

Proposed Marlborough Environment Plan

Topic 9: Natural Hazards

Hearing dates:	28 – 29 and 31 May 2018
S42A Report Writer:	Paul Whyte, Gavin Cooper and Laddie Kuta
Conflicts of Interest:	None
Interim decision:	Yes

(Note: A list of conflicts of interest which arose during the process are available to view on the Marlborough District Council Website)

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List of Abbreviations

LIDAR	Light Detection and Ranging
MDC	Marlborough District Council
MSRMP	Marlborough Sounds Resource Management Plan
NESPF	National Environmental Standards for Plantation Forestry
NPSET	National Policy Statements for Electricity Transmission
PMEP	Proposed Marlborough Environment Plan
RMA	Resource Management Act 1991
S42A Report	Section 42A Report
WARMP	Wairau/Awatere Resource Management Plan

Submitter abbreviations

KiwiRail	KiwiRail Holdings Limited
NFL	Nelson Forests Limited
NZTA	New Zealand Transport Agency
Te Ātiawa	Te Ātiawa o Te Waka-a-Māui

Structure of Decisions

1. It is important that the topic decision is read as a whole together with the tracked change version of the Plan. The decision on each topic contains the reasons for the Panel's decisions. These comprise either adoption of the reasoning and recommendations of the original Section 42A Report or the replies to evidence, or a specific reasoning by the Panel¹.
2. The tracked change version of the relevant PMEP provisions forms an integral part of the decision. The source of the change in terms of the topic that the subject matter was dealt with is clearly identified in the track changes version of the plan. This records all amendments (additions and deletions) to the notified PMEP provisions made by the Panel.
3. Where the PMEP provisions **remain as notified**, it is because:
 - (a) The Panel has decided to retain the provision as notified for reasons set out in this decision; or
 - (b) The Panel adopted the reasoning and recommendation of the Section 42A Report Writer to retain the provision as notified as recommended in the Reply to Evidence; or
 - (c) The Panel adopted the reasoning and recommendation of the Section 42A Report to retain the provision as notified in the original Section 42A report.
4. Where there is a **change to a provision** within the plan it is because:
 - (a) The Panel has amended a provision for reasons set out in this decision in response to a submission point which the Section 42A report writer(s) does not recommend in their reports; or
 - (b) The Panel adopted the reasoning and recommendation of the Section 42A Report Writer to change the provision to that recommended in the Reply to Evidence; or
 - (c) The Panel adopted the reasoning and recommendation of the Section 42A Report Writer to change the provision to that recommended in the original Section 42A report; or

¹ (The only exception to that approach relates to the Noise section of the Nuisance topic where the reasoning and recommendations in the responses to Minutes 54 and 59 may have been adopted, rather than the reasoning and recommendations in the Section 42A Report or the Reply to Evidence report. The reasons for that difference in that topic are dealt with in detail at the commencement of the Noise section of the Nuisance topic decision. In respect of that topic the approach to understanding of the individual submission point decisions addressed in paragraphs 13.3 to 13.5 below should be adjusted accordingly to apply references to the Section 42A Report and/or Reply to Evidence in those paragraphs as being references to the responses to Minutes 54 & 59 for that Nuisance topic.)

- (d) A consequential change has been necessary following on from a decision in either a), b) or c).
5. Where there is a **different recommendation** between the Section 42A Report and the Reply to Evidence (i.e., the recommendation by the Section 42A report writer(s) has changed as a result of hearing the evidence of submitters), unless the Panel decision specifically adopts the original report's reasoning and recommendations, the reasoning and recommendations in the (later) reply to evidence has been adopted and it must be taken to prevail.
 6. There are limited circumstances where the Panel has taken the opportunity to give effect to national policy statements or implement national environmental standards. Where this occurs the relevant decision clearly sets out the nature of the change and the reason for the change.
 7. Finally, there are limited circumstances where the Panel has decided that **alternative relief** is more appropriate than that requested by the submitters, but still within the scope of the relief sought. This is recorded in the Panel's decision.

Natural Hazards

8. This chapter of the PMEP addresses a range of natural hazard issues that can arise in Marlborough. Amongst the range of natural hazards covered in Chapter 11, Volume 1, of the PMEP are particularly those arising from risk of inundation from floods and the consequences of land instability, either as a result of earthquake, landslip or tunnel gully erosion.

Statutory setting

9. The statutory definition of a natural hazard contained in the RMA is:

‘natural hazard means any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment’

10. The statutory scene is set in the RMA by Part 2, in particular s 6(h), and by the associated sections 30 and 31 as to the functions of regional and territorial authorities.
11. Section 6 (h) provides that the Council must recognise and provide for the following as a matter of national importance:

(h) the management of significant risks from natural hazards.

12. Section 30 (1)(c)(iv) as to regional council functions makes provision for one function being:

(c) the control of the use of land for the purpose of—

(iv) the avoidance or mitigation of natural hazards:

13. In addition to that basic task, other relevant functions in planning terms are stipulated in ss.30 (1)(a) and (b):

(a) the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the natural and physical resources of the region:

(b) the preparation of objectives and policies in relation to any actual or potential effects of the use, development, or protection of land which are of regional significance: ...

14. Another subsection in s.30 as to infrastructure planning, which in some circumstances can have some relevance to this topic, is found at s.30(1)(gb):

(gb) the strategic integration of infrastructure with land use through objectives, policies, and methods:

15. For territorial authorities in s 31 there are in effect 'mirror' provisions to those found in s.30 for regional authorities. The most direct 'mirror' image for s 30(1)(c)(iv) as to the mitigation or avoidance of natural hazards is found in s 31 (1)(b)(i). It provides that one of the functions of a territorial authority is:
 - (b) *the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of:*
 - (i) *the avoidance or mitigation of natural hazards;...*
16. Subsections 31(a) and (aa) of the RMA, (which effectively mirror the provisions in s 30 (1) (a) and (b) for regional councils), include for territorial authority functions such as:
 - (a) *the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district:*
 - (aa) *the establishment, implementation, and review of objectives, policies, and methods to ensure that there is sufficient development capacity in respect of housing and business land to meet the expected demands of the district:*
17. Finally, s 35(5) (j) of the RMA requires that each local authority is to keep the following records:
 - (j) *records of natural hazards to the extent that the local authority considers appropriate for the effective discharge of its functions; and ...*
18. The application of ss 6 (h), 30 & 31, and s 35 of the RMA by a unitary authority will inevitably result in the identification of natural hazard areas through its resource management plan. It comes as no surprise then that the PMEP, in conjunction with the identification process of natural hazards through mapping, also proposes policies, rules and maps restricting built development and certain other relevant activities in those identified areas.
19. Such provisions were always likely to lead to submissions from affected landowners as to asserted unreasonableness, unfairness and/or 'unnecessary' restriction on activities.

Summary of principal PMEP Policies the subject of submissions

20. Objective 11.1 encapsulates the overall precautionary approach in the Plan to reduce the risk of effects of natural hazards:

Objective 11.1

Reduce the risks to life, property and regionally significant infrastructure from natural hazards.

21. That Objective is achieved through policies, mapping and associated rules identifying those areas of risk, and requiring the avoiding of infrastructure and other built development in those areas identified as being at risk. Policy 11.1.1 gives effect to that identification process:

Policy 11.1.1 – Establish the extent of land subject to flooding, liquefaction and tunnel gully erosion and identify this land within the Marlborough Environment Plan as a hazard overlay.

22. In terms of the significance of risk, and consequent effects, a very obvious hazard risk exists in relation to the largest river in the district – the Wairau. Its associated floodplains have become the centre of the major population bases in Marlborough and constitute the base of major economic resources such as the viticulture industry.
23. However, Marlborough also has a considerable number of other large and smaller rivers and streams, many of which in extreme rainfall events potentially give rise to a risk of inundation and flood damage, placing people and/or infrastructure and property at risk.
24. Another major issue with significant potential property and infrastructure damage consequences, but to a degree human life risk also, can be the consequences of land instability. That issue has particular significance in the Marlborough Sounds where the soils are commonly unstable and erosion prone. However, another area of major concern is located in the southern Wairau Dry Hills where loessial soil conditions can result in major tunnel gully under-runners potentially undermining infrastructure and built development.
25. Another major natural hazard risk in Marlborough addressed in the PMEP arises from potential instability as a result of earthquake damage and particularly resultant liquefaction, although limited submissions on this issue were received.
26. Finally, at the other end of the climatic scale, Marlborough experiences recurrent drought or very dry summers in the course of which the natural hazard of fire can loom requiring rules or planning maps to avoid or restrict built development in potentially exposed locations.
27. The principal measures utilised in the PMEP to respond to these identifiable potential natural hazards include planning maps such as the Flood Protection zones and Flood Hazard Overlays. Related rules are also used in the PMEP restricting activities in areas where inundation from

flood events, or damage from land instability or fire, is sought to be avoided or mitigated; or where riverbed and stopbank protection measures are required.

28. Flood risk identification and its precise extent in many localities caused significant submission reaction. The PMEP's identification system of flood risk adopts four separate levels of increasing hazard numbered from 1-4 as described in Policy 11.1.9:

Policy 11.1.9 – Establish a hierarchy of flood risk as follows:

- (a) Level 1: Land that suffers flooding of shallow, low velocity water in a flood event with an annual recurrence interval of 1 in 50 years;*
- (b) Level 2: Land that suffers flooding but the depth/velocity of the flooding is not well understood, or cannot easily be expressed relative to natural ground level, in a flood event with an annual recurrence interval of 1 in 50 years, or land within 8 metres of any lake, river or wetland;*
- (c) Level 3: Land that suffers flooding of deep, fast flowing water in a flood event with an annual recurrence interval of 1 in 50 years, or land in the bed of any lake or river or in any wetland; and*
- (d) Level 4: Land that has the potential to suffer flooding of deep, fast flowing water in an extreme flood event that overwhelms stopbanks and other constructed flood defences.*

29. Policy 11.1.8 in a general policy statement requires avoidance of location of habitable structures where they or their associated wastewater management systems could be damaged by inundation. More particularly focused policies in 11.1.10 then provide for three differing levels of control of habitable structures and/or mitigation measures of the level of risk as it increases in seriousness of outcome for the first three risk levels:

Policy 11.1.10 – Control the erection and placement of houses and other habitable structures within areas subject to a flood hazard overlay, and reduce the risks to life and property by:

- (a) establishing minimum floor levels for houses and other habitable structures subject to a Level 1 flood risk, set at least 450 mm above the natural ground level as measured at any point of the building footprint. The building footprint includes any associated on-site wastewater management system;*
- (b) requiring houses and other habitable structures subject to a Level 2 flood risk to be subject to evaluation of the flooding hazard and effective mitigation actions; and*

(c) *avoiding houses and other habitable structures in locations where they will be subject to a Level 3 flood risk.*

30. However, because of the potentially devastating consequences of stopbank protection being overwhelmed in a major flood event, Policy 11.1.11 adopts a straight out avoidance approach to any structures, whether habitable or not, in Level 4 risk areas:

Policy 11.1.11 – Avoid locating intensive residential, commercial or industrial developments on land subject to a Level 4 flood risk.

31. The issue of protection of floodways is also addressed by setting a range of levels in floodway protection zones, based in this case on annual recurrence intervals (ARIs). Varying measures by policy and rule provisions ensure developments and gravel removal activities do not impinge on the essential task of ensuring the flood flows are able to be carried within the protection works or natural banks as much as possible. The policy setting those ARI interval levels is Policy 11.1.4:

Policy 11.1.4 – Establish and maintain floodway capacities for Marlborough’s rivers to the following standards:

- (a) *to an annual recurrence interval of 1 in 100 years for major rivers on the Wairau River floodplain (below the confluence with the Waihopai River);*
- (b) *to an annual recurrence interval of 1 in 50 years for the Waitohi and Waikawa Rivers; and*
- (c) *to an annual recurrence interval of 1 in 50 years for rivers and drainage channels that provide for urban stormwater disposal.*

32. Major issues arising from the submission/hearing process on this chapter included submissions on the following matters:

- The impacts on potential development of land affected by Floodway zones and Flood Hazard overlays.
- The impacts on potential activities arising from rules protecting open floodways in riverbeds and stopbank protection works.
- As part of the previous issue, perceived unreasonableness or unfairness on landowners as a result of the precautionary approach taken to the return frequency and severity of flood risk
- Impacts of rules on potential infrastructure development and maintenance activities to protect that infrastructure.

