

**BEFORE ENVIRONMENT CANTERBURY**

**IN THE MATTER** of the Resource  
Management Act 1991

**AND**

**IN THE MATTER** of submissions and  
further submissions  
made by  
**TRANSPower NEW  
ZEALAND LIMITED** on  
Proposed Variation No  
6 (Christchurch  
Groundwater Protection  
Zones) to the Proposed  
Natural Resources  
Regional Plan Chapter  
4 – Water Quality

**STATEMENT OF EVIDENCE OF DAVID LE MARQUAND ON BEHALF OF  
TRANSPower NEW ZEALAND LIMITED: HEARING VARIATION 6**

**1.0 INTRODUCTION**

1.1 My name is David le Marquand and I am a Director of Burton Planning Consultants Limited. My qualifications are a Bachelor and Master of Arts degree in Geography from Auckland University. I have practised resource management for over thirty years: fifteen of those years in Central Government including six years as a Scientist in the Planning Section of the Water and Soil Directorate (MWD) Wellington, and two years as a Policy Analyst and five years as a Senior Policy Analyst with the Ministry for the Environment in Auckland. I have spent the last fifteen years as a Resource Management Consultant with Burton Consultants.

1.2 My evidence generally supports the submissions lodged by Transpower New Zealand Limited (“Transpower”) on the Proposed Variation No 6 (Christchurch Groundwater Protection Zones) to Chapter 4 Water Quality of the Proposed Natural Resources Regional Plan (NRRP). These were largely further submissions lodged in support of the Oil Companies and some other parties.

1.3 I have been the Account Manager for Transpower for more than fourteen years. In that role I have been responsible for providing advice to Transpower, on a national basis, on relevant district and regional plan provisions and various resource management issues affecting Transpower operations. I have also been involved in a range of transmission projects relating to new and existing infrastructure, and requiring various regional and district council consents, designations and/or outline plans.

## **2.0 BASIS OF EVIDENCE**

2.1 I have read and am familiar with the Proposed Variation 6 provisions, the Officer’s Report for the Hearing in relation to Transpower’s further submissions, and the redline version of the relevant provisions. My evidence primarily focuses on those recommendations in the Officer’s Report relevant to the provisions of concern to Transpower.

2.2 I have read the Code of Conduct for Expert Witnesses issued as part of the Environment Court Practice Notes. I agree to comply with the code and am satisfied that the matters I address in my evidence are within my expertise. I am not aware of any material facts that I have omitted that might alter or detract from the opinions I express in my evidence.

## **3.0 GENERAL BACKGROUND**

3.1 Transpower’s principal concerns in relation to Variation 6 arise in respect of the storage and use of hazardous substances within substations. Oil is the key hazardous substance used and stored within substations, and is found in various equipment and componentry that make up the National Grid. Oil is largely used as a cooling medium in electronic equipment such as

transformers and circuit breakers. The key potential issues that could arise from the activity relate to:

- storage containers (i.e. above ground equipment such as transformers) and the potential risk of contamination from leaks;
- the discharge of stormwater from these facilities and the potential for hazardous substances to be entrained into stormwater discharges from areas where the substances are stored, used and handled. While some substations will discharge into existing Council infrastructure there are a number, due to their location, that will be unable to do so, and where discharges may be to land or surface water.

3.2 Transpower operates and maintains the National Grid in accordance with a number of guidelines. Of particular relevance to this Variation are the Oil Best Practice Guidelines, TP.SS 02.84 (January 2010) Station Oil Services Maintenance specification and TP.GS 54.01 June 2002 Oil Spill Management specification. These documents are the key guidelines and specification by which Transpower manages oil filled equipment at its substations. Essentially all equipment that contains more than 1500l of oil is required to be bunded and any spills contained. Transformers can contain around 40,000l of oil. Other equipment much less. Transformers do tend to leak (i.e. weep) and that will generally increase with age and hence the reason for containing them on impervious surfaces. Any substantial loss is likely to lead to equipment failure and loss of power. Stormwater from those bunded areas is treated according to the risk sensitivity model EROS, which identifies the nature and requirement of treatment. In particular the Guidelines specify the design of interceptors and management practices to address the “at-risk” areas where contaminants may be entrained by stormwater on a substation site.

