

Appendix 3.26.2: Statutory Base

1.1. Resource Management Act

In preparing its Unitary Plan, the Auckland Council is bound by the requirements and parameters of the Resource Management Act (RMA).

Section 30 of the RMA sets out the functions of Regional Councils. These include:

the control of the use of land for the purpose of the avoidance or mitigation of natural hazards (section 30(1)(c)(iv)).

The functions of territorial authorities under the Act (Section 31(1)(b)(i)) are similar but slightly different. Section 31 refers to:

the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of—

(i) the avoidance or mitigation of natural hazards.

In addition to these provisions, Section 106 provides that a consent authority may refuse subdivision consent (but not land use development consent) in certain circumstances, including where land is likely to be subject to erosion, subsidence and slippage, or inundation.

Schedule 4 sets out what should be included in an assessment of effects on the environment (AEE). AEEs are required to be submitted when resource consent is sought. Subsection 2 of Schedule 4 (matters that should be considered when preparing an assessment of effects on the environment) requires that, subject to the provisions of any policy statement or plan, any person preparing an assessment of the effects on the environment should address, amongst other things, any risk to the neighbourhood, the wider community, or the environment through natural hazards.

1.1.1. Possible RMA changes

In 2011, the Minister for the Environment established a Technical Advisory Group (TAG) to report to him on whether the RMA should be amended in relation to (amongst other matters) the management of natural hazards. The terms of reference for the TAG included “giving greater attention to managing issues of natural hazards noting the RMA issues arising from the recent Canterbury earthquakes”.

Currently sections 6 and 7 of the RMA do not include reference to natural hazards; they are primarily managed under sections 30 and 31 (functions of regional councils and territorial authorities to avoid or mitigate natural hazards).

Recommendations of the TAG include:

- A provision requiring decision-makers to recognise and provide for issues around natural hazard risks should be incorporated in section 6 of the RMA – the wording of the provision to be “managing the significant risks associated with natural hazards”

- Regional councils should have the lead function of managing all effects from natural hazards. Territorial authorities are to retain their current function in regard to natural hazards.
- There should be one combined regional and district natural hazards plan. This plan should be required to be operative within three years of enactment of the empowering legislation.
- Section 106 of the RMA be amended:
 - To reflect the risk associated with any natural hazard, rather than the likelihood of the event
 - To state that the consent authority must refuse consent if there will be a significant increase in the risk from any natural hazards
 - That the potential to extend the scope of s.106 to include land use consents issued by regional councils be investigated.
- The Government promulgate a NPS or NES on the management of natural hazards.

The TAG report did not go into any detail as to how significant risks may be identified.

Subsequent to the TAG report, in April 2013 the Ministry for the Environment released a discussion document on possible reforms of the RMA. This included proposed changes to Section 6 and 7 of the RMA, including the insertion of a new matter when councils are formulating plans and considering resource consents – namely “the risks and impacts of natural hazards”.

1.2. Building Act 2004

The Building Act 2004 (Part 1, Section 3) is also relevant. The relevant purpose of the Act includes:

- (a) people who use buildings can do so safely and without endangering their health; and*
- (b) buildings have attributes that contribute appropriately to the health, physical independence, and well-being of the people who use them; and*
- (c) people who use a building can escape from the building if it is on fire; and*
- (d) buildings are designed, constructed, and able to be used in ways that promote sustainable development.*

The Building Act requires all buildings to be ‘safe from all reasonably foreseeable actions during the life of the building’, which is defined as 50 years. Thus a 2% flood event standard is applied in terms of whether the building may be subject to a flood hazard.

Sections 72 – 74 of the Building Act identify the process that councils must follow when considering a building consent on a site subject to one or more natural hazards. The Building Act allows for the council to decline a building consent if, by granting the consent, the development would worsen or accelerate the effects from a natural hazard. Alternatively, building consent can be granted if adequate provision has been or will be made to protect the land, building work, or other property from the natural hazard or hazards.

1.3. Civil Defence and Emergency Management Act 2002

Section 60 of the CDEM Act requires lifeline utilities to prepare a plan as to how they are to function during and after an emergency. Section 60 states that:

Every lifeline utility must—

(a) ensure that it is able to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency;

(b) make available to the Director in writing, on request, its plan for functioning during and after an emergency.

