What's changing to help address Natural Hazards?

There are changes in how we manage land that is at risk of natural hazards under the new Christchurch District Plan.

Some of the main changes from the Christchurch City Plan and the Banks Peninsula District Plan are highlighted here, and reflect decisions by the Independent Hearings Panel on the proposed Christchurch Replacement District Plan.

- The natural hazards provisions adopt a risk-based approach to natural hazard management that focuses on the likelihood and consequences of natural hazard events.
- The natural hazards provisions are new to the District Plan, with the exception of Flood Management Areas.
- The natural hazard provisions are additional to other rules in the District Plan, such as the rules for the zone where the property is located. The natural hazard rules apply only to the part of the property in the natural hazard overlay on the Planning Maps. If a property has more than one natural hazard overlay, any development must meet all requirements for each of the identified hazards.
- The natural hazard overlays identify:
  1) Slope Instability Management Areas on the hills (Port Hills and Banks Peninsula);
  2) Flood Management Areas and a fixed minimum floor level overlay in the flat low-lying areas of the district, including coastal areas. There are also Flood Management Areas for the Waimakariri River, Te Waihora/Lake Ellesmere and Wairewa/Lake Forsyth;
  3) Flood Ponding Management Areas for natural flood plains, wetlands and ponding areas, including Hendersons Basin, Cashmere Stream floodplain, Hoon Hay Valley, Cashmere-Worseleys ponding area, Cranford Basin and Lower Styx ponding area.
  4) High Flood Hazard Management Areas and a Residential Unit Overlay where flood water velocity and/or depth creates a high hazard risk.
  5) Stopbank setbacks immediately adjacent to the primary and secondary Waimakariri River stopbanks.
  6) A Liquefaction Management Area covers a large urban area, including rural land to the north. These areas experienced sand boils and lateral spread (and other impacts of liquefaction processes) in the 2010-2011 Canterbury earthquakes.
- Coastal hazard rules for erosion and flooding from the sea are not included in the new District Plan. They will be included in a plan change in future. Until then the previous rules in the former Christchurch City Plan and Banks Peninsula District Plan apply. For more see: **ccc.govt.nz/environment/land/coast/coastalhazards/**
- The Plan seeks to *avoid* development on sites that have an unacceptable risk and *manage* development where the risk is able to be reduced to acceptable levels through appropriate mitigation.

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Slope Instability Management Areas

- Slope Instability Management Overlays are included to identify areas where properties are deemed to be at risk from rockfall, cliff collapse or mass movement. The extent of the overlay is informed by GNS slope stability modelling for the Port Hills. For more see: **ccc.govt.nz/environment/land/slope-stability/port-hills-gns-reports/**
- The GNS modelling calculates the risk in any one year to the life of a person living at a property at risk of cliff collapse, rockfall/boulder roll, and/or mass movement (the "annual individual fatality risk").
- Each form of slope instability is mapped as a natural hazard overlay area (with associated rules) and then divided into two 'sub-areas' depending on the level of risk:
  1) Cliff Collapse Management Areas 1 and 2;
  2) Rockfall Management Areas 1 and 2; and
  3) Mass Movement Management Areas 1, and combined Areas 2 and 3 (note this last category has risk associated with damage to buildings/infrastructure, not life risk).
- Hill areas not in a Slope Instability Management Area are in the "Remainder of Port Hills and Banks Peninsula Slope Instability Management Area".
- Cliff Collapse Management Area 1, the area of highest risk, has the most stringent rules. Activities associated with new development such as subdivision, earthworks, hazard mitigation and building a new residential unit are prohibited activities in this area (unless existing use rights apply). This means it is not possible to apply for a resource consent for these activities. The only activities anticipated in this overlay are maintenance, protection and clearance works.
- In Rockfall Management Area 1, Cliff Collapse Management Area 2 and Mass Movement Management Area 1, most new development such as subdivision, earthworks, and building a new residential unit is discouraged, requiring resource consent for a non-complying activity in most instances.).
- In Rockfall Management Area 2, and Mass Movement Management Area 2 some development possible where it can be demonstrated through the resource consent process that the risk can be mitigated. Most development requires a resource consent for a restricted discretionary activity.
- Rule 5.7.1 has a table on the status of activities in Slope Instability Management Areas. This mostly applies to new building, hazard mitigation works, infrastructure upgrading, subdivision and earthworks.
- A new certification process allows a less stringent activity status where a site-specific assessment shows the "annual individual fatality risk" for the property is less than the area-wide assessment shown in the planning maps. The certification process involves a rigorous two-stage geotechnical peer review and is only available for Rockfall Management Areas 1 and 2 and Cliff Collapse Management Area 2.

