

# **WAIKATO DISTRICT COUNCIL**

## **Hearings of Submissions on the Proposed Waikato District Plan**

### **Report and Decisions of Independent Commissioners**

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#### **Decision Report 29D: Natural Hazards and Climate Change – Subsidence, Liquefaction and Other Hazards**

**17 January 2022**

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#### **Commissioners**

Dr Phil Mitchell (Chair)

Mr Paul Cooney (Deputy Chair)

Councillor Jan Sedgwick

Councillor Janet Gibb

Ms Linda Te Aho

Mr Dynes Fulton

Mr Weo Maag

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## **Glossary of Terms**

Waikato District Council	Council
The Waikato District Plan Hearings Panel	Panel
Proposed Waikato District Plan	PDP
Stage 2 Natural Hazards and Climate Change	Stage 2

## **1 Introduction**

- 1.1 This report addresses the subject matter of the Stage 2 Natural Hazards and Climate Change provisions (Stage 2), specifically liquefaction and other hazard provisions, including the related submissions received by the Waikato District Council (Council) on Stage 2 of the Proposed Waikato District Plan (PDP). This report should be read alongside Decision Report 29 which sets out the background and process followed for Stage 2.
- 1.2 The PDP manages land stability, liquefaction and mine subsidence risk by including objectives, policies and rules which require geotechnical investigations to be undertaken prior to any subdivision or development. The level of mitigation required is also determined via these assessments, with the intention of ensuring that the site is suitable for the intended use in accordance with the Resource Management Act 1991 (RMA).<sup>1</sup>
- 1.3 While land stability and liquefaction risk are assessed on a site-by-site basis, the notified PDP retained and expanded the existing Mine Subsidence Risk Area overlay in Huntly East. Sites with a possible subsidence risk were identified where associated land use rules and restrictions apply.<sup>2</sup>
- 1.4 Specifically, the following provisions were considered in this hearing:
- a) Land stability: Policies 15.2.1.19 and 15.2.1.21;
  - b) Liquefaction: Policies 15.2.1.22 and 15.2.1.23, Provisions 15.1(6) and 15.1(14), Section 15.12 and Definitions 15.14; and
  - c) Mine subsidence: Policy 15.2.1.20, Section 15.11 and planning maps.

## **2 Hearing arrangement**

- 2.1 The hearing for the Stage 2 Natural Hazards and Climate Change provisions was held between 10 and 12 May 2021 via Zoom. All of the relevant information pertaining to this hearing (i.e., section 42A report, legal submissions and evidence) is contained on Council's website.
- 2.2 We heard from the following parties on the subsidence, liquefaction, and other hazard provisions of the PDP:

<b>Submitter:</b>	<b>Represented by:</b>
Waikato District Council	Mr Grant Eccles (author of the section 42A report)
David Whyte – Huntly Community Board Sub	Mr David Whyte
Waikato Regional Council	Mr James Beban and Ms Sarah Gunnell
Ports of Auckland Limited	Mr Mark Arbuthnot

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<sup>1</sup> Section 42A Report, Hearing 27E: Chapter 15: Natural Hazards and Climate Change – Land Stability, Liquefaction, Mine Subsidence, dated 23 March 2021, Paragraph 13.

<sup>2</sup> Ibid Paragraph 14.

Shand Properties Limited	Mr Chris Dawson
Kāinga Ora	Mr Douglas Allan (Legal Counsel), Mr Craig Sharman

### **3 Overview of issues raised in submissions**

3.1 In the section 42A report, Mr Grant Eccles set out the full list of submissions on the subsidence, liquefaction, and other hazard provisions. Mr Eccles helpfully summarised the provisions in the PDP and set out the key matters of relief sought by the submitters. These matters include:

- a) Mining Induced Land Instability:
  - b) This natural hazard is confined to the Huntly East area, in areas that overlie historic coal mine workings. Successive versions of the Waikato District Plan have applied a mine subsidence risk overlay to sites in the area, with a gradation of severity of planning controls depending on whether a site was identified in the high risk area or not. If a site is within the high risk area, then building and subdivision requires resource consent, which may be declined if subsidence risk is not adequately addressed;<sup>3</sup>
  - c) The PDP expanded the extent of the high risk area and in doing so captured a number of additional properties that were not previously the subject of any District Plan controls in terms of mine subsidence;<sup>4</sup>
  - d) Eighteen submission and further submission points were received regarding the Mine Subsidence Risk Area in Huntly East. Mr Eccles stated that all of these requested that the overlay be removed from the submitters' properties, or in the case of the Huntly Community Board submission, that the extent of the overlay in the PDP be amended to match the overlay in the Operative Waikato District Plan.<sup>5</sup>
- e) Land Stability:
  - f) The PDP contains two policies that address land stability. The policies are directive in their intent to:
    - (i) Avoid locating subdivision and development on land assessed as being or likely to be subject to instability or subsidence unless appropriate mitigation can be put in place and the risk to people, property and infrastructure is not increased, and
    - (ii) Avoid discharging stormwater to ground that is potentially at risk of land instability and subsidence unless appropriate assessments have been undertaken and mitigations measures can be put in place.<sup>6</sup>

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<sup>3</sup> Introductory Hearing Statement of Grant Eccles, dated 6 May 2021, Paragraph 12.

<sup>4</sup> Ibid Paragraph 13.

<sup>5</sup> Section 42A Report, Hearing 27E: Chapter 15: Natural Hazards and Climate Change – Land Stability, Liquefaction, Mine Subsidence, dated 23 March 2021, Paragraph 298.

<sup>6</sup> Introductory Hearing Statement of Grant Eccles, dated 6 May 2021, Paragraph 5.

- g) Mr Eccles stated that submissions on these policies sought to either expand the ambit of the policies or introduce uncertainty through the use of terms such as 'to tolerable levels'.<sup>7</sup>
  - h) Liquefaction:
    - i) The PDP objectives and policies require subdivision and development to be controlled on land assessed as being subject to liquefaction risk. In the current absence of any liquefaction mapping, the PDP rules require the assessment of whether land is at risk of liquefaction to be carried out by applicants for consent;<sup>8</sup>
    - j) Mr Eccles stated that submitters have stated that this unfairly loads the cost of liquefaction investigation on to applicants, and request that Council undertake a district-wide liquefaction assessment to identify susceptible areas.<sup>9</sup>
- 3.2 Given the number of submissions received we have structured the following sections thematically and included the analysis and recommendations of the section 42A report with the relevant submission points.

## **4 Matters raised at the hearing**

### Mining induced land instability

- 4.1 In response to submissions, the section 42A report considered there is an insufficient level of subsidence hazard risk on the properties that have been newly captured by the expansion of the mining subsidence overlay in the PDP to justify their inclusion. Thus, the section 42A report recommended that the retention of the current extent of the mining subsidence overlay, as set out in the Operative Waikato District Plan, is an appropriate method of recognising and providing for mine-related subsidence as a natural hazard, as required by section 6(h) of the RMA.<sup>10</sup>
- 4.2 Mr Eccles relied on the expert evidence of Mr Doug Johnson (an Engineering Geologist) who stated the subsidence risks associated with the Huntly East Mine are well defined and understood, and that properties outside of the Operative Waikato District Plan overlay but within the PDP overlay are at low risk to subsidence.<sup>11</sup>
- 4.3 In addition to this, Mr Eccles recommended amendments to apply restricted discretionary activity status (as opposed to the as-notified status of discretionary) to land-use activities within the overlay that do not comply as a permitted or controlled activity. He recommended that the discretionary activity status for subdivision within the mining subsidence overlay be retained.<sup>12</sup>
- 4.4 Shand Properties Limited sought a controlled activity rule which requires that any buildings that occur on land subdivided within the Mine Subsidence Risk Area are constructed in accordance with the geotechnical assessment undertaken and approved

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<sup>7</sup> Ibid Paragraph 6.

<sup>8</sup> Ibid Paragraph 7.

<sup>9</sup> Ibid Paragraph 8.

<sup>10</sup> Ibid Paragraph 15.

<sup>11</sup> Section 42A Report, Hearing 27E: Chapter 15: Natural Hazards and Climate Change – Land Stability, Liquefaction, Mine Subsidence, dated 23 March 2021, Paragraph 301.

<sup>12</sup> Introductory Hearing Statement of Grant Eccles, dated 6 May 2021, Paragraph 16.

at the time of subdivision, with control reserved over those matters. Mr Eccles agreed and recommended that the controlled activity rule be included in the PDP.<sup>13</sup>

- 4.5 With respect to objectives and policies on land stability, the section 42A report recommended retaining the policies as-notified, as Mr Eccles considered the provisions to be easy to interpret, clear in their intent, and that they have good linkages to the corresponding rules.
- 4.6 Mr David Whyte presented the submission of the Huntly Community Board. Mr Whyte submitted:
- a) That the Huntly Community Board supported the recommendation of the section 42A report with regard to the extent of the Mine Subsidence Risk Area overlay; and
  - b) That there is no current monitoring of the Huntly Mine Subsidence Risk Area. Mr Whyte sought monitoring be undertaken, so that the overlay may be removed or reduced in future dependent on the outcomes of monitoring.
- 4.7 Mr Chris Dawson presented the Shand Properties Limited submission. In summary Mr Dawson stated that Shand Properties Limited:
- a) Sought controlled activity status for land-use consents, when geotechnical matters have been addressed through the subdivision process; and
  - b) Agreed with the recommendation of Mr Eccles on this matter.

#### Liquefaction

- 4.8 Submitters requested that Council undertake a district-wide liquefaction assessment to identify susceptible areas, as currently applicants for resource consent would be required to undertake this assessment.
- 4.9 Mr Eccles and Mr Bird (an Engineering Geologist representing Council) agreed with the relief sought. Mr Eccles concluded that undertaking a district-wide liquefaction assessment represents best practice and complies with MBIE guidelines. The section 42A report recommended that Council prepare a district-wide assessment, which will build on work currently being undertaken by Waikato Regional Council (WRC).<sup>14</sup>
- 4.10 In the meantime, Mr Eccles concluded that there needs to be rules addressing liquefaction, and that the notified rule framework will effectively handle the interim period.<sup>15</sup>
- 4.11 Mr Douglas Allan presented legal submissions on behalf of Kāinga Ora Homes and Communities (Kāinga Ora). In summary, Mr Allan submitted that:
- a) The proposed approach to liquefaction places the onus of identifying areas subject to liquefaction risk onto applicants;<sup>16</sup>

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<sup>13</sup> Section 42A Report, Hearing 27E: Chapter 15: Natural Hazards and Climate Change – Land Stability, Liquefaction, Mine Subsidence, dated 23 March 2021, Paragraph 168.

<sup>14</sup> Introductory Hearing Statement of Grant Eccles, dated 6 May 2021, Paragraph 9.

<sup>15</sup> Ibid Paragraph 10.