- Impacts of rules restricting gravel extraction or other in-channel or riverbed works and drainage system.
- Impacts of the mapping approach to loessial soils and related tunnel gully risk and restrictions related to those issues.
- Mapping of areas prone to liquefaction.
- Identification of earthquake induced geotechnical risks
- Buffer requirements to reduce fire risk between activities.

Submissions Summary

33. We set out below a summary of those areas where the most significant submission involvement occurred either in written submissions or more particularly by appearances at the hearings. The summary focuses on the policy approach, but in addition many of the issues raised rules or methods or maps in the PMEP which are intended to give effect to those policy approaches.
34. The more detailed consideration of particular submission points which follows later in this chapter of our decision makes plain whether a map, policy, rule or method is being addressed.

Flood protection issues

- The largest group of submitters were from the ‘Tuamarina pocket’ area to the north of the lower Wairau where in the major 1983 flood event the stopbanks had been breached and large areas inundated.
- In a number of other locations the detail of the risk level or its aerial extent in mapping was challenged.
- Also raised were the return frequencies utilised in the policies directly addressing the restrictions on location of housing and other built structures in Floodway zones and Flood Hazard Overlays.

River Protection issues

- Policies such as Policy 11.1.4, because of the impacts of inundation, adopt a conservative approach, to the return frequency analysis underlying the spatial mapping to ensure floodway channels are maintained clear of obstruction were also the subject of some submission.
- Policies 11.1.3 and 11.1.5 as to the need to provide for and maintain the integrity of flood protection and mitigation works drew submission as to their impact on the ground on certain properties nearby. Those policies seek to avoid potential adverse effects of activities on those works either directly, or in some cases, if nearby. Again the approach

to that protection is conservative in the PMEP because of the significance of widespread potential adverse consequences if those protection works are breached.

- Policies 11.1.6 and 11.1.7 drew limited numbers of submissions about the restrictions imposed on in-channel or riverbed works and gravel extraction.
- The issue of controls on methods of clearance of sediment from drainage systems on the lower Wairau Plain and in the roading network also drew submission.

Protection of river works infrastructure

- In some locations the consequences of policies designed to protect Council assets providing flood protection were the subject of submission.

Provision for maintenance and development of nationally and regionally, and even locally significant infrastructure

- A number of submissions asserted the PMEP made inadequate provision for these activities which for cost or practical reasons were commonly located in or through floodway zones.

Tunnel gully erosion

- Policies such as 11.1.19 and 11.1.21 as to restrictions on development of land which were the subject of tunnel gully erosion because of loessial soils also drew submission response.

Fire risk issues

- Buffer requirements in Policy 11.1.22 were the subject of some submissions.

Issues arising from restrictive rules in respect of natural hazards

- A considerable number of submissions addressed matters of detail in respect of rules restricting structures or activities in Flood Hazard areas, Floodways and other areas recognised or identified as being potentially affected by natural hazards.

Section 42A Report

35. The submissions on planning aspects of Chapter 11, Volume 1 were comprehensively reported on by Mr Paul Whyte a very experienced planner. His reports particularly provided the policy analysis and consideration of restrictions contained in the rules and methods.
36. Given the heavy emphasis in submissions received on the impacts of the Floodway zones and Flood Hazard Overlays, and the necessity for each of those to be considered in detail by an expert river engineer on site, pursuant to s42A RMA the, Council had also sought a report from Mr Laddie Kuta, an experienced hydraulic engineer. As considerable detailed work was necessary to support Mr Kuta and affected submitters with matters such as consultation for

site access and potential on-ground mapping and rule application issues, Mr Gavin Cooper, another experienced planner, worked closely with Mr Kuta on those detailed Overlay map issues. They provided jointly written reports as to those issues before and at the end of the hearing.

37. Their initial joint Section 42A Report included a helpful appendix which detailed their site inspections and pre-hearing contacts with submitters and contained relevant detailed maps. They also provided a further detailed report at the end of the hearing on matters and evidence advanced in those hearings. The Panel was considerably assisted by their Reply to Evidence report being supplemented by further detailed mapping addressing changes they recommended after hearing the materials provided by submitters.
38. The evidence available to the Panel from Mr Kuta was able to be objectively assessed in quite some detail as to on-ground mapping outcomes. That was due to the fact that he was assisted by a considerable resource of aerial photography and other historical survey material held by the Council of flood or immediate post-flood events in Marlborough which ranged over many decades. All of that material is held in Flood Hazard Atlas compiled by Council and held at the Council offices.
39. In the Lower Wairau floodplain that objective photographic evidence was able to be supplemented in an even more detailed manner by the availability and application of LIDAR aerial surveying, conducted by Council in 2014 and 2016, which enabled contour mapping at a very fine level of +/- 60 mm accuracy within the entire Tuamarina Pocket area. (LIDAR stands for *Light Detection and Ranging*. It is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth from the laser emitter.) That degree of precision enabled even finer movements to be recommended as to the Floodway Zone boundaries and Flood Hazard Overlay levels in response to submitter concerns.

Interim decision

40. In the course of its deliberations on this Natural Hazards topic the Panel considered a submission by Marlborough District Council seeking extra Floodway zonings for a number of smaller catchments, which had not been sought by oversight in the PMEP as notified.
41. The Panel concluded that the relief sought for new zoning by use of the submission process by the Council's river engineering section could not be lawfully provided for, as there would not be proper opportunity to consult with potentially affected landowners, which is a required preliminary step in the First Schedule to the RMA.

42. However, as the subject matter was plainly important in the public interest in terms of potential flood protection measures, the Panel made the decision to depart from its general approach that interim decisions would not be issued. The reasons for doing so were twofold.
43. First, so that Marlborough District Council was aware at as early a stage as possible of the Panel's view of the jurisdictional barrier without having to wait for final decisions to be issued probably a year later.
44. Secondly, so that earlier notice of that outcome would enable Council to embark upon the necessary consultation process for a possible proposed Plan Variation encompassing any such new proposed floodway zonings, (which Variation might be able to be melded in at some time with the PMEP processes.)
45. An interim decision to achieve those ends was accordingly issued on 10 July 2018.²

Consideration of detailed submission points of significance

Earthquake geotechnical issues

Policy 11.1.21 – Locate new structures and works to:

- (a) avoid them being damaged from the adverse effects of land instability; and**
 - (b) avoid any increase in the adverse effects of slope instability that the structure or work may cause.**
46. A submission was made by D. Miller³ with impressively dramatic illustrations of the topographic impacts of earthquake effects on steep ridges. Mr Miller has longstanding geotechnical experience and he was concerned that the PMEP should have strengthened policies and methods to address those risks. The report writer, in his Reply to Evidence, responded only by drawing attention to the fact that Method 11.M.9 records that Council has established minimum geotechnical reporting standards.
 47. Transpower also made a submission on Policy 11.1.21 which sought that it be amended to except regionally significant infrastructure where its location was constrained by operational requirements.

Section 42A Report

48. The report suggested that the exception sought by the Transpower submission appeared to be worded on the basis of a misunderstanding of the intent of the policy, which was not directed

² Interim Decision of the MEP Hearing Panel as to Marlborough District Council's submissions seeking the inclusion of further Floodway zoning in the PMEP

³ Don Miller (238.1)

at the location of infrastructure, but rather to endeavour to ensure infrastructure was not affected from the adverse effects of land instability.

Consideration

49. The Panel was impressed by the demonstrations and descriptions given by Mr Miller of earthquake risks, and enhanced risk exposure on steep ridgelines particularly by reference to overseas experiences.
50. The policy framework requires the location of new structures to 'avoid' damage from adverse effects of land instability and given recent case law, that is a powerful direction in policy terms. It enables and requires a detailed geotechnical assessment where those risks are elevated by slope and potential slope failure. As the Section 42A Report emphasised, Method 11.M.9 also records that minimum requirements for reporting of geotechnical investigations have been adopted. It provides:

11.M.9 Geotechnical reporting standards

The Council has established minimum requirements for the reporting of geotechnical investigations. These identify the expectations for geotechnical investigations and the reporting of those investigations. They also set out the reliance that the Council places on the information provided in geotechnical reports so that this is understood and appreciated.

51. The level of detail required for geotechnical investigations is not readily transferred into rules and/or wording of standards in resource management plans. The use of strong policies and recognition of standards is the most effective way of addressing the issue. The Panel considers the present policy 11.1.21 coupled with Method 11.M.9 provides the policy strength required and the flexibility needed to upgrade standards as those standards or practices are developed or enhanced over time.
52. As to the Transpower proposed exception wording the Panel agrees with the S42A Report view that the first part (a) of Policy 11.1.21 is not aimed at preventing or restricting the location of infrastructure such as that utilised by Transpower but rather at ensuring the location of infrastructure takes into account adverse effects from land movement which could occur which might damage the proposed infrastructure. This can be made clear by introducing a specific recognition of that factor as a new subclause (b) to Policy 11.1.21 with an appropriate addition to the explanation.

53. However, the second part of the notified version of (b) of Policy 11.1.21 is aimed at ensuring that location of infrastructure avoids **any increase in risk** of adverse effects of slope instability, and the Panel does not agree that infrastructure should be exempt from such a requirement.
54. Transpower is concerned that ‘avoidance’ might frustrate the ability to mitigate risk in a situation where it has no practical alternative, for example in Sounds steep hill country, than to place infrastructure on steep slopes.
55. We have emphasised, though, that the phrase used in Policy 11.1.21 (b) is unusual in that it requires the avoidance of ‘any increase in risk’ rather than simply requiring avoidance of any risk of slope instability. The use of that phrase implies a level of risk may exist. The aim of the policy is to ensure any infrastructure built does not increase that level of risk. In the Panel’s view that does leave room for an infrastructure provider to mitigate risk in its design in such a manner that it can demonstrate that it has not increased risk of slope instability.

Decision

56. In the language required by the RMA technically the Miller submission has to be rejected, but in doing so the Panel wishes to record its gratitude to Mr Miller for emphasising an important issue and to recognise the force of the points he was making.
57. The Transpower submission is accepted in part.
58. Policy 11.1.21 is amended to read:

Policy 11.1.21 – Locate new structures and works to:

(a) avoid them being damaged from the adverse effects of land instability; ~~and~~ or

(b) in the case of the National Grid, avoid them being damaged from the adverse effects of land instability, or where they cannot be avoided, must be mitigated to the extent that it is practicable to do so; and

~~(b)~~ (c) avoid any increase in the adverse effects of slope instability that the structure or work may cause.

Marlborough is characterised by steep terrain and in some locations, unstable geology. Combined with the potential for intense rainfall events, these factors create the potential for slope instability. Examples historically include rock/debris slumps, debris slides or flows, coastal erosion and tunnel gully erosion in various parts of the District. Establishing residential, commercial or industrial development or infrastructure supporting that development or linking our communities in locations prone to land instability will lead to unsustainable outcomes. This policy requires new structures and works to be located in environments that avoid adverse

effects caused by land instability. It also addresses the situation of a structure or work exacerbating those adverse effects. It is recognised that the National Grid cannot always be located to avoid all damage from the adverse effects of land instability and therefore this policy allows for the adverse effects of land instability on the National Grid to be mitigated to the extent practicable, where the effects cannot be avoided. The policy will primarily be implemented through the zoning of land and the scale/intensity of activity that the zone rules enable. However, the policy can also be applied in a resource consent context when an assessment of environmental effects for the structure or work identifies a risk of land instability. This includes subdivision undertaken to enable more intensive use of the land. A safe and stable building platform will have to be established for the subdivision of land in certain environments.

