

## Hearing 27 Natural Hazards and Climate Change

### Hearing statement of Angus McKenzie on behalf of Mercury Energy Limited

#### Overview

1. Thank you for the opportunity to speak to the policy and spatial amendments now sought to the PWDP framework by Mercury Energy. Mercury is seeking to support WDC in effectively managing natural hazard risks within the Waikato District utilising the best available information for the Plan.
2. The primary reasons for the amendments sought are set out in the evidence of Dr Webby and my evidence in chief. For expediency I will summarise the key changes requested, noting that the amendments proposed are in the absence of Council taking a risk-based approach to the development of the PWDP framework.
3. Mercury seeks the following relief through changes to the PWDP.
4. The spatial identification of flood hazards related to Lake Waikare and the Rangiriri Spillway, through the mapping of the 1% AEP design flood level of RL 7.37m as part of the Flood Plain Management Area Overlay.
5. In my view, as supported in the evidence of Dr Webby, is that Council should use the best available information it has and not wait for further modelling analysis to include these areas within the PWDP. The plan review process provides an important opportunity to give statutory weight to these areas of known flood risk.
6. Historic information (flood data and photographic evidence) on spatial extent of the flood plain is currently available. WRC clearly demonstrated in their excellent presentation yesterday that it has considerable data that could be used to map known areas of the floodplain that may be subject to significant risk. If risk can be quantified, which is the case here, then it can be managed.
7. **Attachment A** to my evidence in chief sets out the amendments sought to the policy framework and mapping in detail. I note that the attachment refers to the primary submission made by Mercury on Stage 2 of the PWDP.
8. As mentioned at the hearing, to assist the Panel, I have provided an updated version of **Attachment A as part of this summary statement**, which sets out the relief sought by Mercury following review of the s42A reports.
9. Highlights from the relief sought include:
  - Ensuring appropriate acknowledgement of the need to manage both significant risk and high risk in the PWDP policies – Mr Webby has explained these concepts. There is potential for significant risk (*flow x inundation*) if left unmanaged could expose people and communities to intolerable levels of risk.

- Inclusion of appropriate references to the Flood Plain Management Area within the PWDP policies to guide assessment of potentially significant risk that may be present in these areas.
- Establishing clear links between areas subject to flooding, including the Floodplain Management Area and High Risk Flood Areas and other chapters relating to land uses that are at significant risk from flooding.
- Ensuring that appropriate recognition of the cumulative effects of land use changes on the storage capacity of the LWFPS through inclusion in the assessment criteria.

### **Plan implementation**

10. In addition to the above relief, Mercury also seeks the following actions in relation to plan implementation:

- That infill development is documented and recorded over time to ensure that infill volumes and cumulative loss of the storage capacity of the Lower Waikato Flood Protection Scheme is managed and displacement of water is understood.
- It is important that consent information is provided to managers of flood risk data at Regional Council to monitor the impact of infill earthworks volumes within the flood plain on storage capacity.

11. As mentioned at the hearing, Mercury experts would be happy to participate in conferencing on any matters, including the policy framework, and in relation to mapping and flood modelling, to assist the spatial framework for the PWDP.

Angus McKenzie – Director Place Group Limited – NZPI

**Revised Attachment A – updated from evidence in chief to show Mercury’s current position post-s42A reports**

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
15.1 Introductio n	1	(1) The Natural Hazards chapter <u>identifies risks associated with natural hazards and</u> manages land use in areas subject to <del>a the</del> 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, <u>and that in some circumstances new infrastructure development in natural hazard areas may be appropriate where the criteria in the plan are met.</u> These areas will require management through mitigation and adaptation to ensure that the risk of damage to property, <u>historic heritage or sites and areas of Significance to Maaori</u> or injury or loss of lives is not increased."	Support recommended changes in Carter s42A
15.1 Introductio n	1	The Natural Hazards chapter manages land use in areas subject to 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. 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.	The Natural Hazards chapter <u>identifies risks associated with natural hazards</u> and manages land use in areas subject to 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. 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.