3.3 The National Policy Statement on Electricity Transmission (NPSET) came into effect April 2008. The NPSET requires consideration by decision makers when drafting plan rules and making decisions on resource consents and designations. Of particular relevance to this hearing are the following policies.

*Policy 2*

*In achieving the purpose of the Act, decision-makers must recognise and provide for the effective operation, maintenance, upgrading and development of the electricity transmission network.*

*Policy 3*

*When considering measures to avoid, remedy or mitigate adverse environmental effects of transmission activities, decision-makers must consider the constraints imposed on achieving those measures by the technical and operational requirements of the network.*

*Policy 5*

*When considering the environmental effects of transmission activities associated with transmission assets, decision-makers must enable the reasonable operational, maintenance and minor upgrade requirements of established electricity transmission assets.*

*Policy 6*

*Substantial upgrades of transmission infrastructure should be used as an opportunity to reduce existing adverse effects of transmission including such effects on sensitive activities where appropriate.*

3.4 Clearly the National Grid is nationally important infrastructure. It is considered to be strategic infrastructure in terms RPS Plan Change 1. Transpower has the following substations within the Groundwater Protection Zones:

- Islington GPZ 1A
- Addington GPZ 2
- Papanui GPZ 2
- Bromley GPZ 3

3.5 The Oil Companies submissions, which Transpower supported, in relation to the matters addressed by this hearing, sought the following outcomes:

- Ensure that the policy and rule framework is focused appropriately on balanced risk mitigation (probability and consequences) of the effects of discharges and not just on avoiding consequences and/or activities;
- Ensure that existing hazardous facilities can continue to operate, subject to appropriate management measures. This should include upgrades or additions particularly where such upgrades or additions will result in a reduction in the level of risk to groundwater resources;
- If any changes are to be implemented, to ensure that they enable existing hazardous facilities to continue to operate as a permitted activity, and that any upgrades or extensions to such facilities can be undertaken (irrespective of aggregate volume) by way of a restricted discretionary activity consent; and

- That there be no prohibited activities (except for landfills as identified in the policy framework).

3.6 I support the intent of Transpower's further submissions. My evidence focuses on the Officer's recommended changes to the provisions, the intent of those changes as I understand them (via discussions with staff), the issues that those matters raise and how they may be better targeted to ensure appropriate environmental outcomes, while satisfying the intent of Oil Companies submissions and thereby Transpower's further submissions. I examine the specific rules in the first instance then the policies.

#### **4.0 STAFF RECOMMENDATIONS**

4.1 The staff recommendations have made a suite of comprehensive amendments to the policy and rule framework. These changes are significant and need to be re-evaluated in light of the original submissions and further submissions. I have assumed that there is scope within the various submissions for staff to make the various changes proposed.

4.2 Overall I am in general support of the clarity and simplification of the provisions now proposed. In particular I support the intent to:

- develop specific policies for each groundwater zone;
- make existing hazardous substance facilities permitted;
- remove overlap and duplication of HSNO provisions;
- include a schedule of thresholds of substances;
- focus on wet stock reconciliation rather than tank testing regimes; and
- encourage underground tank pulls by making the activity and any associated investigation and remediation permitted.

However, the changes proposed in the staff recommendations raise a number of issues that require further comment.

#### **Stormwater Rules WQL 5 and 7**

4.3 I have considered the stormwater rules in detail in my evidence presented at other hearings for the NRRP (e.g. refer Hearings 22 and 33) and it is not intended to repeat that here. Significant changes have been proposed to those rules via other hearings and the changes proposed as a result of this Variation are minor. A key outcome arising from these rules will be that many

existing industrial facilities within groundwater protection zones will be required to obtain a stormwater discharge consent once the Plan becomes operative. The specific amendments proposed by staff in relation to Rules WQL 5 and 7 for Variation 6 are not opposed.

