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## 11. Natural Hazards

### 11.1 Introduction

#### 11.1.1 Dunedin's natural hazard risks

Communities in and around Dunedin are susceptible to a variety of natural hazards, including flooding from rivers and from the sea due to storm events, tsunamis and sea level rise, land instability, and earthquakes.

A large storm event could easily cause the Taieri River to flood, as well as several smaller rivers. This issue is particularly acute on low-lying flood plains and in coastal areas. Coastal storm surges may also result in flooding of certain areas.

Land instability can affect buildings built on steep sections and large storm events can contribute to land instability. Earthquakes can contribute to land instability and cause liquefaction. Finally, sea level rise as a result of climate change poses some risk to Dunedin, particularly in low-lying coastal communities.

Under the Resource Management Act 1991, Council is responsible for managing land use and subdivision to avoid or mitigate the risks from natural hazards. Council is also required to keep records of natural hazards.

The effects of natural hazards vary in terms of both their likelihood and consequence. Some natural hazards such as flooding may occur relatively frequently and may damage property whereas natural hazards such as tsunami occur infrequently, but when they do occur they pose serious risk to life.

Other natural hazards Dunedin may be vulnerable to include snow, ice, drought, strong winds, and fire. These natural hazards are managed outside the natural hazard provisions of the Plan. For example, the risks from snow and strong winds are managed through the Building Act 2004, and other mitigation measures are taken by the DCC Transportation team.

The Second Generation Plan (2GP) identifies natural hazards through overlays and mapped areas, and aims to reduce the effects of natural hazards through rules according to the type of natural hazard, the risk it poses and the sensitivity of the activity proposed.

#### 11.1.2 Guidance on risk

Land use, subdivision, and development needs to be managed to minimise Dunedin's vulnerability to natural hazards.

In response to the issues, the 2GP proposes to manage the risks from natural hazards based on considering the overall risk from the hazard – in terms of both likelihood and consequence. This approach aims to strike a balance between enabling people to utilise their property without putting them or important assets at risk if an event was to occur. The key priority in managing the risks from natural hazards is the protection of people including loss of life, injury, the risk of being cut off from Civil Defence assistance, or the failure of key infrastructure required to ensure the health and safety of communities (such as wastewater treatment systems). After this the focus is on risk to property, such as loss of, or damage to, buildings.

In the context of the natural hazards provisions, risk refers to the likelihood of a natural hazard event occurring, in combination with the potential adverse consequences of that event, as set out in Table 11.1 below. This approach is based on guidance provided by MfE (Preparing for Future Flooding (A guide for local government in New Zealand) 2010) and GNS Science (Risk-based Land Use Planning for Natural Hazard Risk Reduction, 2013). The degree of risk is influenced by the magnitude of a natural hazard event, and the type of consequences to human safety, property, or the environment arising from the event either on-site or farther afield.

The likelihood of a natural hazard event occurring is placed in the context of the operational life of buildings,

infrastructure and long-term land-use activities. For most natural hazard events, it is difficult to determine exact probabilities of occurrence, and likelihood estimates are indicatively applied, rather than based on any direct scientific basis. The consequences of a natural hazard event occurring is placed in the context of health and safety, costs of damage to the built environment, and social and economic impacts on the wider community.

For the purposes of the natural hazards provisions, the sensitivity of land-use activities is classified according to the health and safety implications of land-use. The land-use sensitivity helps to inform the consequences that may occur as a result of a natural hazard event. This sensitivity classification draws from, and broadly corresponds to, the Building Importance Levels defined in the Building Amendment Regulations 2012.

Risk can be reduced through mitigation measures including site design and layout, material used, and the design of buildings and structures. While these measures should be taken into account when assessing risk, the effectiveness and appropriateness of these mitigation measures, including the residual risk in the event these mitigation measures fail, should also be considered.

**Table 11.1 Risk Guidance**

Likelihood	Minor consequences	Moderate consequences	Major consequences
Very likely (less than 1:50 (1 in 50 year event) or annual exceedance probability (AEP) 2% or more)	Moderate risk	High risk	High risk
Moderately likely <sup>1</sup> (1:50 - 1:200 or AEP range 0.5% to 2%)	Low risk	Moderate risk	High risk
Unlikely (1:200 - 1:500 or AEP range 0.2% to 0.5%)	Low risk	Low risk	Moderate risk
Very unlikely (1:500 to 1:2500 or AEP range 0.04% to 0.2%)	Very low risk	Low risk	Moderate risk
Extremely unlikely (more than 1: 2500 or AEP 0.04% or less)	Very low risk	Very low risk	Low risk

<sup>1</sup> Where likelihood is unknown or poorly established, use 'moderately likely'.

### 11.1.3 Hazard provisions sensitivity classification

For the purpose of the hazard provisions, activities are categorised as sensitive activities, potentially sensitive activities or least sensitive activities as follows:

**Table 11.2 Hazard sensitivity**

Hazard provisions sensitivity classification	Land use activities
Sensitive activities	<ul style="list-style-type: none"> <li>• Cemeteries</li> <li>• Crematoriums</li> <li>• Registered health practitioners</li> <li>• Early childhood education</li> <li>• Emergency services</li> <li>• Hospital</li> <li>• Landfills</li> <li>• Marae-related activities</li> <li>• Prison or detention centre</li> <li>• Residential activities (excluding working from home that do not involve additional people on-site)</li> <li>• Schools</li> <li>• Service stations</li> <li>• Visitor accommodation</li> </ul>