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15.1 Introduction	8	<p>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 <u>historical flood data and photographic evidence of flood or high flow events</u>, 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.</p>	Support changes as recommended in Legarth s42A
15.1 Introduction	9	<p>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, <u>based on the RCP 6.0 scenario over a 100-year period to 2120</u>, has been included in the 2D flood modelling of key risk areas within this district plan. <u>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 reminder of the Flood Plain Management Areas.</u><sup>2</sup> Specific</p>	Support changes as recommended in Legarth s42A, noting that an allowance for climate change should be part of any future modelling of risk.

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		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.	
15.1 Introduction	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 <del>or and</del> the speed of flood water exceeds 2 metres per second <u>or the flood depth multiplied by the flood speed exceeds one</u> , 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	Map full extent of flood plain, which high risk flood areas is a subset only. Mercury seeks that Lake Waikare and the surrounding catchment where ground levels are below 8m RL (Moturiki datum) is included as a Floodplain Management Area overlay within the District Plan.
15.2 Objectives and Policies	Objective 15.2.1 Resilience to natural hazard risk	A resilient community where the risks from natural hazards on to people, property, infrastructure and the environment from subdivision, use and development of land are avoided, or <del>appropriately</del> mitigated to acceptable levels.”	Support changes as recommended in Legarth s42A

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
15.2 Objectives and Policies	Policy 15.2.1.1 New development in areas at significant 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 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 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 risk from natural hazards: (i) High Risk Flood Area; (ii) <u>Flood Plain Management Area</u> ; (ii) High Risk Coastal Hazard (Inundation) Area; (iii) High Risk Coastal Hazard (Erosion) Area.  Mercury seeks to ensure significant risk from flood events is managed and that would include flood plain management areas.
15.2 Objectives and Policies	Policy 15.2.1.2 Changes to existing land use activities and development in areas at significant risk from natural hazards	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, wellbeing and property is avoided.	In areas of High Risk Flood, <u>Flood Plain Management Area</u> , High Risk Coastal Hazard (Erosion) and High Risk Coastal Hazard (Inundation), ensure that when changes to existing land use activities and development occur, <u>people and communities are not exposed to intolerable levels of risk from natural hazards and</u> a range of risk reduction options are assessed, and development that would increase risk to people’s safety, wellbeing and property is avoided.
15.2 Objectives and Policies	Policy 15.2.1.3 New emergency services and hospitals in areas at significant	Avoid locating new emergency service facilities and hospitals in areas which are at significant 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	Avoid locating new emergency service facilities and hospitals in areas which are at significant risk from natural hazards, including High Risk Flood, <u>Flood Plain Management Area</u> , 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

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
	risk from natural hazards	elsewhere and will not increase the risk to or vulnerability of people or communities	and will not increase the risk to or vulnerability of people or communities
15.2 Objectives and Policies	Policy 15.2.1.4 New infrastructure and utilities in areas subject to significant risk from natural hazards	(a) Enable the construction of new infrastructure and utilities in areas at significant 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.	(a) Enable the construction of new infrastructure and utilities in areas at significant risk from natural hazards, including High Risk Flood, <u>Flood Plain Management Area</u> , 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 avoided, remedied or mitigated <del>to the extent practicable;</del> 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.
15.2 Objectives and Policies	Policy 15.2.1.6 Managing natural hazard risk generally	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.	Provide for rezoning, subdivision, use and development outside High Risk Flood, <u>Flood Plain Management Area</u> , 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.



Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
15.2 Objectives and Policies	Policy 15.2.1.10 – Areas defended by stopbanks adjacent to the Waikato River	<p>(a) Control subdivision, use and development in areas identified as Defended Areas adjacent to the Waikato River by:</p> <ul style="list-style-type: none"> <li>(i) assessing the potential risk of overtopping or structural failure of the stopbanks, and overwhelming of associated flood protection structures, before subdivision, <del>use</del> and development occurs; and</li> <li>(ii) requiring that consideration be given to appropriate mitigation to reduce any residual risk identified <u>to acceptable levels<sup>1</sup></u>; and</li> <li>(iii) ensuring that any residual risk is not transferred to neighbouring sites; <del>and</del> <u>and (iv) recognising the functional needs and operational needs of the National Grid.<sup>2</sup></u></li> </ul> <p>(a) Specify minimum setbacks for buildings and earthworks from stopbanks to:</p> <ul style="list-style-type: none"> <li>(i) protect the structural integrity of the stopbanks; and</li> <li>(ii) provide a buffer to reduce the potential risk to life and damage to</li> </ul>	Support changes as recommended in Legarth s42A noting that further information and spatial data on risk needs to be included in the plan to assist assessment of risk in defended areas.

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1 2102.69

2 2101.9

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
		property from deep and fast-flowing flood waters in the event of a breach.	
15.2 Objectives and Policies	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.	(a) Avoid locating new subdivision, use and development in High Risk Flood, <u>Flood Plain Management Area</u> , 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.
15.2 Objectives and Policies	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 <del>the Waikato and Waipa<sup>3</sup> River</del> 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: <ul style="list-style-type: none"> <li>(i) the building <del>development</del> is of a type that is not likely to suffer material damage during a flood; or</li> <li>(ii) the building is a small-scale addition to an existing building; or</li> </ul>	Support changes as recommended in Legarth s42A

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		(iii) the risk from flooding is otherwise avoided, remedied or mitigated.	
15.2 Objectives and Policies	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 <del>on</del> <u>or</u> infrastructure, are avoided or mitigated.	Mercury seeks that the flood plain surrounding Lake Waikare, which is represented by ground levels less than RL8m is mapped and included in the district plan maps as part of the Floodplain Management Area overlay.  This policy may need further amendments once mapping is complete and a process is agreed for documenting infill development and potential effects over time
15.2 Objectives and Policies	Policy 15.2.1.14 – Hazardous substances located within floodplain and flood ponding areas	<b>Policy 15.2.1.14 Hazardous substances located within <u>the 1% AEP floodplain and flood ponding areas, and High Risk Flood Areas</u></b>  (a) Ensure that the location and storage of hazardous substances within the 1% AEP floodplain and flood ponding areas, <u>including High Risk Flood Areas, are managed to prevent</u> do not create an unacceptable hazard <u>risks</u> to people, property, <u>infrastructure</u> or the environment. Alternative amendment: (a) Ensure that the location and storage of hazardous substances within the 1% AEP floodplain and flood ponding area <u>areas affected by natural hazards are managed to prevent</u> do not create an unacceptable hazard <u>risks</u> to people, property, <u>infrastructure</u> or the environment.	Support changes as recommended in Legarth s42A

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15.2 Objectives and Policies	Policy 15.2.1.15 Flood ponding areas and overland flow paths	<p><b>Policy 15.2.1.15 <del>Flood ponding areas and overland flow paths</del> <u>Managing flood hazards through integrated catchment management</u></b></p> <p>(a) Manage <del>stormwater flood</del> hazards by requiring new subdivision and development within <del>floodplains</del>, flood ponding areas and overland flow paths to adopt integrated catchment plan-based <del>stormwater</del> management methods which:</p> <ul style="list-style-type: none"> <li>(i) maintain the <del>flood storage capacity function</del> of natural floodplains, wetlands and ponding areas <u>including flood storage capacity</u>; and</li> <li>(ii) retain the function and capacity of overland flow paths to convey stormwater runoff; and</li> <li>(iii) do not transfer or increase risk elsewhere <u>within the catchment</u>; and</li> <li>(iv) promote <del>low impact best practice</del> stormwater management <del>practices</del><sup>9</sup> with reference to the Waikato Stormwater Management Guideline and the Regional Infrastructure Technical Specifications (RITS); and</li> <li>(v) minimise impervious surfaces.</li> </ul>	Support intent of changes recommended in Legarth s42A

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
15.2 Objectives and Policies	Objective 15.2.2 Awareness of natural hazard risks	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. <u>Relocate Objective 15.2.2 is moved and located together with the other Objectives in Chapter 15.</u>	Support changes as recommended in Carter s42A
15.2 Objectives and Policies	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 <u>including the projected effects of climate change</u> , 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.	Support changes as recommended in Carter s42A
15.2 Objectives and Policies	Policy 15.2.3.3 Precautionary approach for dealing with uncertainty	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.	Support policy, but note the Council needs to do more risk assessment work, particularly spatial work, and this policy may need to be amended following completion of this future work.