<sup>16</sup> Legal Submissions on behalf of Kāinga Ora Homes and Communities, dated 5 May 2021, Paragraph 4.1

- b) Liquefaction is a phenomenon that does not respect property boundaries. To that end, it is clearly inefficient to apply an ad hoc approach which requires each individual property owner to replicate work each time an application for a subdivision or other relevant consent is made. That may result in the same technical work occurring multiple times by virtue of the area subject to the hazard being significantly greater than any individual site for which a separate assessment would be required;<sup>17</sup> and
- c) That Council and its technical advisors have accepted that the approach proposed in the PDP is not best practice, and that Council should identify whether or not there is potential for the hazard in the first place. Mr Allan stated that despite this, Council's response is to maintain the status quo and instead recommend that a district-wide mapping of liquefaction hazards take place through some future process.<sup>18</sup>
- d) Mr Allan stated that this approach is unsatisfactory as:
- e) Relying on a later process is inappropriate because it is not time bound and there is no guarantee that Council will undertake that process promptly;
- f) In the interim, landowners will be subject to a process which is inefficient, and which will place unjustified costs on them, in circumstances where Council accepts that there are issues with doing so;
- g) If a subsequent Schedule 1 RMA process is adopted, there will be time and financial costs to both submitters and the Council; and
- h) Clause 10(4)(a) of Schedule 1 to the RMA provides that decisions must be given within two years of notification of a proposed policy statement or plan. Stage 2 was notified on 22 July 2020. It is therefore well within the two year period for a decision. While the Council may have sought (and been granted) an extension of time from the Minister's on the basis that it would release decisions on Stage 1 and 2 concurrently, there is no statutory requirement for Council to do this.<sup>19</sup>
- i) Kāinga Ora sought:
- j) The introduction of a mapped 'Liquefaction Management Area' or similar with a suite of provisions relevant to subdivision and development within this area (based on what is currently proposed); or
- k) Incorporation a non-statutory interactive set of mapped 'Liquefaction Management Areas' held as a geographic information system which provides information as to hazard risk, and a related policy framework for assessment but no associated rules.<sup>20</sup>

4.12 Mr Craig Sharman presented planning evidence on behalf of Kāinga Ora. In summary, Mr Sharman's evidence:

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<sup>17</sup> Ibid Paragraph 4.2.

<sup>18</sup> Ibid Paragraph 4.3.

<sup>19</sup> Ibid Paragraph 4.4.

<sup>20</sup> Ibid Paragraph 4.5.

- l) Agreed with the section 42A report that it would be advantageous if the district-wide assessment could be completed in time to be factored into a Decisions Version of the PDP;<sup>21</sup> and
- m) Considered that the proposed approach to liquefaction as sought by Kāinga Ora is best practice and should be acted upon with urgency. Mr Sharman's evidence stated that this course of action would avoid an interim period of uncertain duration where the notified provisions of the PDP in respect of liquefaction have legal effect.<sup>22</sup>

#### Other and general agreement with the s42A report recommendations

- 4.13 Mr James Beban and Ms Sarah Gunnell presented planning evidence on behalf of WRC. They agreed with the recommendations of the section 42A report.<sup>23</sup>
- 4.14 Mr Mark Arbuthnot presented planning evidence on behalf of the Ports of Auckland Limited. In summary Mr Arbuthnot agreed with the recommendations of the section 42A report.<sup>24</sup>
- 4.15 Ms Renee Laker tabled a letter. Ms Laker owns a property at 203 Hakanoa Street, Huntly which was excluded from the Operative Waikato District Plan Mine Subsidence Risk overlay. Ms Laker supported the recommendations of the section 42A report to amend the planning maps to the extent from the Operative Waikato District Plan.<sup>25</sup>
- 4.16 Ms Carolyn McAlley tabled planning evidence on behalf of Heritage New Zealand Pouhere Taonga. In summary, Ms McAlley supported the recommendations of the section 42A report.<sup>26</sup>
- 4.17 Ms Alec Duncan tabled a letter on behalf of Fire and Emergency New Zealand and in summary, supported the recommendations of the section 42A report.<sup>27</sup>

## **5 Panel decisions**

- 5.1 The section 42A report addressed 29 separate submissions points and nine further submissions points on Stage 2 of the PDP. The section 42A author analysed these and made a recommendation for each submission to be accepted or rejected by us, along with some changes to the PDP text and planning maps. The author amended some recommendations in rebuttal evidence and their closing remarks.
- 5.2 We do not attempt to address every submission point individually and instead focus on them thematically by reference to the key changes sought by submitters.

#### Mining induced land instability

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<sup>21</sup> Summary Statement of Mr Craig Sharman for Kāinga Ora Homes and Communities, dated 5 May 2021, Paragraph 2.8.

<sup>22</sup> Ibid Paragraph 2.9.

<sup>23</sup> Evidence in Chief of Mr James Beban and Ms Sarah Gunnell on behalf of the Waikato Regional Council, dated 15 April 2021, Paragraph 7.2.

<sup>24</sup> Evidence in Chief of Mark Arbuthnot on behalf of Ports of Auckland Limited, dated 16 April 2021, Paragraph 4.2.

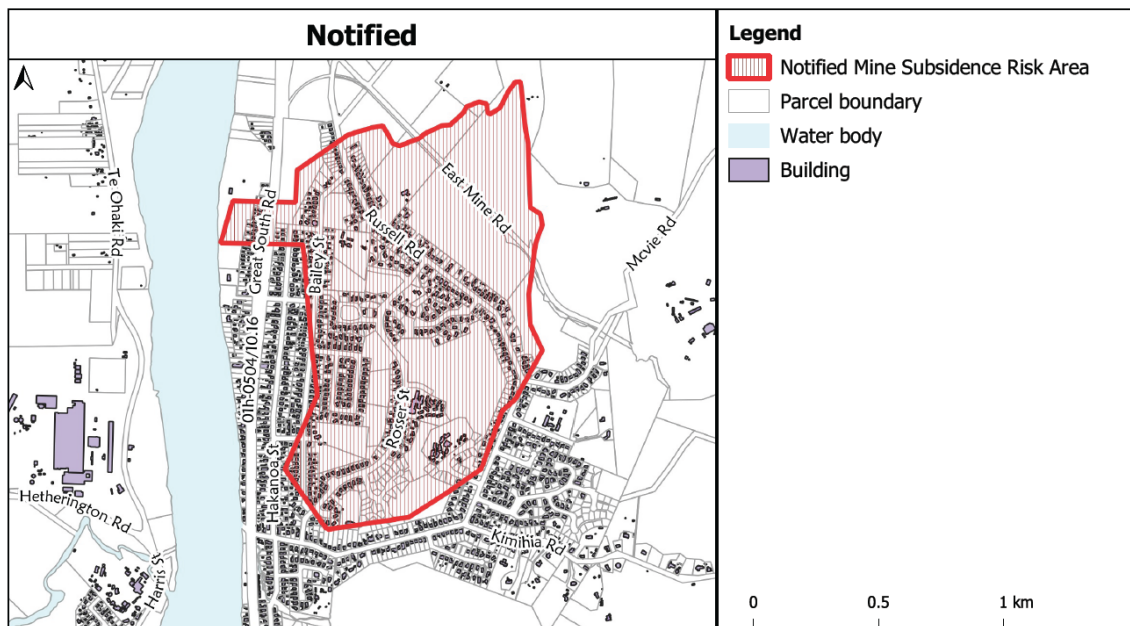
<sup>25</sup> Letter from Ms Renee Laker regarding Natural Hazards and Climate Change: Subsidence and Liquefaction, dated 16 April 2021.

<sup>26</sup> Evidence in Chief of Ms Carolyn McAlley on behalf of Heritage New Zealand Pouhere Taonga, dated 16 April 2021, Paragraph 4.

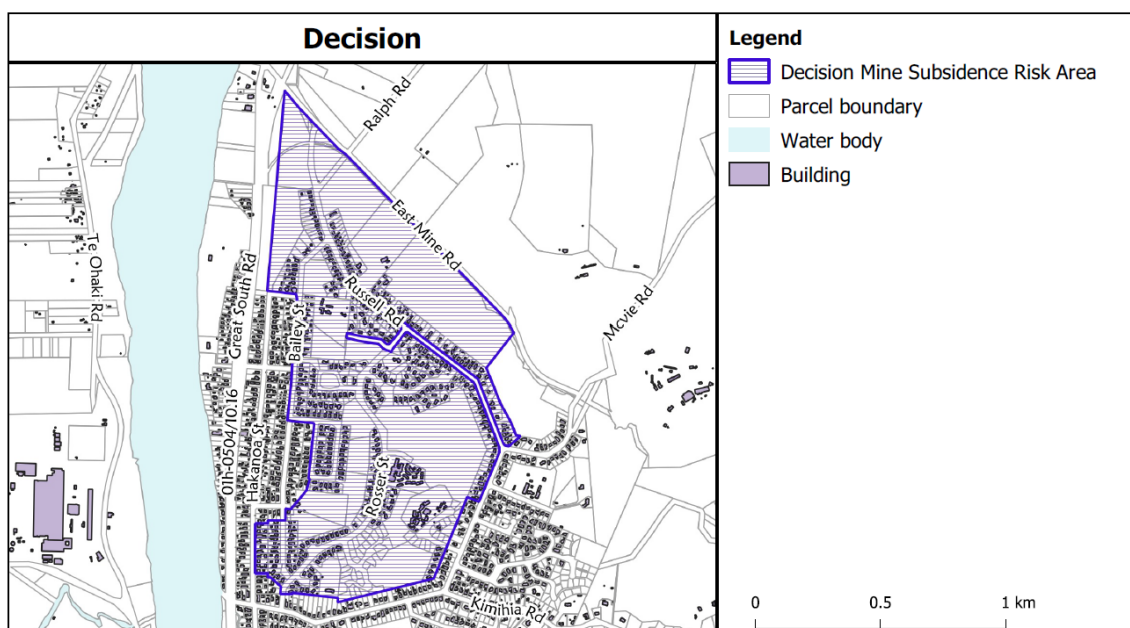
<sup>27</sup> Letter from Ms Alec Duncan regarding Fire and Emergency New Zealand – Letter to be tabled at Hearing 27: Natural Hazards and Climate Change, dated 13 April 2021.



- 5.3 With respect to mining induced land instability, we accept the recommendation of the section 42A report and find that:
- Subsidence risks associated with the Huntly East Mine are well defined and understood; and
  - That properties outside of the Operative Waikato District Plan overlay but within the PDP overlay are at low risk of subsidence.
- 5.4 Given the above, we have amended the PDP planning maps to include the extent of the mining subsidence overlay, as set out in the Operative Waikato District Plan (refer below).



**Figure 1: Notified Mine Subsidence Risk Area**



**Figure 2: Decision Mine Subsidence Risk Area**

- 5.5 We agree with the inclusion of the new controlled activity rule sought by Shand Properties and find that it will avoid unnecessary duplication where an assessment has already been undertaken at the time of subdivision consent, whilst still providing Council with the ability to impose conditions through a resource consent process.

Liquefaction

- 5.6 Regarding the district-wide liquefaction assessment proposed by Kāinga Ora, we agree with the section 42A report recommendation that there needs to be a rule framework addressing liquefaction in the PDP, and the as-notified rules effectively manage this risk. We strongly encourage Council to include the district-wide mapping in the PDP once this assessment is completed.

**6 Conclusion**

- 6.1 We accept and/or reject the section 42A report and the evidence filed by the submitters, collectively forming the section 32AA assessment informing this Decision.
- 6.2 Overall, we are satisfied that the subsidence and liquefaction provisions as amended will provide a suitable framework for avoiding or mitigating risks from natural hazards on people, property, infrastructure and the environment from subdivision, use and development of land.

