

Island Bay Five Year Restoration Plan



Prepared for Wellington City Council and Greater Wellington

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Harley Spence - Coastline Consultants &

Dr. David Bergin - Environmental Restoration Ltd

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PLEASE NOTE

This restoration plan is written in good faith between the contractors and the Wellington City Council, based upon site investigations and information available at the time of production. For any queries about the information contained within the document please contact Coastline Consultants.



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Ph. +64 (07) 350 2240 (Head Office)
Fx. +64 (07) 350 2241
P.O.Box 910, Rotorua 3040, New Zealand
www.coastline.co.nz



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ACRONYMS

WCC	Wellington City Council
GW	Greater Wellington (Regional Council)
DoC	The Department of Conservation
IBBA	Island Bay Beach Association

INTRODUCTION

Island Bay beach is formally managed by Wellington City Council (WCC) in accordance with the South Coast Management Plan (2002):

Island Bay beach is managed for recreation purposes and this defines its predominant character. This includes provision of, or support for, surf club facilities, toilets and beach access. Amenity infrastructure will be provided to accommodate the level of use experienced at this site. The heritage seawall will be maintained and protected.

To the eastern end, the Bait House provides a strong reference point...To the western end, planting (pingao) will be maintained and extended where possible – this area is more natural in character with rocky foreshore and dunes.

Beach grooming will be required from time to time. Parking enhancement and road safety works are permitted provided the public spaces are maintained or enhanced.

The coast and bay seaward of the Mean High Water Mark is managed by the Department of Conservation (DoC) as part of the Tapu Te Ranga Marine Reserve.

Recently there has been much discussion within the wider Island Bay community regarding the future management of the beach. Direct and clear messages have been delivered to WCC from the recently formed Island Bay Beach Association about the need to keep the beach clear of seaweed to enhance the recreation and amenity experience for beach users (<http://homepages.woosh.co.nz/margeandharvey/index.html>). This group's view is not shared by others within the community and was the subject of robust discussion during the public meeting held as part of developing this five-year restoration plan (Saturday April 23, 2009).

The development of this plan is part of WCC's ongoing dialogue process with the Island Bay community.

SCOPE OF THIS REPORT

WCC has requested a detailed report describing the issues, potential outcomes for Island Bay beach, including ecological and recreational values and providing recommendations for the future management of the beach and dunes. This report was to consider:

- Protection of existing infrastructure
- Recreational use of the beach

- Physical context (i.e. road and residential on one side and marine reserve on the other)
- Existing dune restoration work
- Operational constraints (e.g. access, funding, equipment)
- Differing community opinions, and
- The South Coast Management Plan (2002).

Taking the above into account, the recommendations for the sustainable management of Island Bay beach and a suggested implementation timeline have been developed.

SITE INSPECTIONS

The project team inspected the beach on Tuesday April 21, 2009 along with Greater Wellington (GW) and WCC staff. Island Bay Coast Care Group members were also involved for some time during these on-site discussions.

The project team also met several members of the Island Bay Beach Association on the evening of the April 23, 2009. One of the project team (Harley Spence) also facilitated a public meeting and open day on May 23, 2009. The public invitation widely distributed before the Open Day is attached as Appendix 1. The Open Day coincided with the peak of a severe southerly storm.

HISTORICAL CONTEXT

Island Bay beach has been popular with Wellington residents for well over 100 years as a recreation beach (see Appendix 2). The archives of WCC, the Alexander Turnbull Library and local residents hold many photographs showing community events on the beach.

Even the earliest photographs show how the development of the Island Bay township has dramatically altered the beach from its' original state (see Figure 1). Other historical photographs clearly show that the beach originally comprised a large sand dune system that was extensively covered in native sand binding grasses.

However, as development progressed in the early 20th century the large dune system was largely removed and, once the seawall was largely established by the 1920s (see WCC archive photograph Ref. No. 00138:0:5625), there was no longer any dune vegetation present in the centre of the beach.

A substantial area of native dune vegetation at the eastern end of the beach was still visible up until the 1930s in historical photographs. By the 1960s, this had disappeared and, at the western end, the dune vegetation had been reduced to only a narrow band (see Figure 2).

It should be noted that seaweed can be seen on the beach in many of the historic images and therefore the issue of seaweed on the beach cannot be considered only a recent phenomena, which was suggested by some community members, during development of this restoration plan.

Figure 1: View of Island Bay around 1900. The beach in the foreground clearly has significant dunes covered in dune vegetation. The straight alignment of the road (circled) appears to cross the beach in the area where dunes previously existed (photograph Marie O'Hagan).



Figure 2: Aerial view of Island Bay in 1962. Note the large area of dune vegetation at the western end of the beach (circled) is only a narrow remnant of foredune and vegetation cover evident in earlier historical photographs (photograph WCC archives).

