

**APPLICATION FOR RESOURCE CONSENT (LAND
USE) FOR THE CONSTRUCTION OF A COASTAL
CYCLE AND WALKING TRAIL; HIKUWAI DUNES**

**Form 2 – Land disturbing activities
(earthworks, vegetation clearance)**

For

**Department of Conservation
C/- Awhina White
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To: Environment Bay of Plenty Regional Council

Applicant: Department of Conservation – Gisborne Whakatane Area Office

Location: Tirohanga Dunes Conservation Area – Legally described as allotment 405, Waioeka Parish

The Application: Resource Consent (Land Use) for the Construction of a section of the Coastal Cycle and Walking Trail: Tirohanga Dunes Conservation Area
Form 2 – Land disturbing activities (earthworks, quarrying, vegetation, clearance, harvesting, burning)

Zoning: Coastal

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LIST OF ATTACHMENTS

- Appendix 1 *'Technical Specifications, Old Motu Road Cycleway, Tirohanga Reserve Section E1-E4'* prepared by Frame Group Ltd – Attached as separate document.
- Appendix 2 *'Old Motu Road Cycleway: Hikuwai Beach: Coastal Erosion Hazard Assessment'*, prepared by Jim Dahm, EcoNomos Ltd
- Appendix 3 *'Assessment of Landscape and Visual Effects'*, prepared by Wildland Consultants Ltd in partnership with Richard Hart Ltd
- Appendix 4 *'Ecological Assessment of the Tirohanga Hikuwai Dunes Section of the Proposed Motu Cycle Trail'* prepared by Paul Cashmore, Keith Owen, Rhys Burns East Coast Bay of Plenty Conservancy, Department of Conservation
- Appendix 5 *'Summary of Submissions and Working Group Response – January 2011'*
- Appendix 6 *'Meeting Notes 2 February 2011 with Forest and Bird Appendix'*
- Appendix 7 *'Tirohanga Jim Dahm Meeting Notes January 2011'*
- Appendix 8 *'Tirohanga Meeting 28 July 2010'+*
- Appendix 9 *'Archaeological Assessment Motu Cycle Trails – Coastal Dune Section'* prepared by Lynda Walter InSitu Heritage Ltd, including *'Accidental Discovery Protocol'*
- Appendix 10 Typical Cross Section Drawing
- Appendix 11 Soil Type
- Appendix 12 Plans E1 – E2 and E3 – E4
- Appendix 13 Letter of Support from Opotiki District Council Engineering and Services Manager
- Appendix 14 *'Assessment of Proposed Cycleway/Walkway against Policies and Objectives of the Coastal Zone and Part 2 of the RMA'*
- Appendix 15 Calculations, plans, and technical specifications for bridge in section E1 – E2



PLANNING INSTRUMENT

There are a number of planning instruments that apply to this application. They include:

- The Resource Management Act 1991 (the RMA);
- The New Zealand Coastal Policy Statement 2010;
- The Regional Policy Statement (RPS);
- The Operative Bay of Plenty Land Management Plan.

Resource Management Act 1991

In accordance with Part 2 of the Act, the assessment criteria for a resource consent application is set out under Section 104. Section 104B of the Act provides that when considering an application for a resource consent for a Discretionary activity, a consent authority may grant or refuse an application, and if it grants the application, it may impose conditions under Section 108 of the Act.

NOTIFICATION STATUS

Section 95A of the Resource Management Act provides that public notification of a resource consent application is at the consent authority's discretion. It is considered that none of the pre-conditions for notification are relevant, namely:

- An assessment pursuant to Section 95D of the Act indicates that the activity will not create actual or potential adverse effects on the environment that are more than minor; or
- The applicant has not requested the public notification of the application; or
- There is no rule or national environmental standard that requires public notification of the application; or,
- There are no special circumstances that distinguish the application to the extent that it should be publicly notified.

In the event that additional information for this application is requested by Environment Bay of Plenty, the applicant will respond so therefore Section 95C is not relevant.

In making a decision under Section 95D on whether or not an activity will have or is likely to have adverse effects on the environment that are more than minor the consent authority must disregard any effects on persons who:

- Own or occupy the subject land; or
- Persons who own or occupy any adjacent land; or
- Any person who has given written approval to the application.

Section 95E clarifies that a person will be affected by a proposal if the effects are minor or more than minor (but are not less than minor).

The following assessment of environmental effects confirms that the effects of the proposal will be minor.

The applicant therefore requests non – notification of this application



DESCRIPTION OF PROPOSAL

(A) Nature of the Activity:

In February 2009, the Government held the jobs summit which aimed to generate ideas for retaining jobs during a time of global economic crisis. One of the ideas was to establish a cycleway running the length of the country. This would not only create jobs, but also create a long term national asset and enhance our reputation as a premium tourist destination. In 2010 funding was granted for the 150km proposed Motu trails cycleway, located in the Gisborne District Council and Opotiki District Council region. Commencing in Matawai, this cycleway travels along the Old Motu road, forking at the Pakihi track to provide two alternative routes, one travels down the Pakahi track to Opotiki via Otara Road, and the other continues on down the old Motu road to Waiaua, where both options then continue along the Tirohanga dunes as a coastal cycle or walking track. This coastal section will provide a dedicated and safe cycle and walking trail for use and enjoyment by the public, as an alternative to the existing road link.

