



HYDROGEOLOGY • GEOTECHNICAL ENGINEERING • ENGINEERING GEOLOGY

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22 August 2025

The Manager  
Auckland Council  
Private Bag 92-303  
**Auckland 1142**

**Attention: Mr Doug Fletcher**  
Principal Project Lead  
Premium Resource Consents Team



Dear Doug

**RE: s67 RESPONSE LETTER NO. 1 FOR DRURY QUARRY, SUTTON BLOCK  
BUN60449474-FTAA-2503-1037**

## **1. Background**

On 10 July 2025, Earthtech provided s67 queries to Auckland Council relating to the Drury Quarry – Sutton Block as part of the Fast-Track process. The s67 queries related to the following areas:

- i. Regional groundwater drawdown predictions.
- ii. Groundwater drawdown and ground settlement west of the Drury Fault.
- iii. Groundwater supply bores.
- iv. Stream augmentation flow water quality.
- v. Stream augmentation – cumulative effects.
- vi. Post quarrying augmentation of NT1 stream.

The Applicant has provided a response to the above queries as part of the global document, “Drury Quarry Sutton Block – Comments Tracker”. The groundwater queries were responded to in the associated Attachment E – Groundwater Memorandum with:

*PDP (2025b). Drury Quarry – Sutton Block Expansion, Auckland Council Further Information Request on Groundwater. 12 August 2025.*

This letter provides a peer review of the groundwater s67 responses using the same query numbering adopted by PDP (2025b).

## 2. Review of PDP (2025b) s67 Responses

### 2.1 76: A – Regional Groundwater Drawdown Predictions

#### *Missing Information*

*Stage 5 maximum groundwater drawdown contours within the 7.5 kilometre zone of influence, incorporating cumulative drawdown effects from consented Drury and Hunua quarries.*

#### Earthtech Review of PDP Response

The PDP (2025b) response is insufficient as no groundwater drawdown contours within the zone of influence have been provided.

In the vicinity of the Sutton Block, large groundwater level drawdowns of about 230m are proposed (drawdown from RL170m to RL-60m). Groundwater drawdowns reduce away from the quarry.

The requested drawdown contours are required to determine the effects on existing bores and streams, plus the extent of groundwater level monitoring required.

Attached in Appendix A are the predicted inferred drawdown zones for the Hunua Pit Quarry with dewatering to RL-5m from PDP (2011). A similar drawdown plot is required for the Sutton Block application.

PDP (2025b) considers that cumulative effects from the consent Drury and Hunua quarries can be ignored due to the deep RL-60m dewatering levels associated with the proposed Sutton quarry. This position is accepted for the Drury Quarry but not for the Hunua Quarry which has a dewatering level at RL-5m, and is located 3.5km to the north of the site.

The PDP (2011), Figure 15 (Appendix A), shows the Hunua Pit Quarry zone of dewatering extending beyond the northern edge to outside of the 7.5km Sutton Block zone of dewatering influence. Therefore, cumulative drawdown effects from the Hunua Quarry need to be considered for the Sutton Block application.

In the absence of groundwater drawdown predictions, the reviewer has considered the proposed groundwater drawdown trigger levels provided in Appendix 1: Schedule A Groundwater Monitoring Bores and Trigger Levels provided in the Attachment C draft revised consent conditions.

Although the estimated zone of dewatering influence extends 7.5km from the Sutton Block, there are no listed groundwater monitoring bores beyond the quarry site edge at SG12L. (The reviewer acknowledges the proposed new bore, MK1, in Figure 18 of PDP (2025a), but considers it to be a shallow groundwater level bore for possible augmentation of Maketu Stream rather than for monitoring wide-scale quarry groundwater drawdown effects.)

Therefore, the following supplementary information is required:

### *Supplementary Request for Missing Information*

*Proposed monitoring of shallow and deep groundwater levels to the east of the Sutton Block expansion within the predicted 7.5km zone of dewatering influence. Listing of groundwater monitoring bores in draft consent conditions.*

#### *Why is the Information Essential?*

*Predicted groundwater drawdowns are high and up to 230m at the quarry pit. Associated drawdown is expected to extend up to 7.5km from the quarry. No groundwater level monitoring is proposed in the draft conditions beyond the immediate vicinity of the proposed quarry. Such monitoring is required to check the effects on streams and local water supply bores.*

## 2.2 77: A – Regional Groundwater Drawdown Predictions

### *Missing Information*

*A plan showing all stream reaches expected to be subject to baseflow reduction associated with Stage 5 groundwater drawdowns, including cumulative effects from Drury and Hunua quarries. (Please show on plans at a suitable scale. The 1:70,000 scale drawings provided are very difficult to read.)*

### Earthtech Review of PDP Response

s67 query has been adequately addressed by Figure S1 of PDP (2025b).