**For the Hearings Panel**



**Dr Phil Mitchell, Chair**

**Dated: 17 January 2022**

# Chapter 15: Natural Hazards and Climate Change

## 15.1 Introduction

1. The Natural Hazards and Climate Change chapter identifies risks associated with natural hazards and manages land use in areas subject to risk from natural hazards. It identifies areas where certain types of new development will be avoided because of the natural hazards present, but also recognises that there is existing development, including infrastructure, already located on land subject to natural hazards. These areas will require management through mitigation and adaptation to ensure that the risk of damage to property, or injury or loss of lives is not increased.
2. This chapter sets out a two-tiered approach where natural hazard risk from subdivision, use and development is to be avoided within the following identified high risk natural hazard areas:
  - a. High Risk Flood Area;
  - b. High Risk Coastal Inundation Area; and
  - c. High Risk Coastal Erosion Area.
3. Outside of these areas, subdivision, use and development is provided for where natural hazard risk can be adequately avoided, remedied or mitigated and the risk is not exacerbated or transferred to adjoining sites.
4. The following natural hazards areas have been identified and mapped in the district plan:

<b>Overlay</b>	<b>Description</b>
<b><u>Flood hazards</u></b>	
<u>High Flood Risk Areas</u>	<u>Identifies areas within the floodplain where the depth of flood water in a 1% AEP flood event exceeds 1 metre and the speed of flood water exceeds 2 metres per second, or the flood depth multiplied by the flood speed exceeds one.</u>
<u>Flood Plain Management Area</u>	<u>Identifies the 1% Annual Exceedance Probability (AEP) floodplain and has been developed through both 1D and 2D modelling, depending on the level of information available.</u>
<u>Flood Ponding Areas</u>	<u>Identifies areas that experience floodwater ponding in a 1% AEP rainfall event.</u>
<u>Residual Risk Areas / Defended Areas</u>	<u>Identifies areas of land that would be at risk from a natural hazard event if it were not for a structural defence such as a stopbank.</u>
<b><u>Coastal hazards</u></b>	
<u>High Risk Coastal Inundation Area / High Risk Coastal Erosion Area</u>	<u>Identify land where there is significant risk from either coastal inundation or coastal erosion with existing sea level and coastal processes.</u>
<u>Coastal Sensitivity Area (Erosion) / Coastal Sensitivity Area (Inundation)</u>	<u>Identify land that is potentially vulnerable to either coastal erosion or coastal inundation over a 100 year period to 2120, assuming a sea level rise of 1.0 metre.</u>
<b><u>Subsidence risk</u></b>	
<u>Mine Subsidence Risk Area</u>	<u>Identifies an area where subsidence has occurred at Huntly due to former underground coal mining.</u>

- (1) ~~The Natural Hazards chapter identifies risks associated with natural hazards and manages land use in areas subject to a the risk from natural hazards. It identifies areas where certain types of new development will be avoided because of the natural hazards present, but also~~

~~recognises that there is existing development, including infrastructure and historic heritage, already located on land subject to natural hazards, and that in some circumstances new infrastructure development in natural hazard areas may be appropriate where the criteria in the plan are met. These areas will require management through mitigation and adaptation to ensure that the risk of damage to property, historic heritage or sites and areas of Significance to Maaori or injury or loss of lives is not increased.~~

- ~~(2) Maaori freehold land has particular considerations when addressing the potential impact of natural hazards and climate change. This issue has been recognised in this chapter.~~
- ~~(3) This district plan adopts a risk-based approach to natural hazard management. The risk that natural hazards pose to the Waikato District is made up of several factors including:
  - ~~(a) the nature, magnitude and extent of the hazard;~~
  - ~~(b) the anticipated frequency or probability of the hazard event occurring; and~~
  - ~~(c) the exposure and vulnerability of the environment to the hazard, including the likely community losses/damages that could occur.~~~~
- ~~(4) An understanding of both the scale and likelihood of the natural hazard event, and the likely consequences to the community, are central to the risk-based approach. From a district plan perspective, a risk-based approach requires identification and management of activities based on the level of risk to which they are exposed (e.g. farming may be acceptable in a high flood risk area, whereas residential development may not). The level of control over activities in the district plan is therefore related to the level of risk, and whether such risks are considered acceptable or not.~~
- ~~(5) More frequently occurring natural hazards in the Waikato District include flooding, coastal erosion and land instability (land slips and subsidence). The Waikato and Waipa Rivers for instance, flow through the district and can carry large flood flows. The coastal margins are subject to storm events, and sandy areas are particularly vulnerable to erosion by such events. In addition, flood ponding often occurs after heavy rainfall in the Waikato basin.~~
- ~~(6) New Zealand in general is a high earthquake hazard region and earthquake (and associated fault movement, ground shaking and liquefaction) considerations are integral to the design of the built environment<sup>1</sup>. Location of faults in Waikato District may be problematic, due to alluvial sediment and associated processes masking fault traces. While liquefiable soils are generally found within Holocene sediments in river valleys, more work is required within the Waikato District to determine areas where the liquefaction risk is high.~~
- ~~(7) Less frequent natural hazards in the Waikato District, such as wild fires, tsunamis, extreme wind events and drought, may not need a district plan response. Emergency management by groups such as Civil Defence play a significant role, using hazard management tools such as education and advocacy, warning systems and emergency preparedness. There are also non-statutory instruments or processes, such as civil defence recovery plans, and programmes to increase community preparedness, including contingency planning. Insurance and emergency services also play an important role.~~
- ~~(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, 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.~~

<sup>1</sup> MBIE module 3: Identification, Assessment and Mitigation of Liquefaction Hazards May 2016 Rev 0

- (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. 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>9</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.
- (11) ~~The planning maps identify only two flood ponding areas that experience floodwater ponding in a 1% AEP rainfall event. One of the areas is located in the southern part of Huntly adjacent to the river and the other is west of Huntly across the Waikato River adjacent to Lake Waahi and Lake Puketirini. The flood plain rules in this district plan apply to 1% AEP ponding areas including the two specifically identified in the district plan. Other 1% AEP ponding areas will be required to be identified by a suitably qualified and experienced professional as part of an application for resource consent or a plan change.~~
- (12) ~~Residual Risk Areas are areas of land that would be at risk from a natural hazard event if it were not for a structural defence such as a stopbank. In the district plan, these are areas of land protected by stopbanks with a design level of service of at least a 1% AEP flood event, and are generally located along the length of the Waikato River. For the purpose of the district plan, these areas have been called Defended Areas. The district plan includes provision for land protected by stopbanks to ensure that the residual risk is understood and considered as part of any subdivision or development proposals, or any proposal to rezone land to a more intensive land use.~~
- (13) ~~The High Risk Coastal Hazard (Inundation) Area and High Risk Coastal Hazard (Erosion) Area overlays identify land where there is significant risk from either coastal inundation or coastal erosion with existing sea level and coastal processes. The Coastal Sensitivity Area (Erosion) and Coastal Sensitivity Area (Inundation) overlays identify land that is potentially vulnerable to either coastal erosion or coastal inundation over a 100-year period to 2120, assuming a sea level rise of 1.0 metre.~~
- (14) ~~While liquefaction areas have not been identified on the planning maps, provisions in the district plan require this seismically induced natural hazard to be assessed before new~~

~~zonings or subdivision and development are undertaken. This will primarily be achieved through resource consent or plan change processes.~~

- ~~(15) Areas of slope instability can occur within the district. To comprehensively identify these areas over the entire district is not practical, given the size of the district and the changing circumstances in which slope instability occurs (often after high rainfall or seismic events). Consequently, assessment matters are included in the subdivision rules that require a geotechnical investigation to confirm that a building platform is stable before subdivision or development takes place.~~
- ~~(16) Subsidence has occurred at Huntly due to former underground coal mining and is identified as a Mine Subsidence Risk Area. Risk to new dwellings in this area is regulated through a discretionary activity resource consent process.~~
- ~~(17) Wind and seismic loadings are controlled by the Council under the Building Act 2004. The risk of fire hazard is controlled by the Waikato Regional Council, the Department of Conservation and the Waikato District Council through legislation other than the RMA, using both regulation and by increasing public awareness through information.~~
- ~~(18) Methods to increase resilience to projected changes in climatic conditions will increasingly be incorporated into all aspects of land use planning and natural hazard management. Further to this, there will be an increased focus on environmental protection and facilitating inland migration of biodiversity. Methods in this district plan will include promoting low impact urban design and green infrastructure, and increased coastal hazard setbacks to provide a more sustainable and adaptive approach to development.~~

## 15.2 Objectives and Policies

### Objective 15.2.1 – Resilience to natural hazard risk

~~A resilient community where the risks from natural hazards on people, property, infrastructure and the environment from subdivision, use and development of land are avoided or appropriately mitigated.~~

Objective 15.2.1: In an identified high risk natural hazards area, the risks associated with natural hazards on people, property and infrastructure from subdivision, use and development of land are avoided.

Objective 15.2.X: Subdivision, use and development within areas at risk from natural hazards are managed so that natural hazard risks on people, property and infrastructure are avoided, remedied or mitigated.

### Policy 15.2.1.1 - New development in areas at ~~significant~~ high risk from natural hazards

~~(a) Avoid new subdivision, use and development where they will increase the risk to people's safety, well-being and property in the following areas identified as being at significant high risk from natural hazards:~~

- ~~(i) High Risk Flood Area;~~
- ~~(ii) High Risk Coastal Hazard (Inundation) Area;~~
- ~~(iii) High Risk Coastal Hazard (Erosion) Area.~~

- (a) Avoid subdivision, use and new development in the following high risk natural hazard areas:
  - (i) High Risk Flood Area;
  - (ii) High Risk Coastal Inundation Area;



- (iii) High Risk Coastal Erosion Area,  
where there is an increase in risk to people and property.

**Policy 15.2.1.2 - Changes to existing land use activities and development in areas at significant high risk from natural hazards**

- (a) In areas of High Risk Flood, High Risk Coastal ~~Hazard~~ (Erosion) and High Risk Coastal ~~Hazard~~ (Inundation), ensure that when changes to existing land use activities and development occur, a range of risk reduction options are assessed, and development that would increase risk to people's safety, well-being and property is avoided.

**Policy 15.2.1.2A Small scale non-habitable structures in areas subject to high risk from natural hazards.**

- (a) Enable small scale accessory and farm buildings to be located within areas at high risk from natural hazards, including High Risk Flood, High Risk Coastal Inundation and High Risk Coastal Erosion, provided the risks to people, property and the environment beyond the site are managed to acceptable levels.

**Policy 15.2.1.3 - New emergency services and hospitals in areas at significant high risk from natural hazards**

- (a) Avoid locating new emergency service facilities and hospitals in areas which are at significant high risk from natural hazards, including High Risk Flood, High Risk Coastal ~~Hazard~~ (Inundation) and High Risk Coastal ~~Hazard~~ (Erosion), unless, considering engineering and technical constraints or functional and operational requirements, they cannot be reasonably located elsewhere and will not increase the risk to or vulnerability of people or communities.

