Bibliography

Bayfield, M.A 2004: QEII National Trust Working with Local Government. Discussion Document. Report for QEII National Trust and Local Government New Zealand. Published on the Action Bio-Community web page.

Business and Economic Research Ltd (BERL):2002 Community investment in environmental improvements in Taranaki. Report to the Taranaki Regional Council.

Chadderton, W.L; Brown, D.J; Stephens, R.T 2004: Identifying freshwater ecosystems of national importance for biodiversity. Criteria, methods, and candidate list of nationally important rivers. Discussion Document. Published by Department of Conservation, Wellington.

Department of Conservation and Ministry of Fisheries December, 2005: *Marine Protected Areas: Policy and Implementation Plan.* Published in Wellington, New Zealand.

Department of Conservation and Ministry of Fisheries, June 2007: *Marine Protected Areas: Draft Classification and Protection Standard.* Published in Wellington, New Zealand.

Environment Waikato, 2003: *Biodiversity Action Plan*.

Fonterra, Federated Farmers, Taranaki Regional Council, 2004: *Dairying and Clean Streams Accord: Regional Action Plan for Taranaki.*

Green, W and Clarkson, B*, 2005: Turning the Tide ? A Review of the First Five Years of the New Zealand Biodiversity Strategy. The Synthesis Report.* Published by the Ministry for the Environment, Wellington.

Handford, P, 2006: Habitat Protection Fund Project Monitoring Toolkit. WWF-New Zealand, Wellington.

Hitchmough, R; Bull, L and Cromarty, P (compilers), 2007: *New Zealand Threat Classification System lists 2005.* Published by Department of Conservation, Wellington.

McEwen, M, 1987: Ecological regions and districts of NZ. Third revised edition in four 1: 50000 maps. Booklet to accompany Sheet 2. NZ Biological Resources Centre Publication No 5. Department of Conservation, Wellington.

Ministerial Advisory Committee, 2000: *Bio-What ? Addressing the effects of private land management on indigenous biodiversity. Preliminary Report of the Ministerial Advisory Committee.* Published by the Ministry for the Environment, Wellington.

Ministerial Advisory Committee 2000: *Biodiversity and Private Land. Final report of the Ministerial Advisory Committee.* Published by the Ministry for the Environment, Wellington.

Ministry for the Environment and Department of Conservation, April 2007: *Protecting our Places: Information about the Statement of National Priorities for Protecting Rare and Threatened Biodiversity on Private Land.* Published by Ministry for the Environment, Wellington.

Ministry of Fisheries, 1995: Strategy for Managing the Environmental Effects of Fishing.

New Plymouth District Council, 2006: *Significant Natural Areas Action Plan: Progress.*

New Zealand Government, 2000: *The New Zealand Biodiversity Strategy*.

New Zealand Government, 2005: *Marine Protected Areas: Policy and Implementation Plan.* Published by Ministry of Fisheries and Department of Conservation.

Rush, M, 2006: *Netting Coastal Knowledge: A report into what is known about the South Taranaki-Whanganui marine area.* Published by Department of Conservation, Wanganui Conservancy.

South Taranaki District Council, 2002: *Significant Natural Areas in the South Taranaki District.*

South Taranaki District Council *District Plan.*

Stratford District Council *District Plan*

Stratford District Council, 2000: *State of Environment Report*. Published by the Stratford District Council, Stratford.

Taranaki Fish and Game Taranaki Fish and Game Management Plan.

Taranaki Regional Council, 1997: *Regional Coastal Plan for Taranaki.*

Taranaki Regional Council, 2001a: *Wetlands of Taranaki: Taranaki Regional Council priorities for protection and enhancement*.

Taranaki Regional Council, 2001b: *Regional Freshwater Plan for Taranaki.*

Taranaki Regional Council, 2001c: *Regional Soil Plan for Taranaki*

Taranaki Regional Council, 2001d: *Dams, Weirs and other barriers to fish passage in Taranaki.*

Taranaki Regional Council, 2003: *Taranaki-Our Place our Future*. State of Environment Report.

Taranaki Regional Council, 2004a: *Indigenous biodiversity for the Taranaki region*: Regional Policy Statement for Taranaki working paper.

Taranaki Regional Council, 2004b: *Inventory of coastal areas of local or regional significance in the Taranaki region*.

Taranaki Regional Council, 2005: *Regionally Significant Wetlands of Taranaki: An inventory.*

Taranaki Regional Council, 2006: *Proposed Regional Policy Statement.*

Taranaki Regional Council 2006: *Key Native Ecosystems: Inventory of sites with indigenous biodiversity values of regional significance*.

Taranaki Regional Council 2007: *Pest Management Strategy for Taranaki: Animals.*

Taranaki Regional Council, 2007: *Pest Management Strategy for Taranaki: Plants.*

Taranaki Regional Council and Department of Conservation, 2004: *Coastal Information inventory for the Taranaki Coast.* Published by the Taranaki Regional Council.

Walker, S, Cieraad E, Grove P, Lloyd K, Myers S, Park T, Porteous T, 2007: Guide for Users of the Threatened Environment Classification. Landcare Research and Environlink.

Wildland Consultants, 2007: *Review of Significant Natural Areas in New Plymouth District.* Report prepared for New Plymouth District Council.

Willis, G, 2003: *Draft Guideline on Strategic Planning for Biodiversity: A report for Action Bio-Community on using LTCCPs to promote better biodiversity management.* Published on the Action Bio-Community website.

Appendices

Appendix I: Proposed Regional Policy Statement – policies and methods.

OBJECTIVE

To maintain and enhance the indigenous biodiversity of the Taranaki region, with a priority on ecosystems, habitats and areas that have significant indigenous biodiversity values.

Promotion of indigenous biodiversity

POLICY 1

The maintenance, enhancement and restoration of indigenous biodiversity will be promoted throughout the Taranaki region and at different scales within the region and will include ecological landscapes, ecosystems, habitats, communities, species and populations.

Adverse effects on indigenous biodiversity

POLICY 2

Adverse effects on indigenous biodiversity in the Taranaki region arising from the use and development of natural and physical resources will be avoided, remedied or mitigated.

Ecosystems, habitats and areas with significant indigenous biodiversity values

POLICY 3

Priority will be given to the protection, enhancement or restoration of terrestrial, freshwater and marine ecosystems, habitats and areas that have significant indigenous biodiversity values.

