

IN THE MATTER: of the Resource Management Act 1991
(RMA)

AND

IN THE MATTER: of Proposed Plan Change 2: Pukehangi
Heights to the Rotorua District Plan under
Part 5, Sub-Part 5 – Streamlined Planning
Process and Schedule 1 Part 5 of the
RMA.

STATEMENT OF EVIDENCE ON BEHALF OF BAY OF PLENTY REGIONAL COUNCIL:

NATHAN TE PAIRI - Planning

18 September 2020

EXECUTIVE SUMMARY

1. Section 30 of the RMA sets out functions of the Bay of Plenty Regional Council (BOPRC). The functions relevant to Proposed Plan Change 2 (Pukehangi Heights) to the Rotorua District Plan (Plan Change) are as follows:
 - (a) ensure implementation achieves the integrated management of natural and physical resources¹ of the region,
 - (b) control the use of land for the avoidance or mitigation of natural hazards²; and,
 - (c) control the damming and diversion of water and the control of the quantity, level and flow of water in any water body³.
2. BOPRC prepared a submission to the Plan Change following pre-application discussions with planners (Kate Dahm and Craig Batchelar) and storm water experts (Liam Foster and Mark Pennington) for Rotorua Lakes Council (RLC) on matters relating to storm water modelling and effects as well as natural hazard risk.
3. As set out in the evidence of others for BOPRC, the downstream catchment is subject to existing long standing flooding issues. For this reason, I consider a precautionary approach to safeguard future options to remedy this situation is appropriate.
4. For this reason, I consider the plan change provisions must rely wholly on mitigation measures within the development site. Future studies of the Utuhina catchment may illuminate options to address flooding issues in the downstream environment. However, none of this work is significantly progressed to provide the necessary level of certainty that off-site mitigation options could be relied upon for this plan change.
5. Following the receipt of the refined modelling reporting, BOPRC technical staff (modelling and engineering) are, in principle, not opposed to the rezoning of the land within the Development Area. To ensure future subdivision reflects the development constraints resulting from existing flooding issues in the downstream catchment, a number of amendments to the planning provisions are proposed.

¹ Section 30(1)(a) of the RMA

² Section 30(1)(c)(iv) of the RMA

³ Section 30(1)(e)(ii) of the RMA

6. In summary, I suggest amendments⁴ to:
- (a) Objective 3.1 (Natural Hazard Risk – Flooding);
 - (b) NEW Objective 3.2 (Managing Cumulative Effects of Development);
 - (c) Policy 3.1 (Flooding and Storm water) – ensure future subdivision and storm water consents reflect the modelling work;
 - (d) NEW Policy 3.2 ((Natural Hazard Risk – Flooding);
 - (e) NEW Performance Standard (Managing Cumulative Effects of Development);
 - (f) Rule A5.2.3.2 (Notification) – retain the overall ability to approve details, including storm water mitigation;
 - (g) Rule A5.2.3.3.7 and A5.2.4.4.4 (Flooding and Storm water); and
 - (h) NEW Method to implement Policies 3.1 to 3.2.
7. Overall, the above amendments would provide necessary certainty to BOPRC and the community that:
- (a) The limitation imposed, as modelled, are reflected in the Stormwater Management Plan;
 - (b) the cumulative storm water effects of the plan change are considered comprehensively in an integrated manner at subdivision stage;
 - (c) BOPRC can meet its functions under s.30 of the RMA, in particular ensuring mitigation addresses the cumulative effects of future subdivision on the downstream environment with the development of a Stormwater Management Plan (for the entire site) prior to subdivision; and
 - (d) the Plan Change will not preclude options in the lower catchment to address existing flood issues.
8. On this basis, I consider the planning provisions appropriately manage natural hazard risk and potential cumulative storm water effects and, are consistent with the National

⁴ Offered to RLC on 15/9/2020

Policy Statement – Urban Development (NPS - UD) and the relevant objectives and policies of the Bay of Plenty Regional Policy Statement.

Qualifications and Experience

9. My full name is Nathaniel George Te Pairi. I have held the position of Planner at BOPRC since August 2019.
10. I have 15 years' experience as a planner in New Zealand and abroad and, have completed a recognised planning qualification. I have worked on large scale development projects and have expertise in the area of policy planning. I am an associate member of the New Zealand Planning Institute.
11. I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2014 and I agree to comply with it. I confirm that the issues addressed in this statement of evidence are within my area of expertise, except where I state I am relying on the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from my expressed opinion.

Background and Scope of Evidence

12. I have been involved in pre-application discussions and prepared the submission on behalf of BOPRC to the Plan Change. I have visited the site twice.
13. In preparing this statement, I confirm I have read:
 - (a) the s.32 report and attached documentation;
 - (b) the s.42A Hearings report dated 24/9/2020;
 - (c) storm water evidence prepared by Kathy Thiel-Lardon (BOPRC), Peter West (BOPRC), Phillip Wallace (BOPRC), Peter Blackwood (BOPRC) and Mark Ivamy (BOPRC);
 - (d) statements of evidence prepared by Mark Pennington and Liam Foster dated 14/9/2020; and
 - (e) relevant submissions.

14. My statement of position will address planning matters relating to storm water and natural hazard risk⁵: The planning evidence of Jo Watts (BOPRC) will address planning matters relating to water quality (nutrient management)⁶.

Relevant Policy Framework

15. In summary, the key provisions (**see Appendix A**) relevant to BOPRC's submission are as follows:

National Policy Statement: Urban Development 2020 (NPS- UD)

16. The NPS – UD, amongst other directives, requires regional councils to prepare a Future Development Strategy and consider wider opportunities for greenfield growth to enable development capacity. The NPS – UD came into legal effect on 20 August 2020 and is a high level direction relevant to this Plan Change.

Bay of Plenty Regional Policy Statement 2014 (BOP RPS)

Integrated Resource Management: Objectives and Policies⁷

Policy IR 1B: Adopting a precautionary approach

Policy IR 2B: Having regard to the likely effects of climate change

Objective 10 and Policy IR 3B: Adopting an integrated approach

Objective 11 and Policy IR 5B: Assessing cumulative effects

Natural Hazards⁸: Objective and Policies

Objective 31 (Managing natural hazards)

17. **Policy NH 4B** sets out the risk threshold as being a *low level of risk* for Development Sites without increasing risk outside of the development site. The words, '*without increasing risk outside of the development site*', are particularly relevant to the consideration of this Plan Change given the extent and constraints of the downstream receiving environment.