**Policy 15.2.1.4 - New and upgrading of infrastructure and utilities in areas subject to significant high risk from natural hazards**

- (a) Enable the construction of new infrastructure, utilities and ancillary activities and upgrading of existing infrastructure and utilities, in areas at significant high risk from natural hazards, including High Risk Flood, High Risk Coastal ~~Hazard~~ (Inundation) and High Risk Coastal ~~Hazard~~ (Erosion) areas only where:
  - (i) the infrastructure and utilities are technically, functionally or operationally required to locate in areas subject to natural hazards, or it is not reasonably practicable to be located elsewhere; and
  - (ii) any increased risks to people, property and the environment are mitigated to the extent practicable; and
  - (iii) the infrastructure and utilities are designed, maintained and managed, including provision of hazard mitigation works where appropriate, to function to the extent practicable during and after natural hazard events.

**Policy 15.2.1.5 - Existing infrastructure and utilities in all areas subject to natural hazards**

- (a) Provide for the operation, maintenance and minor upgrading of existing infrastructure and utilities in all areas subject to natural hazards.

**Policy 15.2.1.6 - Managing natural hazard risk generally**

- (a) ~~Provide for rezoning, subdivision, use and development outside High Risk Flood, High~~

~~Risk Coastal Hazard (Inundation) and High Risk Coastal Hazard (Erosion) Areas where natural hazard risk has been appropriately identified and assessed and can be adequately avoided, remedied or mitigated and does not transfer or exacerbate risk to adjoining properties.~~

- (a) Outside of high risk natural hazard areas, provide for subdivision, use and development where:
  - (i) natural hazard risk has been appropriately identified and assessed;
  - (ii) the risk can be adequately avoided, remedied or mitigated;
  - (iii) the risk does not transfer to adjoining sites; and
  - (iv) the risk is not exacerbated.

#### **Policy 15.2.1.7 - Protection from risks of coastal hazards**

- (a) Recognise the importance of natural features and buffers, and soft hazard protection works, and prefer them wherever practicable over hard protection structures, where new hazard mitigation measures and/or works are required to protect people, property infrastructure and the environment from the risks of coastal hazards.

#### **Policy 15.2.1.8 – Limitations on hard protection works for coastal hazard mitigation**

- (a) Ensure that where ~~new~~ hard protection structures and works are ~~necessary~~ proposed to protect existing development on public or privately-owned land from coastal hazards that the following is achieved, they are appropriately assessed and controlled and:
  - (i) The structures have primarily a public and/or environmental benefit when located on public land;
  - (ii) The structures are effective considering a range of coastal hazard events including the effects of climate change and the activities or development they are designed to protect;
  - (iii) the economic, social and environmental benefits outweigh costs; ~~and~~
  - (iv) risk to people, property, infrastructure, the natural environment, historic heritage or ~~Māori Sites and Areas of Significance to Māori~~ is not transferred or increased;
  - (v) structures are located as far landward as practicable; and
  - (vi) public access both to and along the coastal area and to the coastal marine area are provided for where the structure is located on public land.
- (b) Ensure that when new hard protection structures are to be located in an area where an adaptive management strategy has been prepared to manage coastal hazards, they are consistent with that strategy;
- (c) Where adaptive management strategies have been prepared, plan change or resource consent processes should have regard to these strategies.

#### **Policy 15.2.1.9 Natural features and buffers providing natural hazard protection**

- (a) Protect, maintain and, where appropriate, enhance the integrity of natural features and buffers which provide a natural defence against the effects of natural hazards and sea level rise, including natural ponding areas, coastal dunes, intertidal areas, wetlands, waterbody margins, riparian/coastal vegetation and floodways.
- (b) Enable natural systems to adapt and respond to natural coastal processes including the effects of climate change.

#### **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; 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.
- (b) 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.

**Policy 15.2.1.11 - New development that creates demand for new protection structures and works**

- (a) Avoid locating new subdivision, use and development in High Risk Flood, High Risk Coastal ~~Hazard (Inundation)~~ and High Risk Coastal ~~Hazard (Erosion)~~ Areas where a demand or need for new structural protection works will be required to reduce the risk from natural hazards to acceptable levels.

**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 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.

**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 infrastructure, are avoided or mitigated.

**~~Policy 15.2.1.14 Hazardous substances located within floodplain and flood ponding areas~~**

- ~~(a) Ensure that the location and storage of hazardous substances within the 1% AEP floodplain and flood ponding areas do not create an unacceptable hazard to people, property, or the environment.~~

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

- (a) Manage ~~stormwater~~ 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~~ with reference to the Waikato Stormwater Management Guideline and the Regional Infrastructure Technical Specifications (RITS); and
- (v) minimise impervious surfaces.

#### **Policy 15.2.1.16 – Development in the Coastal Sensitivity Areas**

- (a) In coastal sensitive areas ~~identified on the planning maps~~, control subdivision, use and development by ensuring that the subdivision, use and development is:
  - (i) supported by a detailed site specific risk assessment, which includes measures to address the effects of climate change; and
  - (ii) designed, constructed and located to minimise the level or risk to people, property and the environment.

#### **Policy 15.2.1.17 - Setbacks from the coast**

- (a) Avoid increasing the risk from coastal hazards by requiring new built development to be set back from the coastal edge, unless there is a functional or operational need for facilities to be located at or near the coast.

#### **Policy 15.2.1.18 Residential development and subdivision potentially subject to fire risk**

- (a) In areas assessed or identified as being potentially subject to elevated fire risk, ensure that an appropriate design and layout, including a buffer area or setback, is provided around for new residential subdivision and development, and the following matters are considered:
  - (i) Access for emergency service vehicles;
  - (ii) Provision of and access to emergency firefighting water supply;
  - (iii) Separation and management of vegetation (with regard to slope, aspect, management regimes and use of less flammable vegetation); and
  - (iv) The design and materials of any buildings.

#### **Policy 15.2.1.19 – Development on land subject to instability or subsidence**

- (a) Avoid locating new subdivision, use and development, including rezoning, on land assessed as being subject to, or likely to be subject to, instability or subsidence, unless appropriate mitigation is provided and the activity does not increase the risk to people, property or infrastructure.

#### **Policy 15.2.1.20 – Development of land in the Mine Subsidence Risk Area**

- (a) On land identified within the Mine Subsidence Risk Area, ensure that:
  - (i) an assessment by an appropriately qualified engineer occurs before subdivision, use or development takes place to confirm that the land is suitable for development; and
  - (ii) buildings are designed and constructed, and uses appropriate materials, to effectively minimise the risk of damage to the buildings from ground subsidence.

#### **Policy 15.2.1.21 – Stormwater management in areas subject to risk of land instability or subsidence**

- (a) Avoid discharge of stormwater directly to ground on land that is potentially at risk of land instability or subsidence unless:
  - (i) an assessment has been undertaken by an appropriately qualified geotechnical

- specialist, indicating that the site is suitable for the proposed discharges; and
- (ii) any adverse effects on the site and receiving environment can be appropriately mitigated.

#### **Policy 15.2.1.22 – Liquefaction - susceptible ~~prone~~ land risk assessment**

- (a) On land assessed as potentially susceptible ~~prone~~ to liquefaction, ensure that:
  - (i) an assessment by a geotechnical specialist occurs before new subdivision, use or development takes place; and
  - (ii) the level of assessment reflects the type and scale of the subdivision, use or development and the overall vulnerability of the activity to the effects of liquefaction; and
  - (iii) the assessment confirms that the land is suitable for the proposed development.

#### **Policy 15.2.1.23 – Control activities on land susceptible to damage from liquefaction**

- (a) Control subdivision, use and development on land assessed as being susceptible to liquefaction induced ground damage, to ensure that appropriate mitigation is provided so that the level of risk to people, property, infrastructure.

#### **Objective 15.2.2 - Awareness of natural hazard risks**

Ensure communities respond effectively and efficiently to natural hazards.

~~A well-informed community that:-~~

- ~~(a) is aware of, and understands, which natural hazards affect the district; and~~
- ~~(b) is able to effectively and efficiently respond to, and recover from, natural hazard events.~~

#### **Policy 15.2.2.1 - Natural hazard risk information**

- (a) Enable people to be informed and have access to information on the natural hazards affecting their properties and surrounding area, including through:
  - (i) provision of Land Information Memoranda;
  - (ii) natural hazard technical information, including the projected effects of climate change, risk registers and mapping on the Council's website, the Waikato Regional Council Hazards Portal, this district plan and accompanying planning maps;
  - (iii) education, provision of information and community engagement; and
  - (iv) alignment with the work of other agencies including iwi and the Waikato Regional Council.

#### **Policy 15.2.2.2 - Awareness of Community Response Plans**

- (a) Improve response to and recovery from natural hazard events by encouraging community awareness and use of information and methods contained in Community Response Plans.

#### **Objective 15.2.3 - Climate change**

Communities are well-prepared to adapt to the effects of climate change.

~~A well-prepared community that~~

- ~~(a) is able to adapt to the effects of climate change; and~~

~~(b) Has transitioned to development that prioritises lower greenhouse gas emissions.~~

#### **Policy 15.2.3.1 - Effects of climate change on new subdivision and development**

- (a) Ensure that adequate allowances are made for the projected effects of climate change in the design and location of new subdivision and development including new urban zoning throughout the district, including undertaking assessments where relevant that provide for:
  - (i) the projected increase in rainfall intensity, as determined by national guidance, ~~but being in the event of a temperature rise of~~ assuming a temperature increase of not less than 2.3°C by 2120;
  - (ii) the projected increase in sea level, where relevant, as determined by national guidance and the best available information, but being not less than 1m by 2120;
  - (iii) in respect to new urban zoning, stress testing under the RCP 8.5 scenario for rainfall<sup>2</sup> and RCP 8.5H+ for sea level rise;<sup>3</sup> ~~and~~
  - (iv) in respect to the coastal environment, increases in storm surge, waves and wind; and.
  - (v) the ability for natural systems to respond and adapt to the projected changes included in (i) to (iv) above.

#### **Policy 15.2.3.2 - Future land use planning and climate change**

- (a) Increase the ability of the community to adapt to the effects of climate change when undertaking future land use planning by:
  - (i) ensuring the potential environmental and social costs of climate change, including effects on indigenous biodiversity (inland migration), historic heritage, ~~Māori Sites and Areas of Significance~~ sites and areas of Significance to Māori, mahinga kai, public health and safety, public access to the coast and waterway margins, and the built environment are addressed.
  - (ii) encouraging the incorporation of sustainable design measures within new subdivision, land use and development, including:
    - (A) low impact, stormwater management, urban design and green infrastructure;
    - (B) of relocatable buildings and structures in areas potentially at risk due to sea level rise or increased flood levels;
    - (C) efficient water storage;
    - (D) provision of renewable energy generation; and
    - (E) transferring to activities with lower greenhouse gas emissions.
  - (iii) providing ongoing monitoring of changes to the environment due to climate change; and
  - (iv) facilitating community discussion on adaptive pathways to manage the risks associated with climate change and incorporating them, where appropriate, into the district plan through plan changes.

#### **Policy 15.2.3.3 Precautionary approach for dealing with uncertainty**

- (a) In areas throughout the district likely to be affected by climate change over the next 100 years, adopt a precautionary approach towards new subdivision, use and development which may have potentially significant or irreversible adverse effects, but for which there is incomplete or uncertain information.

<sup>2</sup> Stress testing under the RCP 8.5 scenario for rainfall, see Ministry for the Environment, 2018: Climate Change Projections for New Zealand. September 2018. Publication No. MFE 1385.