This proposal is for the construction and ongoing maintenance of a section of the coastal cycle and walking trail, which is proposed along the Hikuwai and Tirohanga back dunes. This coastal section commences in the Opotiki township and crosses the Otara River by way of a new bridge to Snell Road (west). From Snell Road, the trail traverses eastward along the back dunes for 8 kilometres, to approximately 600 metres west of the Waiaua River mouth. *This application is only for the section of the trail which commences at 9 Wairakaia Road (5km East of Opotiki), and ends at the private property near the Waiaua River at 962 State Highway 35.* The remainder of the trail which extends west beyond Wairakaia Road is subject to a separate consent application by the Opotiki District Council.

The section of the coastal cycle and walking trail which is subject to this consent application, has the natural topography of undulating dunes. Earthworks and construction will involve vegetation stripping; earthworks to form trail on designed route and gradient; spreading of aggregate; construction of minor structures and; site rehabilitation.

This consent application addresses;

- the effects of coastal duneland vegetation disturbance as a result of the proposal, and;
- a natural hazard assessment.

The majority of this trail section occupies public land administered by the Department of Conservation as the Tirohanga Dunes Conservation Area. Short sections of the trail will cross over access strips, which provide public access to the Pacific Ocean, and are managed by the Opotiki District Council.

This section of the trail has been designed at a Grade 2 ('easy') level, and aligns with the criteria of the New Zealand Cycle Trails Design Guide, prepared by Via Strada for the Ministry of Tourism, February 2010. In accordance with this guide, the trail will be 2.2 metres wide (excluding water tables) to safely accommodate two way cycle traffic; and will have 0 - 7% gradient for 96% of the trail, with up to a 10% gradient for limited short sections of the trail.

The Regional Water and Land Plan classifies sand dune country within 150 metres of the Coastal Marine Area (CMA) to be in the Erosion Hazard Zone.

The cycle trail will typically be located between 30 and 80 metres from the CMA and is therefore within the Erosion Hazard Zone. Earthworks within this zone is a discretionary activity under Rule 1C of the Regional Water and Land Plan.

Similarly, vegetation clearance in the Erosion Hazard Zone is a discretionary activity and Rule 2C of the Regional Water and Land Plan applies. Attention is drawn however, to the definition in the Plan for Vegetation Clearance excludes; (h) 'formation and maintenance of tracks constructed by hand, to a width no greater than 1.5m wide'.

For detailed route location, refer attached 'Frame Group' plans and specification – "*Technical Specifications, Old Motu Road Cycleway, Tirohanga Reserve Section E1-E4 – APPENDIX 1*"



Consent Required

The proposal is located within Sand Dune Country as defined in the Regional Water and Land Plan and therefore within the defined Erosion Hazard Zone. Under this plan resource consent is required as follows;

- i) Earthworks is a discretionary activity under Rule 1C, and
 - ii) Vegetation Clearance is a discretionary activity under rule 2C.
- Proposed structures are minor and limited to one 7 metre long bridge, 2.2 metres wide in the E1 – E2 trail section.

Approval to undertake earthworks during the defined 'Winter Earthworks Period' is requested on the basis that the proposal is located entirely within sand dune country where higher winter rainfall will assist to consolidate disturbed sand, suppress dust and re-establish vegetation.

OVERVIEW OF THE PROJECT

The proposal to construct the full walking and cycle trail from Opotiki township to Waiaua River along the coastal dunes, is being advanced by a partnership between the Opotiki District Council, the Department of Conservation and Whakatohea Maori Trust Board. It has three overarching objectives;

1. improved access to the scenic coastal environment for the benefit and enjoyment of the public;
2. to stimulate local and regional economies by providing a quality recreation activity, and;
3. to foster increased appreciation of the coastal environment and its cultural history that will initiate improvements in the management and enhancement of the natural coastal environment.

The project is backed by financial support from the Ministry of Economic Development who, are likewise, supporting 17 other cycle trails nationally, and will coordinate national and international promotion of the cycle trails.

The project has received considerable support from within the Opotiki community and is viewed as a progressive initiative. The project will result in a quality leisure and recreation experience that is open to the public. It will be centered on managed public access to and along the coast, and will exclude motor vehicles. Very quickly the trail will result in a better managed coast, and improvements to the coastal environment and indigenous habitats. This approach is supported by a range of planning documents that similarly promote improved public access to and along the coast as follows;



Resource Management Act 1991 (RMA)

(Excerpt)

Section 6: Matters of national importance

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

- (a) The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:
- (d) The maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:
- (e) The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga.

This proposal will enhance public access to and along the coastal marine area by providing a dedicated safe and user friendly access way as an alternative to the existing road link. The natural character of the coastal environment will be maintained with the cycle and walkway typically being setback 20 – 50 metres from the dunes and following construction, extensive revegetation will take place. Informal, disused or closed vehicle access tracks will have barriers installed to prevent dune damage, and revegetation will occur at these sites to further enhance coastal preservation. Dogs and off trail use by cyclists, vehicles, or pedestrians will be banned which will result in better management and preservation of the dune and coastal system. Various information / interpretive signs are to be included along the trail. Iwi input into these signs is being provided especially with respect to informing of the cultural history of the coast.

New Zealand Coastal Policy Statement 2010

(Excerpt)

Policy 18: Public open space

Recognise the need for public open space within and adjacent to the coastal marine area, for public use and appreciation including active and passive recreation, and provide for such public open space, including by:

- a) ensuring that the location and treatment of public open space is compatible with the natural character, natural features and landscapes, and amenity values of the coastal environment;
- b) taking account of future need for public open space within and adjacent to the coastal marine area, including in and close to cities, towns and other settlements;
- c) maintaining and enhancing walking access linkages between public open space areas in the coastal environment;
- d) considering the likely impact of coastal processes and climate change so as not to compromise the ability of future generations to have access to public open space; and
- e) recognising the important role that esplanade reserves and strips can have in contributing to meeting public open space needs.