SITE DESCRIPTION

BOTANICAL

As noted in the previous section the botanical values associated with most of Island Bay have been compromised by the development of the township which now occupies most of the original dune system.

The Island Bay Coast Care Group has planted native sand dune vegetation at the western end of the beach in recent years.

Dense plantings of pingao (*Desmoschoenus spiralis*) and spinifex (*Spinifex sericeus*) on the steep foredune face are vigorous and expanding seaward with several metres extension beyond foredune fences. Harakeke (*Phormium tenax*), wiwi (*Ficinia nodosa*) and other hardy species are planted mostly along the landward edge of the dune adjacent to the footpath (see Figures 3 and 4). Taupata (*Coprosma repens*) is readily regenerating at this end of the beach particularly on rocky outcrops and road fill.



Figure 3: Dense plantings by the Island Bay Coast Care Group of spinifex and pingao have re-established on the dune at the western end of the beach.



GEOMORPHOLOGICAL

Island Bay is a relatively small pocket beach on the Wellington South Coast approximately 700m in length. Taputeranga Island provides the beach some shelter from the most direct southerlies as indicated by the permanent mooring of fishing boats. Lumsden (1996), in his detailed report assessing management options at that time, provides many details of the beach geomorphology. In this report, he indicates this bay is a “closed system”. This means that there is no new sand of any significant volume entering the Island Bay beach system from elsewhere along the coast. Sand that is removed from the beach during storm events is gradually returned from immediately offshore during calmer periods as part of normal storm erosion cut-and-fill cycles (Hesp 2000). Sand that is blown off the beach by onshore winds and over the seawall and road is lost to the Island Bay beach permanently.

It is likely that the most seaward component of the dunes (apparent in the historic photographs) at either end of the beach could be re-established. However because only the seaward edge of the original dune system lies seaward of the road and seawall, restoration would only involve the establishment of a sand binding zone. The alignment of the road and

seawall in the central portion of the bay, in particular, cuts seaward across the natural curve of the beach. Establishing and maintaining a foredune seaward of the wall is likely to be very difficult. Waves regularly impact on the wall in the centre of the beach (see Figure 5) which will likely preclude the establishment of permanent dunes or dune vegetation in this area.



CURRENT BEACH MANAGEMENT ISSUES

In the course of this project there have been a number of beach management issues highlighted by agency staff and members of the Island Bay community. These issues include:

SEAWEED AND BEACH CLEANING

- The volumes of seaweed deposited on the beach during storm events can be substantial, particularly after southerly storms. The Island Bay Beach Association is keen to see the central part of the beach in the vicinity of the Surf Club building maintained as a clear beach without seaweed or vegetation. They are requesting that the seaweed is cleared off the beach and the area is kept free of naturally establishing or planted dune vegetation. They are particularly keen to see the beach kept 'clean' in the summer months to allow the area to be used by beach users and annual public events such as the blessing of the boats.
- Other users and residents of Island Bay are keen to see Island Bay managed as naturally as possible. They want to see natural dune form and vegetation covers established. From their perspective, beach cleaning as an anathema to a more natural management approach. They consider that a cover of native vegetation (where this can be restored), will be compatible with the Marine Reserve status of the area.
- There have been problems associated with the type of machinery used to collect seaweed on the beach in the past, for example getting bogged on the beach. There are also health and safety risks associated with machinery and machines have removed sand in the process of collecting seaweed.
- Beach cleaning may have contributed to the lowering of the beach and exacerbated the problem of water encroaching around the Surf Club building. Sand level appears to have dropped in the vicinity of the building.
- Annual plants (likely to be sea rocket *Cakile edentula* as identified from photographs supplied by Island Bay Beach Association) established along flat areas of the beach immediately seaward of the Surf Club building have been hand cleared by local residents.
- The occurrence of litter/rubbish on the beach was raised as a problem by some residents.

WIND BLOWN SAND

- Sand is blowing over the wall and onto the footpaths, roads and seaside properties. Clearing this sand is an ongoing cost to ratepayers and the WCC.
- There are significant volumes of sand built up on the landward side of the road including a playground and park in the central part of the bay. There are differing opinions within the Island Bay community as to the significance of sand loss from the beach. However, the existence of healthy and vigorous sand binding vegetation on the landward side of the road suggests that there continues to be an active supply of windblown sand.
- Location of infrastructure, including the seawall and road, provide a significant challenge to establishing a vegetated dune over most parts of the bay.
- The steep seaward face of the foredune along the western part of Island Bay is, for the most part only suited to the native sand binding plants particularly spinifex and pingao because of the seaward location of the road.

