

Agenda for a meeting of the Huntly Community Board to be held in the Riverside Room, Civic Centre, Main Street, Huntly on **TUESDAY 13 SEPTEMBER 2022** commencing at **6.00pm**.

**1. APOLOGIES AND LEAVE OF ABSENCE**

**2. CONFIRMATION OF STATUS OF AGENDA**

**3. DISCLOSURES OF INTEREST**

The register of interests is no longer included on agendas, however members still have a duty to disclose any interests under this item.

**4. CONFIRMATION OF MINUTES**

Meeting held on Tuesday, 2 August 2022 3

**5. PUBLIC FORUM**

**6. REPORTS**

6.1	NZ Police Update (standing report)	<i>Verbal</i>
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6.6	Councillors’ and Community Board Members’ Reports	<i>Verbal</i>

GJ Ion  
**CHIEF EXECUTIVE**

<b>To</b>	<b>Huntly Community Board</b>
<b>Report title</b>	<b>Confirmation of Minutes</b>
Date:	Friday, 2 September 2022
Report Author:	Elizabeth Saunders, Democracy Advisor
Authorised by:	Gaylene Kanawa, Democracy Manager

### **1. Purpose of the report** **Te Take moo te puurongo**

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To confirm the minutes for a meeting of the Huntly Community Board (HCB) held on Tuesday, 22 August 2022.

### **2. Staff recommendations** **Tuutohu-aa-kaimahi**

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**THAT the minutes for a meeting of the Huntly Community Board held on Tuesday, 22 August 2022 be confirmed as a true and correct record.**

### **3. Attachments** **Ngaa taapirihanga**

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Attachment 1 – HCB Minutes – 22 August 2022

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**MINUTES** for a meeting of the Huntly Community Board held in the Riverside Rooms, Civic Centre, Main Street, Huntly on **TUESDAY, 2 AUGUST 2022** commencing at **6.02pm**.

**Present:**

Mr D Whyte (Chairperson)  
Cr S Lynch  
Cr F McNally  
Mr GB McCutchan  
Ms E Wawatai

**Attending:**

One member of the public

Mrs V Jenkins (People & Capability Manager)

Ms N Huaki-Foote (Policy Planner)

Ms K Davis-Miller (Resource Management Policy Team Leader)

Mr M Horsfield (Acting Democracy Advisor)

Ms E Saunders (Democracy Advisor)

**APOLOGIES AND LEAVE OF ABSENCE**

**Resolved: (Mr Whyte/Mr McCutchan)**

**THAT the Huntly Community Board accepts the:**

- a. **apologies for non-attendance from Ms Bredenbeck, Mr Cork and Mr Wootton**

**CARRIED**

**HCB2208/01**

**CONFIRMATION OF STATUS OF AGENDA ITEMS****Resolved: (Mr Whyte/Ms Wawatai)****THAT:**

- a. the agenda for a meeting of the Huntly Community Board held on Tuesday, 21 June 2022 be confirmed and all items therein be considered in open meeting; and
- b. all reports be received;

**CARRIED****HC2208/02****DISCLOSURES OF INTEREST**

There were no disclosures of interest.

**CONFIRMATION OF MINUTES****Resolved: (Mr Whyte/Mr McCutchan)****THAT the minutes for a meeting of the Huntly Community Board held on Tuesday, 21 June 2022 be confirmed as a true and correct record.****CARRIED****HC2208/03****PUBLIC FORUM**

Agenda Item 5

The following items were discussed at the public forum:

- Creek Naming – There was a levee to Lake Puketirini and it was alleged that Gleeson & Cox was discharging to it illegally. The levee needs to be named and gazetted to give it more mana.

**ACTION:** Mr Whyte to discuss with Waahi Whanui regarding the naming of the tributary.

## **REPORTS**

### NZ Police Update

#### Agenda Item 6.1

The report was received [*HCB2208/02 refers*] and the following discussion was held:

- Mr Whyte had discussed with the Community Led Development Advisor regarding the importance of a Police representative attending the Community Board.

