

BEFORE THE PROPOSED KAPITI COAST DISTRICT PLAN HEARINGS PANEL

IN THE MATTER OF _____ The Resource Management Act 1991

AND

IN THE MATTER OF _____ The Proposed Kapiti Coast District Plan

**CLOSING STATEMENT BY REPORTING OFFICER TO MATTERS RAISED DURING CHAPTER 9:
HAZARDS HEARING AND EVIDENCE NOT AGREED WITH IN THE OPENING STATEMENT
2, 3 & 5 August 2016**

1.0 Introduction

- 1.1 I have considered the evidence, summary statements and submissions of submitters during the course of this Hearing and make the following comments in response
- 1.2 Section 2.0 of this response focuses on the specific issues raised by submitters in relation to Chapter 9 provisions. To aid clarity I have grouped this section of my response into key themes. Section 3.0 of this response responds to specific questions raised by the Panel that are not addressed in the responses under Section 2.0. Section 4.0 provides a summary of the key changes recommended after the consideration of evidence.
- 1.4 The following submitters tabled evidence, summary statements, memorandums of counsel, letters or emails but did not present at the hearing:
- **512/FS131 The Oil Companies**
 - **451/FS29 Rob Crozier & Joan Allin**
 - **38/FS194 North Otaki Beach Group Incorporated**
 - **442/FS87 Chorus**
 - **444/FS88 Telecom/Spark**
 - **208/FS64 Transpower**
 - **252 Regional Public Health**
 - **218/FS55 Coastlands Shopping Town Ltd**
- 1.5 The Oil Companies did not attend the hearing but submitted evidence. I addressed the matters of contention in my opening statement and recommended that panel considers accepting all of the recommendations in this evidence.
- 1.6 **Submitter 208/FS64 Transpower, Submitter 442/FS87 Chorus and Submitter 444/FS88 Telecom/Spark** submitted evidence to the hearing but did not attend. In their evidence all of these submitters note that they support the recommendations of the s42A report in relation to their submissions. I do not propose any further amendments as a result of this submitter correspondence in support of the Section 42A report recommendations.
- 1.7 **Submitter 218/FS55 Coastlands Shopping Town Ltd** tabled a memorandum of counsel at the hearing although they did not attend. In this Memorandum they state that:
- “Coastlands has not filled any expert evidence in respect of this Chapter. The matters of concern raised by Coastland in its initial submission have been resolved as a result of the recommendations contained in the Officers report.”*
- 1.8 **Submitter 38/FS194 North Otaki Beach Group Incorporated** did not appear at the hearing but tabled evidence. I have read this evidence and I believe that it is not relevant to Chapter 9 as it is solely concerned with Coastal Hazards issues which are intended to be excluded from this Chapter. I consider that the evidence tabled is more appropriately dealt with by the Chapter 4 report writer.
- 1.9 I only cover issues or evidence in this report where I have not already considered them in my opening statement or where my opinion has altered.

2.0 Issues Relating to Specific Provisions

2.1 This section deals with the specific issues raised by submitters. I have grouped the issues raised by theme where possible.

References to Maps outside of the District Plan

2.2 Both **Submitter 441 Greater Wellington Regional Council** and **Submitter 276/FS94 Kapiti Coast Airport Holdings Limited** request that amendments be made to the plan in relation to the hazard maps.

2.3 Mr Israelson the expert planning witness for Kapiti Coast Airport Limited discussed the Auckland Unitary Plan and the fact that the plan was intended to rely on non-statutory maps for the assessment of flood hazards. I consider that the recommendation of the Hearings Panel was not as clear cut as Mr Israelson stated. In their recommendation to the council the panel state that:

“The Panel recommends deleting all but one of the ‘Non Statutory Information’ layers from the planning maps for the Unitary Plan provisions because it is inappropriate to use a mapping technique to define the spatial extent of a rule where that mapping is not open to submission and change in the same way as the rule. The one exception is the indicative coastal boundary as this assists in showing the indicative boundary between the district of Auckland and the coastal marine area in the Auckland region”

2.4 I agree with the Auckland Unitary Plan panel that there is an element of natural justice that would be missing if a property could be included in the rules relating to hazards without a public process.

2.5 The situation with the Auckland Unitary Plan as it stands is that the definition of flood plain as recommended by the Panel is (emphasis added):

Flood Plain

The area of land that is inundated by runoff from a specified rainfall event, with an upstream catchment generating 2m³ /s or greater of above ground flow, taking into account:

- *any increases in impervious areas that would arise from changes in land use enabled by the policies and zonings of the Plan;*
- *the effects of climate change over a 100 year timeframe in respect of the frequency and duration of rain fall events and a 1m sea level rise; and*
- *assuming that primary drainage is not blocked.*

Excludes the following areas:

- *constructed depressions or pits within the Special Purpose - Quarry Zone*

Note: The Council holds publicly available information showing the modelled extent of floodplains affecting specific properties in its GIS viewer for the one per cent annual exceedance probability (AEP) rainfall event (the floodplain maps). The floodplain map is

indicative only although Council accepts its accuracy with regard to land shown on the floodplain map as being outside the floodplain. A party may provide the Council with a site specific technical report prepared by a suitably qualified and experienced person to establish the extent, depth and flow characteristics of the floodplain. When taking account of impervious areas that would arise from changes in land use enabled by the policies and zonings of the Plan, recognition should be given to any existing or planned flood attenuation works either existing or planned in an integrated catchment management plan. Council will continually update the floodplain map to reflect the best information available.

- 2.6 Therefore, the flood plain information is not incorporated into the plan, it is simply referred to in a note in the definition of flood plain. This means that the GIS maps are just one source of information on how to establish for a particular site where the 1% Annual Exceedance Probably flood plain is.
- 2.7 As highlighted in the definition above the source of flood in the Auckland situation is mostly from runoff from rainfall events. This information is less certain than the flood modelling carried out for rivers and streams. Therefore, the majority of the information that the KCDC maps are based on has a large amount of data, modelling and research behind it's extent. I consider that this makes the information more appropriate to be held in the PDP Maps.
- 2.8 I also consider that if the Auckland approach was used the policies for this chapter would need to be amended as the Council would no longer be meeting Policy 9.1 – Identify Hazards, as the council would not be officially identifying these. The whole Chapter would also need to re-worked as the Auckland Plan does not reference the GIS Maps of the floodplain apart from in the definition above. Therefore, all references to the maps in the chapter would need to be amended. Over all I consider that it would be inappropriate and out of scope to re-write significant amounts of the Chapter so that the KCDC GIS flood maps could be relied upon instead of the PDP maps.
- 2.9 It is important to note that as the PDP stands the KCDC GIS system would be considered as part of any consent application. If a flood hazard is shown on a site in the PDP Maps, a consent would be required, however when processing the application, the consents planner would rely on advice from KCDC engineers on the type and extent of the flood hazard and what mitigation may be required. The KCDC engineers base their advice on the most up to date data. Therefore, although the PDP maps provide the trigger for certain rules, they are not relied upon for accuracy in an assessment of effects and determining what conditions may be necessary on resource consents. More site-specific considerations, including the most up to date modelling data are very important for an accurate assessment and decision. No changes need to be made to the PDP to allow this kind of assessment.
- 2.10 KCDC staff also use the most up to date information on the flood hazard GIS layer when they carry out:
- Section 106 assessments for subdivision;
 - PIM checks on a building consent, the building team would be informed of what hazards apply (from the GIS system) when making their Building Act section 71 / 72 decisions.
- 2.11 As noted by Sharyn Westlake, Senior Engineer, Strategy and Advisory Specialist, Flood Protection at GWRC, when questioned by the panel at the hearing the major flooding information for the district is not updated easily or quickly. Ms Westlake indicated that a large

amount of work is required to update the flooding maps in relation to flooding from rivers and streams and that each stream or river is re-modelled every 10 years.

