

Before Greater Wellington Regional Council

Under the Resource Management Act
1991

In the matter of the Proposed Natural Resources
Plan for the Wellington Region

And

In the matter of Submissions (S135) and Further
Submissions (FS25) by **Wellington
Water Limited**

STATEMENT OF EVIDENCE OF CAROLYN WRATT

[PLANNING]

28 August 2017

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INTRODUCTION

1. My full name is Carolyn Wratt.

Qualifications and Experience

2. I am a Principal Policy Planner with the consultancy firm of MWH, now part of Stantec.
3. I hold the degrees of Bachelor of Science (Geography and Resource Management) (1997) and Masters of Science (Hons) in Coastal Geomorphology and Resource Management (1999), both from the University of Auckland. I am a full member of the New Zealand Planning Institute and an accredited Resource Management Commissioner under the Ministry for the Environment programme Making Good Decisions.
4. I have eighteen years experience in planning – both regulatory and policy, including working primarily for local and regional authorities around New Zealand. In my capacity as both a consultant and council planner, I have provided policy advice to a number of clients, including assisting the Hearing Panel for the Proposed Waikato Regional Plan. I have appeared as an expert planning witness numerous times.

Code of Conduct

5. I confirm that I have read the Code of Conduct for expert witnesses in the Environment Court Practice Note 2014 and that I have complied with it when preparing this evidence. Other than when I state that I am relying on the advice of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

My involvement with the PNRP

6. I was contracted by Wellington Water Limited ("WWL") over twelve months ago to provide planning assistance with the PNRP hearings. I had no involvement in preparing WWL's submission or further submission.

7. I have been involved in two pre-hearing meetings on behalf of WWL. I attended the pre-hearing on 11 October 2016 regarding Schedule N: Stormwater Management Strategy, and the subsequent pre-hearing meeting on 3 November 2016 regarding the stormwater consenting framework and Schedule N. I have been involved in the expert conferencing as directed by the Hearings Panel on the definition of Regionally Significant Infrastructure and Policy P4.
8. Due to availability, I was not able to attend the pre-hearing meetings on the PNRP rules associated with bores, although I have been briefed by those who did attend on behalf of WWL.
9. I have also given evidence on behalf of WWL in Hearings 1 and 2, including filing Statements of Evidence and Supplementary Statements.

Scope of Evidence

10. I have been asked by WWL to prepare this evidence, covering those matters identified as being part of Hearing 3:
 - (a) Water allocation; and
 - (b) Natural Form and Function.
11. Within the scope provided by the WWL submission and further submission, I will cover:
 - (a) aspects of the PNRP relevant to these matters that I support; and
 - (b) aspects of the PNRP relevant to these matters that I do not support.
12. In preparing this evidence, I have taken into account the following Section 42A reports:
 - (a) Natural Form and Function (Yvonne Legarth);
 - (b) Water Allocation (Paula Hammond);

- (c) Technical - Water Allocation Conjunctive Management Framework (Mark Gyopari);
 - (d) Technical - Water Allocation The Form and Content Proposed Conjunctive Management Framework (Brydon Hughes);
 - (e) Technical - Water Allocation Minimum Flows and Allocation (Mike Thompson); and
 - (f) Technical - Water Allocation Aquifer integrity and dewatering (Doug Mzila)
13. I have also taken into consideration relevant provisions of the Resource Management Act 1991 ("RMA" or "the Act"), and higher level planning documents including:
- (a) New Zealand Coastal Policy Statement ("NZCPS");
 - (b) National Policy Statement for Freshwater Management 2014 ("NPS-FM");
 - (c) the proposed 2017 changes to the NPS-FM;
 - (d) National Policy Statement for Urban Development Capacity 2016 ("NPS-UDC"); and
 - (e) Regional Policy Statement for the Wellington region ("RPS")
14. I have also reviewed a number of submissions where submitters were seeking amendments to provisions that WWL submitted upon.

Structure of Evidence

15. My evidence is structured in four sections. First, I provide an executive summary of the individual issues that the evidence addresses. Second, I provide an overview of WWL's water takes, the key issues, and the relevant considerations from higher order planning documents. Third and fourth, I address the relevant individual provisions in relation to Water Allocation and Natural Form and Function, respectively, focussing on those aspects on which I disagree with the positions taken in the s42A reports.

EXECUTIVE SUMMARY

16. As this third hearing is focused on two sections of the Plan, my evidence only addresses those provisions pertaining to Water Allocation and Natural Form and Function. At a broad scale my evidence addresses the following:
- (a) ensuring that the definitions are clear and add clarity to the provisions in which they are used eg “bore”, “dewatering”, “efficient allocation”, “minimum flow or water level” and “core allocations”, “unused water”;
 - (b) amending Objective O52 so it is realistic and meaningful and focuses on improving the efficient allocation and efficient use of available water, rather than maximising which could come at a significant and unwarranted cost to the community;
 - (c) amendments to the core allocation in the Wellington Harbour and Hutt Valley Whaitua policies and rules to recognise the total allocation already consented rather than general allocation amounts which are not specific to the particular catchment (Policy WH.P2, Table 8.1, Table 8.2, Rule WH.R1);
 - (d) enabling water takes in the Wellington Harbour and Hutt Valley Whaitua below minimum flows and greater than those amounts already consented to be considered as non-complying activities rather than prohibited activities. Changing this approach means consequential changes for rules, policies and definitions (Policy P111, Policy WH.P2, Rule WH.R4)
 - (e) enabling the minimum flows to be considered at rates less than those specified in Table 8.1 where temporary maintenance or upgrading to the community water supply network is required (Rule WH.R4);
 - (f) recognition of the importance of the wider municipal water supply, not just water for the health needs of people;
 - (g) separation of the network from the end use (Policy P118);

- (h) recognition that concepts such as “*unused water*” are not appropriate to water allocated to a community or group drinking water supply and that they may need to be treated differently (e.g. Policy P119);
- (i) changes to improve clarity (e.g. Policy P120, Policy P121, Policy P131, Rule R140, Rule R141);
- (j) protection of the quality and the integrity of the aquifers (eg Policy P125). Of particular note is the need to protect the Hutt Valley aquifer and its importance as the community drinking water supply. This is addressed through suggested amendments to Rule R146, R147 and inclusion of a new rule regarding construction and excavation activities 5m below ground level in the Hutt Valley aquifer system;
- (k) ensuring the Reasonable and Efficient Use Criteria in Schedule Q are meaningful and achievable; and
- (l) ensuring policies are meaningful and focused (e.g. Policies P25 and P26); and
- (m) ensuring policies recognise the importance of operational constraints appropriately (Policy P25).

THE KEY ISSUES AND PLANNING FRAMEWORK

WWL's water takes

17. In the context of the RMA, all of WWL's activities enable “...*communities to provide for their social, economic and cultural wellbeing and for their health and safety...*”. The provision of safe drinking water is an essential service and enables people and communities to provide for their social, economic and cultural well-being and for their health and safety. Without a public water supply and corresponding network these outcomes cannot be achieved.
18. While WWL's physical structures for water supply, wastewater and stormwater are included in the definition of “*regionally significant infrastructure*”, the benefit of the network is not so much in the pipes

or treatment plants themselves, but in the activity they enable. At its simplest level, the water supply network is essential for life by providing potable water. Without the conveyance of the three waters, WWL's infrastructure is merely pipes in the ground.

19. Of particular relevance to this hearing are WWL's consents for water take. While more detail on these consents is included in "Attachment 1", WWL currently has the following consents for water takes:

River	Measuring point	Abstraction amount	Minimum flow / water level
Hutt River	The Hutt River at Kaitoke	Maximum daily abstraction volume 150 Megalitres Abstraction rate of 1735 L/s Maximum instantaneous rate 1850L/s	The permit holder shall cease all abstraction from the Hutt River at the Kaitoke Weir when flow upstream of the weir drops to 600 L/s. Abstraction shall not recommence until flow is over 600 L/s. When flow upstream of the weir is greater than 600 L/s but less than 1760 L/s, all flow above 600 L/s can be abstracted. When flow upstream of the weir is greater than 1760 L/s the maximum abstraction rate shall not exceed 1160 L/s plus 50% of those flows over 1760 L/s
			Construction of Macaskill storage lakes: For a maximum period of 3 years abstract water from the Hutt River at the Kaitoke Weir until the flow upstream of the weir drops to 400 L/s. Abstraction shall not recommence until flow is over 400 L/s. the consent holder may for a period not exceeding 3 years abstract water at a rate not exceeding 1,160 litres/second plus 50% of those flows over 1,560 litres/second when the flow upstream of Kaitoke Weir is greater than 1,560 litres/second.
Orongorongo	Truss Bridge	Average daily rate of	The permit holder shall

River	Measuring point	Abstraction amount	Minimum flow / water level
River		700 L/s Maximum daily volume 60 Megalitres per day Maximum instantaneous rate of 800 L/s	cease all abstraction in the Orongorongo River, Big Huia Creek, little Huia Creek and Telephone Creek when the flow at Truss Bridge drops to 100 L/s. Abstraction will not recommence until flow at Truss Bridge is greater than 100 L/s.
Big Huia Creek		Maximum daily abstraction 20 Megalitres Maximum instantaneous abstraction rate of 232 L/s.	
Little Huia Creek		Maximum daily abstraction 4.3 Megalitres Maximum instantaneous abstraction rate of 50 L/s.	
Telephone Creek		Maximum daily abstraction 4.3 Megalitres Max instantaneous abstraction rate of 50 L/s	
Orongorongo River and its tributaries being Big Huia Creek, little Huia Creek and Telephone Creek		Combined maximum 40 Megalitres per day Maximum 60 Megalitres per day when operational factors limit supply from other sources and there is insufficient water to meet aggregate public demand	
Wainuiomata River and its tributaries being Upper George Creek, Lower George Creek <i>plus</i> Orongorongo River and its tributaries being Big Huia Creek, little Huia Creek and Telephone Creek		Combined maximum 60 Megalitres per day	
Wainuiomata	Manuka Track	Daily average 700 L/s	The permit holder shall cease all abstraction

River	Measuring point	Abstraction amount	Minimum flow / water level
River		Maximum daily abstraction 60 Megalitres per day Maximum instantaneous abstraction rate is 800 L/s	from the Wainuiomata River when the flow at Manuka Track drops to 100 L/s. Abstraction will not recommence until flow is greater than 100 L/s. When flow at Manuka Track is greater than 100 L/s but less than 500 L/s, all flow above 100L/s may be abstracted up to 400 L/s. When flow at Manuka Track is greater than 500L/s the maximum abstraction shall not exceed 400 L/s plus 50% of the flow above 500L/s to a maximum abstraction rate of 800 L/s
Upper George Creek		Maximum daily abstraction 10 Megalitres per day Maximum instantaneous abstraction rate 120 L/s	
Lower George Creek		Maximum daily abstraction 15 Megalitres per day Maximum instantaneous abstraction rate 175 L/s	
Combined Wainuiomata River and its tributaries being Upper George Creek and lower George Creek		Maximum 40 Megalitres per day	
Wainuiomata River and its tributaries being Upper George Creek, Lower George Creek plus Orongorongo River and its tributaries being Big Huia Creek, little Huia Creek and Telephone		Combined maximum 60 Megalitres per day	

River	Measuring point	Abstraction amount	Minimum flow / water level
Creek			
George Creek (upper take)		Maximum instantaneous rate of 120 L/s Maximum take 10 Megalitres per day	
Waiwhetu Artesian Aquifer	Bloomfield Terrace and Mahoe Street, Waterloo, Lower Hutt, at or about map reference	Maximum combined mean maximum daily abstraction volume for Waterloo and Gear Island Water Treatment Plants, calculated as a moving daily mean over any continuous 12 month period, is 83.115 megalitres Maximum combined maximum daily abstraction volume for Waterloo and Gear Island Water Treatment Plants is 115 megalitres Maximum daily abstraction volume for Waterloo is 115 megalitres Maximum daily abstraction volume for Gear Island is 40 megalitres	combined take for Waterloo and Gear Island Water Treatment Plants 24 hour mean groundwater level does not fall below +2.3m relative to mean sea level If the 24 hour mean groundwater level is less than +2.3m relative to mean sea level, the permit holder may only abstract water at the discretion of the Manager, Consents Management, Wellington Regional Council Combined take from the Waterloo and Gear Island Water Treatment Plants 24 hour mean groundwater level does not fall below+ 2.0m relative to mean sea level.