<sup>3</sup> Stress testing under the RCP 8.5H+ scenario for sea level rise, see Ministry for the Environment, 2017: Coastal Hazards and Climate Change – Guidance for Local Government. December 2017. Publication No. ME 1341.

#### **Policy 15.2.3.4 - Provide sufficient setbacks for new development**

- (a) Protect people, property and the environment from the projected adverse effects of climate change, including sea level rise, by providing sufficient setbacks from water bodies and the coast when assessing new development.
- (b) Ensure that, in establishing development setbacks for new development, adequate consideration is given to:
  - (i) the protection of natural ecosystems, including opportunities for the inland migration of coastal habitats;
  - (ii) the vulnerability of the community;
  - (iii) the maintenance and enhancement of public access to the coast and public open space;
  - (iv) the requirements of infrastructure; and
  - (v) natural hazard mitigation provision, including the protection of natural defences.

#### **Policy 15.2.3.5 - Assess the impact of climate change on the level of natural hazard risks.**

- (a) For all new subdivision, use and development requiring rezoning or a resource consent, ensure that account is taken of the projected effects of climate change over the next 100 years when assessing any identified risks from natural hazards, and their effects on people, property, infrastructure and the environment.
- (b) Ensure that, when assessing the effects of climate change on the level of natural hazard risk in accordance with Policy 15.2.3.5(a) above, the allowances in Policy 15.2.3.1(a)(i)-(iv) are applied.
- (c) Where the assessment required by Policy 15.2.3.5(a) ~~and Policy 15.2.3.5(b)~~ indicates that natural hazards are likely to be exacerbated by climate change, ensure that subdivision and development are designed and located so that any increased and cumulative risk from natural hazards is managed to acceptable levels and any intolerable risks are avoided or reduced to tolerable or acceptable levels to avoid, or appropriately mitigate, any increased and cumulative risk, including increased risk of flooding, liquefaction, coastal inundation, coastal erosion, slope instability, fire, and drought.

### **15.2 How to use and interpret the rules**

- (a) The activities covered by the rules in this chapter are also subject to the rules in the relevant zone chapters and the district-wide rules in Chapter 14 Infrastructure and Energy.
- (b) Where subdivision is specified, a subdivision consent is also required under the provisions of the relevant zone chapter, and the district-wide rules in Chapter 14 Infrastructure and Energy will also apply.
- (c) The rules in this chapter apply alongside the National Environmental Standards for Electricity Transmission 2010 (NESETA).
- (d) The rules in this chapter do not apply to:
  - (i) any activity which is a regulated activity under the National Environmental Standards for Telecommunication Facilities 2016 (NESTF);
  - (ii) plantation forestry activities regulated under the National Environmental Standards for Plantation Forestry (NESPF).
- (d) The information requirements for resource consent applications in respect to natural hazards are set out in Rule 15.13.

#### **Advice note**

Effects on archaeological sites, both recorded (identified by the New Zealand Archaeological Association) and unrecorded, are regulated under the Heritage New Zealand Pouhere Taonga

Act 2014. Heritage New Zealand Pouhere Taonga must be contacted regarding development and the need to undertake an archaeological assessment to determine the need for an archaeological authority. In the event of an accidental discovery, the Heritage New Zealand Pouhere Taonga Lower Northern Office must be contacted immediately.

## 15.3 Flood Plain Management Area and Flood Ponding Areas

### 15.4.1 Permitted Activities

- (a) The activities listed below are permitted activities within the Flood Plain Management Area or in a Flood Ponding Area shown on the Planning Maps ~~or in a Flood Ponding Area~~, if they meet the activity-specific ~~conditions~~ standards set out in this table.
- (b) Activities may also be restricted discretionary or discretionary activities, as specified in Rules 15.4.2 and 15.4.3.

Activity		Activity-specific <del>conditions</del> <u>standards</u>
P1	Construction of a new building, or reconstruction of or an addition to an existing building, unless specified in P2 – P5 in Rule 15.4.1.	(a) The minimum floor level is at least 0.5m above the 1% AEP flood level; and (b) Compliance with <del>condition</del> <u>standard</u> (1) shall be demonstrated by a suitably qualified engineer with experience in hydrology.
P2	Additions to an existing building that does not increase the ground floor area of the building by more than 15m <sup>2</sup> .	Nil
P3	Standalone garage with a gross floor area not exceeding 40m <sup>2</sup> .	Nil
P4	(1) Construction of an accessory building without a floor; (2) Construction of a farm building without a floor.	Nil
P5	Construction, replacement, repair, maintenance, minor upgrading or upgrading of utilities.	Nil

P6	Earthworks associated with construction, replacement, repair, maintenance, minor upgrading or upgrading of utilities, including the formation and maintenance of access tracks.	Nil
P7	Earthworks to create a building platform for residential purposes.	Filling height is only to the extent necessary to achieve compliance with Rule 15.4.1 P1(a).
P8	Earthworks not provided for under Rule 15.4.1 P6 or P7.	<p>(a) In the <del>Residential, Village and Country Living Zones</del> – <u>GRZ – General residential, MRZ – Medium density residential, LLRZ – Large lot residential, SETZ – Settlement and RLZ – Rural lifestyle zones</u>, 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 <u>GRUZ – General Rural Zone</u> – 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> persite; 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> <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.</u></p>

## 15.4.2 Restricted Discretionary Activities

- (a) The activities listed below are restricted discretionary activities within the Flood Plain Management Area or in a Flood Ponding 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.~~

Activity		Activity-specific conditions-standards
RD1	Earthworks that are not a permitted activity under Rule 15.4.1 P6 or P7 or earthworks that exceed the activity specific conditions standards in Rule 15.4.1.P8	<b>Discretion is restricted to:</b> <ul style="list-style-type: none"> <li>(a) Timing, location and scale of earthworks;</li> <li>(b) Adverse effects on: <ul style="list-style-type: none"> <li>(i) Existing overland flow paths and surface drainage patterns;</li> <li>(ii) flood storage capacity;</li> <li>(iii) runoff volumes;</li> <li>(iv) adjoining properties, including the transfer of risk;</li> <li>(v) infrastructure and flood protection works;</li> <li>(vi) consideration of soil types and potential for erosion;</li> </ul> </li> <li>(c) Mitigation including compensatory storage, or other flood management measures proposed.</li> </ul>
RD2	<u>Construction of a new building, or reconstruction of, and additions to an existing building which are not permitted by Rule 15.4.1 PI – P5</u>	<b>Discretion is restricted to:</b> <ul style="list-style-type: none"> <li>(a) <u>Assessment of risk from the 1% AEP flood event.</u></li> <li>(b) <u>Alternative locations within the site outside of the 1% AEP floodplain or flood ponding area.</u></li> <li>(c) <u>The type of building development proposed and whether it is likely to suffer material damage during a flood.</u></li> <li>(d) <u>Ability to manage risk through building materials, structural or design work, engineering solutions or other appropriate measures.</u></li> <li>(e) <u>Other mitigation measures to reduce the potential for flood damage to buildings.</u></li> </ul>

### 15.4.3 Discretionary Activities

- (a) The activities listed below are discretionary activities within the Flood Plain Management Area or Flood Ponding Area shown on the Planning Maps ~~or in a Flood Ponding Area.~~

<del>D1</del>	<del>Construction of a new building and additions to an existing building which are not permitted by Rule 15.4.1 PI – P5.</del>
<del>D2</del> D1	Subdivision to create one or more additional vacant lot(s) other than a utility allotment, access allotment or subdivision to create a reserve allotment.
<del>D3</del>	<del>A hazardous facility</del>

### 15.4 High Risk Flood Area

The High Risk Flood Area is located within the Flood Plain Management Area. The rules in this section are to be read in conjunction with the rules for the Flood Plain Management Area and Flood Ponding Areas (Rule 15.4).

#### Permitted Activities

- (a) The activities listed below are permitted activities within the High Flood Risk Area\_



shown on the Planning Maps, if they meet the activity-specific ~~conditions~~ standards set out in this table.

- (b) Activities may also be restricted discretionary, discretionary or non-complying activities, as specified in Rules 15.5.2, 15.5.3 and 15.5.4.

Activity		Activity-specific <del>conditions</del> <u>standards</u>
P1	<p>(1) Repair, maintenance or minor upgrading of existing utilities.</p> <p>(2) <del>New Construction,</del> <u>replacement or upgrading of telecommunication lines, poles, cabinets and masts/poles supporting antennas.</u></p> <p>(3) <u>Construction, replacement or upgrading of electricity lines, poles, cabinets, and supporting structures.</u></p>	Nil
P2	<p>(1) Construction of an accessory building without a floor;</p> <p>(2) Construction of a farm building without a floor.</p>	Nil

### 15.5.1 Restricted Discretionary Activities

- (a) The activities listed below are restricted discretionary activities within the High Risk Flood Area.
- (b) Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in the following table.

Activity	Activity-specific <del>conditions</del> <u>standards</u>
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RD1	<p>(1) New utilities not provided for in Rule 15.5.1 PI(2) <u>or PI(3).</u></p> <p>(2) Upgrading of existing utilities not provided for in Rule 15.5.1 PI(1).</p>	<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 High Risk Flood Area;</li> <li>2. The adverse effects on people and property from establishing or upgrading the utility in the High Risk Flood Area;</li> <li>3. The potential for the development to transfer/increase flood risk to neighbouring properties;</li> <li>4. Consideration of alternative locations;</li> <li>5. Consideration of the projected effects of climate change;</li> <li>6. Any mitigation measures to reduce the risk to people's safety, well-being and property.</li> </ol>
RD2	<p>One addition to a lawfully established building existing at 17 January 2022 where the addition does not increase the ground floor area of the existing building by more than 15m<sup>2</sup>, unless provided for in Rule 15.5.2 RD1.</p>	<p><b>Discretion is restricted to:</b></p> <ol style="list-style-type: none"> <li>(a) The ability to manage flood risk through appropriate building materials, structural or design work or other engineering solutions;</li> <li>(b) The setting of an appropriate floor level for the addition, taking into consideration the location of the addition and the floor level of the existing building;</li> <li>(c) Any mitigation measures to reduce the risk to people's safety, well-being and property.</li> </ol>

### 15.5.2 Discretionary Activities

DI	<p>(1) Subdivision that creates one or more additional vacant lot(s) where:</p> <ol style="list-style-type: none"> <li>(a) The additional lot(s) are located entirely outside the High Risk Flood Area; or</li> <li>(b) The additional lot(s) are partially within the High Risk Flood Area and each additional lot(s) contains <del>a net site</del> <u>an</u> area capable of containing a complying building platform entirely outside the High Risk Flood Area.</li> </ol> <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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### 15.5.3 Non-Complying Activities

(a) The activities listed below are non-complying activities in the High Risk Flood Area.

NC1	<p>Construction of a new building or additions to an existing building, not provided for in Rule 15.5.1 PI – P2 or Rule 15.5.2 RD1 and RD2.</p>
NC2	<p>(1) Subdivision that does not comply with Rule 15.5.3 DI.</p> <p>(2) This rule does not apply to subdivision for a utility allotment, access allotment or subdivision to create a reserve allotment.</p>

NC3	Emergency services facilities and hospitals.
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## **15.5 Defended Area (Residual Risk)**

### **15.6.1 Permitted Activities**

- (a) Activities are permitted activities within the Defended Area identified on the planning maps, unless specified in Rules 15.6.2 or 15.6.3 below, or as otherwise specified in the relevant zone chapter or the district-wide rules in Chapter 14 Infrastructure and Energy.