Hazard provisions sensitivity classification	Land use activities
Potentially sensitive activities	<ul style="list-style-type: none"><li>• Airport</li><li>• Campus</li><li>• Community and leisure (excluding marae-related activities)</li><li>• Commercial activities (excluding visitor accommodation, registered health practitioners, service stations, commercial advertising)</li><li>• Factory farming</li><li>• Industrial activities</li><li>• Invermay/Hercus</li><li>• Major recreation facility</li><li>• Mining</li><li>• Port</li><li>• Rural tourism - large scale</li><li>• Rural research which requires a building</li><li>• Sport and recreation</li><li>• Taieri aerodrome</li><li>• All other commercial, community, industrial and major facility activities</li></ul>
Least sensitive activities	<ul style="list-style-type: none"><li>• Commercial advertising</li><li>• Conservation</li><li>• Domestic animal boarding and breeding</li><li>• Dunedin Botanic Garden</li><li>• Farming</li><li>• Forestry</li><li>• Grazing</li><li>• Mineral exploration</li><li>• Mineral prospecting</li><li>• Public amenities</li><li>• Rural ancillary retail</li><li>• Rural tourism - small scale</li><li>• Temporary activities</li><li>• Working from home</li><li>• All other rural activities</li></ul>

### 11.1.4 Hazard overlays

Dunedin's hazard prone areas are managed through six overlay zones, and two mapped areas (swales and dune systems). Initial assessments have established that risk (as defined in the guidance above) within the hazard overlay zones is as follows:

**Table 11.3 Risk within hazard overlay zones**

Hazard overlay zones	Risk (in accordance with the guidance on defining risk in Table 11.1 above)
Hazard 1 (flood) Overlay Zone	High
Hazard 1 (land instability) Overlay Zone	
Hazard 2 (flood) Overlay Zone	Moderate
Hazard 2 (land instability) Overlay Zone	
Hazard 3 (flood) Overlay Zone	Low
Hazard 3 (coastal) Overlay Zone	

At this stage, no areas have been identified as being exposed to a high or moderate risk from coastal hazards (Hazard 1 or 2 overlay zones), but areas may be included in these categories on the basis of future assessments.

While no areas have been identified as being exposed to a low risk of land instability (as hazard 3 overlay zones), many sites in Dunedin could fit within this category, but risk is managed primarily through the earthworks provisions, and Building Act 2004 requirements (e.g. foundation design).

Assessments of risk have been done on a catchment, landslide, or area-wide basis, often as a desk top assessment drawing on previous on-the-ground investigations and observations, and should be used as a starting point only. Local, site specific assessments are recommended. Where site specific assessments have been carried out and these have been provided to the DCC or Otago Regional Council, these may be available through the DCC Hazard Information Management System, or the Otago Regional Council online Otago Natural Hazards Database.

It is acknowledged that risk can be influenced by site or area specific factors, such as topography, elevation, soil make-up and other factors. Factors such as these should always be taken into account when assessing risk in relation to a particular proposal.

In addition, swales and undeveloped parts of dune systems are identified as mapped areas. Swales form part of the natural drainage system of the Taieri and can act to convey floodwater away from development. In these areas development is considered to be inappropriate, due to the role these features play in mitigating the effects of natural hazard events. Dune systems buffer land from coastal processes.



## 11.2 Objectives and Policies

### Objective 11.2.1

The risk from natural hazards, including climate change, is minimised, in the short to long term.

Policy 11.2.1.1	In the hazard 1 overlay zones avoid the establishment of: a. sensitive activities; and b. potentially sensitive activities that are not permitted in the underlying zone; unless the risk from natural hazards is avoided, or is no more than low.
Policy 11.2.1.2	In the hazard 1 overlay zones, only allow the establishment of potentially sensitive activities that are otherwise permitted in the underlying zone, where all of the following are met: a. the activity has a critical operational need to locate within the hazard 1 overlay zones and locating outside the hazard 1 overlay zones is not practicable; and b. the scale, location and design of the activity or other factors means risk is avoided, or is no more than low.
Policy 11.2.1.3	In the hazard 1 and 2 overlay zones, only allow new buildings, and additions and alterations to buildings, where the scale, location and design of the building or other factors mean risk is avoided, or is no more than low.
Policy 11.2.1.4	In the hazard 1 (flood) Overlay Zone, require outdoor storage to be designed, managed, and located so that: a. potentially dangerous materials will not be mobilised in a flood; and b. materials will not obstruct or impede flood water.
Policy 11.2.1.5	In the hazard 2 overlay zones, only allow the establishment of sensitive activities where the scale, location and design of the activity or other factors means risk is avoided, or is no more than low.
Policy 11.2.1.6	In the hazard 2 overlay zones, only allow the establishment of potentially sensitive activities that are not otherwise permitted in the zone, where all of the following are met: a. the activity has a critical operational need to locate within the hazard 2 overlay zones and locating outside the hazard 2 overlay zones is not practicable; and b. the scale, location and design of the activity or other factors means risk is avoided, or is no more than low.
Policy 11.2.1.7	Only allow large quantities of hazardous substances in hazard 1 and 2 overlay zones where they are stored in a manner that ensures risk from natural hazards is avoided, or is no more than low.
Policy 11.2.1.8	In the hazard 1 and 2 (flood) and hazard 3 (coastal or flood) overlay zones, require new buildings intended for sensitive activities to have a floor level that mitigates risk from flooding (including coastal flooding) and rising groundwater so that risk is no more than low.
Policy 11.2.1.9	In the hazard 3 (coastal) Overlay Zone, require new buildings to be used for sensitive activities to be relocatable so that as coastal hazards, including sea level rise, become more severe, these buildings can be relocated.
Policy 11.2.1.10	Avoid development activities, public amenities and temporary activities in a swale mapped area unless they will not obstruct or impede water in a flood hazard event, and not cause water to be diverted out of a swale.



### Objective 11.2.1

The risk from natural hazards, including climate change, is minimised, in the short to long term.

