

# **Hurunui District Council**

## **Resource Consent Application to Replace Consent CRC070201 to Take and Use Groundwater**

### **Assessment of Environmental Effects**

May 2017



**Bowden**  
**Environmental**  
Resource Management Consultants

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# **Bowden Environmental**

## **Assessment of Environmental Effects**

Groundwater Abstraction

May 2017

### **1.0 INTRODUCTION**

The Hurunui District Council currently holds resource consent CRC070201 (Appendix 1) to take groundwater from a bore on Racecourse Road in the Waipara area, for public water supply. The consent expires on 12 November 2018. The Council has carried out re-development of the bore and a second aquifer pumping test in 2016. The first test was carried out in 2006 to support the consent application which was publicly notified, received submissions, and was decided at a formal Hearing. Condition 10 of the consent resulted from the submissions and required the Council to provide connections to the public supply for properties that have their own bores and could have been adversely affected by the Council's bore. These properties have since been provided connections to the public supply.

The re-development and re-testing of the bore has shown that a higher pumping rate than the consented 15 litres/second is achievable from the bore. The recent pumping test report accompanies this application. This renewal application is to increase the rate and volume as part of the renewal of the consent. The reason for the increase is because the District water demand is growing rapidly and there are difficulties with finding new groundwater sources in the Waipara basin of good quality (low iron and low hardness). It is the Council's strategy to maximise abstraction from proven existing bores before sinking exploratory bores in the complex geological structure of the Waipara area. The application is to increase the rate from 15 l/s to 25 l/s and the annual volume from 472,040 cubic metres to 681,374 cubic metres.

The Council is also providing backup infrastructure for periods when existing pumping equipment requires maintenance. For the Racecourse Road pumping station, the backup strategy is to install a second bore beside the existing bore, and to the same depth, with secondary pumping equipment. This is now necessary with the growing demand of Amberley and the fact that the supply is an on-demand supply due to residential property owners not having any storage. This consent renewal application is to include the backup bore.

### **2.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT**

The Waipara Catchment in North Canterbury has an area of approximately 740 km<sup>2</sup>, consisting of foothills, an alluvial basin and coastal ranges. The basin consists of folded and faulted Torlesse basement, overlain by Tertiary limestone, sandstone and mudstones, which are exposed on the hills and ridges along the eastern and western margins of the basin. The local folding and faulting resulted in the isolation of the Waipara Basin from the Canterbury Plains, giving rise to a distinct hydrogeologic environment.

The groundwater resources utilised in the area include wells penetrating the Quaternary Canterbury and Teviotdale gravels, and the late Pliocene/early Pleistocene Kowai formation. In general, aquifer thicknesses and lithologies show rapid and unpredictable variations over short distances. The hydrogeological system can be described as a complex network of discrete, lithologically and hydraulically heterogeneous anisotropic semi-permeable to permeable channels. Permeabilities and yields are correspondingly variable and unpredictable, though moderate to low overall. Recharge of the gravel aquifers by upwards movement of deeper groundwater is suspected to occur.

The Waipara Regional Plan specifies a groundwater allocation limit for the Basin of 10.7 million cubic metres per year (MCM/year). The reported current allocation is 11.84 MCM/year, although it is noted that this volume is based on some assumptions which may not be correct, e.g. assuming a 212 day irrigation period for the many vineyards in the area.

The accompanying aquifer test report contains more detail on the groundwater resource.

The Waipara River is a perennial river that flows across the alluvial basin. Other significant waterways in the basin include Weka Creek and the Omihi Stream that flow into the middle reaches of the Waipara River and Weka Creek, though this creek generally does not contribute any surface flow to the Waipara River during summer, but does appear to contribute underflow. Omihi Stream by contrast, can supplement the surface flows of the Waipara River significantly.

The Waipara Catchment is dominated by agricultural land uses, mainly horticulture (particularly vineyards) and cropping. Forestry, pastoral farming and some cattle farming also occurs.