### **15.6.2 Restricted Discretionary Activities**

- (a) The activities listed below are restricted discretionary activities within the Defended Area shown on the Planning Maps.
- (b) Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in the following table.
- (c) Activities may also be discretionary activities, as specified in Rule 15.6.3.

<b>Activity</b>	<b>Matters of Discretion</b>
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RDI	<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 utility allotment, an access allotment 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 stop-bank security at and adjacent to the site to be subdivided;</p> <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> <p>(i) people and property,</p> <p>(ii) <u>historic heritage and sites and areas of significance to Māori</u>, and</p> <p>(iii) overall vulnerability 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 highground; evacuation plan).</p>
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### 15.6.3 Discretionary Activities

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

D1	Construction of a new building, <u>or reconstruction of</u> , or new accessory building, 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	<p>(a) Earthworks 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.</p> <p>(b) <u>This rule does not apply to earthworks associated with utilities where the written approval of the authority managing the stop-bank has been obtained.</u></p>

### ~~15.7 Coastal Sensitivity Areas – Coastal Sensitivity Area (Erosion) and Coastal Sensitivity Area (Open Coast)~~

#### ~~15.7.1 Permitted Activities~~

~~(a) The activities listed below are permitted activities within the Coastal Sensitivity Area (Erosion) and Coastal Sensitivity Area (Open Coast) shown on the Planning Maps, if~~

they meet the activity-specific conditions set out in this table.

- (b) ~~Activities may also be restricted discretionary activities or discretionary activities, as specified in Rules 15.7.2 and 15.7.3.~~

<b>Activity</b>		<b>Activity-specific conditions</b>
P1	Additions to an existing lawfully established building	(a) <del>The gross floor area of all additions to the building from [date this rule becomes operative] do not exceed a total of 15m<sup>2</sup>.</del>
P2	(1) <del>Construction of an accessory building without a floor;</del> (2) <del>Construction of a farm building without a floor.</del>	Nil
P3	<del>Construction, upgrading, minor upgrading, replacement, repair and maintenance of utilities.</del>	Nil
P4	Maintenance or repair of an existing lawfully established coastal protection structure.	Nil

### **~~15.7.2 Restricted Discretionary Activities~~**

- (a) ~~The activities listed below are restricted discretionary activities in the Coastal Sensitivity Area (Erosion) and Coastal Sensitivity Area (Open Coast).~~
- (b) ~~Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in the following table.~~

<b>Activity</b>	<b>Matters of Discretion</b>
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RD1	Construction of a new building or additions to an existing building not provided for in Rule 15.7.1 P1-P3 and not listed in Rule 15.7.3 D1.	<p><b>Discretion is restricted to:</b></p> <ul style="list-style-type: none"> <li>(a) The ability to manage coastal hazard risk through appropriate building materials, structural or design work, engineering solutions or other appropriate mitigation measures, including the ability to relocate the building;</li> <li>(b) The application of mitigation through natural features and buffers where appropriate;</li> <li>(c) The ability to impose time limits or triggers to determine when the building and services to be removed or relocated;</li> <li>(d) The degree to which coastal hazard risk, including the effects of climate change over a period to 2120, has been assessed in a site specific coastal hazard risk assessment;</li> <li>(e) Suitability of the site for the proposed use, including the provision for servicing such as access, wastewater, stormwater, and water supply;</li> <li>(f) Adverse effects to people and property and overall vulnerability from the establishment of the new building or additions to an existing building and any mitigation measures to reduce risk;</li> <li>(g) Whether there is any suitable alternative location for the activity to locate within the site;</li> <li>(h) Coastal Sensitivity Area (Open Coast) only the setting of minimum floor levels in areas subject to inundation.</li> </ul>
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### 15.7.3 Discretionary Activities

- (a) The activities listed below are discretionary activities in the Coastal Sensitivity Area (Erosion) and Coastal Sensitivity Area (Open Coast):

D1	Construction of a new coastal protection structure;
D2	Subdivision to create one or more additional vacant lot(s) other than a utility allotment, <del>access allotment or</del> subdivision to create a reserve allotment.

### 15.8 Coastal Sensitivity Area (Inundation)

- (a) The activities listed below are permitted activities within the Coastal Sensitivity Area (Inundation) shown on the Planning Maps if they meet the activity-specific conditions set out in this table.
- (b) Activities may also be restricted discretionary activities or discretionary activities, as specified in Rules 15.8.2 and 15.8.3.

#### 15.8.1 Permitted Activities

Activity	Activity-specific conditions
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P1	Additions to an existing lawfully established building	(a) The gross floor area of all additions to the building from <del>[date this rule becomes operative]</del> do not exceed a total of 15m <sup>2</sup> .
P2	<del>(1) Construction of an accessory building without a floor; (2) Construction of a farm building without a floor.</del>	Nil
P3	<del>Construction, upgrading, minor upgrading, replacement, repair and maintenance of utilities.</del>	Nil
P4	<del>Maintenance or repair of an existing lawfully established coastal protection structure.</del>	Nil

### 15.8.2 Restricted Discretionary Activities

- (a) ~~The activities listed below are restricted discretionary activities in the Coastal Sensitivity Area (Inundation).~~
- (b) ~~Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in the following table.~~

Activity		Matters of Discretion
RD1	Construction of a new building or additions to an existing building not provided for in Rule 15.8.1 P1-P3 and not listed in Rule 15.8.3 D1.	<p><b>Discretion is restricted to:</b></p> <p>(a) <del>The ability to manage coastal hazard risk through appropriate building materials, structural or design work, engineering solutions including the ability to relocate the building, or other appropriate mitigation measures, including the setting of minimum floor levels where appropriate;</del></p> <p>(b) <del>The application of mitigation through natural features and buffers where appropriate;</del></p> <p>(c) <del>The ability to impose time limits or triggers to determine when the building and services to be removed or relocated;</del></p> <p>(d) <del>The degree to which coastal hazard risk, including the effects of climate change over the period to 2120, has been assessed in a site specific coastal hazard risk assessment;</del></p> <p>(e) <del>Suitability of the site for the proposed use and the ability to, provide servicing such as access, wastewater, stormwater and water supply;</del></p> <p>(f) <del>Adverse effects to people and property and overall vulnerability from the establishment of the new building or additions to existing building;</del></p> <p>(g) <del>Whether there is any suitable alternative location for the activity to locate within the site.</del></p>

### **15.8.3 Discretionary Activities**

(a) ~~The activities listed below are discretionary activities in the Coastal Sensitivity Area (Inundation):~~

<del>D1</del>	<del>Construction of a new coastal protection structure</del>
<del>D2</del>	<del>Subdivision to create one or more additional vacant lot(s) other than a utility allotment, access allotment or subdivision to create a reserve allotment.</del>

## **15.7A Coastal Sensitivity Areas**

### **15.7A.1 Permitted Activities**

- The activities listed below are permitted activities within the Coastal Sensitivity Area (Erosion) and the Coastal Sensitivity Area (Inundation) as shown on the Planning Maps, if they meet the activity-specific standards set out in this table.
- Activities may also be restricted discretionary activities or discretionary activities, as specified in Rules 15.7A.2 and 15.7A.3.

<b>Activity</b>		<b>Activity-specific standards</b>
<u>P1</u>	<u>Additions to an existing lawfully established building.</u>	<u>1. The gross floor area of all additions to the building from 17 January 2022 do not exceed a total of 15m<sup>2</sup>.</u>
<u>P2</u>	<ol style="list-style-type: none"> <li><u>Construction of an accessory building without a floor;</u></li> <li><u>Construction of a farm building without a floor.</u></li> </ol>	<u>Nil</u>
<u>P3</u>	<u>Construction, upgrading, minor upgrading, replacement, repair or maintenance of utilities excluding hard protection structures.</u>	<u>Nil</u>
<u>P4</u>	<u>Maintenance or repair of an existing lawfully established hard protection structure.</u>	<u>Nil</u>
<u>P5</u>	<u>Construction of a new building, or reconstruction of, or additions to existing buildings in the RPZ -</u>	<u>1. Compliance with the requirements of any consent notice for the certificate of title pursuant to section 221 of the Resource Management Act 1991 containing specific design or location requirements for buildings.</u>



	<u>Rangitahi Peninsula zone and Coastal Sensitivity Area (Erosion) on a certificate of title which was created by subdivision consent granted between 28 September 2015 and 17 January 2022</u>	
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### **15.7A.2 Restricted Discretionary Activities**

1. The activities listed below are restricted discretionary activities in the Coastal Sensitivity Area (Erosion)-and the Coastal Sensitivity Area (Inundation).
2. Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in the following table.

<b><u>Activity</u></b>		<b><u>Matters of Discretion</u></b>
<b><u>RDI</u></b>	<u>Construction of a new building or additions to an existing building not provided for in Rule 15.7A.1 P1-P3 and P5 and not listed in Rule 15.7A.3D1.</u>	<p><b><u>Discretion is restricted to:</u></b></p> <ul style="list-style-type: none"> <li>(a) <u>The ability to manage coastal hazard risk through appropriate building materials, structural or design work, engineering solutions, and other appropriate mitigation measures, including the ability to relocate the building;</u></li> <li>(b) <u>the setting of minimum floor levels where appropriate;</u></li> <li>(c) <u>The application of mitigation through natural features and buffers where appropriate;</u></li> <li>(d) <u>The ability to impose time limits or triggers to determine when the building and services to be removed or relocated;</u></li> <li>(e) <u>The degree to which coastal hazard risk, including the effects of climate change over a period to 2120, has been assessed in a site specific coastal hazard risk assessment;</u></li> <li>(f) <u>Suitability of the site for the proposed use, including the provision for servicing such as access, wastewater, stormwater, and water supply;</u></li> <li>(g) <u>Adverse effects to people and property and overall vulnerability from the establishment of the new building or additions to an existing building</u></li> <li>(h) <u>Any mitigation measures to reduce risk; and</u></li> <li>(i) <u>Whether there is any suitable alternative location for the activity to locate within the site.</u></li> </ul>