Policy 11.2.1.11	Avoid buildings and structures (except for relocatable surf life saving clubs) within a dune system mapped area unless there is no risk that development will cause, exacerbate, or be at risk from coastal erosion.
Policy 11.2.1.12	In all hazard overlay zones, or in any other area that the DCC has good cause to suspect may be at risk from a natural hazard (including but not limited to a geologically sensitive mapped area (GSA)), only allow earthworks - large scale or subdivision activities where the risk from natural hazards, including on any future land use or development, will be avoided, or is no more than low.
Policy 11.2.1.13	In the hazard 3 (coastal) Overlay Zone, where hazards may worsen over time due to climate change, only allow subdivision activities that will only result in a minimal increase in development potential for sensitive activities or potentially sensitive activities.
Policy 11.2.1.14	Only allow earthworks in a dune system mapped area where they will not: <ol style="list-style-type: none"><li>have adverse effects on the stability or buffering capacity of dune systems; and</li><li>create, exacerbate, or transfer risk from natural hazards.</li></ol>
Policy 11.2.1.15	Only allow earthworks in a swale mapped area and earthworks - large scale in hazard (flood) overlay zones, where they will not: <ol style="list-style-type: none"><li>obstruct or impede flood water, unless part of an approved natural hazard mitigation activity; and</li><li>create, exacerbate, or transfer risk from natural hazards.</li></ol>
Policy 11.2.1.16	Only allow earthworks - large scale in a land instability overlay zone where they will not have adverse effects on land instability nor create, exacerbate, or transfer risk from natural hazards.
Policy 11.2.1.17	Limit vegetation clearance in hazard (land instability) overlay zones, the dune system mapped area, and along the banks of water bodies, to a scale and type that ensures any resultant risk from erosion or land instability is avoided, or is no more than low.
Policy 11.2.1.18	In all hazard overlay zones, only allow new roads or additions or alterations to existing roads, where they are located and designed so that risk from natural hazards is avoided, or is no more than low.
Policy 11.2.1.19	Require buildings and structures to be set back from water bodies an adequate distance to ensure that risk, including from erosion and flooding, is avoided, or is no more than low.
Policy 11.2.1.20	Only allow natural mitigation earthworks and natural mitigation structures where: <ol style="list-style-type: none"><li>the option of doing nothing is not the best practicable option; and</li><li>it will reduce risk overall and not transfer, exacerbate, or create a new risk somewhere else.</li></ol>

## Rules

### Rule 11.3 Hazard Overlay Zones Development Standards

#### 11.3.1 Hazard Exclusion Areas

##### 11.3.1.1 Swale mapped area

- a. New buildings and structures, additions and alterations, public amenities, and buildings and structures associated with temporary activities must not be located inside the boundaries of a **swale mapped area**, except:
  - i. buildings or structures less than 36m<sup>2</sup> in a residential or the Rural Centre Zone; and
  - ii. post and wire fences or other fences where 80% of the surface area will permit the unobstructed passage of water.
- b. Other development activities, including outdoor storage, must not obstruct or impede water in a manner that may cause water to be diverted out of a **swale mapped area**.
- c. Activities that contravene the performance standard for swale mapped area are a non-complying activity, except in a residential or the Rural Centre Zone or temporary activities, in which case they are restricted discretionary activity.

##### 11.3.1.2 Dune system mapped area

- a. New buildings and structures, and additions and alterations, must not be located inside the boundaries of a **dune system mapped area**, except:
  - i. relocatable buildings intended for surf life saving; and
  - ii. natural hazard mitigation activities.
- b. Activities that contravene this performance standard are a non-complying activity.

#### 11.3.2 Maximum Area of Vegetation Clearance in the Hazard Overlay Zones

1. In the Hazard 1 (land instability) or Hazard 2 (land instability) Overlay Zones, vegetation clearance must not exceed a maximum area of 50m<sup>2</sup> per site, per calendar year, except vegetation clearance as part of any of the following is exempt from this standard:
  - a. the erection, maintenance or alteration of fences; or
  - b. the maintenance (but not extension) of existing network utilities, tracks, drains, structures, or roads; or
  - c. the construction of tracks up to 2m in width.
2. Vegetation clearance must not occur in a **dune system mapped area**, except vegetation clearance as part of any of the following, is exempt from this standard:
  - a. planting of indigenous species that is part of conservation activity;
  - b. the maintenance or alteration of fences (including gates);
  - c. the maintenance (but not extension) of existing utilities, tracks, drains, structures, or roads; or
  - d. vegetation clearance that is provided for as part of a conservation management strategy, conservation management plan, reserve management plan or covenant established under the Conservation Act 1987 or any other Act specified in the First Schedule of the Conservation Act 1987.

### 11.3.3 Minimum Floor Level

- In the Hazard 3 (coastal) Overlay Zone, new buildings to be used for sensitive activities (including residential buildings) must have a floor level that is greater than the following:

<b>Coastal Minimum Floor Level area</b>	<b>Levels in metres (in terms of the Otago Metric Datum (OMD), where current mean level of the sea is approximately 100.10 OMD)</b>
a. Karitane and Waikouaiti (Area A)	102.65m
b. Warrington, Blueskin Bay, Pūrākaunui, Long Beach, Otago Harbour, South Dunedin (Area B)	102.60m
c. Tomahawk, Brighton, South Coast, Papanui and Hoopers Inlets (Area C)	102.90m

- In the Hazard 2 (flood) and Hazard 3 (flood) overlay zones, new buildings to be used for sensitive activities (including residential buildings) must have a floor level that is equal to or greater than the floor level shown on the **Flood Minimum Floor Level Map**, or if not shown on that map, at least 500mm above ground level.
- Buildings that do not have people regularly present (for example, garages, carports, and sheds) are exempt from the performance standard for minimum floor levels in Rules 11.3.3.1 and 11.3.3.2.
- In the Hazard 2 (flood) overlay zones, new buildings or additions and alterations to buildings must not include basements or floors that are below ground level.

