

**BEFORE THE HEARINGS PANEL**

**IN THE MATTER**

**of hearings on submissions  
concerning the proposed One Plan  
notified by the Manawatu-Wanganui  
Regional Council**

**Supplementary Recommendations of Phillip Percy  
for the Natural Hazards hearing**

## **INTRODUCTION**

1. The purpose of this report is to identify the changes sought by submitters in their pre-circulated evidence for the Natural Hazards hearing, and to indicate whether and where I wish to alter any of my initial recommendations as a result of this evidence.
2. I have also prepared and made available a further track changes version of Chapter 10 (the ‘green’ version) which shows any supplementary recommendations contained in this report.

## **PRE-CIRCULATED EVIDENCE AND CAUCUSING**

3. Planning evidence was received from:
  - David Murphy (Palmerston North City Council)
  - David Le Marquand (Transpower New Zealand Limited)
  - Lisa Hooker (Airways Corporation of New Zealand Limited)
4. Technical evidence was received from John Philpott (Landlink Limited).
5. The statements of evidence of Mr Le Marquand and Ms Hooker raise no further issues with the amended Chapter 10 as recommended in my planning report, and the comments in their evidence are self-explanatory.
6. Mr Murphy raises a number of matters in his statement of evidence, primarily in relation to Policy 10-2 and Policy 10-4. In an effort to resolve the outstanding matters raised in Mr Murphy’s evidence, two caucusing meetings were held. The notes of these meetings have been circulated to the Hearing Panel and summarise areas where agreement was reached or where there were issues that remained outstanding. Please note that the notes from the two meetings are in a single document as the second meeting involved further discussion of the matters raised in the first meeting.
7. A caucusing meeting between Mr Philpott and Peter Blackwood (the Regional Council’s technical expert) also took place. Notes of this meeting have also been provided to the Hearing Panel. The outcome of this meeting was that there was largely agreement between Mr Philpott and Mr Blackwood on technical matters and that there needed to be some modifications to the wording of Chapter 10 to reflect these outcomes.
8. Mr Philpott raises a matter in his evidence in relation to the inclusion of the Taonui Basin Floodway in the Proposed One Plan (POP). His concern revolves around his consideration that the Taonui Basin Floodway is not actually a floodway in its entirety and that it should be amended. Mr Philpott and Mr Blackwood agreed during the caucusing meeting that the Taonui area comprises floodways, spillways

and ponding areas and therefore that the whole of the mapped area does not need to be treated as if it were a ‘pure’ floodway such as Reid’s Line Floodway or the Makirikiri Floodway.

9. Despite this agreement, there is some uncertainty as to whether there is sufficient scope within the Landlink submission to enable this matter to be addressed through changes to the POP. The Landlink submission states at paragraph 70 (pg 9) “we support the protection of floodways and overflow paths”. This statement on its own would seem to support the current treatment of the Taonui Basin Floodway. However Mr Philpott considers that the labelling of the mapped floodways in Schedule I as originally notified created the impression that the Taonui Basin was a floodable area rather than a floodway and was therefore managed under Policy 10-2(b) rather than Policy 10-2(a). I consider that the relationship between the areas mapped in Schedule I and Policy 10-2(a) was sufficiently clear in the notified POP to enable submitters to interpret the mapped areas as being floodways. Further, Landlink did not specifically refer to the Taonui Basin map at any point in their submission (either to confirm it as floodable area or to redefine the portion of it to be mapped as floodway). However, I can also see that the alternative interpretation could have been reached given that Policy 10-2(b) also referred to floodable areas mapped in Schedule I; therefore the submitter may have considered that the submission points in relation to floodways were applicable to the Taonui Basin map.
10. As this matter has not yet been resolved, I am not proposing to make any changes to my recommendations in relation to the Taonui Basin Floodway at this time. However, I anticipate that further discussions on the matter will take place prior to the hearing and I will provide the Hearing Panel with an update on this matter during my introductory statement.
11. Subsequent to the caucusing meetings, significant further discussion between Mr Blackwood, Mr Philpott, Mr Murphy and myself has occurred to attempt to resolve the outstanding matters and to reach a conclusion on changes to the wording of Chapter 10 in order to resolve as many of the outstanding matters as possible. As a consequence of the caucusing meetings and further discussions, I attach to this supplementary evidence a tracked changes document showing the revised wording that has been partially agreed between the four parties. Some matters raised by Mr Murphy have not been included in the recommended tracked changes and he may wish to address those matters at the hearing.

