

Part 8

Natural hazards

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Plan modification annotations

 indicates where content is affected by proposed plan modification x. refer to plan modification folder or website for details.

 indicates where the content is part of plan modification x, which is subject to appeal.

Underlined content to be inserted.

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8.1 Introduction

The council's functions as outlined in section 31 of the RMA include the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of the avoidance or mitigation of natural hazards. Section 7 also requires the council to have regard to the effects of climate change.

Natural hazards are any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire or flooding) the action of which adversely affects or may adversely affect human life, property or other aspects of the environment.

8.2 Resource management issue

The significant resource management issue which needs to be addressed in the Plan is:

- How to manage irregular or periodic exposure to naturally occurring events such as earthquakes, fires, drought, landslides, cyclones, floods, erosion, slope instability and subsidence, sea storm surge, tsunami, and volcanic and geothermic activity.

Explanation

The frequency and magnitude of these events will vary and their effects on the environment, including people, property and infrastructure will vary as a result. Many natural hazards are not well understood, in terms of their possible location, frequency, magnitude and consequences.

8.3 Objectives and policies

8.3.1 Objective

To avoid the adverse effects of natural hazards on the environment, including life, property and infrastructure as far as is practicable.

Policies

1. By adopting a precautionary approach when there is a lack of information about natural hazards with a high return period (such as a 1 in 10 year or 1 in 50 year flood).
2. By preventing new development and activities in high risk areas where the effects of the natural hazard cannot be adequately avoided or mitigated.
3. By taking into account the potential effects of tsunamis, coastal erosion and deposition processes and the possibility of sea level rise when planning for development near the coast.

Explanation

As well as the requirements of section 31 of the RMA, the Building Act 2004 also requires territorial authorities to place limitations and restrictions on buildings in natural hazard areas. Section 71 of the Building Act 2004 requires a building consent authority (such as the council) to refuse to grant a building consent for construction of a building, or for major alterations to a building:

- if the land on which the building work is to be carried out is subject to or likely to be subject to one or more natural hazards; or
- if the building work is likely to accelerate, worsen or result in a natural hazard on that land or on any other property.

Section 71 of that Act goes on to provide for the granting of consent in certain circumstances.

The Building Act 2004 also requires building consent authorities to issue a building consent if the building work will not accelerate, worsen, or result in a natural hazard on land subject

to hazards and it is reasonable to grant a waiver or modification of the building code in respect of the natural hazard concerned.

8.3.2 Objective

To avoid the creation or exacerbation of the risks of natural hazards by human activities as far as is practicable

Policies

1. By controlling earthworks, and vegetation clearance (including riparian vegetation clearance), to avoid or mitigate the effect of activities which may exacerbate the risk of natural hazards.
2. By protecting hazard prone areas from activities which will accelerate erosion, inundation, and other natural hazards.
3. By limiting the extent of impervious surfaces to decrease the peaks in stormwater flow during high rainfall.
4. By requiring development and activities to adapt to, or retreat from, areas likely to be severely affected by natural hazards.

Explanation

Activities such as earthworks and vegetation clearance (including riparian vegetation clearance) can decrease the stability of land, making it more prone to erosion and slippage. The extent of this will depend on such factors as the slope of the land, the extent of the area modified, the soil type and rainfall.

8.3.3 Objective

To protect and, where appropriate, to enhance existing physical resources and natural defences which moderate the effects of natural hazards.

Explanation

Natural defences include vegetation cover, sand dunes, mangroves, coastal cliffs and other naturally occurring physical resources that can lessen the impacts of flooding, soil instability, storm surge, tsunami, earthquakes and other natural hazards.

Policies

1. By protecting and, where appropriate, enhancing the natural defences (eg dunes) which provide protection from natural hazard events.
2. By avoiding the use of hard engineering structures (such as sea walls and groynes) as far as is practicable, especially those within the coastal environment (above mean high water springs) which adversely affect public access to coastal areas or landscape values.

Explanation

Coastal erosion is a natural process on almost all coastlines. It only becomes a hazard when it poses a real or perceived threat to things that humans value. Sea walls, groynes and other methods of shoreline armoring may protect private property but may cause the loss of the dry sand beach area available to the public or have adverse effects on the local environment. They also adversely affect the natural appearance of coastal areas and replace natural processes that may protect the coast from coastal erosion. The presence of armoring structures may also encourage inappropriate intensification or development in coastal hazard areas and place greater liability on the council and the Auckland Regional Council should these structures fail. Failure of sea walls and groynes may lead to further inappropriate modification of the coastal environment. Sea walls in one area may affect the accretion or movement of sand in other areas. Seawalls enable beachfront interests to enjoy the benefit of a near-shore location while externalising the costs onto a wider community.

Soft solutions in the coastal environment such as the protection of dunes, beach nourishment and planting may be more effective in mitigating the effects of coastal hazards.