#### Note 11.3A - General advice

- Please note that minimum floor levels are based on a larger scale, often catchment wide, analysis of flood levels. They have been identified to reduce the risk from floodwaters, however a flood event may occur which could exceed the specified minimum floor level and which may result in damage. They do not avoid all risk to safety, particularly in relation to access or egress from a site; and they do not avoid all risk of damage to property.
- All building and development are at the owner's risk own risk and the DCC does not accept any liability in regards to the specified minimum floor levels.
- Plan users are advised to read the report Dunedin City Council, Minimum Floor Levels for Flood Vulnerable Areas (GHD, March 2015) to understand the methodology, level of certainty and limitations associated with the specified minimum floor levels.
- A site specific assessment of flood levels and their probabilities is advised before undertaking development.

### 11.3.4 Relocatable Buildings

- In the hazard 3 (coastal) overlay zone, new buildings to be used for sensitive activities (including residential buildings) must be relocatable.
- Buildings that do not have people regularly present (for example, garages, carports, and sheds) are exempt from the performance standard for relocatable buildings.

#### Note 11.3B - General advice

- Relocatable buildings may not avoid all risks from natural hazards, particularly in the long term.
- Development in hazard prone areas, including in the identified hazard overlay zones, are at an owner's risk and the DCC does not accept any liability in regards to development and risk from natural hazards.

### **11.3.5 Outdoor Storage Standard**

In a Hazard 1 (flood) Overlay Zone, materials and goods must be stored in a way that prevents:

1. potentially dangerous materials being mobilised in the event of a flood; or
2. any materials or goods from obstructing or impeding water in a manner that may cause water to be diverted to another site.

## **Rule 11.4 Assessment of Restricted Discretionary Activities (Performance Standard Contraventions)**

### **Rule 11.4.1 Introduction**

1. Restricted discretionary activities will be assessed in accordance with section 104 and 104C of the RMA, meaning only those matters to which Council has restricted its discretion will be considered, and Council may grant or refuse the application, and, if granted, may impose conditions with respect to matters over which it has restricted its discretion.
2. Rule 11.4.2:
  - a. lists the matters Council will restrict its discretion to; and
  - b. provides guidance on how consent applications will be assessed, including:
    - i. relevant objectives and policies, with respect to s104(1)(b)(vi);
    - ii. potential circumstances that may support a consent application;
    - iii. general assessment guidance; and
    - iv. conditions that may be imposed.



#### 11.4.2 Assessment of development performance standard contraventions

Performance standard	Matters of discretion	Guidance on the assessment of resource consents
1. All performance standard contraventions		<p><i>Potential circumstances that may support a consent application include:</i></p> <ul style="list-style-type: none"><li>i. The risks from natural hazards will be no more than low when assessed against the guidance provided in Table 11.1, taking into account site or area specific factors, including the elevation of the site or the topography of the area.</li></ul> <p><i>General assessment guidance:</i></p> <ul style="list-style-type: none"><li>ii. Where more than one standard is contravened, the combined effects of the contraventions will be considered.</li><li>iii. In balancing consideration of the objectives and policies related to reducing risk and those related to general amenity (for example height or setbacks), greater weight will usually be placed on reducing risk.</li><li>iv. In assessing the appropriateness of alternative mitigation measures:<ul style="list-style-type: none"><li>1. consideration will be given to its potential effectiveness, in the short to longer term;</li><li>2. preference will be given to non-structural solutions, over engineering or structural solutions, where practicable;</li><li>3. mitigation measures that rely on significant capital investment or requirements for ongoing maintenance by the DCC or Otago Regional Council will generally not be seen as appropriate; and</li><li>4. any mitigation measures that may result in more than negligible adverse effects on biodiversity, more than minor adverse effects on access to the coast, or significant effects on amenity or natural coastal sedimentation processes, will generally not be seen as appropriate.</li></ul></li></ul>
2. Hazard exclusion areas ( <b>swale mapped area</b> )	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"><li>i. Objective 11.2.1</li><li>ii. Development activities, public amenities and temporary activities in a <b>swale mapped area</b> do not obstruct or impede water in a flood hazard event, and not cause water to be diverted out of a swale. (Policy 11.2.1.10).</li></ul> <p><i>Potential circumstances that may support a consent application include:</i></p> <ul style="list-style-type: none"><li>iii. An assessment by a suitably qualified person has established that the development will not obstruct or impede water in a flood hazard event, and not cause water to be diverted out of the swale.</li></ul>



#### 11.4.2 Assessment of development performance standard contraventions

Performance standard	Matters of discretion	Guidance on the assessment of resource consents
3. In a <b>hazard overlay zone</b> : Hazardous substances quantity limits and storage requirements (Rule 9.3.4)	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"><li>i. Objective 11.2.1</li><li>ii. Hazardous substances in hazard 1 and 2 Overlay Zones are stored in a manner that ensures the risk from natural hazards is avoided, or is no more than low (Policy 11.2.1.7).</li></ul> <p><i>Potential circumstances that may support a consent application include:</i></p> <ul style="list-style-type: none"><li>iii. An assessment by a suitably qualified person has established an appropriate manner of storage.</li></ul>
4. Minimum floor level	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"><li>i. Objective 11.2.1</li><li>ii. New buildings intended for sensitive activities have a floor level that mitigates risk from flooding (including coastal flooding) and rising groundwater so that the risk is no more than low (Policy 11.2.1.8).</li></ul> <p><i>Potential circumstances that may support a consent application include:</i></p> <ul style="list-style-type: none"><li>iii. A site specific assessment by a suitably qualified person has established an appropriate alternative minimum floor level.</li><li>iv. The building is in the hazard 3 (coastal) Overlay Zone and has an appropriate alternative minimum floor level that will mitigate risks from flooding in the short term; and the building is easily relocatable, so that as coastal hazards, including sea level rise, become more severe, the building can be relocated.</li></ul>
5. Maximum area of vegetation clearance	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"><li>i. Objective 11.2.1</li><li>ii. In a Hazard 1 (land instability) or Hazard 2 (land instability) Overlay Zone, or <b>dune system mapped area</b>, the scale and type of vegetation clearance will ensure the risk from erosion or land instability is avoided, or is no more than low (Policy 11.2.1.17).</li></ul> <p><i>Potential circumstances that may support a consent application include:</i></p> <ul style="list-style-type: none"><li>iii. A report by a suitably qualified person confirms that the risk from the vegetation clearance will be no more than low.</li><li>iv. The area is to be replanted in a species that will have equal or greater positive effects in terms of land stability and erosion control.</li></ul>