## **EVIDENCE OF DAVID MURPHY**

12. Mr Murphy raises a number of issues in his evidence, primarily in relation to Policy 10-2(b). A number of points are agreed with and these are discussed below.

### **Definition of ‘residual inundation’**

13. Mr Murphy raises the concern that the ‘residual inundation’ approach proposed in my s42A Planning report does not recognise the varying degree of protection that

some mitigation structures provide. Taking into account Mr Murphy's concerns on this matter, and based on discussions with Mr Blackwood and Mr Philpott, recommended amendments have been made to Policy 10-2(b) to recognise that there are situations where existing mitigation measures provide sufficient risk minimisation such that the residual inundation 'backstop' does not need to be applied. The situations when this would be relevant are where an area is protected by mitigation measures that protect from a 0.2% AEP flood event (such as the stopbanks protecting Palmerston North), or in an area where it can be demonstrated that the existing mitigation measures have a very low risk of failure (such as the example Mr Murphy gives in his evidence). This latter point would need to be determined on a case-by-case basis. In all other cases, the residual inundation standard would need to be met.

14. This recommended change to the policy provides for the variability in existing mitigation measures and provides for the residual inundation 'backstop' to be disregarded where the mitigation measures (existing or new) are sufficiently well designed so as to minimise the risk to development protected by those mitigation measures.

#### **Availability of 0.5% and 0.2% AEP flood modelling data**

15. Mr Murphy raises a question in his evidence about the availability of flood modelling data to enable territorial authorities to make decisions on proposals affected by Policy 10-2. While this is a matter more appropriately answered by Mr Blackwood, I have been advised by Mr Blackwood that the Regional Council is able to provide flood hazard information for those areas that have currently been modelled. Flood levels for a 0.2% AEP flood can be calculated relatively quickly by a suitably experienced expert. In areas where there is no current flood hazard information, individual site assessments would need to be undertaken by a suitable expert much in the same way as site-specific geotechnical assessments need to be undertaken on some sites. Therefore, it appears that flood hazard data is either available or can be derived relatively easily so will not restrict the application of the policy. No changes to the policy are recommended.

#### **Within any other area likely to be inundated**

16. Related to the residual inundation matter raised above, I agree with Mr Murphy that the words 'likely to be inundated' create some interpretation uncertainty for the policy. Through discussions with both Mr Murphy and Mr Philpott, it was concluded that the policy should apply to all of those areas that are likely to be inundated if there were no mitigation measures in place. This then sets the basis for consideration of the residual risk associated with existing mitigation measures and enables areas that are sufficiently well protected from flooding to be managed differently to those that are subject to significant residual risk. To resolve the interpretation difficulty with the words 'likely to be inundated' a change is recommended to make it clear that the land to be considered is that which would be inundated assuming there is no mitigation in place.

### **Infill development within existing areas**

17. The question Mr Murphy raises in relation to whether infill development is captured by the policy is addressed by the recommended changes discussed above. Infill development is to be treated in the same way as greenfields development in that areas that are currently protected by sound mitigation measures can be developed without the need to achieve the residual inundation standard. Areas that are not afforded sufficient protection from flooding, either because there are little or no mitigation measures in place or the mitigation measures in place pose a significant risk of failure, would need to either avoid being developed or would need to put in place mitigation measures that are either sufficiently robust as to minimise the risk of failure or the residual inundation levels would need to be achieved.
18. In the case of Palmerston North City, infill development in those areas currently protected from the 0.2% AEP flood event is enabled without the need to apply the residual inundation standard.