⁵ Submission points 2-5 of BOPRC's submission dated 20/2/2020

⁶ Submission points 6-12 of BOPRC's submission dated 20/2/2020

⁷ Add electronic link – see Appendix 1

⁸ As above – see Appendix 2

18. **Policy NH 9B** requires development proposals to undertake a risk assessment in accordance with Appendix L for Development Site. As the site is greater than 5ha, this policy applies.

Methods to implement the policies

19. Method 18 seeks that structure plans for large-scale land use changes ensure:
- Integrated management of related environmental effects; and

Structure plans shall, as appropriate and applicable:

(ha) Identify all known natural hazards that land to be used for urban purposes may be subject to, or contain, and show how low natural hazard risk is to be maintained or achieved;

(k) show how any adverse effect of increased storm water runoff is to be mitigated; and

(l) show how other adverse effects on the environment and infrastructure are to be avoided, remedied or mitigated.

Existing environment and flood risk

20. The Utuhina catchment is prone to flooding as urban development has occurred within the floodplain. Flooding in the catchment is a long standing issue and to rectify this, a flood protection asset was incrementally constructed between 1974 and 1998 to protect primarily the lower part of the Utuhina catchment.

21. In terms of the extent of present day flooding issues in the Utuhina catchment, the existing flood risk can be described as follows:⁹

- (a) The existing flood protection scheme is currently not meeting its intended Level of Service and flood waters are predicted to spill out of the stream channel and overtopping flood defences:¹⁰

⁹ (a) and (g) – para. 39 of Kathy Thiel-Lardon

¹⁰ Para 30 and 31 and Philip Wallace's evidence and Figure 2

- (b) Fluvial (riverine) flooding affecting critical infrastructure, such as Edmund Road, Ford Road, Sunset Road and State Highway 5, as well as a number of buildings during the current climate events;
 - (c) Significant fluvial (riverine) flooding affecting critical cultural and social buildings, and a large number of residential, commercial and industrial buildings as well as critical infrastructure when climate change is considered. Based on the built environment (functional compromised buildings) flood risk is considered high. Some roads are also considered unsafe for vehicles and people to pass.
 - (d) More than approximately 1700 buildings are susceptible to fluvial flooding in a 0.2% AEP event in the Uthina catchment and approximately 250 buildings would be 'functionally compromised' in a 1% AEP event;
 - (e) Storm water management constraints and overland flow path issues exist resulting in additional buildings being susceptible to flooding; and
 - (f) There are overland flow paths originating upstream of the Plan Change land that are likely to result in flooding if not managed appropriately as part of the detailed design for the entire Development Area.
22. For the avoidance of doubt, the modelling work has considered both the existing and future environment¹¹ (also known as the 'City Future' scenario) to understand the cumulative storm water effects of the Plan Change on the downstream environment. Further detail is provided in the evidence of Peter West and Phillip Wallace¹². Of note this does not include land, such as reserves that may be considered potential residential development sites under the NPS-UD such the 'West brook Precinct'.
23. The model (Greater Uthina Catchment Model) prepared by BOPRC was initiated as part of the Uthina Capacity Review and Flood Risk Project¹³. This modelling then used to understand the effects of the Plan Change.

¹¹ Based on Impermeable Surface Coverage for the various zones of Rotorua Lakes District Plan- Residential 1 – 80%

¹² para 35 of Peter West's evidence

¹³ Para 31-38 of Kathy Thiel-Lardon's evidence

24. For the above reasons, I consider it is appropriate to adopt a precautionary approach (Policy IR 1B of the BOP RPS) and not rely on not yet unsecured off-mitigation measures that may be addressed as part of future programme works. This approach aligns with that outlined in the evidence of Kathy Thiel-Lardon¹⁴, who is leading the BOPRC work on the Utuhina Capacity Review and Flood Risk Project to rectify existing flooding issues.
25. In her view, due to the extent of the existing flood risk, a 'no increase'¹⁵ to the future consideration of effects in the downstream environment is appropriate. This is informed by best practice¹⁶ to ensure:
- (a) decisions are avoided that make it more difficult to manage climate change flood risk in the future; and
 - (b) provide for a robust evaluation of options, costs and benefits over time and across the community through the Utuhina Capacity Review and Flood Risk Project.
26. I agree with Mrs Thiel-Lardon and consider that the planning provisions should appropriately manage cumulative storm water effects in an integrated manner, in addition to flood risk. This is the basis for the new objectives and policies outlined later in this statement.
27. To date, I am not aware of any resource consent applications for discharge or earthworks for the entire Development Area.
- 153 Pukehangī Road (ref: RC 17111/6220134)
28. A resource consent for a retirement home by Freedom Management Services Ltd was applied for on 10 July 2020. A discharge and earthworks consent (ref: RM20-0451 194226) was also lodged in parallel on 17 July 2020.

¹⁵ Para 88 and 41 to 43 of Kathy Thiel-Lardon's evidence

¹⁶ MfE August 2008 'meeting the Challenges of Future Flooding in New Zealand' and MfE May 2010 'Preparing for future flooding: A guide for local government in New Zealand'.

Response to the s.42A Hearing Report

29. I have read the s.42A reports¹⁷ prepared by Craig Batchelar, Kate Dahm, and Kim Smith and the storm water reports prepared by Mr Foster.
30. I note that the section completed by Mr Batchelar relies considerably on the earlier version of the storm water report (now superseded by version 3) prepared by Mr Foster. Following expert caucusing and the agreement on a Joint Witness Statement (storm water), the Storm water Report was subsequently reissued on 14/9/2020.
31. To that end, this statement addresses the salient points in the 'Flooding and Stormwater¹⁸' section of the s.42A report dated 19/8/2020 and to lesser extent, the evidence of Mark Pennington and Liam Foster.
32. In summary, the following matters are discussed below:
- (a) Enabling urban development capacity
 - (b) Other planning processes
 - (c) Modelling
 - (d) Natural hazard risk
 - (e) Suggested amendments to the planning provisions

Enabling Urban Development Capacity

33. BOPRC is not opposed to proposals that seek to enable urban development capacity, particularly contiguous greenfield proposals which are promoted by the NPS-UD.
34. However, in my view, proposals should also appropriately give effect to the objectives of the BOP RPS, in particular:

'Objective 10: Cumulative effects of existing and new activities are appropriately managed;

Objective 11: An integrated approach to resource management issues is adopted by resource users and decision makers; and

¹⁷ Dated 21/8/2020 and 14/9/2020

¹⁸ Section 8.197 page 76

Objective 31: Avoidance or mitigation of natural hazards by managing natural hazard risk for people's safety and the protection of property and lifeline utilities.'