Forestry setback issue

Policy 11.1.22

Require a buffer between dwellings, ancillary structures and land used for commercial forestry.

59. The explanation to 11.1.22 states:

To reduce the risk of fire in rural environments, a setback distance will be imposed to restrict the proximity of:

(a) houses and ancillary structures to existing plantations of commercial forestry; and

(b) new plantations of commercial forestry to existing dwellings and other habitable structures. ...

60. Buffer requirements required by Policy 11.1.22 as to setbacks for housing and associated structures from existing planted forestry, and for the planting of new forestry plantations in relation to adjacent existing dwellings or their associated structures, were the subject of some submissions.

61. However, the NESPF 2017 has imposed provisions which supersede the PMEP at law as to the setback for plantings from dwellings which is now fixed by regulation 14 of the NESPF regulations at a maximum of 40 metres. The Panel noted that the council had already completed an alignment process in respect of the notified PMEP rules. However, this policy had not been addressed through that alignment exercise. To ensure consistency between the PMEP policy and the NESPF the Panel is required to also align Policy 11.1.22(b) and this is reflected in the decision.

62. That means that in the alignment process Policy 11.1.22 (b) of the notified PMEP which would have enabled a larger distance was removed to ensure no greater restriction could be imposed on such new plantings. This is because Policy 11.1.22 (b) of the notified PMEP would have required a setback rule for new forestry planting which is an activity covered by the NESPF.
63. The PMEP by contrast still retains a setback from an existing plantation forest for the building of new dwellings and associated structures. The height of plantation trees can exceed 40 metres and provision has to be made for safety reasons to allow for spark throw from falling burning trees, as well as generous room for firefighting vehicles to have safe access corridors while avoiding fallen burning trees. Rule 3.2.17 in the Rural Environment zone (which is similarly reflected in other zones where dwellings may be erected) requires a setback for all those reasons of 100m.
64. The Panel consider it to be unwise in the extreme to reduce that distance and that 100m is the minimum safe distance that a dwelling should ever be from a forest.
65. As a result of the NESPF what the Panel regards as an unsafe buffer setback of only 40 m is imposed by a statutory regulation for planting of new plantation forestry next to an adjacent existing dwelling. However, for the reverse activity of building a new dwelling next to an existing plantation forest a setback of 100m is required by the PMEP.
66. Because of the legal situation the Panel can do nothing about that outcome, except to adhere in the PMEP to a safe and realistic setback distance, and to point out in this decision the glaring nature of the inconsistency.
67. In doing so the Panel wishes to express its amazement that a modern statutory regulation should allow such a potential hazard to life and dwellings and their associated structures to arise in the event of fire in a forest adjacent to dwellings. The increased risk to dwellings from severe dry conditions, which are currently expected to become recurrent in Marlborough from climate change, was graphically illustrated in the 2018/2019 summer in the fires in nearby Nelson forests.

Decision

68. Submissions seeking changes to Policy 11.1.22 are rejected, but it is noted that as a consequence of the alignment process required to comply with the NESPF 2017 Policy 11.1.22(b) has must be removed from the PMEP. Policy 11.1.22 as a consequence will read:

11.1.22 - To reduce the risk of fire in rural environments, a setback distance will be imposed to restrict the proximity of houses and ancillary structures to existing plantations of plantation forestry.

Policy 11.1.11

Tuamarina pocket mapping

69. A primary concern of submitters⁴ in relation to the PMEP's treatment of properties in the Tuamarina pocket arose from the provisions of Policy 11.1.11. It provides:

Policy 11.1.11 – Avoid locating intensive residential, commercial or industrial developments on land subject to a Level 4 flood risk.

70. Because almost all of the pocket area to the west of the Tuamarina River was identified as being within Level 4 Flood Hazard Area the effects of Policy 11.1.11 were seen as devastating on the ability to use properties to their maximum potential and hence on property values. They sought the deletion of Level 4 as it affected their properties and various submitters sought varying relief as to other hazard levels. The Policy was asserted also to be too broad-brush in approach not taking into account the reality of the existence of small elevated areas in the terrain which it was said were above historic flood levels. Another major driver of the submissions was the fact that prior consultation had not occurred with landowners at Tuamarina as to the detailed effect and extent of the Level 4 Flood Hazard Overlay.

71. The basic approach of submitters was to argue that while they accepted the logic of a progression of hazard identification from natural events increasing in adverse effect from Level 1 through to Level 3; Level 4 was not a true progression as its effects only came into play in the event there was catastrophic failure of protective works. With some force to the logic of their argument they asserted that on that basis all urban areas protected by river protection works, (which would include much of Blenheim itself), should be subject to the same Level 4 Flood Hazard Overlay. They pointed out, again with some compelling logic, that the land at Tuamarina to the east of SH 1 was also subject to serious deep, fast and powerful flooding in 1983 yet the Level 4 Overlay had not been imposed east of SH 1.

Section 42A Report

72. On the issue of lack of detailed consultation with Tuamarina landowners, that omission was accepted as being a fact in the Reply to Evidence. However, the Reply to Evidence did make the point that the identification of the Tuamarina Pocket as being flood prone was not a

⁴ R Light (129.1), M Broughan (229.1), J Broughan (327.1), A Tyson (182.1), D & R Mundy (34.1), S Butler (385.1) and R Parkes(324.2)

planning surprise. It has been identified as such in Policy 11.2.5 of the Operative Wairau/Atawere Resource Management Plan. The difference in policy treatment between the two plans is that in the PMEPP the policy directive is to 'avoid' development in the Level 4 Overlay area, whereas in the WARMP the policy directive was worded as being at the lesser level of a 'limit' on development. That policy in the WARMP stated:

Policy 2.5 Limit any further residential development of Tuamarina township, and Tuamarina pocket in particular, because of flood hazard.

73. In support of the increased level of policy direction in Policy 11.1.1 of the PMEPP the approach in the Section 42A reports was to make reference to the facts that clear incontrovertible photographic evidence existed from the major 1939, 1983, 1998 and 2009 flood events which showed widespread deep inundation in the pocket area. Particularly in 1983 the concern arose not only from the extent of flooding, but in the event of stopbank failure as occurred in that major flood, the dangerous depth and often speed of the floodwaters.
74. The Panel's understanding of the effect of the Section 42A Report writers' description of the Tuamarina pocket area was that it was effectively an area naturally subject to flooding at the confluence of the Wairau and Tuamarina rivers which was 'fortified' against flood hazard by the stopbank protective works. That term was used in the Reply to Evidence because the pocket area was surrounded by protective works on its north, east and south sides, with hills to the west.
75. The Reply to Evidence report informed the Panel that the base assessment utilised detailed photographic records of the 1998 flood which was assessed as a rainfall equivalent to 2% AEP event or a 1:50 year return event for the Tuamarina pocket. The maximum flood level that produced was 5.75m which was the base for the Level 1 Flood Hazard Overlay. The Level 2 Flood Hazard level was assessed by arriving at a level of 5.6m by reducing the height of the Level 1 Flood Hazard by 150 mm as the Building Code requires floor levels to be at least 150 mm above the lowest point on a property. That level of 5.6 m was transposed onto the LIDAR data set to define the transition between the shallow Level 1 flood and the unknown depth Level 2 flood. The report writers were adamant there was sufficient information available for that to be done with accuracy.
76. There was no contrasting objective aerial photography or other contouring work offered to the Panel during the hearing process.
77. The Reply to Evidence report also stressed that the protected 2% Annual Exceedance Probability (AEP) of 5.75 m could be overtopped at a flood level of 7m as a result of damage

from flooding as in 1983, damage consequent on an earthquake, debris or log jams in the Tuamarina River causing overtopping, and/or failure of pumping stations. In addition if a flood event hits the soffit of the main Wairau bridge, either because of massive flood volumes or debris dam build-ups on the bridge support structures, again overtopping becomes a serious risk. All of those were said to be realistic potential threats.

78. As to the more generic issue of why the Level 4 overlay existed here and not in a widespread manner in Blenheim a number of points were made. The first of those was simply the colossal volume of a potential overtopping flood event in the large Wairau River as compared to the much smaller Taylor River flows. Added to that was the reality that in the event of catastrophic failure of protective works, for whatever reason, the natural paleo flood relief channels still exist, and were taken into account in identifying where the consequent flood hazard areas would be adversely affected in a serious manner. The 1983 events painted that outcome graphically at the Tuamarina pocket.
79. It was frankly conceded in the Reply to Evidence that there was indeed logic to the submitters' point that land east of SH 1 should also have been subject to the Level 4 overlay, but the point was made that that omission did not mean the Overlay was invalid in the pocket area. The Panel took it this implied the omission needed to be corrected either by plan change or in the next plan review.
80. However, reference was also made to the LIDAR technology which at Tuamarina enabled much more precision in locating overlay boundaries as to flood hazard effects levels than had been used in the initial PMEP preparation, which was based predominantly on photographic and flood volume evidence and consequent depth analysis.
81. As a consequence of site visits by Mr Kuta and Mr Cooper and discussions with landowners, and, most importantly, the application of the LIDAR survey work, significant changes were proposed in the Section 42A Report. However, those changes recommended by the Section 42A Report, while welcomed by the affected submitters, did not satisfy all their concerns.

Consideration

82. It is important to commence our consideration of this group of submissions from landowners in the Tuamarina pocket by saying that the different planning consequences of the Level 4 Overlay are so significant that we agree with the report writers in the Reply to Evidence that in an ideal world more may have been able to be done by way of earlier consultation with individual landowners affected.

83. However, the Panel also accepts that at a plan preparation stage councils generally would face a massive and unrealistic task if they tried to consult widely on an individual property owner basis on the effects of changes contained in a proposed plan. Quite often out of necessity, consultation at plan preparation stage, particularly as to the detail of zoning or overlay maps and their effects, in part has to devolve down to the Plan notification and submission response processes. The Panel believes that by and large that process has worked for submitters in this case, where those submissions have resulted in considerable detailed on-ground reconsideration, and as a consequence of submitter input more finely drawn recommendations being able to be made by the Section 42A Report writers to the Panel.
84. The use of the term ‘fortified’ to describe the Tuamarina pocket area is considered by the Panel to be very apt for this low-lying area of land, because the ‘pocket’ is surrounded by protective works on its north, east and south sides, with hills to the west. The Panel also accepts the point strongly made in the Section 42A reports that the flood risk from the major Wairau catchment is of a massively greater magnitude than the flood risk posed in Blenheim by flood events from the much more confined Taylor River catchment. The consequence of the combination of those two factors is a potential depth of ponding in major floods in the Tuamarina pocket which is unusually severe. Added to that is the concerning increased severe risk to property and life in the event of protective works failures, because of the speed and volume of the immense flows that can occur in the Wairau River for 1:100 year events such as the 1983 flood in the order of 5,500 cumecs.
85. A comparison of relevance is that the Taylor River produces in a 1:100 year event a flow rate of 170 cumecs. In each case a 10% spill might be expected – the comparison then being an uncontrolled flow of 17 cumecs in the Taylor River area and 550 cumecs in the Lower Wairau. The Section 42A Report described the consequences of an overtopping in Blenheim as being “a few streets acting as lakes, some houses and garages flooding and wet feet in certain lower lying areas, exciting, but manageable.” By contrast the description of effects at the Tuamarina pocket is of floodwater that was “fast, deep and it would be sitting in these areas until floodgates could open again.” The Panel accepts those descriptions as being accurate on the photographic and other descriptive evidence.
86. Additionally, the Panel notes that the PMEP in Policy 11.1.13 draws attention to the fact that risks to life and property are greater in rural environments, the reasons being particularly outlined in the first paragraph of the explanation to that policy:

Policy 11.1.13 – Recognise that the risk to life and property during flood events is greater in rural environments.