### Update on Variation 3 to the Proposed Waikato District Plan

#### Agenda Item 6.2

The report was received [*HCB2208/02 refers*]. In speaking to the report, the Resource Management Policy Team Leader noted the following points:

- Council has been given direction by Central Govt to make a variation to the district plan. Staff were working on the variation, with a notice being included in rates billing notifying the public. The draft variation was still incomplete but staff were aiming to have it completed by the end of August. The submission period had also been extended to 30 days.
- The aim of the variation was to provide higher density housing in the current residential zones. These will apply to towns with more than 5,000 people including Pokeno, Huntly, Ngaruawahia and Te Kauwhata.
- Medium density standards would be applied to the general residential zones, apart from areas that fall into flood zones and other potential hazards.
- Medium density standards would be located close to town centres near existing amenities such as public transport and shops.
- What was up for debate in the submission period if the changes are being directed by Central Government? There are still areas open to debate such as where you can submit on limiting where the zones are.
- Staff want the public to have their say within the submission period.
- The flood zones in Huntly would remain unchanged and it was being recommended they are not changed to medium density.
- Does Huntly not have a special case due to effect of mining underneath the town? No, as development can occur here currently already.

Discretionary Fund Report to 30 June 2022

Agenda Item 6.3

The report was received [*HCB2208/02 refers*] and following discussion was held.

- Huntly War Memorial Application – The application was for the Christmas Grotto Event at the Hall. Funding was sought for materials for the grotto and can be reused for further years.

**ACTION:** Finance to remove the commitment made on 18/02/2020

**Resolved: (Cr McNally/Mr McCutchan)**

**THAT the Huntly Community Board approves a commitment from their Discretionary Fund:**

- for the amount of \$2,295.73 (including GST),**
- towards the cost of materials for the Christmas Grotto Event for the Huntly War Memorial.**

**CARRIED**

**HCB2208/04**

Huntly Works & Issues Report: Status of Items August 2022

Agenda Item 6.4

The report was received [*HCB2208/02 refers*] and discussion was held.

Huntly Bypass Lighting Upgrade

- Works were scheduled to go ahead this week but Kiwirail notified that the works to could not take place at the last minute. It had now been delayed until October.

Tainui Bridge Repairs

- Council had spent \$400k on bridge repairs. Waka Kotahi had stumped up 51% of the cost and they were due to be completed by October this year. The repairs focus on the roller bearings.

Pothole Repairs

- There was a large pothole near Tainui Bridge and it took 20 days for it to be repaired. Communication from Council and Waikato District Alliance had been poor. There was a service request submitted by Mr McCutchan regarding the damaged crash barrier by the gym on Great South Road but he had not received a reply.

Bark in Gardens

- When it rains heavily, the bark/mulch gets washed away and then get stuck in the drains. It was an issue and Council needs to reduce its usage of bark.

Fitness Trail in Tumate Mahuta Drive Park

- A reserve plan was to be made for the park and an updated was needed.

**ACTION:** This item to remain on the schedule.

Street Light Service Requests

**ACTION:** This item to remain on the schedule pending discussion with NZTA on street light outages.

Inground garden lights, Main Street, Huntly

- The lights were still not fixed despite contractors with traffic management working on them.

**ACTION:** This item to remain on the schedule.

Willow Lake – Stormwater Holding Pond

**ACTION:** This item to be added to the schedule. Following a meeting with Watercare, an update would be provided by the chairperson.

Huntly West Sports Complex – Graffiti

**ACTION:** This item to be removed from the schedule.

Signage for Lake Hakanoa

**ACTION:** This item to remain on schedule.

Friendship House Huntly West Hub

**ACTION:** This item to remain on schedule

Planned Projects

**ACTION:** This item to remain on schedule

CCTV Cameras

**ACTION:** This item to remain on schedule

Signage in Town

**ACTION:** This item to remain on schedule

Huntly Resource Centre

**ACTION:** This item to remain on schedule

Fourth Quarter Service Request Report to June 2022

## Agenda Item 6.5

The report was received [*HCB2208/02 refers*] and the following discussion was held.

- There had been a lot of discussion on Facebook regarding bad drinking water. The public needed to be reporting the issues. There were only four complaints during the fourth quarter for drinking water quality.

Review of Elected Member Policies

## Agenda Item 6.6

The report was received [*HCB2208/02 refers*] and no discussion was held.

