forward planning would need to allow for flexibility to alter work programmes on-the-ground during operations. The close relationship between the Coast Care coordinator and the various council officers is very important in this regard.

Many respondents indicated that the Coast Care coordinator would need to be involved in any operational planning.

5.4 DATA MANAGEMENT/MONITORING

Some respondents indicated that the current photo-point monitoring approach is very useful and demonstrates the success of the plantings to date. Others indicated that more could be done in terms of monitoring the success of dune plantings. Specifically this includes fixed photopoints and dune morphology profiling.

It is commonly felt that there has been little focus on monitoring of plantings in the past, as the focus has been on establishment instead.

Some respondents suggested that tracking of resources and budgets would be useful in order to more fully understand the relationship between demand and funding/resources. It is believed that this would help manage Coast Care programme development.

6.0   EVALUATION

6.1   GOALS AND OBJECTIVES

The Coast Care operation has developed its own vision and goals that are more or less consistent with the policies contained in the formal planning instruments of the partner Councils. The Coast Care goals are a collation of objectives, policies, and implementation methods. They are suitable as means of communicating what Coast Care is about to the community as they can be changed to suit the audience need.

In evaluating the effectiveness of the coast care programme, formal policies of the partners need to be considered.

The statutory policy and plans of the partners are more or less consistent in recognising the Coast Care programme, although there is varying recognition that Coast Care is a method that achieves a range of outcomes relating to integrated coastal management, i.e.:

- Preserving the natural character of coastal environment
- Maintaining outstanding and regionally significant landscapes (including landscape qualities of beaches and coastal margins).
- Protecting areas of significant indigenous vegetation and habitats in the coastal environment.
- Maintaining and enhancing public access to and along coastal marine area
- Minimising the threat of natural hazards to human life and environment

All plans have enabled Coast Care activities to be undertaken with the minimum of regulation, which is reflects the acceptance of the programmes effectiveness.

All plans and policies plainly also recognise the merits of community partnership as the fundamental principal of Coast Care.

From the information provided, it is reasonable to conclude that the programme is effective and has made a significant positive contribution to integrated coastal management. However, with only limited monitoring of programme inputs and outputs, it is not possible to provide a quantifiable evaluation of the programme's actual effectiveness and efficiency over time.

The key performance target within the Annual Plan appears to be pro forma and provides a weak measure of effectiveness. It implies that simply maintaining the current "length" of coast covered by programmes is an acceptable programme outcome. In that regard, this objective has clearly been achieved. However, the target needs to be revised to reflect the programmes progressive approach and, for example, the current focus on back dunes and biodiversity.

6.2   ORGANISATIONAL STRUCTURE AND RELATIONSHIPS

The organisational structure and relationships have understandably evolved and developed since establishment in 1994. It was difficult to find consistent documentation on changes made.

6.2.1   General Approach

Coast Care has developed as a joint programme between local government, DoC and the community. EBOP is an appropriate "host" organisation for this activity given its statutory role in coastal management and the benefit of achieving consistency along the regions coastline. However, the potential for this hosting arrangement to "water down" the partnership nature of the programme needs to be taken into account.

As a "partner" to Coast Care, Environment BOP has evolved to become the lead agency rather than being the support agency as originally conceived. This has occurred incrementally and appears to have occurred without any deliberate decision-making by the programme partners

To some extent, the perceived need for a strong "partnership" with the Councils and DoC has reduced over time as a product of the success of the programme in addressing the more immediate issues which led to the programme being established. There has been a high degree of confidence in the programme delivering results under the leadership and approach of the Coast Care Coordinator. Therefore, the partner organisations do not, for the most part, see any immediate need for a greater role or involvement of partners than at present.

6.2.2   Community Coast Care Groups

There is a strong view throughout that the Coast Care Community Groups are highly successful and are making a positive difference to the coastal environment.

A large part of this success is the focus on simplicity, minimising the organisational effort required of the community to undertake the programme "on the ground". There is no requirement to establish formal committee structures. The direct provision of plant material to groups avoids bidding for funds and accounting responsibilities.

The Coast Care coordinator and community groups stress the importance of maintaining this approach.

Coast Care Groups have no formal legal status and therefore should not be promoted as advocacy organisations on wider coastal issues.

6.2.3   Land Management Officer/ Coast Care Coordinator

The role of the Coast Care Coordinator has changed over time. While the commitment to Coast Care remains important, wider responsibilities and roles have also emerged. The position requires a person who is largely self-directed and able to develop strong external networks.

Although the most recent position description makes no specific reference to accountability to the Community Coast Care Groups and the Coast Care Advisory Group there is a general accountability to work with partner groups and organisations and to support community initiatives. The dual reporting lines to the Partner Agencies via the CCAG and to E BOP are an important dimension of the position and this should be more explicitly stated and responsibilities to each identified. The reporting line to EBOP has primacy and this should be maintained.

The current position description is generally appropriate and is consistent with the broader longer term direction of the Sustainable Coastal Management programme. However, the position purpose needs to be amended to recognise that the position gives effect to the strategies and policies of all Partner Agencies, not just those of EBOP.

The change in position title from "Coast Care Coordinator" to "Coast Care Officer", and more recently to Land Management Officer (Coast Care) is a product of recent organisational changes within Environment BOP as the employer and creates corporate consistency.

The Coast Care Coordinator name is still commonly used within the Coast Care "community". Coast Care group coordination is likely to remain a very substantial part of the positions role. The Coast Care Coordinator role is also strongly associated with the Coast Care brand and this clarity of purpose aids communication. Given these circumstances, maintaining an association of the position with the previous job title should be considered. This will also avoid the need to modify a raft of publicity materials and contact information.

The advocacy role of the Coast Care coordinator also needs to be clarified, especially regarding formal submissions on resource consents and plan changes. In general, this is not a role that sits well this type of position. The partner organisations already have corporate practices and procedures in place for this type of involvement. The Coordinators input, if any, should be limited to provision of relevant information to partner organisations.

6.2.4   Coast Care Advisory Group

The Coast Care Advisory Group role is seen as having declined in importance or need over time as the Coast Care programme has become more established.

There is a lack of clarity on what the role of the CCAG is. The lack of formal terms of reference and recent turnover of membership has contributed to this.

The CCAG needs to have a far clearer accountability to give effect to the partnership approach to Coast Care. The CCAG should have the primary responsibility of ensuring the Coast Care programme is developed and prioritised to deliver on the key outcomes identified in standing

policy. This should include taking a long term view to align the programme with the Councils' wider planning processes.

The CCAG needs to develop a terms of reference that clearly sets out its role and responsibility of its members. The terms of reference could include the following:

Role:

Represent the partner agencies in the planning, organisation and monitoring of the Coast Care programme.

Responsibilities:

❑ *Attend quarterly meetings;*

❑ *Develop a long term (ten year) plan that sets priorities for the implementation of Coast Care that are consistent with relevant objectives and policies for the coastal environment;*

❑ *Review and update the long term plan at least every three years;*

❑ *Assist the Coast care Coordinator with the preparation of an Annual Plan and Budget including the setting of key performance targets;*

❑ *Receive and review quarterly monitoring reports and respond to any emerging issues and risks.*

❑ *Prepare an Annual Report in conjunction with the Coast care Coordinator.*

The CCAG membership should be at a level of skill and experience to undertake these responsibilities. The Land Resources Manager should also be on the CCAG and could perform the role of convenor/chair.

Four meetings should be scheduled each year to address elements of the programme planning cycle as well as receiving standard reports on:

❑ Physical results

❑ Financial results

❑ Emerging issues/risks

❑ Communication issues

As part of the review, an alternative approach was suggested by Environment BOP management in order to provide more definite separation between what the programme is to deliver and how it is delivered.

Under this alternative, the CCAG would provide a single line of advice to their respective CE's on what the annual deliverables should be, the CE's would approve the annual programme and Environment Bay of Plenty "contract" to undertake the work. The new Coast Care officer would not be accountable to the CCAG but would report through the Environment Bay of Plenty Western Land Resources Manager. Environment Bay of Plenty would determine how to best deliver the agreed outputs.

This approach was canvassed briefly with the partner agencies. The initial view was that it would be too bureaucratic and complicated. The prevailing view of those providing feedback was that that the Coast Care officer role should be more closely involved with planning with the partner agencies. Some of the partner agencies fear that the perception by the public that Coast Care is run only by EBOP will be increased by this alternative model. The consensus was that the current organisational structure is sound but the roles and responsibilities need to be clearer and better understood.

The conclusion of the review is that any future changes to the structure and resourcing of the programme should be in response to needs defined through the preparation of a long term implementation plan. As noted, the reality of the current situation is that EBOP role is now the lead agency rather than support agency. EBOP have financial commitment that is far greater than the other partners and hence a greater accountability for the programme being delivered effectively and efficiently. This needs to be recognised by the other partners.

6.3   RESOURCES

Technology and support resources are considered to be adequate.

It is difficult to assess with certainty whether the current level of personnel engaged on the programme (staff positions and contractors) is appropriate as there has been no record of time spent on tasks and there is no long term plan on which to base an assessment of needs. Time allocations provided for the review are based on broad brush estimates which are difficult to rely on.

Long term plans for the programme need to be taken into consideration in assessing the level of operational personnel, whether as staff or as contractors.

Consideration should also be given to tasks currently undertaken by the coordinator that could be carried out by other Council staff. For example, a very significant time commitment is made to producing educational and publicity materials (estimated at 40 workings day per year). Some of this work could potentially be undertaken or supported by the Councils corporate communications team.

With questions over resourcing needs and the variable and uncertain nature of the future work load, there is also a strong case to introduce formal timekeeping of tasks to provide usable management information. It is also timely to do this with new personnel commencing work.

6.4   OPERATIONAL PLANNING

Long term effectiveness can be enhanced by more focussed planning beyond the annual planning cycle.

Previous reviews or reports on the overall operational progress and effectiveness of Coast Care have been carried out by various parties (Table 2**Error! Reference source not found.**)

Table 2. Internal reviews and reports on progress and effectiveness of Coast Care.