Key Issues

20. In terms of the water takes relevant to WWL my interpretation of the PNRP's approach is that water takes are largely controlled by two matters – minimum flows (Table 8.1) and allocation amounts which together comprise “*core allocation*”. The concept of “*core allocation*” in the PNRP is central to WWL's submission and I expand on this later in relation to individual provisions. The concept is embedded in number of policies and rules; and (for the catchments relevant to WWL's takes) core allocation means the larger of either:
- (a) the maximum “*allocation amounts*” listed in Tables 8.2 and 8.3;
or
 - (b) the total amount allocated by resource consents.

21. This is problematic. Firstly, Greater Wellington Regional Council already knows with a high degree of certainty that the amount allocated by resource consents is significantly higher than the default figures in Table 8.2, which makes it questionable what purpose the lower number serves. This is particularly so when the reporting officers acknowledge that the significantly lower figures included in the PNRP are not representative of the characteristics or carrying capacity of the catchments.
22. I would support the replacement of the numbers in Table 8.2 with the cumulative total of the allocated amounts from all consents granted, which Greater Wellington Regional Council could produce with certainty. Consequently, I support amendments to both the general and Whaitua-specific policies and rules to reflect this approach.
23. Secondly, the PNRP classifies any further water take greater than the "core allocation" as a prohibited activity. I recommend this be a non-complying activity instead. Taking a step back, this matter must be considered in the context of the relevant higher order planning documents, to which the PNRP is required to give effect.

Water Allocation under Higher Order Instruments

The National Policy Statement for Freshwater Management 2014

24. At a national level, the NPS-FM sets out objectives and policies that direct local government to manage water in an integrated and sustainable way, while providing for economic growth within set water quantity and quality limits.
25. From the way in which core allocations are established in the PNRP it seems that WWL's existing takes might become treated as "over allocation" as that term is defined in the NPS-FM. The NPS-FM defines "over allocation" in two ways, one of which is:

The situation where the resource has been allocated to users beyond a limit.
26. The NPS-FM also defines a "limit", and a "freshwater objective", so that the expanded meaning of the above definition of "over-allocation" is:

The situation where the resource has been allocated to users beyond the maximum amount of resource use available which allows an intended environmental outcome in a freshwater management unit to be met.

27. Whether WWL's takes will become treated as "over-allocation" under the NPS-FM may therefore depend on the 'thresholds' established to meet particular environmental outcomes. While it is not altogether clear, it seems that the proposed "allocation amounts" (i.e. the figures in Table 8.2) might be treated as such thresholds, which would require WWL's takes to be treated as "over-allocation" under the NPS-FM, with severe consequences. In particular, Objective B2 of the NPS-FM is highly directive and seeks to:

avoid any further over-allocation of fresh water and phase out existing over-allocation

and the corresponding Policies B5 and B6 are in similarly directive terms.

28. Conversely, if the "interim" default allocation amounts are replaced with the actual consented take amounts, such that core allocation simply means the total consented allocation, then it would seem that the catchment management unit for Awa Kairangi/Hutt River catchment is not over-allocated as implied by the use of two values.
29. It seems unusual that desktop interim allocation amounts are used in the PNRP, but then are undermined by allowing for continuation of the existing take levels that are considerably greater. This does not seem to amount to an actual assessment of the likelihood of an adverse impact on freshwater sustainability.
30. Further, Policy B5 of the NPS-FM does not necessarily lead one intuitively to a prohibited activity status. Without an actual assessment of the likelihood of an adverse impact on freshwater sustainability a decision to impose a prohibition cannot be justified; because non-complying status, appropriately worded, can just as surely assure the necessary outcome.
31. The directives against over-allocation in the NPS-FM must also be read alongside other aspects of the NPS-FM. In particular Appendix 1 of the NPS-FM identifies municipal and domestic water supply as a

National Value. The objective and policy framework in Part CA of the NPS-FM requires regional plans to establish freshwater objectives for national values, and any other values, that are nationally consistent, whilst recognising regional and local circumstances. It seems that Part CA contemplates a balancing of values, which will be specific to each region.

32. One relevant regional circumstance that needs to be recognised in the setting of freshwater objectives, is the inherent redundancy in WWL's takes; i.e. the takes collectively authorise greater quantities than is ever taken, which enables the 'load' to be varied at each abstraction point according to circumstances, allowing for better management of freshwater values, and better security of supply.

The National Policy Statement on Urban Development Capacity 2016

33. The NPS-UDC is also relevant in its expectation of accommodating growth, and the implications for water supply infrastructure and therefore water allocation. The NPS-UDC came into force on 1 December 2016 which was after the PNRP had been notified. The NPS-UDC directs local authorities to provide sufficient development capacity in their district plans to ensure that demand can be met. This includes both the total aggregate demand for housing and business land, and also the demand for different types, sizes and locations. Development capacity refers to the amount of development allowed by zoning and regulations in plans that is supported by infrastructure. This development can be 'outwards' (in terms of greenfield sites) and/or 'upwards' (by intensifying existing urban environments).
34. The NPS-UDC guidance released by Ministry for the Environment identifies the Wellington region as a medium-growth urban area. The definition of "*medium-growth urban area*" in the NPS-UDC is one where the resident population is projected to grow by between 5% and 10% between 2013 to 2023. At its simplest level, more population equals increased water demand. Targeting water efficiency can only achieve so much, and this PNRP needs to recognise the importance of providing the current and future population with a secure, safe and sufficient water supply. As outlined in Mr Blakemore's evidence, current estimates indicate the population growth will cause water

supply shortfalls at approximately 2041. However as the NPS-UDC has only just come into force, these growth estimates have not yet been rationalised with the requirements of the NPS-UDC for the Wellington Region. It should be noted that the NPS-UDC does not just apply to population growth but also business land.

Regional Policy Statement for the Wellington Region

35. In terms of the RPS, there are several objectives and policies of relevance. Of specific relevance to the municipal and domestic water supply network is Policy 17:

Policy 17: Water allocation and use for the health needs of people – regional plans

Regional plans shall include policies, rules and/or methods to ensure the allocation and use of water from any river or groundwater source provides sufficiently for the health needs of people, including:

- (a) the taking of water by any statutory authority that has a duty for public water supply under any Act of Parliament;
- (b) the taking of water for reticulation into a public water supply network; and
- (c) the taking of water for community supplies.

36. I note the difference in approach between Policy 17 which is highly directive using the word “shall”, and Policy 18 Protecting aquatic ecological function of water bodies – regional plans which is less directive with the use of “promote”, “discourage” and “maintain”. While it could be argued that neither is more important than the other, it is worth noting the different levels of directedness.

37. As I emphasised in the Hearing 1, the context of the RPS objective and policies pertaining to regionally significant infrastructure (and the water supply network which is included in this definition) is key. The local authority water supply network is included in the definition of “regionally significant infrastructure” in terms of both the RPS as well as the PNRP. The RPS Objective and Policies relevant to Regional Plans and regionally significant infrastructure are:

- (a) Objective 10: The social, economic, cultural and environmental, benefits of regionally significant infrastructure are recognised and protected

- (b) Policy 7: Requires regional plans to include policies and/or methods that recognise the benefits of regionally significant infrastructure;
 - (c) Policy 8: Requires regional plans to include policies and rules that protect regionally significant infrastructure from incompatible new use and development;
 - (d) Policy 39: When reviewing regional plans, particular regard shall be given to the social, economic, cultural and environmental benefits and protecting regionally significant infrastructure from incompatible use and development.
38. My evidence is set against the backdrop of the functions and responsibilities of territorial authorities and municipal water supply authorities (in this case WWL) as regards the communities they serve, the fundamental importance of a secure and reliable supply of water in fulfilling those functions, and the unique position which this places WWL in in terms of governance, infrastructure provision and cost and the need for certainty in planning for growth.
39. The PNRP appears to prioritise water for the health needs of people (a term defined in the PNRP) but this approach overlooks the scope of the functions and responsibilities of local authorities and the importance of water taken by WWL which is used for a range of other purposes fundamental to the proper functioning of urban communities and the wellbeing of their inhabitants. Local authorities have a range of functions and responsibilities under relevant legislation beyond the supply of potable water. Public water systems are required to supply a wide range of uses in order to promote the health, safety and wellbeing of the community, including hospitals / schools / correctional facilities, fire fighting, public sanitary facilities, public facilities and amenities, provision to businesses, other household use and more. These uses of water are essential to the maintenance of the economic, social and cultural fabric of our communities.
40. The unique characteristics of WWL's infrastructure also set them apart from most other water takers, particularly insofar as WWL has little influence on the end use of the water, infrastructure varies in quality,

maintenance is ongoing and funds have to be raised via the LTCCP / Annual plan process. The Section 32 report for water quantity identifies the various uses for the approximately 414 million cubic metres per year consented water allocated in the Wellington Region. Public water supply is the largest single use of allocated water (39.5%) across the region as a whole. Other uses include irrigation (35.6%), Wairarapa water races (19% of the total surface water allocation), hydro electricity generation accounts (14%), industry, frost protection and filling ornamental lakes account for less than 5% of the total annual allocation in the region, and there are also small amounts of water used for activities such as private water supply, stock drinking water and dairy shed washdown.¹

41. Given the critical contribution of WWL's activities to the well-being and functioning of the communities, it is entirely appropriate that water takes for the purpose of community drinking water supply (a defined terms in the PNRP) are given a preferential position in terms of water allocation.

WATER ALLOCATION

42. WWL submitted on 54 different provisions associated with water allocation that form part of Hearing Stream 3. I have focused on those areas where WWL's submission sought a different outcome to either the notified PNRP, or where the Section 42A has not accepted the relief sought in WWL's submission.

Definition of Aquiclude

43. The WWL submission sought the introduction of a definition for the Include new definition of "Aquiclude" in reference to Rules R146 and R147. The submission suggested "*Aquiclude is a geological formation or stratum that confines water in an adjacent aquifer*" or to like effect.
44. The Section 42A report recommends rejecting this point of submission and considers that WWL's concerns with regard to the confining layer in the Hutt Valley would be more appropriately addressed through

¹ Section 2.1, Section 32 report: Water quantity for the Proposed Natural Resources Plan for the Wellington Region (July 2015)

amending Rules R146 and R147. I note that the most significant amendment recommended by the Section 42A report to Rule R146 is inclusion of a condition that requires depths to not exceed 5m where the bore is located within a community drinking water supply protection area.

45. I can see that an alternative solution to use of a new term and its associated definition would be to limit the depth of bores, piles and other structures in community drinking water supply protection area which are identified on a map. Such an approach provides more certainty for all uses of the plan, and I discuss the amendments to that effect in my discussion of Rules R146, R147 and R148.

Definition of Bore

46. As notified:

A structure or hole in the ground constructed for the purpose of:

(a) investigating or monitoring the conditions below the ground surface, or

(b) abstracting liquid substances from the ground, or

(c) discharging liquid substances into the ground.

47. The WWL submission accepted the definition but was a further submitter supporting PowerCo [29/062] who sought an exemption for temporary well-pointing from the definition. I note that the Section 42A addresses well-pointing in the context of the definition of "dewatering". While I support the clarification of well-pointing in the definition of "dewatering", the recommended additional text refers to "*the installation of well points to a depth no greater than 5m below ground level (without the well points being considered as a bore)*".² I consider for clarity that the definition of "bore" should also be amended to address the relationship between bores and well points.