### **Functional constraints of non-critical infrastructure**

19. Non-critical infrastructure is highly varied in its location, scale and effect on hazards. Due to the variability of infrastructure and sites, determination of functional constraints will need to occur on a-case-by case basis and it would be difficult to define these factors in the POP. Due to time constraints, this matter was not explored in detail at the caucusing meetings and remains outstanding, therefore my original recommendation remains unchanged.
20. To assist the Hearing Panel with the matters addressed during caucusing and pre-hearing discussions, the table appended to this report identifies the matters raised and areas of agreement and disagreement. The comments in the table should be read in conjunction with the respective caucusing reports.

Phillip Percy

18 May 2009



Note: DM = David Murphy, JP = John Philpott, LH = Lisa Hooker, DL = David Le Marquand

Plan heading	S42A Planning report recommendation	Expert	Matter raised	Comment	Degree of agreement	Supplementary Recommendation
<b>Glossary</b>	NH 18	LH	Support		Agree	
		DL	Support		Agree	
<b>Policy 10-2(a)</b>	NH 6	DM	Support		Agree	
		JP	Amend the map in Schedule I to more accurately show the areas of the Taonui Basin that are floodways.	There is currently uncertainty as to whether there is sufficient scope within the Landlink submission to enable the change requested.	Outstanding	
<b>Policy 10-2(b)</b>	NH 6	DM	Reword policy to enable consideration of wider mitigation matters on a case-by-case basis. Also to avoid the inflexible limit set by the current residual inundation approach.	Amended wording of Policy 10-2(b) is included in the tracked changes version. The recommended changes retain the strong preference for hazard avoidance, and impose a clear level of mitigation to be achieved but provide a degree of flexibility to enable some variability to the mitigation response adopted.  Because the term 'residual'	Agree in part	NH S22

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				'inundation' is only used in Chapter 10, the definition has been removed from the Glossary and incorporated into the policy wording where necessary.		
		DM	Supports shift to avoidance or mitigation.		Agree	
		DM	Supports retention of 0.5% AEP flood as being minimum requirement.		Agree	
		JP	Clarify the policy so that developments in flood hazard areas are to be protected from a 0.5% AEP flood in combination with managing the residual risk.	A change to the wording to reflect the need to put in place protection from a 0.5% AEP flood. This requirement is inherent in Policy 10-2 as notified but the change makes it explicit.	Agree	
		DM	Provide greater certainty as to when the policy applies by addressing the use of the phrase 'likely to be inundated'.	Amend the policy to refer to areas that would be inundated in the absence of mitigation measures to remove the difficulty with determining likelihood of inundation. This change provides an equivalent starting point for all	Agree	

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				development from which the protection afforded by different levels of mitigation dictates how development is assessed.		
		DM	Clarify when infill development needs to be assessed against the policy.	Modify the policy to enable infill development, either where there is a substantial mitigation measure in place (eg Palmerston North with 0.2% AEP protection) or where the effects of failure or overtopping of lesser mitigation measures is managed or is very low risk. Determination of the risk of particular mitigation measures will need to be done on a case-by-case basis and will require input from relevant experts at the time. All development, including infill, needs to either be substantially protected or the residual risk managed.	Agree	
		DM	Clarify when functional	Non-critical infrastructure is highly varied in its location,	Outstanding	

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			constraint comes into play.	scale and effect on hazards. It is appropriate that consideration be given to the effects it may have via Policy 10-2(c). Due to the variability of infrastructure and sites, determination of functional constraints will need to occur on a case-by-case basis and it would be difficult to define these factors in the POP.		
<b>Policy 10-4</b>	NH 8	DM	Support		Agree	