Title	Review Date	Author	Key Recommendations
Five Yearly Review of the BOP Coast Care Programme.	February 2001	Reserves Supervisor Opotiki District Council	Broadening the programme scope to include back dunes, shingle beaches rocky shores and estuaries Enlisting non-council funding support Enlisting further public support.
Coastcare: Where to from here?	February 2001	Parks Officer ,Whakatane District Council	Developing a three to five year strategy for Coastcare Rejuvenating community support Increasing publicity for programmes.
A Review of Coast Care Programme	March 2004	Greg Jenks/Suzy O'Neill	Increasing biodiversity enhancement. Control of vehicle damage of dunes.
Coast Care Programme Status Report	2006	Greg Jenks	New techniques to be developed for dealing with foredune erosion where revegetation alone may not be effective. Managing vehicle use in Bay of Plenty sand-dunes Coast Care Advisory Group to develop a strategy for managing currently unprotected fore-dunes along the Bay of Plenty coastline.

None of these issues from these reviews appear to have been taken forward in any formal planning process or updating of programme goals and objectives.

A long term plan with a ten year outlook will assist in defining the issues and determining what lies ahead for the programme in terms of changes in resourcing and funding, and would provide a mechanism to lead any strategy changes that have implication beyond the annual cycle. Preparation of the management plan should be a role for the CCAG. The plan should be reviewed and updated at least 3 yearly.

Preparation of the plan could be undertaken by policy staff of the partners assisted by the Coast Care coordinator to avoid redirecting efforts from the programmes operational needs.

6.5   DATA REVIEW

This section reviews and discusses the data provided from information requests. Two main types of information were provided:

1) **Textual Data**: Information contained in documents, spreadsheets or computer databases.

2) **Spatial Data**: Data with a geographic location, captured in the Geographic Information System (GIS).

6.5.1   Textual Data

Database

A copy of a report from the EBOP Coast Care planting database was provided. It contained 14 records of planting. No other work information was provided. This does not necessarily mean the work information does not exist, but it appears unlikely that any consistent and centralised recording of work information has been completed.

Reports

The Coast Care programme is reported on at the 'Management Area' level (refer to Appendix 3 for a map of the Management Areas). A Management Area generally corresponds to the area of responsibility of each Coast Care group. Each Management area has a level of activity assigned to it: Advanced Management, Active Management and Nil Management. The definitions of these activities provided in Table 1.

Discussion

The reports discussed the Coast Care progress at a Management Area level. As an example, the Papamoa Coast Care Management area extends from Pacific View Road to the end of Karewa Parade (Figure 1).
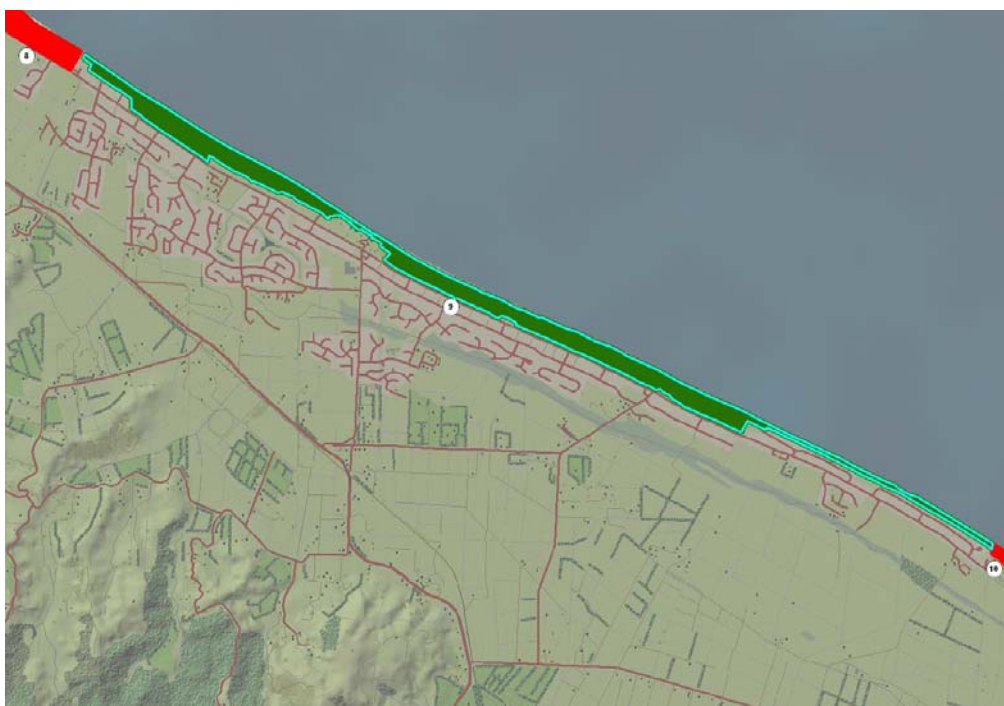
Figure 1. Papamoa Coast Care Management Area

These management area classifications do not necessarily imply that the entire management area is under the defined management regime. In some cases there may be gaps, especially in the active management areas. Nevertheless, the results of a site assessment of a 5km beach section between the Pahaoa and Papamoa coast care group sites, undertaken by the reviewers, suggests that the most or if not all of the 'active management' sites are likely to have completely vegetated foredunes.

No data was available to locate where site work has been done. This results in a difficulty to determine where work has been undertaken in the Management Areas.

Minimal information on events undertaken at work sites was provided (e.g. date, number of plantings, fertilising, pest control etc). Expenses incurred at the work sites were not available.

6.5.2   Spatial Data

Coast Care

The Coast Care layers available include (see Appendix 4, 5 and 6):

Layer	Discussion	No. of records
Coast Care Areas	The area definition of the Coast Care groups area of responsibility. Five of the areas are not allocated to a group. Definition of specific work areas is not included in this data. Date of data provided 16/10/2006.	67

| Significant Biota | The location of currently known significant native flora and fauna species. In some cases these may be rare or threatened species. Additionally, 4 introduced species are located. Date of data provided 16/10/2006. We believe there is additional known significant native flora and fauna species not recorded in this data. | 34 |
| Stream control structures | The location of the stream control structures, through the use of geotextile sand pillows or dune plantings. Date of data provided 06/10/2006. | 7 |

Regional Environmental Coastal Plan

Regional Environmental Coastal Plan layers included:

1) Area sensitive to coastal hazards.

2) Areas of significant conservation or cultural value in the coastal marine area.

3) Coastal habitat preservation zone in the coastal marine area.

4) Sites of district and local significance in the coastal marine area.

5) Outstanding natural features and landscapes.

6) Sites of significance on land.

Other data provided included:

1) Various contour information.

Discussion

The Coast Care Programme lends itself to the capture, management and analysis of spatial data. However, the only GIS data available was of the jurisdictional boundaries with associated coarse metadata.

No GIS based data layers were provided on the specific location of the site works currently undertaken.

6.6   FUTURE DATA COLLECTION

It would be of significant benefit to the programme if basic data collection is undertaken in a consistent and coordinated manner. The following is a discussion of possible approaches for future data collection.

6.6.1 Principles

Information Recording

The key of this principle is the recording of all Coast Care information in one place (e.g. location, events that occur at sites, financial and photographs/video). Making it easily accessible to many people is also essential. If the information recorded is complete, it allows up-to-date management reporting at any time and provides a detailed history about each work site.

A key to helping people understand where resources and effort is being spent is to use the GIS to unlock existing data through *"spatial reporting"* (e.g. where, geographically, is money being spent.)

Emphasis should be placed on unlocking data being collected and to make it both available and understandable to assist and enhance decision making. The goal should be to put GIS outputs in front of senior management and Councillors. This is easily achievable in a manner that is rich in information and easy to understand.

For the information recording system to be successful it needs to be easy to use, fast and logical. The use of GIS functions, such as reporting time (the fourth dimension), and integrated charting and data animation, should be explored e.g. showing when work has been carried out.

Monitoring

EBOP is already committed to ongoing monitoring of the coastal environment through the NERMN programme. This includes the current beach profiling regime (see Section 4.5.3) and will soon also include dune vegetation condition and extent monitoring as part of the biodiversity module of the NERMN programme.

The 2007 NERMN Coastal Monitoring report mentions that further monitoring linkages with the Coast Care programme are desirable (Iremonger, 2007). This could be achieved by establishing new NERMN sites at newly formed coast care sites and current coast care sites that are not currently represented by NERMN sites. If this is not supported by the coastal monitoring department within EBOP, it may be possible to enlist community groups to undertake the dune profile monitoring using the Emery technique (S. Iremonger, pers. comm.).

Coast Care specific monitoring that could be conducted at relatively low cost could include:

- Planting success

- Damage – sea, vehicles, pedestrians etc

- Pest and weeds

Site Information

It is important that consistent, complete information is captured and maintained for each work site. The following are the principles of recording information for each site.

Principle	Discussion	Benefits
Geographic Location	Geographically located and given a site unique number. This allows display on a map of any type of information, such as dollars spent, when last visited, pest control etc (assuming the data is collected).	Provides an easy to understand way to indicate/report where work is being done.
Event Information	All events on sites to be recorded. The events could include; inspection, planting, weed control, pest control, fertiliser, storm events, inspections etc. The key information should include date, person or number of people involved, event type, event detail cost and brief description. An option is to divide the Coast Care Management Areas into smaller logical zones to allow the easy assignment of events.	Provides a historic account of events undertaken at the site. Allows site comparison in terms of success factors. Eg if a work site is successful and another is not, use the event information to determine any trends.
Photography	Comparison photographs to be captured in same location and position of photo recorded. A GPS location should be captured so the same location can be used in the future.	Provides a reliable and repeatable method to ensure photographs are located in the same position.

6.6.2   Implementation

The following discusses the status quo and three implementation options for future work site data collection.

Status Quo

This is the existing situation of data relating to the work site information.

Principle	Discussion
Geographic Location	Management areas are identified, but no site work locations are recorded.
Event Information	Minimal event information is available.
Photographs	Some photographic evidence at work sites has been undertaken. However the photographs are not necessarily taken at the same location. The photographs for the work sites are not grouped together.