Isolation of properties affects the ability of the Council and Civil Defence to provide an emergency response in the event of flooding. The greater the distance of flooded properties from Blenheim (the location of the Emergency Operations Centre) and other towns, the longer it will take to respond to the flooding, especially in the event of large scale or District-wide events. Some communities are proactively preparing readiness plans in recognition of the additional risks created by isolation.

87. The Panel notes the submission by Federated Farmers (425.92) challenging the wording of this policy but agrees with the original Section 42A Report observation by Mr Whyte that minor amendments to capture the points made in the explanation would clarify the reasons for the policy and his recommendation to that effect (at paragraph 99) is adopted by the Panel.
88. However, on the general points at issue underlying the Flood Hazard Overlay purposes, the Panel did not hear any evidence from submitters which detracted in any way from the general analysis contained in the Section 42A reports. That was so both as to the underlying nature of the level of risk from major flood events in the Wairau River, and as to the potential consequences in the event of a failure of protective works such as occurred in 1983. Accordingly the Panel upholds that evidence provided by the Section 42A reports as to the serious nature of those risks and the general underlying reasons why the Flood Overlays have been applied in the Tuamarina Pocket area.
89. As to the point made by the Tuamarina pocket submitters in respect of the land to the east of SH 1 the Panel is in full agreement. That is a serious omission in the PMEP which the Panel unfortunately has no jurisdiction to address in its present process because no submission requested that the Level 4 Flood Hazard Overlay apply to that land. We do, however, suggest to Council that it reconsider the boundaries of the overlay applying in the event of catastrophic failure of protective works in this Tuamarina area as part of its next plan change process – that reconsideration would accord with the policy thrust underlying the second alternative in Policy 1.1.16 (b):

Policy 11.1.16 – Refine the boundaries of flood hazard overlays in response to:

- (a) changes to levels of protection provided by flood defences and other flood mitigation/management works; or*
- (b) new observations of flood events or more detailed assessment of the flood hazard; or*
- (c) changes in catchment hydrology due to land use change or climate change; or*

(d) changes in flood hydraulics due to channel aggradation or erosion, vegetation growth within the floodway or sea level rise.

90. The submitters' evidence and/or planning related submissions were also persuasive in two other significant respects.
91. The first of those was in relation to the points made about the unfairness of utilising a nomenclature of Level 4 for the overlay map and in Policy 11.1.9 which made that level appear to be part of a progression of flood levels, i.e. that Overlay Level 4 was applying to flood events which were larger than those described in Level 3. We are in agreement with the submitters that the use of a consecutive numeral approach in the policy and related overlay numbering carries that connotation, and further, that that is not accurate.
92. What Level 4 is identifying is the consequences of catastrophic failure of protective works, regardless of the size or volume of flood. Moreover, Levels 1 to 3 are identifying flood levels which will naturally occur in increasing depths despite the existence of the protective works, whereas Level 4 is identifying land protected by river protection works but which is placed at serious hazard risk if those works fail.
93. For those reasons we accept the recommendation in the Reply to Evidence from Mr Whyte that the use of the word 'residual' is more appropriate to differentiate the risk being guarded against in the Level 4 Overlay, from the progression of flood levels involved in Levels 1 to 3. That is best reflected by a separate policy wording using Policy 11.1.9 (d) as a separate policy and amending references to Level 4 throughout the PMEP to refer to 'residual flood hazard areas', 'residual risk areas' or 'residual risk' as appropriate for the text. We set out below the consequence of that in our decision on the title to the overlay map of Level 4, and for Policy 11.1.9 (d) and related Policy 11.1.11.
94. The second aspect where submitter evidence was persuasive with the Panel was in relation to the omission of recognition of elevated areas within the pocket area. That evidence meant that those areas either needed a lesser level of flood overlay identification, or in some limited localities even total removal of the overlays. It became obvious after the hearing that that evidence had also been persuasive with the Section 42A Report writers. Their reply to the submitter evidence addressed a number of changes of benefit to submitters after further on-site discussions, and reconsideration of the detail of the most recent LIDAR survey materials.
95. The Panel has considered each of those recommendations in detail and agrees with them as it was satisfied on the level of accuracy able to be achieved by application of the LIDAR dataset, coupled with extensive aerial photography from the 1998 flood in particular, that the

amended overlay delineations recommended were accurate. (The Broughan submission⁵ provides scope for those mapping amendments as it sought a review of the Overlay as it applied to the Tuamarina pocket.)

Decision

96. Policy 11.1.9 is amended to read:

Policy 11.1.9 – Establish a hierarchy of flood risk (Levels 1 to 3) as follows:

(a) Level 1: Land that suffers flooding of shallow, low velocity water in a flood event with an annual recurrence interval of 1 in 50 years;

(b) Level 2: Land that suffers flooding but the depth/velocity of the flooding is not well understood, or cannot easily be expressed relative to natural ground level, in a flood event with an annual recurrence interval of 1 in 50 years, or land within 8 metres of any lake, river or wetland;

(c) Level 3: Land that suffers flooding of deep, fast flowing water in a flood event with an annual recurrence interval of 1 in 50 years, or land in the bed of any lake or river or in any wetland; and

~~*(d) Level 4: Land that has the potential to suffer flooding of deep, fast flowing water in an extreme flood event that overwhelms stopbanks and other constructed flood defences.*~~

Through a combination of historical records and modelling, the Council has been able to characterise the nature of likely flood events. The different flood hazard levels in the policy (~~in terms of depth and velocity~~) reflect the potential severity of flooding (in terms of depth and velocity). Flood risk increases from Level 1 to Level ~~3~~⁴, creating a hierarchy of flood risk. The hierarchy allows the management of flooding to be specifically tailored to reflect the risk. In other words, avoiding or mitigating a Level 1 flood risk requires a different response to avoiding or mitigating a Level ~~3~~⁴ flood risk. ~~This is~~ The different responses to the levels are reflected in subsequent policies. The ~~three~~^{four} levels of flood risk will each be represented by separate flood hazard overlays. An annual recurrence interval of 50 years has been used as the relevant measure of flood risk as it reflects the standard specified in the New Zealand Building Code for managing flood risk to buildings. Level 2 and Level 3 also include land within or in close proximity to lakes, rivers and wetlands. This is because this land has a greater potential to be flooded. It also ensures that the risk of flooding is managed where no historical records

⁵ (229.1)

exist or where no modelling has been undertaken. ~~Level 4 is an extreme flood event and is rarer than a flood with an annual recurrence interval of 1 in 100 years.~~

97. Policy 11.1.11 is amended to read:

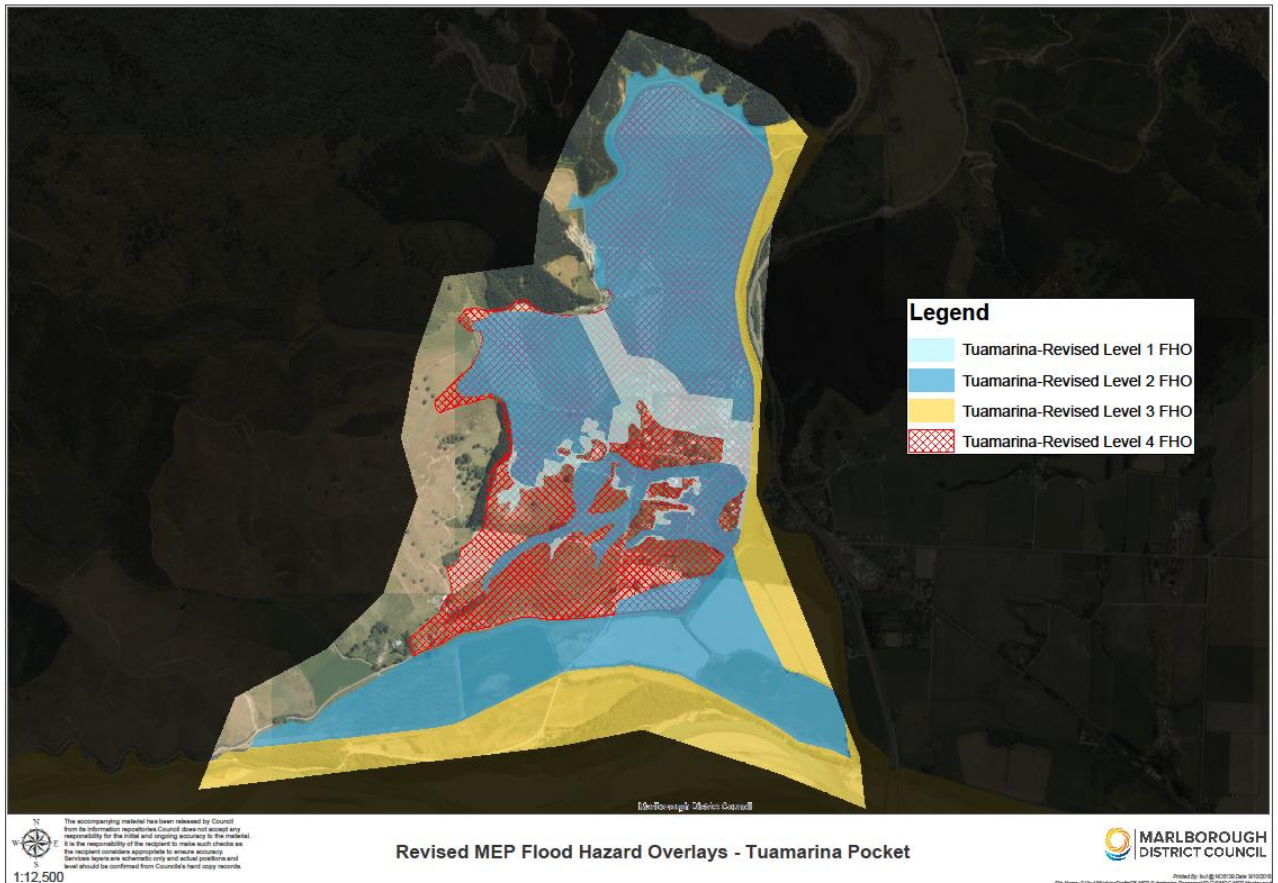
~~Policy 11.1.11 – Avoid locating intensive residential, commercial or industrial developments on land subject to a Level 4 flood risk. Identify land that has the potential to experience flooding of deep, fast flowing water in an extreme flood event that overwhelms stopbanks and other constructed flood defences as residual risk areas (Level R) and avoid locating intensive residential, commercial or industrial developments on land subject to a Level R flood risk.~~

It is possible that areas protected by flood defences will experience extraordinary flood events that exceed the annual recurrence intervals specified in Policy 11.1.4 and subsequently overwhelm stop banks or other flood defences. In some areas, this will result in a sudden occurrence of deep, fast flowing waters that could endanger life, property and regionally significant infrastructure. Although such an event has a very low probability of occurring in any given year, the adverse effects could be catastrophic if intensive development is allowed to occur in these areas.

The Council has considered this and has signalled through this policy that it would be inappropriate to allow any future commercial, industrial or multi-lot residential developments to occur in areas subject to a Level R4 flood risk. Level R indicates an extreme flood event that breaches flood protection works and is rarer than a flood with an annual recurrence interval of 1 in 100 years.

This policy applies to the rezoning of land that would facilitate these developments or to resource consent applications for subdivision or development. While there are not any specific rules that apply to the Level R overlay ~~In the case of~~ resource consent applications for residential subdivision and development and other intensive activities will be assessed against this policy. ~~The~~ threshold for the application of the policy is the creation or development of lots less than one hectare. The density of development where lots are in excess of one hectare is considered an acceptable risk given the probability of flood breakout occurring.

