

# **Section 36 – Natural Hazards: River Flooding, Coastal Erosion, Tsunami and Flood Defences**

## **36.1 Background**

This section contains rules managing the three major natural hazards in the District: flooding, coastal erosion and tsunami. This section also includes rules providing for and protecting flood defences. The rules relating to flooding and coastal erosion (Sections 36.9, 36.11 and 36.13) only apply where the overlays are shown on Planning Maps. If an activity occurs on a lot partly covered by one of these overlays but the activity is outside the overlay, the rules do not apply.

Rules for tsunami and flood defences (Sections 36.15 and 36.17) do not have overlays shown on Planning Maps. The rules apply to any activity described by the rules themselves.

## **36.2 River Flooding**

### **36.2.1 Background**

In many areas of the District, development has occurred on narrow landforms confined between steep inland catchments and the coast, alongside or near rivers or streams that flow from the catchments to the sea. Development here is often subject to high intensity rainfall events, causing flooding. Some areas have built flood defences while others remain exposed to flood hazards.

After a severe storm event in 2002, central government provided funding for a flood mitigation strategy that included flood defences, flood modelling and land use controls. These land use controls were adopted through a plan change to the previous District Plan and have been included in this Plan.

### 36.2.2 Design River Flood Event and Modelling

The land use controls rely on detailed flood modelling of the following 'worst case' design river flood event:

- a) Detailed topographical information including ground contours from LiDAR in 2004. The Tararu and Te Puru Streams have been remodelled using 2013 LiDAR. The flood extent information was validated against recorded historical flood data.
- b) A rainfall event based on a 1% annual exceedance probability (AEP). This rainfall event has a probability of 1% of being exceeded in any year. If a person lived in an area for 70 years, there is a 50% chance that he/she would experience this amount of rainfall within that time.
- c) A spring high tide level.
- d) The predicted effects from climate change: a 20% increase in rainfall intensity by the 2080s, and a 0.5 m increase in sea level by 2100. This is based on Ministry for the Environment guidance at the time of modelling 2004/05.
- e) A water-saturated catchment.
- f) Assuming no debris blockage.

Once assessed, the river flood information was converted into low, medium and high hazard risk categories, with areas protected by a flood protection scheme maintained by the Waikato Regional Council (WRC) categorised as 'defended areas' to recognise the risk from over-topping or breach of the flood defences.

For definitions of flood hazard terms, see Section 3.

Ground levels and hazard setback lines should be confirmed by survey. Ground floor height in Table 1.1 - 1.4 should be based on current best-practice modelling for river inundation.

### 36.2.3 Existing Use Rights

For an existing activity in a flood hazard area, existing use rights under Section 10 of the RMA apply. This says (in summary) that the land use activity can continue if it was lawfully established, has not been discontinued for more than 12 months and the effects of the use are the same or similar in character, intensity, and scale. Building maintenance, site works on existing ground level and an activity that does not further impede flood flows or increase the susceptibility of the site or any other site to flooding, falls into this right.

However, the following examples are beyond existing use rights and must comply with the rules in this section:

- a) A new building.
- b) An increase in the ground cover of a building.
- c) Raising the natural ground level.
- d) Erecting a fence or wall.
- e) Lowering the floor level of a habitable room.
- f) Converting a non-habitable room in an accessory building into a habitable room.
- g) Anything that further impedes flood flows or increases the susceptibility of the site or any other site to flooding.

### 36.2.4 Activity Covering More Than One Overlay

If an activity covers more than one flood hazard overlay, the more restrictive provision(s) apply for that entire activity to the extent of any conflict.

For example, if a new house being constructed is subject to both Low and Medium Flood Hazard Areas, then rules applicable to the medium flood hazard apply. If a new house being constructed is subject to a Medium Flood Hazard Area and the rules of the Thames Flood Management Plan (see Section 36.4) apply, then the higher floor level standard applies.

### 36.2.5 Information Available on Request

The WRC holds flood depth and speed information for sites in the Low, Medium, High and Defended Flood Hazard Areas. The Council can source this information for landowners on request.

## 36.3 Open Space Zone

The Open Space Zone is used to denote areas or lots susceptible to natural hazards. For many streams and coastal areas, advanced hazard modelling has superseded this information. In these areas, the Open Space Zone was returned to the appropriate land use zone (e.g. Residential Zone, Rural Zone) and the hazard information applied as an overlay. The Open Space Zone remains where detailed modelling has not yet been done.

## 36.4 Thames Flood Management Scheme

The settlement areas from Tararu to Kopu were assessed for flooding by the Thames Flood Management Scheme. This included observed flood flows and ponding from streams, stormwater overflow and a coastal flood of 1% AEP relying on the 1938 flood event. This coastal flood event arose when conditions of strong onshore winds, spring tide and low atmospheric pressure coincided.

Some of the rivers in this Thames Flood Management area have been modelled more accurately by the river flooding modelling since 2004. For these flood areas the Thames Flood Management data is removed and replaced by the new overlay. The remaining area has been consolidated into a simpler set of thresholds:

- a) **Floodway** - the channel where water flows freely and swiftly during a flood event.
- b) **Overland Flow Area A** - in an extreme flood event, where shallow water may overflow downhill.
- c) **Overland Flow Areas B and C** - the remaining deeper flood waters.
- d) **Ponding Area** - low-lying land susceptible to flooding from the ocean as well as from landward stormwater overflow. The method used to set this ponding area's threshold height may be appropriate for subdivision, land use and development in other low-lying areas of the District.

The rules in this section only apply to land covered by the flood hazard overlay. If an activity is on a lot partially covered by the overlay, but the activity itself is not covered by the overlay, this section does not apply. If an activity is covered by more than one hazard category (e.g. a house is half low flood hazard and medium flood hazard), the more restrictive rules apply.