Option 1

This is a simple low cost option to implement, using existing tools. It is the minimum recommended level of data collection.

Principle	Discussion	Pros	Cons
Geographic Location	GPS location at the centre of the work site. Recorded in the work site information. Record an approximate area as an attribute in the spreadsheet. A unique ID links the GIS and textual data for spatial reporting.	Simple to implement.	Does not provide area calculation. Requires a GPS.
Event Information	Excel spreadsheet for each work site with event and other relevant information. A separate row for each event should be recorded. Reference to photographs contained in separate field(s).	Low cost option using existing tools.	Reporting could be complicated. Relies on operator to enter data consistently.
Photographs	Photograph taken at the same location. Location estimated by reviewing previous photographs	Simple to implement.	Difficult to get consistent position.

Option 2

A managed solution allowing database data validation.

Principle	Discussion	Pros	Cons
Geographic Location	GPS location at the centre of the work site. Recorded in the work site information. Approximate work area estimated as a rectangle around the recorded location. A unique ID links the GIS and textual data for spatial reporting.	Simple to implement.	Does not provide area calculation. Requires a GPS.
Event Information	ACCESS database containing information for each work site with event and other relevant information. The actual photographs are captured in the database. Different permissions would limit the information different people can see (e.g. Only Coast Care staff could view the financial information.) This database could be implemented either by EBOP or by a consultant.	Information all in one place. Automated data validation. Simple reporting on all events.	Requires database development.

Photographs	Photograph taken at the same location. Location rediscovered by using GPS coordinates.	Photographs taken in a consistent position.	Requires a GPS.

Option 3

This option provides the maximum flexibility for access to all Coast Care information. This is a managed solution allowing database data validation.

Principle	Discussion	Pros	Cons
Geographic Location	GPS is used to determine the initial extent of the work site. A unique ID links the GIS and textual data for spatial reporting.	Provides area calculation.	Requires a GPS.
Event Information	SQL database containing information for each work site with event and other relevant information. The photographs are contained in the database. A web interface is used for creating and editing information. Read only access may be available to "the world". Different permissions would limit the information different people can see (e.g. only Coast Care staff could view the financial information.) This database could be implemented either by EBOP or by a consultant.	Information all in one place. Automated data validation. Simple reporting on all events. Accessible via the EBOP intranet and the Internet	Requires database development.
Photographs	Photograph taken at the same location. Location rediscovered by using GPS coordinates.	Photographs taken in a consistent position.	Requires a GPS.

It may be possible to use existing EBOP database structures to host this information and these opportunities should be discussed with other EBOP departments.

6.7 FUTURE WORK SITE IDENTIFICATION

As part of the work brief, an attempt has been made to identify and prioritise future Coast Care work areas.

The following inputs were considered:

1) Coast Care policies and strategies outcomes from EBOP, TCC and WBOPDC.

2) Use of the Regional Coastal Environment Plan GIS data on significant areas and/or values.

3) Existing and future residential growth areas.

4) Management Area locations.

5) Areas under seasonal pressures.

6) NERMN monitoring locations.

Rather than identify specific work locations, the above inputs were used to identify zones along the coast where effort could be concentrated (see Appendix 7).

If the coast care work sites locations were available in the GIS data it would have been useful to indicate them on this map.

Zone	Discussion
Green	Areas of high use, access pressures, high seasonal use, coastal drainage areas, significant coastal features, significant future population growth.
Blue	Medium use, no access pressure, medium use, no coastal drainage, medium future population growth.
Orange	Minimal use, no access issues, no significant coastal features, low future population growth.

The usefulness of this priority site identification exercise is limited by the data that is available and the way that it is analysed. It is recommended that this methodology be developed further by determining a suitable set of criteria to use (e.g. through consultation) and by deriving more robust base data (e.g. obtained from NERMN programme).

6.8   OPERATIONAL ISSUES

There appears to be a clear sentiment that back-dune restoration should become a major focus of the Coast Care programme in future in order to increase dune biodiversity and to recreate formerly common, but now rare, indigenous plant community gradients and ecotones. Back-dune restoration is already occurring in several 'advanced management' areas.

However, caution needs to be exercised if this transition is to be fully supported by the Coast Care programme. Back-dune restoration is much more difficult than foredune restoration due to the less hardy nature of the species used, the prevalence of competing weeds and the potentially higher abundance of rabbits. Consequently, back-dune restoration comes at a higher risk of failure and a greater cost due to lengthy maintenance and higher plant costs.

It is recommended that back-dune restoration is carefully planned and aims to target key areas with intensive management. The results of the currently underway back-dune restoration trials by the Dune Restoration Trust at Ohiwa should help determine appropriate establishment regimes. Successful weed control/release programmes will be essential if such plantings are to be successful. This will require well planned and monitored weed control contracts.

Rabbit control is another problematic issue. If the potential for community conflicts is to be minimised it will be necessary to manage rabbit control operations very carefully. The Bryans Beach model, where the community group manages the rabbit control contract, may be useful in other areas where rabbits are problematic. Key issues will be appropriate signage (e.g. highly visible, up-to-date) and careful placement of toxins where pets are likely to roam. Methods other than poisoning will probably need to be considered in some areas.

6.9   CLIMATE CHANGE

Climate change has been identified as an issue for future management of the Coast Care Programme. The issues are highly complex and any forecasts of climate change effects include a high degree of uncertainty.

The implications of climate change on New Zealand's coastal environments have been covered by several authors. Some predictions or possible scenarios that have relevance for the Coast Care programme include:

- an increase in coastal hazards (MfE 2004)

- a decrease in soil moisture availability for the east and north of New Zealand (Hennessey *et al.,* 2007)

- an increase in pest (flora and fauna) species impacts on native biota (McGlone, 2001)

The Bay of Plenty Region has been recently identified as a 'hotspot' for vulnerability to climate change by 2050 based on criteria such as large impacts, low adaptive capacity, substantial population, economically important, substantial exposed infrastructure, and subject to other major stresses (Hennessey *et al.,* 2007).

Several publications deal specifically with the climate change ramifications for the Bay of Plenty Region. They conclude that:

- Increased storm intensity and frequency, along with sea level increases[15] will likely result in accelerated and more extensive coastal erosion[16]. However, a NIWA commissioned report predicts that erosion trends within the Bay of Plenty Region are likely to remain relatively similar to current trends, with perhaps a tendency for currently stable areas to begin to erode (such as areas to the south of Papamoa) (NIWA, 2006). Research in other nearby regions suggest coastal erosion is likely to be severely aggravated by projected sea level rises where it is not buffered by net sediment supply (Dahm *et al.*, 2005).

- Currently existing plant pests, such as lantana (*Lantana camara* var. *aculeata*) or Italian buckthorn (*Rhamnus alaternus*) may increase pressure on dune ecosystems (Kenny, 2006).

- Mean annual rainfall is projected to decrease and temperature is projected to increase (Griffiths *et al.*, 2003).

Given these predictions, the implications for the Coast Care programme are:

- Plant pests may become more problematic in terms of competition with native dune species, particularly in back dune areas.

- Pest animals, in particular rabbits, may cause increased damage to coast care plantings

- Increased drought risk and lower average available soil moisture may constrict the appropriate planting season and may result in increased mortality rates

- Accelerated and more extensive erosion may lead to higher rates of loss of established dune plantings or vulnerability of unplanted areas. This may result in an increased demand on the Coast Care programme through higher maintenance requirements and increased interest in restoring currently unplanted dune areas.

Consequently, given the climate change predictions for the Bay of Plenty Region there is likely to be increased pressures on dune plantings and perhaps increased demand for plant supply in currently unplanted areas. Nevertheless, given the high level of uncertainty over climate change predictions it is unclear how significant these pressures will be.

It is recommended that a basic monitoring programme is established, which covers planting success (mortality), pests and weeds. This should allow sufficient response times to climate change issues, given the expected slow rate of change.

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[15] EBOP has adopted an estimate of an increased mean sea level of 49cm by 2100.

[16] EBOP website (accessed 20/06/2008)

7.0 CONCLUSIONS

The Bay of Plenty Coast Care programme has been effective in achieving its operational goals and objectives. In 14 years it has resulted in a significant proportion of the sandy coastline of the region being under some level of dune restoration management. This conclusion is based largely on the observations of participants in the programme given the relatively limited quantifiable data available to the reviewers.

The programme has also been highly successful at engaging the community. The Coast Care programme has a very high level of support within all partner agencies.

The key strengths of the programme are recognised as being:

- Community participation – very enabling and easy for groups to be involved.

- Collaborative approach – the relationships and shared learning between the partner agencies.

- Excellent educational material – raising community awareness of dune values and management issues.

While the programme has been very successful this review has identified several weaknesses and, as a result, opportunities for improvement. These include:

- Clarification of the roles and responsibilities of the various parties involved with the programme.

- Development of a long term implementation plan for the programme.

- A greater emphasis on data collection and management

8.0 RECOMMENDATIONS

It is recommended that the Coast Care Partners consider the following:

8.1 PLANNING FRAMEWORK

When statutory plans are reviewed an attempt should be made to recognise the range of outcomes relating to integrated coastal management that are achieved by Coast Care.

8.2 PROGRAMME ORGANISATIONAL STRUCTURE AND RELATIONSHIPS

Confirm the principle that Coast Care BOP is a programme based on partnership between local government, DoC and the community.