98. The Flood Hazard Areas overlay maps are amended by replacing the references to ‘Level 4’ with ‘Level R’.
99. The hazard overlay mapping for the Tuamarina Pocket area is amended as set out in the response to the Panel’s Minute 39 and as shown below:



100. Policy 11.1.13 and explanatory statement are amended to read:

Policy 11.1.13 – Recognise that the risk to life and property during flood events is may be greater in rural environments given longer response times.

...

The potential increase in flood risk caused by locating development in rural areas needs to be taken into account by individuals when purchasing properties. The Council can also recognise this issue when planning for residential growth in Marlborough. Consolidation of growth in and around existing urban areas will facilitate effective responses to flood events. This matter, along with other rezoning considerations needs to be taken into account when considering the rezoning of land in rural environments to provide for residential, commercial or industrial developments.

Flood Hazard Overlay Level Two impact

101. The combination of Policies 11.1.8 and 11.1.10 (a) and (b) were the subject of a submission by Mr. T. Offen⁶ which was agreed with by the s42A report writer and by the Panel for basically the same reason but the Panel preferred a slight difference in wording to that recommended. The issue can be dealt with succinctly.

102. Policy 11.1.8 provides:

Policy 11.1.8 – Unless provided for by Policy 11.1.10(a), avoid locating houses and other habitable structures, including associated on-site wastewater management systems, where they could be inundated or otherwise damaged by flood events.

103. Mr Offen made the valid point that on its face that wording appears to only allow for development solely in circumstances allowed for by Policy 11.1.10(a) set out below which only relates to Flood Hazard Level 1 land building development options. His submission drew attention to the fact that the wording of Policy 11.1.8 failed to refer to the fact that Policy 11.1.10(b) actually enabled other options for Flood Hazard Level 2 as well.

104. It provides as follows:

Policy 11.1.10 – Control the erection and placement of houses and other habitable structures within areas subject to a flood hazard overlay, and reduce the risks to life and property by:

(a) ...

(b) requiring houses and other habitable structures subject to a Level 2 flood risk to be subject to evaluation of the flooding hazard and effective mitigation actions; and ...

105. The Section 42A report writer agreed with that submission and recommended at paragraph 98 of the original report that all that was required to overcome the issue was an additional wording added to the explanatory statement to Policy 11.1.8 drawing attention to Policy 11.1.10(b).

Consideration

106. With one minor word change to we agree with the addition of the recommended sentence at the end of the explanatory statement to Policy 11.1.8. The word change is from ‘justify’ to ‘enable’.

⁶ (151.3)

Decision

107. Insert a new additional sentence at the end of the explanatory statement to Policy 11.1.8 as follows:

... In addition, Policy 11.1.10(b) requires an evaluation to establish the nature of the flood hazard in the Level 2 risk area. The results of the evaluation may enable locating a house or other habitable structure in this risk area.

108. The exception recognises that Policy 11.1.10(a) provides a means of mitigating the adverse effects of flooding by establishing minimum floor levels. In addition, Policy 11.1.10 (b) enables an evaluation to establish the nature of the flood hazard in the Level 2 risk area. The results of the evaluation may enable locating a house or other habitable structure in this risk area.

Hazard Overlay and Floodway mapping in other locations not in the Tuamarina Pocket

109. In a number of other locations submissions were received from various property owners in the following situations as to the need for closer reconsideration of mapped Flood Hazard Levels or Floodway Zone boundaries.

110. Those submissions included submissions in respect of properties owned by:

- S & D Groome, T Offen and A Harvey all at Clova Bay, Pelorus Sound mapped on Map 4 & 6;⁷
- S Parkes located at Queen Charlotte Drive Linkwater mapped on Map 13;⁸
- Raeburn Property Partnership at Waikakaho valley mapped on Map 23;⁹
- CG & WA Tozer immediately adjacent to the Wairau River on its southern side in the lower Rapaura/Spring Creek area mapped on Map 23 (acceptance of this submission would necessitate a consequential change to the adjoining property to the west);¹⁰
- KJ, JS & JA Timms, P Wilhelmus and Ormond Aquaculture located at Wairau Valley on the southern side of the river west of the township mapped on Map 28;¹¹
- Tim and Franzi Trust located at Riverlands by Cob Cottage Road mapped on Map 33;¹²
- CG & WA Tozer immediately adjacent to the Wairau River on its southern side in the lower Rapaura/Spring Creek area mapped on Map 149; and finally,¹³
- M Tschopp and J Park located in the Waihopai Valley and mapped on Map 169.¹⁴

⁷ S & D Groome (344.1 & 350.1), T Offen (151.1 & 151.5) and A Harvey (388.1)

⁸ (339.28)

⁹ (1084.7)

¹⁰ (319.17)

¹¹ KJ, JS & JA Timms (475.2), P Wilhelmus and Ormond Aquaculture (1035.4)

¹² (353.1)

¹³ (319.4)

- M Patrick located at 8 Market Street, Picton and mapped on Map 34.¹⁵

Section 42A Report

111. In each of those cases the Section 42A report and/or Reply to Evidence report detailed the reconsideration carried out by Mr Kuta after discussions on-site with the submitters. The reports detailed the changes suggested to be made and the reasons for those changes. The Panel, after its consideration of the evidence from submitters, was persuaded to amend the maps in the case of the submitters listed above.

Consideration

112. However, as to the extent of the changes in each case, the Panel has accepted the expert evidence and assessment of Mr Kuta and has agreed with his recommendations in each case for the reasons outlined in either the original report and/or the response to evidence. The Panel did not receive countervailing expert evidence to a level of detail which either rebutted or undermined the detailed recommendations made by Mr Kuta in each case.
113. Another reason why this discussion has been included in the Panel's decision is particularly because in the case of the Tozer submission, the amendments recommended have the effect of changing the Floodway Hazard extent on the adjoining properties to the west.
114. However, the Panel considers that the relatively small adjustments recommended to be made can be regarded as reasonably within the scope of the relief sought in the Clive Tozer submission, because that submission was seeking mapping changes based on water levels. It is obvious and logical that water levels will not be restricted in their effects by title boundary lines. Moreover, the Panel considers that the effects of the change sought is beneficial for the adjoining property owners in that it removes areas from the more restrictive planning treatment of the lands, and so the changes are not at all prejudicial to the respective landowners' interests. In short the result of the amendments approved by the Panel is to lessen the PMEP impact on the affected land not to increase it.
115. A map provided by Mr Kuta in response to Minute 39 showed minor consequences to other properties that the Panel accepts because the effect of the consequential changes is less restrictive for the properties affected. A number of other submissions made seeking amendments to Floodway mapping or Flood Hazard Level mapping were not accepted on reconsideration by Mr Kuta for the reasons he set out in the Section 42A Report. The Panel has carefully considered each of those submissions.

¹⁴ (631.42)

¹⁵ (434.1)

116. One submitter who did appear was Timberlink Limited. It sought removal of the Floodway zoning affecting a long elongated slither of land in the Taylor River area in Blenheim on which it conducts some of its activities, particularly involving the storage of timber or vehicle movements related to that activity. The land is leased from the Council and the lease enables the storage of timber.
117. The Panel's view of that request was that removal of the Floodway zoning at that location was inappropriate in terms of potential high flood levels which can inundate that land in major flood events as Mr Kuta stressed. The Panel's decision cannot of course affect the terms of the lease, but the Panel notes the lease does not enable either side not to abide by other statutorily based legal obligations. The Panel also noted the lease has only a relatively limited number of years to run. Its renewal or otherwise, and on what terms, can be reconsidered at that time.
118. Other issues of significance included a submission by G Hutchings¹⁶ which sought removal of the Flood Hazard Level 2 Overlay on a property adjacent to the Waikawa Stream. Mr Hutchings did not appear at the hearing. Removal at one location obviously has potential implications for other properties affected up or down stream from the submitter's property. The Section 42A Report drew the Panel's attention to the fact that the Council was undertaking a detailed hydraulic analysis of the Waikawa Floodway which would also include with greater certainty the detailed design flood level around the Hutchings property.
119. The Panel is of the view that protection of this floodway is of major importance to its safe functioning as it protects many properties downstream from the submitter and that a conservative approach is warranted until the detailed broader hydraulic analysis has been carried out. Once that has been completed a plan change can be carried out with design levels having more precision. For those reasons the submission is rejected.
120. A not dissimilar situation arose in respect of the submission by the NZ Institute of Surveyors seeking to remove Flood Hazard Level 1 mapping on the lower terraces immediately north of Renwick.
121. The Section 42A Report stated that major flood protection upgrade works were planned to be carried out in the 2019/2020 year but until they were complete that it was premature to remove the Flood Hazard Overlay. The Panel was well aware that this area has been the subject of flood risk exposure which is the very reason the flood protection upgrade works are planned to be carried out. Once those works have been completed then a plan change process

¹⁶ Grant Hutchings (48.1)

can be undertaken to reflect the detailed final outcome of the protection provided by those works. The Panel will recommend to Council that that planning process follows on the completion of the physical works.

122. The Panel recommends that once upstream upgrade flood protection works have been completed, increasing protection for the lower terraces north of Renwick, that Council embark on a detailed flood risk analysis and accompanying plan change proposal to amend the Flood Hazard Level 1 mapped area.

Decision

123. The Timberlink submission is rejected.
124. Amend flood hazard overlay maps 4, 6, 13, 18, 23, 24, 28 and 33 to reflect the maps provided in the Section 42A Report.
125. The Floodway Zone is amended as shown on the Section 42A Report in respect of Map 34 (Michael Patrick Limited), Map 169 (Tschepp and Park) and Map 149 (Tozer).
126. As a consequence to the changes to Mr Patrick's property on Map 34, the overlay over the adjoining property to the south is also amended.
127. As a consequence to the changes to Mr Tozer's property on Map 149, the overlay over the adjoining property to the west is also amended.

Liquefaction mapping detail

Policy 11.1.17

Avoid locating residential, commercial or industrial developments on Rural Environment or Rural Living zoned land on the Wairau Plain east of State Highway 1/Redwood Street, unless remediation methods are to be used to reduce the level of liquefaction risk to an acceptable level.

128. The potential liquefaction hazard posed in an earthquake prone area such as Marlborough with population bases and related built development on an alluvial plain was demonstrated graphically in the Christchurch 2010 and 2011 earthquakes. That risk is addressed in the PMEP in Policy 11.1.17:

Policy 11.1.17 – Avoid locating residential, commercial or industrial developments on Rural Environment or Rural Living zoned land on the Wairau Plain east of State Highway 1/Redwood Street, unless remediation methods are to be used to reduce the level of liquefaction risk to an acceptable level.

129. Levide Capital Limited in its submission sought that there be accurate mapping of the Dillons Point Formation soil type subject to liquefaction risk so that planning rules could be applied to proposed developments in that area.

Section 42A Report

130. The Section 42A Report did not recommend any change to the PMEP because it considered the area of the Dillons Point Formation was sufficiently described in the explanatory statement to Policy 11.1.17. Where relevant at the end of the first paragraph the explanatory statement says:

... Land underlain by the “Dillons Point Formation” on the Wairau Plain has an elevated risk of liquefaction. The Dillons Point formation is marine sediment deposited on the eastern margin of the Plain by previous marine processes and consists of grains of small and relatively uniform particle size. These characteristics, combined with high groundwater levels, are conducive to liquefaction. The western extent of the Dillons Point formation (at a thickness that represents a significant liquefaction risk) is approximately State Highway 1 and Redwood Street.

131. In the Reply to Evidence report, Mr Whyte amended the original recommendation to suggest an addition to the explanatory statement at the end of the first paragraph to state:

The northern and southern extent is generally the Richmond Ranges and the Wither Hills respectively.