#### 11.4.2 Assessment of development performance standard contraventions

Performance standard	Matters of discretion	Guidance on the assessment of resource consents
6. Outdoor storage standard	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"><li>i. Objective 11.2.1</li><li>ii. In the hazard 1 (flood) Overlay Zone, outdoor storage is designed, managed, and located so that potentially dangerous materials will not be mobilised in a flood; and materials will not obstruct or impede flood water (Policy 11.2.1.4).</li></ul>
7. Relocatable buildings	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"><li>i. Objective 11.2.1</li><li>ii. In the Hazard 3 (coastal) Overlay Zone, new buildings to be used for sensitive activities are relocatable so that as coastal hazards, including sea level rise, become more severe, these buildings can be relocated (Policy 11.2.1.9).</li></ul>
8. Setback from coast and water bodies (Rule 10.3.3)	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"><li>i. Objective 11.2.1</li><li>ii. Buildings and structures are set back from water bodies an adequate distance so that the risk, including from erosion and flooding, is avoided, or is no more than low (Policy 11.2.1.19).</li></ul> <p><i>Potential circumstances that may support a consent application include:</i></p> <ul style="list-style-type: none"><li>iii. A site specific assessment by a suitably qualified person has established an appropriate alternative setback.</li></ul>

## **Rule 11.5 Assessment of Restricted Discretionary Activities**

### **Rule 11.5.1 Introduction**

1. Restricted discretionary activities will be assessed in accordance with section 104 and 104C of the RMA, meaning only those matters to which Council has restricted its discretion will be considered, and Council may grant or refuse the application, and, if granted, may impose conditions with respect to matters over which it has restricted its discretion.
2. Rule 11.5.2:
  - a. lists the matters Council will restrict its discretion to; and
  - b. provides guidance on how a consent application will be assessed, including:
    - i. relevant objectives and policies, with respect to s104(1)(b)(vi);
    - ii. potential circumstances that may support a consent application;
    - iii. general assessment guidance; and
    - iv. conditions that may be imposed.



### 11.5.2 Assessment of all restricted discretionary activities

Activity	Matters of discretion	Guidance on the assessment of resource consents
1. All restricted discretionary activities	a. Risk from natural hazards	<p><i>General assessment guidance:</i></p> <ul style="list-style-type: none"><li>i. In assessing the risks from natural hazards, Council will consider:<ol style="list-style-type: none"><li>1. existing hazards assessment reports on the DCC's hazard Information Management System;</li><li>2. the Otago Regional Council's Otago Natural Hazard Database;</li><li>3. any new hazard assessment or engineers' reports provided as part of an application; and</li><li>4. site or area specific factors, including the elevation of the site; or topography and geology of the area, including if it is in a <b>geologically sensitive mapped area (GSA)</b>;</li><li>5. risk to activities proposed on a site, as well as risk that is created, transferred, or exacerbated on other sites.</li></ol></li><li>ii. The creation, transference or exacerbation of risk off-site by the proposed activity, or future proposed activities, for example risk from redirected floodwaters, or risk from landslide on another site will generally not be seen as appropriate.</li><li>iii. In assessing the appropriateness of mitigation measures (other than those prescribed in performance standards):<ol style="list-style-type: none"><li>1. consideration will be given to its potential effectiveness, in the short to long term;</li><li>2. preference will be given to non-structural solutions, over engineering or structural solutions, where practicable;</li><li>3. mitigation measures that rely on significant capital investment or requirements for on-going maintenance by the DCC or Otago Regional Council will generally not be seen as appropriate; and</li><li>4. any mitigation measures that may result in more than negligible adverse effects on biodiversity, more than minor effects on access to the coast, or significant effects on amenity or natural coastal sedimentation processes, will generally not be seen as appropriate.</li></ol></li></ul> <p><i>Potential circumstances that may support a consent application include:</i></p> <ul style="list-style-type: none"><li>iv. The risk from natural hazards will be no more than low when assessed against the guidance provided in Table 11.1.</li><li>v. In the hazard 2 (land instability) Overlay Zone, a report by a suitably qualified person confirms that the risks to the development, or resulting from the development, will be no more than low.</li><li>vi. Measures are proposed (including legal instruments), that will avoid DCC or the community from being subject to claims for protection, compensation, reinstatement, or rectification of</li></ul>

### 11.5.2 Assessment of all restricted discretionary activities

Activity	Matters of discretion	Guidance on the assessment of resource consents
		buildings or structures intended for sensitive activities, or potentially sensitive activities, undertaken in hazard overlay zones.
2. In a <b>hazard 1 or 2 overlay zone</b> other than the Hazard 1 (land instability) <b>Overlay Zone:</b> <ul style="list-style-type: none"><li>• new buildings, and additions and alterations to buildings, which create more than 36m<sup>2</sup> of new ground floor area in a residential zone, or 60m<sup>2</sup> of new ground floor area in all zones other than residential.</li></ul>	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"> <li>i. Objective 11.2.1</li> <li>ii. The scale, location and design of the building or other factors mean risk is avoided, or is no more than low (Policy 11.2.1.3).</li> </ul>
3. In a <b>Hazard 1 (land instability) Overlay Zone:</b> <ul style="list-style-type: none"><li>• new buildings, and additions and alterations to buildings which create more than 1m<sup>2</sup> of new ground floor area.</li></ul>	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"> <li>i. Objective 11.2.1</li> <li>ii. The scale, location, and design of building or other factors mean risk is avoided, or is no more than low (Policy 11.2.1.3).</li> </ul>