Land from Tararu to Kopu has some residual flood hazard information that was not superseded by the recent modelling. This applies mostly to small streams, coastal flooding, overland flow and ponding areas. The rules and mapped areas will remain in this section unless superseded by modelling information in future Plan changes.

## 36.5 Coastal Erosion

### 36.5.1 Policy Directives

The New Zealand Coastal Policy Statement (NZCPS) and the Waikato Regional Policy Statement (RPS) require the Plan to identify coastal hazards, and to restrict subdivision, use and development within areas subject to coastal hazards over a 100 year timeframe, including increased hazards from climate change. This section deals with two: coastal erosion and tsunamis.

Coastal erosion occurs due to a number of environmental factors including natural shoreline fluctuations, effects of storm events and seasonal tidal changes. The effects are minor in areas where there is no settlement or development. However where settlements have established close to the shoreline, as is the case along much of the District, people, property and the environment are at risk from the effects associated with coastal processes.

In response to concerns regarding coastal erosion hazards, WRC identified coastal setbacks to manage the effects of coastal erosion. Prior to this District Plan, the Council has applied these through the Building Act to manage the location, design and floor height of buildings. The data informing establishment of the setbacks has since been reviewed and updated and in line with statutory requirements, the Council has established a tighter framework to manage the risk associated with communities in coastal settlements.

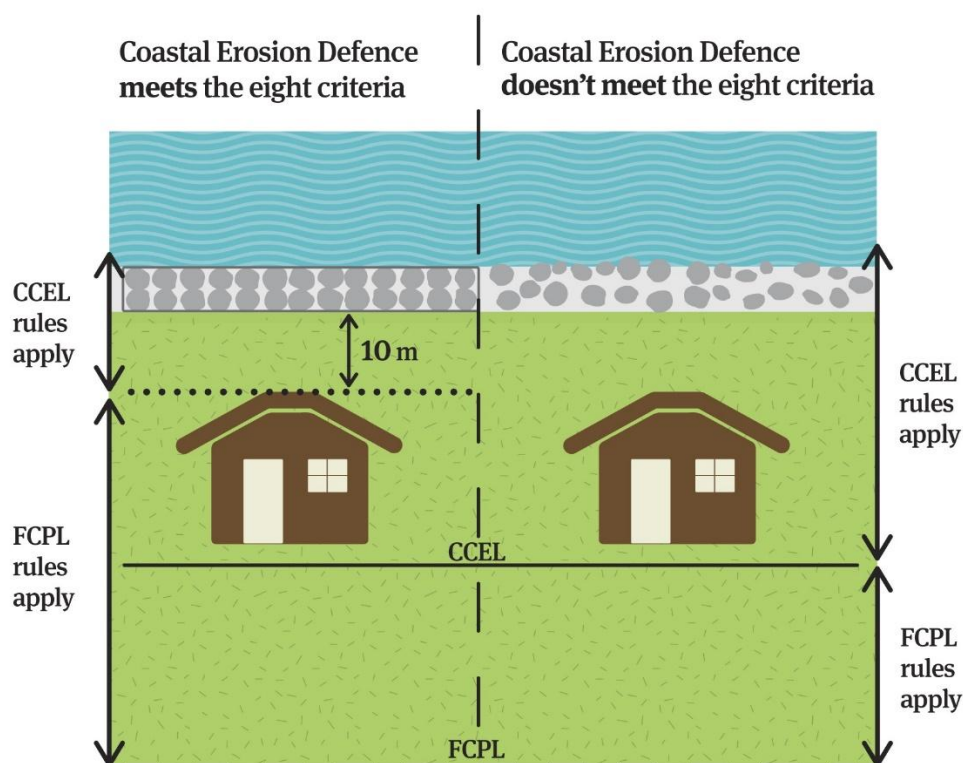
### 36.5.2 Current Coastal Erosion Line

The Current Coastal Erosion Line (CCEL) indicates the most landward extent of current coastal erosion. This would only occur in a severe storm or series of storms when the coastline was already nearing the peak of an erosion phase. The line includes a 5 m buffer to give space for coastal defence reconstruction/beach restoration after an erosion event, and to give residents a feeling of safety that house foundations will not be undermined. A 5 m buffer was also included in dune toe erosion estimates to ensure they were precautionary, which provides for uncertainties in data and current knowledge on dune fluctuation.

The CCEL is based on existing coastal erosion risk. It does not factor in any sea level rise or other climate change effects such as increased northeasterly storms and summer droughts. It also does not address coastal inundation by the sea.

The approach adopted is to avoid any major structures, especially dwellings, between the CCEL and the ocean. Existing structures within this area are still protected through existing use rights. Site-specific assessment of coastal erosion and coastal inundation risks is recommended for resource consent applications triggered by the CCEL.

Some of the District's existing urban areas are protected from erosion by coastal defences consented by the regional and/or district council. In some cases, these defences have now reduced current coastal erosion risk to a tolerable level. The Plan allows for reasonable use where lots already exist seaward of the CCEL and the risk is tolerable. If a lot behind a coastal erosion defence meets all eight criteria below, the FCPL rules (Sections 36.13 and 36.14) apply to the land between the CCEL shown on the Planning Maps, and 10 m landward of the landward edge of the coastal erosion defence. The CCEL rules (Sections 36.11 and 36.12) still apply between the 10 m mark landward of the coastal erosion defence and mean high water springs. The diagram below illustrates this.