POLICY 4

When identifying ecosystems, habitats and areas with significant indigenous biodiversity values, matters to be considered will include, but not be limited to:

(a) the presence of rare or distinctive indigenous flora and fauna species; or
(b) the representativeness of an area; or
(c) the ecological context of an area; and
(d) in addition to (a), (b) or (c) above, the sustainability of the area to continue to be significant in the future.

Other ecosystems, habitats or areas with indigenous biodiversity values

POLICY 5

The maintenance, enhancement or restoration of indigenous biodiversity will be promoted in ecosystems, habitats and areas not covered by Policies 3 and 4 above, but still important for the continuing functioning of ecological processes, including those aspects important for the maintenance, enhancement or restoration of:

(a) connections within, or corridors between, habitats of indigenous flora and fauna;
(b) ecosystems, habitats and areas that provide buffering of habitats of indigenous flora and fauna;
(c) botanical, wildlife, fishery and amenity values;
(d) biological and genetic diversity;
(e) water quality, water levels and flows; and
(f) soils, minerals, nutrients or other physical factors or processes necessary for the survival of any indigenous flora or fauna species or community.

Eco-sourcing

POLICY 6

When re-establishment or restoration of indigenous vegetation and habitat is carried out, preference should be given to the use of local genetic stock.

METHODS OF IMPLEMENTATION

The Taranaki Regional Council will:

		Refer sections in this Strategy:
METH 1	**Identify and monitor** regionally significant natural areas, waterways, wetlands, and other areas with significant or outstanding indigenous biodiversity values.	6.5.3
METH 2	**Monitor and gather information** on potential fish barriers and promote their removal.	6.3.7;6.5.3
METH 3	Consider the use of **financial incentives**, such as grants, subsidies and rate relief, to promote the maintenance and enhancement of indigenous biodiversity including to: (a) assist with the protection of indigenous biodiversity values on privately owned land with a priority on ecosystems, habitats and areas with significant biodiversity values; (b) promote the protection of wetlands; and (c) Promote the maintenance and enhancement of freshwater biodiversity including riparian planting and the removal or alteration of structures that are a barrier to indigenous fish passage.	6.2.5;6.3.3;6.3.5
METH 4	Prepare and implement **pest management strategies or undertake other actions** under the Biosecurity Act 1993 to address the management of harmful animals or plants that have regionally significant actual or potential adverse and unintended impacts on indigenous biodiversity values.	6.3.3; 6.3.3
METH 5	Consider other **pest and weed control** to protect indigenous biodiversity values on privately owned land with a priority on ecosystems, habitats and areas with significant indigenous biodiversity values.	6.2
METH 6	Maintain a **regional plan or plans** with objectives, policies and methods of implementation addressing accelerated erosion, soil health, discharges to land, air and water, the taking of water, fish passage, riparian management, use of river and lake beds, the protection of wetlands and the management of the coastal marine area including estuaries and other areas of outstanding coastal value.	6.3.3
METH 7	Apply **regional rules** to regulate, mitigate or prohibit resource use and development activities that have potential or actual adverse environmental effects on indigenous flora and fauna in relation to soil conservation, air quality, fresh water and the coastal marine area.	6.3.7
METH 8	Provide **technical advice, information and assistance** through the Council's sustainable land management advisory services to promote: (a) the voluntary identification, protection and restoration of ecosystems, habitats and areas with significant biodiversity values; (b) the voluntary identification, protection and restoration of other ecosystems, habitats and areas with indigenous biodiversity values; and (c) the voluntary retirement and planting of riparian margins.	6.3.5
METH 9	Provide **information and guidelines** to resource users and the public that generally promote awareness of: (a) the principles and practices for maintaining, enhancing, or protecting indigenous biodiversity; (b) the mechanisms for protecting natural areas; (c) the importance and values of regionally significant natural areas, waterways, wetlands and areas of outstanding coastal value; (d) the importance and values of indigenous flora and fauna species, particularly those species that are locally rare or distinctive; (e) the benefits of and the techniques for undertaking riparian planting; and (f) techniques for constructing and maintaining in-stream structures in a manner that avoids or reduce adverse effects on in-stream values, fish passage and other users.	6.3.4
METH 10	When implementing the Taranaki Regional Council's Riparian Management Programme and Sustainable Land Management Programme, **promote** the protection, re-establishment or restoration of areas of indigenous vegetation and habitats of indigenous fauna.	6.3.5

METH 11	**Advocate** to relevant agencies, the use of other legislation (such as the Conservation Act 1987, the National Parks Act 1980, the Reserves Act 1977, the Wildlife Act 1953, the Queen Elizabeth II National Trust Act 1977, the Fisheries Act 1983 and the Biosecurity Act 1993) or mechanisms (such as the Forest Heritage Trust Fund, Biodiversity Fund and Sustainable Management Fund) to protect or restore areas of significant indigenous vegetation and habitats of indigenous fauna.	6.4.7
METH 12	**Advocate** when appropriate, to relevant agencies, the sustainable use of the marine environment and the establishment of **marine protected areas, including marine reserves,** to protect areas with regionally significant indigenous biodiversity values.	6.4.7
METH 13	Participate, as a trustee, in the affairs of the **Taranaki Tree Trust**, and provide servicing and support to the Trust.	6.5.2
METH 14	**Monitor and gather information** on the state of indigenous biodiversity, pressures on it, and responses to management.	6.5.2;6.5.3
METH 15	**Encourage the involvement of** central government and other relevant agencies in research or investigations relating to indigenous biodiversity issues and seek the consolidation and sharing of existing and new information about indigenous biodiversity.	6.4.6
METH 16	Promote **integrated management** of indigenous biodiversity in the Taranaki region by: (a) liaising and maintaining linkages with territorial authorities, the Department of Conservation, the Ministry of Fisheries, Ministry of Agriculture and Forestry, iwi and other relevant agencies, groups and individuals regarding indigenous biodiversity issues; (b) encouraging and facilitating, when appropriate, the development of joint databases and information systems and make available and exchange technical information and advice; and (c) undertaking joint initiatives where and when appropriate.	6.4.2;6.4.4;6.4.5;6.4.6