### 11.5.2 Assessment of all restricted discretionary activities

Activity	Matters of discretion	Guidance on the assessment of resource consents
4. In a <b>dune system mapped area</b> and <b>swale mapped area</b> : • Earthworks - large scale that exceed the scale thresholds	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"> <li>i. Objective 11.2.1</li> <li>ii. Earthworks in a <b>dune system mapped area</b> will not have adverse effects on the stability or buffering capacity of dune systems; and will not create, exacerbate, or transfer risk from natural hazards (Policy 11.2.1.14).</li> <li>iii. Earthworks in a <b>swale mapped area</b> will not obstruct or impede flood water, unless part of an approved natural hazard mitigation activity; nor create, exacerbate, or transfer risk from natural hazards (Policy 11.2.1.15).</li> </ul>
5. Earthworks - large scale that exceed underlying zone scale thresholds for a geologically sensitive mapped area	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"> <li>i. Objective 11.2.1</li> <li>ii. The risk from natural hazards is avoided, or no more than low (Policy 11.2.1.12).</li> </ul>
6. Earthworks - large scale that exceed scale thresholds for hazard (flood) overlay zones	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"> <li>i. Objective 11.2.1</li> <li>ii. Earthworks will not obstruct or impede flood water, unless associated with approved hazard protection structures; nor create, exacerbate, or transfer risk from natural hazards (Policy 11.2.1.15).</li> </ul>
7. Earthworks - large scale that exceed scale thresholds for hazard (land instability) overlay zones	a. Risk from natural hazards	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"> <li>i. Objective 11.2.1</li> <li>ii. Earthworks will not have adverse effects on land stability nor create, exacerbate, or transfer risk from natural hazards (Policy 11.2.1.16).</li> </ul>
8. All subdivision activities in a Hazard 3 (coastal) Overlay Zone	a. Risk from natural hazard	<p><i>Relevant objectives and policies:</i></p> <ul style="list-style-type: none"> <li>i. Objective 11.2.1</li> <li>ii. In the hazard 3 (coastal) Overlay Zone, where hazards may worsen over time due to climate change, subdivision activities will only result in a minimal increase in development potential for sensitive activities or potentially sensitive activities (Policy 11.2.1.13).</li> </ul> <p><i>Additional conditions that may be imposed include:</i></p> <ul style="list-style-type: none"> <li>iii. Restrictions and conditions, including by way of consent notice, restricting future subdivision activities.</li> </ul>
9. All subdivision	a. Risk from natural	<i>Relevant objectives and policies:</i>



### 11.5.2 Assessment of all restricted discretionary activities

Activity	Matters of discretion	Guidance on the assessment of resource consents
activities	hazards	<p>i. Objective 11.2.1</p> <p>ii. In all hazard overlays zones, or in any other area or areas that the DCC has good cause to suspect may be at risk from a natural hazard, all subdivisions are designed to ensure any future land use or development will occur in a way that ensures the risk from natural hazards is avoided, or is no more than low (Policy 11.2.1.12).</p> <p><i>General assessment guidance:</i></p> <p>iii. In assessing the risk from natural hazards, Council will consider the proposed and potential future development or land use that may occur as a result of the subdivision to create, transfer or exacerbate risk off site, including, but not limited to:</p> <ol style="list-style-type: none"><li>1. earthworks;</li><li>2. new driveways and vehicle tracks, including culverts or driveway crossings or other <u>site</u> development that may restrict or impede drainage;</li><li>3. wastewater disposal systems (public or private);</li><li>4. stormwater management;</li><li>5. drainage;</li><li>6. all buildings, structures and other development, and the risk to them from natural hazards and their potential to create, transfer, or exacerbate risks off site; and</li><li>7. primary and secondary or ancillary land use activities, and their sensitivity.</li></ol> <p><i>Potential circumstances that may support a consent application include:</i></p> <p>iv. The availability of clear, practicable and safe evacuation routes and/or alternate means of maintaining access during a natural hazard event that will be equally available to future owners, occupiers, or operators.</p> <p>v. That resultant sites provide building platforms that will allow buildings associated with sensitive or potentially sensitive activities to ensure the risk from natural hazards is avoided, or is no more than low, including thorough meeting relevant performance standards.</p> <p>vi. Any associated consents for land use and development activities are approved at the same time consents for subdivisions are granted.</p> <p>vii. Confirmation (including certification) by a suitable qualified expert that the <u>site</u> is suitable for the intended use and the conditions on land use or development that are required for the <u>site</u> to be developed safely.</p> <p>viii. Where development of the resultant sites is likely to result in on-</p>



#### 11.5.2 Assessment of all restricted discretionary activities

Activity	Matters of discretion	Guidance on the assessment of resource consents
		<p>site wastewater disposal or storage, the effects of flooding and sea level rise will be such that safe and effective on-site disposal is likely to be practicable in the long term.</p> <p><i>Conditions that may be imposed include:</i></p> <ul style="list-style-type: none"><li>ix. Building platforms registered against the title by way of consent notice</li><li>x. Restrictions and conditions, including by way of consent notice, on development activities including:<ol style="list-style-type: none"><li>1. minimum floor levels for buildings;</li><li>2. stormwater management systems, for example, retention basins to regulate the rate and volume of surface runoff;</li><li>3. establishment, enhancement, or retention of vegetation;</li><li>4. conditions on the design of earthworks;</li><li>5. the type of water and waste services to be used; and</li><li>6. the location and design of driveways and vehicle tracks.</li></ol></li><li>xi. Restrictions or conditions, including by way of consent notice, on land use activities allowed on the site.</li></ul>

## Rule 11.6 Assessment of Discretionary Activities

### Rule 11.6.1 Introduction

1. Discretionary activities will be assessed in accordance with section 104 and 104B of the RMA meaning Council may grant or refuse the application, and, if granted, may impose conditions.
2. Rule 11.6.2 provides guidance on how a consent application for the listed discretionary activities will be assessed, including:
  - a. relevant objectives and policies that will be considered as a priority with respect to s104(1)(b)(vi);
  - b. potential circumstances that may support a consent application;
  - c. general assessment guidance, including any effects that will be considered as a priority; and
  - d. conditions that may be imposed..