RD2	<p>(1) Any subdivision to create any <u>additional vacant lots where the additional vacant lot(s) are located partially or entirely within the Coastal Sensitivity Area (Inundation), Coastal Sensitivity Area (Erosion):</u></p> <p>(2) <u>Rule 15.7A.2 RD2(1) does not apply to subdivision for a utility allotment, access allotment or subdivision creating a reserve allotment.</u></p>	<p><b>Discretion is restricted to:</b></p> <p>(a) <u>Whether the vacant lot(s) are capable of containing a complying building platform entirely outside the Coastal Sensitivity Area (Inundation), or the Coastal Sensitivity Area (Erosion); or</u></p> <p>(b) <u>Where the vacant lot(s) are not capable of containing a complying building platform entirely outside of the Coastal Sensitivity Area (Inundation), or the Coastal Sensitivity Area (Erosion):</u></p> <p>(i) <u>The degree to which coastal hazard risk, including the effects of climate change over a period to 2120, has been assessed in a site specific coastal hazard risk assessment;</u></p> <p>(ii) <u>Suitability of the vacant lot for the likely future uses, including the provision for servicing such as access, wastewater, stormwater, and water supply;</u></p> <p>(iii) <u>The degree to which alternative subdivision layout(s) have been investigated to avoid or mitigate coastal hazards;</u></p> <p>(iv) <u>Adverse effects to people, property and the environment and overall vulnerability from the likely future uses, including any mitigation measures to reduce risk;</u></p> <p>(v) <u>The setting of minimum floor levels in areas subject to inundation.</u></p>
RD3	<p><u>Construction of a new hard protection structure, or any extension to, or upgrade or replacement of an existing hard protection structure.</u></p>	<p><b>Discretion is restricted to:</b></p> <p>(a) <u>Whether structures have primarily a public and/or environmental benefit when located on public land;</u></p> <p>(b) <u>The extent to which the structure is effective, considering a range of coastal hazard events including the effects of climate change and the activities or development they are designed to protect;</u></p> <p>(c) <u>The extent to which economic, social and environmental benefits outweigh costs;</u></p> <p>(d) <u>Whether risk to people, property, infrastructure, environment, historic heritage or sites and areas of significance to Māori is not transferred or increased;</u></p> <p>(e) <u>The extent to which structures are located as far landward as practicable;</u></p> <p>(f) <u>Whether public access both to and along the coastal area and to the coastal marine area are provided for where the structure is located on public land; and</u></p> <p>(g) <u>Whether an adaptive management strategy has</u></p>

		<u>been prepared to manage coastal hazards, and whether the structure is consistent with that strategy.</u>
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## 15.9 High Risk Coastal ~~Hazard~~ (Erosion) Area

### 15.9.1 Permitted Activities

- (a) The activities listed below are permitted activities within the High Risk Coastal ~~Hazard~~ (Erosion) Area shown on the Planning Maps, if they meet the activity-specific ~~conditions~~ standards set out in this table.
- (b) Activities may also be discretionary or non-complying activities, as specified in Rules 15.9.2 and 15.9.3.

Activity		Activity-specific <del>conditions</del> <u>standards</u>
P1	(1) <del>Construction of an accessory building without a floor; and</del> (2) <del>Construction of a farm building without a floor.</del>	(a) The gross floor area of the building does not exceed 40m <sup>2</sup> .
P2	(1) Repair, maintenance or minor upgrading of existing utilities <u>excluding hard protection structures.</u> (2) <del>New</del> <u>Construction, operation, replacement</u> or upgrading of telecommunications lines, poles, cabinets and masts/poles supporting antennas. (3) <u>New electricity lines, poles, cabinets and masts/ poles supporting antennas.</u>	Nil
P3	Maintenance or repair of an existing lawfully established <del>coastal</del> <u>hard</u> protection structure.	Nil
P4	Earthworks for an activity listed in Rule 15.9.1 P1 - P3, including the maintenance and repair of access tracks.	(a) The maximum volume of filling does not exceed 10m <sup>3</sup> per site; and (b) The maximum depth of any excavation or filling does not exceed 0.5m above or below ground level.

### 15.9.2 Restricted Discretionary Activities

- (a) The activities listed below are discretionary activities in the High Risk Coastal

## Erosion Area.

<u>RD1</u>	<u>Construction of a new hard protection structure, or any extension to, or upgrade or replacement of an existing hard protection structure.</u>	<u>Discretion is restricted to:</u> <ul style="list-style-type: none"> <li>(a) <u>Whether structures have primarily a public and/or environmental benefit when located on public land;</u></li> <li>(b) <u>The extent to which the structure is effective, considering a range of coastal hazard events including the effects of climate change and the activities or development they are designed to protect;</u></li> <li>(c) <u>The extent to which economic, social and environmental benefits outweigh costs;</u></li> <li>(d) <u>Whether risk to people, property, infrastructure, environment, historic heritage or sites and areas of significance to Maaori is not transferred or increased;</u></li> <li>(e) <u>The extent to which structures are located as far landward as practicable;</u></li> <li>(f) <u>Whether public access both to and along the coastal area and to the coastal marine area are provided for where the structure is located on public land; and</u></li> <li>(g) <u>Whether an adaptive management strategy has been prepared to manage coastal hazards, and whether the structure is consistent with that strategy.</u></li> </ul>
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### **15.9.3 Discretionary Activities**

- (a) The activities listed below are discretionary activities in the High Risk Coastal ~~Hazard~~(Erosion) Area.

D1	Earthworks not provided for in Rule 15.9.1 P4.
D2	(1) Relocation of an existing building within the same site where: (a) The building is relocated landward of its existing position.
D3	(1) Replacement of an existing building within the same site where: (a) The replacement building is located landward of the existing building that it replaces; and (b) The replacement building is relocatable <del>on a suspended timber floor</del> ; and (2) The gross floor area of the replacement building is no larger than the existing building that it replaces.
<del>D4</del>	<del>Construction of a new coastal protection structure.</del>
D5	Construction of new utilities not provided for in Rule 15.9.1 P2.
D6	Upgrading of existing utilities not provided for in Rule 15.9.1 P2.

D7	<p>(1) Subdivision that creates one or more additional vacant lot(s) where:</p> <p><del>(a) The additional vacant lot(s) are located entirely outside the High Risk Coastal Hazard (Erosion) Area; or</del></p> <p><u>(a)</u> The additional lot(s) are partially within the High Risk Coastal <del>Hazard</del> (Erosion) Area and each <u>additional</u> lot(s) contains a net site area capable of containing a complying building platform entirely outside the High Risk Coastal <del>Hazard</del> (Erosion) Area.</p> <p>(2) Rule 15.9.2 D7(1) does not apply to subdivision for a utility allotment, access allotment or subdivision to create a reserve allotment.</p>
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#### 15.9.4 Non-Complying Activities

- (a) The activities listed below are non-complying activities in the High Risk Coastal ~~Hazard~~ (Erosion) Area.

NC1	Construction of a new building or additions to an existing building, not provided for in Rule 15.9.1 P1 – P2 or Rule 15.9.2 D2- D6
NC2	<p>(1) Subdivision to create one or more additional lot(s) that does not comply with Rule 15.9.2 D7.</p> <p>(2) Rule 15.9.3 NC2(1) does not apply to subdivision for a utility allotment, access allotment or subdivision to create a reserve allotment.</p>
NC3	Emergency services facilities and hospitals.

#### 15.10 : High Risk Coastal ~~Hazard~~ (Inundation) Area

##### 15.10.1 Permitted Activities

- (a) The activities listed below are permitted activities within the High Risk Coastal ~~Hazard~~ (Inundation) Area shown on the Planning Maps, if they meet the activity-specific ~~conditions~~ standards set out in this table.
- (b) Activities may also be discretionary or non-complying activities, as specified in Rules 15.10.2 and 15.10.3.

Activity		Activity-specific <del>conditions</del> <u>standards</u>
P1	<p>(1) Construction of an accessory building without a floor; and</p> <p>(2) Construction of a farm building without a floor.</p>	(a) The gross floor area of the building does not exceed 40m <sup>2</sup> .

P2	<p>(1) Repair, maintenance or minor upgrading of existing utilities <u>excluding coastal protection structures.</u></p> <p>(2) <u>New Construction, operation, replacement or upgrading of telecommunications lines, poles, cabinets and masts/poles supporting antennas.</u></p> <p>(3) <u>New electricity lines, poles, cabinets and masts/ poles supporting antennas.</u></p>	Nil
P3	Maintenance or repair of an existing lawfully established coastal protection structure.	Nil
P4	Earthworks for an activity listed in Rule 15.9.1 P1 - P3, including the maintenance and repair of access tracks.	<p>(a) The maximum volume of filling does not exceed 10m<sup>3</sup> per site; and</p> <p>(b) The maximum depth of any excavation or filling does not exceed 0.5m above or below ground level.</p>

### 15.10.2 Restricted Discretionary Activities

- (a) The activities listed below are discretionary activities in the High Risk Coastal Inundation Area.

RD1	<u>Construction of a new hard protection structure, or any extension to, or upgrade or replacement of an existing hard protection structure.</u>	<p>Discretion is restricted to:</p> <p>(a) <u>Whether structures have primarily a public and/or environmental benefit when located on public land;</u></p> <p>(b) <u>The extent to which the structure is effective, considering a range of coastal hazard events including the effects of climate change and the activities or development they are designed to protect;</u></p> <p>(c) <u>The extent to which economic, social and environmental benefits outweigh costs;</u></p> <p>(d) <u>Whether risk to people, property, infrastructure, environment, historic heritage or sites and areas of significance to Maaori is not transferred or increased;</u></p> <p>(e) <u>The extent to which structures are located as far landward as practicable;</u></p> <p>(f) <u>Whether public access both to and along the coastal area and to the coastal marine area are provided for where the structure is located on public land; and</u></p> <p>(g) <u>Whether an adaptive management strategy</u></p>
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		<u>has been prepared to manage coastal hazards, and whether the structure is consistent with that strategy.</u>
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### 15.10.3 Discretionary Activities

- (a) The activities listed below are discretionary activities in the High Risk Coastal Hazard~~(Inundation)~~ Area.

D1	Earthworks not provided for in Rule 15.10.1 P4.
<del>D2</del>	<del>(1) Replacement and relocation of an existing building within the same site where: (a) There is no increase in the ground floor area of the building.</del>
<del>D32</del>	<del>Construction of a new coastal protection structure.</del>
D43	Construction of new utilities not provided for in Rule 15.10.1 P2.
D54	Upgrading of existing utilities not provided for in Rule 15.10.1 P2.
D65	(1) Subdivision that creates one or more additional vacant lot(s) where: <del>(a) The additional vacant lot(s) are located entirely outside the High Risk Coastal Hazard (Inundation) Area; or</del> (a) The additional lot(s) are partially within the High Risk Coastal Hazard (Inundation) Area and each additional lot(s) contains a net site area capable of containing a complying building platform entirely outside the High Risk Coastal Hazard <del>(Inundation)</del> Area. (2) Rule 15.10.2 D6(1) does not apply to subdivision for a utility allotment, access allotment or subdivision to create a reserve allotment.
D76	<u>Construction of a new building or additions to an existing building, not provided for in Rule 15.10.1 P1 – P2 or Rule 15.10.2 D2 - D54.</u>

### 15.10.4 Non-Complying Activities

- (a) The activities listed below are non-complying activities in the High Risk Coastal Hazard~~(Inundation)~~ Area.

NC1	<del>Construction of a new building or additions to an existing building, not provided for in Rule 15.10.1 P1 – P2 or Rule 15.10.2 D2 – D5</del>
NC2	(1) Subdivision to create one or more additional lot(s) that does not comply with Rule 15.10.2 D6. (2) Rule 15.10.3 NC2(1) does not apply to subdivision for a utility allotment, access allotment or subdivision to create a reserve allotment.
NC3	Emergency services facilities and hospitals.

### 15.11 Mine Subsidence Risk Area

#### 15.11.1 Permitted Activities

- (a) The activities listed below are permitted activities within the Mine Subsidence Risk Area shown on the Planning Maps if they meet the activity-specific ~~conditions~~ standards set out in this table.
- (b) Activities may also be restricted discretionary activities or discretionary activities, as specified in Rules 15.11.2 and 15.11.3.

