

Report on submissions and further submissions on the  
Proposed Waikato District Plan

## **Hearing 27C: Flood Hazards and Defended Areas**

### **Appendix 2: Recommended Amendments to Text**

## Appendix 2: Recommended amendments to text

Provisions discussed in Report H27C Flood Hazards and Defended Areas of Chapter 15 are set out below. Those in red type are recommended to be amended. No change is proposed for those in black type.

### 1.1 Chapter 15 Introduction

[Changes to paragraphs 8, 9, and 10 only, other authors may recommend changes to other paragraphs]

#### 15.1 Introduction

- (8) High quality up-to-date information is important for natural hazard risk management. The district plan requires the use of the best information available to identify land that may be subject to natural hazards. This includes historical flood data and photographic evidence of flood or high flow events,<sup>1</sup> hazard maps, databases (such as the regional and district hazard registers) and technical reports held by the Council, and the interpretation of these by qualified and experienced professionals.
- (9) Climate change has the potential to increase risk through exacerbating natural hazards, but will also have effects on the environment beyond natural hazards. The Ministry for the Environment predicts the effects of climate change on the Waikato District to include overall warmer temperatures, fewer frosts, a decrease in spring rainfall, increased storm events (including extreme winds) and an average rise in mean sea level. This is likely to mean more frequent droughts leading to water shortages, more inland flooding and salt water intrusion in low-lying coastal areas and an increase in erosion and land instability. For this reason, an allowance for the projected effects of climate change, based on the RCP 6.0 scenario over a 100-year period to 2120, has been included in the 2D flood modelling of key risk areas within this district plan. The key risk areas are located from (Horotiu – Huntly – Ohinewai) and include the Flood Plain Management Area, the High Risk Flood Area and two Flood Ponding Areas. No climate change allowance is included in the 1D modelling for the remainder of the Flood Plain Management Areas.<sup>2</sup> Specific provision has also been made within the Coastal Sensitivity Areas in respect to development that may be impacted by the projected effects of sea level rise over a 100-year timeframe.
- (10) The Flood Plain Management Area is the 1% Annual Exceedance Probability (AEP) floodplain, and is identified through both 1D and 2D modelling, depending on the level of information available. Between Horotiu – Huntly – Ohinewai, where 2D modelling is available, High Flood Risk Areas have also been identified. These are areas within the floodplain where the depth of flood water in a 1% AEP flood event exceeds 1 metre or and<sup>3</sup> the speed of flood water exceeds 2 metres per second or the flood depth multiplied by the flood speed exceeds one, which is considered to put the community at an unacceptable (or intolerable) level of risk in terms of the potential for loss of life, injury or serious damage to property. Subdivision and new activities within the High Flood Risk overlay are carefully regulated

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<sup>1</sup> [2053.14]

<sup>2</sup> [2146.11]

<sup>3</sup> [2102.62]

## I.2 Policy 15.2.1.10

### Policy 15.2.1.10 Areas defended by stopbanks adjacent to the Waikato River

- (a) Control subdivision, use and development in areas identified as Defended Areas adjacent to the Waikato River by:
  - (i) assessing the potential risk of overtopping or structural failure of the stopbanks, and overwhelming of associated flood protection structures, before subdivision, use and development occurs; and
  - (ii) requiring that consideration be given to appropriate mitigation to reduce any residual risk identified to acceptable levels<sup>4</sup>; and
  - (iii) ensuring that any residual risk is not transferred to neighbouring sites; and (iv) recognising the functional needs and operational needs of the National Grid.<sup>5</sup>
- (a) Specify minimum setbacks for buildings and earthworks from stopbanks to:
  - (i) protect the structural integrity of the stopbanks; and
  - (ii) provide a buffer to reduce the potential risk to life and damage to property from deep and fast-flowing flood waters in the event of a breach.

## I.3 Policy 15.2.1.12

### Policy 15.2.1.12 Reduce potential for flood damage to buildings located on ~~the Waikato and Waipa River~~ floodplains and flood ponding areas

- (a) Reduce the potential for flood damage to buildings located on ~~the Waikato and Waipa~~<sup>6</sup> ~~River~~ floodplains and flood ponding areas by ensuring that the minimum floor level of building development is above the design flood levels/ponding levels in a 1% AEP flood event, plus an allowance for freeboard, unless:
  - (i) the building ~~development~~ is of a type that is not likely to suffer material damage during a flood; or
  - (ii) the building is a small-scale addition to an existing building; or
  - (iii) the risk from flooding is otherwise avoided, remedied or mitigated.

## I.4 Policy 15.2.1.13

### Policy 15.2.1.13 Control filling of land within the 1% AEP floodplain and flood ponding areas

- (a) Control filling of land within the 1% AEP floodplain and flood ponding areas to ensure that the potential adverse effects on flood storage capacity, overland flows, run-off volumes on surrounding properties ~~on or~~<sup>7</sup> infrastructure, are avoided or mitigated.