8.4 Resource management strategy

The resource management strategy is to implement rules to avoid or mitigate natural hazards. The frequency and magnitude of these natural hazard events will vary and their effects on the environment, including people, property and infrastructure will vary as a result. The rules concentrate on avoiding or mitigating those natural hazards with a higher probability of occurring in shorter time frames (eg in the next 100 years), including flooding and erosion, coastal erosion, and land slippage. Provisions within the Building Code provide protection for buildings from other natural hazards such as high winds, earthquakes and land settlement. The development and subdivision of land subject to a natural hazard will be subject to appropriate limitations. The planning maps contain information on known natural hazard areas, but in the absence of information on the maps, the Plan sets limitations on activities in areas that have a high probability of being affected by natural hazards. While there is debate, evidence suggests that climate change will result in an increase in the frequency and severity of natural hazards. These risks are managed through the rules during the resource consent process.

8.5 Rules - restricted discretionary activities

8.5.1 Activities

The following are restricted discretionary activities:

1. The removal of any living vegetation more than 0.5m high (except for any species listed in [appendix 14 - Plant and animal pests](#)) on any piece of land where the slope is steeper than 1 in 3 (18°).
2. The removal of any living vegetation more than 0.5m high (except for any species listed in [appendix 14 - Plant and animal pests](#) or grass pasture) within 5m of the centreline of any stream or river or the edge of any lake or wetland.
3. The removal of any living indigenous vegetation (except for any species listed in [appendix 14 - Plant and animal pests](#) or grass pasture) greater than 2m in height within 10m of the centreline of any stream or river or the edge of any wetland.
4. The removal of any living vegetation (except for any species listed in [appendix 14 - Plant and animal pests](#)) more than 1m high from any area identified as a soil warning area, soil register area or in an erosion risk zone.
5. Any of the following:
 - a. The location of any, building, permanent structure, wall or fence (except a post and wire fence)
 - b. Exterior additions or alterations to, or change of use of, any building or structure
 - c. The placement of any septic tank, wastewater treatment and disposal system, effluent disposal field, underground storage tank, water tank or stormwater pipe or soakage field
 - d. Any earthworks
 - e. The storage of any hazardous substance in volumes that exceed the permitted activity rules in [part 9 - Hazardous facilities and contaminated land](#);

When located as follows:

- i. In any natural hazard area identified on the planning maps; or
- ii. In any of the following locations, subject to any more accurate natural hazard information identified in the planning maps to the contrary:

- at an elevation less than 1m above the edge of any adjacent permanent stream, river, wetland or lake
- within a horizontal distance of 20m from the top of any coastal cliff with a slope angle steeper than 1 in 3 (18°)
- on any slope with an angle greater than or equal to 1 in 2 (26°)
- at an elevation less than 3m above mean high water springs if the activity is within 20m of mean high water springs
- at an elevation less than 2m above mean high water springs if the activity is located more than 20m from mean high water springs.

Exception

Provided that activities 5(a) to 5(e) above do not apply to any land located within (i) or (ii) where a report from an appropriately qualified engineer establishes that the land is not subject to, and will not be subject after any proposed activity, building or other structure is completed, to any of the following:

- flooding, in a 1 in 100 year storm
- coastal erosion over a 50 year time frame
- instability or erosion.

Rules 1-5 above do not apply to activities within the conservation land unit undertaken by the Department of Conservation or Auckland Regional Council for structures, facilities and operations in accordance with its functions under the Conservation Act 1987.

Note: the removal of plant pest species and the use of post and wire fences do not require a resource consent from the council.

8.5.2 Notification requirements

Except as provided for by section 95A(4) of the RMA, applications for a resource consent for the above activities will be considered without public notification or the need to obtain the written approval of or serve notice on affected persons (in accordance with section 95A(3) and 95B(2) of the RMA).

8.5.3 Matters of discretion

For applications under [rules 8.5.1\(1\)-\(4\)](#), the council has restricted its discretion to considering the following matters:

1. The extent of vegetation removal.
2. The replacement of any vegetation removed.
3. Methods to avoid or mitigate erosion or slippage of the land as the result of the removal of vegetation.
4. The need for the vegetation clearance to establish a site for horticultural or pastoral farming purposes.

For applications under [rules 8.5.1\(2\)-\(4\)](#), the council has restricted its discretion to considering items (1)-(3) above.

For applications under [rule 8.5.1\(5\)](#), the council has restricted its discretion to considering items (1) to (3) above and also the following matters:

5. Possible effects on public safety and other property.
6. The likelihood of a natural hazard event occurring and the likely extent of any damage.
7. Any exacerbation of an existing natural hazards or creation of a new natural hazard.
8. Effects on landscape values.

9. Effects on public access.
10. The ability to relocate coastal buildings or structures.

8.5.4 Assessment criteria for restricted discretionary activities

The following assessment criteria apply to all applications under [rule 8.5.1](#):

1. The extent of vegetation removal from areas such as steep slopes, near streams, rivers, lakes or wetlands.
2. The extent to which the proposal ensures the replacement of any vegetation which is damaged or removed from areas such as steep slopes, near streams, rivers, lakes or wetlands. This will include the type of vegetation to be used, its height, location and phasing of the planting.
3. The extent to which methods will be undertaken to avoid or mitigate erosion or slippage of the land as the result of the removal of vegetation.