#### The eight criteria are:

- 1 The lot is in the Residential Area.
- 2 The lot has less than 500 m<sup>2</sup> landward of the CCEL.
- 3 A FCPL is landward of the CCEL.
- 4 The Planning Maps do not show a Residual Risk Area on the lot.
- 5
  - A. If seaward of mean high water springs: the coastal erosion defence has, and is in full compliance with, a resource consent of 35 years duration from Waikato Regional Council; or
  - B. If landward of mean high water springs: the defence has, and is in full compliance with, a land use consent of at least 35 years duration from the Council; or
  - C. If the coastal erosion defence crosses mean high water springs: both 5A and 5B above apply.

- 6 The resource consent(s) described in 5 above certify that the coastal erosion defence can withstand a series of severe coastal erosion events, although maintenance may be needed over time, and that coastal erosion at the edges of the defence will not be exacerbated.
- 7 The coastal erosion defence has a long-term management plan registered with the Council that includes: long-term monitoring and maintenance of the defence, provision/triggers for removal or landward relocation of the defence, long-term management of houses and other buildings and structures near the defence, and back-up alternatives to the defence.
- 8 The Waikato Regional Council has assessed coastal inundation risk, and has recommended minimum ground floor heights for dwellings, minor units, other habitable rooms, and storage of hazardous substances.

A Plan change may consider CCEL relocation to account for a coastal erosion defence if all the eight criteria are met, after taking account of the specific beach dynamics and form of the coastal erosion defence. This Plan change should include a Residual Risk Area.

In some situations, existing use rights may apply to maintenance of existing structures seaward of the CCEL (Refer to RMA Section 10).

### **36.5.3 Future Coastal Process Line**

A Future Coastal Process Line (FCPL) is also applied that corresponds to a possible chance of erosion risk in the year 2100. This factors in the effect of a 0.9 m sea level rise relative to 1990 levels using the Bruun Rule.

Given the uncertainties of predicting coastal erosion risk in the future and the limited nature of the Bruun Rule, the FCPL cannot clearly identify what land is and is not at future risk. Instead, it denotes two important methods. Firstly, the area between the FCPL and the CCEL needs to be managed to protect the coastline from possible erosion risk over the long-term. Secondly, any intensification of development in this area beyond what the existing zones and overlays permit needs a site-specific assessment to ensure it will not increase future coastal erosion risk beyond existing levels. The FCPL benefits future generations rather than current generations. It is a buffer area so that future generations retain options to manage their own coastal erosion risk.

### **36.5.4 Future Coastal Process Line Changes**

The current FCPL is a general indicator of a management area (albeit more accurate than the "secondary setback" used by the Council prior to this Plan). Future plan changes may adjust this from more data, advanced modelling and beach specific assessment. Actions to protect the coastline through beach restoration or hard/soft defences may move the FCPL seaward to reflect the updated future risk assessment. The FCPL may also be moved landward if more accurate calculation or modelling indicates a greater future coastal erosion risk.

The FCPL calculations are deemed sufficient to meet NZCPS and RPS requirements for long-term coastal management within the ten-year term of this Plan. This is because of the uncertainties of sea level rise projections this far in the future, and that extending the timeframe from 2100 to 2113 would only result in a minor landward movement in the FCPL.

### 36.5.5 Where the Current Coastal Erosion Area and Future Coastal Process Area Rules Apply

The Current Coastal Erosion Area (CCEA) rules in Section 36.11 apply between the CCEL shown on the Planning Maps and mean high water springs. The Future Coastal Process Area (FCPA) rules in Section 36.13 apply between the FCPL shown on the Planning Maps and the CCEL.

Where a lot protected by a coastal erosion defence meets all eight criteria in Section 36.5.2, the Future Coastal Process Area rules also apply between the CCEL on the Planning Maps and 10 m landward of the landward edge of the coastal erosion defence. The Current Coastal Erosion Area rules no longer apply in this area while the eight criteria are met. This is illustrated in the diagram in Section 36.5.2.

## 36.6 Tsunami

Tsunami risk is most relevant on the eastern coastline of the Coromandel. The most frequent tsunami source is from the South American coast. While these occur about once every 50 to 100 years, they take 12-15 hours to reach New Zealand and have a lower wave height by the time they reach New Zealand. They flood low-lying areas of some settlements, while others are protected by dunes and higher land.

The main near source of tsunami is the Tonga-Kermadec Trench to the northeast of New Zealand. While events generated in the lower portion of the Trench occur only once per estimated 400-800 years, they can take less than an hour to reach New Zealand. Tsunamis affecting eastern seaboard settlements from this source tend to occur from earthquakes greater than magnitude 9 on the Richter Scale with 15-20 m of slip (from 2012 and 2013 assessments). The waves from this size earthquake are also larger: 2-4 m in Whitianga or higher.

The tsunami rule applies to the east coast settlements of Matarangi, Whitianga, Cooks Beach, Hahei, Tairua, Pauanui and Whangamata.

As well as these Plan provisions, tsunami risk management plans are in place for Whitianga and Tairua-Pauanui, and are being developed for other areas in the District. These are non-statutory plans to manage tsunami risk through education, evacuation routes and land use guidance. Over time, these management plans can assist with improving the Plan's provisions to manage tsunami hazard risk.

## 36.7 Flood Defences

The WRC is responsible for maintaining flood defences in the District. The Plan needs to allow for these activities to continue so that flood hazard risks to local communities and infrastructure can remain tolerable. Where these structures are on land not owned or managed by the WRC, some land use activities need to be avoided to preserve the structure/work's integrity and long-term protection. These land use activities are only permitted if the WRC commissions them. Otherwise resource consent is needed to assess their effects on the structure or work, with technical input provided by the WRC.

## 36.8 Activity Table and User Information

The Activity Table in this section groups activities under the overlay heading and provides a rule and section number to go to as a starting point. In the table the following abbreviations are used:

R =	Rule
S =	Section

The zone rules are part of a hierarchy of rules. There may be zone rules, district-wide rules, other overlay rules or special purpose provisions that also apply to the activity and site. Where there is conflict between rules the rule hierarchy applies to the extent of the conflict (see Section 1 Background and How to Use the Plan for more information).

