56 Natural Hazards

56.1 Introduction

This Chapter contains rules relating to land uses in areas mapped as hazard areas. These areas are shown on the Planning Maps by shading on the Resource Area Maps. These rules apply in addition to any other rules in this Plan applicable to the same areas or sites. In addition, Council's *"Policy for Application of Section 36(2) of the Building Act 1991*[1]*"* will apply to all areas mapped as hazard areas, particularly to Coastal Hazard Areas.

The Planning Maps identify land which, on the information currently available, is susceptible to flooding; either due to rivers or streams overflowing their banks, inundation from the sea during high tides or storm surges, or to water ponding during extended periods of wet weather. Due to the scale of the mapping, there will be some areas within the identified land that are less prone, or not prone, to flooding, just as outside the identified flood-prone land there will be land which is subject to flooding.

Coastal hazard reports prepared for Northland Regional Council and Whangarei District Council from 1988 onwards have been used as information sources to assess Coastal Hazard Areas. A list of these information sources is contained in Schedule 56.1 of the Plan. Copies of these references are available from the Council.

The Council is conscious of the need to improve the quality of the natural hazards information and will be carrying out the appropriate research and analysis as resources permit. For example there is a programme to prepare Catchment Drainage Plans for all significant areas of development in the District. People who wish to carry out development in an area identified on the Resource Maps as being subject to natural hazards, should check with the Council to see whether there is any more detailed or up-to-date information relating to the property in question.

Schedule 56.1

The coastal hazard information included on the Resource Maps of this Plan is derived from the following Coastal hazard information sources:

NRC 1988: *Coastal Hazard Identification. Whangarei County*. Technical Publication No.1988/1, March 1988, held by Northland Regional Council.

Gibb, J.G. 1998a: *Review of Coastal Hazard Zones for Eleven Selected Beaches in Whangarei District, Northland Region.* Consultancy Report C.R. 98/4 prepared for and held by Northland Regional Council. July 1998.

Gibb, J.G. 1998b: *Coastal Hazard Zone Assessment for the One Tree Point-Marsden Bay Area, Whangarei Harbour, Whangarei District.* Consultancy Report C.R. 98/3 prepared for and held by Whangarei District Council.

Gibb, J.G. 1999: *Coastal Hazard Risk Zone Assessment for Pataua and Matapouri Bay, Whangarei District.* Consultancy Report C.R. 99/7 prepared for and held by Whangarei District Council. December 1999.

IPCC 1996: *Climate Change 1995. The Science of Climate Change. Summary for Policy Makers and Technical Summary of the Working Group 1*. Report.

1 Now superceded by Section 72 of the Building Act 2004

Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge. Held by Northland Regional Council.

56.2 Natural Hazards Rule Table

56.2.1 Coastal Hazards

Construction or alteration of a building or structure in a Coastal Hazard Area is **permitted** if: a) It does not occur in Coastal Hazard Area 1; and b) All buildings within Coastal Hazard Areas have a minimum floor level of 2.5m above One Tree Point Datum Mean Sea Level 1964.	The construction or alteration of a building or structure that does not comply with a condition for a permitted activity is a **discretionary** activity.

56.2.2 Earthworks

Earthworks upon sand dune complexes are a **permitted** activity if: a) Such earthworks do not occur in Coastal Hazard Area 1; and b) In Coastal Hazard Area 2, the earthworks do not exceed a volume of 25.0m^3 or an area of 150.0m^2, and all sand displaced by such works is returned to the dune complex immediately; and c) The site of the earthworks which will not be covered by buildings or structures is immediately stabilised by appropriate dune binding vegetation within 10 working days of such earthworks being completed.	Any earthworks upon dunes that does not comply with a condition for a permitted activity is a **discretionary** activity.