- 2.12 Ms Westlake also indicated that she believed it was appropriate for any new mapping to go through a schedule 1 RMA process as it gives people included in the maps the opportunity to contest this inclusion which makes the process more transparent and open. Ms Westlake thought that the schedule 1 plan change process for changes to planning maps gives a good result.
- 2.13 I consider that the number of submitters who presented at the hearing requesting that flood hazard annotations in the PDP Maps be removed from their properties gives us an example of the fairness of the PDP process. These submitters were all able to make submission, have expert reports carried out and argue their case. There were also a number of submitters who did not appear at the hearing who challenged the flood hazard annotations on their site and on review by experts I am proposing that the maps be amended in relation to their properties. If the council was to rely on the GIS system solely these opportunities would not be available to the public.
- 2.14 GWRC request an amendment to Policy 9.3 in their evidence so that it states “in areas identified on the District Plan Maps and on other maps held by the GWRC and KCDC as shown below (amendment proposed shown in red):

Policy 9.3 – Managing activities in Hazard prone areas

In areas identified on the District Plan Maps and on other maps held by GWRC and KCDC, ~~New subdivision, and land use and development and specified activities will be managed in a way that located to avoids increasing risks from natural highly hazards prone areas, identified on the District Plan Maps. Subdivision, development and the specified activities will be allowed only where it can be shown that any potential increase in risk exposure on or beyond the land itself has been avoided, remedied or mitigated. Where a modelled risk can be removed, through mitigation, to allow development on part of a site, any mitigation must demonstrate the activities and development do not exacerbate the adverse effects of natural hazards for other people and properties including residual risks.~~

- 2.15 I consider that the wording suggested by GWRC would be similar to referencing non-statutory layers. The addition of the wording proposed would imply that activities are managed in the areas shown in other maps, whether or not the areas are included in the PDP maps. As the PDP Maps are the trigger for requiring a consent, this will not always be the case. For all of the reasons noted above I do not consider this amendment appropriate and do not recommend any changes to the Policy 9.3 beyond those already recommended in my s42A report.
- 2.16 I do however consider that some reference to the GIS flood mapping should be included in the Chapter, currently there is no mention of this mapping at all. Mr Israelson noted in his evidence that the explanation of Policy 9.1 as notified stated (emphasis added):

“Hazard risks have been identified in technical reports. The extent of flood, earthquake fault rupture, river erosion and slope instability hazard areas has been modelled to identify development control areas, which are identified on the district planning maps to provide certainty to property owners. The identification of natural hazards is an ongoing activity carried out by District and Regional Councils as part of the monitoring of the environment. As

more research is undertaken and the information about natural hazards changes, new hazard areas may be identified and existing areas refined. It is important that, where updated information becomes available about the nature and extent of natural hazard development controls, this is reflected on the planning maps.

- 2.17 Mr Israelson makes suggestions for additional wording to be included as an explanation to Policy 9.1 and in the introduction to the flood hazard section of the chapter. While I do not agree that his suggestions are appropriate as they reference the flood maps being outside of the PDP, which I do not support as noted above, I do believe that some additional wording in these areas could be appropriate. I have outlined these recommended amendments in section 4 below.

The Removal of the Erosion and Slope Stability Provisions

- 2.18 **Submitter 547 Tina Pope (and others)** was represented at the hearing by Peter Hughes as she was too unwell to attend. In his evidence Mr Hughes noted that the submitters were opposed to the recommendation in the s42A report to delete the Erosion and Slope stability rules and layer from the plan. Mr Hughes noted that they believe that there are special circumstances within the Paekakariki Precinct that warrant specific provisions.

- 2.19 The issue of scope was introduced at the hearing with the submitter believing that there was not scope to withdraw the provisions in their entirety as there was not a submission requesting that the mapping be removed from the Paekakariki escarpment. I consider that the whole Erosion and Slope stability layer can and should be removed from the plan under submission 451.5 Rob Croizier and Joan Allin that requests that (emphasis added):

*“Seek the PDP is revised so that provisions are drafted using clear and consistent language, appropriate provisions are included, **ill-considered provisions are removed**, default rules are appropriate, provisions are drafted so that unintended consequences will not occur, **and provisions are legally valid and in accordance with the RMA** and relevant documents referred to in the RMA, including the NZCPS, the Regional Policy Statement and the Proposed Regional Policy Statement.”*

- 2.20 As the technical report into the Erosion and Slope stability provisions found that they were not based on appropriate data I consider that these provisions are ‘ill-considered’. Therefore, I do not recommend any changes to my recommendation in regard to this submission or the Erosion and Slope Stability Provisions.

- 2.21 The submitters seemed mostly concerned with preserving the character of Paekakariki and reducing the likelihood of development at the top of the escarpment and the adverse effects they believe would come as a result of this development. I consider that there are a number of controls within the PDP that would restrict development on the Paekakariki escarpment to some extent, these include:

- Open Space (Conservation and Scenic) Zoning
- Ecological Site overlays
- Outstanding Natural Landscape overlay
- Earthworks rules relating to earthworks on slopes of more than 28 degrees

- 2.22 I note that it may be appropriate for a plan change to be carried out in the future to produce appropriate mapping and provisions for Erosion and Slope stability. I do over note however

that KCDC would have to produce the data for the mapping of any change which would be costly.

Subdivision in flood prone areas

- 2.23 As noted above **Submitter 547 Tina Pope (and others)** was represented at the hearing by Peter Hughes as she was too unwell to attend. In his evidence Mr Hughes expressed the submitters' dissatisfaction with the control of subdivision in flood prone areas. Nothing in the evidence of the submitter has led me to change the recommendations in my s42A report as I consider that the control of subdivision within flood prone areas in the chapter is appropriate.

The Calculation of Flood flows

- 2.24 **Submitter 453 Lowell Manning** gave a detailed presentation on the issues covered by his submission. The submission was extremely technical in nature. Graham Levy, Senior Technical Director – Water Resources from CH2M Beca was present at the hearing. CH2M Beca prepared the technical report for the flooding issues on Mr Manning's site, which was included as Appendix 14 of my s42A report.
- 2.25 Mr Levy considered Mr Manning's submission in his letter dated 12 August 2016 attached as Appendix 1 to this statement. In his letter Mr Levy addresses the points raised by Mr Manning please refer to his letter for a more detailed analysis. His overall conclusion is:
"There is nothing new in Mr Manning's evidence that would cause me to change any of the recommendations in the CH2M Beca report. In particular:
- *The design flows used for the mapping are appropriate if at the conservative end of the expected range;*
 - *There is justification for local resurvey, remodelling and updating the maps locally within Mr Manning's property.*
- 2.26 I agree with Mr Levy's conclusion regarding the points presented by Mr Manning at the hearing and do not recommend any changes to the Panel. As noted in the opening statement for the hearing though the issue of the flood hazard mapping on Mr Manning's property at Vera Lane and Redwood Close will be addressed in the integration s42A report and hearing.