DUNE VEGETATION AND RECREATION SPACE

- A major concern for the Island Bay Beach Association with the establishment of dune vegetation in the vicinity of the Surf Club is that this will be the 'thin edge of the wedge' potentially leading to significant areas of vegetated foredune. They argue the area of flat beach for activities will become compromised as revegetated areas expand either by additional planting or by natural spread.
- Some residents would be supportive of native sand binders being established at the eastern end of the beach to reduce sand loss over the seawall. They would be happy to see experimental plantings of spinifex and pingao established adjacent to, and eastward of, the boat ramp.

SURF CLUB BUILDING

- Long term retention of the aging Surf Club building will need to be addressed. Although no longer an active surf club, the building is used for other community activities. The structure is expensive to maintain and is sited within the active beach zone.

SOUTH COAST MANAGEMENT PLAN

- The ongoing management of Island Bay must be in accordance with the South Coast Management Plan (2002) which specifies that:
 - The beach is managed for recreation purposes.
 - The heritage seawall will be maintained and protected.
 - The western end, planting (pingao) will be maintained and extended where possible (note this area is more natural in character with rocky foreshore and dunes).
 - Beach grooming will be required from time to time.

SITE-SPECIFIC MANAGEMENT RECOMMENDATIONS

Management recommendations are provided for five areas of Island Bay beach (Figure 6). Management recommendations for up to five years are tabulated for each area. A list of these management recommendations for all areas is tabulated in Appendix 3.

In developing the recommendations the following site-specific factors have been taken into account:

- Island Bay is a highly modified popular urban beach and this is recognised in the South Coast Management Plan (2002).
- Along most of the beach the assets and infrastructure (including the heritage seawall) are located too far seaward to maintain a self sustaining fully functioning dune system. Historical photographs clearly show that the bulk of the dune system has been removed and roads and housing developed up to, and including, the most active seaward parts of the dunes.
- There are significant concerns from different sectors of the local community about future management options for the beach. These are likely to require ongoing community consultation to resolve. Recommendations contained within this five-year restoration plan are therefore contingent on this ongoing WCC and community dialogue process.
- The focus of this Restoration Plan is on restoring and maintaining a foredune using native plants to firstly reduce wind blown sand, and secondly to improve amenity, natural character, and biodiversity values where possible.
- Recommended priorities for actions and resources are only provided in detail for Years 1 and 2. Only general guidelines are given for Year 3-5 as this is dependent on actions undertaken as well as performance of restoration over the first two years.
- Plant numbers are based on a maximum of 500 plants to be planted comfortably within a single morning session by a community group with 10-20 persons attending.