Confirm the current organisational structure for Coast Care as set out below:
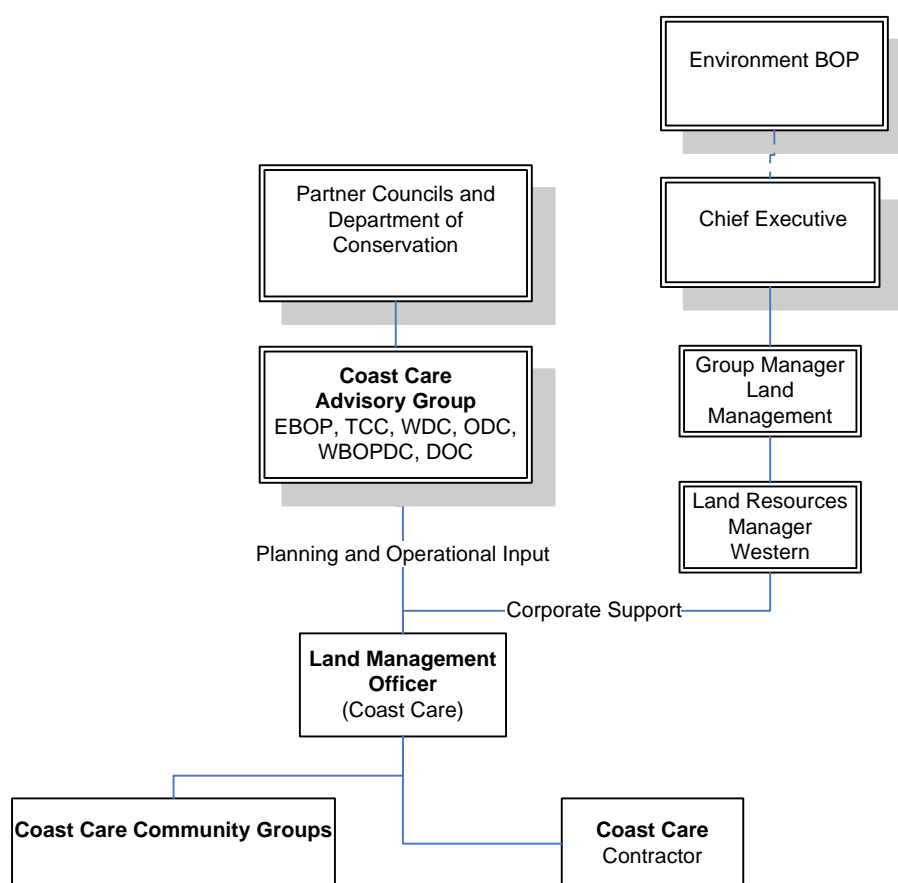
Consider any needed changes to the programme structure and relationships after the preparation of a long term implementation plan.

8.3 COMMUNITY COAST CARE GROUPS

Maintain the current focus on simplicity, minimising formal procedures and organisational effort required of the Coast Care Community Groups to undertake the programme on the ground.

8.4 LAND MANAGEMENT OFFICER/ COAST CARE COORDINATOR

Amend the position purpose to recognise that

❑ The dual reporting lines to the partner Councils via the CCAG and to Environment BOP but that the primary accountability remains to EBOP.

❑ The role gives effect to the strategies and policies of <u>all</u> partner Councils, not just those of EBOP.

❑ The role of the position in coastal issues beyond the defined programme scope is at the direction and discretion of the Manager.

Consider maintaining an association of the position with the commonly known job title: e.g. "Land Management Officer (Coast Care Coordinator)"

8.5   COAST CARE ADVISORY GROUP

Develop and maintain a terms of reference that clearly sets out the role and responsibility of the CCAG Membership:

Role:

Represent the partner agencies in the planning, organisation and monitoring of the Coast Care programme.

Responsibilities:

❑ *Attend quarterly meetings;*

❑ *In conjunction with the Coast Care Coordinator, develop a ten year management plan that sets priorities for the implementation of Coast Care that are consistent with relevant objectives and policies for the coastal environment;*

❑ *Assist the Coast Care Coordinator with the preparation of an Annual Plan and Budget.*

❑ *Receive and review quarterly monitoring reports and respond to any emerging issues and risks.*

❑ *Assist the Coast care Coordinator with the preparation of an Annual Report.*

Membership

The CCAG membership should be at a level of skill and experience to undertake the responsibilities. The Land Resources Manager Western be appointed as convenor.

Meetings

Four meetings should be scheduled each year to address elements of the programme planning cycle as well as receiving standard reports on:

❑ *Physical results*

❑ *Financial results*

❑ *Emerging issues/risks*

❑ *Communication issues*

8.6 RESOURCES

Consider any needed changes to the programme resourcing after the preparation of a long term implementation plan.

Introduce formal timekeeping of tasks for Coast Care staff positions.

8.7 PLANNING

The CCAG prepare a Coast Care Long Term Plan with a ten year outlook that sets priorities for the implementation of Coast Care that are consistent with relevant objectives and policies for the coastal environment.

Establish annual targets for the programme that are consistent with the milestones defined in the long term plan

8.8 DATA MANAGEMENT/MONITORING

A formal data collection protocol is developed based on the following minimum level of service:

Principle	Discussion
Geographic Location	GPS location at the centre of the work site. Recorded in the work site information. Record an approximate area as an attribute in the spreadsheet. A unique ID links the GIS and textual data for spatial reporting.
Event Information	Excel spreadsheet for each work site with event and other relevant information. A separate row for each event should be recorded. Reference to photographs contained in separate field(s).
Photographs	Photograph taken at the same location. Location estimated by reviewing previous photographs

Monitoring data should include planting success, pest and weed presence and control, and physical damage.

Enhance links between the NERMN programme and Coast Care through coordination with the officers responsible for each NERMN component (i.e. coastal dune profiling and biodiversity).

Explore options to host a Coast Care database on existing EBOP database structures .

8.9   OPERATIONAL

Only undertake backdune restoration in relatively small, but intensively managed areas in order to minimise risk of failure. Weed control contracts will need to be managed very carefully in these sites.

Carefully manage rabbit control contracts and include input from community groups. Signage needs to be highly visible and up-to-date. Critically assess the Bryans Beach rabbit control management model to see if it will be useful elsewhere.

9.0   REFERENCES

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Appendix 1 – Interview responses

The following information is a synopsis of the responses from interviewees. Every effort has been made to use the actual wording used by respondents where possible. However, given the diverse nature of replies we have taken the liberty to paraphrase and combine responses where we consider it promotes a clearer message. BML has made every effort to ensure that this information is a fair and accurate representation of the views expressed. However, we accept that further dialog may be required to fully clarify the position of all parties.

The views expressed below do not intend to imply consensus on any particular issue.

PARTNER AGENCIES

Interviewees

Most of the key contacts were available for the phone interviews and included the following people:

Mike Houghton	Parks and Recreation Manager	Opotiki District Council
Marie Gordon	Team leader Regional Parks Development	Tauranga City Council
Peter Watson	Reserves and Facilities Manager	Western Bay of Plenty District Council
Paula Chapman	Manager Community Facilities	Whakatane District Council
Peter McLaren	Service Deliver Officer	Whakatane District Council
Fiona Hennessey	Programme Manager Community Relation	Department of Conservation
Katrina Knill	Programme Manager Community Relation	Department of Conservation
Anastacia Kirk	Threats Ranger	Department of Conservation

Not all of the contacts were available for initial interviews.

Partner Agency participation and structures

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Most of the district councils participate in Coast Care in a two–tiered manner; a program manager overseas budgeting and resourcing issues, but does not typically attend Coast Care Advisory Group (CCAG) meetings, and a field officer (or officers) attends the AG meetings and provides logistical support to the Coast Care coordinator. However the district councils vary in this structure.

The Department of Conservation (DoC) has two Conservancies and three coastal Areas within the Bay of Plenty Region. Three key contacts are involved with Coast Care and are based in each of the Area Offices: Tauranga, Opotiki and Rangitaiki. These three representatives attend CCAG meetings and also draw on other expertise within DoC, including coastal planners and rangers with community engagement experience. Other members of DoC staff are also available to the Coast Care Coordinator, such as botanical or fauna experts. DoC infrequently assists with planting operations and direct involvement with Coast Care groups, largely as a result of resource issues.

There is a broad spectrum of participants in Coast Care and particularly with CCAG, with some members having been involved at inception and others only joining recently. There appears to be a high degree of flexibility in the makeup of the CCAG, with members attending at their discretion. Many respondents indicated that the CCAG did not have much influence on the direction ofCoast Care, nor on the operation of the Coast Care coordinator. Many felt that there was a high level of trust that the CC coordinator was 'doing the right thing' and that CCAG's role was largely to support rather than direct the coordinator.

Support and perceived worth of Coast Care

There is a strong belief from all Partner Agencies that Coast Care is highly successful and produces highly tangible results. Furthermore, the perception of many respondents is that Coast Care is 'cutting edge' and is a leader nationally.

Many respondents stressed that it is important to maintain Coast Care in its current form.

Most respondents indicated that Greg Jenks has been largely responsible for the success during his time as the Regional Coast Care Coordinator.

Some council respondents indicated that Coast Care represents very good value for money and that they would be unlikely to achieve the same results if they were to operate independently with the same budget as they currently contribute to Coast Care.

DoC representatives indicated that without Coast Care, DoC would have only performed basic coastal management such as weed control and NZ dotterel management. This is largely because DoC has relatively few coastal reserves.

Most council respondents indicated that support within the councils was high and that there was general recognition that Coast Care is valuable.

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General issues

Several respondents indicated that there is a widespread perception that EBOP run CC and that other partners are not getting full recognition.

One respondent felt that all employment issues relating to the Coast Care coordinator should be dealt with solely by EBOP.

There appears to have been conflict in the past on whether Coast Care should be used to directly protect private property or whether it should only seek to engage with groups willing to manage wider dune issues.

The advocacyl role of Coast Care appears to be undefined, other than the widespread belief that the CC coordinator should have input into resource consent applications and wider planning processes. Several respondents indicated that the Coast Care coordinator should at least have an advocacy role with resource consents, plans and bylaws.

Respondents indicated that little focus had been placed on Coast Care growth planning.

Budgets

It appears that several councils make financial contributions to Coast Care objectives additional to their set financial contributions, by 'piggybacking' on other council projects.

One respondent suggested that tracking of resources and budgets would be useful in order to more fully understand the relationship between demand and funding/resources. It is believed that this would help manage Coast Care growth.

Understanding of Coast Care goals and objectives

There appears to be a consistent understanding of the broad objectives of CC, being:

3) Education and advocacy of dune function and value

4) Community participation

5) Physical restoration of dune systems

Some respondents argued that hazard management was not an original primary objective of Coast Care, but subsequently became a secondary objective. Similarly, enhancing biodiversity values appears to have become a secondary objective of Coast Care, with a focus on weed and pest control and education on pest plants.