48. I therefore seek the following amendments to the definition of "bore":

A structure or hole in the ground constructed for the purpose of:

(a) investigating or monitoring the conditions below the ground surface, or

² Paragraph 723, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

- (b) abstracting liquid substances from the ground, or
- (c) discharging liquid substances into the ground.

The installation of well points less than 5m below ground level are not considered a bore.

Definition of Dewatering

49. As notified:

The abstraction of groundwater so as to lower the water table for the period of time required to enable maintenance, excavation, construction, or geotechnical work to proceed in the dewatered area, or to sustain a lower localised water table.

50. WWL's submission sought the inclusion of "*diversion*" in the definition and I note that the Section 42A report recommends accepting this amendment.³ I support such an amendment as follows:

The abstraction and/or the diversion of groundwater so as to lower the water table for the period of time required to enable maintenance, excavation, construction, or geotechnical work to proceed in the dewatered area, or to sustain a lower localised water table.
Dewatering may include the installation of well points to a depth no greater than 5m below ground level (without the well points being considered as a bore).

Definition of Efficient Allocation

51. As notified:

Includes economic, technical and dynamic efficiency.

52. WWL's submission considered that these terms are not widely understood. I note that the Section 42A report recommends additional text be added to the definition to match the wording in the MfE guidance on the NPS-FM.⁴ While consistency with higher level documents is a sensible approach, the explanations in the MfE guidance do not provide any further clarity. For example, I am not sure what is meant by the following sentences:

³ Paragraph 720, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

⁴ Paragraph 539, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

- (a) uses which have the highest value to society (this is a very subjective matter);
 - (b) create headroom;
 - (c) maximising the proportion of water beneficially used in relation to that taken; and
 - (d) adjusting the use of water over time to maintain or achieve allocative efficiency (this part of the definition seems circular given that the definition is for efficient allocation).
53. I note that the only time the term "*efficient allocation*" is only used is in Policy P11. Objective O52 uses the term "*efficiency of allocation*" which goes on to address the technical efficiency concept, but the Plan does not address economic or dynamic efficiency. I therefore question whether the definition is needed and whether it increases clarity for the Plan? As the term "*efficient allocation*" is already defined in the NPS-FM, I suggest deleting it from the PNRP.

Definition of Minimum Flow or Water Level

54. As notified:

The flow or water level at which abstraction from a river or groundwater directly connected to surface water is restricted by Wellington Regional Council (or required to cease). The flow in a river or water level in a lake may naturally drop below the interim minimum flow or water level following the restriction/suspension of abstractions.

55. The WWL submission considered this definition is circular as it refers to itself. Although the Section 42A does not address this submission point I agree with the submission to the extent that the definition is not particularly helpful and does not aid understanding or interpretation as it is essentially describing the action to be taken when the characteristic is present rather than the physical characteristic itself. The second sentence does not seem to be adding anything to the definition. As an alternative approach, it may be more useful to note that the real definitions are contained in the Waitua chapters, and the definition direct readers to those chapters. I therefore suggest the following amendments:

The flow or water level at which abstraction from a river or groundwater directly connected to surface water is restricted by Wellington Regional Council ~~(or required to cease). The flow in a river or water level in a lake may naturally drop below the interim minimum flow or water level following the restriction/suspension of abstractions.~~ The minimum flows or water levels are specified in the Whaitua chapters (chapters 7 – 11).

Definition of Unused Water

56. As notified:

Where more than 25% of the maximum daily amount of water allocated to a person for use on a property they own or have an interest in, but not including water that is transferred for use at another location by means of a transfer permit, is demonstrated to not be used over a period of two consecutive years.

57. WWL's submission sought that the definition be amended to specifically exclude community drinking water suppliers. The Section 42A recommended excluding water allocated to a community or group drinking water supply⁵ and I support the inclusion of the following text at the end of the definition:

Unused water does not apply to water allocated to a community or group drinking water supply.

58. This is supported by Mr Blakemore's evidence where he discusses the need for redundancy and flexibility in the water supply network.

Definition of core allocation

59. As notified:

The maximum amount of water that can be taken by all resource consents within a catchment management unit or catchment management sub-unit, other than the amount allowed by supplementary allocation.

60. Although WWL did not submit on this defined term, the Section 42A report recommends substantial amendments.⁶ As I alluded to in the Introduction to my evidence, I am concerned at the PNRP approach

⁵ Paragraph 578, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

⁶ Paragraph 320, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

to the allocation amounts – not only the numbers themselves that are included in Table 8.2, but also the framework to prevent any exceedance of those allocation amounts as a prohibited activity. I therefore am also concerned at the amended changes to the definition of “core allocation” as recommended in the Section 42A report which largely combines Policy P113 and the policies regarding water allocation from the Waitua chapters.

61. If the Hearings Panel were of a mind to retain a high level of detail in this definition, I would suggest the following amendments, consistent with the other changes to the policy and rule framework I promote elsewhere:

~~The maximum amount of water that can be taken by all resource consents within a catchment management unit or catchment management sub-unit, other than the amount allowed by supplementary allocation.~~

(a) For the catchments and sub-catchments listed in the Waitua chapters: the total amount allocated by resource consents as provided for in Tables 7.3-7.5, Tables 8.2 and 8.3 and Tables 10.2 and 10.3 or

(b) For rivers (and their tributaries) and direct connection (Category A) groundwater and high connection (Category B) groundwater not covered by (a):

(i) 50% of the mean annual low flow for rivers with mean flows of greater than 5m³/sec. or

(ii) 30% of the mean annual low flow for rivers with mean flows of less than or equal to 5m³/sec.

Objective O52 Efficient Allocation

62. As notified:

The efficiency of allocation and use of water is improved and maximised through time, including by means of:

- (a) efficient infrastructure, and
- (b) good management practice, including irrigation, domestic municipal and industry practices, and
- (c) maximising reuse, recovery and recycling of water and contaminants, and
- (d) enabling water to be transferred between users, and
- (e) enabling water storage outside river beds.

63. The WWL submission expressed a number of concerns with this objective, with particular concern that it is not practicable in the

context of urban water supply. I note that the Section 42A recommends substantially shortening the Objective so it is focused on the outcome, rather than how that outcome is achieved. I support this more focused approach.

64. However I still have concerns about the use of the word "maximise" as this term is open to interpretation. "Maximising" efficiency of allocation and use could increase continuously at unrealistic cost, irrespective of the incremental gains and irrespective of the starting point. Achieving "maximum" efficiency of allocation or use could be unrealistically expensive. In terms of workability of the objective, there is no way of establishing when maximum efficiency has been reached. This concept may not be consistent with the Local Government Act requirements for water suppliers to be cost-effective.
65. I understand that the concept underpinning water management is that it is a continuous 'journey' to improve efficiency of water use, which over time should result in greater benefit for a given quantity of water used per person. However there is no end point at which the efficiency of allocation and use of water could be said to be "maximised". WWL invest large amounts of public capital in significant infrastructure assets for the purposes of taking, treating and reticulating water, which is an expensive process. Any reduction in water consumption therefore leads to a direct cost saving for WWL and also extends the life of existing infrastructure, delaying capital expenditure. WWL is thus strongly incentivised to actively promote water conservation and demand management in order to minimise operating costs, irrespective of the directives in PNRP.
66. If the Panel were of a mind to retain the concept of incremental gain, I suggest the following as a replacement Objective O52:

Water resources are managed to improve the efficient allocation and efficient use of available water. The efficiency of allocation and use of water is improved and maximised through time, including by means of:

~~(a) efficient infrastructure, and~~

~~(b) good management practice, including irrigation, domestic municipal and industry practices, and~~

~~(c) maximising reuse, recovery and recycling of water and contaminants, and~~

~~(d) enabling water to be transferred between users, and~~

~~(e) enabling water storage outside river beds~~

Policy P107 The framework for taking and using water

67. As notified:

The framework for the take and use of water recognises:

(a) groundwater connectivity to surface water shall be managed as described in Schedule P (groundwater connectivity), and

(b) the take and use of water does not exceed allocation amounts provided for in the Plan, and

(c) minimum flows or water levels are managed in accordance with the Plan provisions.

68. WWL's submission merely notes that WWL have a sophisticated model and work closely with GWRC hydrogeology staff on management of the aquifer. I note that the Section 42A report recommends that Clause b) is amended to focus on "core allocation" amounts.

69. As I alluded to in the Introduction to my evidence, I am concerned at the PNRP approach to the allocation amounts – not only the numbers themselves that are included in Table 8.2, but also the framework to prevent any exceedance of those allocation amounts as a prohibited activity. Based on this, I therefore am also concerned with Clause b) of Policy P107 and the changes to the definition of "core allocation" as recommended in the Section 42A report (which I discuss earlier in my evidence). I support the recommendation in the s42A report to substitute "core allocation" for "allocation amounts" in paragraph (b), as that will mean the take and use framework appropriately recognises and accommodates existing takes. However, as I recommend increased takes be managed as a non-complying activity status, I would support some recognition of this within Clause (b). If the Panel were of a mind to consider such changes, alternative wording could be:

b) the take and use of water does not exceed core allocation amounts, unless it meets the principles in Policy P110

70. The other changes recommended include insertion of a new Clause d) which excludes permitted and controlled activities provided for in the Plan and Section 14(3)(b) and (e) takes from the allocation amounts, or being subject to minimum flows or water levels. My only

further comment is that Clause d) should specify that it is referring to “Section 14(3) of the RMA” for clarity.

Policy P109 Lapse dates affecting water takes

71. As notified:

Resource consents to take and use water shall be given effect to within three years of the commencement date unless a longer lapse date is justified due to the scale or complexity of the activity. For the purpose of this policy, “given effect to” includes the installation of infrastructure, water meter or flow measuring device or the use of the water in accordance with the purpose of the resource consent.

72. WWL's submission sought clarity for the scenario where a consent was granted before building new bulk supply capacity, but then growth forecasts changed which would defer the start date beyond the three years. The Section 42A considered this scenario could be assessed when applying for a resource consent or for an application to extend a resource consent's lapse date. Ms Hammond drew attention to the number of objectives and policies around providing water for the health needs of people, and suggested that a lapse date of greater than three years could be considered under Policy P109 where robust population growth data is supplied.⁷ I accept this assessment and seek no further amendments.

73. As an aside, I note that Ms Hammond's responses to this submission point appear to contemplate more infrastructure being built to go with new consents to take water that respond to population growth projections. This seems to imply that new consents to take water would not just be renewal of old consents, or transfer of allocation between different locations in the same catchment, but would actually be increasing the allocation (which is currently proposed as a prohibited activity by the PNRP).

⁷ Paragraph 636, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

Policy P111 Water takes at minimum flows and water levels

74. As notified:

The take and use of water shall not occur when flows or water levels fall below minimum flows or water levels in the whatua chapters (chapters 7-11), with the exception that water is available below minimum flows:

(a) for firefighting, an individual's reasonable domestic needs and the reasonable needs of an individual's animals for drinking water as provided for by section 14(3)(b) and 14(3)(e) of the Resource Management Act 1991, or

(b) for the take and use of water permitted by rules in the Plan, or

(c) as authorised by resource consents in accordance with Policy P108.

75. WWL's submission supported this Policy although sought the inclusion of root stock protection to be consistent with Policy P112. I note that the Section 42A recommends deleting rootstock protection from Policy P112⁸ which would negate inclusion of rootstock protection in Policy P111. As an aside, there seems to be a high level of duplication between Policy P111 and Policy P115 and I wonder whether these could be rationalised. Policy 111 pertains to the action of taking and using water when flows or water levels fall below the minimum, whereas Policy P115 addresses authorising water takes when flows or water levels fall below the minimum. I wonder whether they amount to the same issue?

76. As I discuss further in this evidence at paragraph 181, I seek amendments to Policy P111 to prioritise community water supply where water take applications exceed minimum flows or allocation limits.