Consideration

132. The Panel agrees essentially with the submitter’s concern that some more accuracy of aerial extent is needed as to the northern, and southern boundaries of the Dillons Point Formation soil type. The western boundary description is sufficient and as the explanation speaks of marine sediment on the eastern ‘margin of the plain’ that addresses the eastern boundary as being the sea.
133. The Panel agrees with the Reply to Evidence report that closer definition needs to be achieved to north and south by amendment to the wording of the explanatory statement. However, based on the local knowledge of some Panel members, there is some concern at the report writer’s final suggestion. Whilst technically it is possible to suggest that the ranges to the north may still lie within a description of the ‘Richmond Ranges’, that terminology is commonly utilised for the ranges to the west of the Kaituna Valley, or at most to the west of the Tuamarina Valley.

Decision

134. To avoid ambiguity or uncertainty, the explanatory statement for Policy 11.1.17 is amended by the addition of the following sentence at the end of the first paragraph:

... The western extent of the Dillons Point formation (at a thickness that represents a significant liquefaction risk) is approximately State Highway 1 and Redwood Street. The northern and southern extent is generally the foothills of the ranges to the north and south of the Wairau Plain.

Sediment removal from Lower Wairau drainage system

135. The drainage system in the Lower Wairau Plain is a prime example of a method utilised to avoid or reduce flood hazard risk. Those systems, and the means of maintaining them by removal of sediment build-up, were the subject of submissions by the Marlborough District Council¹⁷. The size and scope of the network was made clear when the Panel was advised that there are a total of 254 identified channels in the Drainage Network, and the extent of the Drainage Network which potentially comprised a watercourse was approximately 150km long.
136. The MDC submission sought permitted activity status for the repetitive maintenance activities of sediment and invasive weed removal. MDC Rivers Section stressed that its activities were of regional significance, and related to publicly owned assets in the drainage system involved and its associated drains and culverts. It also stressed that the sediment removal activity was intermittent and limited in duration concluding that as a consequence the effects of the sediment removal were small, but the benefits were large in avoiding or reducing flood hazard risk to adjoining properties.
137. In respect of the MDC request, the Section 42A Report¹⁸ recommended a new rule making provision for the weed removal on a broad basis. The Panel on its initial consideration issued Minute 30 seeking further information as follows. That minute describes the nature of the Panel's concerns:

3. *The MEP Hearing Panel (the Panel) noted that the rule would allow for sediment to be removed from any "drain" included in the Drainage Channel Network (as identified in the relevant overlay map in Volume 4 of the Proposed Marlborough Environment Plan).*
4. *The Panel recognises that for many drains, sediment removal is probably necessary to maintain channel efficiency and therefore the drainage function.*

¹⁷ (91.63)

¹⁸ Section 42A Report, page 333

5. *However, the Panel also notes that the Drainage Channel Network might also consist of rivers, some of which may support instream ecological values. Spring Creek is probably a notable example.*
 6. *The Panel would like to be informed as to whether there are rivers that form part of the Drainage Channel Network within which the removal of sediment, in accordance with the recommended rule and standards, would have the potential to cause a significant adverse effect on instream ecology? If the answer to that question is yes, then the Panel requests that these rivers be specifically identified.*
 7. *The Panel notes that one of the recommended standards restricts sediment removal when the depth of water is greater than 2 metres. This may provide appropriate protection for rivers, so the standard should be taken into account when answering the two questions above.*
138. The response provided to that minute came from Mr Peter Hamill the Council officer in charge of its Environmental Science and Monitoring (ESM) team. He reported that the ESM team and the Rivers Section of the Council have different views over which watercourses in the Drainage Network are rivers under the RMA or artificial drainage channels.
139. The Panel considers that it does not need to make a definitive ruling on that knotty issue. Rather its focus has to be on the potential 'cost' in effects terms of the introduction of the proposed permitted activity rule. Mr Hamill's response reached a similar conclusion¹⁹.
140. He also drew the Panel's attention to a 2016 NIWA report on the ecological state of waterways in the Lower Wairau Plain which he summarised as follows:
11. *In 2016 a follow up assessment of watercourses on the Wairau Plain (attached) was conducted by NIWA to determine and changes over time. The report shows that in general there has been a general deterioration in the ecological condition of the watercourses since 2002. The 2016 report also stated that the ecological values of watercourses on the Wairau Plains were limited by modified channels, heavy siltation and excessive in-channel vegetation dominated by invasive weeds.*
141. Amongst the species affected by weed and sediment removal were giant kokopu, which are rarely found in Marlborough, and very large numbers of eels – mainly shortfinned.
142. The invasive weed issue the Panel was told is addressed about every 10 years, and sediment removal has to be particularly carefully addressed for reasons described below²⁰:

¹⁹ Mr P Hamill, Response to Minute 30 of the Hearing Panel, para 7-10.

12. *The Drainage Network almost entirely made up of watercourses that form through the interception of groundwater and have very small flat catchment areas. As a result the sedimentation that enters the system is not coming from erosion of hills and mid slope failures, but from bankside collapse and inputs from subsurface drainage. This means that the volumes of sediment that end up in the waterways are of relatively small volumes.*
13. *The removal of sediment from the Drainage Network needs to be managed very carefully to ensure that the channels are not deepened any more than they currently are. If the channels are deepened it means that more ground water is intercepted which in turn reduces aquifer pressures. A deeper channel also increases the risk of bank collapse starting the whole cycle of the need for sediment removal again.*
143. Once again the Panel was informed that to avoid undue bank collapse sediment removal in the drainage system was only carried out every ten years.

Consideration

144. This is not an easy issue. The removal of sediment and invasive weed species are of major importance to the proper functioning of the waterways contained in the drainage network in physical and ecological terms, and the physical functioning is crucial to reduce or avoid natural hazard flood risk to properties. Policy 14.1.10 recognises those realities:

Policy 14.1.10 – Control water levels in the Marlborough District Council-administered drainage network by removing surplus water from the soils of the Lower Wairau Plain to enable primary production activities to continue.

This policy signals that the Council intends to continue to maintain its drainage network as a means of allowing landowners and resource users to continue accessing the productive capacity of the soil resources of the Lower Wairau Plain. This will require the active control of water levels within the drainage network and the maintenance of drains, small rivers and infrastructure (e.g. pumps, flood gates) that make up the network.

145. However, it is plain that the removal processes for both weed and sediment themselves have significant effects which warrant a conservative approach to their management.

²⁰ Mr P Hamill, Response to Minute 30 of the Hearing Panel, para 12-13

146. The Panel has decided the request for permitted activity status should be rejected, but that an addition should be made to the explanatory statement to Policy 14.1.10. That is needed to explain the ecological sensitivity of the drainage network environment and that that sensitivity requires long-term resource consent conditions to be in place so as to ensure management of the sediment and weed removal activities is appropriately controlled. The detail of such controls, and the possible need to vary them as improvements in management techniques are developed, is not seen as being able to be flexibly provided by standards in a resource management plan which would require cumbersome plan change processes to vary.

Decision

147. The request for a permitted activity rule is rejected but the Panel directs that the following sentences are added as an additional paragraph at the end of the explanatory statement to Policy 14.1.10:

However, the ecological sensitivity of the drainage network environment is such that long-term resource consent conditions need to be in place so as to ensure management of the sediment and weed removal activities is appropriately controlled. There will over time be likely to be a need to vary those conditions of consents as improvements in management techniques are developed.

Sediment removal from culverts and roadside drains

148. At a different scale and in widely differing circumstances roadside drains and culverts also serve a very useful purpose in avoiding flood risk on the surface of roads and adjacent properties.
149. NZTA in its submissions²¹ similarly sought permitted activity status for sediment removal. It stressed that its system of culverts and drains were of both regional and national significance in reducing or avoiding flood hazard risk to adjoining properties whilst protecting the safety of road users by removing flood hazard risk from road surfaces. NZTA also stressed the public ownership of the assets and the entity controlling the activities.
150. Its submissions sought permitted activity status for those repetitive maintenance activities of sediment removal. They also stressed that the sediment removal activity was intermittent and limited in duration, and again NZTA asserted that as a consequence the effects of the sediment removal were small, but the benefits were large in avoiding or reducing flood hazard risk to road surfaces and to adjoining properties.

²¹ New Zealand Transport Agency (1002.129 & 130)

151. The Section 42A Report pointed out that the rules in the notified PMEP only allowed this activity in beds of rivers and lakes and otherwise drew attention to Rule 2.82 which enables maintenance of existing structures.
152. NZTA responded at the hearing by asserting that many of their roadside drains would be within the RMA definition of 'rivers' and therefore it proposed the wording of a new enabling rule. The Reply to Evidence report expressed concerns the rule proposed by NZTA would enable other parties other than NZTA to have permitted activity status – the inference being that could lead potentially to uncontrolled activities with adverse downstream effects. That report also drew attention to the possibility of 'global resource consents' to meet the need.

Consideration

153. The Panel shares the concerns expressed in the Reply to Evidence. It also recognises, though, that there is a major public value in the proposed activities.
154. The Panel takes the view, however, that the most practicable response is not a rule and associated standards in the PMEP but rather long term 'global' consents being sought by NZTA to carry out those activities. Those consents can have a designed suite of appropriate conditions coupled with a detailed management plan.
155. Once again, as was the case with its decision on the MDC drainage network request, there is a desirable level of flexibility available using that approach. It enables relatively ready variation of conditions as techniques develop over time, rather than the cumbersome plan change process and the limitations inherent in rules and standards which have to be crafted as being available to all and which struggle to provide the level of precision needed in management techniques.

Decision

156. The submission requests of NZTA on this issue are rejected.

Works in riverbeds & floodway channels

157. Considerable submission input occurred, particularly from utility operators, in respect of the policies and rules in respect of maintaining clear floodways and riverbeds.
158. One of the more intriguing submissions received was that of Jet Boating NZ Inc²² which sought provision of a permitted activity status for 'minor' works to enable jet boat activities and events. The Jet Boating NZ Inc representatives who appeared explained that the Association had relatively few events which did not warrant the cost and complexity of repetitive resource

²² (64.1 & 612.1)

consent applications to prepare courses for jet boating events. They had relatively low membership numbers to bear what they saw as being unnecessary resource consent compliance costs. They drew attention to similar provisions in the Tasman Resource Management Plan. They generally emphasised, both in their written materials and orally, that the works they undertake are only ‘minor’ in nature, and that the channel formations or diversions they create are restored after each event – hence their assertion of ‘minor’ effect. Te Ātiawa filed a submission in opposition opposing the relief sought.

159. The Section 42A Report and Reply to Evidence queried whether the activities involved could really be categorised as being minor. The Panel had identified that point particularly in their questioning of the nature of works proposed. The response was that the works would only occur at most 3-4 times a year, and would not involve any greater movement of riverbed materials than could be achieved by a ten tonne digger in about 4 hours.
160. The Panel was not re-assured by that response. In the Panel’s view any significant disturbance of that magnitude, or other possibly lesser diversions of natural flow paths in a river bed, have potential adverse effects from sediment movement and ecological disturbance if nothing else which, depending on location, may well have effects which could be considerably more than minor. The alternative would be for the Jet Boating NZ Inc to apply for a long term consent in which it could detail precise locations, predicted effects, sediment control and restoration measures proposed, and a suite of proposed conditions to ensure effects were indeed able to be considered as being ‘minor’.

