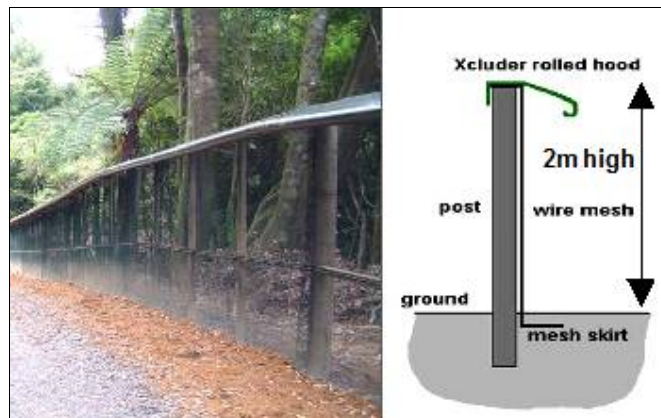


APPLICATION FOR RESOURCE CONSENTS FOR THE ESTABLISHMENT OF A PREDATOR-FREE FENCED RESERVE AT BREAM HEAD



WHANGAREI HEADS, NORTHLAND, NEW ZEALAND

SUMMARY OF PROPOSAL AND ASSESSMENT OF ENVIRONMENTAL EFFECTS FOR CONSULTATION PURPOSES



Xcluder "Kiwi" pest proof fence design: Example Only

***Supporting Documentation for Resource Consent
Application under the Resource Management Act 1991***

September 2008

BREAM HEAD CONSERVATION TRUST**APPLICATION FOR RESOURCE CONSENTS FOR PREDATOR-PROOF FENCE****1. INTRODUCTION****1.1 SUMMARY**

Applicant: Bream Head Conservation Trust
c/- Robin Lieffering (Chairperson)
P O Box 855
Whangarei

Location: Headland on the northern side of the entrance to the Whangarei Harbour.

Land Ownership: The land is predominantly crown owned and administered by the Department of Conservation with a smaller area owned by the Whangarei District Council.

Proposal: The Applicant is seeking resource consents to construct a predator-proof approximately 7-8km long, running generally in an east-west direction within, and in close proximity to, the northern boundaries of the reserve areas at Bream Head ('the Reserve'). This will be followed by a pest eradication programme, including the aerial application of toxic baits.

Consents Required: Preliminary discussions with consent authorities indicate that the following consents are likely to be required:

1. Land Use Consent to carry out earthworks - including on erosion prone land and within the Riparian Management Zone (RMZ);
2. Land Use Consent for vegetation clearance on erosion prone land and in the RMZ;
3. Discharge Permit and Water Permit to divert and discharge stormwater associated with land disturbance activities. Additional consents for work associated with installing culverts in streams may also be required.
4. Aerial application of toxin to eradicate animal pests.
5. It appears that no consent from the District Council will be necessary.

Term: A term of 35 years will be applied for.

Consultation: Extensive consultation has been undertaken and is continuing to be undertaken. There has been widespread public consultation, including public meetings, attendance at meetings of community organisations, and door-to-door personal visits to local residents/property owners. The Department of Conservation has been closely involved with the development of the proposal. Local iwi groups have been involved or kept informed.

1.2 THE LAND

The application area at Bream Head (referred to in this report as ‘Bream Head’ or the ‘Reserve’) covers some 693 hectares of land, comprising the Bream Head and Busby Head Scenic Reserves that are administered by the Department of Conservation under the Reserves Act, and a small reserve and unformed roads administered by the Whangarei District Council. The generosity of a number of local residents whose properties adjoin the Reserve has enabled several small parcels of land to be acquired by the Nature Heritage Fund. This has resulted in the rationalisation of the Reserve boundary and the proposed fenceline.

1.3 THE APPLICANT (The Bream Head Conservation Trust)

The Bream Head Conservation Trust (‘The Trust’) is a registered trust formed for the purpose of restoring and maintaining the unique natural and cultural heritage values of Bream Head. The Trust was formed on 26 September 2001 as a partnership between Iwi, the Community, the Whangarei District Council, and the Department of Conservation to restore the ecology of Bream Head, to preserve its historical and archaeological features and to enhance its recreational and educational potential in ways which are compatible with conservation values.

The late Sir Edmund Hillary was the Trust’s Founding Patron. Current Trustees include representation from the Whangarei District Council, Northland Regional Council, Department of Conservation, Royal Forest and Bird Protection Society, present and past local residents and Iwi. The Trust’s vision is:

A place in which the natural ecology is restored, with healthy forest and abundant bird song, where visitors can experience nature at its best.

1.4 STATUTORY CONSIDERATIONS

The proposal has been developed having regard to the provisions of a number of legislative and planning instruments, including: the Resource Management Act (1991), the Reserves Act, the New Zealand Coastal Policy Statement, the Regional Coastal Plan for Northland, the Regional Water & Soil Plan, and the Whangarei District Plan.

