



# Far North District Council



## AGENDA

# WAIHARARA AND KAIKINO DRAINAGE AREA COMMITTEE

CONFERENCE ROOM  
TE AHU  
CORNER OF MATTHEWS AVE  
AND SOUTH ROAD, KAITAIA

MONDAY 27 MARCH 2017

COMMENCING AT 1:00 PM

**Committee Members:**

Melanie Dalziel  
Fiona King  
Fred Petricevich  
Bob Campbell  
Joe Milich  
Dean Radojkovich

# FAR NORTH DISTRICT COUNCIL

## WAIHARARA AND KAIKINO DRAINAGE AREA COMMITTEE MEETING

MONDAY 27 MARCH 2017 COMMENCING AT 1:00 PM  
TE AHU  
CORNER MATTHEWS AVENUE AND SOUTH ROAD  
KAITAIA

### A G E N D A

#### Item

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#### 1.0 APOLOGIES AND DECLARATIONS OF INTEREST

Members need to stand aside from decision-making when a conflict arises between their role as a Member of the Committee and any private or other external interest they might have. This note is provided as a reminder to Members to review the matters on the agenda and assess and identify where they may have a pecuniary or other conflict of interest, or where there may be a perception of a conflict of interest.

If a Member feels they do have a conflict of interest, they should publicly declare that at the start of the meeting or of the relevant item of business and refrain from participating in the discussion or voting on that item. If a Member thinks they may have a conflict of interest, they can seek advice from the Chief Executive Officer (Acting) or the Team Leader - Governance Support (preferably before the meeting).

It is noted that while Members can seek advice the final decision as to whether a conflict exists rests with the Member.

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#### 2.0 ELECTION OF CHAIRPERSON AND DEPUTY CHAIRPERSON

Document number A1839778

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#### 3.0 INFRASTRUCTURE AND ASSET MANAGEMENT GROUP

##### 3.1 Waiharara and Kaikino Drainage Area Draft Management Plan

Document number A1840983

##### 3.2 Waiharara and Kaikino Drainage Areas Works Programme Update for the Year Ending 2017

Document number A1839785

##### 3.3 Waiharara and Kaikino Drainage Areas Works Programme Update for the Year Ending 2018

Document number A1839784

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#### 4.0 CLOSE OF MEETING

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**MEETING:** WAIHARARA AND KAIKINO DRAINAGE AREA  
COMMITTEE - 27 MARCH 2017

**Name of item:** ELECTION OF CHAIRPERSON AND DEPUTY  
CHAIRPERSON

**Author:** Kate Barnes - Team Leader Governance Support

**Date of report:** 9 March 2017

**Document number:** A1839778

### **Executive Summary**

The purpose of the report is to explain the procedure for the election of the Chairperson and Deputy Chairperson of the Committee and to elect a Chairperson and Deputy Chairperson.

### **Recommendation**

***THAT the Waiharara and Kaikino Drainage Committee uses Voting System \_\_\_\_\_ to elect a Chairperson and Deputy Chairperson for the triennium October 2016 to October 2019;***

***AND THAT the Waiharara and Kaikino Drainage Committee elect \_\_\_\_\_ as Chairperson for the triennium October 2016 to October 2019, in accordance with Standing Orders;***

***AND THAT the Waiharara and Kaikino Drainage Committee elect \_\_\_\_\_ as Deputy Chairperson for the triennium October 2016 to October 2019, in accordance with Standing Orders.***

### **1) Background:**

The first meeting of the Committee will be presided over by the Meetings Administrator until the Chairperson is elected.

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### **2) Discussion and options**

When electing a Chairperson or deputy Chairperson the committee must resolve to use one of the following two voting systems.

#### **System A**

The candidate will be elected or appointed if he or she receives the votes of a majority of the members of the local authority or committee who are present and voting. This system has the following characteristics:

- (a) there is a first round of voting for all candidates;
- (b) if no candidate is successful in the first round, there is a second round of voting from which the candidate with the fewest votes in the first round is excluded; and
- (c) if no candidate is successful in the second round, there is a third round, and if necessary subsequent rounds, of voting from which, each time, the candidate with the fewest votes in the previous round is excluded.

In any round of voting, if two or more candidates tie for the lowest number of votes, the person to be excluded from the next round is resolved by lot.

### **System B**

The candidate will be elected or appointed if he or she receives more votes than any other candidate. This system has the following characteristics:

- (a) there is only one round of voting; and
- (b) if two or more candidates tie for the most votes, the tie is resolved by lot.

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### **3) Financial implications and budgetary provision**

There are no financial implications or need for budgetary provisions as a result of this report.

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### **4) Reason for recommendation**

To elect a Chairperson and Deputy Chairperson in accordance with Standing Orders.

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General Manager: Roger Ackers - General Manager Corporate Services (Acting)

Compliance schedule:

Full consideration has been given to the provisions of the Local Government Act 2002 S77 in relation to decision making, in particular:

1. A Local authority must, in the course of the decision-making process,
  - a) Seek to identify all reasonably practicable options for the achievement of the objective of a decision; and
  - b) Assess the options in terms of their advantages and disadvantages; and
  - c) If any of the options identified under paragraph (a) involves a significant decision in relation to land or a body of water, take into account the relationship of Māori and their culture and traditions with their ancestral land, water sites, waahi tapu, valued flora and fauna and other taonga.
2. This section is subject to Section 79 - Compliance with procedures in relation to decisions.

Relationship with existing policies and Community outcomes.	Not applicable.
Possible implications for the relationship of Māori and their culture and traditions with their ancestral land, water, site, waahi tapu, valued flora and fauna, and other taonga.	None.
Views or preferences of persons likely to be affected by, or to have an interest in the matter, including persons with disabilities, children and older persons.	Not applicable.
Does the issue, proposal, decision or other matter have a high degree of significance or engagement as determined under the Council's Policy #2124?	No
If the matter has a Community rather than a District wide relevance has the Community Board's views been sought?	The committee was established as a sub-committee of the Te Hiku Community Board.
Financial Implications and Budgetary Provision.  Chief Financial Officer review.	There are no financial implications or the need for budgetary provision arising from this report.  The Chief Financial Officer has not reviewed this report.

**MEETING:** WAIHARARA AND KAIKINO DRAINAGE AREA COMMITTEE - 27 MARCH 2017

**Name of item:** WAIHARARA AND KAIKINO DRAINAGE AREA DRAFT MANAGEMENT PLANS

**Author:** Steven Smith - Stormwater Engineer

**Date of report:** 13 March 2017

**Document number:** A1840983

#### **Executive Summary**

The purpose of the report is to ask the Committee to review the draft management plans for the Waiharara and Kaikino Drainage Areas and then recommend that the Te Hiku Community Board adopt the draft management plans.

#### **Recommendation**

***THAT the Waiharara and Kaikino Drainage Area Committee makes the following recommendation to the Te Hiku Community Board:***

***THAT the Te Hiku Community Board adopt the draft management plans as amended by Waiharara and Kaikino Drainage Area Committee.***

#### **1) Background**

For years the Drainage Areas have been unconsented and have not been under any form of Management Plan since the Kaitia Drainage Area Management Plan Draft in the year 2000.

This management plan will be supported by a schedule which will give technical guidance in how the FNDC maintain and design the drains.

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#### **2) Discussion and options**

Staff have drafted this management plan with extensive research supported by site visits, along with information from the Committee members.

The plan outlines how the Committee should operate and how FNDC staff will manage the drainage area.

This Management Plan will be reviewed every 5 years unless asked by the Committee for a special review.

Committee members are asked to review the management plan and propose amendments if required.

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#### **3) Financial implications and budgetary provision**

At the moment there are no financial implications directly associated with the plan, as all the work discussed has already been planned and budgeted for.

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**4) Reason for the recommendation**

To propose the draft management plan to the Te Hiku Community Board for adoption.

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Manager: Steve Little - Manager 3 Waters Operations

Attachment 1: Kaikino Drainage Area Draft Management Plan - Document number  
A1839890

Attachment 2: Waiharara Drainage Area Draft Management Plan - Document number  
A1839892

Compliance schedule:

Full consideration has been given to the provisions of the Local Government Act 2002 S77 in relation to decision making, in particular:

1. A Local authority must, in the course of the decision-making process,
  - a) Seek to identify all reasonably practicable options for the achievement of the objective of a decision; and
  - b) Assess the options in terms of their advantages and disadvantages; and
  - c) If any of the options identified under paragraph (a) involves a significant decision in relation to land or a body of water, take into account the relationship of Māori and their culture and traditions with their ancestral land, water sites, waahi tapu, valued flora and fauna and other taonga.
2. This section is subject to Section 79 - Compliance with procedures in relation to decisions.

Relationship with existing policies and Community outcomes.	Land Drainage Bylaw 2009
Possible implications for the relationship of Māori and their culture and traditions with their ancestral land, water, site, waahi tapu, valued flora and fauna, and other taonga.	Waiharara & Kaikino Drainage Area does include some Maori Land. All land owners are able to provide input into the management of the Drainage Area.
Views or preferences of persons likely to be affected by, or to have an interest in the matter, including persons with disabilities, children and older persons.	Depending on the recommendation the community board puts forward, this will affect only the land owners in question.
Does the issue, proposal, decision or other matter have a high degree of significance or engagement as determined under the Council's Policy #2124?	The matter does not have a high degree of significance to the community as a whole.
If the matter has a Community rather than a District wide relevance has the Community Board's views been sought?	The management plan will be presented to the Community Board for adoption.
Financial Implications and Budgetary Provision. Chief Financial Officer review.	Any work discussed in the management plan is currently budgeted. The CFO has not reviewed this report.

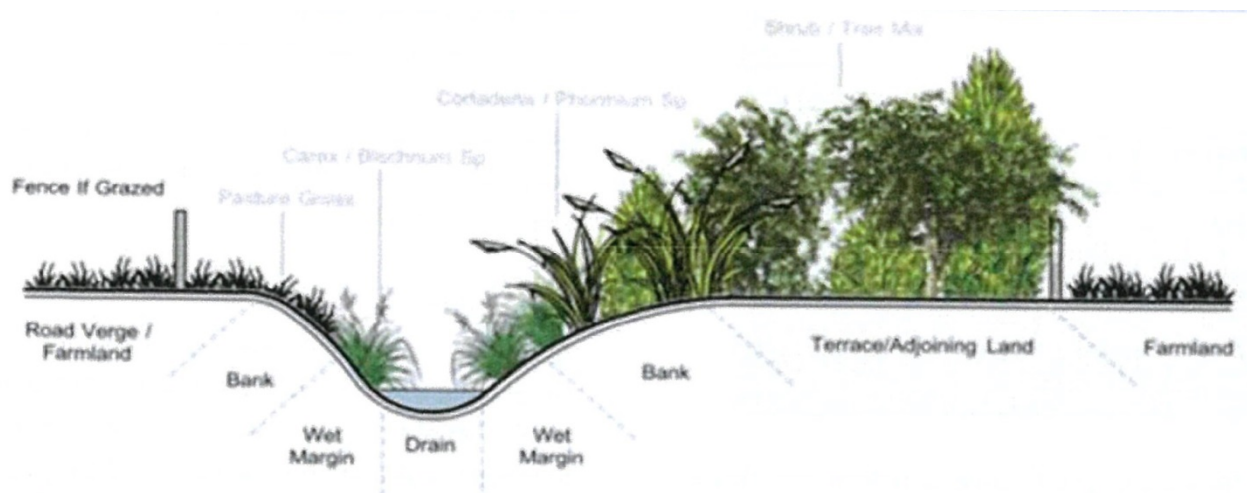


Far North  
District Council

# KAIKINO DRAINAGE AREA

## MANAGEMENT AND OPERATIONAL PLAN

March 2017



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### Appendix:

**A – Kaikino Drain Compartment Maps**

**B - Kaikino Drain Database**

## **1. Physical Environment**

### **Climate**

The Far North's climate is characterised by mild temperatures, humidity and windiness, particularly in coastal areas.

The Annual Average Rainfall measured at Kaitiā Airport is 1429mm. There are sporadic heavy falls associated with depressions of tropical origin. There is a clearly defined winter rainfall maximum with 30-40% of average annual rainfall typically falling in the period June to August. Northland is also prone to summer droughts.

### **Landforms**

The Kaikino Drainage Area consists of alluvial plains and steep hill country. This area begins north of Awanui and Waipapakauri and extends to the Rangaunu Harbour. It then merges into the Waiharara area.

The entire Kaikino area drains into the Rangaunu Harbour, the land is mostly flat, farmland with rolling hills.

The only large body of water in the Kaikino area is lake Waiparera which overflows into the Kaikino Drain and is then channelled out to the harbour.

### **Soils**

The flat area around Kaikino contains sand soils, as well as a large area of clay loam, peaty loam and deep peat. Large areas of the flats have been classified as high value horticulture land.