### **3.0 PLANNING MATTERS**

The “Waipara Groundwater Zone” is managed by the operative Waipara Catchment Environmental Flow and Water Allocation Regional Plan. This Plan manages the taking and use of groundwater and the relevant rules for the application are:

- Rule 6.1 for the replacement application but only if the rate and volume does not exceed the consented rate and volume, or the cumulative allocation does not exceed the allocation limit specified in the Plan.
- Rule 7.1 for the increase in rate and volume, or if the cumulative annual volume of all consents is at or exceeds the allocation limit specified in the Plan.

Because this application is seeking an increase in the rate and volume, and also because the Plan’s allocation limit is reported to be fully allocated, the application falls under Rule 7.1, a non-complying activity. Section 104D of the Resource Management Act provides for consent to be granted for non-complying activities only if:

- The adverse effects will be minor, or
- The activity will not be contrary to the objectives and policies of the Plan.

The relevant environmental effects are considered to be:

- Cumulative effects
- Drawdown interference effects
- Effects on surface waterbodies
- Reasonable need
- Alternative supplies
- Technical efficiency
- Effects on seawater intrusion
- Effects on aquifer stability
- Effects on water quality from cross-connection of aquifers
- Adverse effect of noise associated with the well pump
- Effects on Tangata Whenua values.

The relevant objectives and policies of the Plan are considered to be:

- Objectives 1, 3, 4, 5 which are concerned with surface/ground water connectedness, efficient use of water, economic and social benefits and reliability of supply, as well as sustaining the life supporting

capacity of the Waipara River and its catchments. Objective 2 is concerned with surface water abstraction and is not relevant to this application.

- Policies 1.1-1.11 are concerned with surface water or hydraulically connected groundwater, and are not considered relevant to this application.
- Policy 2.1 seeks to prevent additional abstractions of groundwater, except for replacement consents, or for domestic and stockwater, or unless Policy 2.2 applies.
- Policy 2.2 sets an allocation limit of 10.7million cubic metres and since this application will exceed that limit then this part of the Policy is not complied with. The Policy also seeks to protect the reliability of supply for existing abstractors. Policy 2.2c is not relevant for this application.
- Policy 2.3 is concerned with taking a precautionary approach to groundwater resources.
- Policy 2.4 requires bores to adequately penetrate the aquifer and drawdown effects to be within thresholds specified in the Plan.
- Policies 3.1 and 3.2 are concerned with transfers so are not relevant.
- Policies 3.3 and 3.4 deal with efficiency and metering.
- Policy 3.5 is not relevant since this is a groundwater take.
- Policies 3.6 and 3.7 are concerned with vegetation and therefore are not relevant.
- Policy 3.8 is concerned with cumulative effects of small takes.
- Policy 3.9 relates to review of allocation limits.

The main considerations from the above Objectives and Policies are cumulative effects due to the increase in volume being sought which may result in the Plan's allocation limit being exceeded, and effects on neighbouring bores from increased drawdown. These and all other relevant matters are considered in the following assessments.

## **4.0 ASSESSMENT OF ACTUAL AND POTENTIAL EFFECTS**

### **4.1 Cumulative Effects**

The Waipara Catchment Plan provides for a total groundwater allocation limit from the zone of 10.7 million cubic metres/year. The current consent CRC070201 has a volume of 472,040 m<sup>3</sup>/year which is included in the allocation volume limit. For the additional annual volume, there are two options:

- ECan re-audits its database to determine whether there is any additional volume available within this limit, with the possibility that this application will also be within the limit specified in the Plan.
- If the allocation limit is fully allocated, then the additional annual volume sought in this application (681,374 – 472,040 = 209,334 m<sup>3</sup>) means that the cumulative allocation will increase from the Plan limit of 10.7MCM to 10.909334MCM. This would be 2% over the Plan limit.