Decision

161. That the submissions are rejected.

Policy 11.1.7

Mitigate the adverse effects of gravel extraction on ecological and recreational values, water clarity and bank stability by: (a) – (b)

162. Policy 11.1.7 as to the mitigation of effects of gravel extraction provides:

Policy 11.1.7 – Mitigate the adverse effects of gravel extraction on ecological and recreational values, water clarity and bank stability by:

- (a) avoiding, where practicable, extraction from the wet bed of any river;*
- (b) placing limits on:*
 - (i) the timing of operations (especially to avoid bird nesting);*
 - (ii) the method of extraction;*
 - (iii) the location of the extraction and access to the location;*

- (iv) *the amount of gravel that can be extracted; and*
- (v) *the length of time over which the extraction can occur.*

163. A number of submissions were made seeking inclusion of other factors in Policy 11.1.7 to be considered. The Panel accepted the recommendation and reasoning of the Section 42A Report at paragraphs 83-85 which included a reference to mitigating effects on irrigation water intakes. The one exception related to the request by Burkhart Fisheries and others²³ that reference is made in the policy to effects on 'fisheries resources'. That was recommended for acceptance by the Section 42A Report but it is regarded by the Panel as being unnecessary as the effects of sedimentation arising from gravel extraction on fish species will be able to be addressed as part of the consideration of 'ecological values'.

Decision

164. Policy 11.1.7 is amended to read:

Policy 11.1.7 – Mitigate the adverse effects of gravel extraction on irrigation water intakes, ecological, and recreational values, water clarity and bank stability by: ...

Rule 2.7.8 and Standard 2.9.8

Minor upgrading in, on, or under the bed of a lake or river of the following utilities:

- (a) transmission line existing at 9 June 2016;**
- (b) telecommunication or radio communication facility existing at 9 June 2016.**

165. Rule 2.7.8 was recommended to be amended at page 32 of the Section 42A Report in response to various submissions. The Panel agreed with the reasons for deleting unnecessary references to dates which have now passed, but the Section 42A Report and the Reply to Evidence only made that recommendation in relation to sub-clause (a) whereas the Panel is of the view that sub-clause (b) needs similar amendment for the same reasons. Furthermore the request of Transpower²⁴ to include reference to 'and associated cables' was recommended at paragraph 265 of the Section 42A Report but omitted from the recommended wording at page 5 of Mr Whyte's Reply to Evidence. The Panel agrees with the Section 42A Report at para 265.

Decision

166. Rule 2.7.8 is amended as follows:

2.7.8. Maintenance, replacement and ~~Minor upgrading in, on, or under the bed of a lake or river of the following utilities:~~

²³ Burkhart Fisheries Limited and Lanfar Holdings (4) Limited (610.6), PauaMAC 7 Industry Association Incorporated (1038.8) and Legacy Fishing Limited (906.9)

²⁴ (1198.43)

(a) National Grid transmission line existing at 9 June 2016 and associated cables;

(b) telecommunication or radio communication facility existing at 9 June 2016.

167. Standard 2.9.8 has the same consequential amendments.

Standard 2.9.1.3

There must be no significant change to the external appearance of the structure. Painting a structure is not a significant change for the purposes of this Standard.

168. The report writer's recommendation in relation to this standard was accepted by the Panel but the Panel has decided to slightly reword the recommendation provided in the Section 42A Report.

Decision

169. Rule 2.9.1.3 is amended to read:

2.9.1.3 - There must be no significant change to the external appearance of the structure to the extent that the basic character and integrity of the structure is affected. Painting a structure is not a significant change for the purposes of this Standard

Standard 2.9.1.4

No greater than 10% of the cross-sectional area of the lakebed or riverbed must be disturbed.

170. A number of submitters²⁵ sought changes to clarify the area of riverbed involved and the Section 42A Report recommended a change to include after the word 'area' the phrase '(length and width), as measured from bank to bank,'. The Panel believes that an alternative phrasing achieves the clarity required with respect to rivers: 'in the active channel of a river at the time that the works are undertaken'. Further clarity is achieved by separating the standard for a lake and for a river.

Decision

171. Standard 2.9.1.4 is amended as follows:

2.9.1.4. With the exception of culverts, nNo greater than 10% of the cross-sectional area of the lakebed must be disturbed and no greater than 10% of the cross-sectional area in the active channel of a river at the time that the works are undertaken must be disturbed.

Standards 2.9.2.3 and 2.9.2.4

Permitted activity standards for rock protection structures

172. Submissions were lodged by Federated Farmers seeking deletion of two standards 2.9.2.3 and 2.9.2.4 on the basis that the word 'may' was used which is not apposite for a standard. The

²⁵ Federated Farmers (425.456), PC Hemphill (648.37) and NFL (990.29) and NZTA (1002.121)

Section 42A Report agreed that word was not appropriate for a standard which should not allow for discretion, but the report made the point that the subject matter of the two standards should be retained with more appropriate wording. As the submission sought deletion, amendment falls within the scope of that relief.

173. The Panel agreed with that approach but was not comfortable with the recommended wording. The decision below sets out the wording the Panel has approved for these two standards.

Decision

174. The submission is accepted to the extent that the wording in standards 2.9.2.3 and 2.9.2.4 are amended to read respectively:

2.9.2.3 *Rock ~~may be used for protecting~~ is permitted in the protection of existing structures.*

2.9.2.4 *Rock from damaged or redundant structures ~~may~~ is permitted to be recovered from the lakebed or riverbed.*

New Methods

Standards protecting nationally and regionally significant infrastructure

175. Submissions by KiwiRail²⁶ and NZTA in a further submission and by Transpower²⁷ sought various rules to protect their infrastructure and proposed various rules or standards to that effect, particularly in relation to drainage works. The Section 42A Report at pages 39 & 40 assessed some of the amendments as being a rather blunt tool which would make maintenance or development of the drainage network difficult as one example. The rule proposed by KiwiRail for example would in effect create a buffer zone for the rail corridor.
176. Transpower had requested recognition in the PMEP policies of the Electricity (Hazards from Trees) Regulations 2003 so as to protect the Grid, (and similar requests were made in other submissions on other PMEP Plan provisions.)
177. Understandably in each case the various submitters stressed the importance of protection of their infrastructure as being of national or regional significance.

Consideration

178. The Panel did not consider that protection of nationally or regionally significant infrastructure requires policy provision for additional rule or standard protection in the Natural Hazards

²⁶ (873.96)

²⁷ (1198.51)

chapter beyond what was available elsewhere in the PMEP, save that the Panel did recognise that two major potential impacts needed to be considered - which are now addressed below.

179. The first of the potential impacts on infrastructure which was considered to require a different approach arose from the need to give effect to Policies 10 & 11 of the NPSET. Those policies require Councils to ensure rules and activities do not impact through reverse sensitivity on the operation, maintenance, upgrading and development of the electricity transmission network. The PMEP as amended by the Panel's decisions recognises the importance of a buffer zone for protection of the National Grid Yard.
180. Those Regulations as to hazards to electricity lines from trees have statutory effect and bind all persons already as a matter of law. In the Panel's view nothing more is required by the PMEP than to draw attention to the existence of the regulations – they do not need to be incorporated by specific reference in the PMEP operative provisions. That is most readily achieved by a new Information Method in the Plan.
181. A new method 4.M.11 designed to ensure that outcome is achieved, is worded as follows, (and that response is common to all submissions on the PMEP seeking those Regulations to be incorporated):

4.M.11 The Electricity (Hazards from Trees) Regulations 2003 were introduced in recognition that trees need to be kept at a safe distance from electricity lines for public safety and to protect electricity supply. The Regulations define safe separation distances between trees and powerlines, specify who is responsible for ensuring clearances are maintained and place potential liability on the tree owner in some circumstances if any damage or accident occurs when trees touch powerlines. Further information on Electricity (Hazards from Trees) Regulations 2003 is provided via the Transpower New Zealand Ltd and Marlborough Lines websites

182. The second consideration was to address arguments by KiwiRail that in a similar manner the PMEP should ensure the rail network was not affected unreasonably in an adverse manner from reverse sensitivity. In that regard, it sought particularly that sufficient room for reasonable access was available on adjacent properties for necessary maintenance of structures on those properties without impinging on the rail corridor. In both rural and urban areas decisions on other submissions have recognised the need for a relatively narrow corridor of 1.5 m for that purpose.
183. In summary, the Panel preferred that the issues of integration of infrastructure with other development or activities were addressed by consultative methods. The aim is that integration

of infrastructure and public asset protection and maintenance was put in place in a manner which enabled works to be developed or conducted by using integrated approaches between the broader community and the affected infrastructure operators. The recommendations then in the original report and at page 15 of the report in response to the evidence are not accepted in full. Instead Methods 11.M.7 and 11.M.15 are to be amended as set out in the decision below.

Decision

184. The submissions seeking additional provisions protecting various aspects of infrastructure are only accepted to the extent of the amendments to Methods 11.M.7 and 11.M.15 below, as well as the insertion of the new Method 4.M.11 below:

11.M.7 Council activities

Maintain flood defences and other flood mitigation works to provide protection from flood events as set out in a Council Asset Management Plan. Policies 11.1.3 and 11.1.4 provide guidance as to when the Council will actively manage flood hazards through such intervention and the standards to which protection will be provided. The Asset Management Plan will be prepared in consultation with Marlborough’s tangata whenua iwi, relevant utility operators (particularly KiwiRail and NZTA), affected landowners and the community.

The Council may utilise the emergency provisions provided under Section 330 of the RMA to respond to foreseeable or actual hazard events in order to achieve Objective 11.1

The Council will continue to maintain soil conservation works within the Wither Hills Soil Conservation Reserve in accordance with Rivers and Land Drainage Asset Management Plan.

11.M.15 Gravel Management Strategy

Using the information gathered through Method 11.M.14, the Council will determine the sustainable yield of gravel from Marlborough rivers on an ongoing basis. The allowable annual extraction is recorded in the Gravel Management Strategy. The Strategy is used to guide the processing of gravel permit applications. The Gravel Management Strategy is incorporated into the MEP by reference. The Gravel Management Strategy will be prepared in consultation with Marlborough’s tangata whenua iwi, relevant utility operators (particularly KiwiRail and NZTA), affected landowners and the community.

4.M.11 Electricity (Hazards from Trees) Regulations 2003

The Electricity (Hazards from Trees) Regulations 2003 were introduced in recognition that trees need to be kept at a safe distance from electricity lines for public safety and to protect electricity supply. The Regulations define safe separation distances between trees and

powerlines, specify who is responsible for ensuring clearances are maintained and place potential liability on the tree owner in some circumstances if any damage or accident occurs when trees touch powerlines. Further information on Electricity (Hazards from Trees) Regulations 2003 is provided via the Transpower New Zealand Ltd and Marlborough Lines websites

Standards for Structures adjacent to afforested areas or in Floodways or Flood Hazard areas

185. In the Rural Environment Zone and to a lesser extent in the Coastal Environment Zone rules there are a series of standards applicable to the location of structures in afforested areas or in Floodways or Flood Hazard areas. There was varying submission support and opposition (detailed at pages 43-44 of the original S42A report.) There was particular submission support for buffer areas from afforested boundaries for residential buildings with Federated Farmers seeking exclusion of pump sheds from the application of those rules in those areas. Other submitters sought exclusion from the operation of those rules in relation to growing structures such as grape trellising.
186. A particular exemption was sought by Mr T Offen because his property in the Coastal Environment Zone had recently been through the subdivision consent approval process as a result of which conditions were imposed to address flood hazard mitigation measures sufficiently to enable a subdivision consent to issue.
187. The Section 42A Report proposed various amendments at page 44 only some of which were accepted by the Panel.