Memoranda of Understanding have been signed with the Department of Conservation, Northland Regional Council and Whangarei District Council, giving recognition to the statutory responsibilities of the two councils, and delegating responsibility for fund-raising, ownership and management of the fence to the Trust.

2. DEVELOPMENT PROPOSAL

2.1 LOCATION and AREA

The Bream Head area comprises the southern part of the Whangarei Heads peninsula on the northern side of the entrance to Whangarei Harbour. It extends from Bream Head (Cape Te Whara) in the east to Busby Head and Home Point in the west, and is bounded by sea on three sides.

2.2 REASONS FOR THE PROPOSED DEVELOPMENT

Bream Head has been identified by the Department of Conservation as having outstanding conservation value. It contains the most significant remaining stand of coastal broadleaf forest in Northland. A diverse range of flora and fauna are present, including several visiting bird species from offshore islands. Threatened species include invertebrates and lizards as well as North Island brown kiwi and NZ pigeon (kukupa). The plant list exceeds 300 species and includes many threatened and regionally significant species. For these reasons the site has been placed in the highest category in the Department of Conservation’s Sites of Special Biological Interest and Protected

Natural Areas Programme, and is identified as a priority area for management in the Department of Conservations Northland Conservation Management Strategy (1999).

2.3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.3.1 Summary

The Reserve area is significantly protected on three sides from invasion by introduced land mammals that both prey on and compete with native birds and invertebrates. It is proposed to construct a predator-proof fence along the northern boundary to exclude all mammalian pests (notably mustelids and rodents) from entering the protected area. Once the area has been fenced off, pest mammals within the fenced area will be eradicated.

2.3.2 Structures

The fence and associated structures include H5 treated fence posts with a 2m high fence comprising: a marine grade stainless steel mesh of small enough aperture to exclude mice; a fence hood to prevent animals climbing in; gate cages to provide for appropriate landowner and public access and maintenance vehicles; culverts in streams and watercourses to allow fish access but to exclude pest mammals; specially designed fence ends and traps to minimise the bypassing of the fence by mammals.

2.3.3 Earthworks

To provide room for the fence and vehicle access on the outside of the fence, some earthworks are necessary to create a platform up to 8m wide, formed with a camber so that the fence sits on the highest point and drainage water and surface runoff cannot flow through the line of the fence at any point.

2.3.4 Vegetation Clearance

To prevent cats, possums and rats from leaping over the fence from canopy branches, it is essential to trim vegetation back to provide a 4m wide clearance both inside and outside the fence line.

2.3.5 Watercourses

Concrete round culvert pipes are placed in watercourses, designed to accommodate flood flows, with a boxed culvert at the downstream end containing a specially designed water gate that allows the passage of water and fish but not pests.

2.3.6 Monitoring

Regular inspection and maintenance are essential to assure the continued effectiveness of the fence. A remote monitoring system will provide information on any tree fall across the fence or stream washout but fence damage needs to be checked by regular visual inspection, particularly after significant weather events. A planned maintenance programme is an important part of a management plan for the fence.

2.3.7 Timing.

It would be planned to complete the fence construction over one summer season (October to April). After a settling down period of up to a year, during which management and maintenance systems would be fine-tuned, final eradication of pests inside the fence would commence.

2.3.8 Pest Eradication.

DoC has undertaken a number of successful multi-species pest eradication programmes. A modified version of the DoC planning system has been used successfully behind a number of predator fences, including at Karori, Maungatautari and Macraes Flat. Experience has shown that a combination of aerial and ground-based applications is likely to be the most effective, particularly where access is difficult and hazardous as at Bream Head. Aerial application enables baits to be placed at much closer spacings than is practicable with trap lines and bait stations.

The preferred bait is Pestoff 20R, a second-generation, brodifacoum-based bait containing the lowest concentration required for successful control and eradication of rodents, following a developed Code of Practice. It is the only brodifacoum-based product registered for aerial application.

Targeted pests would be: Norway rat, ship rat, mouse, cat, mustelids (stoat, weasel and ferret), possums, hedgehogs, and rabbits.

2.3.9 Managing Reinvasion.

The possibility of re-invasion by stoats and rodents post eradication without re-invasion prevention measures being in place is always a risk. Managing reinvasion necessitates the installation of buffer control programmes with a range of techniques to maximise the chances of catching potential re-invaders. Mustelids, rodents and cats are the three key species. The programmes need community support and will be based on those developed successfully at other sites.

The responsible management of pets particularly cats by local residents needs to be encouraged. Fishers also need to be targeted to encourage them to have a pack it in, pack it out rubbish policy and dispose of fish bait and carcasses into the water. Walkers need to be encouraged to use the pedestrian gates rather than walking around the fence ends as this can create tracks which pests will tend to follow. This requires that gates are conveniently located. Investigations into better protection of the reserve from re-invasion around the fence ends is continuing.