Cemeteries Bylaw Early Engagement

## Agenda Item 6.7

The report was received [*HCB2208/02 refers*] and the following discussion was held:

- The pre-engagement period was asking for feedback regarding two topics, natural burials and dogs visiting cemeteries. The Board would submit feedback to the Bylaw. There was support for eco-burials but any issues associated would need to be mitigated.



Waikato Regional Council Public Transport Plan Submission  
Agenda Item 6.8

The report was received [HCB2208/02 refers] and the following discussion was held:

- Mr Whyte submitted to the plan and circulated it to Board members. It was noted that the submission could have been worded differently.

Gleeson and Cox Consent Application with WRC and WDC  
Agenda Item 6.9

The report was received [HCB2208/02 refers] and the following discussion was held:

- A public workshop could be held next week for the public to discuss the consent application and encourage the public to submit on the consent application.
- Traffic movements were a big problem especially late at night.
- What certainty would there be that they would follow their consent conditions? Would they be monitored regularly?
- A possible idea was to construct a road to gain access to Rotowaro Rd.
- Gleeson & Cox was seeking to move a bat reserve.

Chairperson's Report  
Agenda Item 6.10

The report was received [HCB2208/02 refers] and no discussion was held.

Councillor's Report  
Agenda Item 6.11

Verbal reports were received on the following items:

- Cr Lynch – Council was in the middle of a number of bylaw and policy reviews.

There being no further business the meeting was declared closed at 7:10pm.

Minutes approved and confirmed this                          day of                          2022.

D Whyte  
**CHAIRPERSON**

<b>To</b>	<b>Huntly Community Board</b>
<b>Report title</b>	<b>NZ Police Update</b>
Date:	Wednesday, 31 August
Report Author:	Elizabeth Saunders, Democracy Advisor
Authorised by:	Gaylene Kanawa, Democracy Manager

### **1. Purpose of the report** **Te Take moo te puurongo**

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To advise members that a representative from the New Zealand Police will be in attendance at the Community Board meeting.

### **2. Staff recommendations** **Tuutohu-aa-kaimahi**

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**THAT the verbal report from NZ Police be noted.**

### **3. Attachments** **Ngaa taapirihanga**

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There are no attachments.

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<b>To</b>	<b>Huntly Community Board</b>
<b>Report title</b>	<b>Discretionary Fund Report to 31 August 2022</b>
Date:	13 September 2022
Report Author:	J Schimanski, Support Accountant
Authorised by:	Alison Diaz, Chief Financial Officer

## **1. Purpose of the report**

### **Te Take moo te puurongo**

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The purpose of this report is to update the Huntly Community Board on the Discretionary fund spend to date, commitments and balance as at 31 August 2022,

## **2. Staff recommendations**

### **Tuutohu-aa-kaimahi**

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**That the Huntly Community Board receives the Discretionary Funding report to 31 August 2022.**

## **3. Attachments**

### **Ngaa taapirihanga**

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Attachment 1 – Discretionary Fund report to 31 August 2022

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<b>HUNTLY COMMUNITY BOARD DISCRETIONARY FUND REPORT 2022/23 (July 2022 - June 2023)</b>
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<b>As at Date: 31-Aug-2022</b>
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		<b>GL 1.204.1704</b>
2022/23 Annual Plan		16,414.00
Carry forward from 2021/22		58,348.33
Total Funding		<u>74,762.33</u>
<b>Income</b>		
<b>Total Income</b>		<u>-</u>
<b>Expenditure</b>	<b>Resolution No.</b>	
<b>Total Expenditure</b>		<u>-</u>
<b>Net Funding Remaining (Excluding commitments)</b>		<u><u>74,762.33</u></u>
<b>Commitments</b>		
21/06/2016 Commitment for placemaking projects (HCB1606/03/1)	HCB1606/03/1	15,000.00
<i>Less: Other Expenses</i>		<u>(2,874.61)</u>
		12,125.39
21/02/2017 Huntly Christmas related activities - recurring	HCB1702/04	to be confirmed
21/05/2019 Revitalise 2 Huntly entrance sites	HCB1905/06	5,000.00
21/12/2021 <i>less: return of funds to the pool HCB2112/04</i>	HCB2112/04	<u>(2,051.20)</u>
21/12/2021 Commitment from HCB Discretionary Fund for the amount of up to \$20,000.00 (including GST) towards the cost of placing a BBQ at the Tumate Mahuta Drive Park.	HCB2112/05	2,948.80
2/08/2022 Commitment from HCB Discretionary Fund for the amount of up to \$2,295.73 (including GST) towards the cost of materials for the Christmas Grotto Event 2022 for the Huntly War Memorial.	HCB2208/04	17,391.30
		2,295.73
<b>Total Commitments</b>		<u><u>34,761.22</u></u>
<b>Net Funding Remaining (Including commitments)</b>		<u><u>40,001.11</u></u>
<i>Note: All amounts reflected are excluding GST</i>		