Appendix II: Land theme: NZBS objectives and actions

Objective 1.1 Protecting indigenous habitats and ecosystems *a) Enhance the existing network of protected areas to secure a full range of remaining indigenous habitats and ecosystems.* *b) Promote and encourage initiatives to protect, maintain and restore habitats and ecosystems that are important for indigenous biodiversity on land outside of protected areas.*	
Actions:	**Strategy sections:**
a) Complete indigenous biodiversity survey and assessment to identify habitats and ecosystems important for indigenous biodiversity.	6.2.2
b) Add to public conservation lands those habitats and ecosystems important for indigenous biodiversity that are not represented within the existing protected area network or that are at significant risk of irreversible loss or decline, or in situations where public ownership is needed for effective management.	NA but see 6.4.7
c) Encourage and support initiatives to protect and maintain habitats and ecosystems important for indigenous biodiversity on private land using a mixture of mechanisms, recognising the rights, responsibilities and interests of landowners and society, including information, education, voluntary mechanisms, economic incentives, property rights and regulation.	6.2; 6.3
d) Prepare a national policy statement and related material to provide guidance to local authorities on implementing provisions of the Resource Management Act relevant to conserving and sustainably managing indigenous biodiversity[22].	NA
e) Expand and modify existing national funding mechanisms (the Nature Heritage Fund, Nga Whenua Rahui and Queen Elizabeth II National Trust) to meet current demand by landowners and communities where a priority, to protect habitats and ecosystems important for indigenous biodiversity, and to maintain the condition of protected areas through fencing and pest management.	6.3.3
f) Identify and remove legislative and other barriers to local authorities using economic incentives (such as rate relief and financial contributions for costs), and investigate new joint national and regional/local funding mechanisms to encourage and support the protection of ecosystems and habitats important for indigenous biodiversity on private land.	6.3.5
g) Develop and strengthen information systems to increase access by local authorities, iwi and hapu, sector groups, communities and landowners to indigenous biodiversity survey and ecosystem data and information about indigenous biodiversity management priorities and protection mechanisms.	6.4.6;6.5.2
h) Promote landowner and community awareness of opportunities to conserve and sustainably use indigenous biodiversity, and to protect and maintain habitats and ecosystems of importance to indigenous biodiversity on private land.	6.2;6.3.5;6.3.6
Objective 1.2 Sympathetic management *Integrate and use measures in the sustainable management of production lands and urban environments that are sympathetic to indigenous biodiversity.*	
a) Incorporate indigenous biodiversity priorities into programmes for sustainable land management including those under the Sustainable Land Management Strategy and related strategies and provide advice on giving effect to these priorities.	6.3.5
b) Encourage and support the protection maintenance and restoration of indigenous biodiversity in urban environments recognising the importance of urban initiatives to enhance community awareness of and involvement in biodiversity conservation.	
Objective 1.3 Pest management in habitats and ecosystems *Prevent, control and manage plant and animal pests, to maintain or improve the condition and health of habitats and ecosystems important for indigenous biodiversity.*	
a) Develop and implement strategies and plans, including national and regional pest management strategies, to manage those plant and animal pests posing significant threats to indigenous biodiversity.	6.3.3
b) Review and address barriers to agencies integrating an indigenous biodiversity focus in national and regional pest management strategies under the Biosecurity Act (see Theme Five).	6.3.3
d) Increase research into, and development of, new technologies and techniques to combat existing and emergent threats from plant and animal pests to indigenous biodiversity.	6.4.6
Objective 1.4 Terrestrial habitat restoration *Restore areas of degraded or scarce habitats and ecological processes that are priorities for indigenous biodiversity*	
a) Expand habitat and ecosystem restoration programmes and initiatives (including those on offshore islands, "mainland islands", kiwi sanctuary zones, and other sites within production lands and urban areas) to restore scarce or under-represented indigenous habitats and ecosystems to a healthy functioning state.	6.3.5
b) Develop and implement regionally based restoration strategies identifying priority areas for restoring biodiversity and develop opportunities for collaboration both within and between regions.	6.3.5
c) Encourage community understanding of, and involvement in, programmes and activities to protect, maintain and restore indigenous biodiversity through showcase projects and volunteer programmes, and improve access to information, technology, expertise and resources.	6.3.4
d) Promote the use of local indigenous species for restoration projects and programmes.	6.3.5

Appendix III: Statement of National Priorities for biodiversity on private land

	Sections in this Strategy:
National Priority 1: To protect indigenous vegetation associated with land environments (defined by Land Environments of New Zealand (LENZ) at level IV) that have 20% or less remaining in indigenous cover.	5.5;6.2;6.3;6.4
National Priority 2: To protect indigenous vegetation associated with sand dunes and wetlands; ecosystem types that have become uncommon due to human activity.	5.5;6.2;6.3;6.4
National Priority 3: To protect indigenous vegetation associated with 'originally rare' terrestrial ecosystem types not already covered by priorities 1 or 2.	5.5;6.2;6.3;6.4
National Priority 4: To protect habitats of acutely and chronically threatened indigenous species.	5.5;6.2;6.3;6.4

Appendix IV: Freshwater theme: NZBS objectives and actions

Objective 2.1 Protection and sustainable management of freshwater ecosystems[24] *a) Ensure that management mechanisms, including mechanisms under the Resource Management Act and protected area statutes, adequately provide for the protection of freshwater biodiversity from adverse effects of activities on land and in water.* *b) Protect a full range of remaining natural freshwater ecosystems and habitats to conserve indigenous freshwater biodiversity, using a range of appropriate mechanisms.*	
Actions:	**Strategy sections:**
a) Provide appropriate national guidance and assistance to decision makers and management agencies on the protection of freshwater biodiversity through a national policy statement on biodiversity the National Agenda for Sustainable Water Management (NASWM) and the Sustainable Land Management Strategy.	6.4.7
b) Develop and apply a comprehensive classification system for freshwater ecosystems in line with the framework and criteria developed under the Environmental Performance Indicators Programme to help identify protection priorities.	NA
c) Progressively protect priority representative freshwater habitats using a suite of protective mechanisms.	6.2
d) Review the range of available protective mechanisms for freshwater biodiversity and determine any required changes to improve their efficiency and effectiveness including the removal of disincentives to protection.	6.3.3
e) Support and where necessary develop joint national and regional/local incentive mechanisms for protecting scarce and under-represented freshwater bodies and their surrounding areas on private land and provide support to landowners to maintain the biodiversity values of these areas (see Action 1.1f).	6.2
f) Provide advice and support to land managers and communities (both rural and urban) who wish to protect freshwater waterways wetlands and habitats in their area to encourage the protection of areas that are a priority for indigenous freshwater biodiversity.	6.3.5;6.3.4
g) Develop clear national criteria for protecting and managing biodiversity in wetlands and geothermal systems through a review of the 1986 Wetlands Policy and 1986 Geothermal Policy and incorporate in a national policy statement on biodiversity (see Action 1.1d).	NA
h) Expand monitoring procedures (and establish new ones) for freshwater bodies (including lakes rivers underground systems wetlands and geothermal systems) important for indigenous biodiversity to enable early action to maintain these ecosystems.	6.5.3
Objective 2.2 Managing pests in natural freshwater habitats and ecosystems *Prevent, control and manage plant and animal pests that pose a threat to indigenous freshwater biodiversity.*	
a) Develop and implement strategies and plans, including national and regional pest management strategies, to manage those plants and animals posing a threat to indigenous freshwater biodiversity and those potential pest species already present in New Zealand but not yet widespread.	6.3.3
Objective 2.3 Freshwater habitat restoration *Restore areas of degraded or scarce natural freshwater habitat and ecosystems that are priorities for indigenous biodiversity.*	
a) Develop and implement regionally based strategies and action plans to prioritise, restore and maintain priority freshwater and riparian ecosystems and to provide opportunities for collaboration between regions and between land and water managers.	6.3.5
b) Compile regional inventories of significant artificial barriers to the migration to and from the ocean of indigenous freshwater species and progress priority actions to restore fish passage.	6.3.7;6.5.3