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
15.2 Objectives and Policies	Policy 15.2.3.5 Assess the impact of climate change on the level of natural hazard risks	<p>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.</p> <p>(a) 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.</p> <p>(b) Where the assessment required by Policy 15.2.3.5(a) and Policy 15.2.3.5(b) above indicates that natural hazards are likely to be exacerbated by climate change, ensure that subdivision and development are designed and located 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.</p>	Support policy, but note the Council needs to do more risk assessment work, particularly spatial work, and this policy may need to be amended following completion of this future work.
15.2 Objectives and Policies	15.4 Flood Plain Management Area and Flood Ponding Areas 15.4.1 Permitted Activities	<p>The activities listed below are permitted activities within the Flood Plain Management Area shown on the Planning Maps or in a Flood Ponding Area, if they meet the activity specific conditions set out in this table.</p> <p>(a) Activities may also be restricted discretionary or discretionary activities, as specified in Rules 15.4.2 and 15.4.3.</p>	<p>Mercury notes the exclusion of Lake Waikare and the surrounding catchment below ground level of 8m RL from the Floodplain Management Area and requests the inclusion of this area in the overlay as per previous comments.</p> <p>Amend PWDP to include Lake Waikare and the surrounding catchment as per submission</p>

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15.4 Flood Plain Management Area and Flood Ponding Areas	15.4.1 Permitted Activities P1	Construction of a new building or an addition to an existing building, unless specified in P2 – P5 in Rule 15.4.1. The minimum floor level is at least 0.5m above the 1% AEP flood level; and (a) Compliance with condition (1) shall be demonstrated by a suitably qualified engineer with experience in hydrology.	Construction of a new building or an addition to an existing building, <del>unless specified in P2 – P5 in Rule 15.4.1.</del> where the minimum floor level is at least 0.5m above the 1% AEP flood level. Compliance with <u>rule 15.4.1</u> shall be demonstrated by a suitably qualified engineer with experience in hydrology.		
15.4 Flood Plain Management Area and Flood Ponding Areas	15.4.1 Permitted Activities P2	Additions to an existing building that does not increase the ground floor area of the building by more than 15m <sup>2</sup> .	Remove as per submission  Manage extensions under revised rule 15.4.1 as above.		
15.4 Flood Plain Management Area and Flood Ponding Areas	15.4.1 Permitted Activities P6	Earthworks associated with construction, replacement, repair, maintenance, minor upgrading or upgrading of utilities, including the formation and maintenance of access tracks.	Suggest inclusion of condition to manage scale: <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>;</u>		
15.4 Flood Plain Management Area and Flood Ponding Areas	15.4.1 Permitted Activities P8	<table border="1" data-bbox="488 1155 734 1380"> <tr> <td data-bbox="488 1155 573 1380">P8</td> <td data-bbox="573 1155 734 1380"><u>Earthworks</u> <u>s</u> not provided for under Rule 15.4.1 P6 or P7.</td> </tr> </table> (a) In the Residential, Village and Country Living Zones –a maximum volume of filling above natural ground level of 10m <sup>3</sup> per site, and a maximum cumulative volume	P8	<u>Earthworks</u> <u>s</u> not provided for under Rule 15.4.1 P6 or P7.	Support changes as recommended in Legarth s42A
P8	<u>Earthworks</u> <u>s</u> not provided for under Rule 15.4.1 P6 or P7.				