Activity Table	
<b>Flooding</b>	<b>S 36.9</b>
Accessory building	R 1
Any other activity	R 2
Comprehensive residential development	R 3
Two or more dwellings per lot	R 3
Earthworks	R 4
Hazardous facility	R 5
Retail sale of LPG, petrol or diesel	R 5
Use or storage of radioactive materials exempt under Radiation Protection Regulations	R 5
Visitor accommodation	R 6
Minor unit	R 7
One dwelling per lot	R 7
Subdivision creating one or more additional lots	R 8
Subdivision creating one or more conservation lots	R 8
<b>Current Coastal Erosion Area</b>	<b>S 36.11</b>
Earthworks	R 11
Public amenity	R 13
One dwelling per lot	R 10
Accessory building	R 10
Addition to a building	R 10
'Soft' coastal defence	R 14
Subdivision to accommodate a network utility	R 15
Subdivision around two or more dwellings	R 15
Any other activity	R 9
'Hard' coastal defence	R 12
Subdivision creating one or more additional lots	R 12
Subdivision creating one or more conservation lots	R 12
Dwelling within Lots 1 and 2 DP 474786, Lots 59 - 65 DPS 8285 and Lots 1 – 15 DPS 15943	R 16



Activity Table	
<b>Future Coastal Process Area</b>	<b>S 36.13</b>
Any other activity	R 17
Accessory building	R 18
Minor unit	R 18
One dwelling per lot	R 18
Addition to a building in the CCEA	R 19
'Soft' coastal defence	R 20
'Hard' coastal defence	R 21
<b>Tsunami</b>	<b>S 36.15</b>
Community facility	R 22
Residential care facility	R 22
<b>Flood Defence</b>	<b>S 36.17</b>
Any other activity	R 23
Flood defence	R 24

**Note:**

1. Works in close proximity to any electricity line can be dangerous. Compliance with the [New Zealand Electrical Code of Practice 34:2001](#) is mandatory for all buildings and mobile plant within close proximity to all electricity lines.
2. Vegetation to be planted near electricity lines should be selected and/or managed to ensure that it will not result in the vegetation breaching the [Electricity \(Hazards from Trees\) Regulations 2003](#).

## 36.9 Flooding Rules

### Rule 1: Accessory building

1. An accessory building that is a permitted, controlled or restricted discretionary activity in the underlying zone rules retains its activity status provided:
  - a) Any portion of the building containing a habitable room meets the standards in Table 1; and
  - b) It is not in the High Flood Hazard Area or a Floodway; and
  - c) If it is in the Medium Flood Hazard Area, Overland Flow Area B or Overland Flow Area C:
    - i) The ground floor allows floodwaters to pass underneath without obstructions excluding foundation posts/poles; and
    - ii) Floodwaters are not diverted or displaced onto surrounding properties; and
    - iii) A report from a suitably qualified expert (e.g. hydrological engineer) accompanies any building consent for the activity, confirming that Rule 1.1 c) i) and ii) are complied with.
2. An accessory building that does not retain its activity status under Rule 1.1 is a restricted discretionary activity.
3. The Council restricts its discretion to all the matters in Table 2.

**Note:**

1. The accessory building (e.g. garage, shed) may be attached to a dwelling or other accessory building
2. Obstructions under Rule 1.1 c) i) may include trellis, hedge and building materials.

**Rule 2: Any other activity**

1. Any other activity not included in Section 36.9 that is a permitted, controlled or restricted discretionary activity in the underlying zone and district-wide rules retains its activity status provided:
  - a) All habitable rooms meet the standards in Table 1; and
  - b) No fence (except for stock control fences in the Rural Zone) or permanent building is in the High Flood Hazard Area; and
  - c) No structure is in a Floodway; and
  - d) No permanent building greater than 50 m<sup>2</sup> is in the area bounded by Kirikiri West Road, Ngati Maru Highway, Waipapa Stream and the Waihou River.
2. Any other activity that does not retain its activity status under Rule 2.1 is a restricted discretionary activity.
3. The Council restricts its discretion to all the matters in Table 2.

**Rule 3: Comprehensive residential development; Two or more dwellings per lot**

1. An activity listed in Rule 3 that is a controlled or restricted discretionary activity in the underlying zone rules retains its activity status provided:
  - a) It meets the standards in Table 1; and
  - b) It is not in the High Flood Hazard Area or Floodway.
2. The Council restricts its discretion to all the matters in Table 2.
3. An activity that does not retain its activity status under Rule 3.1 a) is a discretionary activity.
4. An activity that does not retain its activity status under Rule 3.1 b) is a non-complying activity.

**Rule 4: Earthworks**

1. Earthworks that are a permitted, controlled or restricted discretionary activity in the underlying zone and district-wide rules retain their activity status provided:
  - a) Earthworks do not elevate the site surface above the existing ground level in the:
    - i) Medium Flood Hazard Area; or
    - ii) Overland Flow Area B; or
    - iii) Overland Flow Area C; or
    - iv) In the area bounded by Kirikiri West Road, Ngati Maru Highway, Waipapa Stream and the Waihou River; and
  - b) Within the High Flood Hazard Area or a Floodway, the earthworks are only for the following purpose(s):
    - i) A driveway or accessway less than 1:8 gradient; or
    - ii) Planting or removal of vegetation; or
    - iii) Domestic purposes, horticulture or land cultivation; or
    - iv) Garden amenities or fences; or
    - v) Utility trenching by the Council or a network utilities operator; or
    - vi) Emergency works to clear roads; or

- vii) Maintenance of operational roads or tracks; or
  - viii) Irrigation or land drainage works below ground level; or
  - ix) Forestry firebreaks.
2. Earthworks that do not retain their activity status under Rule 4.1 are a restricted discretionary activity.
  3. The Council restricts its discretion to all the matters in Table 2.