The hill country contains primarily clay-loam and limestone soils. On steeper land, these soil types are prone to slipping, particularly during heavy rain.

## **2. Summary of Kaikino Drainage Catchment Area**

The total catchment area is approximately 22km<sup>2</sup> and consists of 6 sub catchments. It is predominantly covered in forestry, patches of native bush, pasture, wetland and very large area of mangroves (The largest area of mangroves in New Zealand). At the head of the catchment are a number of small lakes, which drain into the Lake Waiparera.

Lake Waiparera spills into the Waiparera Creek (Kaikino drain) through a man-made spillway. The water flows in a southeasterly direction down the Kaikino Drain for approximately 4km and then turns almost 160 degrees to the North / Northeast for about 2km to where it outlets into the mangroves of Ranganu Harbour.

Water which drains into the lake is temporarily ponded and reduces the peak flood hydrograph downstream (maintains a more constant flow rate in the drainage system). Land adjacent to the Kaikino drain is drained by a number of small private drains. One tributary drain is the Hobson drain which intersects the Kaikino Drain approximately 4km down-stream of the lake.

Flood-causing rainfall may occur at any time of the year. No flow records exist for the catchment and flood analysis and modelling is outside the scope of this report. However, flooding within the catchment will be caused by intense rainstorms. Flooding of the lower reaches up to where the Kaikino and Hobson drains intersect will be worst when intense rain coincides with a spring high tide and Northeasterly winds raising the sea level.

## **3. Objective of Kaikino Drainage Catchment Area Management Plan**

The purpose of this Management Plan is to:

- Formalise the purpose of the Kaikino Drainage Area and its assets;
- Document the objectives, policies, and methods of implementation for the management of the Kaikino Drainage Area and its assets;
- Provide an operational plan of the necessary works and procedures to put into effect the purpose and policies of the Kaikino Drainage Area;
- Cover the maintenance of existing assets, proposed upgrades, and the means of funding the proposed works.

- Provide general information in support of resource consent(s) from the Northland Regional Council to undertake the necessary maintenance works contained in the management and operational plan;

#### 4. The Kaikino Drainage Area Management

The Far North District Council (FNDC) oversees the management of a series of drainage areas in the Far North.

The origin of many of these drainage areas date back to the early 20<sup>th</sup> century, and were generally developed for the purpose of converting wetlands and swamps into productive land.

These Drainage Areas were later expanded to provide a measure of safety for the District's urban areas.

Recently, the management of these Drainage Areas was split between the FNDC (generally farm drainage) and NRC (rivers and main tidal flows) to maintain the standard/quality of land and drainage.

The FNDC liaise with, and obtain advice from the relevant Drainage Committees.



Figure 1 – Map Index for the Kaikino Drainage Area

## 5. Statutory Requirements

Various legislation gives Council power to manage, administer, fund and carry out physical works within the Kaikino Drainage Area. Legislation also imposes controls on the drainage area assets and work carried out on them and, as such, imposes obligations on Council. This section lists all such legislation and their implications for the Kaikino Drainage areas.

The most relevant acts are as follows:

- Local Government Act
- Rating Powers Act
- Soil Conservation and Rivers Control Act
- Resource Management Act
- Building Act
- Other Legislation

The assets to which the legislation applies are recorded in the Council information system. Maintenance and upgrading work on the assets is recommended in the various sections.

## 6. Establishment and Administration of the Kaikino Drainage Area

Settlement and development of swamp land started prior to the 1900's, with gum diggers forming the initial drains and tracks. The New Zealand Government, Lands and Survey Department developed significant areas of land to be subdivided into sections and later sold to settlers who would develop the swamps into productive agricultural land. The majority of the development occurred after the First World War.

In 1926 the Mangonui County Council agreed to act as the Drainage Board, and in 1956, the Kaikino Drainage District was formed under the influence of the Ministry of Works who would not construct the spillway unless arrangements were in place for statutory binding maintenance of the main drain. Two years later, the sale of 1513 acres of the Waiharara - Kaimaumau swamps for development into agricultural land proceeded.

Council passed a resolution declaring Kaikino a Drainage District in 1957 and the design and construction of a spillway to lower the lake began.

Due to changes in legislation, the term "Drainage District" no longer applies, and pursuant to the Local Government Act 1974 this Drainage District is now referred to as a Drainage Area. The Drainage Areas located at Motutangi, Waiharara, and Kaikino are known collectively as the Northern Drainage Area (refer **Appendix I** for reference to the location of these schemes).

The agricultural drainage areas have been funded through a combination of private work by landowners and public works by the former Ministry of Works, the local territorial authority, which was the Mangonui County Council until 1989 and is now the Far North District Council (FNDC) and the (now defunct) Soil Conservation and Rivers Control Authority.

Council funding has been obtained through a specific drainage rating classification.

In 2013 the Northern Drainage Committee (NDC) was established. This Committee was made up of local representatives from each Drainage Area, to advise Council on a programme of works for the respective drainage areas.

This (NDC) zone has since been split into four sub areas, Motutangi, Kaitaia, with the Waiharara/Kaikino areas working together as one sub group.

The Kaikino / Waiharara Drainage Area Committee was formally established at the 22 February 2016 meeting of the Te Hiku Community Board at the request of the members of the Kaikino Drainage Management Committee.

The representatives of these areas consider what maintenance is required and then prioritise the works.

These works can relate to improving accessibility of the drains for maintenance crew, as well as spraying and machine cleaning programmes.

## **7. The Planned Level of Protection of the Drainage Area**

The Kaikino Drainage Scheme is to be maintained for the primary purpose of providing for pastoral farmland drainage and the protection of land from flooding, while complying with relevant regulations relating to the catchment area.

A Resource Consent application will be lodged with the Northland Regional Council (NRC) in 2017 to formalise occupation and use of the land drainage area. Once resource consent is granted, this Management Plan may need to be modified to reflect any measures required by that consent.

## **8. Description of Assets within in the Drainage Area**

### **Overview**

Much of the drainage development in the past has been influenced by the necessity to reduce the flooding in the Kaikino Area. However, extensive works are also in place to protect the rural land and lower groundwater levels to improve the productivity of the land.

### **Description**

Generally this drain has reasonably good grades and fast flowing water. It is typically 1-2 metres deep with shallow peat overlying sandstone.

This drain commences at Lake Waiparera where it flows into the spillway at the head of the drainage system, passing under Camp Road through a culvert. Continuing down the drain, two small waterfalls approximately 400mm in height pass through a sandstone cut. The drain then passes under the Heath Road Bridge. Below this point, the water level within the drain is tidally influenced. From its junction with the Hobson Drain to the outlet into the Rangunu Bay, the drain turns back on itself and meanders to the North before discharging into the Bay. The lower reaches contain swamp land administered by the Department of Conservation.

As determined by a resolution of the Drainage Committee, works are a combination of twice yearly spraying and annual machine cleaning on certain sections of the drain with additional machine cleaning and spraying being undertaken as directed.

### **Hobson Drain and Extension**

This drains land in the southwest corner of the catchment and has good grades and reasonable flows. In some parts the banks are unstable.

As determined by a resolution of the Drainage Committee works are a combination of twice yearly spraying and annual machine cleaning with any additional machine cleaning and spraying being undertaken as directed.

## **9. Outline of the Objective of the Planned Maintenance Works**

9.1. To manage and maintain the existing scheme assets and works in the most economically efficient manner such that the system:

- Meets its primary purposes of providing for farm drainage and the protection of land from flooding in accordance with the relevant objectives in Council's *Strategic Plan, Drainage*; and
- Meets its statutory requirements.

9.2. To improve land productivity through improved drainage and reduced duration of flood inundation.

9.3. To have all works completed in a manner sensitive to the environment and creating minimal disturbance compatible with the scope of the works.

9.4. To work within the requirements and aims of DOC, NRC and FNDC.

## 10. Outline of the Maintenance Schedule for the Drainage Scheme

Each year the drains are given condition assessment.

The data is then used to provide a programme for machine cleaning, spraying and other associated works in the Kaikino Drainage Area. This programme is then put up for approval at the next meeting of the committee and community representative.

Normally the drain cleaning will be carried out in late summer or early autumn, to remove any large weed mats/growths that formed over the spring-summer period as well as reshaping and battering of the drains. This allows time for grass to re-establish before the peak rain falls are expected and will help lessen erosion of the newly formed drain embankments.

In addition to planned works such as machine cleaning of the drains, annual spraying is also undertaken. Spraying is the only form of regular maintenance that is carried out on the drains, and unless advised, only the centre of the drain/weed is sprayed. This reduces the effect on the grass established on the embankment.

Another form of regular maintenance in the near future will be the trimming of established grass on the drain embankments. Presently, the majority of the drains will need to be reshaped/have batters formed before this action is required.

The maintenance schedule has been established to maintain the drains at, or better than the current levels.

Below is a summary of the drains, where regular maintenance is carried out upon these drainage scheme assets:

### 10.1 Drains within the Spraying & Machine Cleaning Programme

#### **Kaikino Drain**

Total Length: 3,950 m

#### **Hobson Drain + Hobson Extension**

Total Length: 3,650 m

## 11. Details of the Maintenance Schedule for the Drainage Scheme

All landowners are required to comply with the FNDC Land Drainage Bylaw 2009.

The key sections are:

- There must be no obstructions which interfere with the access for plant or machinery to and along the drainage channel or parts thereof and in particular within 10 m of the drain, Clause 3.1. (trees planted too close are a major issue).
- Grazing stock must be excluded from the drainage channel, Clause 5.7.
- There must not be damage caused to the drainage channel, due to stock accessing the drainage channel for water, Clause 11.1.
- Remove flood debris or other recently deposited material that prevents the free flow of water, from waterways and/or floodgates.
- To ensure access to drains is available at all times in accordance with the policies of this management plan. This includes the control of vegetation outside the tops of drain banks

### 11.1 Machine Cleaning

Land owners adjacent to all drains need to be aware of the influence of DOC, NRC requirements and the discharge of silt downstream. To continue to operate these drainage schemes, the movement of silt needs to be minimised.

The most practical solution is to batter the banks back at the time of machine drain cleaning. This will

progressively stop virtually all bank erosion and most of the silt movement. This will also minimise cost.

A few notes and requirements with machine cleaning and battering are as follows:

- This will require fences to be moved back from the edge of drains to allow the battering of the drain banks.
- Different soils require different batter angles but as a guideline the angles will be between 30 to 40 degrees.
- Once battered the banks will no longer be sprayed at all, only machine trimming being carried out.
- The spraying will be confined to weed growth in the centre, un-battered section of the drains.
- Any mats will be removed by machine without cutting into the bank batters, using a weed rake wherever possible.

By using these methods and drain shape, DOC and NRC involvement will be minimised and the long term future of the drains maintained.

**See the NRC publication “2014-Managing-your-drains-v2” for more information.**

Cleaning will generally involve the removal of the weed mat only, while leaving the sides of the drain untouched.

It is imperative that the drain banks are not cut into during normal drain cleaning.

When reshaping drains or creating new drains, batters and fences are required, with the works taking place during late spring to early autumn. This will assist in the reestablishment of vegetation and minimise silt movement.

### **Disposal of drain cleaning**

- All drain cleanings are to be spread along the access ways.
- If the landowner desires the drain cleanings to be placed elsewhere, it is at his cost for all the extra time and work.
- Any drain cleaning/silt must be placed at least 4m from the top of the drain bank, provided that this is not likely to raise the height of the machine access and creating future access/reach problems.
- If this is the case, the drain cleanings must be placed outside of the access track.
- Drain cleanings must be disposed of in such a way that they do not impede the overland flow of stormwater runoff from adjoining lands into the drains.

### **11.2 Fencing**

Land owners are required to prevent stock from accessing drains. This is to minimise:

- Damage due to stock walking up and down banks and drains
- Silt movement along drains due to bank damage/collapsing and soil dragged in by stock
- Additional cost for drain cleaning due to slower work, generating a higher per metre rate
- Requirement for frequent drain cleaning

### **11.3 Alligator Weed**

High threat aquatic weeds (Alligator, Hornwort) will be sprayed prior to removal with machinery.

Where required these weeds will also be sprayed after removal.

Stock must not eat these weeds unsprayed.

An EPA “Permission for Use of Substances” & NRC consent is required specific to the areas to be

sprayed, for the correct type of spray. The spray used must be applied with considerable forethought, as it can effect crop growth for some distance downstream.

#### **11.4 Oxygen and other Common Weeds**

Spraying of these weeds is to be carried out on demand.

This will generally be twice a year, in the late Spring and Autumn.

#### **11.5 Culverts and Gates**

Culverts and gates are to be installed wherever possible to allow continuous access along the edge of drains.