## I.5 Policy 15.2.1.14

### Policy 15.2.1.14 Hazardous substances located within the 1% AEP floodplain and flood ponding areas, and High Risk Flood Areas

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<sup>4</sup> 2102.69

<sup>5</sup> 2101.9

<sup>6</sup> [2102.63]

<sup>7</sup> 2104.5

- (a) Ensure that the location and storage of hazardous substances within the 1% AEP floodplain and flood ponding areas, including High Risk Flood Areas, are managed to prevent do not create an unacceptable hazard risks to people, property, infrastructure<sup>8</sup> or the environment.

Alternative amendment:

- (a) Ensure that the location and storage of hazardous substances within ~~the 1% AEP floodplain and flood ponding area~~ areas affected by natural hazards are managed to prevent do not create an unacceptable hazard risks to people, property, infrastructure or the environment.

And amend title accordingly.

## 1.6 Policy 15.2.1.15

### **Policy 15.2.1.15 Flood ponding areas and overland flow paths Managing flood hazards through integrated catchment management**

- (a) Manage ~~stormwater flood~~ flood hazards by requiring new subdivision and development within floodplains, flood ponding areas and overland flow paths to adopt integrated catchment plan-based ~~stormwater~~ management methods which:
- (i) maintain the ~~flood storage capacity function~~ of natural floodplains, wetlands and ponding areas including flood storage capacity; and
  - (ii) retain the function and capacity of overland flow paths to convey stormwater run-off; and
  - (iii) do not transfer or increase risk elsewhere within the catchment; and
  - (iv) promote ~~low impact best practice~~ stormwater management ~~practices~~<sup>9</sup> with reference to the Waikato Stormwater Management Guideline and the Regional Infrastructure Technical Specifications (RITS); and
  - (v) minimise impervious surfaces.

## 1.7 Rule 15.4.1 P8

P8	<u>Earthworks</u> not provided for under Rule 15.4.1 P6 or P7.	<p>(a) In the Residential, Village and Country Living Zones – a maximum volume of filling above natural ground level of 10m<sup>3</sup> per site, and a maximum cumulative volume of filling and excavation of 20m<sup>3</sup>; or</p> <p>(b) In the Rural Zone – a maximum volume of filling above natural ground level of 100m<sup>3</sup> per site, and a maximum cumulative volume of filling and excavation of 200m<sup>3</sup> per site; or</p> <p>(c) All other zones – a maximum volume of filling above natural ground level of 20m<sup>3</sup> per site, and a maximum cumulative volume of filling and excavation of 50m<sup>3</sup> per site; and</p> <p>(d) Height and depth of earthworks in all zones</p>
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<sup>8</sup> [2102.78], [2093.6], [2053.32].

<sup>9</sup> [2105.6], [2102.66]

		<p>(i) a maximum height of 0.2m of filling above natural ground level; and</p> <p>(ii) a maximum depth of excavation of 0.5m below natural ground level.</p> <p><u>Where a site is located partly within the Flood Plain Management Area or Flood Ponding Area this rule only applies to that part of the site within the Flood Plain Management Area or Flood Ponding Area.<sup>10</sup></u></p>
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## I.8 Rule 15.4.2

### 15.4.2 Restricted Discretionary Activities

- (a) The activities listed below are restricted discretionary activities within the Flood Plain Management Area shown on the Planning Maps or in a Flood Ponding Area.
- (b) Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in the following table.

~~(c) Any application arising from this rule shall not be limited or publicly notified.<sup>11</sup>~~

## I.9 Rule 15.5.1 PI

Activity		Activity-specific conditions
PI	<ol style="list-style-type: none"> <li>1. Repair, maintenance or <u>minor upgrading</u> of existing <u>utilities</u>.</li> <li>2. <del>New Construction, replacement or upgrading of</del><sup>12</sup>telecommunication lines, poles, cabinets and masts/poles supporting antennas.</li> <li>3. <del>Construction, replacement or upgrading of electricity lines, poles, cabinets, and supporting structures.</del><sup>13</sup></li> </ol>	Nil

## I.10 Rule 15.5.2 RDI

Activity		Activity-specific conditions
RDI	<ol style="list-style-type: none"> <li>1. New <u>utilities</u> not provided for in Rule 15.5.1 PI (2) <del>or PI (3)</del><sup>14</sup>.</li> </ol>	<p><b>Discretion is restricted to:</b></p> <ol style="list-style-type: none"> <li>1. Functional and operational requirements to be located in the <u>High Risk Flood Area</u>;</li> </ol>

<sup>10</sup> [2093.8].

<sup>11</sup> [2053.54].

<sup>12</sup> [2040.5].