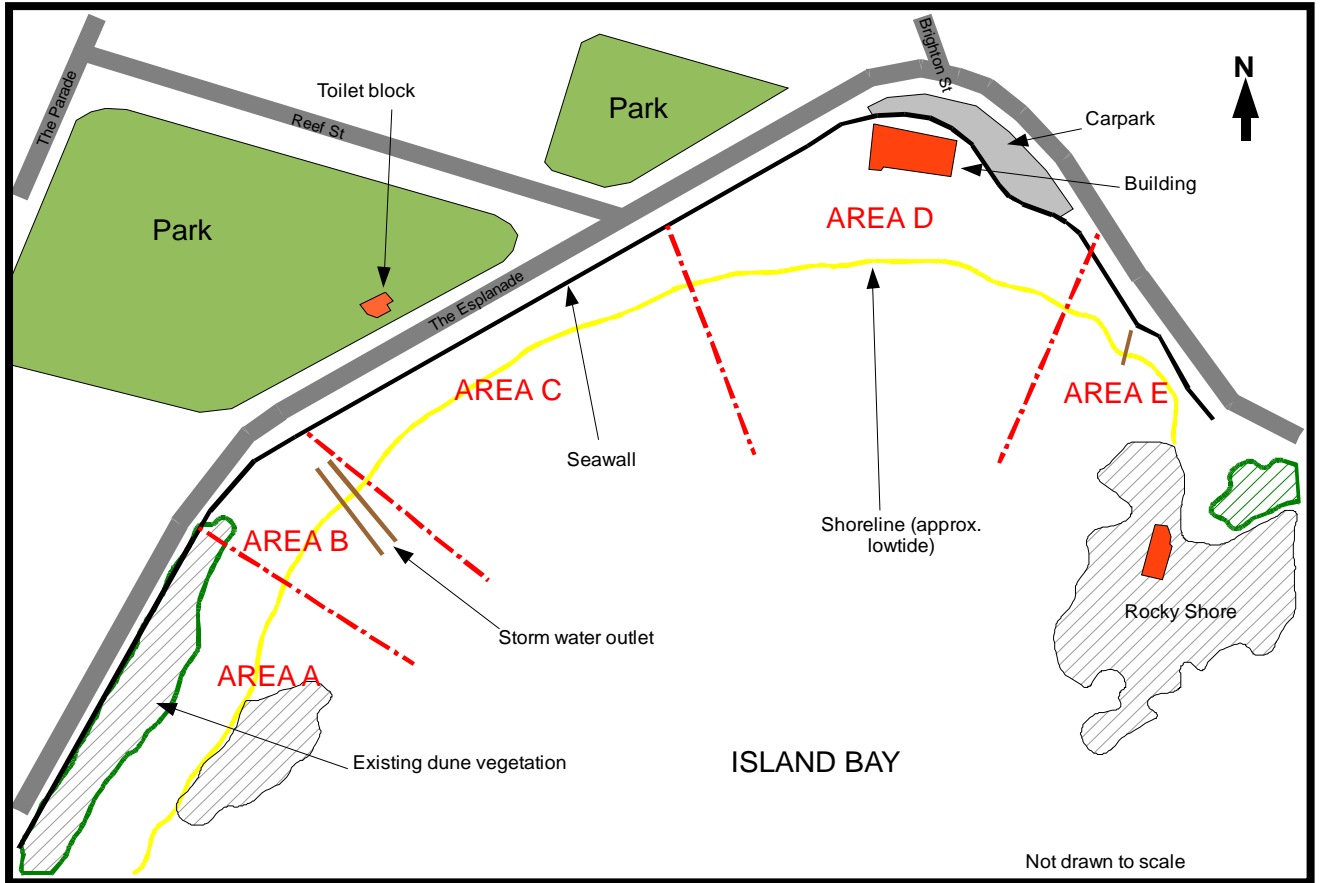


Figure 6: Five site-specific management areas demarcated along Island Bay beach that have been used to provide descriptions and recommendations for restoration.

AREA A – WESTERN PART OF BAY (FIGURE 3 AND 4)

DESCRIPTION

- Planting and management of spinifex and pingao on the steep seaward face of the foredune over the last few years has built a significant incipient dune. This has resulted in vigorous colonies of both species on the foredune extending several metres beyond the fence established originally to protect plantings.
- Planted spinifex in particular along the mid-slope zone is thriving which suggests that this is still part of the active foredune and being fed with fresh sand from frequent strong winds.
- Planted harakeke and wiwi are successfully established along a one to two metres wide band along the landward edge of dune immediately adjacent to the road.
- The dune area landward of the road and car parks in this part of the bay comprises only the active foredune zone. As indicated by the local care group, only an incipient dune of largely sand binding native plants can therefore be expected to establish successfully seaward of the road.
- There is likely to be limited planting areas for other species such as backdune ground cover or low growing shrubs that can be established along the landward edge of the dune adjacent to the road. Localised establishment of exotic grasses at mid and upper slopes suggests some areas are semi-stable.

MANAGEMENT OPTIONS

- Continue the successful management of established spinifex and pingao along the lower parts of the foredune slope including:
 - maintaining access-ways,
 - providing guiding fences where required,
 - selective removal of problem exotic species,
 - broadcast application of fast-release fertiliser as required, and
 - planting any gaps in vegetation cover caused by high seas or disturbance by beach users.
- Interplant the unthrifty pingao on steep slope faces in spinifex where sand accretion is expected to continue. Otherwise on semi-stable sites plant with a range of

backdune species including sand coprosma (*Coprosma acerosa*), wiwi, sand daphne (*Pimelea arenaria*), and pohuehue (*Muehlenbeckia complexa*).

- Continue to plant wiwi and harakeke and include planting of taupata in areas of dense exotic grass on semi-stable mid-sections of foredune face immediately above the active foredune sand binding zone. Use selective grass herbicides to reduce or eliminate the exotic grasses at a local level.

AREA A - MANAGEMENT RECOMMENDATIONS

Within the five-year time frame, effort should continue to maintain the effective restoration and management of the fore-dunes using native sand binding plants along the western end of the bay. Species diversity could be increased particularly in the semi-stable landward dunes using a range of backdune species that are native to the South Coast.

Table 1: Area A Management Actions and Resources

YEAR(S)	ACTIONS	RESOURCES REQUIRED
1	Inter-plant the unthrifty pingao on foredune faces in spinifex where sand accretion is expected	100-200 spinifex per year as required
1	Continue to manage the spinifex and pingao dominated foredune by keeping beach users off the vegetation including ongoing improvement of angled access-ways	Community input into improving access-ways; basic fencing materials
2-5	Continue to inter-plant selected back dune species in semi-stable dunes adjacent to road with wiwi, taupata, harakeke, etc; plant in small groups or a narrow zone adjacent to footpath	10-20 seedlings each of selected back dune species; community time for planting and weed control; gallant for spot spraying marram grass and other exotic grass as required for planting