This proposal meets the requirements for public open space. A dedicated walk and cycle trail adjacent to the coastal marine area will allow the public to safely pursue the recreational activities of walking and cycling while enjoying the natural character, features and landscapes of the coastal environment.



Policy 19: Walking access

1. Recognise the public expectation of and need for walking access to and along the coast that is practical, free of charge and safe for pedestrian use
2. Maintain and enhance public walking access to, along and adjacent to the coastal marine area, including by:
 - a. identifying how information on where the public have walking access will be made publicly available;
 - b. avoiding, remedying or mitigating any loss of public walking access resulting from subdivision, use, or development; and
 - c. identifying opportunities to enhance or restore public walking access, for example where:
 - i. connections between existing public areas can be provided; or
 - ii. improving access would promote outdoor recreation; or
 - iii. physical access for people with disabilities is desirable; or
 - iv. the long-term availability of public access is threatened by erosion or sea level rise; or
 - v. access to areas or sites of historic or cultural significance is important; or
 - vi. subdivision, use, or development of land adjacent to the coastal marine area has reduced public access, or has the potential to do so
3. Only impose a restriction on public walking access to, along or adjacent to the coastal marine area where such a restriction is necessary:
 - a. to protect threatened indigenous species; or
 - b. to protect dunes, estuaries and other sensitive natural areas or habitats; or
 - c. to protect sites and activities of cultural value to Māori; or
 - d. to protect historic heritage; or
 - e. to protect public health or safety; or
 - f. to avoid or reduce conflict between public uses of the coastal marine area and its margins; or
 - g. for temporary activities or special events; or
 - h. for defence purposes in accordance with the Defence Act 1990; or
 - i. to ensure a level of security consistent with the purpose of a resource consent; or
 - j. in other exceptional circumstances sufficient to justify the restriction.

This proposal meets the requirements for walking access. Walking access in this coastal environment will be improved immensely providing increased opportunities for recreation. The development of this walking and cycle trail will increase management of threatened species and habitats, and will protect public health and safety and historic heritage by means of banned off trail use.

Bay of Plenty Regional Coastal Environment Plan

(Excerpt from: Section 7: Public Access)

7.2.3 Policies

7.2.3(a)

- To promote public access to and along the coastal marine area and ensure that public access is restricted only where necessary:
- To protect areas of significant indigenous vegetation and/or significant habitats of indigenous fauna;
- To protect Maori cultural values;



- To protect public health or safety;
- To ensure a level of security consistent with the purpose of a resource consent; or
- In other exceptional circumstances sufficient to justify the restriction notwithstanding the national importance of maintaining that access.

7.2.3(b) To promote the use of a limited number of official accessways to and along the coastal marine area in sensitive areas.

7.2.3(c) Esplanade reserves or strips adjacent to the coastal marine area should be required as a condition of subdivision or major development.

7.2.3(d) New facilities should be designed to maximise public use and access as well as private use.

Policy 7.2.3 of the Bay of Plenty Regional Coastal Environment Plan will be met. Public access to the coastal environment will be promoted as a National Cycleway trail. Management of the surrounding coastal marine environment will be better managed with improvements to threatened vegetation and significant habitats.

Opotiki District Plan

(Excerpt from Section 17 Coastal Zone)

17.2.2 Objectives and policies

Objective 1. The retention, preservation and protection of the distinctive natural character of the Opotiki coastal environment for the enjoyment of the community and visitors to the district.

Policies

1.1 Require setback for structures and buildings from the coast to ensure maintenance of the coastal ecosystem and the natural character of the coastline, and to enable esplanade reserves, or esplanade strips to be set aside for the future.

1.2 Ensure that the subdivision and use of land within the district's coastal areas avoids as far as practicable adverse effects on the coastal ecosystem, water bodies, riparian areas, indigenous vegetation, indigenous habitats, natural character and on areas of historical or cultural value.

Objective 2. Improvement in the public access opportunities to and along the coast which do not depreciate the quality of the coastal environment.

Policies

2.1 Require esplanade reserves or esplanade strips to be set aside along the coast and inland water bodies within the Zone at the time of subdivision, or as conditions of resource consent for land use application. The esplanade areas will be used for conservation purposes, water quality enhancement, habitat protection, or for public access except as otherwise provided for in Te Ture Whenua Maori Land Act 1993.

Objective 1 and 2 in the Opotiki District Plan will be met as discussed previously



LAND OWNERSHIP AND STATUS

The section of trail subject to this application is public land – Tirohanga Dunes Conservation Area, with short sections of the trail crossing over access strips, which provide public access to the Pacific Ocean, and are managed by the Otago District Council.

Public use, enjoyment and access to these lands not only can be anticipated through the status of the land but is an underlying fundamental principle that cannot, without exceptional circumstances, be denied.

It might well be put forward that Department of Conservation has a requisite duty to give effect to the various legislation cited above and status of the land to at least investigate and, where appropriate, promote public access to the coast albeit with due regard to the intrinsic environmental and cultural values.

(B) Scale of the Proposal:

The section of the trail pertaining to this consent application is 4,034 metres long

The total area of ground that will be exposed during construction in this section is 15,541 square metres which equates to the total area of vegetation disturbance.

The finished trail will be 2.2 metres in width equating to an area of 8,874 square metres that will be surfaced with aggregate.

The balance of 6,667 square metres will be as a result of forming a widened bench where required to accommodate side cutting or slope battering required to maintain the design gradient of the trail. This 'over widening' will vary along the trail depending on topography, up to a maximum of 10 metres in width. (Refer Appendix 14 for typical cross section drawing).