Flood Management Areas – minimum floor levels for buildings and limits on filling

- Both the former plans included some provisions for managing flood risks. In the former Christchurch City Plan, Flood Management Areas (FMAs) identified areas of the city likely to be affected in a major flood (a one in 200 year flood). Updated flood models for the new Christchurch District Plan allow for increased sea level rise. Rules for FMAs and the extent of FMAs have changed.
- The new Christchurch District Plan seeks to reduce flood damage in areas affected by major flood events by specifying minimum floor levels for new buildings above flood levels in the FMAs and limiting the filling of land.
- In some FMA areas, the required minimum floor level for buildings is already known and fixed. These areas are identified as in a **Fixed Minimum Floor Overlay**. No resource consent is now required for the minimum floor level, if this fixed minimum floor level is met (that is, it is a permitted activity).
- For areas in the FMA that are not in the Fixed Minimum Floor Overlay, a certification process enables setting a minimum floor level for buildings as a permitted activity. This is also a new provision. If the certified floor level can be met, no resource consent is required. The certificate is valid for two years.
- Specific rules are introduced for the Waimakariri River, Te Waihora/Lake Ellesmere and Wairewa/Lake Forsyth. These FMAs have broadly similar rules, including a certification process for setting minimum floor levels. The FMA for the Waimakariri River also provides for some permitted activities of a rural nature.
- To apply for a certified minimum floor level online, or find out more, see the Council's website.

Daylight recession planes

- Daylight recession planes set out an 'envelope' of building setbacks and heights that a residential building can be constructed within as a permitted activity. Recession plane requirements have been relaxed in in a residential zone in a FMA by treating the required minimum floor level as the ground level that recession planes normally start from. Lifting the starting point for recession planes increases the available building envelope without the need for a resource consent.

Excavation and filling (earthworks)

- Excavation and filling are permitted in an FMA, but with relatively tight limits on volume, depth and extent depending on the type of activity and its location. This is so other properties are not flooded instead or the effects of flooding become worse.

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Flood Ponding Management Area (FPMA)

- FPMAs are areas where water naturally ponds in heavy rain, and are generally in rural areas. This ponding reduces the flooding that would otherwise occur downstream in other developed areas. The objective is to preserve the flood storage capacity of these natural ponding areas.
- There are significant restrictions on excavation, filling and construction in FPMAs. One residential unit is allowed per site (if it is also permitted by the other rules) where the residential unit is on piles or has a maximum ground floor area of 200m^2. Accessory buildings are similarly provided for. Most other buildings are a non-complying activity. Subdivision that creates an additional residential lot in the FMPA is also a non-complying activity.

High Flood Hazard Management Area (HFHMA)

- HFHMAs are new to the District Plan and reflects the Canterbury Regional Council Policy Statement's desire to avoid inappropriate development in high hazard areas.
- HFHMA are generally the most hazardous FMAs, with a high risk to people's safety, wellbeing and property, due to the depth and/or velocity of flood water. The HFHMA includes areas subject to inundation events where the water depth (metres) x velocity (metres per second) is greater than or equal to one, or where depths are greater than one metre, in a 0.2per cent annual exceedance probability (one in 500 year) flood event.
- Generally, subdivision and new development requires a resource consent as a non-complying activity. The exceptions are replacing and repairing buildings and critical infrastructure, utilities, farm buildings, and land in the 'residential unit overlay' of the HFHMA.
- The 'residential unit overlay' of the HFHMA applies to parts of South New Brighton, Southshore and Redcliffs where the where the main flooding risk is from the sea, rather than from rainfall or rivers, and will be at risk from a high flood hazard in the future as a result of sea level rise. New residential units require a (restricted discretionary) resource consent to enable an assessment of whether the risk is acceptable or not taking into consideration of any mitigation. The assessment is based on the how immediate the risk is and the appropriateness of mitigation.

Waimakariri River Stopbank Setbacks

- Activities within the Waimakariri 100 metre wide Primary Stopbank Setback and 50m wide Secondary Stopbank Setback were previously managed though the City Plan to provide a buffer to protect the integrity of the stopbanks and restrict development in the area at most risk from a breach. This approach has largely been carried over.
- Earthworks and new buildings require a non-complying resource consent in most instances.

Liquefaction Management Area

- A Liquefaction Management Area (LMA) was added to the District Plan to ensure an appropriate level of geotechnical assessment of liquefaction susceptibility when resource consents are required for;
  - i) a controlled activity subdivision which creates an additional allotment; or
  - ii) a restricted discretionary higher density residential development on sites of 1500m^2 or more.
- The matters of control/discretion include consideration of remediation methods, the design and layout of allotments, structures, services or foundations, ground strengthening and ability of these matters to be included as conditions of consent.

Note: the new plan may require resource consents in situations where they were not previously required.

View the new Christchurch District Plan at

districtplan.ccc.govt.nz

The information in this document summarises the contents of the Christchurch District Plan in general terms. This information draws on the Christchurch District Plan as it was at the time we were preparing the document, but is not the District Plan. As the Christchurch District Plan is subject to change, anyone seeking the current rules and other provisions of the Christchurch District Plan should refer to **districtplan.ccc.govt.nz**

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