- 4.4 There is, however, one matter relating to Policy WQL 19 (5) that needs further comment. Transpower supported the Airways Corporation submission 12.3 on this matter, which sought its deletion. The provisions states:

*(5) All hard surfaces and vehicle standing areas associated with urban activities within Christchurch Groundwater Protection Sub-Zone 1A must be designed, constructed and maintained so as to avoid hazardous substances and contaminants entering groundwater.*

- 4.5 The reason for Transpower supporting the deletion of this provision was a concern about potential requirements to retrofit treatment to all existing surfaces, even where there is little risk of any contaminants getting entrained. For example, Transpower has numerous buildings on substation sites and would not wish to be required to treat ordinary runoff from those areas. Similarly, if the transmission support structures were to be considered “hard surfaces” there would be an issue in collecting and treating such areas (this matter was raised in relation to the stormwater hearing). The staff report now seeks to attach this condition to not only apply to zones 1A and 1D but also 1C. The staff report has rejected the submission and Transpower’s further submission (p177 of the staff report) and states:

*The clauses address different activities, which pose a risk to groundwater from hazardous substances, i.e. sewerage systems, stormwater systems, hazardous facilities, hard surfaces and vehicle standing areas. The reformatting of policies will assist in clarification.*

- 4.6 I accept that where there is a risk of hazardous substances that are being used and stored entering the groundwater system there need to be measures in place. I also accept that existing service stations and bulk storage facilities designed in accordance with the MfE Guidelines will already be capturing contaminants. However not all runoff from hard surfaces will require specific treatment. In my opinion the policy should be targeted to “at-risk” areas where hazardous substances may be entrained in runoff as opposed to a blanket “all hard surfaces”. This is the way the Oil Industry MfE Guidelines have been designed. Runoff from the canopy roof, for example, is treated as uncontaminated (not requiring treatment) and is diverted away from the on

site treatment system. Similarly Transpower's specifications and guidelines are properly focused on those at risk areas. If the policy is to remain I would like to see the policy reworded (and which will hopefully reflect the amendments that are made to the stormwater provisions in the NRRP) as follows:

- 4.7 *(5) All hard surfaces and vehicle standing areas associated with urban activities within Christchurch Groundwater Protection ~~Sub-Zone XX~~ at risk of entraining hazardous substances must be designed, constructed and maintained so as to avoid hazardous substances and contaminants entering groundwater.*

**Rule WQLYY: Use of land to store or use a specified hazardous substance**

- 4.8 The intent of the rule to permit lawfully established facilities is supported. There are, however, a number of matters that are of concern to Transpower.

**Condition 1**

- 4.9 Condition 1 states:

*The storage or use can be demonstrated to the satisfaction of the consent authority as being lawfully established before 4 July 2004 and similarly the maximum quantity stored or used has not increased since that date.*

- 4.10 In my opinion condition 1 is capable of being inappropriately interpreted as equally applying to throughput as to storage. Clearly a limit on throughput will be a very difficult condition to ascertain both for the Council and operators. Transpower's use of hazardous substances in its equipment does not involve throughput in any significant sense, however it is required to refurbish the oil in transformers from time to time (approximate 8 year cycle). Ascertaining any throughput would be very difficult and to require a consent for a change to that previous pattern of use would be inappropriate. Discussions with ECAN staff confirm that the intent is that the policy does not apply to throughput. Given that position, it is considered appropriate that reference to "used" be deleted from the condition as follows:

*The storage or use can be demonstrated to the satisfaction of the consent authority as being lawfully established before 4 July 2004 and similarly the maximum storage capacity ~~quantity stored or used~~ has not increased since that date.*

4.11 It is noted that the lawfully established date is now proposed to be 4 July 2004. Variation 6 introduced a lawfully established date of 1 August 2007. It is not clear upon what basis this date can be rolled further back. Doing so may well result in some anomalies and unforeseen complications. For example where an industry has relied on section 20A of the RMA in the intervening period for any minor increase in storage, or where a consent has been obtained for an activity in the meantime. It is unclear what would happen upon expiry of such a consent if the activity became a prohibited activity once the Plan was operative. The 1 August 2007 date should, at least, remain. Further consideration is required as to how to address the situation where a consented activity becomes a prohibited activity, which may arise through no fault of Transpower, because someone has drilled a drinking water well in close proximity to a substation.