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				<p>of filling and excavation of 20m<sup>3</sup>; or</p> <p>(b) In the Rural Zone – a maximum volume of filling above natural ground level of 100m<sup>3</sup> per site, and a maximum cumulative volume of filling and excavation of 200m<sup>3</sup> per site; or</p> <p>(c) All other zones – a maximum volume of filling above natural ground level of 20m<sup>3</sup> per site, and a maximum cumulative volume of filling and excavation of 50m<sup>3</sup> per site; and</p> <p>(d) Height and depth of earthworks in all zones</p>	
				<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</u></p>	



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		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 60%;"><u>Management Area or Flood Ponding Area.</u><sup>10</sup></td> </tr> </table>			<u>Management Area or Flood Ponding Area.</u> <sup>10</sup>	
		<u>Management Area or Flood Ponding Area.</u> <sup>10</sup>				
15.4 Flood Plain Management Area and Flood Ponding Areas	15.4.2 Restricted Discretionary Activities RD1	<p><b>15.4.2 Restricted Discretionary Activities</b></p> <p>(a) The activities listed below are restricted discretionary activities within the <u>Flood Plain Management Area</u> shown on the Planning Maps or in a <u>Flood Ponding Area</u>.</p> <p>(b) Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in the following table.</p> <p>(c) <del>Any application arising from this rule shall not be limited or publicly notified.</del><sup>11</sup></p>	Support changes as recommended in Legarth s42A			

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports		Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)				
15.5 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).		Mercury notes the exclusion of Lake Waikare and the surrounding catchment from the Floodplain Management Area and requests the inclusion of this area in the overlay as per previous comments.				
15.5 High Risk Flood Area	15.5.1 Permitted Activities P1	<table border="1"> <thead> <tr> <th data-bbox="591 539 667 651">Activity</th> <th data-bbox="667 539 1263 651">Activity-specific conditions</th> </tr> </thead> <tbody> <tr> <td data-bbox="591 651 667 1198">P1</td> <td data-bbox="667 651 1263 1198">           1. Repair, maintenance or <u>minor upgrading</u> of existing <u>utilities</u>.            2. <del>New Construction, replacement or upgrading of</del><sup>12</sup>telecommunication lines, poles, cabinets and masts/poles supporting antennas.  <del>Construction, replacement or upgrading of electricity lines, poles, cabinets, and supporting structures.</del><sup>13</sup> </td> </tr> </tbody> </table>	Activity	Activity-specific conditions	P1	1. Repair, maintenance or <u>minor upgrading</u> of existing <u>utilities</u> . 2. <del>New Construction, replacement or upgrading of</del> <sup>12</sup> telecommunication lines, poles, cabinets and masts/poles supporting antennas. <del>Construction, replacement or upgrading of electricity lines, poles, cabinets, and supporting structures.</del> <sup>13</sup>	Nil	Support changes as recommended in Legarth s42A
Activity	Activity-specific conditions							
P1	1. Repair, maintenance or <u>minor upgrading</u> of existing <u>utilities</u> . 2. <del>New Construction, replacement or upgrading of</del> <sup>12</sup> telecommunication lines, poles, cabinets and masts/poles supporting antennas. <del>Construction, replacement or upgrading of electricity lines, poles, cabinets, and supporting structures.</del> <sup>13</sup>							
15.5 High Risk Flood Area	15.5.2 Restricted Discretionary Activities RD1	<table border="1"> <thead> <tr> <th data-bbox="472 1198 831 1302">Activity</th> <th data-bbox="831 1198 1263 1302">Activity-specific conditions</th> </tr> </thead> <tbody> <tr> <td data-bbox="472 1302 831 1361"></td> <td data-bbox="831 1302 1263 1361"></td> </tr> </tbody> </table>		Activity	Activity-specific conditions			Add a new matter of discretion <u>f) cumulative effect on the storage capacity of the Lower Waikato Flood Protection Scheme.</u>
Activity	Activity-specific conditions							

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports		Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)	
		RD1	1. New <u>utilities</u> not provided for in Rule 15.5.1 P1(2) <del>or P1(3)</del> <sup>14</sup> .	<b>Discretion is restricted to:</b> 1. Functional and operational requirements to be located in the <u>High Risk Flood Area</u> ;	
			2. Upgrading of existing utilities not provided for in Rule 15.5.1 P1(1).	2. The adverse effects on people and property from establishing or upgrading the <u>utility</u> in the <u>High Risk Flood Area</u> ;  3. The potential for the development to transfer/increase flood risk to neighbouring properties; 4. Consideration of alternative locations; 5. Consideration of the projected effects of climate change; 6. Any mitigation measures to reduce the risk to people's safety, well-being and property.	