It is critical to understand what the Plan's allocation limit is based on. It is a number that is based on either a proportion of the average annual rainfall in the Waipara Basin or if additional data was available then a proportion of the average annual land surface recharge (rainfall plus seepage from rivers). Therefore, the specified allocation limit is a proportion of the input/recharge to the groundwater system and is not based on an assessment of effects of different allocation limits. The current Plan allocation limit should be viewed as an "interim" limit and not as a sustainable limit.

The question is whether the 2% additional allocation sought in this application is significant and seriously stresses the groundwater resource in the Waipara basin to the extent that the resource is “mined” and with a continuing decline in groundwater levels over the long-term. This would represent unsustainable allocation caused by cumulative abstractions.

The natural groundwater system is in a state of balance between inflows and outflows. Any abstraction of groundwater is going to have some effect on the natural patterns of recharge and discharge, and this is manifested in a decline in groundwater levels, reduction in groundwater-fed stream flows, and possibly seawater intrusion in aquifers near the coast. However, these cumulative effects of abstraction may lead to a new equilibrium over a short-term rather than a continuing decline over the long-term. Groundwater levels usually recover after a good winter's rainfall recharge if the cumulative abstraction is not excessive. However, if the cumulative abstraction is excessive and on-going, then levels will continue to decline. This situation would indicate unsustainable allocation.

Groundwater levels are the principal means to monitor the state of the groundwater resource and to give early warning of unsustainable cumulative abstraction which is identified by continuing decline in levels. Environment Canterbury monitors groundwater levels in a network of bores throughout Canterbury for just this purpose. The map in Appendix 2 shows the bores that are monitored near the Council's bore M34/5707. The monitored bores are of a variety of depths as shown on the map. Two groundwater level graphs are presented in Appendix 2. One shows levels in the set of four shallow bores (less than 30 metres deep) and the other shows levels in the set of deep bores (greater than 66 metres deep and down to a similar depth to the Council's bore).

Both sets of graphs show the typical summer/winter fluctuations. They also show that groundwater levels have been low over the last two years, which is in response to the low rainfall recharge that has also been experienced elsewhere in Canterbury. However, the bores do show the winter increase which indicates that the groundwater has received recharge nonetheless. Apart from the last two years, none of the deep bore graphs indicate any continuing decline in levels. Only the shallow bore M34/0311 located furthest to the west in the Waipara Basin shows long-term decline. None of the deep bores in the vicinity of the Council's deep bore show any long-term declining trend. This state of the deep groundwater resource indicates that the current cumulative abstraction is not excessive. It also indicates that the additional 2% sought by the Council is very unlikely to cause a change to this state. It is considered therefore that the additional volume will not be unsustainable.

#### **4.2 Effects of Take on Surrounding Groundwater Users**

The abstraction of groundwater creates a drawdown cone that extends laterally from the pumping bore, and may result in a lowering of groundwater levels in neighbouring bores. Such lowering may have serious consequences for existing users by preventing them from taking their authorised volume or abstraction rate, and may also result in increased costs for such users through having to lower their pump, change from a surface to submersible pump or by using more electricity to abstract water.

The maximum potential effect on surrounding groundwater bores using the methodology set out in Schedule 12 of the Land and Water Regional Plan is considered to provide an appropriate assessment. The details of this assessment are as follows:

- The existing effects of abstraction from bore M34/5707 has existing  $Q_7 = 15$  l/s and the existing  $Q_{150} = 15$  l/s ( $472,040 \text{ m}^3$  annually divided by 150 days and 86.4 but limited to the  $Q_7$  rate).
- The proposed effects of abstraction from bore M34/5707 and the proposed new backup bore, is modelled entirely from the existing bore (the bores will be within a few metres of each other and the combined rate and volume will not exceed that available from one bore alone): The proposed  $Q_7 = 25$  l/s and the proposed  $Q_{150} = 25$  l/s ( $681,374 \text{ m}^3$  annually but at the  $Q_7$  rate to reflect high demand periods).