Appendix V: Coastal and marine theme: NZBS objectives and actions

Objective 3.1 Improving our knowledge of coastal and marine ecosystems *Substantially increase our knowledge of coastal and marine ecosystems and the effects of human activities on them.*	
Actions:	**Strategy sections:**
a) Improve our knowledge of marine species, including taxonomy, distribution, habitat requirements, and the threats to species.	6.4.6
b) Survey, assess, and map habitats and ecosystems important for indigenous biodiversity and develop an agreed bioregional classification system[34].	6.4.6;6.5.4
c) Identify the uniqueness, representativeness, and importance of the biodiversity of New Zealand's coastal and marine ecosystems.	6.2
e) Develop an environmental monitoring system to provide information and a spatial understanding of: the status of marine species; fish stocks; habitats important for indigenous biodiversity; marine environmental health; threats to biodiversity; and the effectiveness of measures to avoid, remedy or mitigate the adverse effects of activities on marine biodiversity. Ensure that this information is readily accessible to all interested groups.	6.5.3;6.5.4
f) Promote individual and community awareness of the effects of activities on marine biodiversity, and the opportunities and responsibilities to protect and maintain habitats and ecosystems of importance to biodiversity.	6.3.4
Objective 3.2 Coordinated marine management *Develop processes for a marine management that enable decision makers to consider whole marine ecosystems.*	
a) Clarify and agree on comprehensive government policy objectives for marine biodiversity management, considering all stakeholder and public interests. Define agency responsibilities, especially for areas outside of the 12 nautical mile limit, and revise these if necessary.	6.4.2
Objective 3.3 Sustainable coastal management *Protect biodiversity in coastal waters from the adverse effects of human activities on land and in the coastal zone.*	
a) As part of the review of the New Zealand Coastal Policy Statement (NZCPS), assess its effectiveness, and that of regional coastal plans, in protecting marine biodiversity, and recommend changes accordingly	6.3.3;6.4.7
b) Expand programmes to mitigate the adverse effects of land use on coastal biodiversity, and incorporate marine biodiversity priorities into programmes for sustainable land use, including the Sustainable Land Management Strategy, National Agenda for Sustainable Water Management (NASWM), and related strategies.	6.3.5
c) Maintain or restore the biodiversity of priority sites in the coastal environment.	6.2
Objective 3.4 Sustainable marine resource use practices *Protect biodiversity in coastal and marine waters from the adverse effects of fishing and other coastal and marine resource uses.*	
b) Identify the coastal and marine species and habitats most sensitive to harvesting and other disturbances and put in place measures to avoid, remedy or mitigate adverse effects from commercial, recreational and Maori customary fishing activities.	NA
c) In the absence of, or uncertainty about, information required for the sustainable use of marine resources, apply the precautionary principle when setting sustainability measures for fishing or setting controls for other coastal and marine uses.	6.3.7
d) Improve the environmental impact assessment (EIA) of fishing and other marine and coastal resource use, and integrate these EIA into fisheries decision making processes (including sustainability measures and fisheries plans) and other marine management processes.	6.37
e) Avoid, remedy or mitigate the adverse impacts of human activities (such as marine transport and mining) on marine biodiversity and develop habitat restoration programmes where appropriate.	6.3.7
Objective 3.5 Managing marine biosecurity risks *Develop an integrated system to identify biosecurity risks to marine biodiversity from exotic organisms and establish appropriate management responses to prevent and reduce these risks and to minimise their impacts.*	
a) Enhance border control to prevent harmful species and diseases establishing and being spread within New Zealand's marine environment (by practices such as discharge of ballast water and the de-fouling of ship hulls).	NA
b) Determine responsibilities for the management of established marine pests so that appropriate measures (including preparing and implementing pest management strategies under the Biosecurity Act 1996) can be undertaken promptly and efficiently.	6.3.3
c) Identify the distribution of exotic species and assess the actual and potential impacts of these on marine ecosystems and biodiversity.	NA
d) Increase pest control and management efforts to levels congruent with national biodiversity goals and develop new technologies and techniques to combat existing and emergent threats to marine biodiversity from marine pests.	NA

Objective 3.6 Protecting marine habitats and ecosystems *Protect a full range of natural marine habitats and ecosystems to effectively conserve marine biodiversity, using a range of appropriate mechanisms, including legal protection.*	
a) Develop and implement a strategy for establishing a network of areas that protect marine biodiversity, including marine reserves, world heritage sites, and other coastal and marine management tools such as mataitai and taiapure areas, marine area closures, seasonal closures and area closures to certain fishing methods.	6.4.2
b) Achieve a target of protecting 10 percent of New Zealand's marine environment by 2010 in view of establishing a network of representative protected marine areas.	6.4.2
d) Promote and encourage individual and community initiatives to protect, maintain and restore habitats and ecosystems that are important for marine biodiversity.	6.3.4
3.7 Threatened marine and coastal species management *Protect and enhance populations of marine and coastal species threatened with extinction, and prevent additional species and ecological communities from becoming threatened.*	
(a) Review the threatened species priority setting systems and extend them to assess coastal and marine species.	NA
(b) Identify and protect threatened species and their key habitats.	NA

Appendix VI: NZBS actions: Biosecurity, Maori, Community and Information

Note: This appendix only includes those actions where local authorities or regional councils were listed in the New Zealand Biodiversity Strategy as key players.