In preparing these plans, Section 3 (Purpose of the Act) refers to communities achieving acceptable levels of risk, including managing and reducing risks. Section 7 states that in preparing plans and actions, a precautionary approach should be taken, namely: *“All persons exercising functions in relation to the development and implementation of civil defence emergency management plans under this Act may be cautious in managing risks even if there is scientific and technical uncertainty about those risks”*.

1.4. Auckland Regional Policy Statement

The Auckland Regional Policy Statement (ARPS) addresses issues of natural hazard management. The natural hazards section of the ARPS was amended by Change 10 (Natural Hazards) which became operative in 2010. The ARPS therefore reflects the most up to date region wide statutory approach to flood hazards.

The following objectives and policies apply to flood management in the Auckland region:

Objective 11.3

To avoid, remedy, or mitigate the adverse effects of natural hazards on human life, property, infrastructure and the environment, while minimizing the adverse effects of measures implemented to reduce the risks of natural hazards.

Relevant policies (11.4.1) include:

1. *Before provision is made enabling development or redevelopment of land, including intensification of land use, any natural hazards, particularly flooding, land instability and coastal hazards, and measures to avoid or mitigate their adverse effects shall be identified.*
2. *Except as provided in 11.4.1.4 below, development shall only be allowed in the 1% AEP flood plain when:*
 - a. *Any adverse effects of a 1% AEP flood event on new buildings, are avoided or mitigated; except in urban areas, when any adverse effects of the 1% AEP flood event on the habitable floors of new buildings are avoided;*
 - b. *Any new building, structure or reclamation will not;*
 - i. *Divert overland flows, or*
 - ii. *Increase runoff volumes to create a new flood hazard, or*

- iii. *Accelerate, worsen or exacerbate existing flood hazards; unless any adverse effects, including potential cumulative effects, on other properties are avoided or mitigated;*
 - c. *Any hazardous substance stored as part of the development, or during the construction, will not create a hazard or significant adverse effect.*

- 3. *A district plan may provide for an alternative flood standard to that set out in 11.4.1.3 to cater for existing hydrological constraints (including, topographical and geological conditions, the nature of existing development, and the adequacy of overland flow paths), and provided that the alternative district plan provisions shall:*
 - a. *Require flood protection to a standard that is no less stringent than the 2% AEP; and*
 - b. *The adverse effects of the 2% AEP flood event on the habitable floors within the development are avoided; and either:*
 - i. *The adverse effects of the development on flood hazards are contained within the boundary of the site; or*
 - ii. *Any adverse effects on flood hazards on other properties are not permitted by the district plan.*

- 4. *Where development or use exists within areas susceptible to natural hazards, construction of mitigation works shall be allowed only where people, property, infrastructure and the environment are subject to risk from hazards, the works are the best practicable option, and any adverse effects on the environment are avoided, remedied or mitigated. The abandonment or relocation of existing structures and the use of non-structural solutions shall also be considered among the options.*

- 5. *Any works or structures within the 1% AEP floodplain or overland flow path(s) shall not create or exacerbate a flood hazard, during a flood event with a greater probability than 1% AEP, either at the site or at any location upstream or downstream of the works or structures; unless:*
 - a. *The adverse effects of the flood hazard are avoided, remedied, or mitigated; or*
 - b. *The work or structure is required to avoid, remedy or mitigate the adverse environmental effects of a flood event; Works may include (but are not limited to) earthworks, riparian planting, piping of streams and the construction of culverts, bridges, retaining walls.*

- 6. *A precautionary approach shall be used (including the development and implementation of plans) in avoiding or mitigating the adverse effects on people, property, infrastructure and the environment of earthquake, volcanic activity, sea level rise, tsunami and global climate change.*

The above provisions reflect the diverse approach of the former councils in the region as to how they managed flood risks. The provisions raise a number of issues that suggest that they do not provide an appropriate, consistent statutory base for the management of development in flood plains, particularly as it relates to existing urban areas. Specific issues include:

- Avoidance versus mitigation. It is not clear as to when an avoidance approach should be taken; that is development is to be kept clear of flood plains. This is clearly an option for greenfields areas.
- Level of risk. The policies leave open the option of a 1% or 2% “standard”. What level of risk is acceptable?
- The types of risk. The policies do not provide any guidance on the types of risks to be considered. For example Policy 3 refers to adverse effects to habitable floors being avoided but without specifying what adverse effects are to be avoided – to occupiers and their safety or to the safety of the building? As discussed in section 5 which reviews overseas examples, risks to people’s safety increases as the people intensity of development increases, with most risks to health and safety associated with people attempting to leave flooded properties.