The cost of these shall be paid from the Kaikino Drainage Scheme rates.

The Kaikino Drainage Scheme committee members shall review the list of improvements to be undertaken and make their recommendation.

#### **11.6 Monitoring and Works Outside the Programme**

It is expected that landowners, contractors and Council staff shall pool information to achieve a realistic picture of the condition and works required to maintain the current scheme.

If the Council representative receives an recommendation from at least 2 members of the committee for specific works, when there is not a committee meeting programmed within 1 month, the works shall be accepted as if from the complete committee.

#### **11.7 FNDC Staff, Resources, Information and Feedback Management.**

##### **11.7.a Policy**

- That the assets of the Kaikino Drainage Area be maintained to, at all times, facilitate the policies of this Management Plan and its associated objectives, including all Resource Consent and statutory requirements and any other system requirements.
- The Council shall supply staff and resources as required in order to fulfil the Council's responsibilities.
- The Council staff shall work with the committee to achieve an outcome which minimises the expenses and maximises the long term benefits to the landowners and drainage system.

##### **11.7.b Information Management**

###### **Policy**

That an information management system, capable of facilitating the analysis necessary for the efficient management of the system, be established and maintained.

###### **Method**

That a central electronic spreadsheet database be maintained in the Far North District Council's computer system, and the following information updated at three-monthly intervals, as required:

- Drain lengths and locations
- Drain heights and GIS data
- Drainage rate paying landowners
- A summary of issues identified during the inspections
- Non-routine work undertaken (including the location, a description of the work, the date

and cost)

- Complaints and requests from stakeholders (including the date and a brief description of the complaint/request (eg. "sediment in river at Bloggs Bend"))
- Information on flood events including (if known) the date, maximum flood level at monitoring points in the system, duration of inundation, damage caused, and the findings of any flood gauging that is undertaken
- All other information collected

### **11.7.c Feedback Management**

#### **Policies**

That a feedback system be put in place that:

1. Is readily accessible by stakeholders, both to report faults and to request improvements they feel the system would benefit from;

and

2. Facilitates the acknowledgment of requests and feedback in accordance with the Far North District Council's policy in this regard.

## **12. Review date for the management plan**

This management plan must be formally and comprehensively reviewed every five years, or sooner if a majority of drainage area ratepayers request a review at any other time.

Amendments to this management plan should be made through a formal process of consultation with the Kaikino Drainage Committee (Est 2016), followed by approval from the Far North District Council Infrastructure and Asset Management Committee.

It is noted that any amendments to the management plan may require approval of the Northland Regional Council and, possibly, a variation to one or more resource consents for the scheme.

## **13. Regulations relating to the Kaikino Drainage Area**

### **The Resource Management Act 1991 (RMA)**

This Act governs legislation for resource use in New Zealand, its purpose, contained in section 5 of this Act, is to promote the sustainable management of natural and physical resources, in a way that enables people and communities to provide for their social, economic, and cultural wellbeing, while sustaining the intergenerational potential of natural and physical resources, safeguarding the life supporting capacity of air, water, soil and ecosystems, and avoiding, remedying or mitigating any adverse effects on the environment.

The Act controls and administers the effects of the use of land, air, and water through a hierarchy of policies, standards, plans and consents.

Each set of controls is binding over those below them to the extent that they must not be inconsistent. It imposes responsibilities on the Regional and District councils to minimise the effects of human activities and natural hazards on the environment.

This is carried out via objectives, policies, and methods of implementation contained in the Regional Policy Statement, Regional Plans and District Plans.

Any activities within the Kaikino Drainage Area must comply with these plans.

The relevant sections of the RMA are set out and discussed below.

### **10 Certain existing uses in relation to land protected**

- (1) Land may be used in a manner that contravenes a rule in a district plan or proposed district plan if;
- (a) either
- (i) the use was lawfully established before the rule became operative or the proposed plan was notified;
- and
- (ii) the effects of the use are the same or similar in character, intensity, and scale to those which existed before the rule became operative or the proposed plan was notified:
- (b) or
- (i) the use was lawfully established by way of a designation; and
  - (ii) the effects of the use are the same or similar in character, intensity, and scale to those which existed before the designation was removed.

**Comment:** The Drainage Area was lawfully established as a Drainage District in 1913.

#### **Far North District Council Bylaw**

The Land Drainage Bylaw 2009, made in accordance with the provisions of Pt 8 of the Local Government Act 2002, Pt XXIX of the Local Government Act 1974 and the Land Drainage Act 1908, was developed for the purpose of enabling regulation of land drainage assets within the Far North District.

This Bylaw provides access to and along drains for maintenance purposes and sets out conditions for any landowner connecting a private drain into any Drainage Area.

#### **Northland Regional Council Regional Water and Soil Plan**

The Revised Proposed Regional Water and Soil Plan for Northland, 1998 controls the use of land and water resources of the Northland region. The policies of the Proposed Regional Policy Statement have been used in its preparation.

It should be noted that farm drains are specifically excluded from the provisions of Section 13 of the Resource Management Act. Therefore, disturbance of the beds of drains does not need resource consents. However, the water in the drains is natural water and activities relating to it are therefore controlled in the Revised Proposed Regional Water and Soil Plan for Northland, 1998.

As discussed, the Kaikino Drainage Area assets are legally established under General Authorisation 9 in the Transitional Regional Plan, and, as such, no consents are required under that plan.

However, these provisions have not been carried into the regional plans prepared under the Resource Management Act. None of these plans allows the damming or diversion of water to the extent that occurs as a result of the Kaikino Drainage Area assets. The "Existing Use" provisions in Section 10 of RMA apply only to land use, not water. Accordingly, consent(s) are required from the Northland Regional Council for the effect of the Kaikino Drainage Area activities effect on water.

Tables 1 and 2 list the key assets in the Kaikino Drainage Area, the most common activities carried out to maintain them, and possible major capital works, and the regional plan consents required for those assets and activities.

It is noted that even if consent is not required, the Revised Proposed Water and Soil Plan usually lists conditions that still must be complied with as part of the permitted activity. In these cases, the location of the conditions is shown in the right hand column.

<b>Existing Kaikino Drainage Area Assets</b>	<b>Resource Consent Required?</b>	<b>Comments, Consent Type and/or Relevant Plan and Section</b>
Drains on farm land – maintained by FNDC	No	Beds of Farm drains excluded from the Resource Management Act.
Fixed structures – floodgates/culverts.	No	S29.1.2 Revised Proposed Water and Soil Plan 1998.
<i>All existing Stopbanks, and other associated existing channel improvements (including cuts and diversions) that provide the channel capacity recommended in this management plan, the State Highway 1N overflow near Larmer Road and the overflow into the Whangatane Spillway.</i>	Yes	Water Permit. S27.3.4 Revised Proposed Water and Soil Plan 1998. This permit should include upgrading to the standards recommended in this Management Plan.

**Table 1.** Resource Consents Required for the Existing Kaikino Drainage Assets.

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<b>Management/ Maintenance Activity</b>	<b>Reference Section</b>	<b>Resource Consent Required?</b>	<b>Comments, Consent Type and/or Relevant Plan and Section</b>
Maintenance Management, maintenance of free flows in rivers (except vegetation and silt removal).	9.5.4, 9.7	No	Permitted activity if approval of this Management Plan is obtained in accordance with the Soil Conservation and Rivers Control Act 1941.
Connections to Scheme Drains	9.10.2	No	S23.1(4) of the Revised, Proposed Water and Soil Plan 1998
Installation of Vehicle Crossings of Waterways	9.7.7	Yes	S24 of the Revised, Proposed Water and Soil Plan 1998
Removal of vegetation, including mangroves, from the streambank upstream of the CMA.	9.5.4	Possibly	If not complying with S35.1(4) of the Revised Proposed Water and Soil Plan 1998, land use consent under S35.3.
Removal of mangroves from the CMA	9.5.4	Yes	Revised Proposed Regional Coastal Plan 1998 rule 26.3.12b if blocking artificial drainage channels, otherwise prohibited.
Upgrading of stopbanks not included in the initial stopbank consent		Yes	Water permit under S27.3.4 of the Revised Proposed Water and Soil Plan 1998.
Installation of Overflow Channels	Refer report in App. A	Yes	Water Permit, S24.3.4 of the Revised Proposed Water and Soil Plan 1998.
Removal of silt from the river bed and the disposal of the resulting spoil	9.5.4	Yes	For removal/disposal in the coastal marine area (CMA), a coastal permit under S26.3.8 of the Revised Proposed Regional Coastal Plan 1998. For removal elsewhere, a land use consent under S27.1 or 27.3, S31.3 and S35.1 of the Revised Proposed Water and Soil Plan 1998. For disposal of spoil outside the CMA, refer to S32 to 35 of the Revised Proposed Water and Soil Plan 1998
Vegetation and weed control in farm drains.	9.6.1	Only with grass carp or some herbicides.	S18.1(3) of the Revised Proposed Water and Soil Plan 1998 for spraying. Department of Conservation license for Grass Carp.
Disposal of Farm Drain Cleanings	9.6.2	No	S32 to 35 of the Revised Proposed Water and Soil Plan 1998
Control of Stock Access to Rivers.	9.10.3	No	S35.1.1 Revised Proposed Water and Soil Plan 1998.
Placement of erosion control structures in rivers	Report in Appendix A, S9.7	No	S29.1.8 Revised Proposed Water and Soil Plan 1998.
Discharge from farm drains	9.10.2	No	23.1.4 Revised Proposed Water and Soil Plan 1998

**Table 2.** Resource Consents Required for the Existing Kaikino Drainage Management and Maintenance Activities. "CMA" = Coastal Marine Area.

## 14. Description of the rating/funding classification

### 14.1 Ratable Areas

Existing rating classifications were developed in 2003 following a review of the individual Drainage Areas. There are three rating classifications A, B & C.

A class applies to all land with direct access to drains maintained under this Management Plan and would lose production if drains were totally blocked off. B class applies to all other drained land connected indirectly to the drainage system. C class applies to adjoining land that would lose access without the drains and by location has a more immediate disposal of excess rainfall to lower lying ground.

## 14.2 Non Rated Land

Non Rated land is classified according to location as either A, B or C. This covers wetland areas, bush covenants and private land with significant natural and aesthetic values to be protected as included in Far North District Council's database of indigenous vegetation.

## 14.3 Drainage Rates

The proposed drainage rates are calculated from the ratio of the rate per Ha based on Class A – 6, Class B – 3 and Class C – 1. The below table lists the properties which are subject to the rating classification, and the class applied to each property:

The rating base for the Kaikino Drainage Scheme is set out below:

Rating Category	Approximate Rating Base
A	452 ha
B	477ha
C	1647 ha

Rating is carried out in accordance with Local government Rating Act 2002. Targeted rates use the separate rates for the specific purpose of land drainage.

Rates are set each year around the proposed programme of maintenance as submitted by the Advisory committee.

## 15. Kaikino Drainage Area Committee Formation and Operational Details

### 15.1 Purpose

*The purpose of the Kaikino Drainage Area Committee is:*

- To represent and consult with the ratepayers of the Kaikino Drainage Area
- To make recommendation to the Te Hiku Community Board in respect of all matters pertaining to the management of the Kaikino Drainage Area
- To ensure the Kaikino Drainage Area ratepayers and the Te Hiku Community Board are well informed about matters of concern relating the Kaikino Drainage Area
- To identify initiatives and improvements and make recommendations to the Te Hiku Community Board on how these improvements can be implemented
- To provide the Kaikino Drainage Area community with an opportunity to provide feedback to the Te Hiku Community Board
- Ensure open and free exchange of information, ideas and concerns between the Te Hiku Community Board and community.

### 15.2 Quorum

The Quorum is set at three.

### 15.3 Responsibilities

#### Work Programmes

Preparing the programme of work for the Kaikino Drainage area, relevant to the purposes of the Committee, which is:

- Consistent with the Annual and Long-term Planning processes of Council

- In accordance with the conditions and requirements outlined in the Management Plan and resource consent conditions.
- Consistent with Policy #4302 - Northland River Management Policy.

Such programmes are to include budgetary provision for all costs associated with the work of the Committee. Notifying the appropriate Council Staff of any Emergency Work required to be carried out.

### **Stakeholder Liaison**

Liaise with all stakeholders as requested by the Council Officer responsible for the Kaikino Drainage Area.

### **15.4 Membership**

The Kaikino Drainage Area Committee is to be appointed by resolution of the Te Hiku Community Board pursuant to the Standing Orders adopted by that Board.

One member of the committee must be a Community Board member.

### **15.5 Protocols**

A chairperson and deputy chairperson must be elected pursuant to the standing orders adopted by the Te Hiku Community Board.

An agenda will be prepared and circulated 2 clear working days in advance of the meeting following a call for items to be notified to the Chairperson and pursuant to the Standing orders adopted by the Te Hiku Community Board.