Site Specific Flooding issues

- 2.27 A large number of the submitters that presented at the hearing on site specific flood issues noted that they have never seen flooding/ponding on their site. I would like to note to the panel that each of the expert reports prepared notes the rainfall data for the relevant area being considered by the report. None of the areas where site specific flooding was considered have had a rainfall event equivalent to a 1% AEP event adjusted for climate change since rainfall records have been kept. This means that none of the submitters have experienced the size of event that the PDP Maps have been modelled on. Therefore, the fact that they have not experienced flooding or ponding on their site does not mean that it will not occur in a 1% AEP event in the future.
- 2.28 A number of submitters in ponding areas also noted that they believe that their properties were not at risk of a flood hazard as any water on their site could not come from a river or stream. The District Plan flood mapping includes both flooding that will result from rivers and streams, but also from rainfall which is large enough for stormwater infrastructure to not cope. Ponding from a rainfall causes the same amount of risk to people and property as

ponding from a river or stream. As pointed out by Mr Levy in his letter dated 12 August 2016 attached as Appendix 1:

“The proposed Council definition of ponding includes the statement “Ponding can be associated with rivers and streams as well as the piped stormwater network.” Arguing that the reference to rivers and streams means that must be the source is spurious. Secondary flow and ponding associated with the stormwater drainage system is covered by the definition..... It constitutes a potential hazard to buildings and is therefore properly recognised as such.”

2.29 I do however consider that amendments should be made to the definitions within the chapter to make it clearer that ponding areas are not always the result of the overflowing of rivers. I address this recommendation in section 4 below.

2.30 **Submitter 216 Graham Halstead** gave evidence about his site at 240 Kapiti Road. He noted his experience with the site and stated that he does not believe that the ponding and fill control areas on his site are appropriate. Mr Halstead also talked of the previous subdivisions that have gone on around the site and noted that he believed his property was intended to be a part of the drainage and stormwater retention approved for those subdivisions. Graham Levy, Senior Technical Director – Water Resources from CH2M Beca considered Mr Halstead’s evidence. CH2M Beca prepared the technical report for the flooding issues on Mr Halstead’s site, which was included as Appendix 11 of my s42A report.

2.31 Mr Levy considered Mr Halstead’s submission in his email dated 25 August 2016 attached as Appendix 2 to this statement. In his email Mr Levy addresses the points raised by Mr Halstead please refer to his email for a more detailed analysis. His overall conclusion is:

“In my opinion the designation of fill control area is appropriate for this piece of land, and should remain in place. It serves to highlight the need for flood storage and secondary flow to be addressed (in accordance with DP rules) when the land is developed.”

2.32 I agree with Mr Levy’s conclusion regarding the points presented by Mr Halstead at the hearing and do not recommend any changes to the Panel.

2.33 **Submitter 531 Les Church** attended the hearing to discuss the issues of the Overflow Path annotation over his property. Mr Church noted during his presentation that since he made his submission on the PDP he has obtained a resource consent to place a garage on his property and this process was not as difficult as he feared it would be. Ben Fountain, Modelling Manager Wellington Water (previously of Jacobs) attended the hearing and listened to the evidence of Mr Church. Mr Fountain prepared the technical report for the flooding issues on Mr Church’s site when he was employed at Jacobs. This report was included as Appendix 19 of my s42A report.

2.34 Mr Fountain considered Mr Church’s evidence in his memo dated 23 August 2016 attached as Appendix 3 to this statement. In his memo Mr Fountain addresses the points raised by Church please refer to his memo for a more detailed analysis. His overall conclusion is:

“I believe the proposed adjusted maps provide appropriate management of the flood risk while not being too restrictive on the development potential of the property.”

2.35 I agree with Mr Fountain’s conclusion regarding the points presented by Mr Church at the hearing and do not recommend any changes to the Panel.

2.36 **Submitter 176 Kerry Dalton** gave a detailed presentation on her property, what she has observed in the area to do with water flows (including a video) and what she sees as the implications of the District Plan ponding notation on her property. Ms Dalton was accompanied by her expert witness, Darcy Brittliff, Director of Orogen Limited a professional engineer. Mr Brittliff read through parts of his pre-circulated evidence at the hearing. Graham Levy, Senior Technical Director – Water Resources from CH2M Beca was present at the hearing. CH2M Beca prepared the technical report for the flooding issues on Ms Dalton’s site, which was included as Appendix 9 of my s42A report.

2.37 Mr Brittliff’s evidence makes several mentions of the stormwater infrastructure in the area of Ms Dalton’s property, because of this the panel instructed me to seek advice from appropriate Council stormwater staff. Mr Blair Murray of BJAZ Consulting reviewed Mr Brittliff’s report on behalf of the Council. Mr Murray was up until recently the Stormwater and Coastal Engineer at Kapiti Coast District Council. Mr Murray is now an independent consultant. Mr Murray’s letter, titled ‘PDP Submission 8 Tangahoe St’, is attached as appendix 3 of this statement. In his letter Mr Murray highlights that:

- The pipeline in the area has no secondary overflow path to the Sea and is of limited capacity, once the pipes capacity is exceeded it will pond in the low point of the road and then overflow into 117 The parade and no 4 Tangahoe Street and then make its way to no 6 and 8 Tangahoe Street.
- Sumps on the even side of the road have a poor grate design with small throats which are very prone to blockage. These sumps are also connected directly to each other rather than separately to the outlet main which is not efficient if both sumps are flowing full.
- In a flood event the water which flows down Aperahama St will be traveling quite quickly as the street is very steep, in severe rainfall water is likely to track across the intersection and hit the kerb and driveway crossings of no 8 and 10 Tangahoe Street most likely overtopping the crossings and flowing down into no 8 and 10 Tangahoe Street.

2.38 Mr Murray concludes that *“It is my view in the more extreme events ponding on these low lying properties 4, 6, 8, 10 Tangahoe St and 117 The Parade is likely to occur. I recommend that the map titled proposed district plan extent in the Beca review No 176 K Dalton report dated 26 May 2015 be adopted for the District Plan as the extent of ponding shown is appropriate given the scope available to make changes.”*

2.39 Mr Levy considered Mr Brittliff’s report in his letter dated 12 August 2016 attached as appendix 1 to this statement. In his letter Mr Levy addresses the points raised by Mr Dalton please refer to his letter for a more detailed analysis. However, in summary Mr Levy notes:

- Mr Brittliff does not appear to have accounted for the possibility of partial pipe inlet blockage, or partial channel blockages (debris or parked cars), which can lead to local increases in flow depth.
- There is no statutory obligation on KCDC to increase the capacity of its stormwater system.
- Mr Brittliff goes into some detail on the volume and therefore depth of ponding. However, his simplified approach of calculating volume over the ponded area then redistributing it over a larger area at a shallower depth is less accurate than the gridded digital terrain data used in the model, and misses the point of the modelling

and mapping. The model shows there will be ponding on this property, and if so then even if it is shallow, it is a potential hazard for which mapping is appropriate and a minimum floor level should be set.

- The effectiveness of the bund proposed by Mr Brittliff is not certain. The drop-off from the street back into the properties is steep and starts immediately behind the kerb in places, and would be challenging to bund effectively.
- Any water contained by the bund proposed would flow down the street and still finish up at the low point in Tangahoe Street, and pond there, if it were not to spill into 115 and 117 The Parade.

2.40 His overall conclusion is:

“The nature of this site, with an upstream catchment including two roads and a number of other properties, and with the group of properties in including 8 Tangahoe Street forming the lowest point in the catchment, without any secondary flow path away from them, is an obvious context in which a ponding hazard would occur in extreme events exceeding the primary drainage system capacity.

I therefore remain of the opinion that the mapping of ponding is appropriate, as set out in the CH2M Beca report.