35. Having read the evidence of Kathy Thiel Lardon who has considered the effects of the Plan Change based on the modelled 'Scenario 15'¹⁹, I do not oppose the request to rezone the land within the Development Area, subject to the suggested changes discussed below and attached in **Appendix B**.

Other Relevant Planning Processes

36. The s.42A report refers to a forthcoming Stormwater Master Plan (SMP) and Catchment Management Plan as potential ways to reduce or remove the need for on-site mitigation within the Development Area.
37. As noted in the s.42A report²⁰ and the evidence of Mark Pennington²¹ RLC are in the preliminary stages of preparing a city-wide SMP²². However, the scope of this work to deliver detailed solutions is limited and additional assessments and confirmation of detailed design is likely to be part of future project phases. For this reason and given we have not received any details of the SMP, I do not consider the SMP can be wholly relied on as a mitigation response to manage storm water effects resulting from the Plan Change.
38. As noted in the evidence of Kathy Theil Lardon, the Utuhina Capacity Review and Flood Risk Project is the joint authority project to specifically address the flooding issues in the Utuhina catchment ('Utuhina Project'). Options have not yet been developed and neither has engagement with the community as directly affected parties and part funders, through a targeted rate fund, of any solution.
39. RLC prepared and submitted a Comprehensive Stormwater Consent (CSC) to BOPRC on October 2017. The CSC has not yet been notified. This consent does not include the development site. A Catchment Management Plan was applied for on

¹⁹ Para 74 of the Evidence of Kathy Thiel-Lardon

²⁰ 8.250

²¹ paragraphs 64-72

²² The Regional Council has not received any detail of the SMP

February 2019 but has not been completed for the catchment and will be confirmed once the CSC is granted by BOPRC.

Modelling

40. To date, RLC have shared the outputs of a number of modelling scenarios with BOPRC to conceptually understand the impacts of the Plan Change on the downstream environment.
41. The evidence of Kathy Thiel-Lardon, Peter West and Phillip Wallace for BOPRC has tested a successful solution under 'Scenario 15' which includes a performance check of the detention ponds undertaken by Peter West²³. On the basis of their evidence, I do not oppose the rezoning of the land within the Plan Change area subject to the suggested amendment in **Appendix B**.
42. The s.42A²⁴ report notes that the consideration of the future environment informed by a baseline of 80% impermeable surface coverage areas is overly conservative. I note this figure was applied to residential areas only and is based on the operative provisions for each of the applicable zones.
43. In any case, I consider the potential effects of the Plan Change on the future environment is a relevant material consideration and, is not overly conservative in its approach. The parameters of the modelling scenario 'City Future' were agreed with RLC prior to caucusing.

Natural Hazard Risk

44. BOPRC questioned the conclusion²⁵ that the Plan Change gives effect to Policy NH 3B and NH 4B. Having considered the Plan Change, I do not consider that Policy NH 3B is relevant. This is because Policy NH 3B requires a risk assessment that involves developments to planning documents by Natural Hazard zones, not development proposals, as is the case for this Plan Change.
45. Policy NH 9B of the RPS is the relevant policy as it requires that a Risk Assessment be prepared for development proposals on sites larger than five hectares.

²³ Para 23 of his evidence.

²⁴ 8.247

²⁵ see pg. 315 Appendix L of the BOPRC RPS

46. Policy NH 4B sets out the risk threshold as being a *low level of risk* for development sites without increasing risk outside of the development site. The words, '*without increasing risk outside of the development site*', are particularly relevant to the consideration of this Plan Change given the extent and constraints of the downstream receiving environment.
47. While the assessments submitted for the Plan Change area do not strictly align with Appendix L, Mark Ivamy, BOPRC's Hazard Planner is satisfied that a low level of risk could be achieved within the Development Area subject to amended wording of Performance Standards²⁶ requiring a risk assessment of detailed design in accordance with Appendix L.

Suggested amendments to the planning provisions

48. BOPRC offered similar set of provisions to RLC on
49. As noted in the s.42A report RLC seek considerable flexibility to determine future mitigation options that relies on a combination of planning provisions, a forthcoming city-wide SMP and future discharge consents to manage cumulative storm water effects.
50. In my view, the planning provisions as noted do not adequately manage the potential cumulative storm water effects, particularly at subdivision stage, or in an integrated manner. BOPRC consider this approach is necessary as no detailed storm water mitigation has been secured in parallel to this Plan Change to manage increased flood risk on the downstream catchment.

Objectives, Policies and Methods

51. Given the constrained nature of the downstream environment, an 'effects' based approach to consider future increases in flood depth, velocity and extent and duration is warranted in this location. The reasons for this are set out in the evidence of Kathy Thiel-Lardon²⁷.

²⁶ A5.2.3.4.7(b)(ii) 8 and A5.2.4.4.4(b)(ii) – See Appendix B

²⁷ Para. 93

52. Therefore, in this particular circumstance, I do not consider the risk based approach goes far enough, noting that future infill within the catchment is likely²⁸. While the s.42A report speculates that future growth based on existing rates will slow, the Rotorua District has been identified as a Tier 2 Urban Environment under the NPS-UD. Therefore, I consider this historical 'low development' trend is likely to change over the next 10 years.
53. I note that objectives and policies of the BOP Regional Natural Regional Plan do not direct subdivision consents, earthwork and discharge consents to be considered in an integrated manner. Therefore, I consider it appropriate to include provisions to give effect to this as part of this Plan Change.
54. I do not consider the combination of planning provisions future consenting process will achieve this overall objective. Moreover, I do not consider that, in practice, s.104 of the Act provides a robust check and balance to ensure that cumulative effects are considered at the consenting stage.
55. As the proposal before the Panel is a plan change, and not a resource consent, I consider this is appropriate stage in the planning process to effectively respond to the, yet to be managed, cumulative effects of this Plan Change in an integrated manner.
56. In my view, the suggested amendments will provide a degree of certainty that effects of the 'site preparation' stage of the development process can be adequately addressed by the planning provisions for the Plan Change.
57. Therefore, I consider amendments and new objectives, policies and methods are appropriate.
58. Amendments to Objective 3.1 (Natural hazard risk - Flooding)
- 'Natural Hazard risk for flooding is managed within the Pukehangī Heights Development Area and in the downstream environment'*
59. And, amendments to Policy 3.1 (Natural Hazard risk – flooding)

²⁸ See planning provisions circulated with the s.42A report - not natural hazard risk (likelihood and consequence) only as currently drafted

'Manage natural hazard risk for flooding on the downstream environment through the preparation of Stormwater Management Plan and at subdivision stage.'