1.5. Proposed Auckland Regional Plan: Air, Land and Water

The regional plan most relevant to flood management is the Auckland Council Regional Plan: Air, Land and Water (ALW Plan). The ALW Plan was made partially operative in part in 2010 with further parts made operative in 2012. While the plan is still subject to a number of appeals, these relate to non-flood management provisions.

The focus of this plan in relation to flooding relates to managing stormwater diversions and discharges so that flooding problems are not exacerbated. For example:

Policy 5.4.4

When processing consent applications for non-network stormwater diversions and discharges under Rules 5.5.2 to 5.5.5, the ARC shall require the applicant to adopt the Best Practicable Option (BPO) for the diversion and discharge, which shall have regard to:

(c) The level of adverse effects on the environment, including in particular adverse effects on:

(ii) the health and safety of people and communities from flooding;

Policy 5.4.4B

In addition to the policy matters outlined in 5.4.4, consent applications for non network stormwater diversions and discharges under Rules 5.5.2 to 5.5.5 will also be assessed against the following matters:

g. Whether the proposal:

- i. avoids exacerbating or causing flooding of the floor level (authorised by a local authority) of a habitable building(s), or a State highway;*
- ii. avoids the use of flood storage volume below the 100 year ARI flood level;*

Discharges from network operators are covered by policies 5.4.6 onwards. Under these policies, stormwater and wastewater network utility operators and highway

network operators shall adopt the Best Practicable Option (BPO) at a catchment or network level to prevent or minimise the actual or potential adverse effects on the environment from stormwater diversions and discharges. Integrated Catchment Management Plans are required to be prepared to help identify priorities and actions within catchments, including how flooding is to be managed.

In terms of standards applying to discharges, rule 5.5.1 states that permitted discharges must not cause:

- flooding, in a 100 year ARI storm, of a habitable floor level in any dwelling, authorised by a Territorial Local Authority, existing at the date of notification of this plan (applies to existing impervious areas).
- flood levels in a 100 year ARI storm to rise within 0.5 metres of a habitable floor level (authorised by a Territorial Authority) in any dwelling unless the relevant District Plan or “Local Authority Infrastructure Design Standards” establishes an alternative freeboard requirement (above the 100 year ARI storm) in which case the District Plan or Local Authority Infrastructure Design Standards freeboard requirement shall prevail (applies to new impervious areas).

1.6. Auckland District Plans

1.6.1. Introduction

Existing district plan provisions as they apply to flood plain management are varied and complex. They are best described by breaking them down into separate provisions and comparing and contrasting the different plans.

Plans are considered from the point of view of:

- Identification of flood hazards
- Types of development managed
- Activities in flood plains.

The following is not an exhaustive discussion of current plans and is limited to the Rodney, Waitakere, North Shore, Auckland City (Isthmus and Central Area), Manukau and Papakura District Plans.

1.6.2. Identification of flood hazards

The plans use different ways to identify flood hazard areas, with some using the 1% AEP floodplain as defined by detailed flood mapping that lies outside the district plan, with others using areas defined by them on planning maps, or as held in council “records or plans”.

Terms used to describe areas subject to flood hazards include the following, few of which are defined within current district plans:

- AEP
- Flood prone
- Flood hazard

- Flood sensitive areas
- Inundation
- Land identified in the “Land Information Register”
- Flood management plans
- Stormwater Management Area.

The North Shore District Plan originally defined flood plain as: “the plan extent of flooding in a given AEP storm”. This has now been updated (via Plan Change 24) to read: *“Means the area typically adjacent to a waterway which becomes inundated with flood waters during a flood event. The 1% AEP flood plain is the area which is likely to be flooded during a rainfall event which has a 1% chance of occurring or being exceeded in any single year”*.

