

## Section 1

# 1. Introduction

This report has been commissioned by the Far North District Council (FNDC) to provide supporting information for the renewal of resource consent 4007 issued by the Northland Regional Council (NRC) for the East Coast Bays Wastewater Treatment Plant and discharges.

Resource consent 4007 was first issued in December 1985 and renewed in August 2001. The current consent expires on 30 November 2008 and thus an application for renewal of this consent is necessary. A copy of resource consent 4007 is included as Appendix A.

The current resource consent allows for the following activities (subject to conditions):

*"01 To discharge treated municipal wastewater to an unnamed tributary of the Parapara Stream, at Taipa, at or about Map Reference O04:514-882*

*02 To discharge contaminants from the wastewater treatment system to ground at two points, in the catchments of an unnamed tributary of the Parapara Stream and an unnamed tributary of Ryders Creek, at or about Map References O04:514-882 & O04:524-889 respectively;*

*03 To discharge contaminants to air from activities associated with the treatment and disposal of wastewater at two points, at or about Map References O04:514-882 & O04:524-889;"*

The volume of wastewater discharged is currently set at 1005 cubic metres per day (based on dry weather flow).

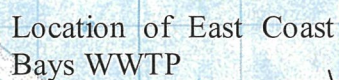
## 1.1 Location

The East Coast Bays Wastewater Treatment Plant is located on Ryder Rd, Taipa on land legally described as Pt Allot 24, SO 59862, and Part A, SO69379 Parish of Taipa, Blk IV Mangonui SD. The wetland is located on land legally described as Pt Allot 57, Parish of Taipa and Pt Sec 33, SO 65075 (Part D), Blk IV, (wetland)

The wastewater treatment plant is designated as Designation no FN 162 in the Far North District Plan for "sewage treatment and disposal purposes" (Zone Map 15).

Wastewater is pumped from the treatment plant to a constructed wetland for further treatment prior to disposal to a tributary of the Parapara Stream. A location plan is attached as Figure 1.1.





**Date**  
April 2008

Original Size: A4			Revisions			
	Init.	Date	0	Draft for Review	SK	03/08
Drawn	SK	03/08	1	Final	SK	04/08



P.O. Box 10022, Te Mai, Whangarei 0143, New Zealand.  
Telephone: 09-438 6460, Fax: 09-438 3969  
Email: [mail@vkenviro.co.nz](mailto:mail@vkenviro.co.nz)  
[www.vkenvironmental.co.nz](http://www.vkenvironmental.co.nz)



## Section 2

## 2. Description of East Coast Bays Wastewater Treatment Plant

A description of the existing East Coast Bays Wastewater Treatment Plant (WWTP) is included in the following section. This section outlines the current WWTP including a description of the existing treatment and disposal scheme and existing capacity.

### 2.1 Existing Wastewater Treatment Plant

The East Coast Bays Wastewater Treatment System was commissioned in 1990 due to the poor soakage characteristics of the local soils and increasing density of residential development which had led to contamination of water resources<sup>1</sup>.

The East Coast Bays WWTP consists of two mechanically aerated facultative ponds followed by a maturation pond from which the secondary treated effluent is pumped to a four cell constructed wetland. From the wetland the treated effluent then goes into a tributary of the Parapara Stream. A third facultative pond has been constructed which can be brought into service if and when required.

### 2.2 Existing Capacity

An estimate of the treatment capacity of the East Coast Bays WWTP in terms of BOD removal can be completed based on Mara<sup>2</sup>. This estimate shows that the aerated ponds have a BOD removal capacity of 436 kg BOD/day<sup>1</sup>.

It is assumed that the BOD removal after the aerated ponds will be 70%<sup>2</sup>. Therefore at a BOD content of 0.07kgBOD/person/day and a flow of 200 litres per person per day the flow capacity of the existing system can be calculated to be 1185 m<sup>3</sup>/day. If the third aerated pond is commissioned, this will increase to 1775 m<sup>3</sup>/day. To increase the treatment capacity further aeration can be added to the aerated ponds.

### 2.3 Existing Disposal Scheme

The East Coast Bays WWTP currently discharges to a tributary of the Parapara Stream. It is proposed to continue to discharge in this manner.

## Section 3

### 3. Assessment of the Statutory Framework

The proposed work will need to be considered within the relevant statutory framework. This includes the Resource Management Act (1991), Northland Regional Policy Statement<sup>3</sup>, the Regional Water and Soil Plan for Northland<sup>4</sup>, and the Regional Air Quality Plan for Northland<sup>5</sup>. Relevant policies and rules are outlined below.