2.3.10 Re-introduction Programme.

Once-present species that would be considered for re-introduction include: burrowing seabirds, red-crowned kakariki, stitchbird, fernbird, NI saddleback, rifleman, whitehead, skink and gecko species, and tuatara. Prioritisation would be driven to some extent by the needs of species recovery programmes and the development of additional sustaining populations. Some birds may be able to self-introduce naturally once predator pests are eradicated.

3. EXISTING ENVIRONMENT

3.1 INTRODUCTION

Bream Head dominates the landscape at the entrance to Whangarei Harbour, 25km south-east of Whangarei City. It is a spectacular coastal headland with a rugged shoreline backed by steep forest-clad slopes and picturesque peaks. Bream Head or Te Whara, together with nearby Mt Manaia holds special significance for local iwi as kaitiaki.

The need to legally protect the intrinsic values of the area was recognised over 100 years ago in 1905 when part of the area was gazetted as a Scenic Reserve. Today, the entire headland is protected as reserves under the Reserves Act 1977. Forest or shrubland comprise most of the area, the exception being a small pastoral lease between Urquharts Bay and Smugglers Cove.

3.2 ECOLOGICAL ASPECTS

Bream Head contains the highest quality coastal forest habitat left in Northland ¹. An unbroken, outstanding sequence of forest vegetation extends from rocky and sandy seashores, through coastal

¹ Pierce, Goulter & Moodie.

broadleaf, high forest slopes, shrubland and finally, rocky outcrops at 488m a.s.l. Some land has previously been cleared for grazing. Much of this has been allowed to regenerate while at Urquharts Bay and Ocean Beach, planting has been undertaken for the past 15 years or so to aid natural regeneration. The area of pasture retained between Smugglers Cove and Ocean Beach provides habitat for birds of open country such as pipits and harrier hawks.

More than 300 plant species have been identified at Bream Head, including rare and threatened species and some island species that are rare on the mainland.

About 15 native forest bird species occur in the Whangarei Heads area, including three threatened birds (the North Island brown kiwi, the North Island kaka and the New Zealand pigeon or kukupa). Birds that are locally extinct or rare on the Northland mainland (kaka, red-crowned kakariki and bellbirds) visit the area from offshore islands. With extensive pest management carried out by DoC over the past 18 years, some of these have re-established mainland breeding colonies at Bream Head, (e.g. bellbird), while the North Island tomtit has recolonised the area. Bream Head is also used as an important kiwi sanctuary. Mature kiwi that have been raised from eggs hatched in captivity are released back into the wild at Bream Head.

Other threatened animals present include the southernmost population of flax snails while there are several lizard species and a diverse invertebrate fauna.

3.3 INTRODUCED PLANTS AND ANIMALS

The natural ecosystems at Bream Head have been degraded by the introduction of pest animals, leading to the local extinction or loss of breeding populations of some species. However, pest eradication efforts by DoC since 1991 have halted this decline. Goats were eradicated in the early 1990s, while aerial toxin application with follow-up trapping and lines of poison bait stations have resulted in possum, rat and mustelids populations being held at low numbers.

In 1997, DoC recorded over 20 species of weeds being present in the reserve. Since then pine trees and ginger infestations have been removed. All known moth plants and pampas on the coastal fringes are being treated on an annual basis as resources allow. Control operations continue against prickly hakea and wattle around Mount Lion (Matariki) and Smugglers Cove.

3.4 CULTURAL AND HISTORICAL ASPECTS

Bream Head has been a site of significance to Maori for centuries and its cultural and spiritual significance remains today. Bream Head contains a rich archaeological landscape of Maori and European heritage extending back at least 700 years. Archaic midden at Smugglers Bay and elsewhere contain a wealth of information on when, what and how people lived in the area hundreds of years ago. The views and input of local iwi (Te Parawhau and Ngati Wai) have been sought in relation to the development of this proposal.

In addition, the area has significant associations with early European settlers and the development of defences against a possible Japanese invasion during WWII. The military mural of Bream Bay in the observation post is of particular significance, being one of the last military murals left in the country.

3.5 PUBLIC USE AND AMENITY VALUES

Bream Head is a 40 minute drive from Whangarei and 2½ hours drive from Auckland. There are two small settlements of 40-50 houses on the boundary of the Bream Head Reserve – Urquharts Bay and Ocean Beach - both comprising a mixture of permanent residents and holiday accommodation. Urquharts Bay on the western boundary is very popular with local visitors for boat launching and fishing. On the eastern side lies Ocean Beach, a popular destination for day trippers from Whangarei including both domestic and international tourists. Facilities have been developed by the district council to cater for the increasing visitor numbers.