Activity		Activity-specific <del>conditions</del> <u>standards</u>
P1	Additions to an existing building	(a) Additions do not increase the gross floor area of the building by more than 15m <sup>2</sup> ; and (b) Additions do not result in the length of any wall of the building exceeding 20m.
P2	Standalone garage	(a) The gross floor area of the building does not exceed 55m <sup>2</sup> ; and (b) The maximum length of any wall does not exceed 20m.
P3	Construction, replacement, repair, minor upgrading, upgrading or maintenance of utilities <u>and associated earthworks</u>	Nil
P4	Earthworks	(a) The maximum volume of filling does not exceed 20m <sup>3</sup> per site; and (b) The maximum depth of any excavation or filling does not exceed 1m above or below ground level.

#### **Rule 15.11.1A Controlled Activities**

- (a) The activity listed below is a Controlled Activity in the Mine Subsidence Risk Area.

Activity		Matters of Control
CI	<u>The construction or alteration of a building that is not provided for under Rule 15.11.1 where a Consent Notice is registered against the Record of Title confirming that a geotechnical assessment has been approved at the time of subdivision and the approved geotechnical report confirms that the ground is suitable for building development and the building development is in accordance with any recommendations of the geotechnical report.</u>	(a) <u>The degree to which the requirements and recommendations of the geotechnical report approved at the time of subdivision have been incorporated in the building design.</u> (b) <u>Whether confirmation is provided from a suitably experienced and qualified geotechnical engineer that confirms the proposed building development is consistent with the recommendations and requirements of the geotechnical report approved at the time of subdivision.</u>



### 15.11.2 Restricted Discretionary Activities

- (a) The activities listed below are restricted discretionary activities in the Mine Subsidence Risk Area.
- (b) Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in the following table.

Activity		Matters of Discretion
RD1	Earthworks that do not comply with Rule 15.11.1 P4.	<b>Discretion is restricted to:</b> <ul style="list-style-type: none"> <li>(a) Location and scale of earthworks;</li> <li>(b) Geotechnical and geological stability of the site following the completion of earthworks;</li> <li>(c) Risk to people and property from subsidence as a result of earthworks.</li> <li>(d) Any other mitigation measures to reduce risk.</li> </ul>
<u>RD2</u>	<u>Construction of a building, or reconstruction of, or accessory building or the reconstruction of or additions to an existing building not provided for in Rule 15.11.1 P1-P3 or C1.</u>	<b>Discretion is restricted to:</b> <ul style="list-style-type: none"> <li>(a) <u>Construction standards and materials.</u></li> <li>(b) <u>Suitability of the site for development.</u></li> <li>(c) <u>The potential effects on health and safety.</u></li> </ul>

### 15.11.3 Discretionary Activities

- (a) The activities listed below are discretionary activities in the Mine Subsidence Risk Area.

<del>D1</del>	<del>Construction of a building or additions to an existing building not provided for in Rule 15.11.1 P1-P3.</del>
<del>D2</del> <u>D1</u>	Subdivision to create one or more additional vacant lot(s) other than a utility allotment, access allotment or subdivision to create a reserve allotment.

## 15.12 Liquefaction

### 15.12.1 Overview of method

- (1) Areas in the district susceptible to liquefaction have not been identified on the planning maps as a natural hazard overlay as is the case with the other natural hazards in this chapter. Where specific land uses have already been identified as restricted discretionary activities in the activity status tables in the relevant zone, liquefaction risk has been added as a matter over which the Council will reserve its discretion, where it is considered relevant for that activity. To satisfy the requirements of sections 104 and 106 of the RMA, identification of appropriate mitigation may be required where the site and proposed development are considered vulnerable to liquefaction based on site-specific characteristics. It is expected that best practice geotechnical and engineering methods will be used to

ensure that the site is suitable for the intended use.

- (2) Where potential liquefaction risk is identified as a matter that the Council restricts its discretion to, the additional matters outlined in Rules 15.12.2 and 15.12.3 below apply where relevant.

#### **15.12.2 Additional matters of restricted discretion for subdivision to create one or more additional vacant lots – liquefaction risk**

- (1) Where potential liquefaction risk is identified as a matter that the Council will restrict its discretion to in a subdivision rule elsewhere in this Plan, and where that proposal involves subdivision to create one or more additional vacant lots, the Council restricts its discretion to the following additional matters (note: these matters will also be relevant to the assessment of a discretionary or non-complying resource consent application where a potential liquefaction hazard has been identified on a site):
- (a) Geotechnical assessment and/or investigation of any potential liquefaction hazard on the site at a level sufficient to confirm the level of risk and its suitability for the proposed activity (see information requirements in section 15.13);
  - (b) Measures proposed to mitigate the effects of liquefaction hazard if present including:
    - (i) Location, size, layout and design of allotments, structures, and building platforms, including consideration given to alternative siting away from where liquefaction risk is greatest;
    - (ii) Location, timing, scale and nature of earthworks;
    - (iii) Provision for ground strengthening and foundation design;
    - (iv) Provision for resilient services and infrastructure, including wastewater, water supply, roads and access;
    - (v) Setbacks in relation to waterways, waterbodies or any steep change in ground elevation, sloping ground or free face, or alternative geotechnical measures to address any identified potential for lateral spread;
    - (vi) Effects on adjoining properties.

#### **15.12.3 Additional matters of restricted discretion for new land use (e.g., multi-unit development) – liquefaction risk**

- (1) Where potential liquefaction risk is identified as a matter that the Council will restrict its discretion to in a rule elsewhere in this Plan for new land use, the Council restricts its discretion to the following additional matters (note: these matters will also be relevant to the assessment of a discretionary or non-complying resource consent application where a potential liquefaction hazard has been identified on a site):
- (a) Geotechnical assessment and/or investigation of any potential liquefaction hazard on the site at a level sufficient to confirm the level of risk and its suitability for the proposed activity (see information requirements in section 15.13);
  - (b) Measures proposed to mitigate the effects of liquefaction hazard, if present,

including:

- (i) Location, size, layout and design of buildings, structures, car parking areas, access and provision for resilient infrastructure and services, including wastewater, stormwater and water supply;
- (ii) Location, timing, scale and nature of earthworks;
- (iii) Provision for ground strengthening and foundation design;
- (iv) Setbacks in relation to waterways, waterbodies or any steep change in ground elevation, sloping ground (or free face, or alternative geotechnical measures to address any identified potential for lateral spread);
- (v) Consideration given to ease of repair (including access to repair damaged structures) of liquefaction-induced damage;
- (vi) Effects on adjoining properties.

### **15.13 Information Requirements for all resource consent applications addressing natural hazards**

#### **15.13.1 General**

- (1) The following documents, to the extent relevant to the proposal:
  - (a) Geotechnical assessment, including identification and assessment of any potentially liquefaction prone land and land subject to slope instability;
  - (b) An assessment of natural hazard risk, including the type of natural hazards present, such as flooding, slope stability, liquefaction, subsidence and coastal hazards. The assessment shall include the level of risk and any increase in risk as a result of the proposal associated with each hazard. Where applicable, the projected effects of climate change over the period to 2120 must be included;
  - (c) Remediation and mitigation measures necessary to make the site and any proposed buildings suitable for the proposed use, such as minimum floor levels, foundation design for relocatability, and appropriate time limits and/or triggers for the removal of any building and onsite wastewater disposal systems.
- (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, or any approved updated version, where relevant:
  - (a) Ngaruawahia Catchment Management Plan, March 2015;
  - (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.

#### **15.13.2 Liquefaction Potential**

- (1) For land use resource consent applications where the additional matters the Council will restrict its discretion to include liquefaction, as per Rule 15.12.3, the following

information is required:

- (a) A preliminary geotechnical assessment in sufficient detail to determine:
    - (i) the liquefaction vulnerability category, being either “liquefaction damage is unlikely” or “liquefaction damage is possible”, as shown in Table 4.4 in “Preliminary Document: Planning and engineering guidance for potentially liquefaction prone land – Resource Management Act and Building Act aspects. Pub MfE and MBIE, September 2017”; or
    - (ii) whether or not the site is susceptible to liquefaction using an alternative accepted method, observation, or desktop study.
  - (b) Where a “liquefaction damage is possible” category has been identified for the site as per 15.13.2(1)(a)(i) above, or an alternative accepted method, observation or desktop study indicates that the site is susceptible to liquefaction as per 15.13.2(1)(a)(ii) above, the assessment will be required to determine the liquefaction vulnerability in more detail, and in proportion to the scale and significance of the liquefaction hazard, and must:
    - (i) Identify any areas which require particular ground strengthening or other mitigation measures, and recommendations for such mitigation; and
    - (ii) Identify areas to be excluded from built development, due to liquefaction hazard constraints (which includes lateral spread), or which require geotechnical setbacks; and
    - (iii) Indicate options and recommended locations for the proposed activities and infrastructure recommended by the geotechnical engineer.
  - (c) All geotechnical assessments in respect of liquefaction risk are to be prepared by a suitably qualified and experienced engineer with experience in geotechnical engineering or a Professional Engineering Geologist (IPENZ registered).
- (2) For subdivision consent applications that create one or more additional vacant lots as per Rule 15.12.2:
- (a) an assessment in accordance with 15.13.2(1)(a) above will be required to be provided.
  - (b) Where a “liquefaction damage is possible” category has been identified for the site as per 15.13.2(1)(a)(i) above, or an alternative accepted method, observation, or desktop study indicates that the site is susceptible to liquefaction as per 15.13.2(1)(a)(ii) above, the subdivision application will be required to include sufficient information and proposed measures to satisfy that liquefaction risk can be adequately avoided, remedied or mitigated, including the potential effects of lateral spread.
  - (c) Subdivision plans shall show, to the extent relevant or appropriate to the scale and significance of the liquefaction hazard identified:
    - (i) any areas which require particular ground strengthening or other mitigation
    - (ii) measures, and recommendations for such mitigation; and
    - (iii) any areas which should be excluded from built development due to geotechnical constraints, or which require geotechnical setbacks; and
    - (iv) any features of subdivision layout recommended by the geotechnical engineer, for example any recommended locations for proposed activities and other infrastructure as a result of geotechnical constraints.
  - (d) All geotechnical reports in respect of liquefaction potential are to be prepared by a suitably qualified and experienced engineer with experience in geotechnical

engineering or Professional Engineering Geologist (IPENZ registered).

#### **15.13.3 ~~Country Living Zone~~ RLZ – Rural lifestyle zone - Tamahere**

- (1) Any resource consent in relation to land located in the ~~Country Living Zone~~ Rural lifestyle zone in Tamahere will be required to include details of ponding of stormwater and overland flow paths as a result of a 1% AEP storm event (with rainfall events adjusted for climate change), as well as mitigation measures taking account of information that the Council holds in respect to the Tamahere stormwater catchment area.

#### **15.13.4 Defended Areas**

- (1) For any Restricted Discretionary Activity land use and subdivision applications within the Defended Area, the following information is required to the extent relevant to the scale of the proposal:
- (a) a risk assessment, carried out by a suitably-qualified and experienced risk assessment practitioner, which identifies the nature and level of residual risk, and details of appropriate methods to further reduce residual risk, where appropriate.

#### **15.14 Definitions**

**The provisions notified under this heading are addressed in Decision Report 30: Definitions**