**Note:**

1. *Kauri dieback disease is a significant threat to the kauri trees in the district. Refer to [www.kauridieback.co.nz](http://www.kauridieback.co.nz) for more information. To protect against this disease, the Department of Conservation recommends using the following procedures for earthworks within three times the radius of the canopy dripline of a kauri tree (the potential contamination area):*
  - a) *Define the potential contamination areas for individual trees or a stand of trees.*
  - b) *Establish an entry/exit point by each potential contamination area where vehicles and equipment are cleaned of all soil and organic material when moving into, out of, and between contamination areas.*
  - c) *Do not transport soil or organic material from within a potential contamination area to outside a potential contamination area or vice versa, unless disposing to landfill.*
  - d) *Earthworks in potential contamination areas should be done during dry soil conditions. This reduces equipment contamination and makes cleaning easier.*

**Rule 5: Hazardous facility; Use or storage of radioactive materials exempt under Radiation Protection Regulations; Retail sale of LPG, petrol or diesel**

1. An activity listed in Rule 5 that is a permitted or controlled activity in the underlying district-wide rules retains its activity status provided it meets the standards in Table 1.
2. An activity that does not retain its activity status under Rule 5.1 is a discretionary activity.

**Rule 6: Visitor accommodation**

1. Visitor accommodation that is a permitted, controlled or restricted discretionary activity in the underlying zone rules retains its activity status provided:
  - a) It meets the standards in Table 1, and;
  - b) It occurs within an existing dwelling, minor unit or accessory building; and
  - c) It is not in the High Flood Hazard Area or a Floodway; and
  - d) If it is in the Medium Flood Hazard Area, Overland Flow Area B or Overland Flow Area C:
    - i) The ground floor allows floodwaters to pass underneath without obstructions excluding foundation posts/poles; and
    - ii) Floodwaters are not diverted or displaced onto surrounding properties; and
    - iii) A report from a suitably qualified expert (e.g. hydrological engineer) accompanies any building consent for the activity, confirming that Rule 6.1 d) i) and ii) are complied with.
2. Visitor accommodation that does not retain its activity status under Rule 6.1 a), c) and d) is a restricted discretionary activity.
3. The Council restricts its discretion to all the matters in Table 2.

4. Visitor accommodation that does not retain its activity status under Rule 6.1 b) is a discretionary activity.

*Note:*

1. *Obstructions under Rule 6.1 d) i) may include trellis, hedge and building materials.*

#### **Rule 7: Minor unit; One dwelling per lot**

1. An activity listed in Rule 7 that is a permitted, controlled or restricted discretionary activity in the underlying zone rules retains its activity status provided:
  - a) It meets the standards in Table 1; and
  - b) It is not in the High Flood Hazard Area or a Floodway; and
  - c) If it is in the Medium Flood Hazard Area, Overland Flow Area B or Overland Flow Area C:
    - i) The ground floor allows floodwaters to pass underneath without obstructions excluding foundation posts/poles; and
    - ii) Floodwaters are not diverted or displaced onto surrounding properties; and
    - iii) A report from a suitably qualified expert (e.g. hydrological engineer) accompanies any building consent for the activity, confirming that Rule 7.1 c) i) and ii) are complied with.
2. An activity listed in Rule 7 that does not retain its activity status under Rule 7.1 is a restricted discretionary activity.
3. The Council restricts its discretion to all the matters in Table 2.

*Note:*

1. *Obstructions under Rule 7.1 c) i) may include trellis, hedge and building materials.*

#### **Rule 8: Subdivision creating one or more additional lots; Subdivision creating one or more conservation lots**

1. For a subdivision listed in Rule 8 that is a restricted discretionary activity in the underlying district-wide rules, the Council extends its discretion to all the matters in Table 2.

## 36.10 Assessment Standards, Matters and Criteria

Table 1 – Standards		
1. <u>Defended Area</u>	Minimum ground floor <u>height</u> above <u>ground level</u> of: a <u>dwelling</u> , a <u>minor unit</u> , other <u>habitable room</u> and storage of hazardous substances.	0.5 m above the predicted flood level for the design river flood event in Section 36.2.2.  For the <u>defended area</u> : assuming the defences exist but a failure has occurred.
2. <u>Low Flood Hazard Area</u>		
3. <u>Medium Flood Hazard Area</u>		
4. <u>High Flood Hazard Area</u>		
5. <u>Ponding Area</u>	As above, from Tararu to Kopu as shown in Planning Maps	RL 2.776 New Zealand Vertical Datum 2016 (NZVD2016)
6. Overland Flow Area A		0.5 m above <u>ground level</u>
7. Overland Flow Area B		1 m above <u>ground level</u>
8. Overland Flow Area C		1.5 m above <u>ground level</u>
9. Setback from the base of a flood defence: for new buildings and <u>building</u> additions that reduce the distance from the closest part of the <u>building</u> to the flood defence.  This setback does not apply if an easement, or other legal instrument, for the purposes of access to or <u>maintenance</u> of the flood defence has been registered on the <u>title</u> and the proposed buildings or <u>building</u> additions do not encroach over or impede that easement or legal instrument.		20 m
10. No <u>fence</u> is in a <u>High Flood Hazard Area</u> or a Floodway.		
11. No permanent <u>structure</u> is in a Floodway.		