Policy P112 Priorities in drought and serious water shortage

77. As notified:

In times of drought and serious water shortage when flows or water levels fall below the minimum flows or water levels in the whatua chapters of the Plan (chapters 7-11), water takes shall be limited to that required for firefighting, human health, animal drinking water and rootstock protection.

⁸ Paragraph 497, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

78. WWL's submission sought two amendments – firstly to use defined terms and replace “*human health*” with the defined term “*health needs of people*” and secondly to re-order the policy in terms of priority.
79. I consider the Policy would benefit from both of these amendments, as using a defined term increases clarity and I note that the Section 42A report recommends using the defined term “*health needs of people*”. While Ms Hammond recommended reordering the priorities in Policy P112,⁹ this was not shown as a recommended amendment. I therefore seek the following amendments:

In times of drought and serious water shortage when flows or water levels fall below the minimum flows or water levels in the whitua chapters of the Plan (chapters 7- 11), water takes shall be limited to that required for ~~firefighting, human~~ health needs of people, animal drinking water and ~~firefighting~~ rootstock protection.

Policy P113 Core Allocation for Rivers

80. As notified:
- The maximum allocation amounts for rivers (and their tributaries) and directly connected groundwater not listed in Rules R.R1, WH.R1 and K.R1 in the whitua chapters of the Plan (chapters 7, 8 and 10) is:
- (a) for rivers with mean flows of greater than 5m³/sec, 50% of the mean annual low flow, or
- (b) for rivers with mean flows of less than or equal to 5m³/sec, 30% of the mean annual low flow.
81. WWL's submission sought amendments to Policy P113 recognise that scientific information may indicate that abstraction at other rates may be appropriate. I understand Policy P113 applies to rivers in the Te Awarua-o-Porirua whitua and the Wairarapa Coast whitua as well as to a few rivers in the other whitua where the allocation amounts have not been quantified numerically.¹⁰ WWL abstracts from the Hutt, Wainuiomata and Orongorongo Rivers.

⁹ Paragraph 487, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

¹⁰ Paragraph 304, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

82. This point of submission seems to mistakenly assume that this policy is relevant to WWL however my understanding from Mr Blakemore is that all WWL current and likely future takes are listed in the Whaitua Chapter. On this basis, I do not pursue this point.

Policy P114 Priorities when demand exceeds supply

83. As notified:

When the total take and use of water allocated by resource consents above minimum flows or water levels exceeds the core allocation amount, the take and use of water shall be allocated according to the following priorities, in order of importance:

- (a) the health needs of people, and
- (b) stock drinking water, and
- (c) other values.

84. WWL's submission considered Policy P114 is inconsistent with Policy P112, and should include fire fighting and root stock protection before "other values". The submission also sought inclusion of root stock protection as a new Clause d).
85. I note that the Section 42A report recommends substantially simplifying the Policy to prioritise the take and use of water for the health needs of people by community drinking water supply or a group drinking water supply over all other uses.¹¹
86. As an aside, I note the recommendations in the Section 42A report would retain the current heading of Policy P114, which (if the text of the Policy were changed as recommended) would leave the heading and the text rather mis-matched.
87. I partially support the approach taken by the Section 42A report, as it seems to me there are two priorities: firstly the take and use of water for the health needs of people, which is a subset of the broader municipal water supply as this essentially keeps the region operating. I consider Policy P114 should address both of these uses respectively. WWL has a number of functions and responsibilities around water which is used for a range of other purposes fundamental to the

¹¹ Paragraph 501, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

proper functioning of urban communities and the wellbeing of their inhabitants beyond drinking water.

88. Local authorities are required to supply water in order to promote the health, safety and wellbeing of the community, including hospitals / schools / correctional facilities, fire fighting, public sanitary facilities, public facilities and amenities, provision to businesses, and more. These uses of water are essential to the maintenance of the economic, social and cultural fabric of the communities.

89. In my view there is value in having two policies:

(a) Policy P114, largely as notified, to provide policy support for resource consent applications for new water takes to exceed the core allocation (which I am seeking as a non-complying activity). Policy P114 seems to have been drafted on the premise that the "core allocation" could be exceeded and such a policy would provide guidance to help prioritise competing applications for additional water take; and

(b) a new policy as recommended by the Section 42A report which prioritises water for the health needs of people, including those provided by a municipal water supply network.

90. I therefore seek that Policy P114 be retained with slight amendments, and a new policy be added:

Policy P114 Priorities when demand exceeds supply

When considering applications for new takes that will increase total allocation above the core allocation, ~~the total take and use of water allocated by resource consents above minimum flows or water levels exceeds the core allocation amount~~, the take and use of water shall be allocated according to the following priorities, in order of importance:

(a) the health needs of people, and

(b) stock drinking water, and

(c) other values.

Policy P114A Priority of water take and use

The take and use of water for the health needs of people, including municipal water supplies, shall be a priority over other uses.

Policy P115 Authorising takes below minimum flows and lake levels

91. As notified:

The take and use of water may be authorised below minimum flows or lake levels established in whitua chapters of the Plan (chapters 7-11) for:

(a) the health needs of people as part of group drinking water supply or community drinking water supply, and

(b) the water used by industry from a community drinking water supply for a period of seven years from the date of public notification of the Proposed Natural Resources Plan (31.07.2015), and

(c) permanent horticultural or viticultural root crops (excluding pasture species, animal fodder crops and maize) for the sole purpose of avoiding their death provided:

(i) the water shall only be available five days (120 hours) after minimum flow cessation take restrictions are imposed and where no practical alternative sources of water are available or accessible, and

(ii) the amount of water needed shall be determined following consideration of the extent and type of crop(s) and the risk of crop death in drought situations, and

(d) category A groundwater which shall be required to reduce the take by 50% of the amount consented above minimum flows, and

(e) category B groundwater (directly connected), category B groundwater (not directly connected) and category C groundwater.

92. WWL's submission considered that the Policy should recognise the downstream minimum flow requirements that are included in the existing resource consents to take water from the Hutt River, the Wainuiomata River and the Orongorongo River. I do not agree and consider that the purpose of Policy P115 is about identifying the uses where the take and use of water may be authorised below minimum flows or lake levels, rather than the levels themselves.

93. The Section 42A report considered this is not necessary as Policy P115 provides advice for the resource consent process for the situations where it would be appropriate to allow a take to continue when a river or lake falls below the minimum flow or water level. I agree and therefore do not consider this amendment necessary.

94. WWL's submission sought clarification of Clause b) as to whether it means industrial uses can not use water after 7 years if rivers are below minimum consented flow levels. The Section 42A report

acknowledges that this is a harsh provision, but considers that the seven year timeframe provides sufficient time for water dependent industries, community and group water supplies to investigate and invest in water storage options.¹² While I agree that drinking water has to be the priority, WWL provide water supply a wide range of uses in order to promote the health, safety and wellbeing of the community, including hospitals, schools, fire fighting, public sanitary facilities, public facilities and amenities, provision to businesses and more. These uses of water are essential to the maintenance of the economic, social and cultural fabric of the communities. It would be extremely difficult to separate the networks for drinking water from industry, particularly when industrial sites also require drinking water, and water for the uses outlined in the definition of the “*health needs of people*”. I consider this policy will be very hard to practically implement.

95. Advice from Mr Blakemore is that just about every industrial connection that uses process or cooling water also includes a health needs component which cannot be separated. His advice is that from a practical perspective if WWL was asking for a water take below the minimum flow then they would have already implemented an outdoor water use ban – which is the most severe level of restriction before rationing. I understand WWL would not be able to stop industry using water for process or cooling purposes. Failure to be granted an emergency water take in this situation would compromise WWL's ability to meet Health Act obligations.

Policy P118 Reasonable and efficient use

96. As notified:

The amount of water taken or diverted through resource consents shall be reasonable and used efficiently, including consideration of:

- (a) applying the reasonable and efficient use criteria identified in Schedule Q (efficient use) to new users immediately, while existing users replacing existing resource consents have a period of four years from the date of the plan being made operative to meet the criteria, and
- (b) maximising the efficient use of water when designing systems to convey or apply water, and

¹² Paragraph 511, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

- (c) industry guidelines, and
- (d) water use records.

97. WWLs' submission sought rephrasing Clause (b) to clarify what "maximising" means in relation to designing systems and how that relates to operations to maintaining a level of efficiency. I agree that the meaning of Clause b) is unclear particularly in the context of WWL's network and operations. While WWL can control the water within their system and ensure that the systems convey water effectively and efficiently, WWL actually has no control over the end use.
98. It seems to me that Clause b) is not clear in its intent – it refers to the use of water, but also systems to convey water. I consider there are potentially three separate matters here:
- (a) the design of conveyance and the network;
 - (b) operation of the network; and
 - (c) the end use.
99. WWL's submission also sought inclusion of a new Clause e) "*risk management and redundancy policies adopted by the operators of regionally significant water supply infrastructure as provided for in Schedule Q (efficient use)*".
100. As outlined in Mr Blakemore's evidence, Wellington Water operates multiple sources and holds consents to abstract water. To ensure that there is sufficient water supply, WWL needs flexibility to manage the amount taken from each water source. I understand from Mr Blakemore that flexibility is required not only because of the variability in demand for water, but also because of the risks to each of the three water sources.
101. It seems to me that Policy P118 has limited applicability or relevance to municipal water suppliers such as WWL because of the limited ability to control the end use of the water, and yet WWL will be captured by this Policy. I note that the Section 42A report shares this view, that maximising the efficient use of water when designing systems to convey or apply water does not necessarily apply to public

water supply networks, and is perhaps more relevant to irrigation systems.¹³ The Section 42A report goes on to consider that a public water supply network would want to be able to demonstrate they had measures in place to ensure water was being delivered efficiently through the network and not being lost through leakage. I agree that these are matters that should appropriately be addressed by municipal supply networks but Policy P118 does not deliver this in my opinion. I therefore recommend that Policy P118 is amended to include clauses that are specifically relevant to municipal supply networks, or a new policy is drafted to apply to public water supply networks (and they are excluded from Policy P118).

Policy P118

The amount of water taken or diverted through resource consents (excluding existing resource consents for community or group drinking water supplies) shall be reasonable and used efficiently, including consideration of:

- (a) applying the reasonable and efficient use criteria identified in Schedule Q (efficient use) to new users immediately, while existing users replacing existing resource consents have a period of four years from the date of the plan being made operative to meet the criteria, and
- (b) maximising the efficient use of water when designing systems to convey or apply water, and
- (c) industry guidelines, and
- (d) water use records.

Policy P118A

The amount of water taken or diverted through resource consents for municipal public water supply networks shall be reasonable and used efficiently by:

- (a) requiring the amount of water taken and used to be reasonable and justifiable with regard to the intended use, and
- (b) adopting risk management and redundancy policies as provided for in Schedule Q (efficient use), and
- (c) delivering water efficiently through the network.

¹³ Paragraph 571, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

Policy P119 Unused water

102. As notified:

Unused water allocated to an existing resource consent may be re-allocated to the same user when the existing resource consent is replaced, or the abstraction rate is changed, only if the consent holder can demonstrate how the unused water will be used within four years, including by means of:

(a) a capital expenditure programme linked to the purpose water is used for, and

(b) satisfying the reasonable and efficient use criteria identified in Schedule Q (efficient use).

103. WWL's submission sought that the definition of unused water needs to clearly specify that community drinking water suppliers are excluded. As I have discussed above, the Section 42A report recommends excluding water allocated to a community or group drinking water supply from the definition of "*unused water*"¹⁴. I support that amendment and consider this would address WWL's concerns as this policy would no longer apply. I note that the Section 42A report recommends an exclusion added to Policy P119 to clarify that it does not apply to a community or group drinking water supply. I support this, although I suggest the exclusion be added after the policy so the intent is clear:

Unused water allocated to an existing resource consent may be re-allocated to the same user when the existing resource consent is replaced, or the abstraction rate is changed, only if the consent holder can demonstrate how the unused water will be used within four years, including by means of:

(a) a capital expenditure programme linked to the purpose water is used for, and

(b) satisfying the reasonable and efficient use criteria identified in Schedule Q (efficient use).