60. This is to ensure the 'flood risk' is captured as a separate policy response to issue of 'flooding effects' and to give effect to Policy NH 4B of the BOP RPS which seeks to ensure the risk outside of the development site is not increased.

61. A NEW Objective 3.2,

'Cumulative storm water effects are appropriately managed in an integrated manner within Pukehangi Heights Development Area'

62. A NEW Policy 3.2

'Manage the cumulative storm water effects on the downstream environment through the Storm water Management Plan and at subdivision stage.'

63. As storm water mitigation has not been secured as part of this Plan Change, I consider this objective to be the most appropriate way of giving effect to the IR 3B and IR 5B of the BOP RPS.

64. A NEW Performance Standards (integrated management);

'Any future subdivision consent shall be submitted together with any applications for discharge consents required from. The subdivision consent shall demonstrate:

(i) Compliance with the recommended mitigation measures secured as part of the Stormwater Management Plan for the entire Plan Change area; and

(ii) Demonstrate cumulative effects of granting the particular consent on the flood risk to downstream urban areas, when considered together with other previously granted subdivision and discharge consents within the Development Area,

65. I consider the above are necessary to provide the necessary certainty that at the time of subdivision, the effects of storm water and earthwork are considered together. Importantly, the subdivision consent shall demonstrate compliance with the mitigation

measures set out in the SMP. While suggested in the s.42A report²⁹ but not confirmed in the provisions, I agree that the SMP should apply to the entire Development Area for Pukehangī Heights.

66. In my view, a comprehensive planning response is required to address both the flood risk and storm water effects (depth, velocity, extent and duration)³⁰. This is mainly because the downstream catchment is already 'at capacity'³¹ and is likely to be exacerbated by future infill envisaged by RLC's operative District Plan.
67. Further, the above suggested amendments are consistent with the general intent of Method 18 of the BOP RPS which seeks that structure plans for large scale land use changes co-ordinate development with infrastructure and integrate the management of environmental effects (see **Appendix A**).
68. Further, to support the above I consider a new method is necessary to ensure an integrated process guides future applications:

'Rotorua Lakes Council will discuss any applications for subdivision consent within the Pukehangī Development Area with Bay of Plenty Regional Council to enable such applications to be considered together with any applications for discharge consent for the same development, to ensure flooding effects and mitigation are addressed in an integrated manner.'

Performance Standards A5.2.3.4.7 and A5.2.4.4.4 – 'Storm water Management Plan'

69. The s42a report and the Storm water Report prepared by Liam Foster contemplates a Stormwater Management Plan for the entire site to manage the cumulative effects. I agree with this approach and consider it should be captured by the Performance Standards.
70. BOPRC are concerned that without specific Performance Measures and Design Criteria, the SMP will not provide sufficient certainty that the assumptions of the modelling work (Scenario 15) will be incorporated in the Stormwater Management Plan which will inform future subdivision consents. The reasons for the range of

²⁹ 8.256

³⁰ see evidence of Kathy Thiel-Lardon

³¹ See evidence of Kathy Thiel-Lardon

Performance Standards and Design Criteria is set out clearly in Paragraphs 93 to 99 of Kath Thiel- Lardon.

71. I agree with this and consider the SMP should prescribe specific Performance Standards (see **Appendix B**³²) to ensure that future consents reflect the development limitations of the Plan Change on the downstream environment.
72. Notwithstanding this, the provisions³³ do provide for other alternative design criteria subject to the written approval of the Manager of Engineering of BOPRC.
73. Some of the assumptions, including the necessity of modelling a 72-hour nested storm, remain a matter of contention and are addressed in the evidence of Peter Blackwood and Peter West.

Mitigation

74. The s.42 report and evidence of Mark Pennington³⁴ considers that there are many ways to mitigate storm water and flooding effects. In principle I agree, however this view does not consider particular circumstances of this Plan Change before the Hearing Panel.
75. To clarify, Scenario 15 is the only option advanced by RLC to support the Plan Change that has not been opposed by BOPRC's engineers. No other option (including Scenario 16³⁵) has been tested in a similar manner to support the rezone of the Development Area that has had regard to the downstream constraints of this catchment.
76. For this reason, the provisions³⁶, as amended by BOPRC require the written approval from BOPRC's Manager of Engineering to ensure that consideration of factors outside the functions of the district council (under s.31) are appropriately considered. As noted, in the evidence of Kathy Thiel-Lardon, this catchment features a complex river network which includes a confluence of three streams within an urban area and, is at

³² See A5.2.3.4.7 (b) and (c) and, A5.2.4.4.4 (b) and (c)

³³ A5.2.4.4.4 (c)(iv) and A5.2.4.4.4(c)(iv)

³⁴ 73(b)

³⁵ Para. 33 of Philip Wallace's evidence

³⁶ A5.2.3.4.7(a)(v) and A5.2.4.4.4(a)(v)

'high risk'. In my view, these factors demonstrate that any mitigation proposal should necessitate the input of the Regional Council.

77. Further, the mitigation inputs/assumption would drive the outputs³⁷ of any future modelling runs to test the impacts on the downstream and, consequently, the management of cumulative storm water effects at implementation state (subdivision). BOPRC seeks sign off approval by the Manager of Engineering to ensure the future modelling work for the SMP reflects, but is not 'locked' into Scenario 15.
78. I note a number of concerns raised by Mark Pennington, Liam Foster and the s.42A report that necessary mitigation assumptions that informed Scenario 15 may be overly conservative, or may reveal that reduced mitigation is required once further detailed designs are completed, or a more efficient mitigation method has prevailed.
79. I consider it is appropriate to provide a degree of flexibility in the provisions to allow details of mitigation to be further considered when the SMP is prepared for the entire site.
80. However, I consider it is appropriate for a new rule for limited notification to the Bay of Plenty Regional Council in the instance that that the Performance Standards are not met and signed off from the Regional Council cannot be obtained. This follows the same convention otherwise used for the amended provisions for TW in the s.42A report:

'any application for subdivision that does not meet the subdivision performance standards in A5.2.3.3.7 and A5.2.4.4.4 (and NEW Performance Standard (integrated management) and does not obtain require the written approval of the Chief Executive or delegate of Bay of Plenty Regional Council, shall be limited notified to Bay of Plenty Regional Council for the purpose of assessing and ensuring compliance with those subdivision performance standards.'