<b>To</b>	<b>Huntly Community Board</b>
<b>Report title</b>	<b>Works, Actions &amp; Issues Report: Status of Items September 2022</b>
<b>Date:</b>	13 September 2022
<b>Report Author:</b>	Karen Bredesen, PA to the General Manager Service Delivery
<b>Authorised by:</b>	Vanessa Jenkins, People & Capability Manager

## **1. Purpose of the report**

### **Te Take moo te puurongo**

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The purpose of this report is to update the Huntly Community Board on actions and issues arising from the previous meeting and works underway in August.

## **2. Staff recommendations**

### **Tuutohu-aa-kaimahi**

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**That the Huntly Community Board Works, Actions & Issues Report: Status of Items for September 2022 be received.**

## **3. Attachments**

### **Ngaa taapirihanga**

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Attachment 1 – Huntly Community Board Works, Actions & Issues Register – September 2022

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Issue	Area	Action	Comments
	Greg McCutchan	<p>DECEMBER 2021: To remain on schedule pending discussion with NZTA on street light outages.</p> <p><b>FEBRUARY 2022: To remain on schedule.</b></p>	<p>JANUARY 2022: Huntly Community Board to provide a verbal update at the 15 February meeting.</p>
Inground garden lights, Main Street, Huntly	Community Board Chair	<p>DECEMBER 2021: Lights are now working, but item to remain on the schedule.</p> <p><b>JUNE 2022: To remain on schedule.</b></p>	<p>JULY 2021: A suitable contract has been organised to work with WEL to quote the work.</p> <p>AUGUST 2021: This item to remain on the schedule.</p> <p>SEPTEMBER 2021: This item has been parked. This item to remain on the schedule.</p> <p>NOVEMBER 2021: This item to remain on the schedule. The Chairperson to follow up on this item.</p> <p>DECEMBER 2021: The repairs have been completed. The contractor was unable to check lights operating at night. Can the Board please advise if any of the lights are still not operational.</p> <p>SEPTEMBER 2022: Unfortunately, the lights were fixed, however have since been vandalised. The contractor is currently investigation the damage and are providing costings.</p>
Willow Lake – Stormwater Holding Pond	Community Board Chair	<p>AUGUST 2021: This item to be added to the schedule. Following a meeting with Watercare, an update would be provided by the chairperson to the Board meeting scheduled for Tuesday, 21 September 2021.</p> <p><b>MAY 2022: To remain on schedule.</b></p>	<p>SEPTEMBER 2021: Following a meeting with Watercare, an update would be provided by the chairperson to the Board meeting scheduled for Tuesday, 2 November 2021.</p> <p>NOVEMBER 2021: Following a meeting with Watercare, an update would be provided by the Chairperson to the Board meeting scheduled for Tuesday, 14 December 2021.</p> <p>MARCH 2022: The Chair to give a verbal update at the HCB 29 March meeting.</p>