Table 2 – Restricted Discretionary Activity Matters
<p><b>1. Flood hazard risk to people or property</b></p> <ul style="list-style-type: none"> <li>a) The extent to which a <u>flood hazard risk assessment</u> determines that the level of risk to the <u>site</u> including the proposed activity is acceptable or tolerable.</li> <li>b) Whether any changes to surface features or topography have occurred over time which may have a material effect on the flood modelling assumptions and identified areas of flood hazards.</li> <li>c) Whether a <u>building</u> can breach the flood hazard standards while maintaining a tolerable risk because of the activity intensity, low capital value, temporary duration, construction materials or design, or other factor.</li> <li>d) Whether the <u>building</u> is designed to withstand the design river flood event (described in Section 36.2.2) without movement (e.g. floor levels, structural framework, anchors).</li> <li>e) Whether the activity displaces or diverts flood waters from the design river flood event (described in Section 36.2.2), with more than minor effects on people or property off-<u>site</u>.</li> <li>f) The extent to which mitigation measures reduce the risk to people and property from the design river flood event (described in Section 36.2.2).</li> </ul> <p><b>2. Natural character of rivers</b></p> <ul style="list-style-type: none"> <li>a) Whether the activity has an adverse effect on the natural character and function of a river system.</li> </ul>

**Table 2 – Restricted Discretionary Activity Matters**

**3. Barriers to floodwater movement**

- a) The extent to which fences, walls or other building structures allow for the passage of flood waters and debris through them.

**4. Distance from flood defence**

- a) Whether the building is at risk from increased flood damage resulting from a breach of a flood defence near the building
- b) Whether access to and maintenance of the flood defence is not compromised or impeded by any proposed development or subdivision.

**5. Mitigation measures for flood hazard risk**

- a) Whether any proposed mitigation measures are effective to mitigate the risk to people and property arising from the flood hazard.

**6. Management of cumulative or cascading risks associated with flooding**

- a) The extent to which the activity avoids or mitigates any cumulative risks (particularly coastal inundation and coastal erosion) and any cascading risks (particularly debris flows).

## 36.11 Current Coastal Erosion Area Rules

### Rule 9: Any other activity

1. Any other activity not included in Section 36.11 that:
  - a) Erects or relocates a new permanent building in the Current Coastal Erosion Area Overlay; or
  - b) Is an addition to an existing permanent building where the addition is in the Current Coastal Erosion Area Overlay;
 Is a non-complying activity.

### Rule 10: One dwelling per lot; Accessory building; Addition to a building

1. An activity listed in Rule 10 is a restricted discretionary activity, provided:
  - a) It is partly or fully within land between the Current Coastal Erosion Line and the Te Puru South Coastal Erosion Line on 401 - 419 Thames Coast Road, Te Puru shown in Figure 1 below; and
  - b) A new building or an addition to a building is relocatable; and
  - c) Council is indemnified against any liability associated with the failure (in whole or part) of any coastal defence structure, including any damage or costs arising from such failure, or ongoing maintenance of the structure; and
  - d) There is a long term management plan for the maintenance of coastal defence structure which has been approved by the Council and shall include long-term monitoring and maintenance of the defence, provision/triggers for removal or landward relocation of the defence, long-term management of dwellings and other buildings and structures near the defence, and back-up alternatives to the defence; and

- e) A report on coastal processes affecting the site, at a level of detail that corresponds to the scale and significance of the environmental effects, is submitted with the application.
2. The Council restricts its discretion to the matters in Table 3 below.
3. An activity listed in Rule 10 that:
  - a) Is not a restricted discretionary activity under Rule 10.1; or
  - b) Is located partly or fully on land seaward of the Te Puru South Coastal Erosion Line on 401-419 Thames Coast Road, Te Puru shown in Figure 1 below;Is a non-complying activity.

**Note:**

1. Under this rule "relocatable" can include construction on wooden, concrete or other piles in a manner so that the building can be lifted or moved by vehicles and re-established in a new location.
2. The Te Puru South Coastal Erosion Line and the Current Coastal Erosion Line are shown in Figure 1 below.
3. For the avoidance of doubt, maintenance, replacement or alterations can be undertaken inside the building envelope and the building footpath of a lawfully established building on 401-419 Thames Coast Road, Te Puru shown in Figure 1 below in accordance with the existing use rights provisions in section 10 of the [Resource Management Act 1991](#).



Figure 1 – 401 to 419 Thames Coast Road, Te Puru



Te Puru South Coastal Erosion Line – yellow dashed line  
Current Coastal Erosion Line – solid green



### Rule 11: Earthworks

1. Earthworks that are a permitted, controlled or restricted discretionary activity in the underlying zone and district-wide rules retain their activity status provided:
  - a) They are commissioned by the Waikato Regional Council; or
  - b) They are for domestic gardening; or
  - c) They are to install a consented or permitted building, structure or coastal defence.
2. Earthworks that do not retain their activity status under Rule 11.1 are a discretionary activity.

#### Note:

1. *Kauri dieback disease is a significant threat to the kauri trees in the district. Refer to [www.kauridieback.co.nz](http://www.kauridieback.co.nz) for more information. To protect against this disease, the Department of Conservation recommends using the following procedures for earthworks within three times the radius of the canopy dripline of a kauri tree (the potential contamination area):*
  - a) *Define the potential contamination areas for individual trees or a stand of trees.*
  - b) *Establish an entry/exit point by each potential contamination area where vehicles and equipment are cleaned of all soil and organic material when moving into, out of, and between contamination areas.*
  - c) *Do not transport soil or organic material from within a potential contamination area to outside a potential contamination area or vice versa, unless disposing to landfill.*
  - d) *Earthworks in potential contamination areas should be done during dry soil conditions. This reduces equipment contamination and makes cleaning easier.*

### Rule 12: 'Hard' coastal defence; Subdivision creating one or more additional lots; Subdivision creating one or more conservative lots

1. An activity listed in Rule 12 is a non-complying activity.

### Rule 13: Public amenity

1. A public amenity that is a permitted or controlled activity in the underlying zone and district-wide rules retains its activity status provided:
  - a) It is commissioned by the Council; and
  - b) It is not a building.
2. A public amenity that does not retain its activity status under Rule 13.1 is a restricted discretionary activity.
3. The Council restricts its discretion to matters 3, 5, 6 and 8 in Table 3.