### 11.6.2 Assessment of all discretionary activities

Activity	Guidance on the assessment of resource consents
1. All discretionary activities	<p><i>Relevant objectives and policies (priority considerations):</i></p> <p>a. Objective 2.2.1 and Objective 11.2.1</p> <p><i>General assessment guidance:</i></p> <p>b. In assessing the risks from natural hazards, Council will consider:</p> <ul style="list-style-type: none"> <li>i. existing hazards assessment reports on the DCC's hazard Information Management System;</li> <li>ii. the Otago Regional Council's Otago Natural Hazard Database;</li> <li>iii. any new hazard assessment or engineers' reports provided as part of an application;</li> <li>iv. site or area specific factors, including the elevation of the site, or topography and geology of the area;</li> <li>v. the type, nature and scale of the activity, and how this affects its sensitivity to natural hazards;</li> <li>vi. short to long term effects, including effects in combination with other activities;</li> <li>vii. the potential for cumulative adverse effects arising from similar activities occurring as a result of a precedent being set by the granting of resource consent;</li> <li>viii. risk to activities proposed on a site, as well as risk that is created, transferred, or exacerbated on other sites; and</li> <li>ix. new or changes to land use and any associated development activities together, as development may not be appropriate given the risk associated with a site, or conditions on development activities may be required to mitigate the risk from natural hazards.</li> </ul> <p>c. The creation, transference or exacerbation of risk off-site by the proposed activity, or future proposed activities, for example risk from redirected floodwaters, or risk from landslide on another site will generally not be seen as appropriate.</p> <p>d. In assessing the appropriateness of mitigation measures (other than those prescribed in performance standards):</p>



### 11.6.2 Assessment of all discretionary activities

Activity	Guidance on the assessment of resource consents
	<p>Guidance on the assessment of resource consents</p> <ul style="list-style-type: none"> <li>i. consideration will be given to its potential effectiveness, in the short to longer term;</li> <li>ii. preference will be given to non-structural solutions, over engineering or structural solutions, where practicable;</li> <li>iii. mitigation measures that rely on significant capital investment or requirements for ongoing maintenance by the DCC or Otago Regional Council will generally not be seen as appropriate; and</li> <li>iv. any mitigation measures that may result in more than negligible adverse effects on biodiversity, more than minor effects on access to the coast, or significant effects on amenity or natural coastal sedimentation processes, will generally not be seen as appropriate.</li> </ul> <p>e. Mitigation measures relying on minimum floor levels are either:</p> <ul style="list-style-type: none"> <li>i. based on recommended minimum floor levels specified in recommended minimum floor level areas as shown in the <b>flood minimum floor level mapped area</b>; or</li> <li>ii. are based on a <u>site specific</u> assessment by a suitably qualified hydrologist which establishes an appropriate alternative minimum floor level.</li> </ul> <p><i>Potential circumstances that may support a consent application include:</i></p> <p>f. The availability of clear, practicable and safe evacuation routes and/or alternate means of maintaining access during a natural hazard event that will be equally available to future owners, occupiers, or operators.</p> <p>g. Measures are taken (including legal instruments), that will avoid the Council or community from being subject to claims for compensation, reinstatement, or rectification of sensitive activities, or potentially sensitive activities, undertaken in hazard overlay zones.</p> <p>h. In the Hazard 2 (land instability) Overlay Zone, a report by a suitably qualified person confirms that the risk to the activity, or resulting from the activity, will be no more than low.</p> <p>i. For discretionary land use activities, whether any associated buildings or structures meet relevant hazards-related development performance standards, or otherwise achieve the relevant policies for development (see Rule 11.4 for performance standard contraventions).</p> <p><i>Conditions that may be imposed include:</i></p> <p>j. Building platforms registered against the title by way of consent notice.</p>
2. • hazard mitigation earthworks • hazard mitigation structures	<p><i>Relevant objectives and policies (priority considerations):</i></p> <p>a. Objective 11.2.1</p> <p>b. The option of doing nothing is not the best practicable option and it will reduce risk overall and not transfer, exacerbate, or create a new risk somewhere else (Policy 11.2.1.20)</p>

### 11.6.2 Assessment of all discretionary activities

Activity	Guidance on the assessment of resource consents
3. <b>In the hazard 1 overlay zones:</b> • potentially sensitive activities permitted in underlying zone	<i>Relevant objectives and policies (priority considerations):</i> a. Objective 11.2.1 b. The activity has a critical operational need to locate within the hazard 1 overlay zones and locating outside the hazard 1 overlay zones is not practicable (Policy 11.2.1.2.a). c. The scale, location and design of the activity or other factors means risk is avoided, or is no more than low (Policy 11.2.1.2.b).
4. <b>In the hazard 2 overlay zones:</b> • potentially sensitive activities not permitted in underlying zone	<i>Relevant objectives and policies (priority considerations):</i> a. Objective 11.2.1 b. The activity has a critical operational need to locate within the hazard 2 overlay zones and locating outside the hazard 2 overlay zones is not practicable (Policy 11.2.1.6.a). c. The scale, location and design of the activity or other factors means risk is avoided, or is no more than low (Policy 11.2.1.6.b).
5. <b>In the hazard 2 overlay zones:</b> • sensitive activities	<i>Relevant objectives and policies (priority considerations):</i> a. Objective 11.2.1 b. The scale, location and design of the activity or other factors means risk is avoided, or is no more than low (Policy 11.2.1.5).