Issue	Area	Action	Comments
		<p><b>June 2022:</b> Following a meeting with Watercare an update would be provided by the Chairperson.</p>	<p>AUGUST 2022: An ecologist has assessed the pond and provided a summary of issues/remediation possibilities.</p> <p>Watercare's stormwater engineer has met with the Community Board Chair on location and discussed the potential options. Their preference aligned with the basic maintenance and planting suggestions by the ecologist. Maintenance aspects has been scheduled with a sub-contractor who we understand are busy and have planned to complete the works in September. Planting aspects will be combined effort with Waters and Parks and is to be organised for the next planting season.</p> <p>SEPTEMBER 2022: Following a meeting with Watercare, an update to be provided by the Chairperson.</p>
Planned Projects	Roading / Projects / Waters Teams	<p>The Board requested they be provided information of planned projects in Huntly and how long upgrades were supposed to last.</p> <p><b>JUNE 2022: To remain on schedule.</b></p>	
CCTV Cameras	Lianne Van Den Bemd	<p>Update to be provided to the Board and Police regarding the current status of the Camera Upgrade.</p> <p><b>JUNE 2022: To remain on schedule.</b></p>	<p>JUNE 2022: No update.</p> <p>AUGUST 2022: Staff are in negotiation with suppliers for district wide servicing of CCTV cameras including design, installation, monitoring and maintenance.</p> <p>SEPTEMBER 2022: No update.</p>
Signage in Town	Open Spaces, Stephanie Loughnan	<p>The signage at Lake Hakanoa was incorrect. Signage states that the reserve was called Lake Hakanoa Sports Park,</p>	<p>JUNE 2022: Staff have investigated signage, and correct signage "Huntly Domain" has been ordered from the supplier and will be installed when delivered.</p>

Issue	Area	Action	Comments
		<p>but the correct name was the Huntly Domain.</p> <p>Staff to investigate the incorrect signage at Huntly Domain and replace the signs with the correct name.</p> <p><b>JUNE 2022: To remain on schedule.</b></p>	<p>AUGUST 2022: Signage should be installed by the end of July 2022.</p> <p>SEPTEMBER 2022: Signage has been installed.</p>

## **Community Projects Updates (As at 24 August 2022)**

### Ruawaro Tennis Club Courts

The base course remediation works is underway (22 August) and the installation of the fencing is planned to start on 5 September.

### Lake Hakanoa Domain Tennis Courts Renewal

The Team is in discussion with HEB Construction to confirm pricing.

### Raahui Pookeka | Huntly Railway Station - Historic Station Building Relocation

All information has now been provided to the Building Team to complete the processing of the building consent.

The contractor and subcontractors are developing the works schedule and working through the steps to get the building readied for relocation and setting a shift date. Awaiting building consent signoff and KiwiRail approval to commence the foundation works adjacent to the railway platform.

### Tumate Mahuta Carpark Renewal

This carpark is in the design phase. Construction is scheduled for early 2023.



*Tumate Mahuta Carpark*

### Lake Hakanoa Bridge Replacement

Planning is underway for the replacement of the pedestrian bridge in 2023, suitable to provide access for maintenance vehicles for the lake walkway.



For internal use only

ECM Application # LUC0488/22

ECM .....

SUBMISSION #.....

CUSTOMER # .....

# Submission form

(Form I3)

**Submission on an application concerning resource consent that is subject to public notification by consent authority** Sections 95A & 96 of the Resource Management Act 1991

**SUBMISSIONS CLOSE AND MUST BE RECEIVED BY WAIKATO DISTRICT COUNCIL BY TUESDAY 16<sup>TH</sup> AUGUST 2022**

To: Waikato District Council

Name of submitter (full name) .....

This is a submission on an application from Gleeson Managed Fill Limited to establish and operate a managed fill disposal activity that imports material to deposit within identified gullies (Fill Areas 2-4) located north of an existing quarry within the same site. To undertake soil disturbance of a piece of land (within Fill Area 3) as per the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health at 310 Riverview Road HUNTLY

\*I am  am not  a trade competitor for the purpose of Section 308B of the Resource Management Act 1991

\* Select one

† I am  am not  # directly affected by an effect of the subject matter of the submission that

(a) adversely affects the environment; and

(b) does not relate to trade competition or the effects of trade competition

†Delete this paragraph if you are not a trade competitor

# Select one

**The specific parts of the application that my submission relates to are:**

Give details (attach separate sheets if necessary):

.....  
.....  
.....  
.....  
.....  
.....  
.....

I  support  oppose  am neutral to the part/s named above.

Give details:

The reasons for my views are.....

.....  
.....  
.....  
.....  
.....