- The transmissivity and storativity are from pumping tests (test report included with application):
  - Transmissivity  $T = 87 \text{ m}^2/\text{d}$
  - Storativity  $S = 0.00053$
  - Leakage  $L = 1194 \text{ m}$
  - $K'/B' = 0.000061 \text{ d}^{-1}$
  - Sigma = 0.1
  - Overlying  $T_0 = 100 \text{ m}^2/\text{d}$
  - Leaky confined aquifer with separation at 60 metres between pumped and overlying aquifers. Exclude bores less than 10 metres deep (see aquifer test report)
  - Hunt-Scott two-layer model.

The drawdown spreadsheets for the existing and proposed pumping schedules are in Appendix 3. A spreadsheet showing the differences in drawdowns in neighbouring bores is also in Appendix 3. The spreadsheet contains comments about the differences for each neighbouring bore. The result is that no neighbouring bores are potentially adversely affected by the change to the pumping schedule. However, the current consent condition 10 will be retained to ensure those neighbouring bore owners have a secure water supply into the future.

#### **4.3 Effects of Take on Surface Water Bodies**

The bore is located over 2.5 km from the nearest river, being the Kowai River North Branch, and over 5 km from the Waipara River. In addition, the standing water level in the bore is greater than 12 metres below ground level and the bore logs indicate several separate aquitards and water-bearing layers above the 146 metre deep bore. This indicates that there will be no stream depletion effect on any surface waterbody.

#### **4.4 Reasonable Need**

The use of water is required to be reasonable for the intended purpose. The current consent authorises 15 l/s and 1,296 m<sup>3</sup>/d and 472,040 m<sup>3</sup>/year. The application is to increase this to 25 l/s and 2,160 m<sup>3</sup>/d and 681,374 m<sup>3</sup>/year.

The bore M34/5707 is a particularly high producing bore in the Waipara Basin, and it is the Council's strategy to maximise abstraction from proven high quality sources to supply the growing demand in the District. Based on the last two years' actual water usage for Amberley township area and a growth in population predicted over the next 30 years from 1660 people to 2086 people, plus the restricted rural supply and assumption in similar growth, then the following Table provides the volume sought.

Area	Actual Average Daily Consumption m <sup>3</sup> /day	Actual Peak Daily Consumption m <sup>3</sup> /day	Actual Annual Consumption (average daily x 365 days) m <sup>3</sup> /year	Growth (annual x 2086/1660) plus factor of safety (10%) m <sup>3</sup> /year
Amberley	860	2155	313,900	433,900
Rural	490.5	490.5	179,032	247,474
<b>Total</b>				<b>681,374</b>

The peak daily volume exceeds the rate of 25 l/s for 24 hours/day, therefore there will be some days when the demand is not met from this source and alternative sources will need to supplement the supply. The alternative sources already exist and are part of the interconnected reticulation.

#### **4.5 Alternative Supplies**

The Council has been investigating other sources of water for the public supply. Surface water sources are problematic due to water quality issues. Other deep groundwater sources in the Waipara basin are limited due to the complex geology. The current bore M34/5707 at the Racecourse Road site is a proven relatively highly productive bore of very good quality water, and poses the best option to increase supply to meet the growing demand in the District.

#### **4.6 Technical Efficiency**

Public supplies which include long pipelines in rural areas typically require a factor of safety to account for leakage and broken pipes. The Council has applied a factor of 10%. A typical assessment of efficiency is the litres/person/day that the volume represents. While the public supply served by this abstraction is not solely for domestic purposes (other purposes include stockwater, gardens, commercial, industrial, etc) it nevertheless gives an indication of whether the volume sought is in the reasonable range. Assuming the annual volume of 681,374 m<sup>3</sup>/year for approximately 2,500 people gives an average daily volume of 750 litres/person/day. This is not unreasonable as a rough measure of efficiency when considering it supplies more than just domestic use.