#### **Prohibited activity status**

4.12 Transpower supports the Oil Companies seeking deletion of the prohibited activity categories from the Plan. Rule WQLYY seeks to make any activity within a Community Drinking Water Supply Protection Zone for a bore listed in Schedule WQL2 a prohibited activity. In the original notified version of the NRRP such an activity would have been non-complying at these locations, at least enabling a case to be made via the consent process. While I could accept such a category for new facilities (i.e. they are free to locate elsewhere) such an activity status poses a significant potential impediment to the industry, and potentially the region, if applied to existing, regionally important facilities.

4.13 As identified the National Grid is nationally significant infrastructure. I have assessed the location of all Community Drinking Water Supply Protection Zones (CDWSPZ) in relation to Transpower's substations throughout the region in terms of the information available on the ECAN GIS. Attached as Attachment 1 are aerials relating to the four critical Christchurch City substations. At this stage there are no CDWSPZ's that overlay any Transpower substation. However, there appears to be an ongoing risk to Transpower that the development of new drinking water wells could blight its existing development. While WQN 27 makes the establishment of new drinking water supplies a discretionary activity, while discretion is not limited

there are 8 matters of discretion listed that refer to the effect of existing activities on the drinking water activity. There is nothing in either the condition or the policy framework that protects existing activities from being subject to new protection zones. This is very concerning, creates investment uncertainty and could significantly impact on the ability of Transpower to meet the electricity needs of the community. In my opinion it is also untenable in terms of giving effect to the NPSET.

- 4.14 The proposed provisions mean the installation of a nearby bore would result in no increase in capacity even if the resulting works at an existing substation site would improve the existing situation and decrease the probability of any incidents happening (e.g. transformers installed within a building). Even a non-complying activity category is a significant impediment for what is essential infrastructure. In my view the non-complying/prohibited approach accepts the present level of risk from such sites but would appear to run the risk of foregoing potential environmental improvements and improvements to the risk profile of particular regionally significant facilities, It is not, in my view, acceptable to impose a prohibited activity status initiated by third party activity on such regionally significant strategic infrastructure, especially where an upgrade could improve both its level of risk and service to the community if a consenting process were allowed.
- 4.15 There needs to be a basis upon which a case can be made, particularly for existing regionally significant strategic infrastructure, but indeed for any existing activity, as realistically there are few alternative options. Prohibited activity status is a draconian measure. While I understand the intent behind it, the approach is too blunt and will not lead to sustainable resource management. For regionally significant strategic infrastructure, the focus should be on both components of risk: probability and consequences, and not just consequences. As an example: it may be that bores in close proximity to hazardous facilities have to be either deeper (thereby reducing the CDWSPZ), more closely monitored, or decommissioned and any changes to existing hazardous facilities constructed to the highest industry standards. For other activities there should at least be an ability to enact changes to those facilities that would see risk stay the same or reduce, even if storage is increased.

### **Wet Stock**

- 4.16 Transpower supported the Oil Companies submission in relation to Rule WQL 42. The proposed new provision in WQLYY states Condition 2:

*Stock reconciliation of a specified hazardous substance shall be undertaken at regular intervals. If the stock reconciliation of a substance stored in a container located in or under land shows a discrepancy for the measurement period of more than 25 litres or 0.5 percent, whichever is the smaller, Environment Canterbury shall be notified;*

- (i) immediately, if the container is located within a Community Drinking Water Supply Protection Zone for a well listed in Schedule WQL2. or within Christchurch Groundwater Protection Zones 1, 1A, 1 B, 1 C, 1 D, or 2 ; or*
- (ii) within two working days if the discrepancy occurs over three consecutive measurements for a container located in any other area.*

Transpower does not undertake wet stock reconciliation in the way undertaken for petroleum tanks and/or as controlled by HSNO. This is because the hazardous substance is within the equipment. Potential leaks are monitored in accordance with Transpower guidelines. Any substantial leak (greater than 5 litres) is required to be reported. The proposed condition is acceptable to Transpower.