This policy does not apply to water allocated to a community or group drinking water supply.

104. As an aside, I note this exclusion of the policy is consistent with treating unused drinking water allocation as not being an "*over allocation*" within the NPS-FM meaning; which I consider appropriate

¹⁴ Paragraph 578, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

in light of the NPS-FM's requirement to set freshwater objectives taking into account the National Value of municipal water supply.

Policy P120 Taking water for storage

105. As notified:

The taking of water for storage outside a river bed at flows above the median flow is appropriate provided Policy P117 is satisfied.

106. WWL's submission sought that the policy be amended so it is more direct and does not contain ambiguous terms such as "is appropriate". I agree and consider that the Policy be reworded as follows:

~~The taking of Water may be taken~~ for storage outside a river bed at flows above the median flow, ~~is appropriate~~ provided Policy P117 is satisfied.

Policy P121 Preventing salt water intrusion

107. As notified:

Taking groundwater shall avoid salt water intrusion into an aquifer or landward movement of the salt water/fresh water interface, including by:

(a) cessation of groundwater takes in a catchment management unit on the Kāpiti Coast when the water level at the foreshore falls below 1m above mean sea level (based on groundwater levels averaged over three days), and

(b) maintaining water levels at 2m above sea level at the foreshore of the Hutt Valley aquifer zone shown in Figure 8.2, chapter 8: Wellington Harbour and Hutt Whaitua, (based on groundwater levels averaged over 24 hours) and cessation of water takes when the water level falls below 1.7m above mean sea level.

108. WWL's submission sought that the datum be specified rather than generically referring to "sea level". I note that both Dr Mzila¹⁵ and Ms Hammond¹⁶ agree that both Clauses a) and b) be amended to read "*mean sea level (Wellington vertical datum 1953)*". I support these amendments and consider they provide additional clarity.

¹⁵ Paragraph 6.4, Statement Of Primary Evidence Of Dr Douglas Mzila On Behalf Of Wellington Regional Council Technical – Water Allocation – Aquifer Integrity And Dewatering (07 August 2017)

¹⁶ Paragraph 687, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

Policy P125 Taking of groundwater

109. As notified:

The taking of groundwater shall not result in cross-contamination between aquifers or water-bearing layers that results in, or may result in, adverse effects on water quality.

110. WWL's submission considered the Policy does not cater for foundation work that does not result in taking water but has the potential to result in cross-contamination between aquifers or water-bearing layers.

WWL sought that the policy be expanded to address these types of activities. The Section 42A report considered that such amendments could affect multiple activities that disturb the ground but are unlikely to affect aquifers. The Section 42A report recommended this matter would be best addressed through Rule R146A to protect the aquifers in the Hutt Valley.¹⁷

111. While I agree that this matter can indeed be addressed through a rule framework, I consider protection through the policies is also necessary. Such an amendment would provide policy support to the rules. I acknowledge that the amendments sought may affect multiple activities, however there are two checkboxes within this policy which determine whether the policy applies to any particular activity:

(a) shall not result in cross-contamination between aquifers or water-bearing layers; and

(b) results in, or may result in, adverse effects on water quality.

112. Protection of the structural integrity and quality of water in the aquifer is critical to the region's water supply and I consider it appropriate that all activities that affect the aquifers be captured by this policy, not just the taking of groundwater.

113. I therefore seek that Policy P125 be amended as follows:

Policy P125—~~Taking of groundwater~~ Water quality cross-contamination

¹⁷ Paragraph 692, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

~~The taking of groundwater~~ Activities shall not result in cross-contamination between aquifers or water-bearing layers that results in, or may result in, adverse effects on water quality.

Policy P127 Backflow of contaminants

114. As notified:

There shall be no backflow to surface water or groundwater of contaminants from any equipment or infrastructure which is used to irrigate land or used to apply animal effluent, agrichemicals or nutrients.

115. WWL's submission sought that the policy should also include no backflow of contaminants from bores used to supply water for industrial processes. The Section 42A report recommends inclusion of a new Clause a) addressing industrial processes¹⁸ and I support this amendment.

Policy P130 Bores

116. As notified:

Bores, including new bores, shall:

(a) be sited to ensure adequate separation from existing bores, avoid an over-concentration of bores in a particular area (except where intensive investigation is required on a site for geotechnical, contamination or other investigative purposes), and to minimise adverse effects on the reliability of supply from properly constructed, efficient and fully functioning existing bores, and

(b) be constructed, and bore logs and other records be prepared, in accordance with the NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock, and

(c) be used in a manner that prevents:

(i) contaminants from entering the bore from the land surface, and

(ii) the waste of water.

117. WWL's submission sought inclusion of a clause that does not allow interconnection of groundwater between aquifers and cross contamination. The submission also sought a requirement for double casing of bores. The Section 42A report rejected the submission and

¹⁸ Paragraph 693, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

considered that the policy is directed at bores, not the taking of groundwater.¹⁹ In my experience, bores can be used to access groundwater as well as for other reasons. However that aside, I consider that Policy P125 achieves the outcome sought by WWL in terms of preventing interconnection of groundwater between aquifers and cross contamination if the amendments I suggest at Paragraph 113 above are adopted. In this case, amendments to Policy P130 on this matter would therefore not be necessary. I agree with Ms Hammond that the type of casing is most appropriately addressed through matters of control in Rule R147.

Policy P131 Bores no longer required

118. As notified:

Bores that are no longer required shall be decommissioned in general accordance with the NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock.

119. WWL's submission considered the policy is not clear whether it applies to the process of decommissioning bores or whether it obligates owners or occupiers of unused bores to decommission them. I agree that the purpose of the policy is not clear. Is the purpose to:

- (a) require bores no longer required to be decommissioned? or
- (b) require bores to be decommissioned in accordance with NZ standards?

120. I consider this policy could be re-drafted to be clearer in its intent. That matter aside, I note that the Section 42A report recommends introducing a new rule to permit the decommissioning of bores so Council is able to ensure bores are decommissioned in accordance with the NZ Drilling Standards²⁰ and I would support this as a logical rule cascade flowing from this policy. I cannot find Ms Hammond's recommended new rule in the Section 42A report so cannot comment on the specific wording.

¹⁹ Paragraph 699, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

²⁰ Paragraph 703-705, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

Rule R140 Dewatering – permitted activity

121. As notified:

The take of water and the associated diversion and discharge of that water for the purpose of dewatering a site, including but not limited to, maintenance, excavation, construction or geotechnical testing, is a permitted activity, provided the following conditions are met:

- (a) the take continues only for the time required to carry out the work but does not exceed one month, and
- (b) the take and diversion and discharge is not from, onto or into contaminated land or potentially contaminated land, and
- (c) the take does not cause ground subsidence, and
- (d) the take does not deplete water in a water body, and
- (e) there is no flooding beyond the boundary of the property.

Note

Discharges to water, or onto or into land where it may enter water related to dewatering are provided for by Rule R42.

122. WWL's submission sought that Condition (a) should be extended to six months as the establishment and maintenance of regionally significant infrastructure will frequently require dewatering for a longer period than one month. The submission alternatively sought creation of a special category of permitted activity for regionally significant infrastructure, or have consents trigger to controlled activity status.

123. While the intent of Condition a) is clear, the interpretation is less so. Is it one calendar month? Thirty days within a calendar year? Thirty continuous days? What is the stand-down period before the next month resets ie thirty days dewatering, seven days non-activity, followed by another thirty days dewatering?

124. While Dr Mzila outlines the potential impacts from dewatering²¹, there is still no strong reason for one month other than considering that the one month timeframe is reasonable to ensure the effects of dewatering are managed.²²

²¹ Paragraphs 7.5-7.8, Statement Of Primary Evidence Of Dr Douglas Mzila On Behalf Of Wellington Regional Council Technical – Water Allocation – Aquifer Integrity And Dewatering (07 August 2017)

²² Paragraph 727, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

125. I question whether there is any need for a maximum time limit if the conditions are all being met. Dr Mzila considered that where a dewatering system is to pump high flow rates for extended periods of time (more than a month), there is the potential to lower regional groundwater levels in the aquifer, and reduce the water resources available to third party abstractors.²³ I question whether this is not addressed by Condition (d) in that a water body can be below-ground i.e. an aquifer.
126. As an aside, I consider Clause d) could be drafted more clearly. I can understand that Ms Hammond may not want to exclude regionally significant infrastructure from the conditions of this rule, but I draw attention back to the RPS objective and policies which requires regional plans to include policies and/or methods that recognise the benefits of regionally significant infrastructure. I also wish to draw attention to Objective O12 of the PNRP, and how this is meaningfully given effect to through the rules.
127. It seems to me there may be three different amendments worthy of consideration:
- (a) an exemption for regionally significant infrastructure from condition (a);
 - (b) an exemption for local authorities from condition (a); or
 - (c) a controlled activity status for regionally significant infrastructure unable to meet condition (a) of Rule R140.
128. Of these options, I would favour option c) as this will ensure all the other standards of the permitted activity would be met. This would also allow conditions to be placed, whilst enabling effects to be considered. It also provides certainty for the regionally significant infrastructure that the consent will be granted.
129. The Hearings Panel should be aware that WWL is currently seeking a global resource consent to dewater trenches and excavations for

²³ Paragraph 7.16 Statement Of Primary Evidence Of Dr Douglas Mzila On Behalf Of Wellington Regional Council Technical – Water Allocation – Aquifer Integrity And Dewatering (07 August 2017)

works relating to the maintenance, repair, replacement, upgrade and installation of bulk water supply, stormwater and wastewater infrastructure. The works cover both planned and urgent works. The resource consent sought is a 'global consent' that would allow WWL to dewater excavations within the four territorial authorities under its geographic area.

Rule R146 Geotechnical investigation bores – permitted activity

130. As notified:

The use of land and the associated diversion and discharge of water or contaminants for the drilling, construction or alteration of a geotechnical investigation bore is a permitted activity, provided the following conditions are met:

- (a) the bore is not located within a community drinking water supply protection area shown on Map 26, Map 27a, Map 27b, or Map 27c, and
- (b) there is compliance with the NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock, and
- (c) a Wellington Regional Council bore/well log form is submitted to the Wellington Regional Council within one month of the bore being constructed, and
- (d) there is no flooding beyond the boundary of the property.

Note

For contaminated land site investigation bores Rule R54 also applies.

131. WWL's submission on this rule expressed a number of concerns. Firstly the submission considered there is a need to protect the aquifers from penetration to protect the integrity of the artesian aquifer capping layers. Stemming from this concern was requests to amend activity statuses, conditions and maps.

132. Two pre-hearing meetings were held with WWL and CentrePort Properties Limited regarding the drilling of bores and other activities that could affect the integrity of the Hutt aquifer system. As a result of the pre-hearing meetings it was agreed in principle to:

- (a) amend the permitted activity Rule R146 to include a depth condition (5m) in the Hutt Valley aquifer zone that will ensure any bores that have the potential to penetrate the confining

layer will require resource consent, where the effects can be appropriately assessed, and

- (b) introduce a new rule, which only applies in the Hutt Valley aquifer zone (on land only), which would require resource consent for piling or excavation activities that exceed a depth of 5m.