The design route has been selected to; minimise earthworks and vegetation disturbance; maintain suitable gradient and; maximise the coastal experience for users of the trail. While the applicant is confident that this designed route is reliable with respect to these criteria, a 10 metre wide envelope is requested for the construction of the trail. The reason for this is to enable modification to avoid any cultural, heritage or ecological sites that might be discovered during construction and to accommodate any other unforeseen circumstances.

It is proposed therefore, that the trail be constructed within 5 metres of the design line - affecting a 10 metre wide 'envelope'. Any such variation from the design line will not result in; i) the trail being located closer than 20 metres from crest of eroding dune face or; ii) the trail being located closer to any existing residential dwellings or, iii) greater area of vegetation disturbance, volume of earthworks or any effect on permanent or ephemeral water courses.

This potential amendment to the design line will not effect any net change to the trail dimensions in terms of overall length, width and 'over widening' as described above.

Detailed location of the trail is identified on attached design plans and aerial photographs (appendix 12, and 15).

(C) When will the activity be undertaken, and for how long will it occur?

The earthworks component of construction is scheduled to commence on 1 April 2011 and to be completed before August 31 2011.

Minor associated works such as installation of fencing, signs and bollards and mulching of surface vegetation will commence in January and continue to October 2011.



Associated minor maintenance work and repair will be ongoing. Earthworks associated with ongoing maintenance are likely to be associated with clearing sand deposited on the trail by wind or occasional slope failure. Such incidents will involve minor volumes of sand – estimate less than 2 cubic metres per incident; will be isolated and; dispersed over the length of the trail.

(D) Proposed works and construction methods:

Construction methodology will be as follows;

- 1) On site route verification - this was undertaken prior to preparation of assessments but will be repeated immediately prior to construction
- 2) Vegetation removal. Existing vegetation over the route of the trail is variously adventive exotic pasture and weed species or; recovering indigenous vegetation. Indigenous vegetation predominantly consists of Muehlenbeckia sp. with occasional knobby clubrush, houpara and taupata

(Refer Appendix 3). Prior to earthworks vegetation will be either removed by scraping using a mechanical excavator or; reduced by mulching to ground level. Where there is existing indigenous vegetation - Muehlenbeckia sp. - the vegetation / root mass will be retained and where possible used to reinstate vegetation on areas exposed during construction adjacent to the formed trail
- 3) Form trail using excavator (up to 10tonne) - bench, cut and fill and compact trail to specified route and gradient
- 4) Construct timber retaining structures where required
- 5) Deposit and spread base course (weathered rock with high percentage clay content to ensure good binding qualities) 100mm deep x 2.2m wide, level and compact
- 6) Deposit, spread and compact GAP20 surfacing 50mm deep
- 7) Trim and dress sides of formed trail to form; water tables and ensure cut slopes do not to exceed 1:1 gradient
- 8) Install coconut fibre matting on slopes greater than 1 metre (1377 sq m scheduled)
- 9) Revegetation. Using a mix of indigenous coastal species, predominantly Muehlenbeckia sp.; Isolepis nodosa (Knobby Clubrush) planted at minimum 1 sq m spacing

(E) Details of engineering design associated with proposal:

Detailed plans by Frame Group are attached. (Refer Appendix 1). These include aerial plans, cross sections every 10 metres, long sections, typical construction x sections and; structures.

(F) Cross sections / long sections of any cut / full areas over 2.0 metres in height:

Cross section plans are included for the trail design at 10 metre intervals (Refer Appendix 12).

Plans identify all cut or fill areas.

Cross sections identify locations where the cut or fill is over 2.0 metres in height.



2 DESCRIPTION OF THE RECEIVING ENVIRONMENT

2.1 The Natural Environment

a) Geology and Soils:

The proposed works are located within coastal sand dunes. Landcare Research Bay of Plenty soil mapping soil type; Kyra 9.1; Symbol Oe, back dunes described as 'deep well drained, raw soils'.

Landcare 'soil fact sheet' is attached with this application. (Refer Appendix 11). Sand depth extends considerably beyond maximum excavation depth.

b) Upstream and downstream catchment characteristics:

- Watercourses/Coastal Marine Area

The cycle trail crosses only one water courses as follows:

- One 7 x 2.2 metre span timber bridge will be constructed to negotiate the eastern stream (see appendix 15)

Proposed bridge and culverts comply with Rule 60 of the Land and Water Plan as a permitted activity.

Detailed plans and specifications are included with the engineering drawings of the application (Refer Appendix 15).

- Drainage patterns / size of catchments:

Except for the streams described above the trail does not come within close proximity to any other over land water course.

Further, due to the drainage characteristics of the back dunes, there is an insignificant amount of run off as all storm water drains directly into the sand.

c) Topography:

Typical rolling 'hummocky' sand dune formations. Dunes vary in height; typically 6-8 metres asl but up to a maximum height of 12 metres asl with varying slopes to maximum of 1:4 (27%).

There is no evidence of erosion within the backdune environment ie land ward of the foredune.