I also remain of the opinion that 4 Tangahoe Street and 117 The Parade have a similar risk of ponding, as stated in the CH2M Beca report.”

2.41 The two expert’s on this issue have a large difference of opinion. I note that Mr Brittliff states in his report that (emphasis added):

*“Based upon the information that I have reviewed I do not see any value in including a Hazard Map that highlights the land as being subject to a flood plain **when there is no waterway present** and the perceived risk once quantified is minute and **actually able to be completely mitigated through simple improvements to a road berm and kerb detail for 50 metres of road.**”*

2.42 I have addressed the issue of flooding not relating to waterways still being a hazard above. I also note that mitigation is not an issue that can be considered as part of the PDP. The PDP has to be based on the information and situation at the time. It would not be appropriate to exclude the site from the flood mapping in the hope that mitigation works would be carried out in the future. The PDP needs to be based on a sites current susceptibility to flooding.

2.43 Overall considering all of the expert evidence I agree with Mr Levy and Mr Murray’s conclusion regarding the points presented by Mr Brittliff and Ms Dalton and do not recommend any changes to the Panel. I consider that the ponding area proposed to be shown on the site is appropriate give the scope available to make changes. I note that if there was scope the area of flooding on the site and some neighbouring properties would be larger than that proposed to be shown in the PDP (refer to the maps in the CH2M Beca technical report included as Appendix 9 of my s42A report).

2.44 **Submitter 86 Margaret Klimenko** gave another detailed presentation on the issues covered by her submission. Mr John Klimenko also presented his evidence on behalf of the submitter and R & N Coachman of 11 Health Camp Road. Mr Klimenko is a Chartered Professional Engineer. Mr Klimenko’s submission was technical in nature and addressed a number of issues he sees

with how the flood modelling was carried out for the District. Graham Levy, Senior Technical Director – Water Resources from CH2M Beca was present at the hearing. CH2M Beca prepared technical report for the flooding issues on the Klimenko’s site, which was included as Appendix 6 of my s42A report.

- 2.45 Mr Levy considered the Klimenko’s submission in his letter dated 12 August 2016 attached as Appendix 1 to this statement. In his letter Mr Levy addresses the points raised by the Klimenko’s please refer to his letter for a more detailed analysis. His overall conclusion is:

“There is nothing in the evidence to the hearing that causes me to alter my conclusion that these properties are appropriately identified as subject to ponding in the 1% AEP climate change flood event, as set out in the proposed District Plan. This is consistent with the findings in the CH2M Beca report.”

- 2.46 I agree with Mr Levy’s conclusion regarding the points presented by the Klimenko’s at the hearing and do not recommend any changes to the Panel.
- 2.47 In contrast to other submitters, **Submitter 511 Mari Housiaux** requested that an area be added to the flood hazard mapping in her submission and evidence. Ms Housiaux gave a detailed presentation about the area and where flood/ponding occurs. During her presentation Ms Housiaux showed a previous flood hazard map that included the dunes. As requested by the panel I discussed this map with the stormwater staff at KCDC and they suggested that GWRC may be more informed on the issue.
- 2.48 Sharyn Westlake, Senior Engineer, Strategy and Advisory Specialist, Flood Protection at GWRC addressed this map in her letter “Kapiti Coast District Council Proposed District Plan: Chapter 9 Hazards” attached as Appendix 4 to this statement. Ms Westlake notes that that the map shown is likely to have been an early draft of the flood modelling for the area and that *“modifications were subsequently made to the flood extent map to reflect the ground contours based on the LIDAR aerial photography, which resulted in the 2006 flood maps in the KCDC District Plan”*. Therefore, this shows that the information shown in the map by Ms Housiaux is out of date and not based on the best information available.
- 2.49 Ms Westlake also notes in her email that flooding in the area of the Te Hapua Dunes would not be related to flooding of the Managone Stream in a 1% AEP and any flooding would be ‘stormwater flooding’ which is mapped by KCDC. As noted in my s42A report and in Mr Murray’s memo attached as Appendix 4 to my report s42A report, rural areas have not been a focus of flood mapping for the KCDC. This is because they represent large areas that would need to be mapped and doing this mapping would be costly. Not surprisingly KCDC has concentrated on the areas where hazards will have the most risk, which is where areas are built up and have a larger population and therefore a larger likelihood of further development or intensification.
- 2.50 As came through in the questioning of the panel it is also important to note that the risk to people and property from the Te Hapua wetland as a hazard is not large. The area of flooding represents a natural wetland that increases in depth with the level of rain and run off in the area. As noted in my s42A future development of this area would not be easy as the site includes a number of ecological sites. As also noted in my s42A report any likely hazard in the area would also be able to be considered under section 106 of the RMA for a subdivision consent and section 71 and 72 of the Building Act 2005 for a building consent.

2.51 Therefore, considering all of the above I do not recommend any changes to the recommendations in my s42A report in regard to **Submitter 511 Mari Housiaux**

Inadequacy of PDP provisions to deal with stormwater/flooding issues

2.52 Two submitters (**Submitter 266 FS/47 Alex Metcalfe** and **Submitter 263/FS11 John Le Harivel**) raised the issue of the effects of upstream development on properties downstream. Although Mr Le Harivel did not attend the hearing he tabled a submission. The submitters do not believe that the PDP adequately takes account of the effects of earthworks and development on the stormwater and river system. Mr Metcalfe talked of the increased flooding at his and Mr Le Harivel's sites as a result of development. Mr Metcalf also noted that this is an issue further upstream at Mazengarb Road.

2.53 While I am sympathetic to the issues raised by these submitters I do not consider that the hazards chapter of the PDP can solve these issues. There are rules in the chapter that control earthworks and subdivision within flood prone areas and I consider that the level of rule is appropriate. The rules that relate to stormwater attenuation from developments are included in Chapter 11 Infrastructure. I note the requirement in Standard 11B.1.1.2 which states:

3.2 Stormwater systems must be designed to provide hydraulic neutrality to ensure stormwater runoff from all new impermeable surfaces is disposed of, or stored on-site and released at a rate that does not exceed the peak stormwater runoff when compared to the pre-development situation, for the 50%, 20%, 10% and 1% Annual Exceedance Probability flood

2.54 A number of the issues raised by the submitters relate to Council policies and projects which are not covered by the PDP. The PDP does not direct the provision of storm water infrastructure by KCDC. Therefore, I do not recommend any amendments to s42A report and recommendations as a result of these submissions.

Dr Gerald Rys

2.55 **Submitter 85 Dr Gerald Rys** presented detailed evidence at the hearing relating to what he sees as a number of issues with Chapter 9. I consider that the majority of the comments made by Mr Rys at the hearing were outside the scope of his submission. I address a number of his points briefly below:

- Choice of 1% AEP – the council does not have enough information or data to map for a 2% AEP at this stage, such a change would also require a plan change.
- Is climate change a hazard – there is no scope to include this in the PDP.
- The plan uses both a precautionary and risk based approach – this is correct as the different approaches are used for different situations.
- Risk exposure is not defined – a definition is considered unnecessary and outside of scope.
- With regard to Mr Rys' concerns about Tsunami's and volcanic eruptions, I do not understand how rules within the PDP can lessen the exposure of people and property to the risks from these hazards. The production of Tsunami maps showing areas of high risk is not within the scope of the PDP.
- Use of the term 'potentially contaminated' – this is the terminology used in the NES and HAIL.
- Flood hazards and climate change – all models and calculations for flooding in the PDP have an allowance for climate change.