#### **4.7 Effects on Seawater Intrusion**

The coast is very remote from the site. The increase in rate from the bore will not cause seawater intrusion.

#### **4.8 Effects on Aquifer Stability**

The aquifer is gravel-based, which typically is not subject to subsidence due to pumping. The bore has been in use for many years without any sign of stability problems.

#### **4.9 Effects on water quality from cross-connection of aquifers**

The bore is screened over one water-bearing layer. Cross-connection with other aquifers will not occur.

#### **4.10 Effects of noise associated with the well pump**

The bore is fitted with a submersible electric pump. There will be no noise issues for neighbouring residences.

#### **4.11 Effects on Tangata Whenua Values**

Chapter 2 of the Council's Regional Policy Statement 2013 outlines the issues and concerns of significance to Ngai Tahu, while Chapter 4 outlines provisions for the relationship that Ngai Tahu has with resources in Canterbury. These chapters seek to:

1. Identify who are the relevant organisations representing Tangata Whenua in the Canterbury region,
2. Set out natural resource issues of significance to Ngai Tahu, and provide a culture context for those issues,
3. Set out the relevant matters recognised in part 12 of the Ngai Tahu Claims settlement Act 1998, including fulfilling the Canterbury Regional Council's obligations to note the existence of statutory acknowledgements of statutory areas, and
4. Recognise and provide for the relationship between Ngai Tahu and natural and physical resources.

The site of the abstraction is within the rohe of Te Ngai Tuahuriri Rūnanga. Therefore the relevant Iwi management plans are the Ngāi Tahu Freshwater Policy Statement and the Mahaanui Iwi Management Plan. The proposed activity is not considered to be contrary to the relevant policies as assessed below.



## **Ngāi Tahu Freshwater Policy Statement**

- Wahi Tapu, Policies 1 and 2: No areas of Wahi Tapu have been identified within the area of effects for this application.
- Mauri, Policies 1, 2, 3, and 4: The application does not adversely affect water quality or quantity of surface waterbodies within the area of effects. Effects on groundwater sustainability have been addressed above and it is considered that the additional abstraction will not cause any issues.
- Mahinga kai, Policies 1, 2, 3, and 4: No areas of critical mahinga kai habitats have been identified in the area of affects, and the activity will not adversely affect water quality or quantity of water bodies within the area of effects.

## **Mahaanui Iwi Management Plan 2013**

The parts of relevance in the Mahaanui Iwi Management Plan are those relating to water quality, water quantity, water management, and particularly the sections on water quantity, water quality, and groundwater.

The proposed activity is not considered to adversely affect water quantity, i.e. the abstraction will not result in long-term sustainability issues. Nor does it adversely affect water quality. Therefore, the activity is not considered to be contrary to the Mahaanui Iwi Management Plan.

There are no Silent Files or Treaty of Waitangi Settlement areas in the area of effects (the Waipara River and the Kowai River are Statutory Acknowledgement Areas, but are not affected by the application).

## **5.0 PROPOSED CONSENT CONDITIONS**

All current conditions of CRC070201 are appropriate with the following amendments:

- The updated standard wording for the current conditions is accepted.
- Condition 1 is not necessary. However, a duration of 30 years is sought for this public water supply use (this is the period of the prediction in growth for the population served).
- Conditions 2 and 3 are to be as follows: Water may be taken from bore M34/5707, 250mm diameter and 147m deep, at map reference NZTM 1577088-5226281, and a proposed bore, 250mm diameter and 147m deep, at map reference NZTM 1577098-5226278, at combined rates of 25 l/s and 2,160 m<sup>3</sup>/d, and a combined annual volume of 681,374 cubic metres.

## **6.0 OVERALL ASSESSMENT AGAINST OBJECTIVES AND POLICIES**

The relevant objectives and policies are those of:

- Waipara Catchment Environmental Flow and Water Allocation Regional Plan
- Regional Policy Statement
- National Policy Statements and National Environmental Standards
- Resource Management Act Part 2.