The foredune however, typically displays an eroded seaward face as the result of wave action. Risk associated with erosion by the sea is addressed in an attached 'Coastal Erosion Hazard Assessment' prepared by J Dahm, EcoNomos Ltd. (Refer Appendix 2). This report concludes that 'the proposed trail will generally be at a low risk from coastal erosion for at least the next 2-3 decades' and 'the disruption of dune vegetation by the trail is minor and can be readily addressed'.



d) Ecological and Vegetation Values:

An 'Ecological Assessment of the Tirohanga – Hikuwai Dunes Section of the Proposed Motu Cycle Trail' is attached (Refer Appendix 4). The assessment has been prepared by Paul Cashmore, Keith Owen and Rhys Burns from the East Coast Bay of Plenty Conservancy office of the Department of Conservation at the request of the applicants. The report includes an assessment of flora and fauna values. The assessment concludes that the

effects of the proposal are 'relatively minor' as the area has been substantially modified and that the most significant ecology are, at best, 'recovering from past heavy modification by grazing, burning, and weed encroachment'. The report describes the main impact of the trail will be disturbance of pohuehue (*Muehlenbeckia* sp) vinelands.

e) Ecological Features:

Refer 'd' above.

f) Watercourses: Receiving Environment and Water Quality:

One water courses as described in 2.1a above is the only evident water course. All water received into the coastal dune environment is readily absorbed into the sand.

2.2 Description of the Human and Built Environment

a) Built Structures:

The proposed trail directly crosses the following built structures; intermittent post and wire fences; farm tracks; internal roading / carpark / new culvert and on bridge at Tirohanga Dunes Conservation Area.

b) Neighbours:

There are many residential properties which adjoin the Tirohanga Dunes Conservation Area. The cycle and walking trail is located in close proximity to these.

Community consultation has been undertaken that has identified both support for the proposal and some opposition. This has been particularly evident amongst residential property owners from Tirohanga.

While the scope of this consent application is located some 2 kilometres from these residents, for completeness, the details of the consultation process, issues raised and, the applicant's responses are included with this application. Some of the issues raised through this consultation relate in general terms, to environmental, ecological, erosion and operational matters. It is the applicant's opinion that these matters have been adequately assessed in the expert reports as minor or inconsequential, and further, managed through mitigation measures offered by the applicant.

Consideration has been given by the applicants to matters relating to security and loss of privacy by some property owners at Tirohanga Beach. As these matters relate more directly to the effects of the use of the trail and; that the Tirohanga properties are outside of the geographic location of this application, they are considered to be outside the scope of this resource consent application. Nevertheless, the applicant advises that attempts have been made to address and alleviate these concerns by offering the following mitigation measures;

- locating the trail as far as practicable from residential property boundaries;
- applicant has initiated some discussion with Police about establishing a Tirohanga 'neighbourhood watch'



- undertaking to install barriers to prevent motor vehicles or motor cycles accessing the trail;
- undertake regular litter patrols along the trail and;
- offering to plant larger (indigenous) plants to provide an element of visual screening and separation.

Requests to relocate the trail within the highway corridor on the landward (rather than coastal) side of properties have not been supported.

Refer Appendices 5-8 for Consultation documents.

2.3 **Natural and Cultural Heritage**

- (a) An archaeological field inspection has been undertaken by InSitu Ltd and is included with the application (Refer Appendix 9)

The inspection found no visible archaeological sites or material although recommends precautionary measures to address any accidental discovery during construction. The recommendations of this assessment will be adopted by the applicant, in particular, adoption by the applicants of an 'Accidental Discovery Protocol'; an archaeological survey undertaken during construction throughout the Opotiki Domain and; clear instructions to contractors in identifying artifacts during earthworks.

A Landscape Assessment has been undertaken by Wildland Consultants in conjunction with Richard Hart; 'Otara – Tirohanga Dune Section of the Proposed Motu cycle Trail: Assessment of Landscape and Visual Effects' (Refer Appendix 3).

The assessment concludes that 'the effect of the cycleway on natural character and amenity and visual effects will be relatively minor' and recommends revegetation of disturbed ground; ongoing weed control; addressing existing encroachment issues and; measures to improve public access to the beach in association with the cycle trail development.

- b) **Amenity Values**

Reference; 'Otara – Tirohanga Dune Section of the Proposed Motu Cycle Trail – Assessment of the Landscape and Visual Effects' by Wildland consultants (Refer Appendix 3).

Recommendation	Applicants Response
Re-establishment of dune vegetation on all exposed cut and fill slopes, with on-going weed and pest control along the length of the trail (p12, 18)	Supported It is proposed to use methods
Implement on going weed monitoring and management plan	Supported Although note that plant pest control in the dunes has been an on going initiative by both DOC and ODC and supported by BOPRC
Address private property encroachments at Tirohanga	Not applicable to this application
Public access should be maintained to a high standard especially at Hikuwai and Tirohanga beaches	Supported Selected public access and viewing points will be provided consistent with BOP Coast Care standards under the existing permitted activities status provided to Coast Care under the Regional Coastal Management Plan and will be maintained by the applicant.



c) Iwi Consultation

Whakatohea Maori Trust Board is a partner agency in the development of Motu Trails.

Individual hapu Ngai Tama, Ngati Rua, Ngati Patu have been engaged and expressed support. It is the applicants understanding that Ngati Rua have mana whenua over the route of the trail.

Confirmation might be obtained by contacting the following;

Geoff Bristowe, 07 315 5478, on behalf of Ngati Rua
Tracey Hillier, 07 315 5400, Secretary Ngai Tama
John Hata 07 315 5591, chair Ngati Patu

e) Areas of Significant Natural Heritage identified in the Bay of Plenty Regional Council's Regional Policy Statement or Regional Plans

No part of the cycle trail will affect an Area of Significant Conservation or Cultural Value, a Regionally Significant Feature or Landscape or, an Outstanding Natural Feature or Landscape identified in the Bay of Plenty Regional Coastal Environment Plan.

The Landscape Assessment by Wildlands Consultants describes two sites of ecological significance in proximity to the cyleway at Tirohanga and the western Tablelands escarpment. Neither of these sites will be affected by the proposal.