- Comments that the rules only related to further subdivision and development – the flood rules also include control of additions, fences and earthworks in certain areas. Other activities and buildings have existing use rights (this is also true of the request to require water tanks in pre 1999 houses).
- In regard to Policy 9.33 Dr Rys states that it should refer to any future use of the land – there is no scope to make such a change.
- Dr Rys notes that the NES for Contaminated land is being updated – the PDP will be required to take account of any update to the NES when it occurs.
- The issues of landfarming and deposition of oil drilling contaminants on farmland – this is outside of the scope of the PDP

2.56 Therefore, there was nothing in Dr Rys’ evidence that has led me to amend the recommendations in my s42A report.

Policy 9.4 Precautionary Approach

2.57 Three submitters gave evidence in relation to Policy 9.4 and the precautionary principle. **Submitter 441 Greater Wellington Regional Council (GWRC)** request in their evidence that the policy be amended to refer to all effects as their may also be positive effects from an activity. I do not consider the recommendation appropriate. The precautionary approach is intended to be used when the effects of an activity are significantly adverse and I consider that this specific wording is needed in the policy. Although activities may also have positive effects these do not need to be reflected in the policy as that is not the issue the policy is particularly addressing. The positive effects of any activity will still be taken into consideration when a resource consent assessment is carried out.

2.58 **Submitter 451 Rob Crozier and Joan Allin** and **Submitter 378 Coastal Ratepayers United Inc** discuss the precautionary principle and Policy 9.4 at length in their evidence. Both submitters consider that a further distinction needs to be made in the policy between risk assessment and the management of risk. Both submitters suggest splitting the policy into two parts with the first part relating to risk assessment and the second relating to the management of risk. I consider that the changes requested by the submitters are outside of the scope of the original policy. I consider that the statement that *“a precautionary approach will be taken to the management of risks from hazards”* notes clearly that the approach relates to risk management.

2.59 I also do not consider that there needs to be specific mention in the policy of that the *“expected benefits and costs will be taken into account and, where appropriate, adaptive management will be adopted.”* I consider that this further complicates the policy and is again out of scope.

2.60 The submitters are largely concerned with how the Policy will be used at a later date when a plan change is carried out for Coastal Hazards. I consider that it would be appropriate at the time of a plan change for Coastal Hazard that this policy be re-considered along with that plan change to ensure that it fits with the proposed plan change. I do not consider that it is appropriate at his stage to try and make this policy fit a plan change which has not been scoped yet.

2.61 Therefore, I do not consider that the changes requested by the submitters are appropriate and I do not recommend any further changes to Policy 9.4 as a result of this evidence. I stand by my assessment of the policy in my s42A report.

The deletion of Policy 9.34

- 2.62 Two submitters opposed the deletion of Policy 9.34 in their evidence, **Submitter 441 GWRC** and **Submitter 252 Regional Public Health**. Both highlight the responsibility of Territorial Authorities to manage the use, development or subdivision of contaminated land under section 31 of the RMA. GWRC notes in their evidence that territorial authorities “*still have to address other matters such as impacts on drinking water supply areas, amenity values and tāngata whenua values.*”
- 2.63 I agree with Ms Watson and GWRC that this is the case, however, I do not consider that these issues are covered by Policy 9.34 as notified. Clause d) may to some extent address issues outside of the NES, but it is not one of the issues that Ms Watson would like included. Policy 9.34 as notified reads:

Policy 9.34 – Assessment Criteria

When considering whether contaminated or potentially contaminated land is safe for its intended use, subdivision or development, Council will have regard to the following:

- a) the nature and extent of any contamination of soil or groundwater and the potential sources of contamination;*
- b) the approach to any proposed remediation, and/or ongoing management of the contamination, including:
 - i. extent of earthworks or removal of materials undertaken, including any method to control the release of contaminants into the environment;*
 - ii. treatment or disposal methods for contaminated or potentially contaminated materials, soil or water;*
 - iii. measures employed to prevent or mitigate any adverse effects on human health, water quality, or the downstream receiving environment are appropriate;*
 - iv. methods to address the risk of the contamination to public health and safety and that of workers involved in site works;**
- c) the extent to which the effects of remediation are acceptable;*
- d) the suitability of the land for its intended use;*
- e) whether adequate measures will be taken to ensure the safe operation of the proposal on the land.*

- 2.64 I also consider that the amendments proposed by GWRC are outside of the scope of submissions and that keeping the policy with only one clause is unnecessary. Therefore, I continue to recommend that the Panel considers deleting Policy 9.34.

Greater Wellington Regional Council

- 2.65 **Submitter 441 Greater Wellington Regional Council** made a number of suggestions in their evidence additional to those which have already been addressed. GWRC notes that there should be amendment to the matters of discretion for Rules 9C.3 (1) and (5) to bring them in line with changes that requested by Ms Watson at the Chapter 3 hearing. I agree with Ms Watson that the changes suggested would be appropriate if they are also adopted in Chapter

3. I recommend that the panel considers making the changes shown below if similar changes are made in Chapter 3:

Rule 9C.3.1

5. The location of any nominated building site relative to the natural hazards, historic heritage features ~~and sensitive natural features~~ ecological sites (schedule 3.1), outstanding natural features and landscapes (schedule 3.4), and geological sites (schedule 3.6).

Rule 9C.3.3

7. The location of any nominated building site relative to the natural hazards, historic heritage features ~~and sensitive natural features~~ ecological sites (schedule 3.1), outstanding natural features and landscapes (schedule 3.4), and geological sites (schedule 3.6).

2.66 Ms Watson also suggests amendments to Policy 9.32 to provide better clarity. The changes requested were:

Policy 9.32 – Management or Remediation

Any development, subdivision or change in land use on ~~HAIL land, or land identified as~~ potentially contaminated land or ~~potentially contaminated land~~ by the Kapiti Coast District Council or the Wellington Regional Council's SLUR database, that is reasonably likely to increase the risk of exposing people or the environment to contaminants, will be managed or remediated to eliminate any unacceptable risk to the environment. ~~by management or remediation of the contaminated land.~~

2.67 I do not agree that the amendments provide clarity, they do not change the meaning of the policy and I consider that the policy is clear as proposed to be amended in my s42A report, therefore I do not recommend any changes to Policy 9.32 as proposed in my s42A report.

Development within the River Corridor

2.68 **Submitter 319/FS177 Waikanae Christian Holiday Park Inc (EL Rancho), Submitter 380/FS59 Barry, Suzanne and Timothy Mansell, and Submitter 425/FS180 Lutz Brothers Limited and C E Lutz** were represented at the hearing by Anna Carter, Senior Resource Management Consultant, Land Matters. Ms Carter gave evidence regarding why she considers that the rules for development within the river corridor should be more lenient. Ms Carter made points about the following issues:

- a. fences in the river corridor obtain consent as a controlled activity - Ms Carter considers that fences in the river corridor should be a permitted activity.
- b. buildings within the river corridor are a non-comply activity - Ms Carter considers that buildings should be allowed in the river corridor where there is a functional necessity.
- c. Policy 9.12 and the requirement in c) that flow corridors and overflow paths are “kept clear” - Ms Carter considers that “maintained” would be more appropriate.

2.69 I asked Sharyn Westlake Senior Engineer, Strategy and Advisory Specialist, Flood Protection at GWRC to comment on Ms Carter’s evidence. Ms Westlake produced a letter for “Kapiti Coast District Council Proposed District Plan: Chapter 9 Hazards” which is attached as appendix 5 to this statement. In her letter Ms Westlake states that:

- She considers Policy 9.12 of the KCDC PDP is consistent with Policy 29 of the RPS and Policy 27 of the Proposed Natural Resources Plan in avoiding inappropriate development.