### **6.1 *Waipara Catchment Environmental Flow and Water Allocation Regional Plan***

The Objectives are concerned with surface/ground water connectedness, limits on abstraction, efficient use of water, economic and social benefits and reliability of supply, as well as sustaining the life supporting capacity of the Waipara River and its catchments.

Policies 1.1-1.11 are concerned with surface water allocation and hydraulically connected groundwater, which are not relevant to this application.

Policies 2.1, 2.2 and 2.4 relate to sustainably managing groundwater and ensuring adverse effects of abstraction are no more than minor. An allocation limit of 10.7 million cubic metres is set from the Waipara zone. This application will exceed the limit by 3%. However, the above assessment shows that this will not be unsustainable, and will not reduce reliability of supply for existing abstractors.

Policy 2.3 is concerned with taking a precautionary approach to managing deep groundwater resources. This application does not contravene this policy since the assessments have been carried out showing there are no adverse effects.

Policies 3.1 and 3.2 are concerned with transfers so are not relevant.

Policies 3.3 and 3.4 deal with water use efficiency and metering. This application shows that the rate and volume is efficient, and the take is metered therefore it achieves these policies.

Policy 3.5 is not relevant since this is a groundwater take.

Policies 3.6 and 3.7 are concerned with vegetation, therefore are not relevant.

Policy 3.8 is concerned with cumulative effects of small takes which are not authorised by an individual consent.

Policy 3.9 is concerned with reviews of the allocation limits. This is not relevant to this application.

The relevant objectives and policies for this application relate to sustainable allocation and effects on neighbouring bores. The assessments show that the additional allocation will not be unsustainable and effects will be less than minor.

## **6.2 Regional Policy Statement**

The Canterbury Regional Policy Statement (2013) has Objectives and Policies for the management of fresh water which may be summarised as follows:

- Objectives 7.2.1 and 7.2.4 require the region's fresh water resources to be managed sustainably
- Objectives 7.2.2 and 7.2.3 require that abstraction and use of water is efficient and water quality is not degraded
- Policies 7.3.1, 7.3.2 and 7.3.3 require fresh water bodies and biodiversity to be protected
- Policy 7.3.4 requires environmental flow and allocation regimes to be adhered to
- Policies 7.3.6 and 7.3.7 requires water quality standards to be adhered to
- Policy 7.3.8 requires efficient allocation and use of fresh water
- Policy 7.3.10 recognises benefits of storage of water to improve efficiency
- Policy 7.3.11 recognises existing infrastructure
- Policy 7.3.12 adopts the precautionary approach for fresh water management.

The regional plans are developed under this planning framework and implement policies and rules to deliver on these higher level requirements. As such, the application will meet these requirements due to it being in accordance with the Waipara Plan and specifically that while the groundwater allocation limit will be exceeded, the additional 3% allocation will not be unsustainable.

## **6.3 NPSs and NESs**

### **Freshwater**

This 2011 NPS was amended and came into effect in 2014. The NPS must be fully implemented as soon as reasonably practicable, or no later than 31 December 2030. It sets out objectives and policies for the management of water and directs councils to adopt quality and quantity limits in plans.

The freshwater NPS inserts two transitional policies directly into regional plans which require councils to consider specific criteria when making decisions on a resource consent application. The intent is that any more than minor potential adverse effects of activities, in relation to water takes, use, damming and diverting, as well as discharges, are thoroughly considered and actively managed (to the extent that an NPS can achieve that) pending the inclusion of limits in plans. These policies apply to activities that require a resource consent until such time as changes to regional plans to give effect to the NPS are made. Amendments to include the policies should be made promptly. In accordance with the RMA, amendments to existing regional plans are to be made by local authorities without using the process in Schedule 1 of the Act and as soon as practicable.

