



11 September 2020

Jessica Chalmers
Senior Implementation Advisor
Environment Canterbury

Our ref: /12534837/

Your ref:

Dear Jessica

**Mr N J & Mrs L M Harris & Harakeke Nominees Limited
Potential Effects on Hurunui Lower Rural Water Scheme**

Mr N J & Mrs L M Harris & Harakeke Nominees Limited (otherwise known as Glenturret Farm Limited) applied for a renewal of their existing water permit (CRC169648) and Farming land use (CRC169646) in October 2017, as part of this application a change of conditions was also sought to include the McLaughlan Block within the associated consented areas.

GHD have been made aware by Environment Canterbury that a small portion of proposed consented area is within the Hurunui Lower Rural Water Scheme (HLRWS) Community Drinking Water Protection Zones (CDWPZ), refer to Figure 1. It is noted that this area was covered by Glenturret Farm Limited's previous resource consents.

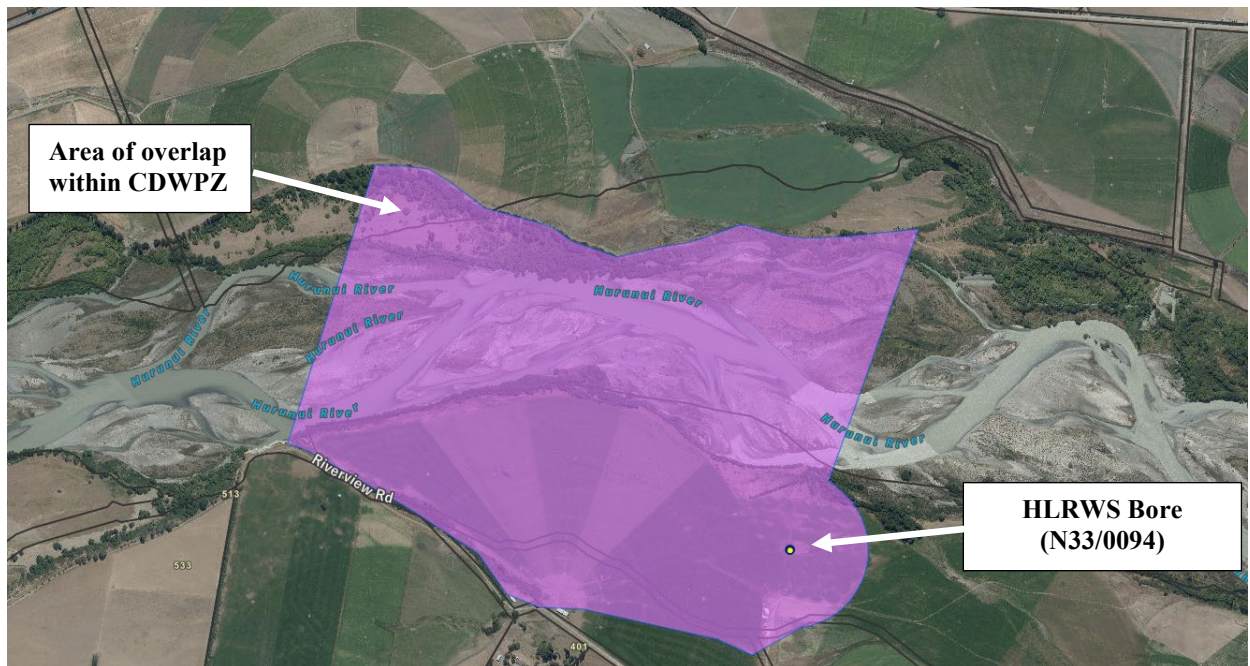


Figure 1: Glenturret Farm Limited and HLRWS Community Drinking Water Protection Zone

Environment Canterbury have requested that Glenturret Farm Limited provided an assessment against the potential effects on the HLRWS drinking water supply, as this was not specifically discussed within

the consent application. An assessment of potential effects on the supply is discussed below as well an assessment against the National Environmental Standard for Sources of Human Drinking Water (NES-DW).

Potential effects on the HLRWS drinking water supply

The proposed area of overlap covers a small area and is located adjacent to the Hurunui River. It is situated on a small river terrace, with the area being covered in a mixture of pasture and vegetation (willows).