#### 3.1 Resource Management Act 1991

The Resource Management Act 1991 (RMA) is the primary legislation for managing resource use in New Zealand. The single overarching purpose of the RMA (given in Part II of the Act) is:

*“ . . . to promote the sustainable management of natural and physical resources.”*

To ensure the purpose and principles of the RMA are upheld, the Act sets out the respective roles of regional and district councils. Accordingly, Northland Regional Council (NRC) has a statutory framework with particular regard to the following sections in Part II of the RMA:

##### **Purpose-**

- (1) *The purpose of this Act is to promote the sustainable management of natural and physical resources.*
- (2) *In this Act, **sustainable management** means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while-*
  - (a) *Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
  - (b) *Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and*
  - (c) *Avoiding, remedying, or mitigating any adverse effects of activities on the environment.*



**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:*
- (b) *The protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:*
- (c) *The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*
- (d) *The maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:*
- (e) *The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.*
- (f) *The protection of historic heritage from inappropriate subdivision, use, and development.*
- (g) *The protection of recognised customary activities.*

**Other matters-**

*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 have particular regard to-*

- (a) *Kaitiakitanga:*
  - (aa) *The ethic of stewardship:*
- (b) *The efficient use and development of natural and physical resources:*
  - (ba) *The efficiency of the end use of the energy:*
- (c) *The maintenance and enhancement of amenity values:*
- (d) *Intrinsic values of ecosystems:*
- (e) *Repealed:*

- (f) *Maintenance and enhancement of the quality of the environment:*
- (g) *Any finite characteristics of natural and physical resources:*
- (h) *The protection of the habitat of trout and salmon.*
- (i) *The effects of climate change.*
- (j) *The benefits to be derived from the use and development of renewable energy.*

#### **Treaty of Waitangi-**

*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 take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).*

When considering the effects of the proposed activity the NRC is also required to consider the cultural, economic and social benefits of a safe and secure wastewater system to the local communities. These benefits need to be balanced against the potential adverse effects of the activity on the community and the resource. It is concluded that the benefits of a safe and secure wastewater system outweigh any adverse effects, which are unlikely to be more than minor. The way in which the NRC weighs up these elements is influenced by policy set by the NRC which is discussed in sections 3.2, 3.3 and 3.4.

## **3.2 Regional Policy Statement for Northland**

The Regional Policy Statement for Northland<sup>3</sup> provides objectives and policies in relation to the natural and physical resources in the Northland region and establishes an associated management framework for dealing with them.

### **3.2.1 Air Quality**

The following objective (Section 16.3) has been developed to protect the existing high air quality of the region in a sustainable manner:

1. *"The sustainable management of the air resource by avoiding, remedying, or mitigating adverse effects on the environment from the discharge of contaminants to air"*

Section 16.4 (c) of the Regional Policy Statement for Northland states the following policies with regards to avoiding nuisance effects from air discharges:

1. *"To avoid contaminant discharges to air creating a nuisance or detracting from the amenities of areas by either:*
  - *encouraging and when appropriate, requiring separation of incompatible land uses; and*
  - *providing services and promoting practices which avoid or mitigate nuisance effects.*

### **3.2.2 Water Quality**

The following objectives (Section 17.3) have been developed to provide for maintenance and enhancement of water quality within the region:

1. *"The maintenance or enhancement of the water quality of natural water bodies and coastal waters in Northland to be suitable, in the long term, and after reasonable mixing of any contaminant with the receiving environment and disregarding the effect of any natural events, for such of the purposes listed below as may be appropriate..."*
2. *The reduction and minimisation of the quantities of contaminants which adversely affect water quality entering water bodies, and coastal waters, in particular those that are potentially toxic, persistent or bio-accumulative.*
3. *Avoid, remedy or mitigate the adverse effects of discharges of contaminants on the traditional, cultural and spiritual values of water held by Tangata Whenua".*

Section 17.4 (a) of the Regional Policy Statement for Northland states the following policy with regard to water quality standards:

1. *"To ensure that discharges of contaminants, and water and land use are managed so as to achieve or exceed, where practicable, the water quality standards suitable for the desired purposes, as set out in Objective 17.3.1."*
2. *To have a particular regard, when setting water quality standards and rules in plans and when setting conditions to resource consents to:*
  - (i) *Potential effects on the gathering of Kaimoana and Kaiawa: and*
  - (ii) *The long term goal of enhancing inner harbour and estuarine areas.*