The term “Flood Sensitive Area” has also been introduced in the North Shore Plan. This means *“the area bordering the 1% AEP flood plain which is within 0.5 metres in elevation of the predicted flood level”*.

Various definitions are given of habitable rooms / buildings (where this is to be used a means of distinguishing between different types of development):

- Under the Auckland City District Plan - Isthmus Section, habitable room means any room in a residential unit excluding a kitchen, laundry, bathroom, toilet or any room used solely as an entrance hall, passageway or garage.
- Manukau City District Plan’s version of a habitable room means a space used for activities normally associated with domestic living, including a bedroom, but excludes any conservatory, bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, clothes-drying room, or other space of a specialised nature occupied neither frequently nor for an extended period.
- The North Shore District Plan now refers to Habitable Residential Building as “any part of a residential unit, excluding the following: garages, carports and windowless storerooms, or a building containing any part of a residential unit located on the ground floor”.

1.6.3.Types of development managed

The legacy district plans vary in the extent to which they identify different types of development within flood plains:

- The Auckland City District Plan - Isthmus Section refers to any “activity or development in flood prone areas”. It is not clear if this covers vegetation clearance. Earthworks are covered by a different section of the Plan and are subject to a Bylaw. There is a separate rule relating to subdivision.
- The North Shore District Plan refers to subdivision, buildings, structures and site works within the 1% AEP.
- The Waitakere District Plan refers to any activity on, or building on or subdivision of land subject to inundation. Earthworks and clearance of vegetation are also identified.
- The Manukau District Plan focuses on stormwater treatment devices, buildings, earthworks, subdivision and also any activity which adversely affects the functionality of land in stormwater management areas for stormwater treatment purposes.
- Under the Rodney District Plan, flooding risk only appears to be addressed at the subdivision stage, and in relation to vegetation clearance and earthworks and business activities but not in relation to residential or community-type buildings / development (although there is reference to sections 71 and 72 of

the Building Act). The Rodney District Plan further refers to “importation of urban cleanfill” in relation to flood hazards.

- The Papakura District Plan also refers to “placement or storage of materials” when referring to flood hazards.

1.6.3.1. Activities

First generation District Plans prepared between 1999 – 2003 generally classified development and activity in flood susceptible areas as a restricted discretionary activity.

1.6.3.2. Buildings / Structures

In the Central City (Auckland CBD), the Auckland City District Plan - Central Area Section controls subdivisions that create new lots in flood prone areas, but not new buildings. No specific provisions apply to floor levels for habitable or non-habitable buildings. It is not clear if this is because there is no flood risk within the CBD, or any risk is judged to be acceptable. There does not seem to be any specific reference to ground floor apartment buildings, for example.

The Isthmus Section of the Auckland City District Plan sets out a different standard for business activities to be a permitted activity as compared to residential activities (floor level above 50 year ARI flood level as opposed to 100 year ARI for habitable floors), but does not explain why. Residential and community development within the 100 year ARI is possible, subject to a minimum freeboard of 500mm being provided. In contrast, Business development has to be 300mm above the 1 in 50 year flood level.

Mt Wellington Quarry is the most significant urban redevelopment area in the Isthmus, where a partial “greenfields approach” is taken. Most development is outside the identified 100 year ARI and a flood warning system is put in place to alert residents to a flood hazard.

Waitakere, North Shore and Manukau District Plans take similar approaches in regard to existing urban areas and greenfields areas (Long Bay, Northern Strategic Growth Area (NorSGA), Flat Bush). Greenfields areas have significantly more emphasis on flood prevention and development fitting in around flooding constraints. Flood plains have been identified and zoning provisions generally support little development in these areas – with appropriate development being infrastructure and minor works associated with recreational activities.

In the existing urban area, the Waitakere District Plan classes development in flood hazard areas as a limited discretionary activity. The North Shore takes a discretionary approach. In relation to buildings within flood plains, the following criteria apply in North Shore:

- Whether redevelopment of existing buildings and structures can be undertaken in a way that reduces flood hazards for the site, as well as downstream or upstream sites, using techniques such as reducing building coverage and increasing on-site flood storage space.
- Whether development proposed to be located in the 100 year ARI flood plain is required to be located in the flood plain for operational reasons (such as infrastructure) and involves activities that do not place people at risk of adverse affects.