56.2.3 Flooding

Construction or alteration (excluding internal modifications) of a building, construction of vehicular access to a building or allotment, or earthworks in a Flood Susceptible Area, is a **permitted** activity if: a) A report or certificate from a suitably qualified and experienced professional is provided to the Whangarei District Council which indicates that the activity is designed to accommodate the flood hazard and will not create any adverse effects upstream or downstream nor endanger human life; or b) The work involved is maintenance of an existing building. **Note:** Reference may be made to previous reports relating to the flood susceptibility of the area.	Construction or alteration of a building or earthworks that does not comply with a condition for a permitted activity is a **restricted discretionary** activity. ***Discretion is restricted to:*** i. Construction or alteration of a building in relation to its location; ii. The avoidance, remediation or mitigation of coastal hazards.

56.2.4 Mining Subsidence

Construction or alteration (excluding internal modifications) of a building or earthworks within a Mining Hazard Area is a **permitted** activity if: a) A geotechnical survey of the ground under, and in the immediate vicinity of the site, is undertaken, and b) A report or certificate, which has been prepared by a suitable qualified and experienced professional, is provided to the Council which indicates that: i) Where the site is to accommodate a residential unit, there is an identified building area of at least 100m2 where a residential unit can be built so that there is compliance as a permitted activity with the rules in this plan; and ii) The site is suitable for the activity or structure, and iii) The structure is of an appropriate design and the building materials are appropriate in the circumstances; and c) The risk of subsidence is not increased by the construction, alteration or excavation.	Construction or alteration of a building or earthworks that does not comply with a condition for a permitted activity is a **restricted discretionary** activity. **Discretion is restricted to:** i. Construction standards; ii. Effects on health and safety.

56.3 Reasons for Rules / Explanations

Coastal Hazards
Short-term coastal erosion occurs because of storm events such as high winds, waves and increased water levels along the coastal foreshore. Coastal flooding is an associated natural hazard. Coastal Hazard Areas prone to coastal erosion and flooding are shown on the Planning Maps. These coastal hazards can present a serious risk to human life and physical structures. A potential rise in sea level will exacerbate these hazards. By ensuring that the floor levels of structures and buildings are at least 2.5m above One Tree Point Datum Mean Sea Level 1964, this risk will be significantly reduced. Natural processes and features such as coastal dunes and mangroves can provide some defence against coastal hazards and this protection should be maintained and enhanced where possible.

Earthworks
Earthworks in coastal dunes can reduce the protection these natural systems provide against coastal hazards. Earthworks also make the dunes very unstable, thus causing a new hazard to emerge. Re-vegetation will help protect the dunes and thus protect the properties behind them.

Flooding
The Flood Susceptible Areas identified on the Planning Maps identify flooding from river systems, potential overland flow and low-lying areas which have experienced, or could be subject to, flooding under conditions such as poor drainage. The controls in the Plan are intended to reduce the risk from flooding by requiring the flood risk to be assessed when undertaking any activity such as building or forming an access to an allotment or building. There is also a perceived risk to human safety to those traversing such an access during peak flood periods.

The assessment of flood susceptibility in plantation forestry areas may be included as part of the Annual Harvesting Plans, prepared as a requirement of resource consents granted by the Northland Regional Council.

Mining Subsidence
The areas subject to possible mining subsidence are identified on the Planning Maps. A network of tunnels exists in the residential areas of Kamo and Hikurangi. The risk to properties situated above these old coal mining tunnels, and to human life, can be minimised by ensuring that any earthworks or structure is suitable and does not increase the likelihood of subsidence. This can be achieved by controlling the design and building materials of structures that are built in these areas.

Revision and Sign-off Sheet

Date Approved	Editor	Paragraph	Change Reference	Decision Date	Approved By
27 June 2007	FP		Typo Paragraph 1 page 4.		PW
4 October 2007	FP	56.2.3; 56.3	Plan change 51 as notified		PW
4 October 2007	FP	56.2.3; 56.3	Plan change 51 amendments as adopted by Council	ES 20 September 2007	PW
4 February 2010	FP	56.2.3	Typo correction		PW
21 September 2010	FP	Reference to Chapter 2.3.3	Plan Change 106 consequential changes, this provision no longer exist.	Record 10/96471	PW

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