Currently, for the public, there are three entry points into the Reserve area at Bream Head from the adjacent land. These are located at the Urquharts Bay car park, the Peach Cove Track car park, and at the southern end of Ocean Beach. The Reserve is popular for rock fishing, for swimming and picnicking in summer, and for its walking and tramping tracks. People walking into the Reserve tend to follow well defined tracks. The route to Smugglers Cove would be one of the most popular. The Reserve is an important amenity for local residents.

In the event of the predator proof fence going ahead, DoC, in conjunction with the district council and the Trust, will monitor visitor impacts and determine what if any additional facilities may be required, such as road end toilets, parking and rubbish collection.

3.6 CONCLUSIONS

The application area has very high ecological, amenity, cultural, historical and recreational values. It must be ensured that the proposal does not create significant adverse effects on any of these values.

4. ASSESSMENT OF ENVIRONMENTAL EFFECTS OF THE PROPOSAL

4.1 ECOLOGICAL

4.1.1 TERRESTRIAL

Intensive monitoring at other sites where pests have been eradicated by aerial application of Pestoff has shown that there may be minor short-term impacts on a small number of bird species, mainly exotic, insectivorous ground-feeders such as blackbirds, but that there may be low mortality rates in some native species. However, populations recover very quickly due to the increased food resources and the absence of nest-predation.

The positive effects will include: greatly enhanced ecological processes (flowering, fruiting, seed dispersal, etc.), including a much healthier coastal forest ecosystem; greatly enhanced biodiversity values due to the natural re-establishment and re-introduction of species that have been absent for a hundred years or more; greatly reduced amounts of labour and toxin used for pest control; spill-over of native bird species into surrounding areas.

4.1.2 AQUATIC

The associated earthworks may release small volumes of sediment but this will be minimised by construction work being carried out during the drier months and installing sediment traps as necessary to comply with resource consents.

To ensure complete aerial coverage of baits to high tide mark, it is almost inevitable that some baits will fall into the sea. The pellets will quickly break up under wave action, becoming unavailable for fish. Although some small crumbs may be taken by invertebrates, any food chain effects should be undetectable. Based on earlier work at Kapiti Island, the amount of toxin entering the marine environment will be many orders of magnitude lower than the lethal limits known to be toxic to some fish species.

4.1.3 SUMMARY

Experience with predator-proof fences at other sites have shown that the potential adverse effects of the fence construction and pest eradication are minimal and are far outweighed by the positive benefits that result. The forests of Bream Head will once again echo to bird song.

No native terrestrial or marine species are considered to be at significant risk at an ecosystem level from the proposed aerial baiting operation.

4.2 CULTURAL AND HISTORICAL

The important cultural use of Bream Head by early Maori and European are highly valued features of the landscape. Archaeological and historical advice has been retained and DOC will manage these features appropriately into the future. In particular staff will minimise any damage to these features and consult with iwi and seek appropriate authorities before disrupting them during any construction phase of any recreation facilities.

4.3 PUBLIC USE AND AMENITY VALUES

The fence and track platform will necessitate earthworks and vegetation clearance that may have a minor visual impact on sloping ground when viewed along the direction of the fence. When viewed from an angle or on horizontal ground, the adjoining vegetation will largely screen the fence from view. The fence will also be apparent across the open pasture area.

Access to the Reserve from the sea by boat will not be affected because the fence will not run along the shoreline at any point.

At or in proximity to each of the existing three entry points to the Reserve, appropriate gates will be conveniently built into the fence to allow the public walking access. These gates will be specifically designed to allow people access but prevent the accidental entry of mammalian predators. At the ends, gates will be located to encourage people to use them rather than walking along the beach.

Currently at Urquharts Bay people are able to walk along the beach towards Home Point to gain access into the Reserve. It is proposed that the Fence will terminate close to the shore near Home Point. While the public will still be able to travel around the ends of the fence, this will be discouraged, particularly above high tide mark, to avoid tracks and scent trails that predators might follow.

4.4 CONCLUSIONS

The proposal represents a significant opportunity to enhance the ecological values of an area that is already rated very highly, and to provide protected habitat for at-risk re-introduced species. Any adverse effects are expected to be short-term and no more than minor. The positive benefits will far outweigh any negative impacts. The proposed fence is the only option that will provide the level of protection required for the re-introduction of locally extinct species (such as stitch bird, saddleback and tuatara).

It is essential that the proposal is supported by the local communities and by the public at large for the potential benefits to be realised.

Acknowledgements:

Pierce, Goulter & Moodie: Biodiversity Values and Opportunities for Restoration at Whangarei Heads (March 2002).

Natural Logic Environmental Management: Assessment of Environmental Effects for a pest proof fence and animal pest eradication programme. (Draft – October 2007).