133. Based on the outcomes of the pre-hearing meetings and Dr Mzila's technical evidence, the Section 42A report recommends amending Rule R146 to include a 5m depth condition. The Section 42A report also recommends introducing a new rule R146A to control activities deeper than 5m in the Hutt Valley. Drawing on Mr Blakemore's evidence, I support these changes albeit with further amendments that were discussed at the pre-hearing meeting but for some reason have not been incorporated in Ms Hammond's recommended amendments:

Rule R146: ~~Geotechnical Investigation and monitoring bores - permitted activity~~

The use of land and the associated diversion and discharge of water or contaminants for the drilling, construction or alteration of a ~~geotechnical investigation~~ bore for the purpose of investigating or monitoring the conditions below the ground surface is a permitted activity, provided the following conditions are met:

- (a) ~~Where~~ the bore is ~~not~~ located within a community drinking water supply protection area shown on ~~Map 26, Map 27a, Map 27b, or Map 27c,~~ the depth below ground level will not exceed 5m, and
- (b) there is compliance with the NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock, and
- (c) a Wellington Regional Council bore/well log form is submitted to the Wellington Regional Council within one month of the bore being constructed, and
- (d) there is no flooding beyond the boundary of the property, and
- (e) Where the bore is located within the Hutt Valley aquifer zone shown on Map XX the depth below ground level will not exceed 5m on land or 5m below the seabed in the coastal marine area, and
- (f) a discharge to water, or onto or into land where it may enter water meets the conditions of Rule R42, and
- (g) Where the bore is located within the coastal marine area, the activity shall comply with the coastal management general conditions specified in Section 5.7.2, excluding conditions (b) and (c), and

(h) The bore shall be decommissioned in accordance with NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock as soon as practical after the investigation and monitoring is completed, and

(i) the bore is not associated with hydrocarbon exploration or production.

Note

For contaminated land site investigation bores Rule R54 also applies.

Rule R146A:

Construction and excavation activities 5m below ground level in the Hutt Valley aquifer system – discretionary activity

The use of land within the Hutt Valley aquifer system shown on Figure XX for the construction or removal of building foundations and earth retention structures or excavation (permanent or temporary) where the depth below the natural ground level exceeds 5m including any associated:

(a) Diversion of water

(b) Dewatering

(c) Discharge of water and contaminants

is a discretionary activity.

134. I note that Ms Hammond has yet to fill in the reference figure to this rule, so I am not sure which figure she is intending to reference.

135. I understand the activity status for drilling constructing or alteration of any bore that exceeded 5m depth within the Hutt Valley aquifer zone was not explicitly discussed at the pre-hearing meeting. Given Mr Blakemore's evidence and the importance of the security and integrity of the water supply aquifer, I seek amendments to Rule R147 and a consequential insertion of a restricted discretionary activity as outlined below.

Rule R147 Drilling, construction or alteration of any bore – controlled activity

136. As notified:

The use of land and the associated diversion and discharge of water or contaminants for drilling, construction or alteration of a bore (other than a geotechnical investigation bore permitted in Rule R146) is a controlled activity, provided the following conditions are met:

(a) the bore is not associated with hydrocarbon exploration or production, and

- (b) the bore is constructed and operated in accordance with the NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock.

Matters of control

1. Compliance with the NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock
2. Bore location, size (including diameter of the bore casing) and depth
3. Bore screening depth and type
4. Backflow prevention methods
5. Information requirements including bore logs, piezometric levels, groundwater tests, and bore construction details
6. Management of the effects of any discharge of contaminants

137. WWL's submission sought amendments to protect the integrity of any artesian aquifer capping layers through double casing of bores that penetrate the Waiwhetu aquiclude, and protecting the community drinking water supply area. The submission also sought amendments to maps to recognise abstraction from the Gear Island Water Treatment Plant for public supply. The groundwater protection zone must extend from Taita through to the Petone foreshore and span the width of the Hutt Valley.
138. I note that the Section 42A recommends including the type of casing as a matter of control²⁴ and I support this amendment. However I remain concerned that Rule R147 does not match the approach of Rule R146 and provide any protection for the community drinking water supply area – either as a condition or matter of control. Resource consent applications for controlled activities cannot be declined.
139. If a standard was to be included so that Rule R147 did not apply to bores located within a community drinking water supply protection area shown on Map 27a, Map 27b, or Map 27c, non-compliance could then take the activity to a discretionary activity under Rule R148, or a new rule as a restricted discretionary activity. Either of these seem to me to be an appropriate rule cascade. I therefore seek

²⁴ Paragraph 699, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

inclusion of conditions (similar to Rule R146) to Rule R147 as outlined below.

140. In considering this Rule, I note that compliance with the NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock is both a condition and a matter of control. I suggest that only one is necessary.

The use of land and the associated diversion and discharge of water or contaminants for drilling, construction or alteration of a bore (other than a ~~geotechnical investigation~~ bore permitted in Rule R146) is a controlled activity, provided the following conditions are met:

- (a) the bore is not associated with hydrocarbon exploration or production, and
- (b) the bore is constructed and operated in accordance with the NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock, and
- (c) the bore is not located within a community drinking water supply protection area shown on Map 27a, Map 27b, Map 27c or within the Hutt Valley aquifer zone shown on Map XX;

Matters of control

- ~~1. Compliance with the NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock~~
- 2. Bore location, size (including diameter of the bore casing), casing type and depth
- 3. Bore screening depth and type
- 4. Backflow prevention methods
- 5. Information requirements including bore logs, piezometric levels, groundwater tests, and bore construction details
- 6. Management of the effects of any discharge of contaminants

141. I also seek inclusion of a new restricted discretionary rule to cover the eventuality of a bore within a community drinking water supply protection area or within the Hutt Valley aquifer zone. Matters for discretion could include:

- (a) Compliance with the NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock;
- (b) Bore location, size (including diameter of the bore casing), casing type and depth;
- (c) Bore screening depth and type;
- (d) Well head design and security;

- (e) Backflow prevention methods;
- (f) Methods for controlling any leakage or pressure from the bore during construction; and
- (g) Methods for preventing aquifer cross-connection and leakage from the surface into groundwater.

Rule R148 Drilling, construction or alteration of any bore – discretionary activity

142. As notified:

The use of land and the associated diversion and discharge of water or contaminants for drilling, construction or alteration of a bore that is not permitted by Rule R146 or controlled by Rule R147 is a discretionary activity.

143. WWL's submission expressed concern that this rule did not prevent damage to the aquiclude caused by the driving of piles or a deep excavation, including anywhere in the Hutt valley and Wellington harbour (e.g. wharf piers). The submission considered damage to the aquiclude may result in aquifer leakage and/or contamination. I understand this matter is addressed by the recommendation in the Section 42A report to insert a new discretionary activity for construction and excavation activities 5m below ground level in the Hutt Valley aquifer system (proposed as Rule R146A) and I support this insertion.

Policy WH.P2 Core allocation in the Wellington Harbour and Hutt Valley Whaitua

144. As notified:

The maximum amount of water available for allocation from rivers (and tributaries) and groundwater in the Te Awa Kairangi/Hutt River, Wainuiomata River catchment and Orongorongo River catchments, at the time an application is made for resource consent to take and use water, shall not exceed whichever is the greater of:

- (a) the total amount allocated by resource consents, or
- (b) the allocation amounts identified in Tables 8.2-8.3 except for the taking and use of water identified in Policy P117 at flows above the median flow.

145. WWL's submission noted that the allocation amount for the Wainuiomata River and the allocation amount for the Orongorongo River in Table 8.2 are significantly less than the current consented abstraction from these rivers for community water supply. The submission sought that the allocation amount for each of the Wainuiomata and the Orongorongo Rivers should be increased to 460 L/s which is the current consented takes for these rivers under normal operating conditions).
146. The Section 42A report considers that Policy WH.P2 acknowledges situations where the amount allowed by resource consents exceeds the amount specified in the relevant table and provides for those situations in Rule WH.R1.²⁵ While this may be the intent of Clause a) in Policy WH.P2, there is the question of what purpose Clause b) serves if Council is aware that the total amount allocated by resource consents already exceeds those figures in Table 8.2? For users of the plan it is not clear what purpose the figures in Table 8.2 serve when Greater Wellington Regional Council are aware that the resource consents granted are for a considerably greater allocation amount. Council should be able to easily (and with a very high degree of certainty) produce these numbers.
147. I note at the start to Section 8 of the PNRP, the box states:
- Minimum flows, minimum water levels and core allocation referred to in the Plan are interim to the extent that they will be reviewed by whitua committees and may be amended by plan changes or variations following recommendations of whitua committees.
148. If these figures are interim and not necessarily an accurate representation of the allocatable amount of the catchment, I question what is their purpose? In addition, the Section 42A report acknowledges that they are not based on detailed and catchment specific analysis.²⁶
149. I note that Section 32(1)(b)(ii) of the RMA requires provisions to be assessed in terms of the efficiency and effectiveness in achieving the

²⁵ Paragraph 331, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

²⁶ Paragraph 6.46, Statement Of Primary Evidence Of Mike Thompson On Behalf Of Wellington Regional Council Technical – Water Allocation: Minimum Flows And Allocation (7 August 2017)

objectives. It seems to me that Clause b) has been drafted so as to be ineffective as it is essentially trumped by the greater allocation amount already consented (Clause a)).

150. I suggest a more pragmatic solution would be to delete Clause b) and amend Clause a) to refer to Table 8.2. I also suggest amending Table 8.2 to reflect the total amount that is already allocated by resource consents.
151. I also question what leeway this policy provides to increase the total amount allocated if it could be shown that the rivers (and tributaries) and groundwater in the Te Awa Kairangi/Hutt River, Wainuiomata River catchment and Orongorongo River catchments could sustain a greater take. I am mindful of the expectations of the NPS-UDC with regards to accommodating and servicing growth. Improving efficiency of water use can only achieve so much and it is likely that population growth will necessitate an increase in water takes. I understand from Mr Blakemore that current growth estimates indicate population growth will cause water supply shortfalls at approximately 2041, however this has not yet been rationalised against the growth requirements of the NPS-UDC.
152. While I am aware that this very issue will hopefully be determined through the Whaitua process, it seems to me that the Whaitua process is discussed as the forum in which the *thresholds* will be refined, not necessarily the regulatory framework itself.
153. I would support inclusion of a policy and rule framework that enables an allocation amount greater than the consents already granted if it could be proven by the consent applicant that the greater take could be sustained by the catchment. While I have not attempted to draft any such policies, there will need to be policy guidance that ensures appropriate emphasis is placed upon the maintenance of water quality. I consider that Policy 110 (which covers the core elements of the mandatory interim policy required under Policy B7 of the NPS-FM) could be modified to provide a suitable policy setting. Section 104(1)(b)(iii) of the RMA will ensure that Greater Wellington Regional Council has regard to the NPS-FM when considering an application for such a resource consent.

154. I therefore seek the following amendments to Policy WH.P2

The maximum amount of water available for allocation from rivers (and tributaries) and groundwater in the Te Awa Kairangi/Hutt River, Wainuiomata River catchment and Orongorongo River catchments, at the time an application is made for resource consent to take and use water, shall not exceed ~~whichever is the greater of:~~

~~(a) the total amount allocated by resource consents as identified in Tables 8.2-8.3, or~~

~~(b) the allocation amounts identified in Tables 8.2-8.3 except for the taking and use of water identified in Policy P117 at flows above the median flow.~~

Rule WH.R1 Take and use of water in the Wellington harbour and Hutt Valley Whaitua – restricted discretionary activity

155. As notified:

The take and use of water from any river (including tributaries) and groundwater in the Te Awa Kairangi/Hutt River, Wainuiomata River and Orongorongo River catchments, is a restricted discretionary activity provided the following conditions are met:

- (a) the take and use shall not occur below the minimum flows in Table 8.1, except that this condition does not apply to:
 - (i) water for the health needs of people as part of a group drinking water supply or a community drinking water supply, and
 - (ii) taking groundwater, and
- (b) in any catchment management unit in Tables 8.2 and 8.3, the amount of water taken and used, in addition to all existing resource consents, does not exceed whichever is the greater of:
 - (i) the maximum amount allocated by resource consents at the date the consent application is lodged, or
 - (ii) the allocation amounts in Tables 8.2 and 8.3except that this condition does not apply to the take and use of water at river flows above the median flow, and
- (c) at flows above median flow:
 - (i) the frequency of flushing flows that exceed three times the median flow of the river is not changed, and
 - (ii) 50% of the river flow above the median flow remains in the river, and
- (d) the take and use is not from a river identified as outstanding in Schedule A1 (outstanding rivers).