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
15.5 High Risk Flood Area	15.5.2 Restricted Discretionary Activities RD2	<p>One addition to a lawfully established building existing at [the date this rule becomes operative ], 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>Discretion is restricted to:</p> <p>a) The ability to manage flood risk through appropriate building materials, structural or design work or other engineering solutions;</p> <p>(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;</p> <p>(c) Any mitigation measures to reduce the risk to people’s safety, wellbeing and property.</p>	<p><del>One addition to a lawfully established building existing at [the date this rule becomes operative ], 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.</del></p> <p><del>Discretion is restricted to:</del></p> <p><del>a) The ability to manage flood risk through appropriate building materials, structural or design work or other engineering solutions;</del></p> <p><del>(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;</del></p> <p><del>(c) Any mitigation measures to reduce the risk to people’s safety, wellbeing and property.</del></p>
15.5 High Risk Flood Area	15.5.3 Discretionary Activities D1	<p>Subdivision that creates one or more additional vacant lot(s) where:</p> <p>(a) The additional lot(s) are located entirely outside the High Risk Flood Area; or</p> <p>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<sup>4</sup> area</u> capable of containing a complying building platform entirely outside the High Risk Flood Area.</p> <p>This rule does not apply to subdivision for a utility allotment, access allotment or subdivision to create a reserve allotment.</p>	Support changes as recommended in Legarth s42A

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
15.6 Defended Area (Residual Risk)	15.6.2 Restricted Discretionary Activities	<p>(a) The activities listed below are restricted discretionary activities within the Defended Area shown on the Planning Maps.</p> <p>(b) Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in the following table.</p> <p>(c) Activities may also be discretionary activities, as specified in Rule 15.6.3.</p>	<p><del>(a) The activities listed below are restricted discretionary activities within the Defended Area shown on the Planning Maps.</del></p> <p><del>(b) Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in the following table.</del></p> <p><del>(c) Activities may also be discretionary activities, as specified in Rule 15.6.3.</del></p>

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
15.6 Defended Area (Residual Risk)	15.6.2 Restricted Discretionary Activities RD1	<p>(1) Subdivision that creates one or more additional vacant lot(s).</p> <p>(2) Rule 15.6.2 RD1(1) does not apply to subdivision for a utility allotment, an access allotment or subdivision to create a reserve allotment. Discretion is limited to:</p> <ul style="list-style-type: none"> <li>(d) (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;</li> <li>(b) The impact of any planned improvements, maintenance or upgrading on the residual risk;</li> <li>(c) The effect of groundwater levels and variability in ground conditions on stop-bank security at and adjacent to the site to be subdivided;</li> <li>(d) the likely depth and duration of flooding as a result of a breach or overtopping event or flood ponding;</li> <li>(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);</li> <li>(f) The adverse effects <del>to</del> <u>on</u>: <ul style="list-style-type: none"> <li>i. people and property,</li> <li>ii. <u>historic heritage and Sites and Areas of</u></li> </ul> </li> </ul>	<p>Seek that subdivision be made a discretionary activity under 15.6.3</p> <p>Include (a) to (h) as assessment criteria</p>

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
		<p><u>Significance to Maori,</u> <sup>5</sup>and iii.  overall vulnerability  from potential failure or overwhelming of the structural defences and associated flood protection works relevant to the proposed new lot(s);  (g) Potential for the development to transfer/increase flood risk/residual risk to neighbouring properties;  (h) Any additional mitigation measures proposed or site features which reduce residual risk (e.g. natural high ground; evacuation plan).</p>	