a. Actions from Biosecurity Theme of NZBS:	
Objective 5.2 Methods of assessing and managing biosecurity risks *Establish effective methods of assessing and managing risks from unwanted organisms to indigenous biodiversity in conjunction with those methods for introduced species.*	
a) Assess the probability and likely scale of adverse effects on indigenous biodiversity from potential pest species, including species that are: • not in New Zealand, but may be accidentally introduced through international trade and travel; and • already in New Zealand, but which have not become widespread .	NA, although see 6.3.3
c) Develop and implement indicators under the Environmental Performance Indicators Programme and strategies for assessing the effectiveness of biosecurity management in protecting indigenous biodiversity and important introduced species.	6.5.3
Objective 5.5 Managing potential pest species *Eradicate or contain introduced species that have the potential to become serious threats to New Zealand's indigenous biodiversity and important introduced species.*	
b) Raise public awareness about introduced species that pose a potential threat to indigenous biodiversity.	6.3.4
b. Actions from Maori and Biodiversity theme of NZBS	
Objective 7.1 Partnerships in biodiversity management *Develop partnerships between Maori and Crown agencies in the conservation and sustainable management of biodiversity, consistent with the principles of the Treaty of Waitangi.*	
a) Improve current management to encourage iwi and hapu participation in processes for managing biodiversity within their rohe, including management of conservation areas, and resource management processes applying outside of these areas, and recognise iwi and hapu resource management plans that address biodiversity issues within their rohe.	6.4.3
b) Negotiate and establish protocols and arrangements with iwi and hapu at regional and local levels with respect to the management of specific habitats or particular species within their rohe, as a basis for building and maintaining effective working relationships and partnerships.	6.4.3
Objective 7.2 Matauranga Maori *Recognise and respect the role of matauranga Maori in biodiversity management and provide for its retention and protection.*	
b) Recognise the knowledge and role of Maori as kaitiaki in the conservation and sustainable use of biodiversity, including the cooperative management of public conservation areas and local authority resource management processes.	6.4.2;6.4.3
c) Enable Maori to incorporate traditional values and practices within tikanga-based biodiversity projects (such as the DoC Tikanga Atawhai projects) as part of their role as kaitiaki, and as a means of promoting and reviving matauranga Maori.	6.4.4;6.4.3
Objective 7.3 Treaty of Waitangi claims settlement processes *Ensure policy development in relation to the conservation and sustainable use of biodiversity is responsive to the outcomes of Crown Treaty settlements and that Treaty settlement proposals are advanced in ways that enable the conservation and sustainable use of biodiversity.*	
a) Monitor Treaty settlements and ensure Treaty settlement provisions and biodiversity management policies are compatible and complementary.	6.4.3
b) Advise parties negotiating Treaty settlements on the biodiversity implications of settlement options.	NA
Objective 7.4 Science and research *Recognise and provide for Maori interests and involvement in government-funded scientific research about biodiversity.*	
a) Develop a process for incorporating Maori biodiversity research needs into priority setting for research at national, regional and local levels.	NA
b) Encourage partnerships between science providers and Maori in undertaking appropriate government-funded research.	6.4.6

c. Actions from Community Participation and Awareness NZBS theme

Objective 8.1 Community awareness and involvement *Enhance and broaden individual and community understanding about biodiversity (in particular, New Zealand's indigenous biodiversity) and increase community involvement in the conservation and sustainable use of New Zealand's biodiversity.*	
a) Make information about biodiversity available to people and communities, relevant to their local environments (that is, on the extent and management needs of ecosystems, habitats and native species), to enable them to make decisions and take action to support the conservation and sustainable use of biodiversity.	6.3.4
b) Develop a public awareness programme about New Zealand's lesser known or appreciated indigenous ecosystems, habitats and species important for biodiversity conservation.	6.3.4
c) Encourage greater community involvement and partnerships in management programmes and participatory projects to conserve and sustainably use biodiversity.	6.4.2
Objective 8.2 Role of resource managers *Encourage natural resource managers and users and landowners to adopt realistic and pragmatic steps to conserve and sustainably use biodiversity.*	
a) Support, and where necessary develop, joint national and regional/local incentive mechanisms to encourage land, freshwater and marine management practices that lead to the conservation and sustainable management of biodiversity (see also Actions 1.1f and 2.1e).	6.4.2
b) Promote and support, in partnership with the Landcare Trust, landcare groups and other community-based groups, the integration of biodiversity considerations into sustainable land and water management initiatives.	6.4.2
c) Support activities through the Sustainable Management Fund that enhance landowner and community understanding of ways to avoid or minimise the effects of human activities on biodiversity, and encourage community involvement in practical initiatives that help achieve the sustainable management of biodiversity.	6.3.5
e) Develop and use national and regional "biodiversity awards" to reward notable efforts or achievements by landowners, businesses and community groups to conserve and sustainably use indigenous biodiversity.	6.3.4
Objective 8.3 Environmental education *Expand and enhance education about biodiversity as a key element in developing environmental education programmes and activities.*	
c) Promote and coordinate the role of environmental education in the conservation and sustainable use of biodiversity (as part of the implementation of the New Zealand Environmental Education Strategy) and encourage the active participation of local authorities, iwi and hapu, businesses, and environmental and community groups in developing and implementing environmental education activities.	6.3.4

d. Actions from Information, knowledge and capacity NZBS theme

Objective 9.1 Expand the research frontier *Identify and fill critical gaps in scientific knowledge, including applied research, and prioritise and coordinate future research to address key issues and threats to biodiversity.*	
a) Develop and implement a coordinated research strategy to identify and fill gaps in our knowledge and understanding of biodiversity relevant to key threats.	6.5.4
b) Invest in relevant research that contributes to better management of introduced pests and enhanced management of indigenous biodiversity.	6.5.4
Objective 9.2 Use ecosystem-based methods to map our indigenous biodiversity *Develop and implement effective approaches to map indigenous biodiversity at ecosystem scales and inform management actions and research.*	
a) Develop effective methods of ecosystem classification and mapping biodiversity and for identifying and monitoring key biodiversity issues and threats.	6.2.2
b) Accelerate biodiversity survey, identification and assessment of threats to key ecosystems. (See also Actions 1.1a, 2.1b and 3.1b).	6.2
Objective 9.3 Keep track of change *Use consistent measures and methods to monitor and provide information on key changes in the extent and condition of indigenous biodiversity.*	
a) Clarify agency accountabilities for monitoring and reporting on indigenous biodiversity.	NA
b) Develop, select and use cost-effective methods (including indicators) for monitoring indigenous biodiversity and threats to indigenous biodiversity.	6.5.3
Objective 9.4 Reporting and adaptive management *Ensure that local, regional and national reporting on the state of indigenous biodiversity informs ongoing priority setting for biodiversity management and research as a key part of an adaptive management approach.*	