In addition to items (1) to (3) above, the following additional assessment criterion applies to applications under [rule 8.5.1\(1\)](#):

4. The extent to which the vegetation clearance is needed to establish a site for horticultural or pastoral farming purposes having regard to its intended use, and the orientation, topographical and drainage characteristics of the site as may support that use.

In addition to items (1) to (3) above, the following additional assessment criteria apply to applications under [rule 8.5.1\(5\)](#):

5. The likelihood of a natural hazard event occurring, and the likely extent of damage occurring as the result of that event. In considering this, regard will be had to the extent to which site specific analysis of the hazard (such as engineering stability or flooding reports) and its effects have been undertaken and any other information the council may have on the site and surrounding land.
6. The extent to which the proposal affects the potential impacts of the natural hazard present, or has the potential to create a new natural hazard on the subject land and any adjacent land. In considering this, regard will be had as to whether the proposal is likely to:
 - avoid, remedy or mitigate the potential impacts of the natural hazard; or
 - accelerate or exacerbate the probability of a natural hazard occurring and/or the potential impacts of the natural hazard.
7. The extent to which the proposal ensures that any storage tanks (above ground or underground) installed in hazard prone areas are protected from damage, flooding, spilling, dislocation and leakage in the event of a natural hazard event.
8. The extent to which the proposal ensures that hazardous substances stored in hazard prone areas are protected from flooding, spillage and leakage in the event of a natural hazard event.
9. The extent to which the proposal includes non-structural solutions such as planting to avoid, remedy or mitigate the hazard rather than hard engineering solutions.
10. The extent to which landscape values, and public access are affected by any structure used to avoid, remedy or mitigate any natural hazard.
11. The extent to which any building, structure or activity located in a natural hazard area near the coast, can be relocated in the event of severe coastal erosion and shoreline retreat.

8.6 Rules - discretionary activities

8.6.1 Activities

The activities listed below are discretionary activities.

1. The placement of any material, objects or structures, in or on any beach above mean high water springs in a manner that may serve as a defence against coastal erosion.
2. The modification, alteration or removal of sand dunes and vegetation (except for any species listed in [appendix 14 - Plant and animal pests](#)) on sand dunes within 40m of mean high water springs.

8.6.2 Explanation

Natural hazard areas as identified on the planning maps include flood prone areas, areas identified as filled, unstable or weak ground, including areas of suspected slope instability or where soils reports are held; refuse tip sites with weak ground, and coastal erosion risk areas. It does not include any wind zone identified for the purposes of the Building Act 2004.

Flood prone areas include type A flood plains, type B flood risk areas and secondary or overland flow paths taken by stormwater on its way to a flood plain in a storm that is more severe than a 1 in 10 year storm. Type A flood plains shown on the council's planning maps and geographic information system ('GIS') are considered by the council to be a reasonably accurate assessment of flooding in a 1 in 100 year storm. Type B flood risk areas shown on the planning maps or GIS are not as accurate as type A areas and may be based on incomplete information.

8.6.3 Additional requirements

There may be instances where the requirements of section 71 of the Building Act 2004 will prevent a building consent being issued, even though the activity is authorised under the RMA by virtue of the above rules, if the council believes the land on which the building work is to be carried out is subject to or likely to be subject to one or more natural hazards. The council is likely to refer to any information it has, including information stored on its GIS when making this determination.

The placement of any structure in, on, under or over the bed of a lake or any river or stream or below mean high water springs is controlled by the Auckland Regional Council.

8.6.4 Assessment criteria for discretionary activities

The council's assessment of an application for a discretionary activity will include consideration of the following matters:

1. The matters set out in [clauses 8.5.4\(4\), \(5\), \(8\), \(9\) and \(10\)](#)
2. The extent to which any proposed coastal protection works involving the placement of any material, objects or structures, in or on any area located outside of the coastal marine area will be located and designed so as to avoid adverse environmental effects including:
 - long term visual effects on the coastal landscape and amenity values
 - any likely increase in the coastal hazard posed to the coastline in question, including increased rates of erosion, accretion, subsidence or slippage
 - undermining of the foundations at the base of the structure
 - erosion in front of, behind or around the ends of the structure
 - settlement or loss of foundation material
 - movement or dislodgement of individual structural elements

- off shore or long shore loss of sediment from the immediate vicinity.
- 3. The extent to which any existing natural features (eg sand dunes in coastal hazard areas) will provide protection from the natural hazard present.
- 4. The extent to which methods to avoid or mitigate erosion of sand dunes as the result of any modification, alteration or the removal of vegetation from the dune.

8.7 Relationship with rules in other parts of the Plan

Refer to [part 12 - Subdivision](#) for the rules for subdividing in natural hazard areas.

[Part 14 - Definitions](#) must be referred to as it is likely to contain definitions of terms used in this part of the Plan.