Consideration

188. The Panel was generally accepting of the submissions and evidence stressing that pump sheds were unlikely to be structures capable of causing major diversions in flow or other barriers to flow. Similarly in terms of buffer distances to forestry, the existence of pump sheds would not pose any risk to human life from fires, or be likely to obstruct access for fire-fighting.
189. However, the Panel was concerned at the prospect of flood breakouts tearing out structures for grape growing and what impediment or diversionary effect to flood flows that might lead to so it issued Minute 31 to Council's Rivers Section Manager, Mr Geoff Dick, for response. In summary his response was that vineyard structures should not be located in Floodway zoned areas or in Flood Hazard Level 3 areas but otherwise were not able to be described as a significant risk in Level 2 areas. A part of his views, which essentially summarised his response, follows:

4(ii)(d) In my opinion, outside formal managed Floodways/Floodway Zones, the risks to the wider community of not requiring resource consent for structures in Level 2 Flood Hazard areas is small. The same cannot be said for buildings or similar flood vulnerable structures where Council has an obligation to ensure Building Act requirements in relation to flood damage are met.

190. With the benefit of that guidance the Panel concluded that the submission relief sought could be met by various amendments to the relevant rules as set out in the decision below.
191. Finally, in respect of the submission by Mr Offen it is not reasonable for a recent detailed consideration of flood levels to be affected by the PMEP's more general standards. That is best dealt with for his property, or any similar property, by a separate scheduling of properties exempt for those reasons in an appendix in Volume 3 for the Coastal Environment Zone.
192. For that purpose it will be necessary for the new appendix to be inserted in the PMEP entitled 'Properties exempt from flood hazard requirements under Standard 4.2.1.13'. That appendix will then be able to be populated with subdivision consents where detailed flood hazard assessments have been conducted and the consent granted on conditions which have taken into account those flood hazards.

Decision

193. The submissions on these issues are accepted in part to the extent that the relevant rules in any zone are amended as follows:

3.2.1.7. A habitable structure or accessory building (other than a pump shed) must have a fire safety setback of at least 100m from any existing commercial forestry or carbon sequestration forestry on any adjacent land under different ownership.

3.2.1.15. A building or structure that has the potential to divert water must not be erected within a Level 2 Flood Hazard Area provided that the following buildings or structures are exempt:

- (a) Post and wire stock and boundary fences*
- (b) viticultural support structures*
- (c) structures which are both less than 6m² in area and less than 2m in height; and*
- (d) masts, poles, radio and telephone aerials less than 6m above mean ground level*

3.2.1.16 A building or structure must not be erected within a Level 3 Flood Hazard Area provided that the following buildings or structure are exempt:

- (a) post and wire stock and boundary fences,
- (b) structures which are both less than 6m² in area and less than 2m in height; and
- (c) masts, poles, radio and telephone aerials less than 6m above mean ground level.

3.3.10.3. *There must be no carbon sequestration forestry planting within 100m of a habitable structure or accessory building (other than a pump shed) located on any adjacent land under different ownership.*

4.2.1.6. *A habitable structure or accessory building (other than a pump shed) must have a fire safety setback of at least 100m from any existing commercial forestry or carbon sequestration forestry on any adjacent land under different ownership*

4.2.1.13 *A building or structure that has the potential to divert water must not be erected within a Level 2 Flood Hazard Area provided that the following buildings or structures are exempt:*

- (a) Post and wire stock and boundary fences;
- (b) viticultural support structures;
- (c) structures which are both less than 6m² in area and less than 2m in height;
- (d) masts, poles, radio and telephone aerials less than 6m above mean ground level; and
- (e) buildings and structures on those properties scheduled in Appendix 22

4.2.1.14 *A building or structure must not be erected within a Level 3 Flood Hazard Area provided that the following buildings or structure are exempt:*

- (d) post and wire stock and boundary fences;
- (e) structures which are both less than 6m² in area and less than 2m in height; and
- (f) masts, poles, radio and telephone aerials less than 6m above mean ground level.

19.2.1.8 *A building or structure that has the potential to divert water must not be erected within a Level 2 Flood Hazard Area provided that the following buildings or structures are exempt:*

- (a) Post and wire stock and boundary fences
- (b) viticultural support structures
- (c) structures which are both less than 6m² in area and less than 2m in height; and
- (d) masts, poles, radio and telephone aerials less than 6m above mean ground level

19.2.1.9. *A building or structure must not be erected within a Level 3 Flood Hazard Area provided that the following buildings or structure are exempt:*

- (a) post and wire stock and boundary fences,

- (b) structures which are both less than 6m² in area and less than 2m in height; and
- (c) masts, poles, radio and telephone aerials less than 6m above mean ground level.

194. A new Appendix 22 is inserted in Volume 3 of the PMEP entitled 'Properties exempt from flood hazard requirements under Standard 4.2.1.13'.
195. The Offen property described as within title identifiers 631325 to 631332 (inclusive) Marlborough Land Registration District and subject to Consent Notice 10549755.4 registered against such titles is to be inserted in the new Appendix 22.

Rules 21.3.11.1 and 21.3.12.3

Removal of aquatic weeds

196. Submissions were made by Marlborough District Council in respect of a range of rules relating to this issue to achieve more satisfactory working outcomes. Most led to recommendations as to amendments and reasoning supporting them in the Section 42A Report which the Panel accepted and do not need repetition here.

197. As notified those provisions provide standards for weed removal as follows:

21.3.11.1. Crack willow must not be planted on any floodway, except for the Wairau River downstream of the Wye River confluence.

21.3.12.3. The excavator must not enter flowing water.

198. However, in respect of rules 21.3.11.1 and 21.3.12.3 the Panel preferred different wording to that recommended. The Council submission sought deletion of Rule 21.3.11.1 and the Section 42A Report agreed as the Biosecurity Act 1993 covered the crack willow situation.
199. In respect of Rule 21.3.12.3 the Council sought addition of the words "where possible" and the Section 42A Report recommended 'where practical' to achieve more certainty for a standard.
200. The report writer at paragraph 406 recommended acceptance of a submission by MDC that this rule be deleted because the Biosecurity Act prohibited the sale and propagation of crack willow and so the rule was unnecessary. The Panel acknowledged that legislative position but felt it was informative to the public that the plan providing guidance on resource management issues in Marlborough should reinforce that restriction.

Decision

201. Rules 21.3.11.1 and 21.3.12.3 are amended as follows:

21.3.11.1. Crack willow must not be planted on any floodway, ~~except for the Wairau River~~ downstream of the Wye River confluence.

21.3.12.3. *The excavator must not enter flowing water unless there is no practical alternative.*

Rule 2.7

Permitted Activities

Section 42A Report

202. This submission was addressed in the Topic 9 Section 42A Report at para 159, as follows:

KMS Mining Ltd (1269.1 and .2) requests small –scale suction dredging where engines are no more than 7 kilowatts power be included as a permitted activity. Given that there is no analysis of potential effects potential effects and there is no suggested standards I recommend that the submission is rejected at this time.

203. Unfortunately for what otherwise was a very carefully prepared and considered report, it can only be said that in respect of this particular submission there has been an oversight of the attachments and content of the submission as it did indeed propose detailed standards. The report was correct, though, in the statement that there was very limited if any analysis of potential effects.

204. The request for relief in the submission requested a new permitted activity rule with the following standards:

Add new standards to support new permitted activity:

2.9.0. Small-scale suction dredging where engines are no more than 7 kilowatts power.

2.9.0.1 (a) The internal diameter of the nozzle does not exceed 150mm; and

(b) The mining activity is not carried out within 20 metres of any structure which has foundations in the river bed, or any ford or pipeline; and

(c) The activity does not cause any flooding or erosion; and

(d) No refuelling is carried out while the dredge is within the wet bed of the river; and

(e) The area dredged lies within the wet bed of the river, and no material is removed from within or under the banks of the river; and

(f) No suction dredge is operated within 50 metres of another dredge; and

(g) No explosives or earthmoving machinery apart from the dredge is used to move material in the river bed; and

(h) Any rocks moved to allow suction dredging to occur are returned as close as possible to the site from which they were removed; and

(i) There is no conspicuous change in the colour or visual clarity of the water body beyond a distance of 100 metres downstream of the point of discharge; and

(j) No lawful take of water is adversely affected as a result of the bed disturbance; and

(k) No dredging is to take place between the dates 1st May and 30th September to protect fish spawning; and

(l) Dredging is only to be carried out between the times of 7.00am and 7.00pm on any day with noise levels not exceeding 85dBL.

205. Unfortunately the attachments to the submission included a statement that the submitter was likely to be overseas at the time of the hearing and as a result no appearance occurred.

206. As a consequence the Panel only had before it the material in the submission and its attachments. Those included some generalised correspondence from West Coast Regional Council on the Crown Minerals fees review 2016 Discussion Document, examples of Plan provisions from the Tasman, and Otago and West Coast regional plans, and some detailed correspondence as to Wakamarina river access and Fish and Game spawning season concerns in that river.

207. As expressed in the submission the permitted activity status requested was very broad being as follows:

2.7.0. Small-scale suction dredging where engines are no more than 7 kilowatts power.

208. Issues raised by the proposal include the volumes of sediment likely to be disturbed, gravel volumes involved and their physical movement effects on the natural bed of the river and/or the amenity attributes of the river, the volumes of water diverted, noise and visual impacts on other recreational river users, potential impacts on Marlborough's tangata whenua cultural values, and impacts on indigenous fauna and ecosystems.

209. Other major concerns are how the potential number of such dredges could be controlled if permitted activity status was provided as sought, and the rivers or streams in which that status was sought to be applied. It was noted by the Panel that in the example provisions provided by the submission, that a number of water bodies were excluded in those other regions from the permitted activity provisions. Plainly those Councils had concerns as to adverse effects in some rivers if the permitted activity status was provided generally, as is sought in this submission.

210. While the proposed provisions seek to limit effects by limiting the size of the power source and nozzle diameter, the volumes able to be moved and the disturbance created will still be capable of being significant, and increased in potential adverse effects if more than one pump was active.

211. The Panel did not consider that it had sufficient information on most of those issues to form a reasoned decision on whether permitted activity status on the standards proposed would

safeguard the natural quality values which it is required to protect in terms of s 6 (a), (c) and (e) and s 7 (c), (d) and (f) of the Resource Management Act 1991.

Decision

212. The relief requested of a new permitted activity status rule with associated standards is rejected.

[New] Standard 2.13.1.5

213. Transpower (1198.51) requested that a new standard be included to protect the National Grid as follows:

2.13.1.x Within the National Grid Yard:

(a) the activity, and associated works must maintain compliance with the New Zealand Electrical Code of Practice (NZECP34:2001) at all times; and

(b) vegetation planting shall be undertaken to ensure that plants are selected and managed to achieve compliance with the Electricity (Hazards from Trees) Regulations 2003.

214. In addition it sought that the rules for Drainage Channel Network activities be amended as a consequence to make any activity not complying with this new standard a non-complying activity.

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215. The report writer pointed out that in fact both of the sub-clauses of the new proposed standard were matters which already carried a mandatory status without being in the Plan, but nonetheless he recommended sub-clause (a) should be included to give effect to the NPSET, but with the requested (b) being an Advice Note only.
216. The report writer pointed out that the consistent approach in the PMEP is not to use non-complying status, so he recommended that the request to amend the relevant rule was not accepted.

Consideration

217. In other topic decisions the Panel has concluded that it is unnecessary and not helpful for the Plan to incorporate by reference other statutory documents which have their own statutory effect. That being the case here the inclusion in the Plan of these proposed new standards is not necessary to protect the National Grid as it is already protected by the mandatory nature of compliance being independently required by other statutory instruments. The proposed new standard would add nothing to the mandatory nature of those other instruments. That

being the case, it is unnecessary to incorporate them in the Plan by reference to them as standards in the manner requested.

218. As that is the Panel's conclusion, the issue of a non-complying status rule drops away. (However, the Panel would not have accepted that status was required in any case.)

Decision

219. The requests by Transpower for a new standard 2.13.1.5 incorporating reference to the NZ Electrical Code of Practice and the Electricity (Hazards from Trees) Regulations 2003, and for an amendment to the relevant rule to make non-compliance with that new standard a non-complying activity, are rejected.