a) Use monitoring results to provide local, regional and national views on the state of New Zealand's indigenous biodiversity, to report on progress towards achieving biodiversity goals, review and re-focus management action, and inform research to fill critical information gaps.	1.5
Objective 9.5 Share Information and best practice *Consolidate and share existing and new information, methods, technologies and management experiences so that others can benefit from relevant knowledge about indigenous biodiversity.*	
a) Develop resources and systems that promote the consolidation and sharing of information about indigenous biodiversity and hands-on biodiversity management.	6.5.3
Objective 9.6 Build capacity *Enhance the capacity of people and organisations to fulfill their responsibilities to conserve and sustainably manage New Zealand's indigenous biodiversity.*	
a) Document codes of practice and expected performance standards for use of the most cost effective techniques for managing biodiversity and provide for the evaluation and continuous improvement of these techniques and the sharing of information on best practice.	6.2.7;6.3.8; 6.4.8;6.5.5
b) Incorporate biodiversity values into sector- and industry-based environmental management systems, performance standards, guidelines, environmental policies and codes of practice, with the help of advice and information from government agencies.	6.4.4
c) Ensure that biodiversity management agencies review and monitor their capacity to implement best practice management techniques, enhance their competencies and share these experiences with others.	6.4.2
d) Ensure appropriate skills training and education to enhance the capacity of people and relevant management agencies to manage indigenous biodiversity.	6.3.2
Objective 9.7 Valuing biodiversity *Improve the knowledge of market and non-market values of indigenous biodiversity and develop methodologies to evaluate the full cost of activities in terms of their impacts on these biodiversity values*.	
a) Review mechanisms that have been used in other countries to value biodiversity, and where practicable, develop ways to apply these techniques in New Zealand.	NA
b) Investigate and raise awareness of the range of incentives (including financial, information and property-based mechanisms) which resource managers can use to encourage and reward sympathetic management of indigenous biodiversity (see also Actions 1.1e, 1.1f and 2.1e).	6.3.5

Appendix VII: Threatened species in Taranaki

A number of threatened species in Taranaki have had their threat status change from the classification undertaken in 2002 to 2005: ornate skink status changed from not threatened to gradual decline; goldstripe gecko from sparse to gradual decline; NI rifleman from not threatened to gradual decline. Threat classification and qualifiers can be checked against the 2005 lists (Hitchmough et al. 2007).

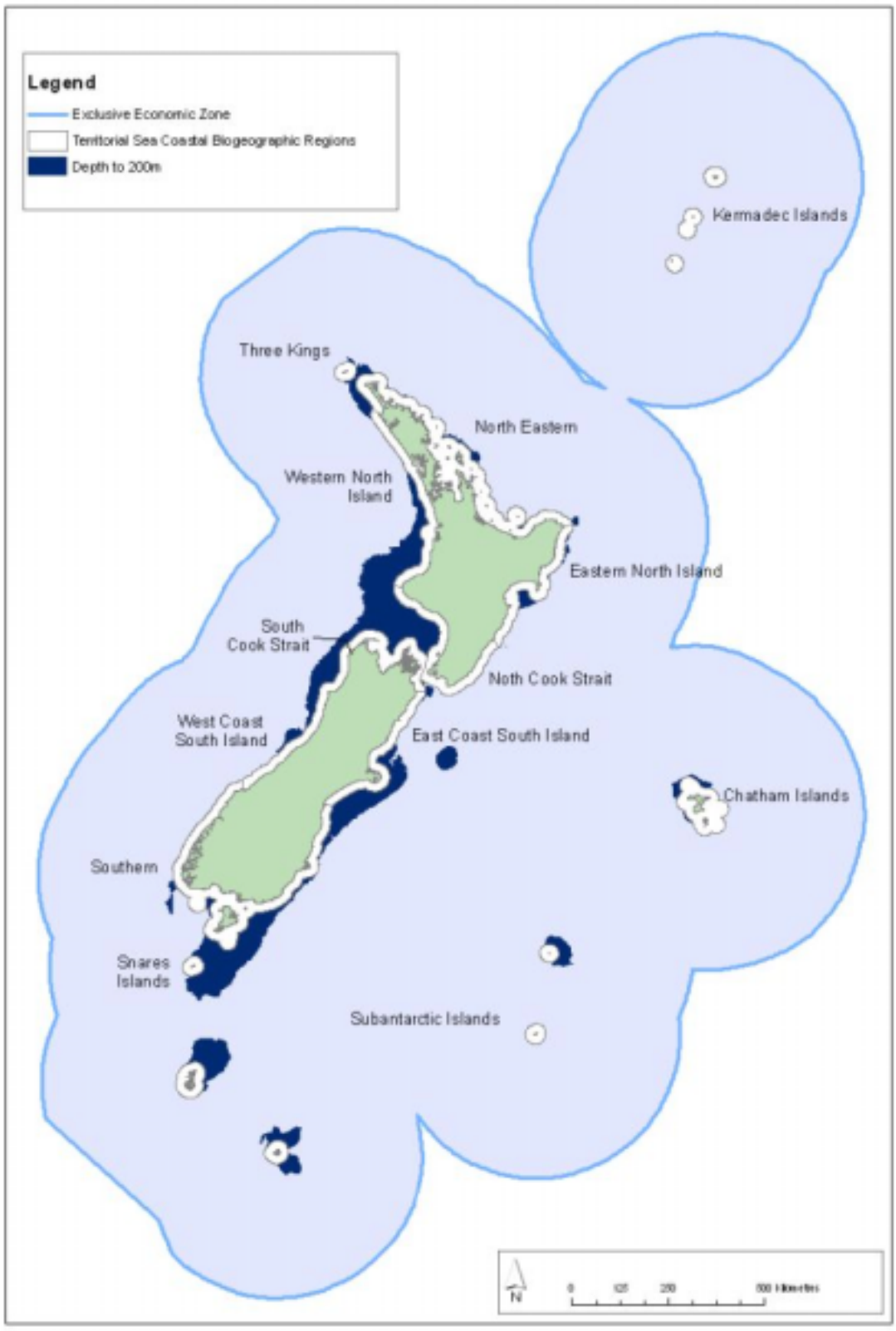
Common Name	Taxon	Qualifiers	Threat Classification
Mamals			
short-tailed bat	Mystacina tuberculata rhyacobia		Range restricted
NI long-tailed bat	Chalinolobus tuberculata (North Island)		Nationally vulnerable
Birds			
Blue duck, whio	*Hymenolaimus malachorhynchos*	HI	Nationally Endangered
North Island Brown kiwi	*Apteryx mantelli*	HI, RF	Serious Decline
Little Black Shag	*Phalacrocorax sulcirostris*	SO	Sparse
Long Tailed Cookoo			Gradual Decline
Northern Little Blue Penguin	*Eudyptula minor iredalia*	HI, EF	Gradual Decline
NI Fernbird	*Bowdlera punctata vealeae*	HI	Sparse
NI Kaka			Nationally Endangered
NI Kokako	*Callaes cinerca wilsoni*	CD, HI, FF	Nationally Endangered
NI Rifleman	*Acanthisitta chlorus granti*	DP, HI	Gradual Decline
NZ Dabchick	*Poliocephalus rufopectus*		Sparse
NZ Falcon	*Falco novaeseelandiae*		Nationally Vulnerable
NZ Pigeon	*Hemiphaga novaeseelandiae*		Gradual Decline
Red-billed Gull	*Lanus novaehollandiae scopulinus*		Gradual Decline
Reef Heron	*Egretta sacra sacra*	DP SO HI	Nationally Endangered
Spotless Crake	*Porzana tabuensis plumbea*	SO	Sparse
Banded dotterel	*Charadrius bicinctus bicinctus*		Gradual Decline
Northern New Zealand dotterel	*Charadrius obscurus aquilonius*	CD, ST	Nationally vulnerable
Australasian bittern	Botaurus poiciloptilus		Nationally endangered
Black shag	Phalacrocorax carbo novaehollandiae		Sparse
black-fronted tern	Sterna albostriata		Nationally endangered
Flesh-footed shearwater	Puffinus carneipes		Gradual decline
Fluttering shearwater	Puffinus gavia		Not threatened
Grey-faced petrel	Pterodroma macroptera gouldi		Not threatened
New Zealand scaup	Aythya novaeseelandiae		Not threatened
North Island fernbird, Matata	Bowdleria punctata vealeae		sparse
North Island Robin	Petroica australis longipes		Not threatened
Northern diving petrel	Pelecanoides urinatrix urinatrix		Not threatened
NZ white-faced storm	Pelagodroma marina maoriana		Not threatened