<sup>13</sup> [2123.5], [2100.4]

<sup>14</sup> [2123.6]

	<p>2. Upgrading of existing utilities not provided for in Rule 15.5.1 PI(1).</p>	<p>2. The adverse effects on people and property from establishing or upgrading the <u>utility</u> in the <u>High Risk Flood Area</u>;</p> <p>3. The potential for the development to transfer/increase flood risk to neighbouring properties;</p> <p>4. Consideration of alternative locations;</p> <p>5. Consideration of the projected effects of climate change;</p> <p>6. Any mitigation measures to reduce the risk to people's safety, well-being and property.</p>
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### I.11 Rule 15.5.3 DI

DI	<p>1. Subdivision that creates one or more additional vacant lot(s) where:</p> <p>(a) The additional lot(s) are located entirely outside the High Risk Flood Area; or</p> <p>(b) The additional lot(s) are partially within the High Risk Flood Area and each additional lot(s) contains a <del>a net site</del> <u>an</u><sup>15</sup> area capable of containing a complying building platform entirely outside the High Risk Flood Area.</p> <p>2. This rule does not apply to subdivision for a utility allotment, access allotment or subdivision to create a reserve allotment.</p>
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### I.12 Rule 15.5.4 NC3

NC3	Emergency services <del>s</del> <sup>16</sup> -facilities and hospitals.
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### I.13 Rule 15.6.2 RDI

Activity	Matters of Discretion
<p>RDI</p> <p>(1) Subdivision that creates one or more additional vacant lot(s).</p> <p>(2) Rule 15.6.2 RDI(1) does not apply to subdivision for a <u>utility allotment</u>, an <u>access allotment</u> or subdivision to create a reserve allotment.</p>	<p><b>Discretion is restricted to:</b></p> <p>(a) The actual level of service provided by the structural defence and associated flood protection works, including any change in the level of service anticipated due to climate change and sea level rise;</p> <p>(b) The impact of any planned improvements, maintenance or upgrading on the residual risk;</p> <p>(c) The effect of groundwater levels and variability in ground conditions on <del>stop</del>-bank security at and adjacent to the site to be subdivided;</p>

<sup>15</sup> [2143.3]

<sup>16</sup> [2103.33]

		<p>(d) the likely depth and duration of flooding as a result of a breach or overtopping event or flood ponding;</p> <p>(e) the location of the subdivision, including services such as wastewater, water supply and roading/access (including escape routes), in relation to potential breakout points (failure zone);</p> <p>(f) The adverse effects <del>to</del> <u>on</u>:</p> <ol style="list-style-type: none"> <li>i. people and property,</li> <li>ii. <u>historic heritage and Sites and Areas of Significance to Maori</u>,<sup>17</sup> and</li> <li>iii. overall vulnerability</li> </ol> <p>from potential failure or overwhelming of the structural defences and associated flood protection works relevant to the proposed new lot(s);</p> <p>(g) Potential for the development to transfer/increase flood risk/residual risk to neighbouring properties;</p> <p>(h) Any additional mitigation measures proposed or site features which reduce residual risk (e.g. natural high ground; evacuation plan).</p>
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### I.14 Rule 15.6.3 D2

(a) The activities listed below are discretionary activities within the Defended Area.

D1	Construction of a new <u>building</u> or new <u>accessory building</u> , located within 50m of the toe of a stop-bank where the stop-bank is under the responsibility of the Council, the Waikato Regional Council or the Crown.
D2	<ol style="list-style-type: none"> <li>i. <u>Earthworks</u> located within 50m of the toe of a stop-bank where the stop-bank is under the responsibility of the Council, the Waikato Regional Council or the Crown.</li> <li>ii. <u>This rule does not apply to earthworks associated with utilities where the written approval of the authority managing the stopbank has been obtained.</u><sup>18</sup></li> </ol>

### I.15 15.13 Information Requirements

#### 15.13.1 General

- (l) The following documents, to the extent relevant to the proposal:
- (a) Geotechnical assessment, including ...;
  - (b) An assessment of natural hazard risk...;

<sup>17</sup>[2107.19]

<sup>18</sup>[2040.6]

- (c) Remediation and mitigation measures...
- (2) Plans identifying:
  - (a) Topographical features within the site and surrounding area;
  - (b) The location of natural hazards on all or part of the site.
- (3) Consideration of the information contained in the following stormwater catchment management plans where relevant:
  - (a) Ngaruawahia Catchment Management Plan, March 2105;
  - (b) Tamahere Stormwater Catchment Management Plan and Report, 2011
  - (c) Port Waikato Stormwater Catchment Management Plan and Report, 2004;
  - (d) Pokeno Catchment Management Plan, 2010;
  - (e) Te Kauwhata Catchment Management Plan, 2009;
  - (f) Tuakau Catchment Management Plan, Draft 2014. <sup>19</sup>

## **I.16 Definition of Flood Plain Management Area**

### **Flood Plain Management Area**

Means an area identified on the planning maps which is at risk of flooding in a 1% AEP flood event and is otherwise described [in this District Plan](#)<sup>20</sup> as the 1% AEP floodplain.

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<sup>19</sup>[2147.4]

<sup>20</sup>[2093.4]