### **15.6 Values**

Advocacy - promote the public's trust and confidence in Council and the Community Board

Openness - communicating clearly and providing as much information as possible

Honesty - observing both the spirit and the letter of the law, policy and procedures

Respect - treating people with courtesy, observing their rights and recognising the different roles that others play in management and decision making

Responsiveness - dealing with issues within agreed timeframes

Consider the full range of costs and benefit of alternatives in making recommendations to Council

Ensure open and free exchange of information within the group

### **15.7 Meetings**

The Kaikino Drainage Area Committee will meet twice a year as determined by the Te Hiku Community Board in the Schedule of Meetings.

Additional meetings may be held when required with the approval of the Chief Executive Officer.

### **15.8 Standing Agenda Items**

Confirmation of previous minutes

A financial report provided by the Chief Financial Officer

Proposed Work Programme

### **15.9 Reporting**

A report will be included in the Te Hiku Community Board agenda at the following meeting that conveys any recommendations to the Te Hiku Community Boards for adoption.

### **15.10 Support**

Administrative support is provided by the Council's Governance Support team.

### **15.11 Funding and Budgets**

Funding for the Committee will align with Council's Revenue and Financing Policy.

The Committee shall only recommend the expenditure of funding on purposes for which that funding was originally raised and in accordance with the budgets approved by Council through its Long-term Plan and Annual Plan.

Expenses will be funded from the Kaikino Drainage Targeted Rate.

#### **15.12 Procurement of Goods and Services**

The procurement of goods and services for the Kaikino Drainage Area will be in accordance with the Far North District Council Procurement Policy, Policy #2104-14 Procuring Goods and Services and the Procurement Manual.

#### **15.13 Contact with Media and Outside Agencies**

The Committee Chairperson is the authorised spokesperson for the Committee in all matters where the Committee has authority or a particular interest.

Committee members, including the Chairperson, do not have delegated authority to speak to the media and/or outside agencies on behalf of Te Hiku Community board on matters outside the Committee's delegations.

#### **15.14 Conduct of Affairs**

The Committee shall conduct its affairs in accordance with the *Local Government Act 2002*, the *Local Government Official Information and Meetings Act 1987*, the *Local Authorities (Members' Interests) Act 1968*, The Hiku Community Board Standing Orders and Council Code of Conduct.

#### **15.15 Power to Delegate**

The Kaikino Drainage Area Committee may not delegate any of its responsibilities, duties or powers.

#### **15.16 Returning Standing Members**

The existing Kaikino Drainage Area Committee members shall be returned at the time of election unless they request otherwise.

#### **15.17 New Members**

A minimum of 2 existing Kaikino Drainage Area Committee members shall be required to propose the addition of a new member to the committee.

#### **15.18 Removing Existing Committee Members**

A unanimous vote by all of the other existing Kaikino Drainage Area Committee members shall be required to remove a current committee member.

# Appendix A - Drain Compartment Maps

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**Figure 2 – Map Index for the Kaikino Area (Aerial)**

**Figure 3 – Map Index for the Kaikino Area (Property Map)**

**Figure 4 – Location and Length of the Kaikino Drain (Google Maps)**

**Figure 5 – Location and Length of the Hobson Drain + Extension (Google Maps)**

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Figure 2 – Map Index for the Kaikino Area (Aerial)

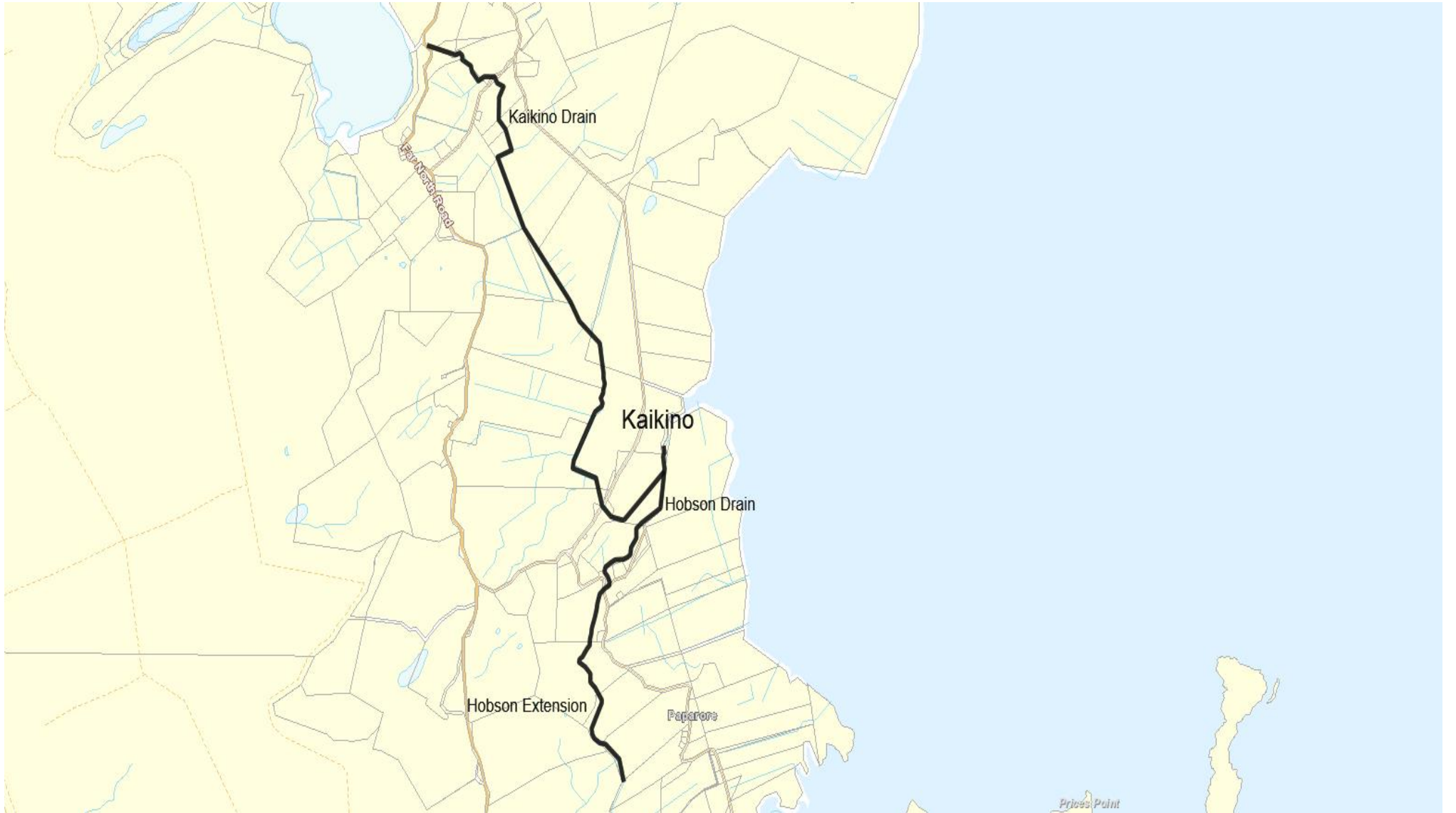


Figure 3 – Map Index for the Kaikino Area (Property Map)



Figure 4 – Location and Length of the Kaikino Drain (Google Maps)



Figure 5 – Location and Length of the Hobson Drain + Extension (Google Maps)

# Appendix B – Kaikino Drain Database

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Table 3 – Kaikino Drain Database



ID	Sub Area (Kaikino)	Drain Name / Location	Length (m)	Drain Dimensions
60001	Kaikino (Northern)	Kaikino Drain	382	
60002	Kaikino (Northern)	Kaikino Drain	316	
60003	Kaikino (Northern)	Kaikino Drain	745	
60004	Kaikino (Northern)	Kaikino Drain	599	
60005	Kaikino (Northern)	Kaikino Drain	320	
60006	Kaikino (Northern)	Kaikino Drain	91	
60007	Kaikino (Northern)	Kaikino Drain	112	
60008	Kaikino (Northern)	Kaikino Drain	104	
60009	Kaikino (Northern)	Kaikino Drain	143	
60010	Kaikino (Northern)	Kaikino Drain	75	
60011	Kaikino (Northern)	Kaikino Drain	185	
60012	Kaikino (Northern)	Kaikino Drain	672	
60013	Kaikino (Northern)	Kaikino Drain	305	
60014	Kaikino (Northern)	Kaikino Drain	568	
60015	Kaikino (Northern)	Kaikino Drain	223	
60016	Kaikino (Northern)	Hobson Drain	1489	
60017	Kaikino (Northern)	Hobson Extension	397	
60018	Kaikino (Northern)	Hobson Extension	835	

Table 3 – Kaikino Drain Database

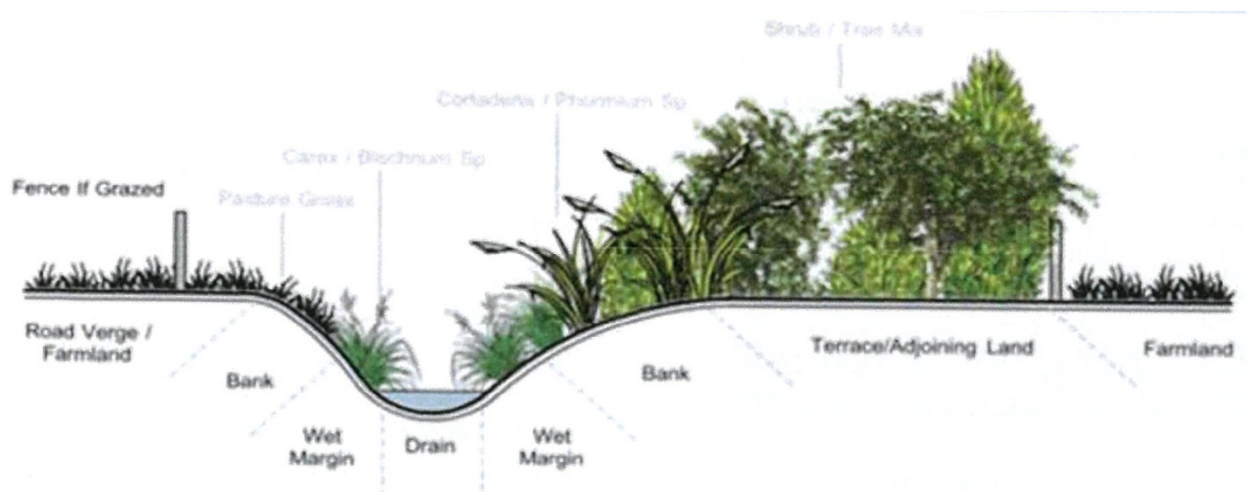
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# WAIHARARA DRAINAGE AREA

## MANAGEMENT AND OPERATIONAL PLAN

March 2017



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**Appendix:**

- A – Waiharara Drain Compartment Maps**
- B - Waiharara Drain Database**

## **1. Physical Environment**

### **Climate**

The Far North's climate is characterised by mild temperatures, humidity and windiness, particularly in coastal areas.

The Annual Average Rainfall measured at Kaitiā Airport is 1429mm. There are sporadic heavy falls associated with depressions of tropical origin. There is a clearly defined winter rainfall maximum with 30-40% of average annual rainfall typically falling in the period June to August. Northland is also prone to summer droughts.

### **Landforms**

The Waiharara Drainage Area consists of alluvial plains and steep hill country. This area begins north of Awanui and Waipapakauri and extends to the Rangaunu Harbour. It then merges into the Kaikino area.

The entire Waiharara area drains into the Rangaunu Harbour, the land is mostly flat, farmland with rolling hills.

The only large body of water in the near the Waiharara area is lake Waiparera which overflows into the Kaikino Drain and is then channelled out to the harbour so it does not contribute to the flows in the Okohine Stream.

### **Soils**

The flat area around Waiharara contains sand soils, as well as a large area of clay loam, peaty loam and deep peat. Large areas of the flats have been classified as high value horticulture land.

The hill country contains primarily clay-loam and limestone soils. On steeper land, these soil types are prone to slipping, particularly during heavy rain.

## **2. Summary of Waiharara Drainage Catchment Area**

The Waiharara Drainage District is located between the Motutangi Drainage District to the North, the Kaikino Drainage District to the South and the large areas of significant wetland to the East. The catchment consists of one main drain, the Okohine Stream with three tributary branches, Cox Branch, Bilcich Branch, and the Tunnel Traverse.

It is a complex catchment defined by the geology and underlying aquifer. Sand dune and sand stone ridges isolate sub-catchments with peat basins between sand dune boundaries. Artesian water was observed along the drains flowing from the Aupouri aquifer. Sand provides areas for recharging the aquifer. Sand stone layers cause perched water tables and also confine the aquifer (confine water below the sandstone).