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CCAG meetings

One respondent felt that the CCAG structure/approach was very effective early on, as it allowed all parties to gain common understandings and to raise the collective knowledge of the group. However, more recently the CCAG approach has become less effective for established members, but still provides an effective forum for bring new members 'up to speed'. In effect, the CCAG benefit in terms of information sharing and collaboration appears to have plateaued.

Many would like to see fewer meetings and none think there should be more frequent meetings. However, some advocate for meetings on a needs basis. One suggestion was for quarterly meetings, with potential for further meetings as a when they are needed (e.g. ahead of the planting season).

One respondent suggested that the Chair role for the CCAG meetings shouldn't be rotated and that the EBOP Land Resources Manager should chair all meetings. Furthermore, it was suggested that meeting agendas need to be circulated early to the CCAG, so that members had time to modify or add to the agenda.

SWOT analysis

Strengths

The key strengths of Coast Care are seen as follows:

- The community participation that is been able to generate (in particular work with schools)

- The high quality advocacy/educational material (especially the 'life is a beach' educational material)

- That is has been able to promote and support dune research, which has led to more successful outcomes.

- The Partner Agency collaborative approach

- The photographic record of the clear physical results is a powerful tool for community engagement and wider support.

- The ability to provide for the formalisation of access ways

- The fact that planting work is easy and yields rapid results

- The recent use of contractors to free up the Coast Care coordinator

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- That Coast Care has been able to develop some very strong branding and marketing products

Weaknesses

The key weaknesses of Coast Care are seen as follows:

- There appears to have been little or no growth planning. Furthermore, it was suggested by one respondent that coastal management plans have perhaps constrained Coast Care growth in some areas and should have been driven by Coast Care instead.

- The Partner Agencies do not currently make significant management decisions

- There are no clear terms of reference for the Partner Agencies. At times this has led to poor communication between the coordinator and council, which has in turn led to uncertainty over responsibilities.

- The CCAG does not have the right level of representation. It should be higher-level and should not get bogged down in operational matters. This can lead to inefficiencies and ties up the Coast Care coordinator.

- There is a lack of hard monitoring data. Much of the measures of success are anecdotal or rely on imprecise photographic records. There is a perception that Coast Care results are easily seen but not quantifiable.

- The level of supervision of some groups is not high enough and can lead to high plant mortality rates. This is especially a problem with school groups.

- Not enough publicity

- There are not enough dune management experts on the CCAG

- There is a heavy focus on Tauranga area to the detriment of other areas. But it is recognised that this is probably a function of the population distribution within the region.

- There is not enough focus on wider biodiversity issues, such as indigenous fauna

- Communication at the operational level between the Coast Care coordinator and Partner Agency delivery staff has not always been effective.

Opportunities

The key opportunities for Coast Care are seen as follows:

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- Greater coordination with other community/environment groups where there are areas of overlap. There are many groups within the region that operate with similar objectives to Coast Care groups, but there does not appear to be any overarching coordination between these groups. Greater coordination could facilitate more holistic environmental enhancement.

- It may be desirable to expand the operations of Coast Care groups to include other things (such as targeted biodiversity management) to continue to keep them interested in the future.

- It may be possible to advocate to private landowners (e.g. farmers) to retire marginal coastal land and allow Coast Care groups to operate there.

- It would be beneficial for Coast Care to assist with formalising beach access in currently problematic areas, such as Whakatane. Coast Care could assist by targeting key impact groups, such as surfcasters.

- Coast Care should be involved with the formation of bylaws and council policy. In particular, there is widespread concern over the ad hoc management of beach vehicle and horse access within district bylaws. Coast Care may be able to assist with a region-wide policy for beach access issues.

- Corporate sponsorship may provide additional funding using schemes such as 'adopt a beach'.

- It would be beneficial to increase the availability of currently available awareness/educational material and to use in a strategic manner (e.g. aimed at teachers) in order to increase participation with the programme.

- The increasing public awareness of climate change and sea level rise issues could be capitalised on by Coast Care in order to increase participation with the programme.

- Coast Care may be able help manage coastal encroachment issues using its advocacy/education function and the ability to improve access formalisation.

- The formulation of a long term strategic plan for Coast Care, could help focus Coast Care effort towards key areas that require management.

- The development of annual work plans with contributions from the Partner Agencies would be of benefit for Coast Care and would help partners manage and prioritise internal effort.

- Honorary rangers may assist with policing and advocacy roles at no extra cost to Coast Care.

- The Coast Care monitoring regime could be improved and made more rigorous, using fixed photopoints and coastal profiling. There is potential to combine this monitoring with

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existing regional monitoring programmes, such as the Natural Environment Regional Monitoring Network (NERMN).

▪ CC could target Iwi involvement, as this is potentially powerful group that is only involved incidentally through individual Coast Care groups.

Threats

The key threats for Coast Care are seen as follows:

▪ A more strategic focus might narrow the potential audience as a more complex message may be less compelling.

▪ There is a perception by some respondents that the new land resources management regime represents a threat insofar that this may bring about change to Coast Care. In particular there is a perception that the western focus of the Land Resources Manager may be "problematic".

▪ Some perceive a shift in attention from the advocacy/education role to more operational planting activities and believe this may be problematic in future.

▪ Given the current lack of terms of reference for the Partner Agencies, Coast Care is vulnerable to a breakdown of relationships between Partner Agencies. A good relationship between partner agencies needs to be maintained.

▪ Discouraging public participation (e.g. by having insufficient resources to engage groups) may de-motivate potential Coast Care groups.

▪ Loss of leadership in the Coast Care Officer role. The current model relies heavily on the direction determined by the Coast Care Officer.

▪ Failure to raise awareness on a national level may result in poor coastal management policies. This may result in increased promotion of hard engineering options where dune planting would be preferable.

▪ Failure to allow funding and staffing levels to adapt to future growth is likely to hinder the delivery of Coast Care.

▪ The determination of when active Coast Care work is finished for an area. Failure to keep Coast Care groups engaged following successful establishment of dune plantings could potentially lead to dune regression.

OTHER CONTACTS

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Most of the key contacts were available for the phone interviews and included the following people:

Name	Role
Maria Corbett	Contractor Coast Care
Wayne O'Keefe	Contractor Coast Care
Lucy Brake	Ex Coast Care coordinator (currently Becca Ltd)
Suzy O'Neill	Ex Coast Care coordinator
Shane Iremonger	Environmental Scientist (coastal) – EBOP
Nancy Willems	Environmental Scientist (ecology) – EBOP

General

Recognised as an extremely successful programme and at the 'cutting edge'

Coast Care coordinator

Recognition that there is at least another part time position required in additional to the full time Coast Care coordinator.

The role needs to be very consultative and participatory with community groups.

Operational

The volume of work/demand has decreased in recent years (at least in western areas)

Backdune areas are much more difficult to undertake and weed control is critical in these areas. Weed control contracts in these areas need to be carefully managed.

Coast Care coordinators need to be treated like other EBOP officers for employment matters.

Groups are never left to plant unsupervised

No regular follow-up monitoring is conducted

SWOT analysis

Strengths

Good community involvement

Agency partnership – collaborative approach

Weaknesses

Under-resourced/staffed

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Rabbit control has significant time lags and has political problems

Monitoring insufficient

Not fully appreciated within EBOP

Poor reviewing practices

No real forward planning

Lack of support from EBOP

Opportunities

Use community to manage rabbit control contracts

Better dissemination of information on website

COMMUNITY GROUPS

Interviewees

The following people were interviewed over the phone:

Contact Person	Group Name	Area
Malcolm Ballard	Bryans Beach	Opotiki
Lyn Dempsey	Ohiwa	Opotiki
Vaughan Payne	Tirohanga	Opotiki
Aubrey Tawhai	Omaio	Opotiki
Grahame Whyte	West End	Whakatane
Lex Williams	Waterford Estate	Whakatane
Vic Munro	Ohope	Whakatane
Robyn Rosie	Otamarakau	Otamarakau / Pukehina
Richard Speed	Pios Beach	Mount Maunganui / Papamoa
Sandy Garland	Mt Maunganui	Mount Maunganui / Papamoa
Ruth Kingsford	Waihi Beach	Waihi Beach

General

Seen as a very positive relationship between councils and the community.

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Planting is seen as easy and fun.

Operational

Most groups operate a very basic system whereby an appointed leader or 'coordinator' is contacted by the Coast Care coordinator and then relays the information to the rest of the group. The high level of organisation made available by the Coast Care coordinator allows community groups to have such as low level of organisation. Some groups advertise for volunteers.

There is a view that there is a lot of work to do and that groups wont be 'finished' in the near future.

At least one group has taken over the rabbit control contract management due to dissatisfaction over how it was previously undertaken.

Coast Care Coordinator

Most respondents were very supportive of the current Coast Care officer. In particular his enthusiasm, consultative and participative approach has been highly appreciated.

Contact and coordination is typically basic and involves one or two phone calls and site meetings per year.

In one case the contact from the Coast Care coordinator has ceased when the previous Coast Care coordinators resigned (when there was two coordinators). This has meant that one group has stopped participating and some restoration work has since been lost during storms.

There was a general perception that the current Coast Care coordinator was over worked.

Technical comments

Backdune planting is difficult and has a low success rate.

SWOT analysis

Strengths

The involvement of the community

Not too onerous

Enjoyable experience

Community enforcement

Efficient use of resources

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Easy to engage with and isn't restrictive

Weaknesses

Loss of contact with groups can occur

Planting day cancellation at short notice can dampen groups' enthusiasm

Planting by children can result in higher levels of mortality

Supply of backdune plants

Loss of current coordinator

Concerns over poor rabbit control management

Opportunities

More planting days during school holidays

Use Coast Care to help with vehicle access issues

Stream mouth control works

Threats

Climate change

EBOP politics is seen as a threat.