### **Biodiversity**

This proposed NPS is intended to provide clearer direction to local authorities on their responsibilities for managing indigenous biodiversity under the RMA. It outlines policies and decision-making frameworks for the identification and management of indigenous biodiversity found outside the public conservation estate. It seeks to promote the maintenance of indigenous biodiversity while recognising the rights and responsibilities of landowners and the interests of Māori.

The proposed NPS contains a list of criteria for identifying areas of indigenous vegetation and habitats of indigenous animals that have been recognised as being rare and/or threatened at a national level. District and regional plans must identify these areas of significant biodiversity within five years of the NPS taking effect. Councils would be required to manage the effects of activities to ensure there is no net loss of significant indigenous biodiversity.

### **Sources of Human Drinking Water Standard**

This NES came into effect on 20 June 2008. It requires regional councils to ensure that effects on drinking water sources are considered in decisions on resource consents and regional plans. Specifically, councils are required to:

- decline discharge or water permits that are likely to result in community drinking water becoming unsafe for human consumption following existing treatment
- be satisfied that permitted activities in regional plans will not result in community drinking water supplies being unsafe for human consumption following existing treatment
- place conditions on relevant resource consents requiring notification of drinking water suppliers if significant unintended events occur (e.g. spills) that may adversely affect sources of human drinking water.

### **Ecological Flows and Water Levels**

The proposed NES aims to promote consistency in the way we decide whether the variability and quantity of water flowing in rivers, groundwater systems, lakes and wetlands is sufficient. The proposed NES would do this by:

- Setting interim limits on the alteration to flows and/or water levels for rivers, wetlands, and groundwater systems that do not have limits imposed through regional plans or Water Conservation Orders.
- Providing a process for selecting the appropriate technical methods for evaluating the ecological component of environmental flows and water levels in rivers, lakes, wetlands, and groundwater systems.

### **Measurement of Water Takes**

These Regulations require consent holders to meet minimum requirements to measure their water takes. The regulations also require water use data to be reported to regional councils.

## **6.4 Resource Management Act Part 2**

### **Purpose of the Act – Section 5**

The purpose of the Act is to “promote the sustainable management of natural and physical resources”. Based on the information available, it is considered that the proposed activity is consistent with the purpose of the Act.

### **Matters of National Importance – Section 6**

Section 6 outlines matters of national importance that are to be recognised and provided for in achieving the purpose of the Act. These matters include, but are not restricted to, the preservation of the natural character of rivers and their margins, and the protection of inappropriate subdivision, use and development. The relationship of Maori, their culture and traditions to the environment must also be recognised and provided for. It is considered that the activity can be carried out in a manner that will not adversely affect any matter set out in Section 6.

### **Other Matters – Section 7**

Section 7 of the Act sets out those matters that have particular regard attributed to them in achieving the purpose of the Act. Those matters are as follows:

- (a) *Kaitiakitanga;*
- (b) *The efficient use and development of natural and physical resources;*
- (c) *The maintenance and enhancement of amenity values;*
- (d) *Intrinsic values of ecosystems;*
- (e) *Recognition and protection of heritage values of sites, buildings places, or areas;*
- (f) *Maintenance and enhancement of the quality of the environment;*
- (g) *Any finite characteristics of natural and physical resources;*
- (h) *The protection of the habitat of trout and salmon.*

With the mitigation measures proposed, it is considered that this activity will not compromise any of the matters included in Section 7.

### **The Principles of the Treaty of Waitangi – Section 8**

*In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).*

The Court of Appeal has identified four principles, which form the basis of developing a relationship of partnership and communication. These are the Essential Bargain, Tribal Self-Regulation, The Treaty Relationship, and Active Protection. The third principle, the Treaty Relationship, accords Maori with special status as a Treaty Partner, distinct and separate from status as an ‘affected party’. The Runanga was not contacted regarding this application as they were not considered to be a potentially adversely affected party. A specific assessment against Tangata Whenua values has been carried out, and it is considered that the activity will not compromise any matters in Section 8.