81. I consider this is an appropriate rule for the following reasons:
- (a) No details of storm water mitigation have been secured that would manage cumulative effects in parallel to this Plan Change;

³⁷ Para. 23 of Peter West's evidence

- (b) For the purposes of the assessing and ensuring compliance with the subdivision performance standards;
- (c) To ensure the SMP appropriately addresses mitigation and effects together, including any alternatives proposed by the developer following further testing of detailed design options (see above);
- (d) To assist BOPRC to consider the impacts of any future mitigation option on the operation and maintainance of the Kaituna flood protection scheme (Kaituna);
- (e) To ensure the SMP appropriately applies the mitigation assumptions of Scenario 15 (the 'successful' modelling scenario), or retain the ability to test any feasible alternative;
- (f) To ensure consistency between the SMP and any discharge and/or earthwork consents that will be ultimately considered by BOPRC; and
- (g) To assist the Regional Council to give effect to its functions under s.30 of the RMA which will be impacted by the granting of the Plan Change.

Other provisions

82. For clarity, I suggest the following:

- (a) the term 'Development Area' is either defined, or clarified within provisions to ensure the term applies to the entire Plan Change area; or
- (b) a 'Development/Structure Plan' map is appended to the planning provisions; and

83. I support the amendments to Tables A5.2.3.1 and A5.2.4.1 to require any subdivision that does not meet the Performance Standards is a non-complying activity.

Conclusions

84. I do not oppose the rezoning of the Plan Change for residential/rural development subject to the amendments which seek to:

- (a) Manage the cumulative effects of subdivision;

- (b) Secure site-wide mitigation details at the site-wide Stormwater Management Plan;
 - (c) No subdivision may proceed until site-wide Stormwater Management Plan has been approved by the Bay of Plenty Regional Council:
 - (d) Require subdivision, discharge and earthworks consents to be submitted and considered in an integrated manner at subdivision stage;
 - (e) Include a number of Design Criteria and Performance standards to reflect assumptions of the feasible modelling 'Scenario 15' which informed this Plan Change. Necessarily, these matters should be had regard to in the SMP;
 - (f) Require approval of the details of mitigation measures by the Manager of Engineering.
 - (g) Include provisions for limited notification to the Bay of Plenty Regional Council in the instance that that the Performance Standards are not met and sign off from the Manager of Engineering cannot be obtained.
85. In applying a precautionary approach, I consider it appropriate to require full on-site mitigation within the Pukehangi Height Development area. On this basis, I consider that the Plan Change will not preclude options in the lower catchment to address existing flood issues.
86. However, the specific options for the Utuhina catchment will be considered and worked through the community by both RLC and BOPRC through Utuhina Capacity Review and Flood Risk Project following the finalisation of the modelling work for this catchment.

DATE 18 September 2020

Nathan Te Pairi

Bay of Plenty Regional Policy Statement

Integrated Resource Management Policies

Policy IR 1B: Applying a precautionary approach to managing natural and physical resources

Apply a precautionary approach to the management of natural and physical resources, where there is scientific uncertainty and a threat of serious or irreversible adverse effects on the resource and the built environment.

Explanation

There is a lack of complete information and understanding about some natural and physical resources, and their use and development. A precautionary approach requires that any adverse effects can be identified and understood and any activity is carried out at a level or rate that adequately considers the risk of operating with imperfect information. Where appropriate, the precautionary approach may include an adaptive management approach. Councils are expected to apply the precautionary approach as appropriate when considering resource consents and developing district and regional plans. Where a precautionary approach is needed, such activities will be considered as part of the planning and resource consent process.

<i>Table reference: Objectives 11 and 10, Methods 3 and 10</i>
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Policy IR 2B: Having regard to the likely effects of climate change

Recognise and provide for the predicted effects of climate change having particular regard to:

- (a) Predicted increase in rainfall intensity, taking account of the most recent national guidance and assuming a minimum increase in the annual mean temperature of 2°C by 2090 (relative to 1990 levels); and
- (b) Predicted increase in sea level, taking into account the most recent national guidance and the minimum sea-level rise projections in Policy NH 11B.

Explanation

Known risks associated with climate change are to be considered in association with the planning of subdivision, use and development. Climate change effects should be considered in association with resource consents and plan change processes. Adaptation and forward planning is necessary to mitigate or avoid risks associated with climate change.

National guidance figures in Policy IR 2B are from the Ministry for the Environment guidance manual on climate change, 'Preparing for Climate Change - a guide for local government in New Zealand (2008)', from available data at the time. The 2o C increase in annual mean temperature is a mid-level projection of future temperature changes and may be refined in future.

<i>Table reference: Objective 11, Method 3</i>
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Policy IR 3B: Adopting an integrated approach

Adopt an integrated approach to resource management that:

- (a) Recognises the interconnected nature of natural and physical resources, including as they adjust to changes;
- (b) Recognises the multiple values of natural and physical resources;
- (c) Responds to the nature and values of the resource and the diversity of effects (including cumulative and reverse sensitivity effects) that can occur;
- (d) Seeks to maximise benefits by considering opportunities to align interventions (including regulatory and non-regulatory) and/or to achieve multiple objectives;
- (e) Encourages developments, activities or land-use changes to:
 - 1. Provide for the relationship between land use and water quality and quantity
 - 2. Recognise the advantages and constraints of land use capability;
 - 3. Provide for infrastructure and;
 - 4. Benefit the economic wellbeing of communities.
- (f) Takes a long term strategic approach which recognises the changing environment and changing resource use pressures and trends;
- (g) Applies consistent and best practice standards and processes to decision making; and
- (h) Recognises different community values and social needs;

and regards these as positive effects.

Explanation

Integrated resource management requires a holistic view that looks beyond organisational, spatial or administrative boundaries. For integrated management to be effective and efficient it requires a coherent and consistent approach and that agencies or organisations involved in resource management work together in a collaborative manner. This is because there is overlap in the functions of local authorities and also resources and issues that cross jurisdictional boundaries.