Matters for discretion

1. The reasonable and efficient use of water, including the criteria in Schedule Q (efficient use)
2. The timing, amount, and rate of take of water; including instantaneous (L/sec), daily (m³/day), and seasonal requirements and duration and timing of peak daily take rate
3. For group drinking water supplies or community drinking water supplies, the amount and rate of water taken and used for the health needs of people
4. Reduction in the rate of take from surface water and groundwater directly connected to surface water at times of low flow and restrictions when rivers approach or fall below the minimum flows
5. Effects due to local flow or water level depletion on wetlands, springs, or the downstream river reach in the same catchment management unit
6. Interference effects on existing lawful water takes
7. Prevention of salt water intrusion into the aquifer, or landward movement of the salt water/fresh water interface
8. For a take and use in category B groundwater (directly connected) or category B groundwater (not directly connected)
9. Preventing fish from entering water intakes
10. Measuring and reporting, including the guideline in Schedule S (measuring takes)

156. While WWL's submission did not specifically seek any changes to this Rule, it instead sought changes to Table 8.1 and 8.2 to which this Rule refers. As discussed above at paragraphs 146-153, a change in approach to Table 8.2 and Policy WH.P2 will necessitate amendments to Rule WH.R1. I therefore seek the following amendments:

The take and use of water from any river (including tributaries) and groundwater in the Te Awa Kairangi/Hutt River, Wainuiomata River and Orongorongo River catchments, is a restricted discretionary activity provided the following conditions are met:

- (a) the take and use shall not occur below the minimum flows in Table 8.1, except that this condition does not apply to:
 - (i) ~~water for the health needs of people as part of a group drinking water supply or a community drinking water supply~~ municipal and domestic water supply network, and
 - (ii) taking groundwater, and
 - (iii) temporary maintenance and upgrade works to the municipal water supply network, and

- (b) in any catchment management unit in Tables 8.2 and 8.3, the amount of water taken and used, ~~in addition to all existing resource consents,~~ does not exceed ~~which ever is the greater of:~~
 - ~~(i) the maximum amount allocated by resource consents at the date the consent application is lodged as identified in Tables 8.2 and 8.3, or~~
 - ~~(ii) the allocation amounts in Tables 8.2 and 8.3 (except that this condition does not apply to the take and use of water at river flows above the median flow), and~~
- (c) at flows above median flow:
 - (i) the frequency of flushing flows that exceed three times the median flow of the river is not changed, and
 - (ii) no more than 50% of the river flow above the median flow remains in the river, is taken for rivers with mean flows greater than 5m³/sec, and
 - (iii) no more than 10% of the total river flow is taken for rivers with mean flows of less than or equal to 5m³/sec,
- (d) the take and use is not from a river identified as outstanding in Schedule A1 (outstanding rivers).

157. I note that Clause d) and how this then interacts with Rule WH.R3 (which is a non-complying activity status for take and use of water from a river or lake in the Wellington Harbour and Hutt Valley Whaitua identified as outstanding in Schedule A1 (outstanding rivers) or Schedule A2 (outstanding lakes)) could be problematic for WWL if the intakes were needing to be relocated further up the river. Schedule A1 identifies both Te Awa Kairangi / Hutt River and Wainuiomata River as being rivers with outstanding values upstream of a point 20 metres above the Kaitoke Dam and Wainuiomata Water Supply inlet respectively. This potential scenario is addressed by Mr Blakemore in his evidence.

Tables 8.1 and 8.2

158. WWL sought Table 8.1 be amended to enable the minimum flow below the Kaitoke water supply intake to be able to be reduced to 400 L/s for special circumstances such as lining the Macaskill Lakes. This point is addressed by Mr Thompson in his technical evidence where he considers that the granting of the consent for a 3 year reduced minimum flow was on the basis that it was short term and in his opinion does not justify a more permanent reduction to the Kaitoke

threshold.²⁷ With respect, WWL was not seeking a permanent reduction in the minimum flow below Kaitoke, but was more concerned with ensuring that the policy and rule framework (which includes Table 8.1) enables a temporary decrease in the minimum flow where maintenance and upgrading works are required. I consider that this matter is most appropriately addressed through the rule framework and amendments to Rule WH.R1 to enable this as outlined above in paragraph 156.

159. WWL's submission sought amendments to Table 8.2 to increase the allocation amount for each of the Wainuiomata and the Orongorongo Rivers to 460 L/s each to reflect the consents held by WWL.
160. Mr Thompson addresses this submission point in his technical evidence and outlines the approach to calculating the allocation amounts for the Hutt, Wainuiomata and Orongorongo Rivers. His reason for not considering the amendments sought by WWL is that it is a methodology consistent with the rivers elsewhere in the region.²⁸
161. While I can understand the desire for consistency, this is not representative of the information available on the effects of allocation of amounts higher than those listed in the table (as contained in the assessment of effects that accompanied the resource consent applications), or the amounts already allocated through consents. Mr Thompson effectively defers this analysis and decision to the Whaitua process²⁹ which I do not support. Given that the information is already available of the effects of a larger allocation amount, I do not see any reason why this change could not be made through this PNRP process. I question why the higher level is not acceptable, especially as the catchment has been operating at that level under existing consents. I have not seen any evidence of concerns or effects which warrant the lower level. I

²⁷ Paragraph 5.46, Statement Of Primary Evidence Of Mike Thompson On Behalf Of Wellington Regional Council Technical – Water Allocation: Minimum Flows And Allocation (7 August 2017)

²⁸ Paragraph 6.46, Statement Of Primary Evidence Of Mike Thompson On Behalf Of Wellington Regional Council Technical – Water Allocation: Minimum Flows And Allocation (7 August 2017)

²⁹ Paragraph 6.47, Statement Of Primary Evidence Of Mike Thompson On Behalf Of Wellington Regional Council Technical – Water Allocation: Minimum Flows And Allocation (7 August 2017)

understand Mr Thompson's justification for the lower level is based on generic calculations rather than catchment specific work.

162. While Mr Thompson may consider it appropriate to leave this detail until the Whaitua process, I do not agree. While more technical information will hopefully arise out of the Whaitua process upon which to base policies and rules, I do not think the Panel can defer their decision on the basis of the unknown outcomes of a future process.
163. I am informed by Mr Blakemore that the consented figures for allocation for WWL are as follows:
- (a) Hutt 2335L/s (1735L/s existing consent + 600L/s recharge to the Lower Hutt aquifer);
 - (b) Wainuiomata 460L/s (existing consent); and
 - (c) Orongorongo 460L/s (existing consent)
164. While I seek the following amendments to Table 8.2, it is with caution as I only have the consented allocation amounts for WWL and there may well be other consents Greater Wellington Regional Council have granted for these catchment management units:

Catchment management unit for the Te Awa Kairangi / Hutt River catchment (shown in Figures 8.1 and 8.2)	Allocation amount (L/s)
Te Awa Kairangi/Hutt River and tributaries, <u>direct connection (Upper Hutt or Lower Hutt category A groundwater and high connection (Upper or Lower Hutt category B groundwater (directly connected)</u> in the catchment management units shown in Figures 8.1 and 8.2	2,140 <u>2,335</u>
Wainuiomata River and tributaries	180 <u>460</u>
Orongorongo River and tributaries	95 <u>460</u>

Rule WH.R4 Take and use of water that exceeds minimum flows, lake levels or core allocation – prohibited activity

165. As notified:

The take and use of water from a river (including tributaries) or groundwater in the Wellington Harbour and Hutt Valley Whaitua in Tables 8.2 and 8.3 that does not meet conditions (a) or (b) of Rule WH.R1 is a prohibited activity.

166. WWL's submission sought inclusion of text to recognise that some rivers' current allocations may exceed the default values shown in Table 8.2.

167. I have a more fundamental problem with this prohibited activity in that it does not contemplate a scenario where water takes occur below the minimum flows in Table 8.1 (condition (a) of Rule WH.R1 – accepting that this does not apply to water for the health needs of people as part of a group drinking water supply or a community drinking water supply or taking groundwater), or exceeds the greater amount allocated of all existing resource consents or the allocation amounts in Tables 8.2 and 8.3 (condition (b) of Rule WH.R1).

168. Section 67(3)(a) of the RMA requires regional plans to give effect to national policy statements. While the NPS-FM is highly relevant to the matter of water allocation, so is the NPS-UDC. I am not aware of anything in the RMA which requires any particular NPS's to take precedence over any others. Unless one is more directive than the other, then they both have to be given effect to.

169. Wellington region is required by the NPS-UDC to accommodate medium-growth and this means planning infrastructure to service the expected growth³⁰. The next three – ten year period (which is the expected lifespan of the PNRP) is deemed to be “*medium term*” in the NPS-UDC. Policy PA1 of the NPS-UDC requires that within this timeframe there is “*sufficient housing and business land development capacity*”. Development capacity must be feasible, zoned and either serviced with development infrastructure or funding for that infrastructure must be identified in a Long Term Plan. The NPS-UDC defines “*development infrastructure*” as:

³⁰ The NPS-UDC refers not only to housing but business land also (Objective OA2).

network infrastructure for water supply, wastewater, stormwater, and land transport as defined in the Land Transport Management Act 2003, to the extent that it is controlled by local authorities.

170. Further, the NPS-FM does not ignore the balance that needs to be struck between freshwater ecology/health, and providing for municipal supply. The way the NPS-FM directs the formulation of freshwater objectives, and directs that in the process of formulating them, consideration must be given to the choices between different values (CA2(f)(iv)), means that the NPS-FM does not necessarily prevent increasing allocation in the future.
171. I am aware from Mr Blakemore's evidence that the growth estimations indicate additional water takes will be required around 2041. In terms of other relevant timeframes, the Whaitua process (including resultant plan change/variation) is expected to be completed by 2025 (so as to "give effect to" the NPS-FM) and the current WWL water takes will come up for renewal in 2033.
172. This may mean that WWL may need to increase the take of water at some point in the future to provide the growing population with a larger potable water supply. A prohibited activity status would effectively prevent this even being contemplated. A less restrictive consent status would allow the effects of any applications for new consents or consent renewals to be carefully evaluated, which is what WWL's submission sought. WWL's submission considered that consenting an allocation greater than those in Table 8.2 does not necessarily mean that the river ecological values or any other values are compromised or under threat. Rather, it indicates that the reach is likely to be fully allocated and that the effects of any applications for new consents or consent renewals should be carefully evaluated.
173. It is worth noting that the recently signalled changes to the NPS-FM (which will come into force 7 September 2017) include consideration of economic well-being in addition to environmental:

Objective A4: To enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing freshwater quality, within limits.

Policy A7: By every regional council considering, when giving effect to this national policy statement, how to enable communities to provide

for their economic well-being, including productive economic opportunities, while managing within limits.

Objective B5: To enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing freshwater quantity, within limits.

Policy B8: By every regional council considering, when giving effect to this national policy statement, how to enable communities to provide for their economic well-being, including productive economic opportunities, while managing within limits.