3 EFFECTS OF THE PROPOSAL

a) Actual or potential effects of the proposal on the environment

Sediment Contaminants:

The trail is to be constructed in sand dune country comprising granular sand with very low fine particle content that would result in sediment runoff. Further, the trail will encounter one water course. Earthworks at this location will be minimal due to a small bridge being constructed over this water course. The nature of this environment presents a less than minor risk of contamination by sediment of streams or waterways.

Dust:

There is a minor potential for dust to be generated during earthworks, particularly vegetation stripping and the forming of the trail bench through the disturbance of the sand during dry conditions. However, the potential for these operations to cause nuisance to other third parties is unlikely. Because of the coarse particle size sand has very low dust content; residential properties are located some distance away from the trail.

Strong winds during dry conditions may disturb sand from recently exposed sites prior to vegetation becoming established. This is not likely to cause a significant dust nuisance. For the same reasons as above, the potential for such circumstances to cause nuisance to neighbouring properties is less than minor. Measures will be put into place however to minimise the extent of exposed sand; prompt reinstatement and restriction to earthworks during dry, windy conditions.

Earthworks and vegetation removal is scheduled for autumn / winter months when there is higher rainfall therefore, moisture content in the sand will suppress dust and encourage quicker reestablishment of vegetation.



Natural Values:

Separate assessments have been prepared on the effects of the cycle trail on existing ecology / flora and fauna values (attached).

Heritage Values:

An Archaeological Assessment has been undertaken by Lynda Walter of InSitu – Heritage Ltd. (attached). This assessment concluded that ‘no visible archaeological sites or material indicating the presence of buried

archaeology was identified’. Further, neither a recorded site in the Opotiki Domain Reserve or, ‘other known sites or places of Maori cultural significance’ will be affected by the construction’.

The report recommends precautionary measures including assessment during or after vegetation clearance and that an accidental discovery protocol be established during construction by contractors.

Tangata Whenua:

Consultation has been undertaken with Tangata Whenua through the development of the cycleway project. Whakatohea Maori Trust is a Partner Agency in the development of the cycleway. It is important to note that representatives of Whakatohea Iwi and hapu Ngati Patu; Ngai Tama and Ngati Rua facilitated the celebratory signing ceremony in August. In addition Iwi representatives from Whakatohea and Ngai Tai assisted with coordinating the ‘sod turning’ ceremony in November 2010.

Landscape and Amenity:

An ‘Assessment of Landscape and Visual Effects’ has been prepared by Wildland Consultants in conjunction with Richard Hart, Registered Landscape Architect. (attached).

The report assesses natural and visual character; amenity values and; landscape and visual effects and concludes as follows;

“Overall, potential effects on natural character and amenity, and any visual effects, will be relatively minor if the following matters are addressed:

- Dune vegetation must be re-established on disturbed ground following construction of the trail. This should be undertaken to the satisfaction of the controlling authority (Opotiki District Council or Department of Conservation)
- An ongoing weed and pest animal management plan should be implemented, to provide an ongoing improvement to the dune habitat and character
- Reserve encroachments at Tirohanga should be addressed
- Public access should be maintained to a high standard. This may require upgrading of key access points, such as Hikuwai and Tirohanga.

The first two items above should become conditions of any resource consent(s) granted for the project”.

The applicants undertake to comply with the above items as follows;

- Muehlenbeckia (sp) stripped from the site during construction will be replanted on the recontoured site. In addition nursery raised Muehlenbeckia (sp) plants grown from cuttings sourced from the Tirohanga / Hikuwai dunes will be used to reinstate vegetation over disturbed ground supplemented with indigenous shrub species suitable to the environment including; ngaio, karo, taupata, harakeke, toitoi, whau, pohutukawa
- Ongoing weed control will be undertaken in the immediate proximity of the track ie: within 5 metres. Beyond this margin to approximately 20 metres, weed control will be more discretionary targeting priority species; woolly nightshade, boxthorn, privet, periwinkle, blackberry, pampas and gorse.



- Outside the scope of this application but Department of Conservation have initiated measures to address encroachment on to Conservation estate prior to the cycleway proposal
- Measures to improve access to the beach at existing and new locations will be undertaken under the guidance of Coast Care.

It should be noted that the Department of Conservation is a financial partner in 'Coast Care'. As applicant Council will undertake environmental and public access improvements consistent with Coast Care guidelines and, direct Coast initiatives to the Hikuwai dunes.

b) What is potential erodibility of the soils of the site:

The coastal cycle trail is located entirely on sand dunes within 150 metres of the Coastal Marine Area and therefore within Sand Dune Country as defined within the Regional Water and Land Plan as follows;

- Sand Dune Country – coastal dune systems with sand soils, which are characterised by low amounts of organic matter and low cohesiveness. Includes areas with Land Use Capability of VIII and VIIIe, and Land Management Suite of LMS 3 or LMS 4. For the purposes of the rules in section 9.2 of this regional plan, it is coastal land measured horizontally from the Coastal Marine Area to either;
 - (i) 150 metres landward of the Coastal Marine Area; or
 - (ii) the point where land changes from Sand Dune Country to another soil type; whichever is the lesser distance.
- Section 9.2 of the Regional Water and Land Plan classifies Sand Dune Country within the Erosion Hazard Zone and therefore Rule 2C applies relating to land and soil disturbance by vegetation clearance.
- Land Care Research soil report prepared for Environment Bay of Plenty identifies the sand dune soil type at this location as 'Ohope Sand' characterised as consistent deep sand with rapid permeability.

c) What is the estimated sediment generating potential of the site (*this should include an assessment of slopes greater than 10 degrees with aspects not north facing*):

The trail will be constructed entirely in sand country with very high permeability characteristics. The potential for generating sediment as a result of vegetation removal or earth disturbance is therefore very low and any effects less than minor.