Sustainable land management requires integrating the development and use of the land with the attributes of its wider environment: the availability of water and its capacity to receive contaminants without adverse effects, the ability of the land to retain its physical qualities while supporting the use, and recognition of and provision for the wider environment within which the activity occurs.

<i>Table reference: Objectives 10, 11 and 14, Methods 3, 9, 11, 41, 47 and 70*</i>
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Policy IR 5B: Assessing cumulative effects

Give regard to the cumulative effects of a proposed activity in contributing to:

- (a) Incremental degradation of values of sites identified as having high natural character (in accordance with Policies CE 2B and CE 8B);
- (b) Incremental degradation of matters of significance to Māori including cultural effects (in accordance with Policy IW 5B);
- (c) Incremental degradation of water quality from point source and non-point source discharges including urban stormwater;
- (d) Inefficient use of space associated with sprawling or sporadic new subdivision, use or development;
- (e) Incremental degradation of scenic values, amenity, open space, recreation and the general use and enjoyment by the public;
- (f) Adverse impacts on coastal processes, resource or values, biodiversity and ecological functioning;
- (g) The availability of freshwater resources;
- (h) Increased risk from natural hazards;
- (i) The loss of versatile land for rural production activities;
- (j) Effects on the function, efficiency and safety of infrastructure; and
- (k) Social and economic wellbeing.

Explanation

Policy IR 5B recognises that it is often the cumulative effects of a variety of processes and activities (both natural and human induced) that have significant impacts on a range of regionally significant resource management issues. For example, impacts on the natural character of the coastal environment, wetlands, lakes and rivers and their margins. Also, the effects of urbanisation outside urban limits or zones can adversely impact on the ability to undertake rural production activities which should be a predominant land use in rural areas. In the case of natural character, cumulative effects should be considered when making decisions on any activity in the coastal environment, wetlands, lakes and rivers and their margins to ensure that natural character, open space and amenity values are not incrementally degraded. This will allow opportunities for restoration to be considered in places which, although compromised, are not considered to be degraded beyond repair.

<i>Table reference: Objectives 10 and 11, Methods 3 and 10</i>
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Policy NH 4B: Managing natural hazard risk on land subject to urban development

Require a Low natural hazard risk to be achieved on development sites after completion of the development (without increasing risk outside of the development site) by controlling the form, density and design of:

- (a) Greenfield development;
- (b) Any urban activity within the existing urban area that involves the construction of new and/or additional buildings or reconstruction of or addition to existing buildings (including any subdivision associated with such activities); and
- (c) Rural lifestyle activities;

except that a Low level of risk is not required to be achieved on the development site after completion of the development where the development site is located within a natural hazard zone of Low natural hazard risk and that natural hazard zone will maintain a Low level of natural hazard risk after completion of the development.

Explanation

In general, the purpose of Policy NH 4B is to ensure that wherever and whenever new urban development (or redevelopment) occurs it is designed and built to achieve Low natural hazard risk. This applies regardless of whether a plan specifically provides for the activity or not.

Importantly, the policy requires consideration of natural hazard risk at the scale of the “development site”. That term is defined and confines the consideration of risk to that area of land where development is proposed.

Consideration at the site scale avoids the risk associated with new development being distorted by an existing level of risk that might exist elsewhere in the natural hazard zone.

An important exception to that general policy approach is that a Low level of risk need not be achieved on a development site as a result of development provided that after completion of the development the risk level within the natural hazard zone remains Low. This can only be achieved within a natural hazard zone that has a pre-existing natural hazard risk that is Low. It means that on some development sites achieving a Low level of risk may not be necessary. This provides an element of flexibility to future land development and is consistent with Policy NH 3B and the explanation of that policy as set out in this Statement.

Options for reducing natural hazard risk may take many forms. Some potential risk reduction measures are set out in Appendix M.

Requiring new development or redevelopment to achieve a Low level of risk will, over time, reduce aggregate risk over a natural hazard zone that may be subject to risk that exceeds the Low level.

City and district councils and the Regional Council will need to either require those undertaking development or redevelopment of land to undertake risk management as part of that development process (consistent with Policy NH 4B) or ensure development achieves low natural hazard risk through the provisions of district and regional plans (consistent with Policy NH 12A).

There may be extraordinary circumstances where new development (or specific urban activities within such development) can appropriately be subject to greater than Low natural hazard risk. Those situations are addressed by Policy NH 6B.

<i>Table reference: Objective 31, Methods 3, 18 and 23A</i>

Policy NH 9B: Assessment of natural hazard risk at the time of subdivision, or change or intensification of land use before Policies NH 7A and NH 8A have been given effect to

Before a district or, where applicable, regional plan gives effect to Policies NH 7A and NH 8A, assess natural hazard risk associated with a development proposal to subdivide land or change or intensify land use using the methodology set out in Appendix L where:

- (a) The subdivision of land or the change or intensification of land use is proposed to occur on an urban site of 5 ha or more; or
- (b) The relevant consent authority considers risk assessment appropriate having regard to:
 - (i) the nature, scale and/or intensity of the activity,
 - (ii) the location of the development site relative to known hazards,
 - (iii) the cumulative effect on risk of developments on sites less than 5 ha,
 - (iv) the nature and extent of any risk assessment that may be required under, or incorporated within, the operative district or regional plan,

except that the obligation to assess the risk of the natural hazard under this policy shall not arise where the risk derives from a geothermal hazard which is managed under this Statement's section 2.4 and the Geothermal Resources Policies and Methods.

Explanation

Although Policy NH 8A requires risk assessment in the context of the development of district plans (and any regional plan controlling land use), there are other circumstances when it is appropriate to assess natural hazard risk. Policy NH 9B defines the circumstances when risk assessment for a development proposal is appropriate in the interim period before district and regional plans give effect to policies NH 7A and NH 8A ("the interim period").

The scale and the nature of development are important as they determine the potential consequences of a hazard event. For that reason, Policy NH 9B applies a threshold test of developments or redevelopment on sites of 5 ha or more. Moreover, such developments represent a significant change to the urban environment and offer an opportunity to "design-in" measures that can achieve a Low level of natural hazard risk.