The old Okohine Stream was a serpentine meandering stream confined in places but has been largely straightened during development of the Drainage District. Sediment in this type of stream are generally low.

## **3. Objective of Waiharara Drainage Catchment Area Management Plan**

The purpose of this Management Plan is to:

- Formalise the purpose of the Waiharara Drainage Area and its assets;
- Document the objectives, policies, and methods of implementation for the management of the Waiharara Drainage Area and its assets;
- Provide an operational plan of the necessary works and procedures to put into effect the purpose and policies of the Waiharara Drainage Area;
- Cover the maintenance of existing assets, proposed upgrades, and the means of funding the proposed works.
- Provide general information in support of resource consent(s) from the Northland Regional Council to undertake the necessary maintenance works contained in the management and operational plan;

#### 4. The Waiharara Drainage Area Management

The Far North District Council (FNDC) oversees the management of a series of drainage areas in the Far North.

The origin of many of these drainage areas date back to the early 20<sup>th</sup> century, and were generally developed for the purpose of converting wetlands and swamps into productive land. They were expanded to provide a measure of safety for the districts urban areas.

Recently the management of these drainage areas was split between the FNDC (farm drainage generally) and NRC (rivers and main tidal flows) to maintain the standard/quality of land and drainage. The FNDC liaise with and obtain advice from the relevant drainage committees.

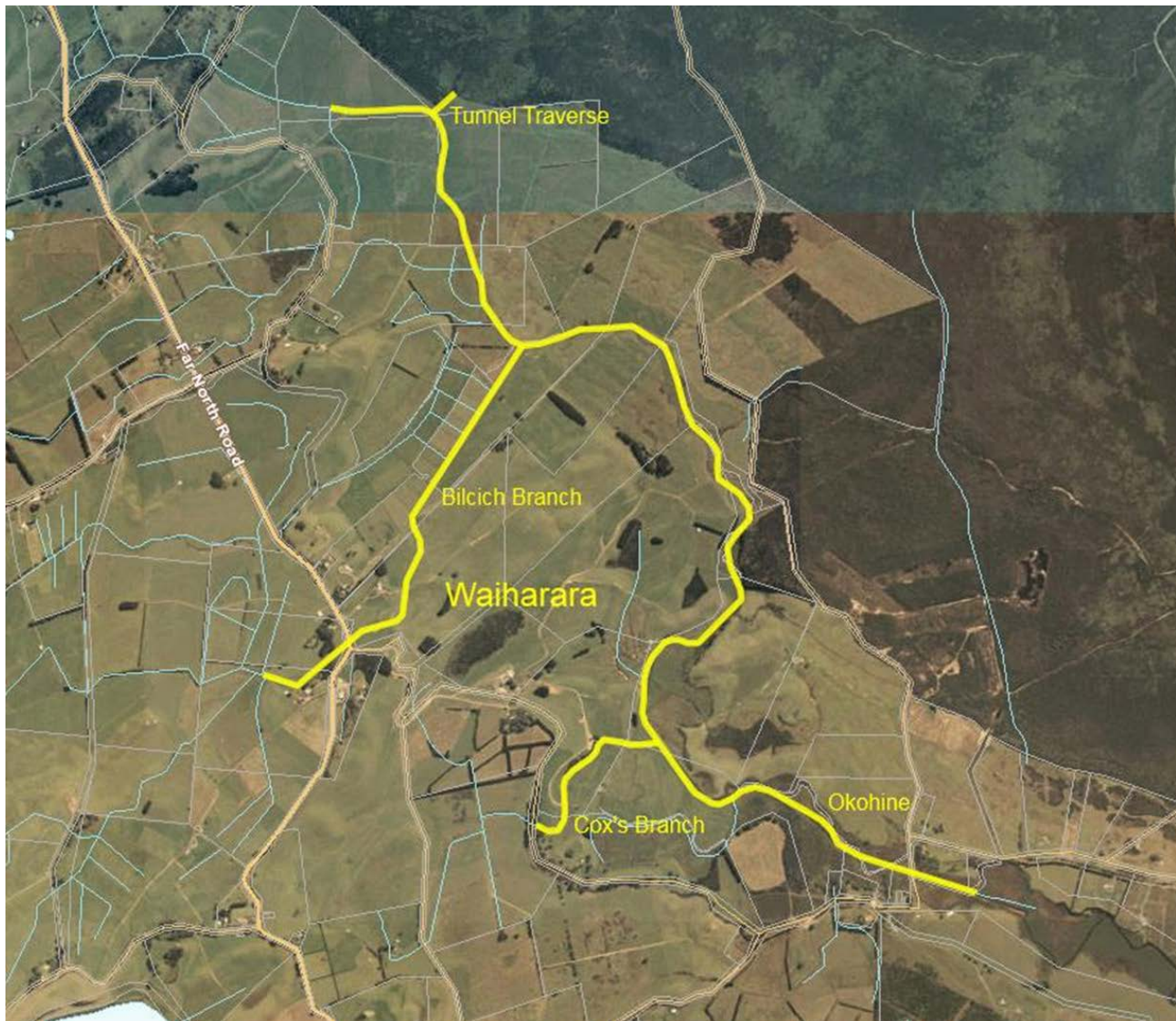


Figure 1 – Map Index for the Waiharara Drainage Area

## 5. Statutory Requirements

Various legislation gives Council power to manage, administer, fund and carry out physical works within the Waiharara Drainage Area. Legislation also imposes controls on the drainage area assets and work carried out on them and, as such, imposes obligations on Council. This section lists all such legislation and their implications for the Waiharara Drainage areas.

The most relevant acts are as follows :

- Local Government Act
- Rating Powers Act
- Soil Conservation and Rivers Control Act
- Resource Management Act
- Building Act
- Other Legislation

The assets to which the legislation applies are recorded in the Council information system. Maintenance and upgrading work on the assets is recommended in the various sections.

## 6. Establishment and Administration of the Waiharara Drainage Area

Settlement and development of swamp land started prior to the 1900's with gumdiggers forming the initial drains and tracks. The New Zealand Government, Lands and Survey Department developed significant areas of land to be subdivided into sections and later sold to settlers who would develop the swamps into productive agricultural land. The majority of the development occurred after the 1<sup>st</sup> World War.

In 1926 the Mangonui County Council agreed to act as the Drainage Board and Waiharara Drainage District was declared on 21 January 1960, this was formed under the Mangonui County by 9 ratepayers on 5<sup>th</sup> October 1959. A proposed rating classification on 1689 acres was undertaken in December 1963. In 1973, peat mining was investigated and in August 1974 Kauri Deposit Surveyors Ltd granted 3 coal prospecting licenses.

Due to changes in legislation, the term Drainage District no longer applies and pursuant to the Local Government Act 1974 this Drainage District is now referred to as a Drainage Area. The drainage areas located at Motutangi, Waiharara, and Kaikino are known collectively as the Northern Drainage Area (refer **Appendix I** for reference to the location of these schemes).

1975 saw a further extension of the Motutangi and Waiharara Drainage Districts by 688 ha and 324 ha respectively, and development plans were prepared for Okohine Stream above Bilich Branch for Tunnel Traverse and Noton Traverse. To date the Tunnel and Norton Traverse have never been constructed. Works were carried out improving the outlet in 1977 on the Okahine Stream.

Works continued in the 1980's with the emphasis on maintaining and cleaning drains. Monsanto Chemical Company was contracted concerning the safe use of Roundup for spraying drains, grass carp (fish) were investigated and 20 metre strips along the drains to allow for cleaning by hydraulic excavator were constructed in the Motutangi area.

In 1985 subsidies for drainage works ended. (**Subsidies on already flood control schemes carried on until 1992**).

The agricultural drainage areas have been funded through a combination of private work by landowners and public works by the former Ministry of Works, the local territorial authority, which was the Mangonui County Council until 1989 and is now the Far North District Council (FNDC) and the (now defunct) Soil Conservation and Rivers Control Authority.

Council funding has been obtained through a specific drainage rating classification.

In 2013 the Northern Drainage Committee (NDC) was established.

NDC was made up of local representatives from each drainage area, to advise Council on a programme of works for the respective drainage areas.

This (NDC) zone has since been split into four sub areas, Motutangi, Kaitaia, with the Waiharara/Kakino areas working together as one sub group.

The Kaikino / Waiharara Drainage Area Committee was formally established at the 22 February 2016 meeting of the Te Hiku Community Board at the request of the members of the Kaitaia Drainage Management Committee.

The representatives of these areas consider what maintenance is required and then set an order of priority. These works can relate to improving accessibility of the drains for maintenance crew, as well as spraying and machine cleaning programmes.

## 7. The Planned Level of Protection of the Drainage Area

The Waiharara drainage scheme is to be maintained for the primary purpose of providing for pastoral farmland drainage and the protection of land from flooding, while complying with relevant regulations relating to the catchment area.

A resource consent application will be lodged with the Northland Regional Council (NRC) in 2017 to formalise occupation and use of the land drainage area. Once resource consent is granted, this Management Plan may need to be modified to reflect any measures required by that consent.

## 8. Description of Assets within in the Drainage Area

### Overview

Much of the drainage development in the past has been influenced by the necessity to reduce the flooding in the Waiharara. However, extensive works are also in place to protect the rural land and lower groundwater levels to improve the productivity of the land.

As determined by a resolution of the Drainage Committee works are a combination of twice yearly spraying and annual machine cleaning on certain sections of the drain with additional machine cleaning and spraying being undertaken as directed.

### Waiharara

This Drainage Area covers an approximate area of 15.4km<sup>2</sup>.

### Tunnel Traverse

Approximately 50 meters of the Tunnel Traverse had been formed and is being sprayed annually.

Norton Traverse, North East Traverse and extension for the Tunnel Traverse were not constructed as this has become part of Kaimaumau Scientific reserve.

### Okohine Stream

At a distance of 450 meters from the intersection of the tributaries Covich Branch and Tunnel Traverse the stream had been sprayed annually, exhibited its as-built shape and was flowing freely with good falls available.

Below 450 meters the drain is machine cleaned as required with annual spraying between. In several places the banks of the drain have collapsed due to soil instability and springs behind the banks, cattle grazing the edges and cattle going into the stream to drink.

In places the cleaning platform used by the hydraulic cleaner was up to 4 metres above the stream invert. Lowering of these high banks with a bulldozer will reduce machine cleaning time and reduce the cost of maintenance work.

The flood gate at Cox Branch appears in good condition and operating well. Salt water keeps the lower section of this stream clean of weed **over approximately a 1300 stretch**. The lower flood gate was replaced in 1999.

### Bilicich Drain

Bilicich Branch drains a large area of land to the North of State Highway 1. Approximately 1,800 metres from the intersection with Okohine Stream is maintained by Council and sprayed annually. Drainage of the land to the west of the road relies on maintenance of the lower reaches.

### Cox Branch

Cox Branch drains one of the lowest areas in the catchment, and the old stream bed can be seen meandering around the flats.

## **9. Outline of the Objective of the Planned Maintenance Works**

9.1. To manage and maintain the existing scheme assets and works in the most economically efficient manner such that the system:

- Meets its primary purposes of providing for farm drainage and the protection of land from flooding in accordance with the relevant objectives in Council's *Strategic Plan, Drainage*;
- and
- Meets its statutory requirements.

9.2. To improve land productivity through improved drainage and reduced duration of flood inundation.

9.3. To have all works completed in a manner sensitive to the environment and creating minimal disturbance compatible with the scope of the works.

9.4. To work within the requirements and aims of DOC, NRC and FNDC.

## **10. Outline of the Maintenance Schedule for the Drainage Scheme**

Each year the drains are checked and their condition assessed.

The data is then used to provide a program for machine cleaning, spraying and other associated works in the Waiharara Drainage Area.

This program is then put up for approval at the next meeting of the committee and community representative.

Normally the drain cleaning will be carried out in late summer or early autumn, to remove any large weed mats/growths that formed over the spring - summer period as well as reshape and batter the drains.

This allows time for grass to re-establish before the peak rain falls are expected and will help prevent increased erosion of the newly formed drain embankments.

In addition to planned works such as machine cleaning of the drains, annual spraying is also undertaken. Spraying is the only form of regular maintenance that is carried out on the drains and unless advised, only the centre of the drain/weed is sprayed. This reduces the effect on the grass established on the embankment.

Another form of regular maintenance in the near future will be the trimming of established grass on the drain embankments.

Currently the majority of the drains will need to be reshaped/have batters formed before this action is required.

The maintenance schedule has been established to maintain the drains at or better than the current levels.