- She considers that development should be avoided in high hazard areas as I first principle and she agrees with my comment in my s42A report that ‘maintain’ would be ambiguous. She notes that the policy to keep paths clear is appropriate given existing use rights and the importance of the area to flood hazard management.

- 2.70 In regard to fencing Ms Westlake considers that even post and wire fences may catch debris in the river or stream corridor and that such fences can change the movement of floodwater across the floodplain. However, Ms Westlake does note that these fences are likely to be more of a problem for the landowner if they block debris. She also notes that the rules within the KCDC ODP work well, these rules allow post and wire fences within the river corridor as a permitted activity. On balance Ms Westlake has no issue with maintaining the status quo and amending the PDP to allow for fences within the River and Stream Corridor that are post and wire.
- 2.71 Ms Westlake also notes that where Greater Wellington has a designation over a river corridor their approval will be required for any structure (including fences) as the holder of the designation.
- 2.72 Over all I agree with Ms Westlake’s comments. I recommend that the panel considers amending the rules within the chapter to allow for post and wire fences within the River and Stream Corridor as a permitted activity. This change is addressed in section 4 below.
- 2.73 Nothing in the remainder of the evidence of **Submitter 319/FS177 Waikanae Christian Holiday Park Inc (EL Rancho), Submitter 380/FS59 Barry, Suzanne and Timothy Mansell, and Submitter 425/FS180 Lutz Brothers Limited and C E Lutz** has lead me to change any recommendations in my s42A report.

Otaki South Precinct

- 2.74 **Submitter 411/FS178 Land Matters Ltd** was represented at the hearing by Anna Carter, Senior Resource Management Consultant, Land Matters. Ms Carter gave detailed background to the Otaki South Precinct and Plan change 81 that was approved by KCDC in 2010.
- 2.75 I asked Sharyn Westlake Senior Engineer, Strategy and Advisory Specialist, Flood Protection at GWRC to comment on Ms Carter’s evidence. Ms Westlake produced a letter for “Kapiti Coast District Council Proposed District Plan: Chapter 9 Hazards” which is attached as appendix 5 to this statement. In her letter Ms Westlake states that:
- “I am satisfied that the KCDC decision on Plan Change 81 and subsequent Environment Court Consent Order amendments provided for overflow and residual overflow through the site and controls on fencing. I support the outcomes of this plan change being retained in the new district plan.”*
- 2.76 As Greater Wellington supported the plan change and still considers that the outcomes are appropriate I do not believe that any additional flood hazard mitigation measures should be placed on the site by Chapter 9. The rules of Chapter 9 would significantly increase the activity status for development on the site which has already been through a comprehensive plan change that took flood hazards into consideration. Therefore, I recommend that the

panel considers exempting development in the Otaki South Precinct which is accordance with Otaki South Precinct structure plan included in the plan as appendix 6.5 from the rules of Chapter 9. I recommend an amendment to the Rule 9B.0. Applicability of Rules 9B.1A – 9B.6 in section 4 of my report below.

2.77 I also consider that the way these rules will work with Chapter 6, Working Environment and the general workability of this solution should be considered at the integration report stage to ensure there are no gaps with the solution proposed.

Ngārara Zone

2.78 **Submitter 263/FS125 Maypole Environmental Ltd** reiterated the concerns within their submission at the hearing. The submitter's preference is for the PDP to exclude the Ngārara Zone from the application of the hazards provisions. Maypole made several requests in their submission these are:

- That the rules to be amended so it is clear that they do not apply to any activity within an identified Neighbourhood Development Area that is in accordance with a Council-approved Neighbourhood Development Plan granted under Rule 5C.4.2 or within the Ngārara Precinct.
- An exemption from the stream corridor provisions for activities within the Ngārara Zone and Ngārara Precinct to ensure it does not get caught by the non-complying activity status.
- The removal of the Stream Corridor Area, Storage Area, and Ponding Area overlays from the Planning Maps as they relate to the Ngārara area.

2.79 I do not consider that it is appropriate to delete the flood hazard areas from the Ngārara zone, for the reasons I set out in my s42A report.

2.80 I have considered Mr Hansen's evidence on the comprehensiveness of the Ngārara development process and the provisions of Chapter 5 relating to the zone.

2.81 As noted in my s42A report I was concerned about a possible time lag between the time of a Neighbourhood Development Plan (NDP) being approved and a subdivision consent being applied for. I was concerned that the flood hazard situation within the Ngārara area could change in during any time lag. This concern has been somewhat alleviated by the answer of Ms Westlake of GWRC when questioned at the hearing about how regularly major flood plain modelling for each river is updated. Ms Westlake answered that this is only carried out for each catchment every 10 years.

2.82 Stormwater flooding information may be updated more regularly, however I consider that any difference in flooding hazards between the time of the NDP being approved and the subdivision consent being applied may be taken into consideration at the time of a subdivision consent through section 106 of the RMA and at the time of building consent under section 71 and 72 of the Building Act 2005 if changes pose a risk.

2.83 When considering the rules in Chapter 5, Living Environment, I noted two issues that I consider need to be rectified if the Ngārara Zone is to be exempt from the provisions when there is an approved NDP. The first issue is that rule 5C.4.2 for the approval of a NDP does not specifically note natural hazards as an area that requires consideration. The rule, however, does make the following mentions of flood hazard issues (emphasis added):

General requirements – Neighbourhood Development Plan

- c) *evidence that each future lot used for residential purposes **will provide a building site above the 1% Annual Exceedance Probability flood event** and a minimum road frontage of 6 metres,*

Stormwater Management Plan:

- a) *an assessment of effects with overall aims of demonstrating that no more than minor effects are created through the development in each NDP Neighbourhood Development Plan **and that overall benefits to current water quality and flooding risks are achieved;***

- 2.84 However, I do not consider that these matters of discretion are sufficient for all of the appropriate issue to be considered. Therefore, to allow the exemption to the hazard rules I recommend that the Panel considers adding either a further standard to the rule 5C.4.2 regarding the requirement for a flood hazard management plan or that additional requirements be added under the Stormwater Management Plan to assess the flood hazards in more detail.
- 2.85 When considering the proposed rules of Chapter 5, I also noted that once a NDP has been approved a subdivision consent is a controlled activity under Rules 5C.2.1. There is currently no mention of natural hazard management as a matter of control, therefore I recommend that the panel considers adding a matter of control “Natural hazard risk management” to Rule 5C.2.1 in line with the matter of discretion in rule 5.C.3.1.
- 2.86 Therefore, I recommend that the panel considers exempting the Ngārara Zone from the hazard provisions if a development is in accordance with an approved Neighbourhood Development Plan under Rule 5C.4.2 if a new matter of discretion is added to Rule 5C.4.2 for flood hazard management and rule 5C.2.1 has “Natural hazard risk management” added as a matter of control.
- 2.87 I also consider that the way these rules will work together and the workability of this solution should be considered at the integration report stage to ensure there are no gaps with the solution proposed.
- 2.88 Mr Hansen also raised the issue of subdivision for the purpose of vesting reserves in his evidence. He noted that he was unable to find a submission point that referred to this request. I can confirm that these changes were based on the notes of a meeting held with Maypole on 14 July 2015. The scope for this change was considered to be that the request went some slight way towards the relief sought by the submitter to exclude the area from the hazard mapping. However, on reflection this may have been pushing the scope of the submission and as the submitter does not support these rules and exemptions I recommend that they be deleted. I cover this issue in section 4 of my report below.