While large-scale development proposals ought to involve an assessment of natural hazard risk as a matter of course, there may well be other smaller scale developments that should also be subject to risk assessment in the interim period. Policy NH 9B should not foreclose the opportunity for city and district councils to exercise discretion at the time of any resource consent application, notice of requirement or private plan change to require an assessment to be undertaken under Appendix L. Policy NH 9B (b) sets out the matters that will be relevant for a city or district council to consider when deciding whether to exercise that discretion.

Policy NH 9B also provides that risk assessment does not need to be undertaken when the natural hazard is managed under section 2.4 in this Statement. Note that section 2.4 and its associated Geothermal Resources Policies and Methods do not manage non-geothermal hazard risks to which a geothermal system, by its location, might be susceptible (e.g. tsunami or flooding). Those non-geothermal risks require assessment under this policy.

<i>Table reference: Objective 31, Methods 3, 18 and 23A</i>

Method 18: Structure plans for land use changes

Prepare structure plans for all large-scale land use changes to ensure:

- Coordinated development through the integrated provision of infrastructure; and
- Integrated management of related environmental effects.

Structure plans shall, as appropriate and applicable:

- (a) Identify land which is to be used or developed for urban purposes;
- (b) Identify intensification areas;
- (c) Show proposed land uses, including:
 - (i) Arterial and collector roads, rail and network infrastructure
 - (ii) Residential, commercial and business centres
 - (iii) Schools
 - (iv) Parks
 - (v) Land required for recreation
 - (vi) Land to be reserved or otherwise set aside from development for environmental protection purposes
 - (vii) Appropriate infrastructure corridors
 - (viii) Community, health and social service facilities, including those necessary to cater for an ageing population.
- (d) In respect of proposed land uses (see (c) above), demonstrate the live-work-play principle to development;
- (e) Show how the target yields set out in Policy UG 4A will be met;
- (f) Identify all existing and consented, designated or programmed infrastructure and infrastructure corridors;
- (g) Identify infrastructure requirements, including the provision of and responsibility for that infrastructure;
- (h) Identify all known contaminated sites that land to be used for urban purposes may contain and show how adverse effects from contaminated land are to be avoided, remedied or mitigated;
- (ha) Identify all known natural hazards that land to be used for urban purposes may be subject to, or contain, and show how low natural hazard risk is to be maintained or achieved;
- (i) Identify significant cultural, natural and historic heritage features and values and show how they are to be protected;
- (j) Identify significant view shafts to be maintained and enhanced through the avoidance of inappropriate development;
- (k) Show how any adverse effect of increased stormwater runoff is to be mitigated;
- (l) Show how other adverse effects on the environment and infrastructure are to be avoided, remedied or mitigated;
- (m) Show how provision has been made for public transport, cycleways and pedestrian connections;

Appendix A

- (n) Document consultation undertaken with persons (including tangata whenua) affected by or interested in the proposed land uses, and any response to the views of those consulted;
- (o) Show how the sequencing of urban growth requirements detailed in Policy UG 6A will be achieved;
- (p) Include Urban Design Plans which:
 - (i) Apply and demonstrate adherence to the New Zealand Urban Design Protocol (March 2005) Key Urban Design Qualities;
 - (ii) Outline the urban design objective and rationale;
 - (iii) Provide an analysis of context;
 - (iv) Provide a site analysis; and
 - (v) State design outcomes for the proposed development.

“As appropriate and applicable” is intended to allow the content of a structure plan to be tailored to the nature and scope of the development proposal to which it relates and, to give effect to this Method, District plans can identify methods for assessing which of the above matters must be addressed, in light of the particular scope of the proposed land use change and its environmental effects.

Implementation responsibility: Regional council, city and district councils.

Suggested changes to planning provisions

(BOPRC amendments are underlined)

Suggested amendments to Objective 3.1 (Natural hazard risk - Flooding)

Natural Hazard risk for flooding is managed within the Pukehangī Heights Development Area and in the downstream environment.

Suggested amendments to Policy 3.1 (Natural hazard risk - Flooding)

'Manage natural hazard risk for flooding on the downstream environment through the preparation of Stormwater Management Plan and at subdivision stage.'

Suggested amendments to Objective 3.2 (Natural hazard risk - Flooding)

'Cumulative storm water effects are appropriately managed in an integrated manner within Pukehangī Heights Development Area'

NEW Policy 3.2 (Natural hazard risk – flooding)

'Manage the cumulative storm water effects on the downstream environment by through Stormwater Management Plan for the entire Pukehangī Heights Development Area and at subdivision stage.'

1. Providing overland flow paths for events that are greater than that designed for; and
2. Providing for other treatment measures that may arise because of site specific assessments.

NEW method to implement Policies 3.1 to 3.2

'Rotorua Lakes Council will discuss any applications for subdivision consent within the Pukehangī Development Area with Bay of Plenty Regional Council to enable such applications to be considered together with any applications for discharge consent for the same development, to ensure flooding effects and mitigation are addressed in an integrated manner.'

Proposed Mitigation performance standards to implement Objective 3, and Policies 2.3 and 3.1

Suggested amendment Rule A5.2.3.2 - allow for limited notification for BOPRC

A5.2.3.2 (Non-notification)

1. Any application for resource consent for the activities listed in Table A5.2.3.1 a 4 - 11 shall be considered without public or limited notification. If the Land Use and/or Subdivision are consistent with the Pukehāngi Development Area Structure Plan and Performance Standards, with the exception that:

- (a) any application that has potential effects on culturally significant sites, downstream water quantity, downstream water quality or Lake Rotorua water quality will require the written approval of Te Rūnanga o Ngāti Kearoa Ngāti Tuarā Trust, Ngāti Whakaue, and Te Arawa Lakes Trust in order to proceed without limited notification.
- (b) any application for subdivision that does not meet the subdivision performance standards in A5.2.3.4.7, A5.2.3.4(8), A5.2.4.4(4), A5.2.4.4(5) and the NEW Performance Standard) and does not obtain require the written approval of the Chief Executive or delegate of Bay of Plenty Regional Council, shall be limited notified to Bay of Plenty Regional Council for the purpose of assessing and ensuring compliance with those subdivision performance standards.

Replace Rule A5.2.3.4.7 and A5.2.4.4.4 with the following:

Site preparation: Stormwater Management Plan

No subdivision may proceed until site-wide Stormwater Management Plan has been approved by the Bay of Plenty Regional Council.