AREA B – WESTERN SEAWALL AREA (FIGURE 7)

DESCRIPTION

- Short area comprising a steep incipient dune of bare sand adjacent to the seawall between the western end of the seawall and the large concrete stormwater outfall.
- Access-ways occur at both ends of this area. The western access at the end of the seawall leads directly onto the bare sand allowing a steep descent onto the beach. The eastern access-way at the stormwater outlet is via concrete steps where sand is blowing onto the footpath through the gap in the seawall.
- The area is used by children for jumping onto bare soft sand. Discussions suggest that residents are not opposed to leaving all or part of this area as a play area although there is concern that concrete or rocks partially submerged under the sand could injure children jumping off the seawall.



MANAGEMENT ISSUES AND OPTIONS

- As indicated by residents, this relatively short area of free moving sand could be left as a sacrificial dune for children. However, the project team agree the blocks of concrete just below surface of sand could be a health and safety issue for those jumping off the wall depending on the fluctuating levels of the sand. WCC indicate that the blocks are part of the works associated with the road protection and their removal would compromise the integrity of the wall.
- Alternatively, in consultation with the local community and beach users, small areas could be fenced off progressively for planting with native sand-binders. Access-ways will require alignment to avoid wind funnelling sand onto the road, and guide fencing to protect any new plantings. There appeared to be no objection from across the Island Bay community to extending the sand binders over this area.
- Pingao along mid-slope at the western end is expanding into the area and could be encouraged by broadcast dressing fast-release of fertiliser along the leading edges.

AREA B - MANAGEMENT RECOMMENDATIONS

Within the five-year time frame, and with ongoing community consultation, planting using native sand binding plants could be expanded into Area B. This would cover the partially hidden concrete blocks adjacent to the wall that are potentially hazardous to children jumping off the wall into loose sand.

Table 2: Area B Management Actions and Resources

YEAR(S)	ACTIONS	RESOURCES REQUIRED
1-2	Community consultation is required to determine if this area is to be left as a play area for children. Discussions must address the possible safety issues regarding partially buried concrete blocks	Community and agency consultation time
3-5	Consider expanding spinifex and pingao into this area; plant up to four rows at 60 cm spacing along seaward part of the wall; expand eastern edge of sand binders from Area A by judicious broadcast spreading of fast-release fertilisers; erect basic fencing to reduce/manage beach user access	200 each of spinifex and pingao per year; allow up to 100 sand binders for subsequent years for blanking; basic fencing materials as required; apply fast-release fertiliser as required

AREA C – CENTRAL BAY SEAWALL (FIGURE 5)

DESCRIPTION

- Narrow high tide beach seaward of the wall devoid of a dune or any vegetation.
- This area is likely to be contributing significantly to wind-blown sand landward of the seawall.
- Some residents are keen to attempt to establish a sand binding zone.

MANAGEMENT ISSUES AND OPTIONS

- The proximity of high water mark along the seawall means that it will be very unlikely that a permanent vegetated foredune system could be established along this area.
- A planted zone comprising three to four rows of spinifex at 60 cm spacing with some pingao could be trialled along the wall in an attempt to build a small incipient dune with the proviso that the planting is unlikely to remain in the long term because this area is highly vulnerable to high seas and storm waves.
- Plantings along the western end in the vicinity of the stormwater are not likely to impact on areas eastward where some residents want the beach to remain free of vegetation in the vicinity of the Surf Club building. Any plantings would still require basic fencing to encourage beach users to avoid planted areas.

AREA C - MANAGEMENT RECOMMENDATIONS

Establishing a permanent vegetated foredune seaward of the wall will be difficult as the seawall is located too close to the sea.

Table 3: Area C Management Actions and Resources

YEAR(S)	ACTIONS	RESOURCES REQUIRED
3-5	Lower priority due to the high risk of developing an incipient dune so close to the high water mark. Plant spinifex and pingao in four rows adjacent to seawall at 60 cm spacing between plants	500 spinifex plants and 100 pingao for Year 3; blanking in Years 4-5 likely to replant entirely or partially depending on effect of storms and high seas – allow 200 spinifex and 50 pingao per year

AREA D – CENTRAL BAY AND SURF CLUB BUILDING ZONE (FIGURE 8)

DESCRIPTION

- This area is a low-lying flat beach to the seawall and surrounding the surf club building. Residents indicate that waves rarely reach the seawall along this area.
- Seaweed is deposited during and after southerly storms, principally kelp from nearby rocky shores and the near-shore islands.
- The surf club building is within the active foredune zone. Water inundates the dune areas around the building during occasional high seas and storms.
- There is evidence that sand is being funnelled onto the footpath in the vicinity of an access-way where there is a gap in the seawall.