petrel			
sooty shearwater	Puffinus griseus		Gradual decline
Southern black-backed gull	Larus dominicanus dominicanus		Not threatened
white-fronted tern	Sterna striata striata		Gradual decline
Wrybill, ngutu-parore	Anarhynchus frontalis		Nationally vulnerable
yellow-crowned kakariki	Cyanorhamphus auriceps		Gradual decline
Reptiles			
Striped Skink	*Oligosoma striatum*		Data Deficient
Goldstripe Gecko		DP, HI	Sparse
Speckled Skink	*Oligosoma infrapunctatum*	HI	Gradual Decline
Brown skink	*Oligosoma zelandicum*		sparse
Pacific gecko	*Hoplodactylus pacificus*		Gradual decline
Speckled skink "southern North Island" (new species to be described)	*Oligosoma* aff. *Infrapunctatum "Southern North Island"*		Nationally endangered
Maui's dolphin	*Cephalorhynchus hectori maui*	CD, HI	Nationally critical
Killer Whale	*Orcinus orca*	ST, SO	Nationally critical
Terrestrial invertebrates			
carabid beetle	*Brullea antarctica* (Castelnau, 1867)		Sparse
Mammals			
short-tailed bat	Mystacina tuberculata rhyacobia		Range restricted
NI long-tailed bat	Chalinolobus tuberculata (North Island)		Nationally vulnerable
Vascular Plants			
	Brachyglottis kirkii var. kirkii		Serious decline
	Crassula peduncularis	SO, EF	Nationally Endangered
	Dactylanthus taylorii	CD	Serious Decline
	Euphorbia glauca	EF	Serious Decline
	Gratiola nana	SO, HI	Gradual Decline
	Marrattia salicina	CD, SO	Serious Decline
	Melicytus drucei	CD, RC, OL	Range Restricted
	Myriophyllum robustum	CD	Gradual Decline
	Ranunculus recens var. *recens*	CD	Gradual Decline
	Amphibromus fluitans	EF, TO	Nationally Endangered
	Coprosma aff. *acerosa* (AK 36799; Taranaki)		Range restricted
	Celmisia major var. *brevis* Allan	OL	Range restricted
	Craspedia "Otakeho"	*DP*	Range restricted
	Crassula manaia	CD, EF	Gradual Decline
Pingao	*Desmoshoenus spiralis*	CD,EF	Gradual Decline
	Leptinella dispersa ssp. *dispersa*		Sparse
	*Limosella "*Manutahi"	ST	Nationally Critical
	Myosotis pygmaea var. *minutiflora*		Nationally Vulnerable
	Myosotis pygmaea var. *pygmaea*		Serious Decline
	*Pterostylus micromega (*Hook f.*)*	CD, HI, EF	Nationally Critical
	Ranunculus limosella Kirk	HI	Gradual Decline
	Sonchus kirkii		Gradual Decline
	Thelymitra aff. *longifolia*		Data Deficient
	Hebe speciosa	CD, RF, HI	Nationally