- Whether green areas, parking areas or buildings and structures that are less susceptible to effects of flooding or prone to exacerbating effects of flooding can be located in the flood plain.
- Whether the retention of vegetation or addition of new vegetation will;
 - i. benefit the hydrology of the flood plain
 - ii. benefit the ecology of the flood plain and streams
 - iii. contribute to green linkages.
- The extent to which the amenity of the development will be affected by flooding, including the likely frequency of flooding.

The Papakura District Plan (made operative in 1999) provides for permitted, discretionary and non complying activities as follows:

- Permitted is placement of *non-habitable* buildings or structures comprising less than 100m² in area on land shown as “possible flood hazard” and located north of the Papakura-Clevedon Road.
- Certain activities in the identified flood susceptible area have a non-complying activity status (buildings, placement of fill) unless they have been allowed by a council flood management plan (and in the case of buildings, have 300mm freeboard above the 1% ARI and do not increase flooding on other properties). Where allowed by a flood management plan, these activities are a restricted discretionary activity.

1.6.3.3. Infrastructure

First generation plans were not explicit as to what types of infrastructure may occur within flood plains, although some exceptions to the above general “discretionary” approach apply through specific provisions. For example the Manukau District Plan provides for the following in Stormwater Management Areas (which cover stream corridors and flood plains – although it is not clear if all flood plains are covered by these Management Areas):

- Permitted Activity: Small pumping stations (where all facilities are underground except for small control boxes not exceeding 2m wide by 2 m high).
- Controlled Activity: stormwater treatment devices, including ponds and wetlands
- Restricted Discretionary Activity: utility services.

For some zones introduced by recent plan changes, some forms of infrastructure are allowed within flood plains, such as for Long Bay where the following is listed as permitted: wetlands, water and wastewater infrastructure, roads and associated structures, boardwalks, tracks playgrounds and below ground network infrastructure (telecoms, power, gas). Stormwater ponds are not a permitted activity.

1.6.3.4. Site works / Earthworks

Under the Manukau City District Plan, all earthworks that are within a 100 year ARI flood plain are a restricted discretionary activity.

The North Shore District Plan (prior to modification by Plan Change 24) allows for some earthworks within floodplains:

- The disturbance of an area of less than a 100m² or volume of 10m³, either wholly or partially within any secondary flow path or 1% AEP flood plain, is a permitted activity.

- On the other hand, it helpfully clarifies that “modification of the areal extent of the 1% AEP flood plain either within the site, or on upstream or downstream sites” is a discretionary activity.

Under Auckland City District Plans, all works in flood plains and secondary flow paths must comply with Part 18 of the Auckland City Consolidated Bylaw 2008, Stormwater Management.

Under the Papakura District Plan, the placement of fill on land that is subject to flooding is a restricted discretionary activity where a draft comprehensive flood management plan has been published by the Council for the catchment or a comprehensive discharge consent for the discharge of stormwater from the catchment has been granted which allows for filling to be located in the 100 year ARI flood plain. Otherwise it is a non-complying activity.

1.6.3.5. Subdivisions

Provisions in existing district plans vary, but to a lesser extent than for activities.

In the Auckland City District Plan – Isthmus Section, the Council will not approve a subdivision where:

- Any of the land the subject of the application or any structure on that land is likely to be subject to material damage by erosion, subsidence, slippage or inundation from any source; or any use subsequent to the subdivision is likely to accelerate, worsen, or result in material damage to that land or other land from these causes,
- Provided however, this rule may not apply where:
 - i. any proposed allotment has an adequate building platform, whether constructed or not, that will not be affected by any erosion, subsidence, slippage or inundation. Use will be made of consent notices or other instruments to limit building to those parts of the site which are free from such effects; or
 - ii. adequate works or other innovative solutions can be undertaken to avoid, remedy or mitigate these hazardous effects.