Submitter 451/FS29 Rob Crozier & Joan Allin

- 2.89 **Submitter 451/FS29 Rob Crozier & Joan Allin** submitted detailed evidence to be tabled at the hearing. I addressed a number of the points raised in my opening statement and I will not go over these again.

2.90 Ms Allin notes in her evidence that her opinion is that “*land in the beds of rivers and lakes is covered not only by s13 but also s9 of the RMA and therefore the PDP*”. I do not agree with Ms Allin’s interpretation and continue to assert the opinion held in my s42A report that the beds of rivers and lakes are the responsibility of regional councils under section 13 of the RMA.

2.91 Ms Allin states in her evidence that:

“Regardless of how Chapter 9 is amended to refer to coastal hazards or not, all of the Chapter 9 wording including the policies needs to be appropriately worded in relation to coastal hazards. People will have no control over what provisions are or are not included in any plan change. Coastal hazards may be slotted into Chapter 9 and whatever wording is “locked in” in Chapter 9. If the locked-in provisions are not included in a plan change, there will be no opportunity for submitters to challenge the locked-in wording.”

2.92 I consider that when a future plan change for Coastal Hazards is prepared that any relevant provisions within Chapter 9 will be included in the review, I do not believe that there will be locked-in wording at this point as KCDC will carry out a comprehensive plan change and will take account of issues that it is not possible to address in the PDP because of scope.

2.93 The use of Clause 16 (2) of Schedule 1 of the RMA is another issues raised by Ms Allin in her evidence. I consider that the change of the term hazard to risk is appropriate in these cases as there has been an error where the correct term has not been used. I therefore stand by the use of clause 16(2) to make these amendments. I also consider that the notes added to rules within the Chapter that highlight the jurisdiction boundaries between the Regional and District Council are minor also, these do no change the meaning of the rules at all, they are simply making the plan easier to use by explaining to plan users that KCDC does not have jurisdiction over all of rivers and lakes. Again I consider that the use of clause 16(2) is appropriate and that these changes have minor or less than minor effect.

2.94 I consider that the reference to “avoiding new *development* in areas subject to high *risk* from hazards” in section 9.1.1 introduction is appropriate. I also consider that it is appropriate for Policy 9.3 to not include the term “inappropriate”. I consider this is in line with Policy 27 of the Proposed Natural Resource Plan for the Wellington Region which states:

*Policy P27: High hazard areas
Use and development, including hazard mitigation methods, in high hazard areas shall be avoided except where:*

2.95 In reference to Policy 9.3 Ms Allin requests that the term ‘*land use*’ be kept in the policy. This term is proposed to be deleted as there are not rules within the chapter that are relevant to the use of land. The rules in the chapter relate to subdivision and development. Ms Allin also believes that the policy is overly restrictive. Nothing in Ms Allin’s evidence has lead me to change my stance on the policy as represented in my s42A report, I continue to consider that the policy as proposed to be amended strikes the right balance.

2.96 I do not consider that the reformatting of Rule 9B.1.2 has changed its meaning, I also consider that the exemptions are appropriate.

2.97 In regard to Rule 9B.1.6 the areas of open space now included within this rule as proposed to be amended come from the rule in Chapter 8 that is proposed to be moved to this chapter and merged into Rule 9B.1.6. The reference to streams in this rule is in response to

submissions 229.8 Gordon and Sylvia Moller that requests that the rule be amended to enable stream and river maintenance as a permitted activity. The deletion of the reference to the Otaki and Waikanae River names is also in response to these submissions as the deletion tries to ensure that River clearance is enabled in all rivers not just the Otaki and the Waikanae. Although these rivers are the most likely to need clearance the submitters request that stream and river maintenance is a permitted activity, they do not state that it should be a permitted activity only within certain Rivers or streams.

2.98 Therefore, nothing within the evidence of Ms Allin (apart from the changes already identified in my opening statement) has lead me to change the recommendations in my s42A report.

3.0 Responses to specific questions from the Panel

3.1 I was asked two questions by the panel after my opening statement in regard to objectives. Firstly, Commissioner McMahon asked me to consider whether Objective 2.5 is still appropriate give the withdrawal of the Coastal Hazards provisions. I do consider that there is a gap left in the implementation of Objective 2.5 now that there are no provisions for Coastal Hazards. However, I consider that Chapter 9 implements this objective as much as it possibly can within the scope of the plan. The Panel may consider amending Objective 2.5 to state that it excludes Coastal Hazards, but I am unsure whether there is scope to do so.

3.2 Secondly, Commissioner Pomare asked if I still considered that the Tāngata Whenua Objective was still appropriate given Te Ohu Taiao’s request for gravel extraction to not be a permitted activity in Chapter 9. I consider that the chapter still meets objective 2.1 as best it can.

3.3 Gravel extraction that occurs within the bed of a river will need a consent from Greater Wellington Regional Council. The concerns of Tāngata Whenua in relation to Gravel extraction will be addressed by Greater Wellington when a consent is processed. It is unlikely that Gravel extraction within the river corridor could occur without requiring consent from Greater Wellington, any extraction that does not include any part of the bed of the river is unlikely to have any positive flood protection effect. The rule is proposed to be permitted in the PDP so that there is not a double up in process. Therefore, I consider that Chapter 9 still meets Objective 2.1 of the District Plan.

4.0 Areas in which evidence has led me to recommend further changes

4.1 The amendments I recommend as a result of reviewing the evidence and statements provided by submitters prior to and during the hearing, are outlined/summarised below.

4.2 In response to the confusion caused by the inclusion of the word ‘floodplain’ within the definition of the ponding within Table 9.1Flood Hazard Categories, I recommend that the panel considers making the changes below under Clause 16 (2) of Schedule 1 of the RMA to make the definitions less confusing (additional changes are shown in red):

<i>Ponding</i>	These are floodplain areas where slower-moving flood waters could pond either during or after a flood event. A <i>Ponding Area</i> may isbe affected by a direct flood risk. Ponding can be associated with rivers and streams as well as the piped stormwater network. Ponding is a direct risk.
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- 4.3 In response to **Submitter 276/FS94 Kapiti Coast Airport Holdings Limited** I recommend that the Panel considers adding the following additional wording shown below to acknowledge that the PDP Maps are not the only source of hazard information (additional changes are shown in red):

Note under Policy 9.1:

~~“Hazard risks have been identified in technical reports. The extent of flood, earthquake fault rupture, river erosion and slope instability hazard areas has been modelled to identify development control areas, which are identified on the district planning maps to provide certainty to property owners. The identification of natural hazards is an ongoing activity carried out by District and Regional Councils as part of the monitoring of the environment. As more research is undertaken and the information about natural hazards changes, new hazard areas may be identified and existing areas refined. This redefined information may be shown on the Council’s GIS system. Although the GIS maps are not used to determine status under the District Plan, they are useful for the most up to date flood hazard information and may be used under section 106 of the RMA or the Building Act. It is important that, where updated information becomes available about the nature and extent of natural hazard development controls, this is reflected on the planning maps.”~~

Existing paragraph below Table 9.1 Flood hazard categories in section 9.2.1 Introduction:

~~Natural Hazard Maps (District Planning Maps) identify the extent of these nine flood hazard categories areas (river corridor, stream corridor, overflow path, residual overflow path, ponding areas, residual ponding areas, flood erosion areas, flood storage areas, and fill control areas for the Ōtaki, Waikanae, Paraparaumu and Raumati floodplains. The Council also maintains Flood Extent Maps on GIS that are more regularly updated, although these maps are not used to determine status under the District Plan, they are useful for the most up to date flood hazard information and may be used under section 106 of the RMA or the Building Act.~~

- 4.4 As discussed in Section 2.0, in response to **Submitter 263/FS125 Maypole Environmental Ltd** and **Submitter 411/FS178 Land Matters Ltd** I recommend that the panel considers amending the applicability of rules section of Chapter 9 as follows (additional changes are shown in red):

Rule 9B.0. Applicability of Rules 9B.1A – 9B6

Rules 9B.1UA to 9B.5 shall apply to all land and activities in all Zones ~~unless otherwise specified~~except:

- the Otaki South Precinct where the development is in accordance with the structure plan in appendix 6.5.
- in the Ngārara Zone within an identified Neighbourhood Development Area that is in accordance with an approved Neighbourhood Development Plan under Rule 5C.4.2, in which case the conditions of the Neighbourhood Development Plan shall take precedence.