- Cut slopes will be finished at a 1:1 (100%) slope while fill slopes will be at a 2:1 (50%) slope
- All cut slopes greater than 1 metre in height will be covered with coconut matting
- All exposed sand will be planted as soon as practicable after completion of the trail with *Muehlenbeckia* sp selectively grown from plant material sourced from the site.

Related Matter

At this stage it has not been determined where the basecourse material will be sourced from. This will be determined through the tender process and it is likely the successful tenderer will have secured access to a suitable quarry in close proximity to the project. Numerous quarries operate on farms within 5km of the coast that do not require consent under the Regional Land And Water Plan as they do not exceed the 5000 cubic metre threshold. It is possible that one or more of these quarries will be used to construct the cycle trail. The applicant undertakes to notify the Bay of Plenty Regional Council of the outcome of the tender process so that necessary consents are addressed.



4 METHODS USED TO AVOID / REMEDY OR MITIGATE THESE ENVIRONMENTAL EFFECTS

For each of the effects identified above, describe the measures you will take to avoid / reduce / remedy them:

Sediment Contaminants:

The only identified risk of sediment contamination is by way of non approved earthworks in the vicinity of streams along the route of the cycleway. Contractors will be briefed of this concern and given clear instructions to avoid any such risk.

All stockpiles of surfacing material will be located away from water courses or swales to avoid any sediment contamination.

Track formation will include regular grade changes, cambers, super elevation to avoid potential track scour. Water will be directed to suitably formed or existing swales.

Dust:

Earthworks will be restricted so that if under dry windy condition there is any potential for dust nuisance to adjoining properties, work will cease until more favourable conditions prevail.

Works is scheduled for March to August when there is a higher incidence of rain; wet sand will therefore suppress dust and promote more rapid establishment of revegetation species.

Coconut fibre matting will be applied to all cuttings where the slope is 1:1 and height is 1 metre or higher. This will reduce potential slope failure and dust.

Natural Values:

The Ecological Assessment provided by Department of Conservation makes recommendations to avoid areas of indigenous vegetation. The route will be amended where practicable to avoid unnecessary removal of *Muehlenbeckia* vinelands while maintaining design requirements relating particularly to grade and width. Cycle trail width of 2.2 metres will however be retained.

Heritage Values:

Consistent with the recommendations of the Archaeological Assessment;

- i) Archaeologist will be on site to inspect earthworks at Opotiki Domain, acting on advice Historic Places trust to be informed
- ii) Accidental Discovery Protocol (Refer Appendix 9) will be entered into with contractors engaged on the project and contractors made aware of the requirements
- ii) In the event of discovery of any artifacts or koiwi, work will cease immediately in the vicinity; archaeologist, HPT, Iwi / hapu representative advised as appropriate. Work will not resume until approved by respective authority.

Tangata Whenua:

A significant feature of the trail is the integration of a cultural / heritage component which respective Iwi and hapu have been involved from the start of the project. Relevant Iwi and hapu are partners in the project and have representation on the Motu Trails Working Group charged with implementing the project; the Governance Group responsible for overseeing the project and; the Motu Trails Charitable Trust charged with the future marketing and development of the Trail.



Landscape and Amenity:

The recommendations of the landscape Assessment will be adopted as follows;

- Dune vegetation will be re-established on disturbed ground following construction of the trail. This should be undertaken to the satisfaction of the controlling authority (Opotiki District Council or Department of Conservation).
- An ongoing weed monitoring and management plan will be implemented, to improve the dune habitat, biodiversity and character.
- Reserve encroachments onto Department of Conservation land at Tirohanga will continue to be addressed
- Public access will be maintained to a high standard. This will require upgrading of key access points, such as Hikuwai and Tirohanga consistent with Coast Care guidelines and practices.

Erodability:

The nature of the sand dune environment and mitigation associated with the construction of the trail will result in minimal risk of erosion.

The Coastal Erosion Hazard Assessment prepared by Jim Dahm of EcoNomos Ltd (Refer Appendix 2) states under Dune Management Considerations (section 3) that 'the dune and vegetation disturbance required to place the track is relatively minor'.

Mitigation measures will include:

- Exposed earthworks will be revegetated promptly using suitable indigenous species primarily *Muehlenbeckia* (sp). Nitrogen based fertiliser will be applied to promote growth
- Coconut fibre matting will be applied to all slopes constructed at 1:1 and greater than 1 metre high
- The trail will have a 3% crossfall and longitudinal grade changes to direct storm water off and away from the trail to existing soakage swales in the dunes.

Other Matters:

Consideration has been given by the applicants to concerns raised by some property owners from Tirohanga Beach and their perception that the use of the cycleway will have a negative effect on their security and privacy. As these matters relate more directly to the *effects of the use* of the trail they are considered to be outside the scope of resource consent. Nevertheless attempts have been made to address and alleviate these concerns by locating the trail as far as practicable from residential property boundaries; an undertaking to construct barriers, where practical, to prevent motor vehicles or motor cycles accessing the trail; assurances of regular litter patrols along the trail and; offers to plant larger (indigenous) plants to some provide visual screening. Requests to relocate the trail on the landward (rather than coastal) side of properties – on the highway corridor – has not been supported.



Summary of Effects and Mitigation:

Reports have been prepared and submitted with this consent application addressing the potential effects of the construction, use and ongoing maintenance of the Cycle Trail where it occupies the coastal environment.

Attached reports address;

- Archaeology and Heritage
- Landscape and Visual Effects
- Ecology
- Coastal Hazard
- 10 metre construction envelope will not result in; i) the trail being located closer than 20 metres from crest of eroding dune face or; ii) the trail being located closer to any existing residential dwellings or, iii) greater area of vegetation disturbance, volume of earthworks or any effect on permanent or ephemeral water courses.