Appendix 2 – Policy Framework

Name	Organisation	Mandate	Outcome	Ref	Implementation Method	Ref
Bay of Plenty Regional Coastal Environment Plan	Environment BOP	RMA	Preserve the natural character of coastal environment	4.2.2	Services - Provide for natural character values in all protection/retirement works. Biodiversity enhancement – promote us e of local indigenous species. Education – raise awareness of natural character values.	4.2.4-4.2.6
			Maintain outstanding and regionally significant landscapes (including cumulative landscape qualities of beaches and coastal margins).	5.2.2	Advocacy – contribute to community based **coast care programmes**	5.2.4
			Protect areas of significant indigenous vegetation and habitats in the coastal environment.	6.2.2	Advocacy – encouraging District Councils, Department of Conservation and private land owners to protect sites of ecological significance. Education – raise awareness of need and means to maintain sites of ecological significance, including **coast care**	
			Maintain and enhance public access to and along	7.2.2	Works - Contribute to **Coastcare** programmes for	7.2.4(b)

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Name	Organisation	Mandate	Outcome	Ref	Implementation Method	Ref
			coastal marine area		beaches.	
			Involve tangata whenua in coastal management	8.2.2(a)	Community involvement - Develop procedures to give effect to kaitiakitanga.	8.2.4(b)
			No increase in the total risk from coastal hazards.	11.2.2	Advocacy – use of soft protection works such as **dune care**. Facilitation – promote an encourage community groups to become involved in hazard management(including **Coast Care**). Services – contribute on an equitable basis towards the costs of implementing a regional community **coast care** programme.	11.2.4(a) 11.2.3(a)
			Disturbance of CMA only where appropriate.	14.2.2	Rules - enable use of dredged sand for beach replenishment. Rules - disturbance of foreshore permitted for **Coastcare** projects. Advocacy – Prohibit sand and mineral extraction from beaches and foredunes	14.2.3(k), 14.2.3.(r), S8.5, 14.2.4(f).
			Manage effects of exotic plants on coastal environment.	16.2.2	Rules – introduction of exotic plants prohibited.	16.2.4(a)

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Name	Organisation	Mandate	Outcome	Ref	Implementation Method	Ref
			Appropriate recreation in coastal environment.	19.2.2	Advocacy - Provision of land based infrastructure to support recreation	19.2.3(d)
Regional Land and Water Plan	Environment BOP	RMA	Enhance coastal dune systems.	9.2.1 A	Rules – permitted and discretionary **Coast Care** works.	
Coast Care Concept Plan	Environment BOP					
Tauranga Operative District Plan	Tauranga City	RMA	Manage effects of coastal hazards on structures and the environment.	6.1.4	Rules – **Coastcare** revegetation and structures permitted activities. Works - Programme works associated with Regional **Coast Care** programmes.	6.1.9.2(6)
Coastal Reserves Management Plan	Tauranga City	RA	Management of natural dune complexes to provide hazard reduction, amenity and natural character.	Goal 1, Goal 2	Works – Mechanical repair of damaged dunes identified by **Coast Care** Coordinator. Works - Focus **Coast Care** programme on priority areas: • Stormwater outlets • Areas of limited vegetation • Areas of human pressure Works – priorities for weed control Works – use of indigenous plants in revegetation in conjunction with **Coast Care**	Obj 2, 3, and 4. Obj 1,3 and 4.

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Name	Organisation	Mandate	Outcome	Ref	Implementation Method	Ref
					Community Involvement – Promote formation of **Coast Care** Groups Services - Provide resources to **Coast Care** groups (design, plants, transport)	
Western Bay of Plenty District Plan	WBOPDC	RMA	Minimise threat of natural hazards to human life and environment	12.2.1	Rules – Under EBOP plans. Works – **Dune care** programmes under Reserves Act. Education – programmes to heighten public awareness of hazards	12.4.3
			Protect natural character of coastal environment.	12.2.2	Rules – Under EBOP plans. Works – **Dune care** programmes under Reserves Act. Education – programmes to heighten public awareness of hazards	12.4.3
Whakatane District Plan	WDC	RMA	Preserve and enhance natural areas and landforms, such as dunes and wetlands, which play an important role in hazard mitigation.	2.4.3.9, Proposed Variation No6	Works - Provide works associated with any Operative Reserves Management Plan or approved Regional **Coastcare** programmes. Rules - Beach replenishment, planting and	Proposed Var No 6, 4.4.4.1

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Name	Organisation	Mandate	Outcome	Ref	Implementation Method	Ref
					restoration works associated with approved Regional **Coastcare** programmes.	
Opotiki District Plan	ODC	RMA	Avoid or mitigate effects of natural hazard occurrence.	7.2.2.1	Advocacy - **Coast Care** programmes encouraged to ensure that the integrity of the coast and dune systems is maintained.	7.6.1.(2)
			Preserve natural character and amenity values	17.2.2	Advocacy - Continued support for established and future community **Coast Care** or **Dune Care** programmes, including continued liaison with Bay of Plenty Regional Council in respect of these programmes. Rules - Conservation planting and management, weed and pest removal, replanting and rehabilitation of indigenous vegetation.	17.6.1.2, 17.3.1.10
			Improve public access to and along the coast.	17.2.2		
			Protect natural character of the Opotiki coastal environment	17.2.2		
Bay of Plenty Conservation Management	Department of Conservation	CA Act, RMA, RA	Protect and restore rivers, duneland, harbours and estuaries.	1.3.1	Work with Tangata Whenua, local authorities and **community care groups**.	Mgt. Policy #4

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Name	Organisation	Mandate	Outcome	Ref	Implementation Method	Ref
Strategy						
			Improve quality and functioning of ecosystems	1.3.2	Undertake ongoing pest control with Tangata Whenua, other organisatons and communities of interest.	Obj. #2

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No.	NAME
1	Waihi Beach Coast Care
2	Shaw Road
3	The Loop
4	Island View Coast Care
5	Pios Beach Coast Care
6	Matakana
7	Matakana
8	Nga Potiki
9	Papamoa Coast Care
10	Te Tumu-Kaitua Blocks (Iwi owned)
11	Ford Land Holdings
12	Maketu Spit
13	Maketu Coast Care
14	Private land
15	Rogers Road
16	Otamarakau Coast Care
17	Matata/Pikowai Coast Care
18	No Name

No.	NAME
19	No Name
20	Thornton Coast Care
21	Coastlands Coast Care
22	Piripai
23	West End Coast Care
24	Ohope Coast Care
25	Waterford Estate Coast Care
26	Ohope Spit
27	Ohiwa Coast Care
28	Bryans Beach Coast Care
29	Waiotahi Coast Care
30	Te Rere Coast Care
31	Hukuwai
32	Tirohanga Coast Care
33	Waiaua
34	Opape Coast Care
35	Torere Coast Care
36	Hawai Coast Care

No.	NAME
37	Omaio Coast Care
38	No Name
39	Waiorere Coast Care
40	Te Kaha Coast Care
41	Raukokore Coast Care
42	Oruaiti Coast Care
43	Whangaparaoa Coast Care
44	Taiwhakaea
45	No Name
46	Maraehako Bay
47	Raukokere River Beach
48	Pahaoa Coast Care
49	Mount Maunganui Coast Care
50	Private Land
51	Pukehina Coast Care
52	Maraenui
53	No Name
54	Motuhoa Coast Care

Explanations

This map indicates the Coast Care Management Areas. The Coast Care Groups active in the Management Areas are indicated with a red symbol. It should be noted no information was available to map the locations where specific Coast Care work has been undertaken.