#### Rule 14: 'Soft' coastal defence

1. A 'soft' coastal defence is a restricted discretionary activity provided any rock, concrete, metal, timber or geotextile component is buried.
2. The Council restricts its discretion to all the matters in Table 3.
3. A resource consent application under Rule 14.1 shall be assessed without public notification under Sections 95 and 95A of the RMA
4. A 'soft' coastal defence that is not a restricted discretionary activity under Rule 14.1 is a non-complying activity.

#### Rule 15: Subdivision around two or more dwellings; Subdivision to accommodate a network utility

1. An activity listed in Rule 15 is a discretionary activity.

#### Rule 16: Dwelling within Lots 1 and 2 DP 474786, Lots 59 - 65 DPS 8285 and Lots 1 – 15 DPS 15943.

1. A new dwelling or addition to an existing dwelling within Lots 1 and 2 DP 474786, Lots 59 - 65 DPS 8285 and Lots 1 – 15 DPS 15943 that is located seaward of the Current Coastal Erosion Line is a prohibited activity.

### 36.12 Assessment Matters and Criteria

**Table 3 – Restricted Discretionary Activity Matters**

#### **1. Collective action across the affected area**

- a) Whether all lots subject to a specific coastal hazard are protected by the 'soft' coastal defence.
- b) The extent to which the community affected by the specific coastal hazard is working together to achieve a holistic solution to coastal hazard risk.
- c) Whether the 'soft' coastal defence would disadvantage a site disproportionately.

#### **2. Effects on nearby sites**

- a) Whether the 'soft' coastal defence would increase the coastal hazard risk to adjacent or nearby sites.

#### **3. Preservation and/or restoration of high tide beaches**

- a) Whether the structure is located landward enough to allow for a beach to exist at high tide.

#### **4. Legal provisions for management of the coastal defence**

- a) Whether the coastal defence is legally protected against damage and legally allows for access and maintenance if it is within or partly within private land and/or across multiple lots.

#### **5. Ability to remove structure**

- a) Whether the structure can be removed or replaced if changes occur to climate, risk levels or tolerance, ecosystems, or community preferences.

**Table 3 – Restricted Discretionary Activity Matters**

**6. Effects on natural character of the coastal environment**

- a) The extent to which the structure avoids, remedies or mitigates adverse effects on the existing natural character of the coastal environment.

**7. Burial of structural components**

- a) Whether the rock, concrete, metal, timber, geotextile or other man-made component is buried in a manner and at a depth so that the component is only exposed for a short period of time (i.e. a few weeks) after a severe storm (e.g. once every five years).

**8. Management of cumulative or cascading risks associated with coastal erosion**

- a) The extent to which the activity avoids or mitigates any cumulative risks (particularly tsunami) and any cascading risks (particularly coastal inundation).

**9. Activities on 401 - 419 Thames Coast Road between the Current Coastal Erosion Line and the Te Puru South Coastal Erosion Line.**

- a) Whether the building addition is a minor component of the building.
- b) The extent to which an activity avoids or mitigates any risk from coastal erosion.
- c) The extent to which effective erosion protection is provided for the site on which the new building is located.
- d) The extent to which any recommendations provided in the coastal processes report are complied with.
- e) The extent to which the proposal is consistent with the long term management plan for the maintenance of coastal defence structure which has been approved by the Council.

### 36.13 Future Coastal Process Area Rules

**Rule 17: Any other activity**

1. For any other activity not listed in Section 36.13 that is a restricted discretionary activity in the underlying zone and district-wide rules, the Council extends its discretion to include matters 1–3 in Table 4.

**Rule 18: Accessory building; Minor unit; One dwelling per lot**

1. An activity listed in Rule 18 retains its activity status provided any new buildings (excluding a garage) are relocatable.
2. An activity that does not retain its activity status in Rule 18 is a non-complying activity.

**Note:**

1. Under this Rule, "relocatable" can include construction on wooden, concrete or other piles in a manner so that the building can be lifted and moved by vehicles and re-established in a new location.
2. Rule 18 only applies to new buildings used as a dwelling or a minor unit or accessory building within the Future Coastal Process Area. It does not apply to extensions or renovations of existing buildings.

#### Rule 19: Addition to a building in a CCEA

1. An addition to a building that is partly or fully within the CCEA, but the addition itself is partly or fully within the FCPA, is a restricted discretionary activity.
2. For a lot that meets all eight criteria in Section 36.5.2, an addition to a building that is partly or fully within 10 m of the coastal erosion defence, but the addition itself is partly or fully more than 10 m landward from the coastal erosion defence, is a restricted discretionary activity. This supersedes Rule 19.1.
3. The Council restricts its discretion to matter 4 in Table 4.

#### Rule 20: 'Soft' coastal defence

1. A 'soft' coastal defence is a restricted discretionary activity provided any rock, concrete, metal, timber or geotextile component is buried.
2. The Council restricts its discretion to all the matters in Section 36.12 Table 3.
3. A resource consent application under Rule 20.1 shall be assessed without public notification under Sections 95 and 95A of the RMA.
4. A 'soft' coastal defence that is not a restricted discretionary activity under Rule 20.1 is a non-complying activity.