### **Activity status for extensions to existing facilities**

- 4.17 Transpower supported the Oil Companies submission seeking any extension to an existing facility be considered no worse than a restricted discretionary activity. I support the intent of the Oil Companies submission. At present the staff recommended rule provides for extensions to existing (e.g. substations) facilities within the groundwater protection zones as a non-complying activity, the same activity status as for new facilities. While I can understand the signal for new facilities to avoid these areas, I would prefer to see the activity status be no worse than a discretionary activity for existing facilities, where not within a Community Drinking Water Supply Protection Zone and non-complying if they are (as opposed to prohibited) but with an exception (i.e. discretionary) for strategic infrastructure such as the National Grid if they are.
- 4.18 The reason why a change to the activity status is considered appropriate is that while existing activities are permitted there should be an “incentive” to improve over time all aspects of existing facilities in order to as practicable reduce any risks from those sites. This would involve ensuring those sites have the equipment and procedures that meet best practice (e.g. contained

and banded areas with appropriate treatment around transformers). Transformers have to be replaced from time to time and/or capacity increased or extra redundancy built into the system to increase the integrity of supply. This will mean additional equipment. Newer equipment will reduce the probability of an incident. The reduction in probability of an event occurring will be an environmental improvement. A non-complying/prohibited activity regime does not, in my view, send an appropriate signal to enable the National Grid to continue to operate and upgrade in accordance with the NPSET.

4.19 The policy framework (including the zone policies and policy WQL 8 and 12) make specific provision for extensions to existing facilities, which reinforces my view that they should not be treated on the same basis as new facilities.

4.20 New provisions in WQLZZ should be introduced as follows:

**2A A discretionary activity if it:**

*Is an extension to a lawfully established activity and not within a Community Drinking Water Supply Protection Zone.*

*Is an extension to lawfully established strategic infrastructure and within a Community Drinking Water Supply Protection Zone*

**3A A non complying activity if it:**

*Is an extension to a lawfully established activity and within a Community Drinking Water Supply Protection Zone.*

4.21 There are some consequential amendments required to the policies. These are discussed below. Furthermore there is a need to address the issues relating to the establishment of new drinking water bores and associated protection zones.

## **OBJECTIVES AND POLICIES**

4.22 As the rules propose a non-complying activity status for new and any extensions to existing facilities, within the groundwater protection areas, the objectives and policies and their interpretation are critical for any activities involving hazardous substances.

4.23 The reworking of policies 13-21 into new policies 13-19 represents a significant change to the notified version of Variation 6. While I am generally

supportive of the restructure (e.g. one policy per groundwater zone) there are a number of issues that need addressing.

### **Reworked Policy 13**

- 4.24 Each policy (13-19) is prefaced with the same preamble taken from the previous policy 13:

*Manage activities in the Christchurch Groundwater Protection Zone XXX so that there is no significant increase in the risk of contamination of groundwater by avoiding activities that may result in contaminants entering and persisting in groundwater, and minimising effects of activities where contaminants will exist in groundwater for only a short period. In particular:*

- 4.25 The subsequent parts of the relevant policies (13-19) set out how activities are to be managed in each respective zone. There are clear differences between the groundwater protection zones and the subsequent elements of the policies, i.e. they do not result in “avoidance of all activities” that may result in contaminants entering groundwater, and they contain a variable element. Notwithstanding the phraseology of the policy it does not appear that the intent is to have to remove all hazardous substance use from Christchurch. As a consequence there is, in my opinion, an inherent and concerning contradiction and discretion built into the new policies.