Advanced Management

1. Areas where planting native fore-dune species was completed at least 3 years prior, and

2. Growth rates are sufficiently rapid to ensure the plants are now naturally colonising any bare sand, and

3. Where established plants have restored an incipient fore-dune, and

4. The dune is now more resilient to wave attack, and

5. The dune is now sufficiently wide to self-repair following normal erosion episodes.

6. Frequently groups have commenced back-dune planting.
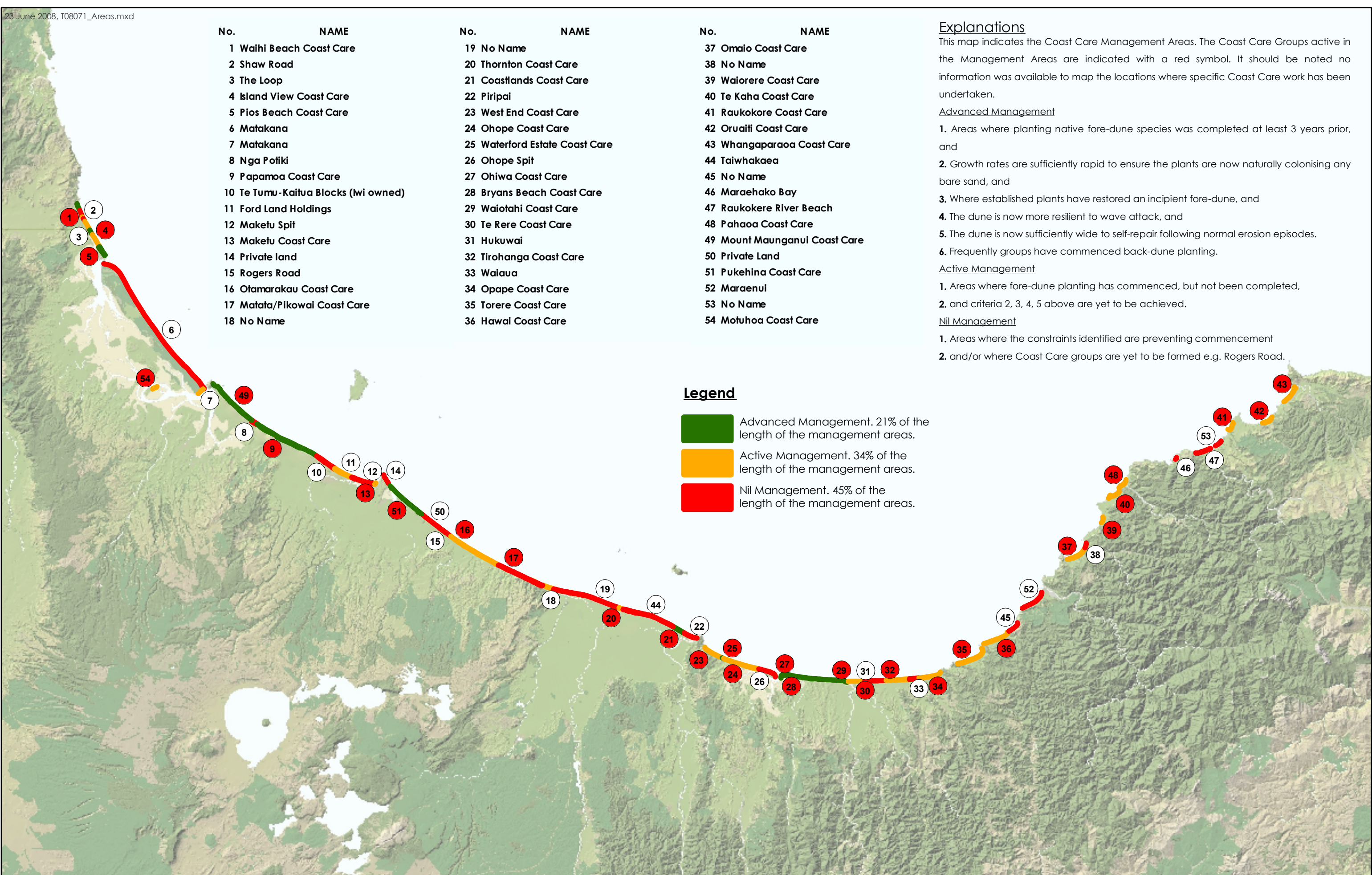
Active Management

1. Areas where fore-dune planting has commenced, but not been completed,

2. and criteria 2, 3, 4, 5 above are yet to be achieved.

Nil Management

1. Areas where the constraints identified are preventing commencement

2. and/or where Coast Care groups are yet to be formed e.g. Rogers Road.

Legend

- **Advanced Management. 21% of the length of the management areas.**
- **Active Management. 34% of the length of the management areas.**
- **Nil Management. 45% of the length of the management areas.**

Coast Care Review

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km
0 2.5 5   10   15   20

Notes
This map indicates the Coast Care Management Areas. However no information was available to map the locations where specific Coast Care work has been undertaken.

Coast Care Management Areas

Legend

● NERMN Monitoring Sites

Coast Care Area

Advanced Management. 21% of the length of the management areas.

Active Management. 34% of the length of the management areas.

Nil Management. 45% of the length of the management areas.

Coast Care Review

Mapping by Boffa Miskell | ww.boffamiskell.co.nz

0 2.5 5   10   15   20
km

Source

1. NERMN Sites 2006, EBOP, Supplied 23 June 2008.

Note

This map indicates the Coast Care Management Areas. However no information was available to map the locations where specific Coast Care work has been undertaken.

NERMN Monitoring Site Locations

Legend

● Significant Biota

Coast Care Area

Advanced Management. 21% of the length of the management areas.

Active Management. 34% of the length of the management areas.
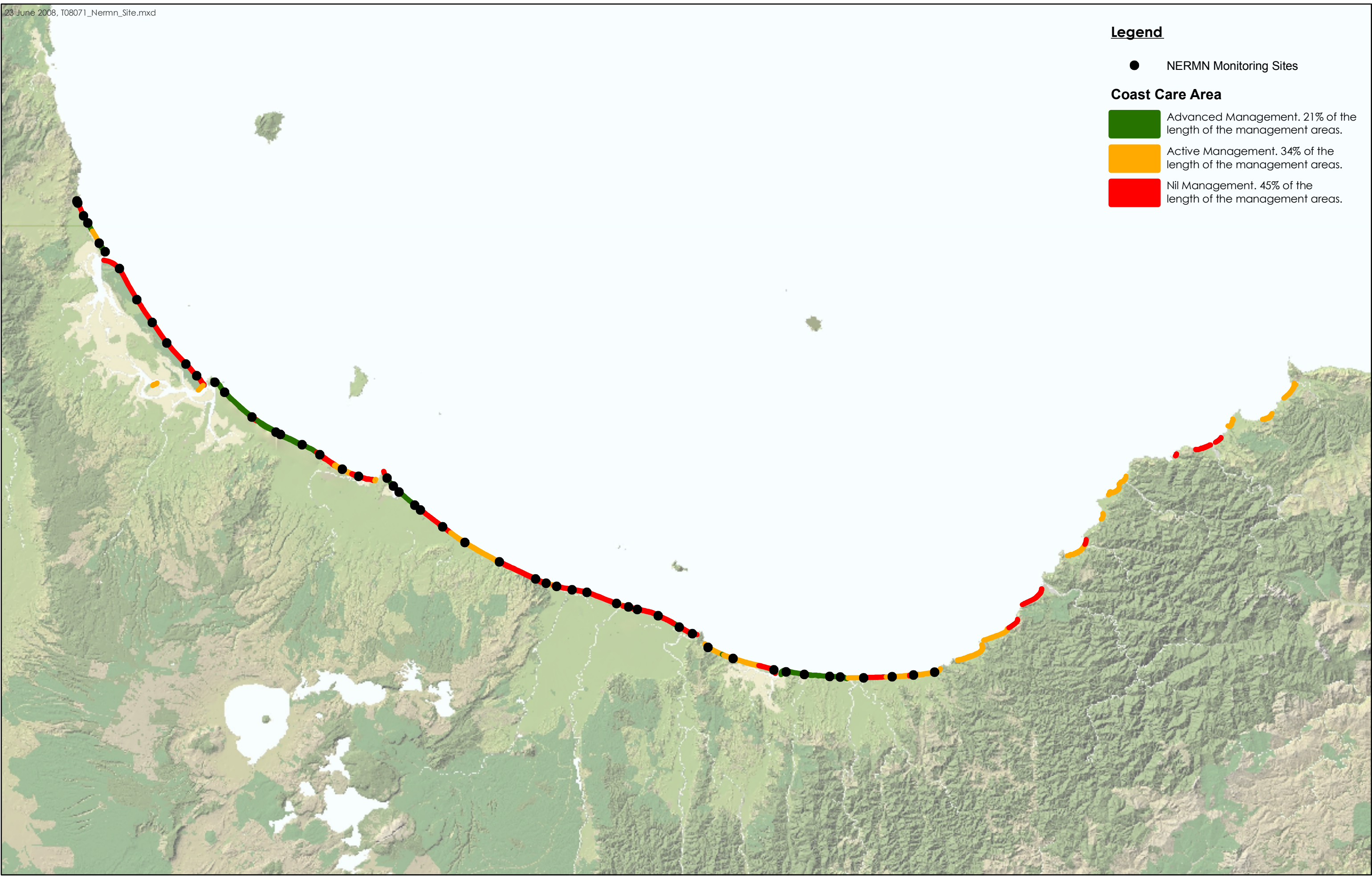
Nil Management. 45% of the length of the management areas.

Coast Care Review
Mapping by Boffa Miskell | ww.boffamiskell.co.nz

0 2.5 5   10   15   20
km

Source
1. Coast Care Significant Biota 16/10/2006, EBOP, Supplied 6 June 2008.

Note
This map indicates the Coast Care Management Areas. However no information was available to map the locations where specific Coast Care work has been undertaken.
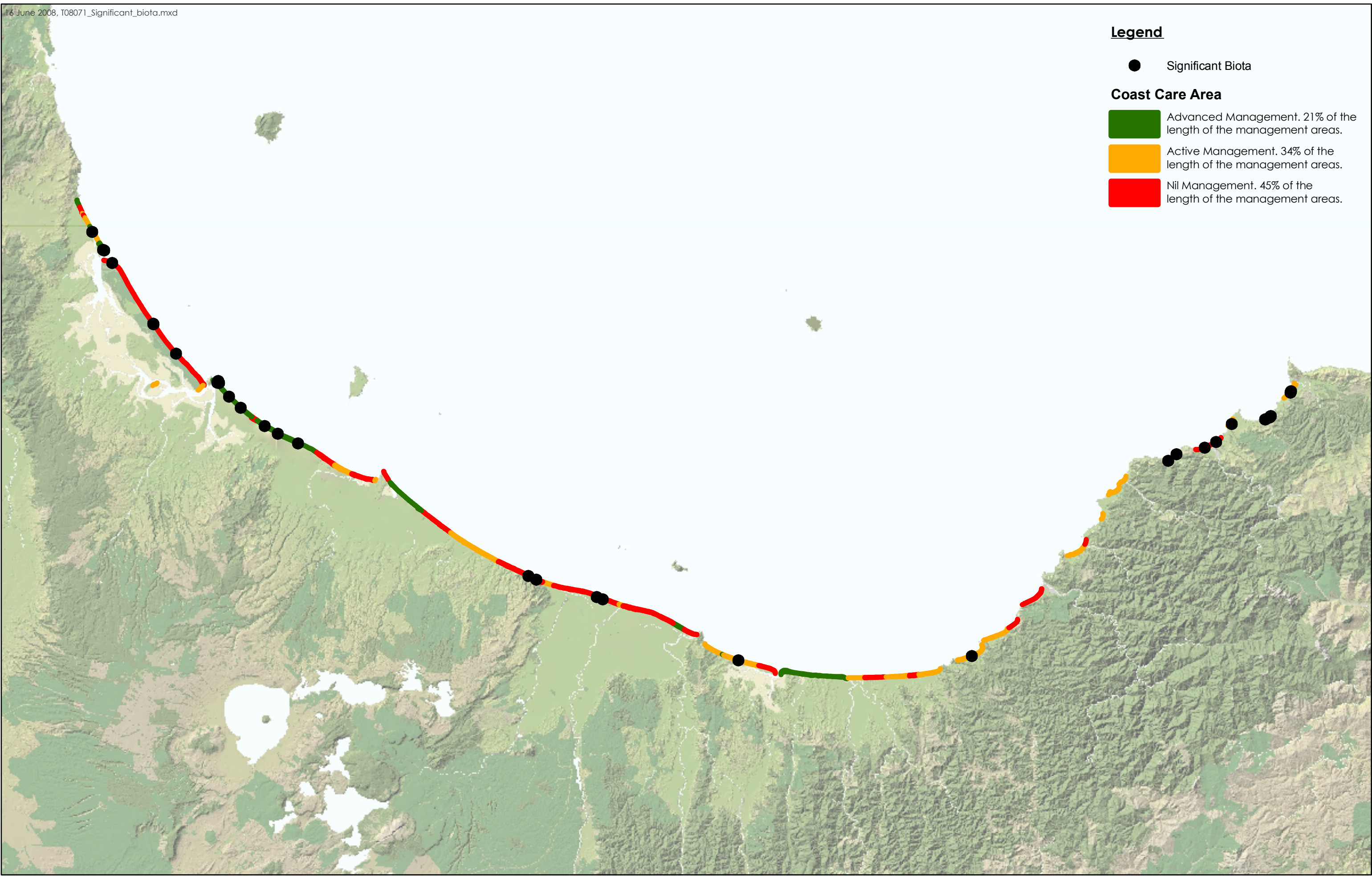
Significant Biota

Legend

● CoastCare Structures

Coast Care Area

■ Advanced Management. 21% of the length of the management areas.