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)				
15.6 Defended Area (Residual Risk)	15.6.3 Discretionary Activities D2	<p>(a) The activities listed below are discretionary activities within the <u>Defended Area</u>.</p> <table border="1" data-bbox="568 360 1263 1024"> <tr> <td data-bbox="568 360 719 624">D 1</td> <td data-bbox="719 360 1263 624">Construction of a new <u>building</u> or new <u>accessory building</u>, located within 50m of the toe of a stop-bank where the stop-bank is under the responsibility of the Council, the Waikato Regional Council or the Crown.</td> </tr> <tr> <td data-bbox="568 624 719 1024">D 2</td> <td data-bbox="719 624 1263 1024">i. <u>Earthworks</u> located within 50m of the toe of a stop-bank where the stopbank is under the responsibility of the Council, the Waikato Regional Council or the Crown. ii. <u>This rule does not apply to earthworks associated with utilities where the written approval of the authority managing the stopbank has been obtained.</u></td> </tr> </table>	D 1	Construction of a new <u>building</u> or new <u>accessory building</u> , located within 50m of the toe of a stop-bank where the stop-bank is under the responsibility of the Council, the Waikato Regional Council or the Crown.	D 2	i. <u>Earthworks</u> located within 50m of the toe of a stop-bank where the stopbank is under the responsibility of the Council, the Waikato Regional Council or the Crown. ii. <u>This rule does not apply to earthworks associated with utilities where the written approval of the authority managing the stopbank has been obtained.</u>	Support changes as recommended in Carter s42A.
D 1	Construction of a new <u>building</u> or new <u>accessory building</u> , located within 50m of the toe of a stop-bank where the stop-bank is under the responsibility of the Council, the Waikato Regional Council or the Crown.						
D 2	i. <u>Earthworks</u> located within 50m of the toe of a stop-bank where the stopbank is under the responsibility of the Council, the Waikato Regional Council or the Crown. ii. <u>This rule does not apply to earthworks associated with utilities where the written approval of the authority managing the stopbank has been obtained.</u>						



Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
15.13 Information requirements for all resource consent applications addressing natural hazards	15.13.1 General	<p>(1) The following documents, to the extent relevant to the proposal:</p> <p>(a) Geotechnical assessment, including identification and assessment of any potentially liquefaction prone land and land subject to slope instability;</p> <p>(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;</p> <p>(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.</p> <p>(2) Plans identifying:</p> <p>(a) Topographical features within the site and surrounding area;</p> <p>(b) The location of natural hazards on all or part of the site.</p> <p><u>(3) Consideration of the information contained in the following stormwater catchment management plans where relevant:</u></p> <p>(a) <u>Ngaruawahia Catchment Management Plan, March 2015;</u></p> <p>(b) <u>Tamahere Stormwater Catchment Management Plan and Report, 2011</u></p>	Support changes as recommended in Legarth s42A report

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
		<p>(c) <u>Port Waikato Stormwater Catchment Management Plan and Report, 2004;</u></p> <p>(d) <u>Pokeno Catchment Management Plan, 2010;</u></p> <p>(e) <u>Te Kauwhata Catchment Management Plan, 2009;</u></p> <p>(f) <u>Tuakau Catchment Management Plan, Draft 2014.</u> <sup>6</sup></p>	
15.13 Information requirements for all resource consent applications addressing	15.13.4 Defended Areas	<p>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:</p> <p>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</p>	<p>Consequential change as Mercury seeks that subdivision in the Defended Area should be a discretionary activity under rule 15.6.3.</p> <p>For any <del>Restricted</del> 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:</p>

Section reference	Paragraph/ Provision	PWDP wording including any changes recommended in s42A reports	Relief sought by Mercury post s42A report (additional text shown in underline, deletions shown in strikethrough)
natural hazards		methods to further reduce residual risk, where appropriate.	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.
PWDP maps	All affected maps	N/A	That Lake Waikare and its surrounding catchment, where ground levels are below 8m RL (Moturiki datum) is included as a Floodplain Management Area overlay within the District Plan.