A Stormwater Management Plan (SMP) for the entire Development Area shall be prepared by a suitably qualified and experienced practitioner for the purposes of both the subdivision and discharge consents to ensure an integrated approach is taken to stormwater management. The SMP shall demonstrate compliance with the following:

(c) **Information and Assessment Requirements**

The SMP shall include the following information:

- (i) The intended scale, nature and form of proposed subdivision in the Development Area;
- (ii) An assessment of actual and potential effects of storm water (velocity, flood depth, flood extent) as well as related erosion effects on the downstream catchment that includes the Lower Utuhina catchment;
- (iii) The assessment shall consider the potential for effects related to flood duration including:
 - (1) holding up stormwater discharges to the streams due to elevated and longer duration backwater;
 - (2) increased stream bank erosion and channel instabilities from extended periods of elevated flows;
 - (3) increased infiltration of stormwater to the wastewater system from extended inundation of gully traps and the potential for wastewater overflows; and

- (4) increased length of time buildings and structures might be flooded above the key flood hazard threshold for depth and velocity;
- (5) any other identified potential adverse effects.
- (iv) An assessment of the actual and potential effects on water quality;
- (v) Details of the size of ponds, location, configuration of the outlet structures and, discharge locations, and hydraulic performance of the ponds for on-site storm water management (including mitigation measures); and
Details of the size of channels and the related erosion protection measures for primary, secondary and overland flow paths (on-site and off-site) including for the receiving waterways immediately downstream;
Written approval from Bay of Plenty Regional's Council's Manager of Engineering that the proposed management and mitigation measures adequately and appropriately manage the potential adverse effects identified in relation to flooding as required by (a)(ii) and (iii) above;
- (vi) Consideration of the sensitivity of proposed storm water management measures to the staging of development in the Development Area;
- (vii) An assessment of actual and potential effects of storm water management measures on land stability and liquefaction;
- (viii) A proposal for the intended future staging and timing for the vesting of infrastructural assets to Territorial Authority; and
- (ix) Detail of ongoing operational procedures and maintenance requirements for any water quantity and/or quality control structures or formed features such as ponds/dams.

Advice note: at the time of finalising this Plan Change under the streamlined planning process, comprehensive storm water mitigation planning has not been secured for the Development Area and therefore, it is considered imperative the future subdivision is considered in a comprehensive and integrated manner to enable cumulative downstream effects to be managed.

(d) **Performance Standards:**

The SMP shall demonstrate compliance with the following Performance Standards:

- (i) Downstream storm water effects:

- (1) The on-site storm water management (including mitigation measures) shall achieve no increase in velocity, flood depth and flood extent in the downstream catchment (including the lower Uthina stream and tributary channels and, the adjacent floodplains) except in the 0.2% AEP 2130 storm.
- (2) The mitigation measures shall also demonstrate no more than minor duration effects in the downstream catchment (including the lower Uthina stream and tributary channels and, the adjacent floodplains) except in the 0.2% AEP 2130 storm.
- (ii) Natural hazard risk (downstream of the development site)
 - (1) any building(s) would be functionally compromised;
 - (2) health and safety of people;
 - (3) life lines.
- (iii) The risk assessment required in order to demonstrate compliance with this standard shall consider the 10%, 2%, 1%, and 0.2% AEP 2130 storm events.

Advice note: Guidance on risk assessment can be provided by Bay of Plenty Regional Council as required.

(e) Design Criteria

The SMP shall be designed based on the following Design Criteria unless otherwise agreed in writing by the Manager of Engineering, Bay of Plenty Regional Council:

- (i) The Soil Conservation Service (SCS) rainfall-runoff method is to be used; runoff curve numbers shall be in accordance with Table 4.1 of the WSP report (Version 2 dated 19 August 2020);
- (ii) Initial abstraction (losses) of 0mm;
- (iii) 72-hour centrally located fully-nested storm profile based on rainfall intensities from the NIWA's HIRDS software;

(iv) Calculated by the RLC floodplain storm water models and the BOPRC Greater Utuhina Catchment Model (the Models) for the following storms:

- (1) 10% AEP current climate storm;
- (2) 1% AEP current climate storm;
- (3) 1% AEP 2130 (RCP 8.5) storm;
- (4) 2% AEP 2130 (RCP 8.5) storm; and
- (5) 0.2% AEP 2130 (RCP 8.5) storm.

Advice note: The Regional Council is responsible, together with the District Council, for managing land use to ensure natural hazards including flooding are mitigated or avoided. The Regional Council also has functions to ensure the integrated management of the Region's resources.

(v) Overland flow paths

The sizing and location of overland flow paths (originating upstream of the Development Area) shall be designed to take into account the 0.2% AEP 2130 storm, to show that each flow path:

- (1) is of adequate capacity to cope with the anticipated flow; and
- (2) discharges to a location that does not detrimentally affect other properties.

(vi) Secondary flow paths

The design of secondary flow paths (flows originating within the Development Area) shall be designed to take into account the 1% AEP 2130 storm:

The design of secondary flows paths shall consider conditions of total inlet blockage at critical culverts and other critical structures (such as pond and dams) and shall provide for emergency spillways and safe passage of the design storm through private property.

Flow on roads shall be designed for a depth and velocity (D x V) that demonstrates compliance with the Australian Disaster Resilience Handbook Collection, Guideline 7-3 (Technical flood risk management guideline) or otherwise demonstrates to the satisfaction of the [insert appropriate RLC manager] that the carriageway is safely passable by people and by a light vehicle.

Secondary flow paths within the Development Area on private property shall require protection by legal easements.

(vii) Dams and ponds

The geotechnical safety and stability of dams and pond structures shall be demonstrated by a suitably qualified and experienced practitioner including for the design situation of the structure being brim-full for several days.

Pond outlet structures shall be configured to ensure adequate drainage rates. As a minimum, 50% of the volume in any pond or dam that is only served by the lowest outlet shall drain in no more than 24 hours. Pond outlet structures shall be suitably protected against debris blockage.

(viii) Geotechnical

The designer shall carry out a geotechnical assessment when considering the large-scale use of infiltration systems including effects on downstream environment.

NEW Performance Standard

Any subdivision application shall be submitted together with any applications for discharge consents required from Bay of Plenty the subdivision application shall demonstrate:

(ix) Compliance with the recommended mitigation measures secured as part of the Stormwater Management Plan for the entire Plan Change area; and

(x) Demonstrate cumulative effects of granting the particular consent on the flood risk to downstream urban areas, when considered together with other previously granted subdivision and discharge consents within the Development Area,