Under the North Shore District Plan (after modification by Plan Change 24, as discussed below), for subdivision to be a controlled activity, the location of the building platform shall:

- Avoid creating an impediment to the 100 year ARI flow; and
- Provide a minimum of 500mm freeboard above the 100 year ARI flood level if for a habitable building.

In addition to this, the following assessment matters apply to controlled activity subdivisions:

- The floor level of any proposed habitable building has at least 1000mm freeboard above the 1% AEP flood level, unless the Council has (or is provided with) sufficient information to be satisfied that 700mm provides sufficient freeboard to provide an adequate safety margin against flooding.
- The floor level of any proposed non-habitable building has at least 600mm freeboard above the 10% AEP flood level.
- Any proposed building or structure to be located within the 1% AEP flood plain is designed to avoid any impediment to the passage of flood waters, or creates any potential adverse effects on upstream or downstream properties.

Under the Rodney District Plan, lots less than 1,000m² in area must be free of inundation (in an event with an AEP of 1%). Each site with a net area of 1,000m² or greater must contain an identified area of not less than 1,000m² (or such greater area as may be required by rules in the relevant chapter of the Plan) free of inundation (in an event with an AEP of 1%).

Under the Manukau District Plan the subdivision process where part of the land is identified as being a Stormwater Management Area is required to determine the final boundaries of this Area and then vest it with the council for drainage reserve purposes (forming part of the financial contribution). It is acknowledged that all land identified as Stormwater Management Area may not be wholly required, and information submitted by the applicant can demonstrate (hydrological information) that such land is not required.

1.6.4. North Shore Plan Change 24

North Shore City Council was the council who most recently proposed replacing their entire flood-related district plan provisions. Plan Change 24 was notified in 2009 and became operative in 2012. This made a number of changes:

- Network utilities in the flood sensitive area or the 100 year ARI flood plain (subject to Rule 8.4.9.5 General Standards), are a permitted activity.
- Buildings within the flood sensitive areas (subject to Rule 8.4.9.5 General Standards) and flood protection works within the 100 year ARI flood plain required to protect existing buildings from flooding hazards, are a controlled activity.
- Buildings and structures or alterations and additions to existing buildings increasing building coverage, within the 100 year ARI flood plain, along with permitted and controlled activities that do not comply with Rule 8.4.9.5 General Standards, are a discretionary activity.

All Permitted and Controlled Activities are required to comply with the following standards (failure to comply requires that an application be made for a Discretionary Activity resource consent):

- Finished floor levels within flood sensitive areas or coastal inundation areas shall be:
 - i. For habitable residential buildings, at least 500mm above the 100 year ARI flood level, and
 - ii. For buildings other than habitable residential buildings, above the 100 year ARI flood level.
- Flood protection works within an overland flow path required to protect existing buildings from flooding hazards shall maintain the same entry and exit point of the overland flow path at the site boundary, shall not alter the volume and velocity of water flow, and shall not cause additional adverse effects on neighbouring sites.
- Fences and network utilities located within or over an overland flow path that do not obstruct the overland flow path shall:
 - i. provide an opening equivalent to twice the area required to convey the 100 year ARI flow of the overland flow path, and
 - ii. the opening shall be constructed to minimise the chances of blockage of the overland flow path.

Plan Change 24 to the North Shore District Plan allows for site works associated with flood protection works within the 100 year ARI flood plain required to protect existing buildings from flooding hazards as a controlled activity, otherwise site works within

the 100 year ARI flood plain where they are not associated with flood protection works required to protect existing buildings from flooding hazards, or network utilities, are a discretionary activity.

1.7. Plan changes for New Growth Areas

Plan changes for new growth areas that have become operative over the past few years include Mt Wellington Quarry, Flat Bush, Long Bay and NorSGA. The approach for these areas involves structure plans, comprehensive development plans or concept plans that define a flood hazard area. For Flat Bush and Long Bay, the location of the flood plain was taken into account in the zoning of the land. In both cases, a restrictive zoning is applied to areas of flood risk and these areas may also be transferred to Council ownership. For NorSGA, an indicative ecological and urban open space corridor is shown on the concept plan, based on the catchment management plan. Comprehensive development plans are expected to then provide detail as to how development is to occur in accordance with the concept plan.