Below is a summary of the drains, where regular maintenance is carried out upon these drainage scheme assets:

### **10.1 Drains within the Spraying & Machine cleaning programme**

#### **Okohine Stream**

Total Length: 5,310 m

## **Bilcich Branch**

Total Length: 1,800 m

## **Cox Branch**

Total Length: 860 m

## **Tunnel Traverse**

Total Length: 50m

## **11. Details of the Maintenance Schedule for the Drainage Scheme**

All land owners are required to comply with the FNDC Land Drainage Bylaw 2009.

The key sections are:

- There must be no obstructions which interfere with the access for plant or machinery to and along the drainage channel or parts thereof and in particular within 10 m of the drain, Clause 3.1. (trees planted too close are a major issue).
- Grazing stock must be excluded from the drainage channel, Clause 5.7.
- There must not be damage caused to the drainage channel, due to stock accessing the drainage channel for water, Clause 11.1.
- Remove flood debris or other recently deposited material that prevents the free flow of water, from waterways and/or floodgates.

and

- To ensure access to drains is available at all times in accordance with the policies of this management plan. This includes the control of vegetation outside the tops of drain banks

### **11.1 Machine Cleaning**

Land owners adjacent to all drains need to be aware of the influence of DOC, NRC requirements and the discharge of silt downstream. To continue to operate these drainage schemes, the movement of silt needs to be minimised.

The most practical solution is to batter the banks back at the time of machine drain cleaning. This will progressively stop virtually all bank erosion and most of the silt movement. This will also minimise cost.

A few notes and requirements with machine cleaning and battering are as follows:

- This will require fences to be moved back from the edge of drains to allow the battering of the drain banks.
- Different soils require different batter angles but as a guideline the angles will be between 30 to 40 degrees.
- Once battered the banks will no longer be sprayed at all, only machine trimming being carried out.
- The spraying will be confined to weed growth in the centre, un-battered section of the drains.
- Any mats will be removed by machine without cutting into the bank batters, using a weed rake wherever possible.

By using these methods and drain shape, DOC and NRC involvement will be minimised and the long term future of the drains maintained.

***A good reference is the NRC publication "2014-Managing-your-drains-v2".***

Cleaning will generally involve the removal of the weed mat only, while leaving the sides of the drain untouched.

It is imperative that the drain banks are not cut into during normal drain cleaning.

When reshaping drains or creating new drains, batters and fences are required, along with the works being carried out during late spring to early autumn. This will assist in the reestablishment of vegetation and minimise silt movement.

### **Disposal of drain cleaning**

- All drain cleanings are spread along the access way's.
- If the landowner desires the drain cleanings to be placed elsewhere, it is at his cost for all the extra time and work.
- Any drain cleaning/silt must be placed at least 4m from the top of the drain bank, provided that this is not likely to raise the height of the machine access and creating future access/reach problems.
- If this is the case, the drain cleanings must be placed outside of the access track.
- Drain cleanings must be disposed of in such a way that they do not impede the overland flow of stormwater runoff from adjoining lands into the drains.

### **11.2 Fencing**

Land owners are required to prevent stock from accessing drains.

The reasons are,

- Damage due to stock walking up and down banks and drains
- Silt movement along drains due to bank damage/collapsing and soil dragged in by stock
- Additional cost for drain cleaning due to slower work, generating a higher per metre rate
- More frequent drain cleaning

### **11.3 Alligator weed**

High threat aquatic weeds (Alligator, Hornwort) will be sprayed prior to removal with machinery.

Where required these weeds will also be sprayed after removal.

Stock must not eat these weeds unsprayed.

An EPA "Permission for Use of Substances" & NRC consent is required specific to the areas to be sprayed, for the correct type of spray. The spray used has to be applied with considerable forethought as it can effect crop growth, for some distance downstream.

### **11.4 Oxygen and other common weeds**

Spraying of these weeds is to be carried out on demand.

This will generally be twice a year, in the late Spring and Autumn.

### **11.5 Culverts and gates**

Culverts and gates are to be installed wherever possible to allow continuous access along the edge of drains.

The cost of these shall be paid from out of the Waiharara Drainage Scheme rates.

The Waiharara Drainage Scheme committee members shall review the list of improvements to be undertaken and make their recommendation.

## 11.6 Monitoring and Works Outside the Programme

It is expected that landowners, contractors and council staff shall pool information to achieve a realistic picture of the condition and works required to maintain the current scheme.

If the Council representative receives an recommendation from at least 2 members of the committee for a specific works, when there is not a committee meeting programmed within 1 month,, the works shall be accepted as if from the complete committee.

## 11.7 FNDC Staff, Resources, Information and Feedback Management.

### 11.7.a Policy

- That the assets of the Waiharara Drainage Area be maintained to, at all times, facilitate the policies of this Management Plan and its associated objectives, including all Resource Consent and statutory requirements and any other system requirements.
- The Council shall supply staff and resources as required in order to fulfil the Council's responsibilities.
- The Council staff shall work with the committee to achieve an outcome which minimises the expenses and maximises the long term benefits to the landowners and drainage system.

### 11.7.b Information Management

#### Policy

That an information management system, capable of facilitating the analysis necessary for the efficient management of the system, be established and maintained up to date.

#### Method

That a central computer spreadsheet database be maintained in the Far North District Council's computer system, and updating the following information at three-monthly intervals, as required:

- Drain lengths and locations
- Drain heights and GIS data
- Drainage rate paying landowners
- A summary of problems identified during the inspections
- Non-routine work undertaken (including the location, a description of the work, the date and cost)
- Complaints and requests from stakeholders (including the date and a brief description of the complaint/request (eg. "sediment in river at Bloggs Bend"))
- Information on flood events including (if known) the date, maximum flood level at monitoring points in the system, duration of inundation, damage caused and the findings of any flood gauging that is undertaken
- All other information collected

### 11.7.c Feedback Management

#### Policies

That a feedback system be put in place that:

1. Is readily accessible by stakeholders, both to report faults and to request improvements they feel the system would benefit from;

and

2. Facilitates the acknowledgment of requests and feedback in accordance with the Far North

District Council's policy in this regard.

## 12. Review date for the management plan

This management plan must be formally and comprehensively reviewed every five years, or sooner if a majority of drainage area ratepayers request a review at any other time.

Amendments to this management plan should be made through a formal process of consultation with the Waiharara Drainage Committee (Est 2016), followed by approval from the Far North District Council Infrastructure and Asset Management Committee.

It is noted that any amendments to the management plan may require approval of the Northland Regional Council and, possibly, a variation to one or more resource consents for the scheme.

## 13. Regulations relating to the Waiharara Drainage Area

### The Resource Management Act 1991 (RMA)

This Act governs legislation for resource use in New Zealand, its purpose, contained in section 5 of this Act, is to promote the sustainable management of natural and physical resources, in a way that enables people and communities to provide for their social, economic, and cultural wellbeing, while sustaining the intergenerational potential of natural and physical resources, safeguarding the life supporting capacity of air, water, soil and ecosystems, and avoiding, remedying or mitigating any adverse effects on the environment.

The Act controls and administers the effects of the use of land, air, and water through a hierarchy of policies, standards, plans and consents.

Each set of controls is binding over those below them to the extent that they must not be inconsistent. It imposes responsibilities on the Regional and District councils to minimise the effects of human activities and natural hazards on the environment.

This is carried out via objectives, policies, and methods of implementation contained in the Regional Policy Statement, Regional Plans and District Plans.

Any activities within the Waiharara Drainage Area must comply with these plans.

The relevant sections of the RMA are set out and discussed below.

### **10 Certain existing uses in relation to land protected**

- (1) Land may be used in a manner that contravenes a rule in a district plan or proposed district plan if;*
- (a) either*
  - (i) The use was lawfully established before the rule became operative or the proposed plan was notified;*
  - and*
  - (ii) The effects of the use are the same or similar in character, intensity, and scale to those which existed before the rule became operative or the proposed plan was notified;*
- (b) or*
  - (i) The use was lawfully established by way of a designation; and*
  - (ii) The effects of the use are the same or similar in character, intensity, and scale to those which existed before the designation was removed.*

**Comment:** The Drainage Area was lawfully established as a Drainage District in 1913.

### **Far North District Council Bylaw**

The Land Drainage Bylaw 2009, made in accordance with the provisions of Pt 8 of the Local Government Act 2002, Pt XXIX of the Local Government Act 1974 and the Land Drainage Act 1908, was developed for the purpose of enabling regulation of land drainage assets within the Far North District.

This Bylaw provides access to and along drains for maintenance purposes and sets out conditions for any landowner connecting a private drain into any Drainage Area.

**Northland Regional Council Regional Water and Soil Plan**

The Revised Proposed Regional Water and Soil Plan for Northland, 1998 controls the use of land and water resources of the Northland region. The policies of the Proposed Regional Policy Statement have been used in its preparation.

It should be noted that farm drains are specifically excluded from the provisions of Section 13 of the Resource Management Act. Therefore, disturbance of the beds of drains does not need resource consents. However, the water in the drains is natural water and activities relating to it are therefore controlled in the Revised Proposed Regional Water and Soil Plan for Northland, 1998.

As discussed, the Waiharara Drainage Area assets are legally established under General Authorisation 9 in the Transitional Regional Plan, and, as such, no consents are required under that plan.

However, these provisions have not been carried into the regional plans prepared under the Resource Management Act. None of these plans allows the damming or diversion of water to the extent that occurs as a result of the Waiharara Drainage Area assets. The “Existing Use” provisions in Section 10 of RMA apply only to land use, not water. Accordingly, consent(s) are required from the Northland Regional Council for the effect of the Waiharara Drainage Area activities effect on water.

Tables 1 and 2 lists the key assets in the Waiharara Drainage Area, the most common activities carried out to maintain them and possible major capital works, and the regional plan consents required for those assets and activities.

It is noted that even if consent is not required, the Revised Proposed Water and Soil Plan usually lists conditions that still must be complied with as part of the permitted activity. In these cases, the location of the conditions is shown in the right hand column.

<b>Existing Waiharara Drainage Area Assets</b>	<b>Resource Consent Required?</b>	<b>Comments, Consent Type and/or Relevant Plan and Section</b>
Drains on farm land – maintained by FNDC.	No	Beds of Farm drains excluded from the Resource Management Act.
Fixed structures – floodgates/culverts.	No	S29.1.2 Revised Proposed Water and Soil Plan 1998.
<i>All existing Stopbanks, and other associated existing channel improvements (including cuts and diversions) that provide the channel capacity recommended in this management plan, the State Highway 1N overflow near Larmer Road and the overflow into the Whangatane Spillway.</i>	Yes	Water Permit. S27.3.4 Revised Proposed Water and Soil Plan 1998. This permit should include upgrading to the standards recommended in this Management Plan.

**Table 1.** Resource Consents Required for the Existing Waiharara Drainage Assets.

<b>Management/ Maintenance Activity</b>	<b>Reference Section</b>	<b>Resource Consent Required?</b>	<b>Comments, Consent Type and/or Relevant Plan and Section</b>
Maintenance Management, maintenance of free flows in rivers (except vegetation and silt removal).	9.5.4, 9.7	No	Permitted activity if approval of this Management Plan is obtained in accordance with the Soil Conservation and Rivers Control Act 1941.
Connections to Scheme Drains	9.10.2	No	s23.1(4) of the Revised, Proposed Water and Soil Plan 1998
Installation of Vehicle Crossings of Waterways	9.7.7	Yes	S24 of the Revised, Proposed Water and Soil Plan 1998
Removal of vegetation, including mangroves, from the streambank upstream of the CMA.	9.5.4	Possibly	If not complying with s35.1(4) of the Revised Proposed Water and Soil Plan 1998, land use consent under S35.3.
Removal of mangroves from the CMA	9.5.4	Yes	Revised Proposed Regional Coastal Plan 1998 rule 26.3.12b if blocking artificial drainage channels, otherwise prohibited.
Upgrading of stopbanks not included in the initial stopbank consent		Yes	Water permit under S27.3.4 of the Revised Proposed Water and Soil Plan 1998.
Installation of Overflow Channels	Refer report in App. A	Yes	Water Permit, S24.3.4 of the Revised Proposed Water and Soil Plan 1998.
Removal of silt from the river bed and the disposal of the resulting spoil	9.5.4	Yes	For removal/disposal in the coastal marine area (CMA), a coastal permit under S26.3.8 of the Revised Proposed Regional Coastal Plan 1998. For removal elsewhere, a land use consent under S27.1 or 27.3, S31.3 and S35.1 of the Revised Proposed Water and Soil Plan 1998. For disposal of spoil outside the CMA, refer to S32 to 35 of the Revised Proposed Water and Soil Plan 1998
Vegetation and weed control in farm drains.	9.6.1	Only with grass carp or some herbicides.	S18.1(3) of the Revised Proposed Water and Soil Plan 1998 for spraying. Department of Conservation license for Grass Carp.
Disposal of Farm Drain Cleanings	9.6.2	No	S32 to 35 of the Revised Proposed Water and Soil Plan 1998
Control of Stock Access to Rivers.	9.10.3	No	S35.1.1 Revised Proposed Water and Soil Plan 1998.
Placement of erosion control structures in rivers	Report in Appendix A, S9.7	No	S29.1.8 Revised Proposed Water and Soil Plan 1998.
Discharge from farm drains	9.10.2	No	23.1.4 Revised Proposed Water and Soil Plan 1998

**Table 2.** Resource Consents Required for the Existing Waiharara Drainage Management and Maintenance Activities. "CMA" = Coastal Marine Area.