- 4.26 The Oil Companies sought in their submission that Policy WQL 13 be reworded as follows (note: I have added some extra wording underlined to add clarification):

*Ensure the risk of contamination to Christchurch groundwater from activities is appropriately assessed and managed to the extent that:*

- (i) Where discharges may result in contaminants entering and persisting in groundwater and would have an adverse effect on groundwater quality, the risk of discharge is avoided in the first instance by avoiding the establishment of that land use or where this is not practicable (e.g. existing activity), appropriate mitigation measures are implemented.*
- (ii) Discharges are minimised where the water quality effect of contaminants will only exist in groundwater for a short period of time.*

- 4.27 The staff report (page 81) identifies that the Oil Companies suggested wording is close to the intent of the existing wording. I disagree. In my opinion there are important differences between the two. The Oil Companies submission more appropriately reflects or enables the more pragmatic intent (sought by Transpower in its further submissions) and effect of the staff

recommended more detailed zone policies and rules. It introduces the concept of practicability. New uses can be readily avoided, existing activities can't. It is not practicable to avoid the risk of such discharges where there are already zoned urban areas, established activities using and storing hazardous substances or regionally significant strategic infrastructure (e.g. substations). In my opinion the Oil Companies version (with my amendment) would be more appropriate as a header to each zone policy. Alternatively this could be elevated as an objective as it applies to all the zone policies.

- 4.28 If the policy 13 header is to remain for each zone policy then the words "In particular" need to be replaced with words "to the following extent:" or similar. This would at least better reflect the collective intent and wording of each of the subsequent zone provisions.

#### **Activity consistent with the protection of groundwater**

- 4.29 The phrase "the activity is consistent with the protection of groundwater quality" now appears in each of the new policies 13 - 17. In my opinion there is significant uncertainty over what that aspect is and how it will be applied. The staff report has made the following comment in response to the Oil Companies submission (staff report Part 5 p 105):

*The policy states that activities, which are legally provided for in district plans but have not yet been established on the parcel of land, may only be established under certain conditions. There is two requirements set out in the policy: applying best management practice measures and, that they are consistent with the protection of groundwater. While guidance is provided on appropriate measures, the requirement to be "consistent with the protection of groundwater" is purposefully left open to allow judgement to be exercised on the wide range of activities that are possible. The policies do, however, give specific requirements for the more common activities in each zone.*

- 4.30 The staff report identifies a particularly important intent, in that the "consistency" test is supposed to be applying to activities not yet established. This is not clear in the present drafting. This aspect needs to be clarified in the respective policies by including reference to "new" where this test is intended to be applied.
- 4.31 I remain uncomfortable with the deliberate openness of the policy, as it is not likely to lead to greater certainty or consistent decision-making. On the one hand it is purporting to enable the urban development provided for in the

other District plans and RPS, but on the other, reserves discretion to thwart any and every such development sanctioned by those other documents on an ad hoc basis (i.e. when a consent is triggered). A test of “consistent with” would also appear to be a different test to “no significant increase in risk” in the policy header to each zone policy. If there is to be such a test then further guidance and criteria is required to be developed if such policy is to be capable of delivering consistent decision-making. However, I do not believe that this provision is necessary given the header to the policies and would prefer it was deleted altogether.

### **Explanation to the policy framework**

- 4.32 In general I support the proposed explanation to the policy framework, however there are a couple of matters that need further consideration. The overall approach is discussed at the end of the explanation; I would support the overall approach being considered upfront of the policy explanation.
- 4.33 The policy headers (in policies 13-19) refer to “*no significant increase in risk*”. However the explanation to the staff recommended policy introduces the concept of “*avoid unnecessary risk*” which is stated as being “*the emphasis of management to be on the consequences of an activity rather than the probability of those consequences occurring*”. I understand the concern is where an event will have a very high consequence irrespective of the probability of that event occurring. The explanation goes on to state “*As the quantity of contaminant being stored and used on-site increases, so too does the level of consequence to groundwater in the event of a system failure. However it is only in the event of failure, or accident, that contamination occurs. There is clear need for a strong level of management of this risk, e.g. limiting the quantity of hazardous substances on site, or requiring bonding* ”
- 4.34 In my opinion there remains a role for the consideration of probability. Probability is an important consideration in relation to age of equipment. A 20 or 30-year-old transformer will likely have a higher probability of leakage and failure than a new one, yet they may have the same oil volume and therefore have the same consequence if there was a failure. Even with a complete failure of a transformer and the loss of contents the probability that the oil could escape to contaminate groundwater is extremely remote given that they are above ground containers, they are banded and they have systems