## 2.3 78: B – Groundwater Drawdown and Ground Settlement West of Drury Fault

### *Missing Information*

*Assessment of potential groundwater drawdown and ground settlement effects west of the Drury Fault from expected deep greywacke drawdown to RL-55m within the adjacent Hunua and Drury greywacke blocks.*

### Earthtech Review of PDP Response

s67 query has been adequately addressed by PDP (2025b).

## 2.4 79: B – Groundwater Drawdown and Ground Settlement West of Drury Fault

### *Missing Information*

*Groundwater level monitoring of the Drury Fault.*

### Earthtech Review of PDP Response

The six monitoring bores west of the Drury Fault, as listed in Table 1 of PDP (2025b), are considered appropriate.

s67 query has been adequately addressed by PDP (2025b).

2.5 i. 80: C – Groundwater Supply Bores

*Missing Information*

*Specific assessment of in-well drawdown effects (incorporating pump depths and water supply demands) on existing water supply bores within the zone of influence.*

ii. 81: C – Groundwater Supply Bores

*Missing Information*

*Identification of potentially affected water supply bore owners, including those with consented takes.*

Earthtech Review of PDP Response

PDP (2025b) responses are not considered adequate. For the application, bore owners who could be adversely affected by quarry groundwater drawdown have not been identified.

The reviewer agrees that the Auckland Council's bore database has limitations. The reviewer considers that, given the proposed large quarry drawdowns, a community survey of local bores should be conducted, using the database as a starting point. The survey should extend to the 7.5km extent of the predicted drawdown radius. From the survey and the predicted groundwater drawdown contours requested in 2.1 above, potentially affected bore owners can be identified.

2.6 82: D – Augmentation Flow Water Quality

*Missing Information*

*Water treatment standard for augmentation from groundwater. Confirmation of treatment to achieve ANZECC 95% Ecosystem Protection Levels.*

Earthtech Review of PDP Response

s67 query has been adequately addressed by PDP (2025b).

2.7 83: E – Stream Augmentation – Cumulative Effects

*Missing Information*

*Clear methodology in determining the cause of baseflow reduction in terms of Hunua and Sutton Block quarries for Hays and Symonds Streams.*

Earthtech Review of PDP Response

s67 query has been adequately addressed by PDP (2025b).

2.8 84: F – Post Quarrying Augmentation of NT1 Stream

*Missing Information*

*Proposed post-quarrying mitigation of loss of baseflows to NT1 Stream as a result of greywacke aquifer removal from quarry excavation within catchment.*

Earthtech Review of PDP Response

s67 query has been adequately addressed by PDP (2025b).