## 14. Description of the rating/funding classification

### 14.1 Ratable Areas

Existing rating classifications were developed in 2003 following a review of the individual drainage areas. There are three rating classifications A, B & C.

A class applies to all land with direct access to drains maintained under this Management Plan and would lose production if drains were totally blocked off. B class applies to all other drained land connected indirectly to the drainage system. C class applies to adjoining land that would lose access without the drains and by location has a more immediate disposal of excess rainfall to lower lying ground.

### 14.2 Non Rated Land

Non Rated land is classified according to location as either A, B or C. This covers wetland areas, bush covenants and private land with significant natural and aesthetic values to be protected as included in Far North District Council's database of indigenous vegetation.

### 14.3 Drainage Rates

The proposed drainage rates are calculated from the ratio of the rate per Ha based on Class A – 6, Class B – 3 and Class C – 1. The below table lists the properties which are subject to the rating classification, and the class applied to each property:

The rating base for the Waiharara drainage scheme is set out below:

Rating Category	Approximate Rating Base
A	452 ha
B	477ha
C	1647 ha

Rating is carried out in accordance with Local government Rating Act 2002. Targeted rates use the separate rates for the specific purpose of land drainage.

Rates are set each year around the proposed programme of maintenance as submitted by the Advisory committee.

## 15. Waiharara Drainage Area Committee Formation and Operational Details

### 15.1 Purpose

*The purpose of the Waiharara Drainage Area Committee is:*

- To represent and consult with the ratepayers of the Waiharara Drainage Area
- To make recommendation to the Te Hiku Community Board in respect of all matters pertaining to the management of the Waiharara Drainage Area
- To ensure the Waiharara Drainage Area ratepayers and the Te Hiku Community Board are well informed about matters of concern relating to the Waiharara Drainage Area
- To identify initiatives and improvements and make recommendations to the Te Hiku Community Board on how these improvements can be implemented
- To provide the Waiharara Drainage Area community with an opportunity to provide feedback to the Te Hiku Community Board
- Ensure open and free exchange of information, ideas and concerns between the Te Hiku Community Board and community.

### 15.2 Quorum

The Quorum is set at three.

## **15.3 Responsibilities**

### **Work Programmes**

Preparing the programme of work for the Waiharara Drainage area, relevant to the purposes of the Committee, which are:

- Consistent with the Annual and Long-term Planning processes of Council
- In accordance with the conditions and requirements outlined in the Management Plan and resource consent conditions.
- Consistent with Policy #4302 - Northland River Management Policy.

Such programmes are to include budgetary provision for all costs associated with the work of the Committee.

Notifying the appropriate Council Staff of any Emergency Work required to be carried out.

### **Stakeholder Liaison**

Liaise with all stakeholders as requested by the Council Officer responsible for the Kaitaia Drainage Area.

## **15.4 Membership**

The Waiharara Drainage Area Committee is to be appointed by resolution of the Te Hiku Community Board pursuant to the Standing Orders adopted by that Board.

One member of the committee must be a Community Board member.

## **15.5 Protocols**

A chairperson and deputy chairperson must be elected pursuant to the standing orders adopted by the Te Hiku Community Board.

An agenda will be prepared and circulated 2 clear working days in advance of the meeting following a call for items to be notified to the Chairperson and pursuant to the Standing orders adopted by the Te Hiku Community Board.

## **15.6 Values**

Advocacy - promote the public's trust and confidence in Council and the Community Board

Openness - communicating clearly and providing as much information as possible

Honesty - observing both the spirit and the letter of the law, policy and procedures

Respect - treating people with courtesy, observing their rights and recognising the different roles that others play in management and decision making

Responsiveness - dealing with issues within agreed timeframes

Consider the full range of costs and benefit of alternatives in making recommendations to Council

Ensure open and free exchange of information within the group

## **15.7 Meetings**

The Waiharara Drainage Area Committee will meet twice a year as determined by the Te Hiku Community Board in the Schedule of Meetings.

Additional meetings may be held when required with the approval of the Chief Executive Officer.

## **15.8 Standing Agenda Items**

Confirmation of previous minutes

A financial report provided by the Chief Financial Officer

Proposed Work Programme

## **15.9 Reporting**

A report will be included in the Te Hiku Community Board agenda at the following meeting that conveys any recommendations to the Te Hiku Community Boards for adoption.

### **15.10 Support**

Administrative support is provided by the Council's Governance Support team.

### **15.11 Funding and Budgets**

Funding for the Committee will align with Council's Revenue and Financing Policy.

The Committee shall only recommend the expenditure of funding on purposes for which that funding was originally raised and in accordance with the budgets approved by Council through its Long-term Plan and Annual Plan.

Expenses will be funded from the Waiharara Drainage Targeted Rate.

### **15.12 Procurement of Goods and Services**

The procurement of goods and services for the Waiharara Drainage Area will be in accordance with the Far North District Council Procurement Policy, Policy #2104-14 Procuring Goods and Services and the Procurement Manual.

### **15.13 Contacts with Media and Outside Agencies**

The Committee Chairperson is the authorised spokesperson for the Committee in all matters where the Committee has authority or a particular interest.

Committee members, including the Chairperson, do not have delegated authority to speak to the media and/or outside agencies on behalf of Te Hiku Community board on matters outside the Committee's delegations.

### **15.14 Conduct of Affairs**

The Committee shall conduct its affairs in accordance with the *Local Government Act 2002*, the *Local Government Official Information and Meetings Act 1987*, the *Local Authorities (Members' Interests) Act 1968*, The Hiku Community Board Standing Orders and Council Code of Conduct.

### **15.15 Power to Delegate**

The Waiharara Drainage Area Committee may not delegate any of its responsibilities, duties or powers.

### **15.16 Returning Standing Members**

The existing Waiharara Drainage Area Committee members shall be returned at the time of election unless they request otherwise.

### **15.17 New Members**

A minimum of 2 existing Waiharara Drainage Area Committee members shall be required to propose the addition of a new member to the committee.

### **15.18 Removing Existing Committee Members**

A unanimous vote by all of the other existing Waiharara Drainage Area Committee members shall be required to remove a current committee member.

# Appendix A – Drain Compartment Maps

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**Figure 2 – Map Index for the Waiharara Area (Aerial)**

**Figure 3 – Map Index for the Waiharara Area (Property Map)**

**Figure 4 – Location and Length of the Bilcich Branch (Google Maps)**

**Figure 5 – Location and Length of the Cox Branch (Google Maps)**

**Figure 6 – Location and Length of the Tunnel Traverse (Google Maps)**

**Figure 7 – Location and Length of the Okohine Stream (Google Maps)**

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Figure 3 – Map Index for the Waiharara Area (Property Map)



Figure 4 – Location and Length of the Bilcich Branch (Google Maps)



Figure 5 – Location and Length of the Cox Branch (Google Maps)



Figure 6 – Location and Length of the Tunnel Traverse (Google Maps)

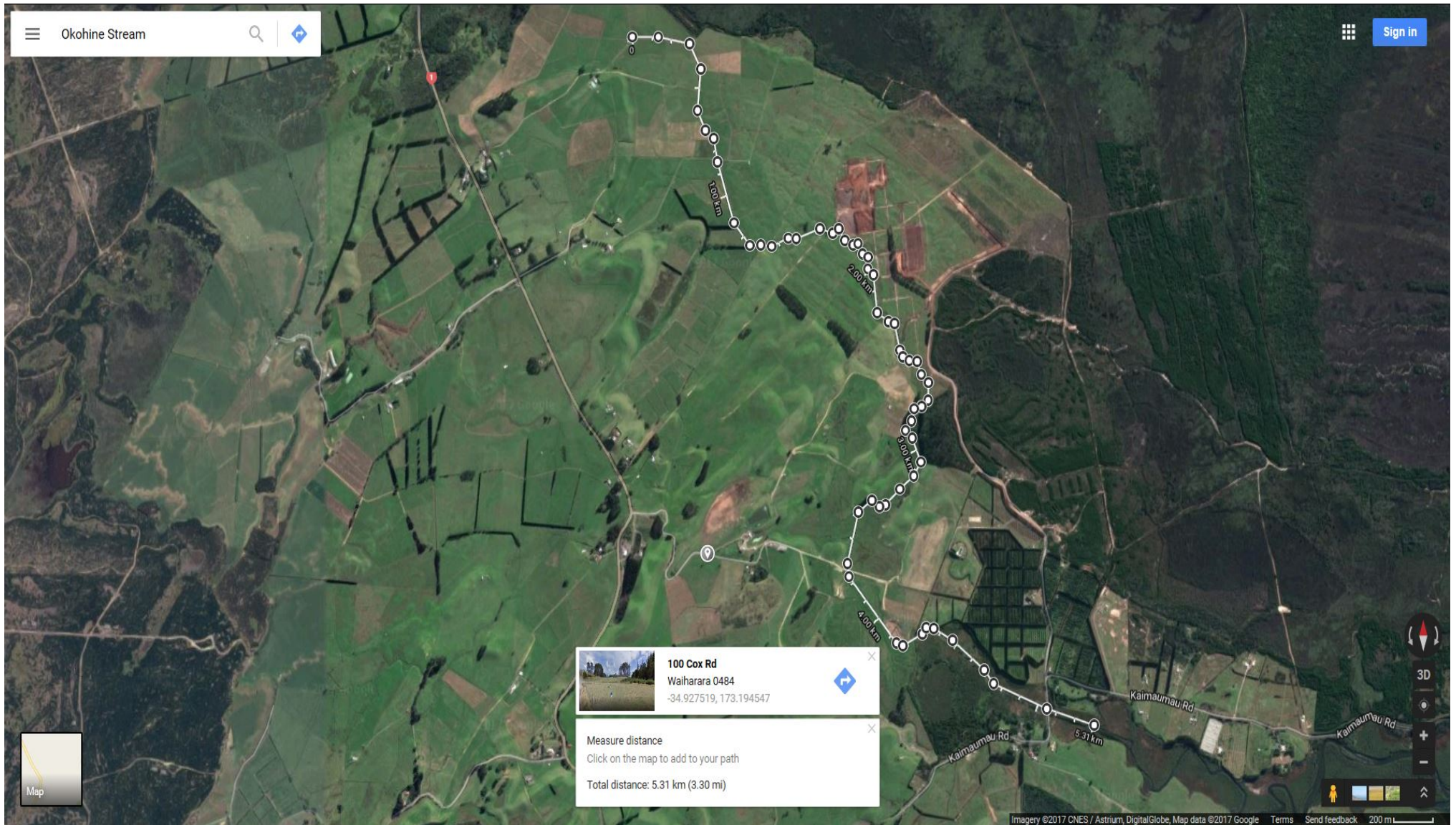


Figure 7 – Location and Length of the Okohine Stream (Google Maps)

# Appendix B – Waiharara Drain Database

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Table 3 – Waiharara Drain Database



ID	Sub Area (Waiharara)	Drain Name / Location	Length (m)	Drain Dimensions
60164	Waiharara (Northern)	Tunnel Traverse	81.09	
60165	Waiharara (Northern)	Okohine	1028.79	
60166	Waiharara (Northern)	Okohine	95.75	
60167	Waiharara (Northern)	Okohine	54.91	
60168	Waiharara (Northern)	Okohine	129.64	
60169	Waiharara (Northern)	Okohine	85.16	
60170	Waiharara (Northern)	Biicich Branch	91.79	
60171	Waiharara (Northern)	Biicich Branch	213.74	
60172	Waiharara (Northern)	Biicich Branch	118.07	
60173	Waiharara (Northern)	Biicich Branch	95.9	
60174	Waiharara (Northern)	Biicich Branch	1251.24	
60175	Waiharara (Northern)	Okohine	267.34	
60176	Waiharara (Northern)	Okohine	2198.42	
60177	Waiharara (Northern)	Okohine	390.17	
60178	Waiharara (Northern)	Cox Branch	678.87	
60179	Waiharara (Northern)	Okohine	1138.57	

**Table 3 – Waiharara Drain Database**

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**MEETING:** WAIHARARA AND KAIKINO DRAINAGE AREAS COMMITTEE - 27 MARCH 2017

**Name of item:** WAIHARARA AND KAIKINO DRAINAGE AREAS WORKS PROGRAMME UPDATE FOR THE YEAR ENDING 2017

**Author:** Steven Smith - Stormwater Engineer

**Date of report:** 27 March 2017

**Document number:** A1839785

### **Executive Summary**

The purpose of the report is to provide the Waiharara and Kaikino Drainage Areas Committee with an outline of the completed and proposed works and costs within the Waiharara and Kaikino Drainage Areas during balance of the financial year ending 30 June 2017.