174. There is strong policy support at both the RPS level (Policy 17) and within the PNRP itself (Objectives O6, O8 and O12, and Policies P7, P12, P13, P114, P115 etc) recognising the importance of municipal water supply. I note that the language used in Policy 17 of the RPS uses the very directive term "ensure" in relation to the allocation of sufficient water for people's health. The PNRP objectives and policies achieve this two ways – through specific recognition of the importance of water supply for the health needs of people, and through its inclusion in the definition of regionally significant infrastructure.
175. It seems to me that until there is specific work done that shows any more water allocation would be unsustainable, then a prohibited activity status is too restrictive, particularly given the direction in all the relevant higher-order planning documents. Such an approach would also be compatible with Objective O6 of the PNRP.
176. I note that this very same activity status was considered in the recent Board of Inquiry decision into the Tukituki Catchment Proposal.³¹ While the Environmental Defence Society sought a prohibited activity status for consent applications that did not comply with the allocation limits, the Board considered that an application to take water that does not comply with the allocation limits or minimum flows is most appropriate as a non-complying activity.³²
177. The Board of Inquiry gave three reasons for this approach:

³¹ Final Report and Decisions of the Board of Inquiry into the Tukituki Catchment Proposal, Volume 1 of 3: Report and Decisions (18 June 2014)

³² Paragraphs 607 and 608, Final Report and Decisions of the Board of Inquiry into the Tukituki Catchment Proposal, Volume 1 of 3: Report and Decisions (18 June 2014)

- (a) Any application for consent to take water that does not meet the allocation or minimum flow requirements will have to be evaluated against the NPSFM as well as the RMA and other relevant high level documents. Making it a prohibited activity prevents any such application being made or evaluated. There may be situations where minor, temporary, urgent or unique considerations justify consideration of an application for a non-complying activity.
- (b) They did not believe that the NPSFM compels the conclusion that over allocation of water quantity must be a prohibited activity whereas over allocation of water quality can be a non-complying activity. In both cases the NPSFM states that over allocation is to be avoided.
- (c) There was also evidence that the aquifer could potentially sustain abstraction above the maximum amount specified.

178. Prohibited activity status is an extremely restrictive activity status. Although the NPS-FM seeks to avoid over-allocation, the concept of 'over-allocation' is itself required to take account of different values within the formulation of freshwater objectives appropriate to the region (including the value and benefits of municipal water supply); and in any event avoidance of over-allocation does not necessarily require prohibited activity status. If the Panel were of a mind to retain the prohibited activity status, they would need to satisfy themselves that there is sufficient information to determine that there is no scenario where the catchment could ever sustain:

- (a) flows below those specified in Table 8.1;
- (b) an allocation amount of surface water greater than that contained in Table 8.2 (or the sum total of all the consents already granted, whichever is the greater); or
- (c) an allocation amount of ground water greater than that contained in Table 8.2 (or the sum total of all the consents already granted, whichever is the greater).

179. The Section 42A reports (and for that matter the Section 32 reports that preceded them) have placed considerable emphasis on the refinements expected from the Whaitua process. However, most of the emphasis seems to be on the Whaitua refining the thresholds (minimum flows, minimum lake levels, core allocation), not refining the regulatory framework of the rules themselves. There is a risk that imposing prohibited activity status prior to the Whaitua process will signal that the catchment management unit cannot support any further water takes, when there is insufficient data to support this position.
180. If the Panel is minded to adopt non-complying status for any increase in water takes above the presently consented allocations, then there will also need to be policy guidance that ensures appropriate emphasis is placed upon the maintenance of water quality. I consider that Policy 110 (which covers the core elements of the mandatory interim policy required under Policy B7 of the NPS-FM) could be modified to provide a suitable policy setting.
181. I therefore seek the following amendments:

Rule WH.R4

The take and use of water from a river (including tributaries) or groundwater in the Wellington Harbour and Hutt Valley Whaitua in Tables 8.2 and 8.3 that does not meet conditions (a) or (b) of Rule WH.R1 is a non-complying ~~prohibited~~ activity.

Policy P111: Water takes at minimum flows and water levels

The take and use of water shall not occur when flows or water levels fall below minimum flows or water levels in the whaitua chapters (chapters 7-11), with the exception that water is available below minimum flows:

- (a) for firefighting, an individual's reasonable domestic needs and the reasonable needs of an individual's animals for drinking water as provided for by section 14(3)(b) and 14(3)(e) of the Resource Management Act 1991, or
- (b) for the take and use of water permitted by rules in the Plan, or
- (c) as authorised by resource consents in accordance with Policy P108, or
- (d) community drinking water supply.

182. I note that two other submitters expressed concern with the approach of this rule being prohibited and sought a non-complying activity status instead.³³

Schedule Q Reasonable and efficient use criteria

183. As notified:

Irrigation

A resource consent application to take water for irrigation purposes shall include an assessment using a field validated model that considers land use, crop water use requirements, on-site physical factors such as soil water holding capacity, and climatic factors such as rainfall variability and potential evapo-transpiration. The model must reliably predict annual irrigation volume within an accuracy of 15%. The annual volume calculated using the model shall meet with the following criteria:

- (a) an irrigation application efficiency of 80%, and
- (b) demand conditions that occur in nine out of 10 years.

Group or community water supplies

A water management plan shall be submitted with a resource consent application to take and use water for group or community drinking water supplies that addresses:

- (a) the reasonable demand for water, taking into account the size of the group or community, the number of properties that are to be supplied, the potential growth in demand for water, the sectors in the group or community that will use the water and the relative amounts that will be provided to each sector.

Sectors in the community using water include:

- households (domestic use)
 - businesses (commercial use)
 - industry
 - hospitals, other facilities providing medical treatment, marae, schools or other education facilities, New Zealand Defence Force facilities or correction facilities
 - public amenity and recreational facilities such as gardens, parks, sports fields and swimming pools
 - sectors requiring water for the reasonable needs of animals or agricultural uses that are supplied by the group drinking water supply or community drinking water supply system
- (b) the amount of water required for the health needs of people and how the water supplier will manage water used by all sectors at times when restrictions are being placed on all consented uses of water (summer low flow periods), and

³³ Paragraph 345, Section 42A Hearing Report Topic: Water Allocation, Paula Hammond (4 August 2017)

(c) the effectiveness and efficiency of the distribution network.

Water races

Ahead of the implementation of Method M13: Wairarapa Water Races, information shall be submitted with resource consent applications to take and use water that identifies water race sections, and/or properties where water use efficiency within the water race network could be improved. This information shall set out a timetabled programme to be implemented during the term of a resource consent which investigates opportunities to proactively work with landowners in any identified water race sections and/or properties. This shall include (but is not limited to) investigating closing section(s) of water races where alternative sources of supply exist or are practical.

Other uses

An assessment of reasonable and efficient use must accompany a resource consent application for any other use of water. The amount of water applied for should be calculated in accordance with good management practices for efficient use of water in relation to that use or by demonstrating that water is not being wasted, such as by means of a water use audit by an independent party to identify any wastage and any opportunities for re-use or conservation.

184. The submission from WWL expressed concern that due to a lack of desire to meter water usage by the Councils there currently is no way to provide data on water usage to the level expected by Schedule Q. For example the need to specifically identify use by such categories as “*other facilities providing medical treatment*” (implying all), “*marae*”, and “*other educational facilities*” (implying all) is unclear, as many of these may be no more significant in their water use than an individual household. While the approach to sector information to be taken by the applicant to demonstrate reasonable demand for a group or community should remain a requirement, it needs to be less prescriptive. The level of specificity in the schedule e.g. marae is impractical. Taking the marae as an example, there are only a few in the Wellington region and it is not clear why they are focused upon.
185. I therefore recommend amending the sectors so they are more meaningful as follows:

Group or community water supplies

A water management plan shall be submitted with a resource consent application to take and use water for group or community drinking water supplies that addresses:

- (a) the reasonable demand for water, taking into account the size of the group or community, the number of properties that are to be supplied, the potential growth in demand for water, the sectors in the group or community that will use the water and estimates the relative amounts that will be provided to each sector.

Sectors in the community using water may include:

- households (domestic use)
 - businesses (commercial use)
 - industry
 - hospitals, and other large facilities ~~providing medical treatment, marae, schools or other education facilities, New Zealand Defence Force facilities or correction facilities~~
 - public amenity and recreational facilities ~~such as gardens, parks, sports fields and swimming pools~~
 - sectors requiring water for the reasonable needs of animals or agricultural uses that are supplied by the group drinking water supply or community drinking water supply system
- (b) the amount of water required for the health needs of people and how the water supplier will manage water used by all sectors at times when restrictions are being placed on all consented uses of water (summer low flow periods), and
- (c) the effectiveness and efficiency of the distribution network.

NATURAL CHARACTER

186. While WWL did not make primary submissions to any provisions in this hearing stream, it was a further submitter to the submission from New Zealand Transport Agency [146/090] regarding Policy P25, and New Zealand Transport Agency [146/091] regarding Policy P26.

Policy P25 Natural Character

187. As notified:

Use and development shall avoid significant adverse effects on natural character in the coastal marine area (including high natural character in the coastal marine area) and in the beds of lakes and rivers, and avoid, remedy or mitigate other adverse effects of activities, taking into account:

- (a) the extent of human-made changes to landforms, vegetation, biophysical elements, natural processes and patterns, and the movement of water, and
- (b) the presence or absence of structures and buildings, and
- (c) the particular elements, features and experiential values that contribute significantly to the natural character value of the area, and the extent to which they are affected, and
- (d) whether it is practicable to protect natural character from inappropriate use and development through:
 - (i) using an alternative location, or form of development that would be more appropriate to that location, and
 - (ii) considering the extent to which functional need or existing use limits location and development options.

188. New Zealand Transport Agency sought specific recognition of regionally significant infrastructure in Policy P25, particularly in terms of whether the development is appropriate.

189. The Section 42A report considered that it is not necessary to duplicate those provisions, or to specifically refer to regionally significant infrastructure, in Policy P25 which deals with significant adverse effects of use and development on natural character. The Section 42A report considers "*Use and development*" already encompasses "*regionally significant infrastructure*".³⁴

190. While structures and works undertaken by regionally significant infrastructure is undoubtedly encompassed by the words "*use and development*", both the RPS and the PNRP itself at Objective O12, then again at Policy P12 seek to recognise the benefits of regionally significant infrastructure. I would like to draw attention back to the RPS which requires that the social, economic, cultural and environmental, benefits of regionally significant infrastructure be recognised and protected. Including consideration of regionally significant infrastructure in Policy P25 is another way to meaningfully recognise that regionally significant infrastructure is different. The amendments sought to the policy would enable regionally significant infrastructure to get a slightly different framework to reflect the benefits they provide to the wider community.

³⁴ Paragraph 227, Section 42A Hearing Report on Natural Form and Function, Yvonne Legarth (7 August 2017)

191. I therefore support New Zealand Transport Agency's amendments as follows:

...

d) ~~whether it is practicable to protect natural character from inappropriate use and development through~~ whether the use and development is appropriate after considering:

(i) ~~using~~ ~~an~~ the use of alternative locations, or form of development that would be more appropriate to that location; and

(ii) ~~considering~~ the extent to which functional need or existing use limits location and development options;

(iii) whether the use and development is for regionally significant infrastructure.

Policy P26 Natural processes

192. As notified:

Use and development will be managed to minimise effects on the integrity and functioning of natural processes.

193. Fundamental to the primary submission from New Zealand Transport Agency and the further submission in support from WWL is the use and interpretation of the word "*minimise*". As I have outlined in previous evidence on Hearing Streams 1 and 2, I have difficulty with the use of the term "*minimise*" where use of this term leads one back to Policy P4 where the definition of "*minimised*" is established. I have a number of concerns with Policy P4 (set out in my evidence in Hearing 1). In addition, it is not clear whether some of the policies provide an alternative definition of what minimise means, specific to the subject matter of the Policy, or whether Policy P4 applies in its entirety to all uses of the word "*minimise*".

194. As an aside, I consider this policy is not particularly useful as it is too broad to be particularly meaningful, as it relates to:

(a) use and development (i.e. everything);

(b) minimising effects (this matter depends where the Panel land on Policy P4 and the outcome of the expert conferencing but there is no sense of scale of minimising); and

(c) integrity and functioning of natural processes (in terms of the environment, everything is essentially a natural process).

195. I note this point was raised in the submission from Fertiliser Association of New Zealand [302/035].



CAROLYN WRATT

28 AUGUST 2017