MANAGEMENT ISSUES

- The Island Bay Beach Association (IBBA) members want this area kept free of seaweed and remove growth of sea rocket on the beach. They would also like to see the area between the seawall and the rear of the building filled to near seawall height before planting to reduce deposition of rubbish.
- Many other residents would prefer to minimise beach cleaning as the seaweed on the beach after storms is a natural process. Early historic photographs appear to confirm that seaweed is a natural phenomenon on Island Bay beach.
- It can be difficult to remove layers of seaweed that have subsequently been buried by wind blown sand.
- Crowds gather for infrequent community events including the Big Dig and for the blessing of the boats.
- Cleaning of the beach would be highest priority in summer months from January to March when the beach is most heavily used.
- Sea rocket occupies the strandline (high water mark where seaweed and debris is often deposited) occasionally but had been removed by residents during beach clearing working bees.
- Water inundates the dune areas around the building during occasional high seas and storms. However, there appears to be some conjecture amongst different residents as to how often this occurs.

- Seaweed is often used informally for gardening or composting



MANAGEMENT OPTIONS

The options for management of this area are given below. Ongoing dialogue will be required between the Council, local residents and beach users to finally determine long term management options.

BEACH CLEARING

- The IBBA is keen to see this area kept free of seaweed and vegetation although this may only be necessary over the summer months. The South Coast management Plan (2002) states *“beach grooming will be required from time to time”*.

- The IBBA have used working bees to hand-clear the beach. However, they would prefer to see use of a light tractor and blade to remove any significant build-up of seaweed after storms and primarily during the summer months when beach activities coincide with the residents/beach users need for a clean beach.
- The project team recognises that deposition of seaweed is a natural phenomenon that contributes to the ecological systems within a beach, including contributing towards dune building processes. The debate within the Island bay community over the merits of clearing seaweed off the beach is common at other New Zealand urban beaches and internationally.
- In this instance, given the popularity of Island Bay as a recreational beach, a compromise involving careful removal of the seaweed from above the high water mark may be a practical option to maximise amenity values during the high use January – March period.

SURF CLUB BUILDING

- Planting in front of the building is not likely to be a viable option as this area is too vulnerable to high seas and storm waves.
- The long-term viability of retaining and maintaining the surf club building within the foredune zone needs to be considered. The building is old and requires high maintenance. The possibility of moving the building away from the beach has been discussed within the community.
- Plans should be developed in the long-term to relocate the building landward (such as the park across the road). The dune restoration options that have been suggested, including replacing the basement with poles, are likely to be expensive and give only marginal gains for establishing a foredune.

DUNE RESTORATION AND PLANTING

- For a largely closed beach system such as Island Bay (Lumsden 1996), sand lost from the beach is a net loss and is permanent. Therefore erosion problems, especially in the face of anticipated Climate Change and sea level rise, are likely to be exacerbated with any continuing loss of sand.
- The establishment of even a narrow foredune of native sand binding plants dominated by spinifex can be very effective in trapping sand on the beach and reducing permanent loss of sand to the road and seaside properties. Current trials in several regions including parts of Wellington have shown that sand loss from a beach system can be reduced significantly with the planting of a narrow foredune and as a

result the cost of removing sand from paths, roads and front beach properties is reduced.

- There is probably sufficient space to consider establishing a narrow incipient dune seaward of the seawall. However, it would be useful to confirm local opinion that waves rarely reach the seawall along this section.
- Based on the build up of sand immediately seaward of the seawall, it is likely a narrow band of sand binding vegetation could be established. A small vegetated foredune could coexist with a relatively wide beach seaward that would be suitable for ongoing beach activities.
- Establishment of a vegetated incipient dune could include:
 - Planting four to five rows of native sand binding plants at 60 cm spacing between plants in a two to three metre wide band along the seawall to initiate the building of an incipient dune.
 - Installation of angled access-ways through the planted zone to reduce wind tunnelling of sand landward particularly through gaps in the seawall.
 - Use of fences of simple basic construction to protect plantings both along access-ways and seaward of the planted zone.
- A monitoring programme should be set up with involvement of the local community to determine the success or otherwise of the co-existence of a flat beach available for beach users in combination with an established narrow incipient foredune dominated by native sand binding plants. This should include not only monitoring performance of vegetation but also changes in sand levels using dune profiles and the frequency and quantity of seaweed and debris deposition on the beach.
- A compromise between the establishment of a small incipient vegetated dune and occasional clearing of seaweed from the beach along this area may therefore be possible. It is recommended that this option is fully explored by all parties. Relatively inexpensive test plots of planted vegetation could be established to determine its feasibility.