designed to contain a completed failure. The relationship between volume of storage, system failure and consequence is therefore not a simple linear relationship. It is accepted that consequence increases proportionally in relation to the size of the largest container. Probability remains an important consideration though where there are multiple containers on a site as in the case of a substation. A system failure that results in the release of all multiple containers on a site would be an extremely rare event and I am not aware of anything like that ever happening. Electrical equipment like transformers and circuit breakers are sealed units, while they can weep they are located above ground so any leaks are readily detectable. Transpower's seismic policy is to currently design for a 1 in 2500-year earthquake event. This is very high standard. Indeed if we "planned" for such events solely on a consequence basis you would be unable to develop a design standard. Consideration of probability should be a factor that can be applied when looking at extensions to existing facilities. An upgrade could result in an overall net reduction in the risk profile of a site (e.g. better containment or treatment). The opportunity for that reduction to occur will be lost if there is a zero tolerance threshold applied.

4.35 If consequence is considered in isolation from probability then there is a big question on where to draw the line. For example petrol tankers travel on roads, therefore there is a chance of a spillage from a 40,000l tanker on a road, which in turn could wash off into the ground. Similarly there is also a chance that two tankers could collide and discharge their contents, but the probability of that happening is substantially less than one tanker. Similarly three tankers could collide, although again the probability of that is extremely remote. If we were only concerned about consequence then those consequences would need to be factored into the consideration about new roads.

4.36 I would like to see the following changes made to the fourth paragraph of the explanation by deleting:

~~Accordingly, the appropriate approach to managing groundwater quality is to avoid potential consequence, even if the probability of those consequences occurring is low. That is, the emphasis of management is to be on the consequences of an activity rather than the probability of those consequences~~

~~occurring. This approach is called "avoid unnecessary risk".~~ And replacing with:

*Accordingly, the appropriate approach to managing groundwater quality is to avoid potential consequences in the first instance, even if the probability of those consequences occurring is low. That is the approach is to avoid all unnecessary risk. Where that is not possible then the probability of those consequences occurring can be considered, particularly for existing activities.*

## **5.0 CONCLUSION**

- 5.1 The staff recommendations have made a number of significant changes to the policies and rules. The overall intent to simplify the structure of the rules is supported.
- 5.2 Rule WQLYY permits existing hazardous substances facilities and requires a non-complying consent for any expansion in the groundwater protection zones. The activity status is not opposed for new activities but is for existing activities and an alternative basis is presented (refer paragraph 4.20) i.e. discretionary activity for strategic infrastructure. It is considered appropriate that there be careful scrutiny for any such expansion and that will still occur with such a consent process. However the fact that prohibited activity status for any expansion within a Community Drinking Water Supply Protection Zone is proposed is a potentially major impediment for nationally significant strategic infrastructure (National Grid). Notwithstanding that the National Grid facilities are not currently located within such zones there is a potential for that to occur as there are no countervailing protections in the NRRP. As a consequence one could become a prohibited activity through the actions of a third party. This clearly is not acceptable for the National Grid and is considered to be contrary to the NPSET. The prohibited activity status could be retained for new activities.
- 5.3 The policy framework is generally supported but requires further amendment in accordance with the matters outlined in this evidence.

David le Marquand

26<sup>th</sup> March 2010

ECAN GIS IDENTIFYING COMMUNITY DRINKING WATER SUPPLY  
ZONES IN RELATION TO ISLINGTON, ADDINGTON, PAPANUI AND  
BROMLEY SUBSTATIONS