#### Rule 21: 'Hard' coastal defence

1. A 'hard' coastal defence is a non-complying activity.

### 36.14 Assessment Matters and Criteria

**Table 4 – Restricted Discretionary Activity Matters**

#### **1. Development intensification within the Future Coastal Process Area**

- a) Whether the activity maintains or reduces the number of dwellings or major building assets within the Future Coastal Process Area.
- b) For lots completely within the Future Coastal Process Area, or where there is not enough space in a lot to locate a dwelling outside the Future Coastal Process Area, whether one dwelling on the lot is provided for.

#### **2. Effects of potential sea level rise**

- a) Whether the subdivision, use or development is able to adapt to sea level rise over the next 100 years as predicted by the most recent national guidance on climate change and sea level rise.
- b) Whether site-specific assessment of underlying beach geology, beach contour, elevation or other factor indicates that coastal erosion risk is unlikely in 100 years' time at that site.

**Table 4 – Restricted Discretionary Activity Matters**

**3. Location of additional dwellings (including resulting from subdivision), community facilities and lifeline utilities**

- a) Ensuring that a proposed subdivided lot identifies an appropriate building platform and effluent soakage area (for non-reticulated lots) on the lot outside the Future Coastal Process Area where a dwelling can be installed while still meeting zone yard and height in relation to boundary standards.
- b) Whether the building provides a service to the wider community: infrastructural, social or commercial that may require additional protection works should sea level rise increase coastal erosion risk and the building should therefore be located outside the Future Coastal Process Area.
- c) Whether site-specific assessment of underlying beach geology, beach contour, elevation or other factor indicates that coastal erosion risk is unlikely in 100 years' time at the location of additional dwellings, community facilities or lifeline utilities.

**4. Effect on coastal erosion risk management from an addition to a building in the CCEA**

- a) The extent to which the building addition does not increase the cost or difficulty of demolishing or relocating the entire building that is partly within the CCEA
- b) Whether the building addition is a minor component of the building.
- c) Whether the load-bearing building frames of the main building are outside the CCEA.

## 36.15 Tsunami Rules

### **Rule 22: Community facility; Residential care facility**

1. An activity is listed in Rule 22:
  - a) Located in a Residential Area, Commercial Area, Industrial Area or Recreation Area, of Matarangi, Whitianga, Cooks Beach, Hahei, Tairua, Pauanui or Whangamata; and
  - b) Provides services to people with disabilities or illnesses, elderly people, or pre-school, primary school or secondary school-age children; and
  - c) With a ground level less than 5 m above mean sea level;
 that is either:
  - d) A new activity on the site; or
  - e) A new building bigger than 50 m<sup>2</sup> on the site;
 that is a permitted, controlled or restricted discretionary activity in the underlying zone and district-wide rules is a restricted discretionary activity.
2. The Council restricts its discretion to all the matters in Table 5.

## 36.16 Assessment Matters and Criteria

**Table 5 – Restricted Discretionary Activity Matters**

**1. Provision and functionality of a vertical evacuation area**

- a) Whether there is a vertical evacuation area that is sufficiently high to be above a maximum credible tsunami event.
- b) Whether the vertical evacuation area is sufficiently strong to withstand a tsunami with a flow speed of  $8 \text{ ms}^{-1}$  carrying debris (e.g. has steel-reinforced foundations braced at the footings and buried to solid earth/bedrock that can support the floor without the presence of any walls below the floor).
- c) Whether the floor is sufficient and practicable to shelter the usual occupants and staff in the facility in the event of a tsunami.

**2. The ability to safely evacuate all facility and occupants out of danger of a tsunami**

- a) If a vertical evacuation area is not practicable, whether an alternative is in place to safely evacuate (vertically or otherwise) the facility occupants and staff out of danger of a tsunami within an hour after a major earthquake, assuming all roads are blocked or impassable.

**3. Management of cumulative or cascading risks associated with tsunami**

- a) The extent to which any cumulative risks (particularly coastal erosion) and cascading risks (particularly earthquake and liquefaction) are factored into the design of the vertical evacuation area.

**Note:**

- 1. *Useful guidance on Table 5 Matter 1 is in the following report and any subsequent versions: Leonard, G.S. et. al. July 2011. Scoping study for evaluating the tsunami vulnerability of New Zealand buildings for use as evacuation structures. GNS Science Consultancy Report 2011/36. Lower Hutt. Institute of Geological and Nuclear Sciences Limited.*
- 2. *Useful guidance can also be found in the following guide: Applied Technology Council. June 2009. Vertical Evacuation from Tsunamis: A Guide for Community Officials. FEMA P646A. Redwood City, California. Federal Emergency Management Agency and National Oceanic and Atmospheric Administration.*

## 36.17 Flood Defence Rules

### Rule 23: Any other activity

1. Any other activity not included in Section 36 that is a permitted, controlled or restricted discretionary activity in the underlying zone and district-wide rules retains its activity status provided any:
  - a) Earthworks; or
  - b) Deposition of materials; or
  - c) Installation, alteration or removal of a structure;On a flood defence (including defences against coastal flooding) is authorised by the Waikato Regional Council.
2. Any other activity that is not permitted under Rule 23.1 is a discretionary activity.
3. A resource consent application under Rule 23.2 shall be notified to the Waikato Regional Council.

#### Note:

1. *Rule 23 only applies to natural hazard defences that are physical works. It does not apply to the Defended Area Overlay (excluding the physical natural hazard defences), flood spill areas, or natural character areas with flood mitigation benefits.*

### Rule 24: Flood defence

1. A flood defence installation, alteration, removal, maintenance, upgrade or debris clearance of a flood defence (including defences against coastal flooding) is a permitted activity, provided it is commissioned by the Waikato Regional Council.
2. An activity that is not permitted under Rule 24.1 is a discretionary activity.
3. The Waikato Regional Council shall be notified of resource consent application under Rule 24.2.