Yours sincerely



**P I KELSEY**

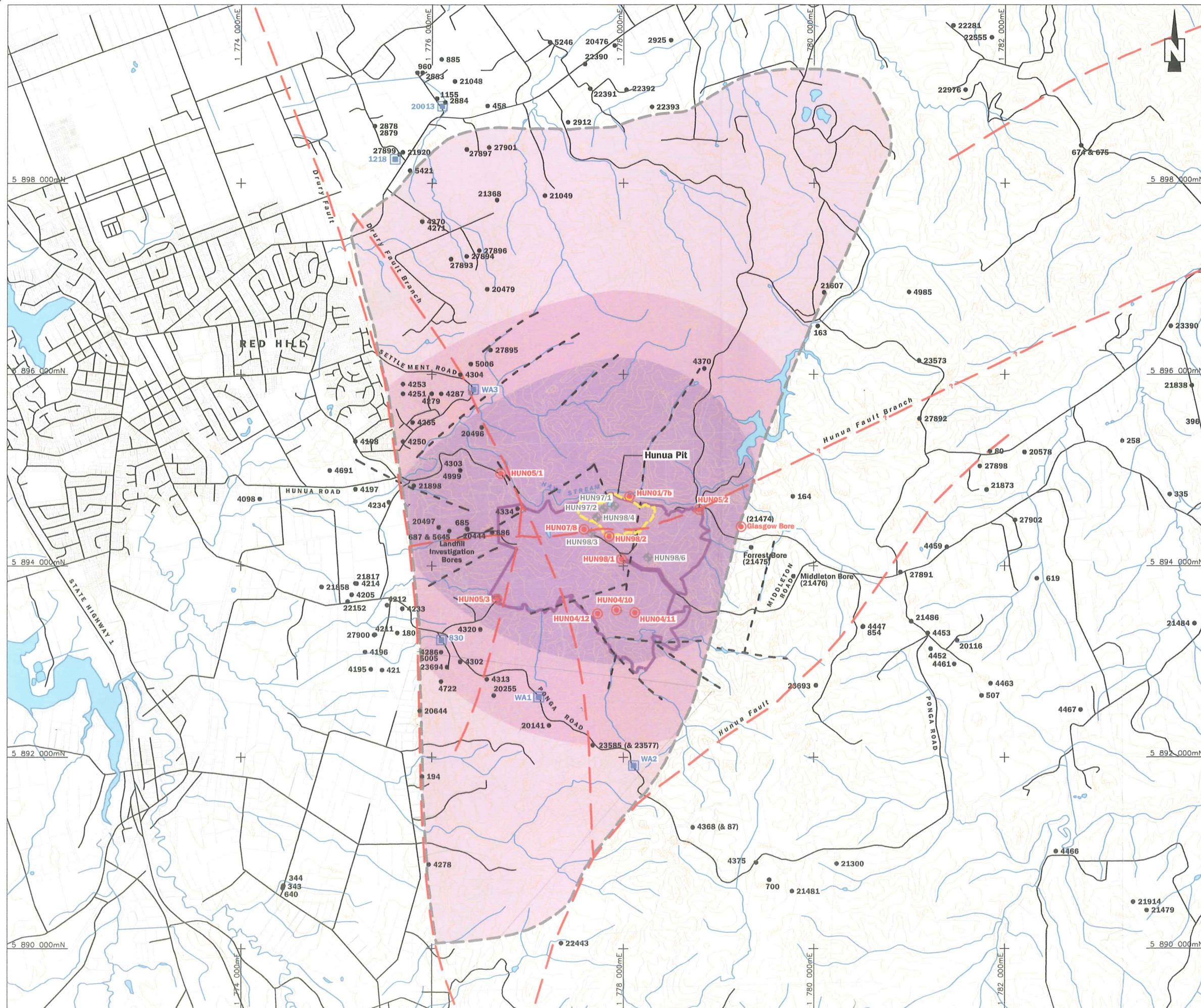
*Principal Hydrogeologist*

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Encl: Appendix A – Figure 15, Inferred Drawdown Zones in Greywacke for Dewatering at RL-5m.

## Appendix A

Figure 15 (PDP)  
Inferred Drawdown Zone in Greywacke for Dewatering at RL-5m



- KEY:
- BH1 Proposed Additional Monitoring Bore
  - HUN98/1 Groundwater Monitoring Bore
  - HUN98/3 Destroyed/Dry Groundwater Monitoring Bore
  - 4985 Farm Well (ARC bore ID)
  - Fault (approx.)
  - - - Lineament from aerial photos
  - Winstone Aggregates Property Boundary
  - - - Estimated Zone of Influence for Pit at -5.0m RL

Inferred Drawdown Zones for Dewatering at -5.0m RL (based on Figures 14a and b)

- 0-30m
- 30-50m
- 50-70m

Source:  
1. Topographical and Cadastral Map derived from LINZ data.  
2. Based on Grant Fisher Industrial Geology well survey compiled (14/12/2010) and groundwater monitoring data compiled (08/09/2010).

|     |                             |        |      |
|-----|-----------------------------|--------|------|
| 6   | Project title change        | Jun 11 |      |
| 5   | Text edits                  | May 11 |      |
| 4   | Zones edited                | May 11 |      |
| 3   | AC Bore ID numbers assigned | Apr 11 |      |
| 2   | Edits                       | Mar 11 |      |
| 1   | Issued for Review           | Mar 11 |      |
| No. | Revision                    | Date   | App. |

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Client :

 **WINSTONE**  
AGGREGATES

Project :

Hunua Pit:  
Inferred Groundwater Effects

Title :

Inferred Drawdown Zones in  
Greywacke for Dewatering  
at -5m RL

  solutions for your environment

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Auckland Wellington Christchurch

|                                                            |              |            |
|------------------------------------------------------------|--------------|------------|
| Scale 1:40,000 (A3)                                        |              |            |
| Project No. :                                              | Figure No. : | Revision : |
| AJ480705                                                   | 15           | 6          |
| Filed : AJ480705D002_NZTM.dwg Xref : AJ480704_HunuaPit.dwg |              |            |