The HLRWS infiltration gallery is located approximately 1.1 km south-east of this portion of land and is located on the opposite side of the Hurunui River, which is up to 300 metre wide at this point and contains multiple braids. The infiltration gallery is located 200 metres south of the Hurunui River and abstracts at a depth of 5.8 metres. Given the shallow depth of the bore and river gravels underneath, the abstraction point is considered hydraulically connected to the river. It is also noted that the land use surrounding the bore is used for intensive dairy farming.

In Section 4.5 of the application an assessment on the potential effects of nutrients on groundwater and surface water for the activity as a whole was provided. This assessment was undertaken to provide an assessment against the Nitrogen and Phosphorus load and concentration limits set out in Schedule 1 of the Hurunui Waiau River Regional Plan (HWRRP).

The assessment provided in Appendix I of the application concludes that the concentrations of nitrogen and phosphorus in the Hurunui River from the entire farming operation is 0.0013 mg/L for nitrogen and 0.000027 mg/L for phosphorus. This equates to an average cumulative concentration in the river of 0.3232 mg/L for nitrogen (Nitrate Nitrogen + Nitrite Nitrogen) and 0.0012 mg/L for dissolved phosphorus.

While this assessment is for the entire farms potential effects on water quality in the Hurunui River, both concentrations are likely to be well below the current New Zealand Drinking Water Standards.

In addition to this, the farm is located on the northern side of the Hurunui River with the drinking supply point located over 1.1 km away on the opposite side of the river. Given this distance and the large base flows within the Hurunui river and its multiple braids, its it considered unlikely the proposal will have a measurable effect on water quality at the abstraction point.

Given the above, it is considered the proposal will have a negligible effect on the HLRWS drinking water supply.

National Environmental Standard for Sources of Human Drinking Water

As a section of works is occurring within a CDWPZ, the following Regulations of the NES-DW are relevant to this proposal:

Table 1: Assessment of the National Environmental Standard for Sources of Human Drinking Water

Regulation	Applicable Standards and Compliance
Regulation 6 - Type of activity to which regulations 7 and 8 apply	Regulations 7 and 8 only apply to an activity that has the potential to affect a registered drinking-water supply that provides no fewer than 501 people with drinking water for not less than 60 days each calendar year. <i>Comment: The HLRWS is registered as a small community/ Rural Supply that provides for 25 to 100 people, therefore Regulation 7 and 8 do not apply to this proposal</i>

Regulation 7 & 8 - Granting of water permit or discharge permit upstream of abstraction point	N/A – <i>These regulations do not apply</i>
Regulation 9 & 10 - Limitations on permitted activity rules for activities upstream of abstraction points	N/A – <i>These regulations do not apply</i>
Regulation 11 - Type of activity to which regulation 12 applies	<p>Regulation 12 only applies to an activity that has the potential to affect a registered drinking-water supply that provides no fewer than 25 people with drinking water for not less than 60 days each calendar year.</p> <p><i>Comment: The HLRWS is registered as a small community/ Rural Supply that provides for 25 to 100 people, therefore Regulation 12 applies to this proposal</i></p>
Regulation 12 - Condition on resource consent if activity may significantly adversely affect registered drinking-water supply	<ol style="list-style-type: none"> 1. When considering a resource consent application, a consent authority must consider whether the activity to which the application relates may— <ol style="list-style-type: none"> a. itself lead to an event occurring (for example, the spillage of chemicals) that may have a significant adverse effect on the quality of the water at any abstraction point; or b. as a consequence of an event (for example, an unusually heavy rainfall) have a significant adverse effect on the quality of the water at any abstraction point. 2. If the consent authority considers that the circumstances in sub clause (1) apply, and it grants the application, it must impose a condition on the consent. 3. The condition must require the consent holder to notify, as soon as reasonably practicable, the registered drinking-water supply operators concerned and the consent authority, if an event of the type described in subclause (1) occurs that may have a significant adverse effect on the quality of the water at the abstraction point. <p><i>Comment: It is considered that the proposed activity is extremely unlikely to lead to an event described in subclause 1 occurring, nevertheless, it is assumed that the Council will impose a condition accordance with subclause (3).</i></p>

Summary

Based on the information previously provided with the application, it can be concluded that the proposed activity will have negligible effects on the Hurunui Lower Rural Water Scheme water supply point or the ability to comply with the health quality criteria as set out in the NES-DW.

We trust this letter fulfils the Environment Canterbury's request on assessing Glenturret Farm's potential effects on the Hurunui Lower Rural Water Scheme.

If you have any further questions of the proposal, please feel free to contact Amy Callaghan via email or telephone.

Sincerely
GHD Limited



Sean Mooney
Environmental Planner