AREA D - MANAGEMENT RECOMMENDATIONS

A compromise is suggested for Area D, whereby the establishment of a small foredune immediately adjacent to the seawall is developed and maintained along with retaining an open beach at low tide available for recreation that has infrequent clearing of seaweed during summer months only. Planting of sand binders could precede based on the results of revegetation at the eastern end of the bay. This recommendation is dependent on, and requires, ongoing consultation with local residents and beach users.

Table 4: Area D Management Actions and Resources

YEAR(S)	ACTIONS	RESOURCES REQUIRED
1	Ongoing community consultation to provide consensus on beach management	Continuing public consultation time including field visits and public open days as required.
2-5	<p>Depending on community consultation outcomes and early success of planting of sand binders further west:</p> <ul style="list-style-type: none"> • Implement experimental planting along the wall with sand binders • Initiate periodic summer clearing of seaweed from beach in times of high beach use <p>Monitor beach and dune profiles and monitor and maintain planted zones</p> <p>Replant any gaps in sand binding vegetation as required</p> <p>Continue to maintain access-ways.</p>	<p>300 spinifex and 100 pingao planted in Year 2 along wall</p> <p>Utilise appropriate machinery for clearing seaweed as required from January to March. Minimise compaction and sand loss</p> <p>Monitoring design and equipment</p> <p>1-200 sand binding seedlings as required</p>
1-5	Clear sand and other debris from the access to the toilets and changing rooms as required	Ongoing sand clearing programme

AREA E – EASTERN ZONE, SURF CLUB TO EASTERN HEADLAND

DESCRIPTION

- A gently sloping beach to near the seawall comprising mostly bare sand; sand levels along at least one part of the seawall are up to the top of the wall east of a boat ramp.
- There is no vegetation cover on the seaward side of the wall and conjecture as to the amount of sand lost over the wall to inland sites.
- As with Area D, some residents are in favour of establishing a vegetated foredune but others are concerned this will lead to expansion of vegetation over the open sand areas used for recreation.

MANAGEMENT ISSUES AND OPTIONS

- There is some scope for establishing a small vegetated dune where sand is ramping up to the top of the seawall in the vicinity of the boat ramp. This would reduce loss of windblown sand from the beach onto the road and landward properties.
- Some residents are supportive of a small experimental planting of sand binding vegetation (mainly spinifex with some pingao) on the eastern side of the boat ramp where there is build up of mobile sand.

AREA E - MANAGEMENT RECOMMENDATIONS

Restoration involving the establishment of experimental plots of sand binding natives is recommended as a first step to determining the impacts of a vegetated zone on reducing sand loss and maintaining an open flat beach for recreational use.

Table 5: Area E Management Actions and Resources

YEAR(S)	ACTIONS	RESOURCES REQUIRED
1-2	Establishing a small vegetated dune where sand is ramping up to seawall in vicinity of the boat ramp.	300 spinifex and 100 pingao spread over Years 2 and 3.
3-5	Monitor establishment of incipient foredune with sand binders and blank up gaps as required	1-200 sand binding seedlings as required

REFERENCES

Hesp, P.A. 2000: Coastal sand dunes form and function. *Coastal Dune Vegetation Network Bulletin No. 4*. Forest Research, Rotorua. 28p.

Lumsden, J.L. 1996: Beach management proposals for Island Bay, Wellington. Report prepared for Wellington City Council (unpubl.). Coastal Engineering Consultants, Christchurch. 28p.

South Coast Management Plan 2002: *South Coast Management Plan - To protect and enhance the coastal character of Wellington's South Coast*. Wellington City Council. 76p.

APPENDIX 1: FLYER INVITATION CIRCULATED FOR THE PUBLIC OPEN DAY HELD AT ISLAND BAY MAY 23, 2009.



Fishing Boats, Island Bay Beach, 1920.
Photo: P. Barker, courtesy Wellington City Archives (01.38.0.5.625)

Island Bay: Beach Information Open Day

Sat 23 May 12.30–3pm
Island Bay Surf Club,
The Esplanade

Island Bay residents and beach users are invited to come along to the Island Bay Surf Club to discuss the long-term management of the beach.

Beaches are dynamic places and managing them sustainably in an urban area is an ongoing challenge. You may also be aware that there has been debate in recent months about how to deal with seaweed on Island Bay beach.

Wellington City Council has employed Coastline Consultants and Environmental Restoration Ltd to provide management advice on selected beaches along Wellington's coastline – including Island Bay.

The consultants, along with City Councillors and Council staff, will be at the surf club on 23 May from 12.30 to 3pm to answer questions about the beach environment and also listen to residents' ideas, experiences and concerns.

There'll be an interesting display of historical photographs of Island Bay dating back over 100 years along with other information on beach and coastal processes. If you have any historical information you'd like to share (photos, newspaper articles etc) please bring them along!

If you can't make the open day, we'd still like to hear from you.