## Rule 11.7 Assessment of Non-complying Activities

### Rule 11.7.1 Introduction

1. Non-complying activities will be assessed in accordance with section 104, 104B and 104D of the RMA meaning Council may grant or refuse the application, and, if granted, may impose conditions.
2. Rules 11.7.2 - 11.7.3 provide guidance on how a consent application for the listed non-complying activities will be assessed, including:
  - a. relevant objectives and policies that will be considered as a priority with respect to s104(1)(b)(vi); and
  - b. general assessment guidance, including any effects that will be considered as a priority.

#### 11.7.2 Assessment of non-complying activities

Activity	Guidance on the assessment of resource consents
1. In the <b>hazard 1 overlay zones</b> : <ul style="list-style-type: none"> <li>• New potentially sensitive activities not permitted in zone</li> <li>• New sensitive activities</li> </ul>	<p><i>Relevant objectives and policies (priority considerations):</i></p> <ul style="list-style-type: none"> <li>a. Objective 2.2.1</li> <li>b. Objective 11.2.1, Policy 11.2.1.1</li> </ul> <p><i>General assessment guidance:</i></p> <ul style="list-style-type: none"> <li>c. In assessing the risks from natural hazards, Council will consider:               <ol style="list-style-type: none"> <li>i. existing hazards assessment reports on the DCC's hazard Information Management System;</li> <li>ii. the Otago Regional Council's Otago Natural Hazards Database;</li> <li>iii. any new hazard assessment or engineers' reports provided as part of an application;</li> <li>iv. site or area specific factors, including the elevation of the site, or topography and geology of the area;</li> <li>v. the type, nature and scale of the activity, and how this affects its sensitivity to natural hazards;</li> <li>vi. short to long term effects, including effects in combination with other activities;</li> <li>vii. risk to activities proposed on a site, as well as risk that is created, transferred, or exacerbated on other sites;</li> <li>viii. the potential for cumulative adverse effects arising from similar activities occurring as a result of a precedent being set by the granting of resource consent; and</li> <li>ix. evacuation routes, and/or alternate means of maintaining access during a natural hazard event;</li> </ol> </li> <li>d. The creation, transference or exacerbation of risk off-site by the proposed activity, or future proposed activities, for example risk from redirected floodwaters, or risk from landslide on another site will generally not be seen as appropriate.</li> <li>e. In assessing the appropriateness of mitigation measures (other than those prescribed in performance standards):               <ol style="list-style-type: none"> <li>i. consideration will be given to its potential effectiveness, in the short to longer term;</li> <li>ii. preference will be given to non-structural solutions, over</li> </ol> </li> </ul>

### 11.7.2 Assessment of non-complying activities

Activity	Guidance on the assessment of resource consents
	<p>engineering or structural solutions, where practicable;</p> <p>iii. mitigation measures that rely on significant capital investment or requirements for ongoing maintenance by the DCC or Otago Regional Council will generally not be seen as appropriate; and</p> <p>iv. any mitigation measures that may result in more than negligible adverse effects on biodiversity, more than minor effects on access to the coast, or significant effects on amenity or natural coastal sedimentation processes, will generally not be seen as appropriate.</p> <p><i>Potential circumstances that may support a consent application include:</i></p> <ul style="list-style-type: none"> <li>f. The risk from natural hazards, will be no more than low, when assessed against the guidance provided in Table 11.1.</li> <li>g. A report by a suitably qualified person confirms that the risks to the development, or resulting from the development, will be no more than low.</li> <li>h. Measures are proposed (including legal instruments), that will avoid DCC or the community from being subject to claims for protection, compensation, reinstatement, or rectification of buildings or structures intended for sensitive activities, or potentially sensitive activities, undertaken in hazard overlay zones.</li> </ul>

### 11.7.3 Assessment of non-complying performance standard contraventions

Performance standard	Guidance on the assessment of resource consents
1. Hazard exclusion areas ( <b>swale mapped area</b> ) ( <b>dune system mapped area</b> )	<p><i>Relevant objectives and policies (priority considerations):</i></p> <ul style="list-style-type: none"> <li>a. Objectives 2.2.1</li> <li>b. Objective 11.2.1, Policies 11.2.1.10, 11.2.1.11</li> </ul>

## Rule 11.8 Notification

1. Applications for resource consent for the following activities will be publicly notified in accordance with section 95A(2) of the RMA, unless Council considers special circumstances exist in relation to the application:
  1. non-complying activities.
2. With respect to resource consent applications for the following activities, manawhenua will be considered an affected person in accordance with section 95B of the RMA where their written approval is not provided:
  1. discretionary and non-complying activities in a **wāhi tūpuna mapped area** where the activity is identified as a threat to the **wāhi tūpuna mapped area** in Appendix A4.
3. Otago Regional Council will be considered an affected person in accordance with section 95B of the RMA where their written approval is not provided with respect to applications for resource consent in the following locations:
  1. Hazard 1 (flood) overlay zones; and
  2. **swale mapped areas**.
4. In accordance with section 95(B) of the RMA, where an application is not publicly notified, Council will give limited notification of an application to all affected persons.
5. All other activities are subject to the normal tests for notification in accordance with sections 95A-95G of the RMA.

## Rule 11.9 Special Information Requirements

1. A report by a suitably qualified person, which addresses the relevant assessment matters of this plan, may be requested by Council for any activity that is subject to:
  1. a hazard overlay zone;
  2. a **dune system mapped area**;
  3. a **swale mapped area**;
  4. a minimum floor level;
  5. a geologically sensitive mapped area; and
  6. land that Council has good cause to suspect is hazard prone.
2. For the purpose of natural hazard risk, a suitably qualified person includes:
  1. Hydrologists;
  2. Geotechnical engineers; and
  3. Geomorphological specials (including coastal).



**SECOND  
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