Key mitigation measures in response to the proposal will be the enhancement of indigenous flora and improved provision and management of public access. These measures will be undertaken in direct response to disturbance during construction but also, long term initiatives to improve the areas beyond the area affected by construction. This will in turn benefit more generic biodiversity values such as fauna habitat, and improved provision and management of access along the trail and from the trail to the beach. Many of the areas that will benefit in this regard currently have very degraded habitat values and / or grazed.

No significant adverse effects are identified in these reports. However, collectively they recommend a precautionary approach to protect heritage, landscape and ecological values associated with this coastal environment. In recent decades, use of these dunes has included intermittent and uncontrolled grazing, vehicle tracking and encroachment. Combined with the accelerating incursion of plant and animal pests this has resulted in an overall decline in the natural values of this environment. The joint proposal by the Opotiki District Council and the Department of Conservation to develop a public cycleway through this environment is viewed by the applicant as a means by which better management and responsibility will be undertaken for this environment. While the primary focus of the proposal is the development of a cycle trail it will also be available to pedestrians and will provide a significant public recreation amenity consistent with the provisions of a raft of planning documents supporting the provision of public access to and along the coast. The success of the trail relies on the opportunity it provides for the public to experience and enjoy the natural, scenic coastal environment.

4.1 Erosion and sediment control plans

With reference to Environment Bay of Plenty 'Erosion and Sediment Control Guidelines for Earthworks'.

The cycle trail proposal has;

- Very low risk of fluvial erosion or sediment discharge as a result of earthworks
- Insignificant effect on the receiving environment; streams / ephemeral water courses / riparian margins or effect on water quality
- Nil effect on the protective function of coastal sand dunes or slopes > 35 degrees
- The applicant applies for an exemption to the winter shut down period between 1 May and 15 September as the proposed earthworks comply with Section 1.5.1 of the Guide



- The site is located on sandy soils with good ground infiltration and terrain is not steep. Erosion and Sediment Guidelines identify that it is preferable that earthworks be undertaken in the winter period in sandy soils as this lowers the risk of dust during the drier summer months; and/or when there is no discharge off site;
- In the context of Erosion and Sediment Control and potential effects, the effects can be considered on a qualitative scale as: nil to minor adverse effects
- Works will be programmed so that vegetation removal, earthworks and revegetation / reinstatement will be integrated to result in prompt completion of sections of the trail.
- Stockpiles of basecourse material will be located away from water courses to prevent any contamination by sediment.

a) Schedule of Works

Describe the estimated timing of each stage of the earthworks including the installation / removal of erosion and sediment controls, and any other relevant works.

Stage	Description (Erosion controls, sediment controls, developmental earthworks)	Expected start date	Expected completion date
1	Route confirmation / flagging	March 2011	July 2011
2	Vegetation mulching or stripping	April 2011	May 2011
3	Earthworks to form trail bench	April 2011	August 2011
4	Construct timber retaining structures	April 2011	July 2011
5	Place basecourse, contour and compact	April 2011	July 2011
6	Place topcourse and compact	April 2011	July 2011
7	Trim and dress sides of formed trail	April 2011	August 2011
8	Install coconut fibre matting on slopes greater than 1 meter	April 2011	September 2011
9	Revegetation	June 2011	August 2011

b) Erosion control measures

As described;

- Works timed to be undertaken in autumn / winter
- No water courses affected
- Replanting / reinstatement as soon as practicable
- Coconut fibre on steep cut slopes

c) Sediment control measures

As described;

- Negligible runoff from site is expected
- Trail grade and crossfall to shed water from finished surface
- No water courses affected



4.2 Dust control plan

- Work is scheduled for autumn / winter months to take advantage of rain as dust suppressant
- In the event that dust causes nuisance during dry / windy conditions work creating dust will be temporarily halted and not commenced until favourable conditions prevail
- No more than 250 metres of the trail will be exposed before basecourse is applied and dust mitigation measures employed
- A sign will be prominently displayed advising contact details of contractor for inquiries regarding dust or other nuisance.

6 MONITORING

a) What, if any, monitoring do you propose to carry out to ensure that the discharge does not have any adverse effect?

- Daily inspections and completion of compliance with consent conditions will be undertaken by the contractor
- Weekly site meetings with principal and contractor to monitor inspections and compliance with consent conditions
- Bay of Plenty Regional Council compliance staff invited to weekly site meetings or as required

7 PERSONS LIKELY TO BE DIRECTLY AFFECTED

Persons who may be interested or affected and consultation undertaken

State any contact made with neighbouring land owners and occupiers and organisations such as the Department of Conservation, Eastern Region Fish and Game Council, local iwi and community groups. Where possible, record any comments made by these parties and outline your response to them. A list of people and organisations who you consider may be interested or affected should also be supplied wherever possible.

Note: Environment Bay of Plenty can provide a form for the written approval of affected persons.

Name: Whakatohea Maori Trust Board
Address: 122 St John Street, Opotiki 3122
PO Box 207, Opotiki 3162

Name: Opotiki District Council – Roading
Address: C/- Jim Finlay, Engineering and Services Manager
108 St John Street, Opotiki 3122
PO Box 44, Opotiki 3162

Name: Ngati Rua Hapu
C/- Geoffery Bristowe
07 315 6042



Name: Ngai Tamahau Hapu
C/- Secretary, Tracey Hillier
07 315 5400

Name: Ngati Patumoana Marae Trustees
C/- Chairman, John Hata
07 315 5591