■ Active Management. 34% of the length of the management areas.

■ Nil Management. 45% of the length of the management areas.

Stream Control using Sand pillows
Stream Control using Sand pillows

Stream Control using Sand pillows

Stream Control using Sand pillows

Stream Control using Dune planting

Stream Control using Sand pillows

Stream Control using Dune planting

Coast Care Review
Mapping by Boffa Miskell | ww.boffamiskell.co.nz

0   2.5   5   10   15   20
km

Source
1. Coast Care Structures 16/10/2006, EBOP, Supplied 6 June 2008.

Note
Topography representation created from LINZ 1:50000 topographical data.

Structures

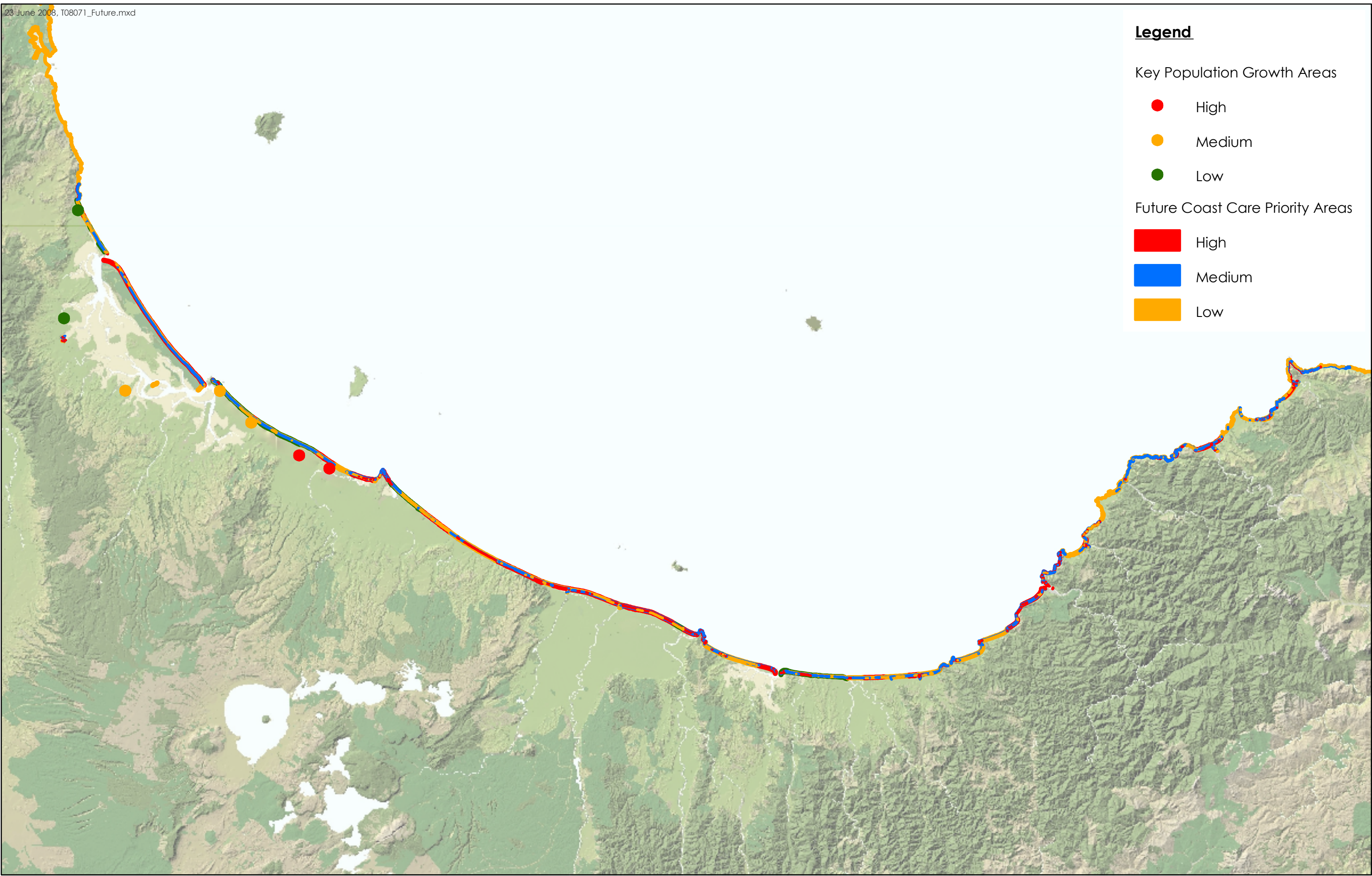23 June 2008, T08071_Future.mxd
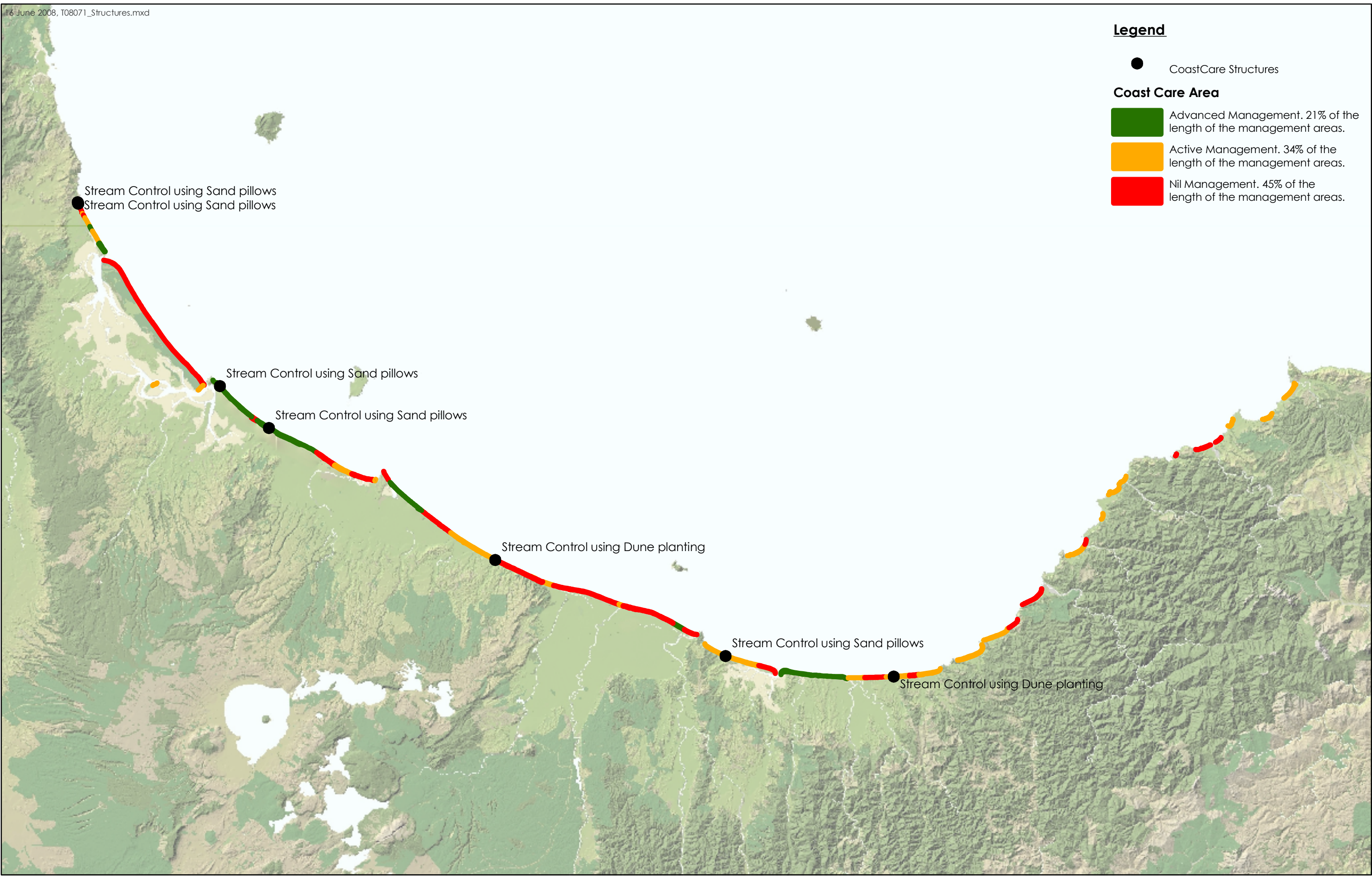
Legend

Key Population Growth Areas
- ● High
- ● Medium
- ● Low

Future Coast Care Priority Areas
- High
- Medium
- Low

Coast Care Review
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0 2.5 5   10   15   20
km

Source: 1. Policy Areas from the Regional Plan, EBOP, Supplied 6 June 2008.

Note: This map demonstrates an example of the using GIS concepts to help determine priority areas. The layers used in this example are sourced from the EBOP Regional Plan. Additional layers such as population concentrations could be included. This model would be refined in conjunction with stakeholders.

Future Work Site Priorities:
Example

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