Please get in touch with:

Amber Bill, Community Engagement & Reserves Manager, Wellington City Council, tel 803 8150 or email Amber.bill@wcc.govt.nz or **Richard MacLean**, Wellington City Council External Communications, tel 801 3578 or email Richard.maclean@wcc.govt.nz

APPENDIX 2: EXTRACT FROM THE LIFE OF KATHERINE MANSFIELD RELATING TO ISLAND BAY

The following passage was mentioned by a participant during the Island Bay Community meeting 23 May, 2009.

“Thursday

“Thank you indeed for [Audrey](#)—It was most good of you to bother about her at all—And you have typed it so beautifully for me. Is your room a success? I do hope so— Of course you have been busy lately— and so have I in a very pleasant sort of way—writing I mean. I am just off to Island Bay for a long day and maybe an evening—I am going to write and have to go to the sea for copy—*Do* bring a book and come—too—Dear—and we shall ‘paddle’ and ‘bathe’ — Don't you *love* the two processes?

“I wonder if you have read *Lube Delinge* by Father Sheehan—Father Macdonald lent it to me—some days ago—and it is very good—Oh, what a *beautiful* day—

“Thank you again—Dear—I feel most horrid to have bothered you so persistently about my annoying children... You have indeed been a godmother to them—and they—too—are grateful—

“Lovingly yours

“K.”

[around 1907]

Title: [The Life of Katherine Mansfield](#)

Authors: [J. Middleton Murry](#) & [Ruth Elvish Mantz](#)

Publication details: [Constable and Company Limited](#), 1933

sourced from the NZ Electronic Text Centre – Victoria University

<http://www.nzetc.org/tm/scholarly/tei-ManLife-t1-body-d15-d2.html#tei-ManLife-t1-body1-d14-d2-x40-t1>

APPENDIX 3: LIST OF RECOMMENDED PRIORITIES FOR ACTIONS AND RESOURCES FOR UP TO FIVE YEARS REQUIRED FOR RESTORATION AND MANAGEMENT OF AREAS A TO E, ISLAND BAY BEACH, WELLINGTON.

Table 6: List of Recommended Priorities for Actions and Resources Required for up to Five Years – Areas A to E, Island Bay Beach, Wellington

AREA(S)	YEAR(S)	ACTIONS	RESOURCES REQUIRED
A	1	Inter-plant the unthrifty pingao on foredune faces in spinifex where sand accretion is expected	100-200 spinifex per year as required
A	1	Continue to manage the spinifex and pingao dominated foredune by keeping beach users off the vegetation including ongoing improvement of angled access-ways	Community input into improving access-ways; basic fencing materials
A	2-5	Continue to inter-plant selected back dune species in semi-stable dunes adjacent to road with wiwi, taupata, harakeke, etc...; plant in small groups or a narrow zone adjacent to footpath	10-20 seedlings each of selected back dune species; community time for planting and weed control; gallant for spot spraying marram grass and other exotic grass as required for planting
B	1-2	Community consultation is required to determine if this area is to be left as a play area for children – address possible safety issues regarding partially buried concrete blocks	Community and agency consultation time
B	3-5	Consider expanding spinifex and pingao into this area; plant up to 4 rows at 60 cm spacing along seaward part of wall; expand eastern edge of sand binders from Area A by judicious broadcast spreading of fast-release fertilisers; erect basic	200 each of spinifex and pingao per year; allow up to 100 sand binders for subsequent years for blanking; basic fencing materials as required; apply fast-release fertiliser as

		fencing to reduce beach user access	required
C	3-5	Lower priority due to the high risk of developing an incipient dune so close to the MHWS. Plant spinifex and pingao in 4 rows adjacent to seawall at 60 cm spacing between plants	500 spinifex plants and 100 pingao for Year 3; blanking in Years 4-5 likely to replant entirely for partially depending on effect of storms and high seas – allow 200 spinifex and 50 pingao per year
D	1	Ongoing community consultation to provide consensus on early management	Continuing public consultation time including field visits / open days
D	2-5	Depending on community consultation and ongoing involvement implement actions advised within this Restoration Plan – e.g. initiate experimental planting along wall with sand binders and summer clearing of seaweed from beach	300 spinifex and 100 pingao planted in Year 2 along wall; utilise small tractor for clearing seaweed as required from December to March
D	3-5	Monitor establishment of incipient foredune with sand binders and replant any gaps as required	1-200 sand binding seedlings as required
E	1-2	Establishing a small vegetated dune where sand is ramping up to seawall in vicinity of the boat ramp.	300 spinifex and 100 pingao spread over Years 2 and 3.
E	3-5	Monitor establishment of incipient foredune with sand binders and blank up gaps as required	1-200 sand binding seedlings as required