### **Recommendation**

***THAT the Waiharara and Kaikino Drainage Areas Committee make the following recommendation to the Te Hiku Community Board:***

***THAT the following works in the Waiharara and Kaikino Drainage Area be approved to be completed before 30 June 2017:***

#### **Waiharara**

<b><i>Spraying of drains during Autumn</i></b>	<b><i>\$2,000</i></b>
<b><i>Contingency allowance</i></b>	<b><i>\$1,000</i></b>
<b><i>Two new access culverts, steel gates and strainers are required for access between the Bainbridge and Steele farms</i></b>	<b><i>\$3,000</i></b>

<b><i>Total</i></b>	<b><i>\$6,000</i></b>
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#### **Kaikino**

<b><i>Spraying of drains during Autumn</i></b>	<b><i>\$1,986</i></b>
<b><i>Install a culvert, access track, gate and strainers at Joe Milich's</i></b>	<b><i>\$1,500</i></b>
<b><i>Install a culvert, access track, gate and strainers at John Matijevich's</i></b>	<b><i>\$1,500</i></b>
<b><i>Spraying of the Pampas and removal of the Wattles is required through the Avocado Orchard on the Hobson Extension upstream of Paparore Road is required due to their encroachment into the drain</i></b>	<b><i>\$300</i></b>

<i>Removal of the bamboo for a distance of 10 m from the edge of the embankment of the Kaikino Drain adjacent to the Heath Road bridge is required for vehicular access</i>	<b>\$700</b>
<i>Removal of the Alligator weed from the Hobson Drain may be required if weed growth proves detrimental to the functionality of the outfall</i>	<b>\$3,000</b>
<i>Contingency allowance</i>	<b>\$1,000</b>
<b>Total</b>	<b>\$9,986</b>

1) **Work completed to date.**

<b><u>Waiharara</u></b>	
<i>Spraying of drains during late Spring</i>	<b>\$1,303</b>
<i>Machine cleaning of the lower &amp; upper drain section</i>	<b>\$12,934</b>
<b>Total</b>	<b>\$14,237</b>
<b><u>Kaikino</u></b>	
<i>Spraying of drains during late Spring</i>	<b>\$1,986</b>
<i>Hall hire for drainage meeting</i>	<b>\$45</b>
<b>Total</b>	<b>\$2,031</b>

2) **Background**

The Waiharara and Kaikino Drainage Areas Committee was formally established at the 26 February 2015 meeting of the group previously known as the Northern Advisory Drainage Committee.

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**2) Discussion and options**

The proposed works for the 2016-17 financial year are detailed below:

The following works have not yet been priced or instructed:

- Access culverts at Milich's and Matijevich's
- Additional spraying on the Hobson Drain
- Removal of the bamboo adjacent to the Heath Road bridge.
- Removal of the Alligator weed from the Hobson Drain

### **General Spraying Issues**

The spraying contractor has advised that they have had the following problems associated with the last round of spraying in the 1516 financial year:

- Due to the weather last summer the vegetation growth has been vigorous and this made it difficult to identify any hazards and as a consequence impeded the progress of the spraying operation.
- Due to the late commencement to the spraying operations the spraying contractor experienced a number of weather related problems and the drains had significant vegetation growth in them.

The spraying contractor had advised that they have noted the following issues:

### **Alligator weed**

There several areas where Alligator weed is becoming a problem.

An EPA "Permission for Use of Substances" & NRC consent is required specific to the areas to be sprayed, for the correct type of spray. The spray used has to be applied with considerable forethought as it can effect crop growth, for some distance downstream.

A funding allowance of \$3,000 plus NRC fees was included in the 2016/17 year for spot spraying.

### **Accessibility Issues**

A notice has been sent to all property owners reminding them of the requirements that they must comply with the Drainage Bylaw.

A funding allowance of \$3,000 in each area (\$6,000) has been included in the 2016/17 year for access work and culverts etc.

### **Machine Cleaning**

There had been some areas identified which required machine cleaning work.

A complete review of these areas was carried out and the major portion of the Waiharara drains were machine cleaned due to the significant vegetation mats which required removal.

### **Repeated Note:**

Land owners adjacent to all drains need to be aware of the influence of DOC and the discharge of silt downstream. To continue to operate these drainage schemes, the movement of silt needs to be minimised.

The most practical solution is to batter the banks back at the time of machine drain cleaning. This will progressively stop virtually all bank erosion and most of the silt movement. This will also minimise cost.

This will require fences to be moved back from the edge of drains to allow the battering of the drain banks.

Different soils require different batter angles but as a guideline the angles will be between 30 to 40 degrees.

Once battered the banks will no longer be sprayed at all, only machine trimming being carried out.

The spraying will be confined to weed growth in the centre, un-battered section of the drains.

Any mats will be removed by machine without cutting into the bank batters, using a weed rake wherever possible.

By using this method and drain shape, DOC and NRC involvement will be minimised and the long term future of the drains maintained.

A good reference is the NRC publication "2014-Managing-your-drains-v2".

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### 3) Financial implications and budgetary provision

A summary of the 16/17 financial year is as follows:

<b><u>Waiharara</u></b>	<b>Budget</b>
2015-16 Residual funds (reserve funds available)	\$15,383
2016 Opening Balance (rated income)	\$7,000
2016-17 Expenditure completed	\$14,237
2017 Additional Proposed Expenditure	\$6,000
<b>2016-17 Closing Reserve Balance</b>	<b>\$2,146</b>

#### **Kaikino**

A summary of the 16/17 financial year is as follows:

	<b>Budget</b>
2015-16 Residual funds (reserve funds available)	\$12,091
2016-17 Opening Balance (rated income)	\$9,000
2016-17 Expenditure completed	\$2,031
2017 Additional Proposed Expenditure	\$9,986
<b>2016-17 Closing Reserve Balance</b>	<b>\$9,074</b>

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### 4) Reason for recommendation

The reason for the recommendation is to confirm the works and their associated costs to be completed by 30 June 2017.

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Manager: Stephen Little - Manager 3 Waters Operation

Compliance schedule:

Full consideration has been given to the provisions of the Local Government Act 2002 S77 in relation to decision making, in particular:

1. A Local authority must, in the course of the decision-making process,
  - a) Seek to identify all reasonably practicable options for the achievement of the objective of a decision; and
  - b) Assess the options in terms of their advantages and disadvantages; and
  - c) If any of the options identified under paragraph (a) involves a significant decision in relation to land or a body of water, take into account the relationship of Māori and their culture and traditions with their ancestral land, water sites, waahi tapu, valued flora and fauna and other taonga.
  
1. This section is subject to Section 79 - Compliance with procedures in relation to decisions.

Relationship with existing policies and Community outcomes.	Policy #4302 - Northland River Management Policy.  Policy #2104-14 Procuring Goods and Services.
Possible implications for the relationship of Māori and their culture and traditions with their ancestral land, water, site, waahi tapu, valued flora and fauna, and other taonga.	Ngai Takoto Iwi is included in the development of the management plan for the districts drainage areas.
Views or preferences of persons likely to be affected by, or to have an interest in the matter, including persons with disabilities, children and older persons.	The purpose of the Committee is to liaise with persons likely to be affected.
Does the issue, proposal, decision or other matter have a high degree of significance or engagement as determined under the Council's Policy #2124?	No.
If the matter has a Community rather than a District wide relevance has the Community Board's views been sought?	This report seeks a recommendation from the Committee to the Te Hiku Community Board.
Financial Implications and Budgetary Provision.  Chief Financial Officer review.	Financial implications are to be considered by the committee and budgetary provision is made by way of a targeted rate.  The Chief Financial Officer has reviewed this report.

**MEETING:** WAIHARARA AND KAIKINO DRAINAGE AREAS COMMITTEE - 27 MARCH 2017

**Name of item:** WAIHARARA AND KAIKINO DRAINAGE AREAS WORKS PROGRAMME UPDATE FOR THE YEAR ENDING 2018

**Author:** Steven Smith - Stormwater Engineer

**Date of report:** 27 March 2017

**Document number:** A1839784

### Executive Summary

The purpose of the report is to provide the Waiharara and Kaikino Drainage Areas Committee with an outline of the proposed works and costs within the Waiharara and Kaikino Drainage Areas during the financial year ending 30 June 2018.

### Recommendation

***THAT the Waiharara and Kaikino Drainage Areas Committee make the following recommendation to the Te Hiku Community Board:***

***THAT the following works in the Waiharara and Kaikino Drainage Area be approved to be completed before 30 June 2018, with the spraying program to start during November 2017:***

#### **Waiharara**

<b><i>Spraying of drains during Spring and Autumn</i></b>	<b><i>\$3,000</i></b>
<b><i>Contingency allowance</i></b>	<b><i>\$3,000</i></b>
<b><i>Machine clearing of the drains</i></b>	<b><i>\$4,500</i></b>
<b><i>NRC Resource Consent Application Fees</i></b>	<b><i>\$1,500</i></b>
<b><i>Total</i></b>	<b><i>\$12,000</i></b>

#### **Kaikino**

<b><i>Spraying of drains during Spring and Autumn</i></b>	<b><i>\$3,000</i></b>
<b><i>NRC Resource Consent Application Fees</i></b>	<b><i>\$1,500</i></b>
<b><i>Machine clearing of the drains</i></b>	<b><i>\$6,500</i></b>
<b><i>Contingency allowance</i></b>	<b><i>\$3,000</i></b>
<b><i>Total</i></b>	<b><i>\$14,000</i></b>

## 1) Background

The Waiharara and Kaikino Drainage Areas Committee was formally established at the 26 February 2015 meeting of the group previously known as the Northern Advisory Drainage Committee.

## 2) Discussion and options

The proposed works for the 2017-18 financial year are as detailed below:

### **General Spraying Issues**

The spraying contractor has advised that they have noted the following issues:

### **Alligator weed**

There several areas where Alligator weed is becoming a problem.

An EPA "Permission for Use of Substances" & NRC consent is required specific to the areas to be sprayed, for the correct type of spray. The spray used has to be applied with considerable forethought as it can effect crop growth, for some distance downstream. NRC fees have been included in the 17/18 year for spot spraying.

### **Machine Cleaning**

Waiharara had substantial machine cleaning in 16/17. An allowance has been made for some additional machine cleaning.

Kaikino has had not machine cleaning recently and an allowance has been made for machine cleaning this year.

A complete review of these and any other areas which may require machine cleaning shall be investigated in conjunction with the spraying contractor to identify the location of any significant vegetation mats which will require removal.

### **Repeated Note:**

Land owners adjacent to all drains need to be aware of the influence of DOC and the discharge of silt downstream. To continue to operate these drainage schemes, the movement of silt needs to be minimised.

The most practical solution is to batter the banks back at the time of machine drain cleaning. This will progressively stop virtually all bank erosion and most of the silt movement. This will also minimise cost.

This will require fences to be moved back from the edge of drains to allow the battering of the drain banks.

Different soils require different batter angles but as a guideline the angles will be between 30 to 40 degrees.

Once battered the banks will no longer be sprayed at all, only machine trimming being carried out.

The spraying will be confined to weed growth in the centre, un-battered section of the drains.

Any mats will be removed by machine without cutting into the bank batters, using a weed rake wherever possible.

By using this method and drain shape, DOC and NRC involvement will be minimised and the long term future of the drains maintained.

A good reference is the NRC publication "2014-Managing-your-drains-v2".

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### **3) Financial implications and budgetary provision**

A summary of the 17/18 financial year is as follows:

	<b>Budget</b>
Waiharara	
2016-17 Residual funds (reserve funds available)	\$2,146
2017-18 Opening Balance (rated income)	\$14,000
2017-18 Proposed Expenditure	\$12,000
<b>2017-18 Closing Reserve Balance</b>	<b>\$4,146</b>

Kaikino

A summary of the 17/18 financial year is as follows:

	<b>Budget</b>
2016-17 Residual funds (reserve funds available)	\$9,074
2017-18 Opening Balance (rated income)	\$8,000
2017-18 Proposed Expenditure	\$14,000
<b>2017-18 Closing Reserve Balance</b>	<b>\$3,074</b>

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#### **4) Reason for recommendation**

The reason for the recommendation is to confirm the works and their associated costs to be completed by 30 June 2018

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Manager: Stephen Little - Manager 3 Waters Operation

Compliance schedule:

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  - a) Seek to identify all reasonably practicable options for the achievement of the objective of a decision; and
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