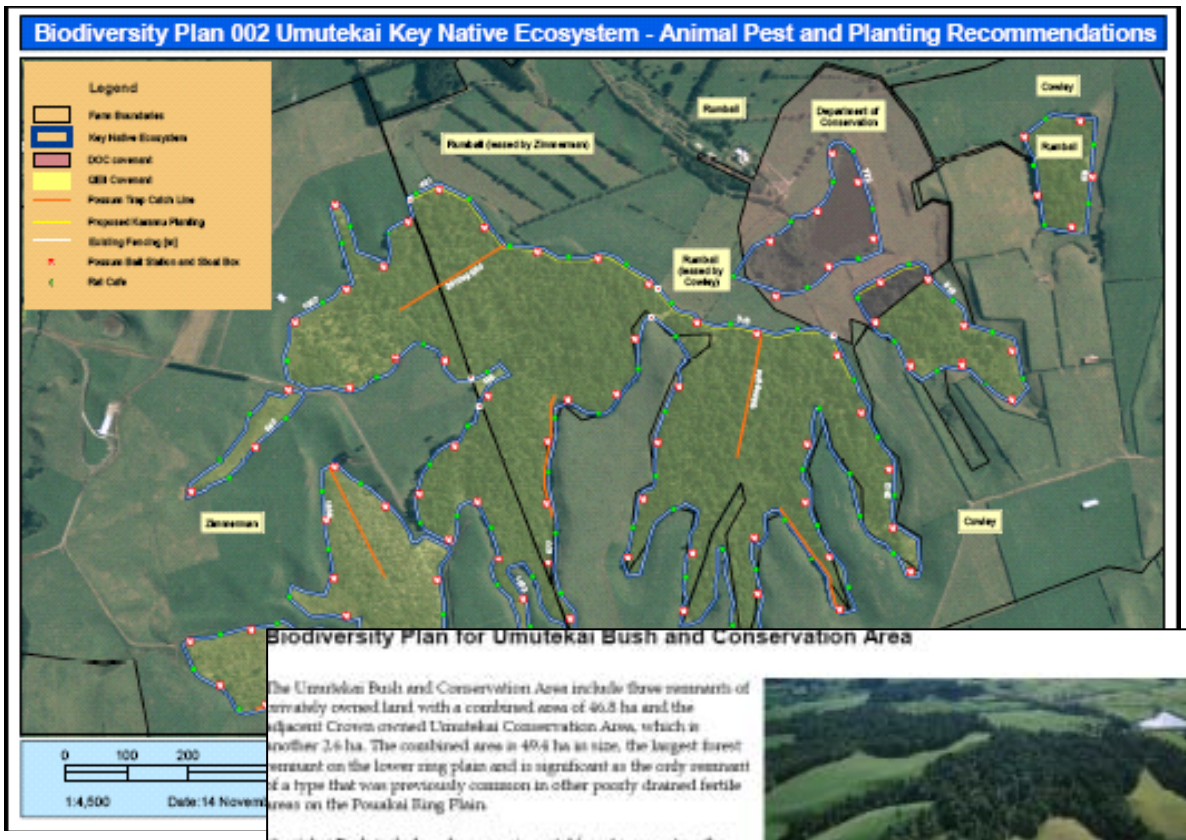
		endangered
Lepidium flexicaule	CD, TO, EF	Nationally vulnerable
Lepidium oleraceum	CD, HI, EF	Nationally endangered
Mazus novaezeelandiae subsp. Serious decline	CD, HI	
Rorippa divaricata	CD, EF	Nationally endangered
Prasophyllum aff. Patens	CD, DP	Nationally vulnerable
Myosotis petiolata var. pansa	EF	Nationally endangered
Peraxilla colensoi	CD, HI	Gradual decline
Peraxilla tetrapetala	CD, HI	Gradual decline
Pimelea aff. arenaria	DP, RF	Serious decline
Schoenus carsei	SO, HI	Gradual decline
Pomaderris apetala subsp. maritima (Mohakatino swamp)	CD, SO, RF	Nationally critical
Olearia quinquevulnera		Sparse
Oreomyrrhis "minute flower"		Sparse
Tetragonia tetragonioides	EF	Sparse
Brachyglottis turneri		Range restricted
Crassula manaia	CD	Gradual decline
Leptinella dispersa subsp. rupestris	RF	Range restricted
Crassula mataikona		Data deficient
Pittosporum kirkii		Serious decline

Qualifiers: CD—Conservation Dependent; DP—Data Poor; EF—Extreme Fluctuations; EW—Extinct in the wild; HI—Human Induced; OL—One Location; RC—Recovering; RF—Recruitment Failure; SO—Secure Overseas; ST—Stable; TO—Threatened Overseas.

Appendix VIII: Coastal classification map



Appendix IX: Example of a Biodiversity Plan



Biodiversity Plan for Umutekai Bush and Conservation Area

The Umutekai Bush and Conservation Area include three remnants of privately owned land with a combined area of 46.8 ha and the adjacent Crown owned Umutekai Conservation Area, which is another 2.6 ha. The combined area is 49.4 ha in size, the largest forest remnant on the lower ring plain and is significant as the only remnant of a type that was previously common in other poorly drained fertile areas on the Pouakai Ring Plain.

Umutekai Bush includes a large semi-coastal forest remnant on the Pouakai Ring Plain with an adjoining lake in the Conservation Area. The site is located between the headwaters of the Mangatuha and the Mangaoneoneo streams (two small tributaries of the Waiwhakaiho River).

Objectives of the Plan

- To maintain possum and other pests below a level at which they are likely to cause adverse effects on the values of the site.
- To maintain pest plants at a level below which they cause adverse effects on the biodiversity values of the site.

Recommended Actions to safeguard the special values at this site:

	Actions	Who?	Funding/Resources	Timeframe
Formal agreement	Majority of private areas covenanted by QEII Covenants. DOC land (2.6ha) conservation area	QEII DOC		Completed
	Complete legal survey and registration of area of bush mistakenly overlooked during the covenanting process	QEII	QEII	February 2008
Animal pest control: possums	Monitor possum levels in bush (and rat numbers at the same time)	TRC Pest Management Officer (PMO)		Annually
	If possum levels > 5% RTC undertake knockdown control to bring population down to sustainable level	TRC PMO	TRC pest fund	By 30 April 2008
	Install bait stations at 100m spacing	TRC PMO	TRC pest fund	By 30 April 2008
	Maintain possum levels at <10% RTC by maintaining bait in bait stations and on adjoining farms to create buffer	Landowners		Ongoing
	Maintain possum levels at <5% RTC on adjacent conservation area	DOC		Ongoing
Animal pest control: predators and rats	Install stoat boxes (DOC250s) at 100m spacing around perimeter of bush and rat cafés between traps.	TRC PMO	BOF	By July 2008
	Check stoat boxes and rat-cafes monthly, particularly spring, summer and autumn. Empty traps, rebait rat cafes.	TRC PMO	BOF TRC pest fund.	Sept 2008- January 2009
	Install stoat boxes (phase 2) around road to create buffer area (years 2 and 3 of project)	TRC PMO to coordinate	BOF	2008-2010
	Contact key conservation groups to inform, gain support and generate interest in assisting with pest management at this site to generate pool of volunteers to help trap clearance	TRC PMO		2008
Pest plants	Initial knockdown of woolly nightshade and other weeds identified in weed plan	TRC Land Management Officer (LMO) to coordinate	TRC EEG QEII	Early 2008
	Ongoing weed maintenance- hand pulling of small plants that spring up post initial control	Landowners	QEII can supply herbicide	Ongoing
	Monitor pest plant distribution	TRC and QEII		Annual assessment
Fence from stock	Observe fence problems	Land owners or	Notify TRC or QEII	As required