Notes: [1] Notwithstanding the activity category defined by Rules 9B.1 to 9B.5 for any activity, attention is also drawn to the rules:

[a] in Chapters 3, ~~9~~, 11 and 12 which apply to matters which apply across all zones in the District – for example, ~~transport~~ carparking, vehicle access, traffic generation, signs; and

[~~a~~b] in Chapters 5, 6, 7 and 8 that apply to specific land use Zones in the District – for example the Rural Plains Zone and the Open Space (Recreation) Zone.

The rules in these chapters may identify the activity as (or result in the activity being) a different activity category than expressed below. Additional clarity on activity category determination is provided in Chapter 1 (Section 1.1).

4.5 As discussed in Section 2.0, in response to **Submitter 319/FS177 Waikanae Christian Holiday Park Inc (EL Rancho)**, I recommend that the panel considers amending the activity status of post and wire fences in the river and stream corridor so that they are permitted if they are post and wire. This requires amendments to Rules 9B.1. and 9B.2.2 as follows (additional changes are shown in red):

Rule 9B.1. Permitted Activities

The following activities are **permitted** activities, provided that they comply with all corresponding permitted activity standards and all relevant permitted activity standard in other chapters (unless otherwise specified).

Permitted Activities	Standards	Reference
5. Fences in any flood hazard area. except the river corridor or stream corridor.	1. Fences in <u>the river corridor, stream corridor, an overflow path, or residual overflow path</u> shall be post and wire and shall not impede the free flow of flood waters.	Policies 9.3, 9.4, 9.8, 9.9, 9.11 & 9.12

Rule 9B.2 Controlled Activities

The following activities are **controlled** activities, provided that they comply with all corresponding controlled standards (unless otherwise specified).

Controlled Activities	Standards	Matters over which Council reserves control	Reference
2. Fences in a <i>river corridor</i> or <i>stream corridor</i> . or fences in an overflow path or residual overflow path <u>that</u>	1. Any fence shall not impede the free flow of flood waters.	1. The materials from which the fence(s) is constructed 2. The avoidance or mitigation of the potential	Policies 9.3, 9.4, 9.8, 9.9, 9.11 & 9.12

<u>are not post and wire.</u>		adverse effects of flooding including the design of the fence to prevent debris entrapment.	
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4.6 As discussed in Section 2.0, in response to **Submitter 263/FS125 Maypole Environmental Ltd** I recommend that the panel considers amending the rules with Chapter 9 to delete changes recommended in my s42A report to allow for a lesser status of the subdivision of land within the River corridor for reserve purposes. I recommend that rules of Chapter 9 be amended as follows (additional changes are shown in red):

Rule 9B.3 Restricted Discretionary Activities

The following activities are **restricted discretionary** activities, provided that they comply with all corresponding restricted discretionary standards (unless otherwise specified).

Restricted Discretionary Activities	Standards	Matters over which Council will restrict its discretion	Reference
6. Subdivision of land located wholly within the river corridor and/or stream corridor where the land is proposed to be vested as Reserve.	4. The land being subdivided must be intended to be vested to the Kapiti Coast District Council, the Wellington Regional Council or the Department of Conservation. Note: the acceptability of the land intended to be vested with these parties should be established prior to lodging an application, and the outcome of consultation with these parties shall accompany the application	5.1 The effect of the subdivision on the effective functioning of the river and/or stream corridor. 2. Whether or not any or all of the land is accepted as reserve.	

Rule 9B.4 Discretionary Activities

The following activities are **discretionary** activities.

Discretionary Activities	Assessment Criteria	Reference
4. Subdivision of land located partly within the river corridor and / or stream corridor where only part, or none, of the land is to be vested as Reserve and where each lot has: <ul style="list-style-type: none"> a) a building site located outside any river or stream corridor, overflow path or residual overflow path. b) building sites shall be located above the estimated 1 % AEP flood event level. c) formed vehicle access which does not 		

Rule 9B.4 Discretionary Activities

The following activities are **discretionary** activities.

Discretionary Activities	Assessment Criteria	Reference
<u>adversely affect the flood hazard risk on other properties in the same flood catchment.</u>		

Rule 9B.5 Non Complying Activities

The following activities are **non complying** activities

Non Complying Activities	Reference
1. <u>Subdivision of land located wholly within the Stream corridor and/or River corridor where the land is not to be vested as Reserve.</u>	Policies 9.2, 9.3, 9.4, 9.9 & 9.12

5.0 Issues not resolved

- 5.1 While working on this chapter I have found two issues that can not be resolved within the PDP process as there is no scope.
- 5.2 One of these is that the river corridor is a zone as well as an overlay. This means that there are no underlying land use rules for sites that are within the river corridor zone only the rules that relate to the mitigation of flood hazards. This means that there are no relevant bulk and location or noise rules for this zone. I consider that the Council should correct this issue via a future plan change.
- 5.3 The second issue is that the rules within this chapter only restrict 'buildings' and fences within the river and stream corridor. This means that small scale detached buildings would be a permitted activity by default. The definition of building within the PDP as notified excludes "Detached structures (including temporary structures) not exceeding 2.4 metres in height and not exceeding 8m² in gross floor area where they are located at least 1 metre from any adjoining property boundary." As far as I am aware this exclusion or, something very similar are intended to remain within the definition of building within the PDP going forward. I consider that detached structures of this size could have adverse effects on the movement of water within the river and stream corridors. I consider that the intention was not to permit these small scale buildings, but an omission was made when drafting the PDP. Again I consider that the Council should correct this issue at a later date via a plan change.



.....
Rebecca Lloyd
6 September 2016

Appendix 1:

Kapiti Proposed District Plan – Flood Hazard Submissions – 12 August 2016 – Graham Levy

[REFER SEPARATE ATTACHMENT]

Appendix 2:

KCDC Proposed District Plan – comments on #216 Halstead – 25 August 2016 – Graham Levy

[REFER SEPARATE ATTACHMENT]

Appendix 3:

Kapiti District Council Proposed District Plan Hearing: 5 Hewson Cres, Otaki – 23 August 2016 – Ben Fountain

[REFER SEPARATE ATTACHMENT]

Appendix 4:

PDP Submission 8 Tangahoe St – received 25 August 2016 -Blair Murray

[REFER SEPARATE ATTACHMENT]

Appendix 5:

**Kapiti District Council Proposed District Plan: Chapter 9 Hazards – 1 September 2016 –
Sharyn Westlake**

[REFER SEPARATE ATTACHMENT]