I seek the following decision from Waikato District Council:  Approve  Decline

Give precise details, including any parts of the application you wish to have amended and the general nature of any conditions sought.

.....

.....

.....

.....

.....

Number of additional sheets attached .....

I wish to be heard in support of my submission Yes  No

If others make a similar submission, I will consider presenting a joint case with them at the hearing Yes  No

Pursuant to section 100A of the Resource Management Act I request that you delegate your functions, powers and duties required to hear and decide the application to one or more hearings commissioners who are not members of the local authority Yes  No

**If you make a request under section 100A of the Resource Management Act, you must do so no later than 5 working days after the close of submissions and you may be liable to meet or contribute to the costs of the hearings commissioner or commissioners.**

**Signature of submitter of person authorized to sign on behalf of the submitter**

..... **Date** .....

A signature is not required if you make your submission by electronic means

**Address** ..... **Postcode**.....

**Email** ..... **Phone**.....

**Contact person's name (name and designation if applicable)** .....

This is the person and the address to which all communications from the Council about the submission will be sent

**Note to Submitter**

The closing date for serving submissions on the consent authority is the 20<sup>th</sup> working day after the date on which public or limited notification is given. If the application is subject to limited notification, the consent authority may adopt an earlier closing date for submissions once the consent authority receives responses from all affected persons

You must serve a copy of your submission on the applicant whose address for service is Paua Planning Ltd, Kate Madsen, 180 Bawden Road, RD 2, Albany 0792 or email [kate@pauaplanning.co.nz](mailto:kate@pauaplanning.co.nz) as soon as reasonably practicable after you have served your submission to Waikato District Council

If you are a trade competitor, your right to make a submission may be limited by the trade competition provisions in Part 11A of the Resource Management Act 1991

**Written Submission**

**Postal Address** Waikato District Council, Private Bag 544, Ngaruawahia 3742  
Telephone 0800 492 452

**Email Submission**

[Consent.submissions@waidc.govt.nz](mailto:Consent.submissions@waidc.govt.nz)

The information you have provided on this form is required so that your submission can be processed under the RMA, and your name and address will be publicly available. The information will be stored on a public register and held by the Council, and may also be made available to the public on the Council's website. In addition, any on-going communications between you and Council will be held at Council's offices and may also be accessed upon request by a third party. Access to this information is administered in accordance with the Local Government Official Information and Meetings Act 1987 and the Privacy Act 1993. If you have any concerns about this, please discuss with a Council Planner prior to lodging your submission. If you would like to request access to, or correction of your details, please contact the Council.

Huntly Community Board (HCB) submission  
about Gleeson and Cox (G & C) managed fill  
consent. Submission to Waikato District Council  
(WDC) and Waikato Regional Council (WRC)  
August 2022



The following document is broken into three main sections. The first is short and an introduction to HCB in how they support appropriate development in the town. The second section is about previous behaviour and trust around G & C and WDC. Past behaviour is the best predictor or future behaviour, thus discussion of past events is highly relevant. The third section is looking at specific issues

Since this document has grown in size, way beyond expectations a simple index is included to help navigate

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As separate attachments are the following appendixes

Appendix One:	Newspaper article by Stuff, Company at centre of Huntly dump battle broke rules over stockpiled coal
Appendix Two:	Outline of possible illegal dumping
Appendix Three:	HCB Dust created by Gleeson and Cox trucks using council land as part of their business.
Appendix Four:	HCB memo to WRC Dust associated with Gleeson and Cox (G & C) quarry and trucking
Appendix Five:	NZ Medical Association publication, Erionite in Auckland bedrock and malignant mesothelioma: an emerging public and occupational health hazard?

## 1) HCB supported Smart Build

The board is not anti development. We actively support appropriate and beneficial development in our township. Case in point is the expansion of Smart Build. This is now a large operation on the southern approaches to the township and it is very obvious if you head south from Huntly. Although the expansion removed green space within the community turning what was a lifestyle block into industrial buildings, as well as demolishing homes and impacting local residents, the board supported this expansion both with written and verbal submissions in the process. The reasons that the board supported this was the following

- This is a local business, owned by someone who lives in the community. They are only a phone call away with any issues or concerns. He has a reputation to uphold in the community as an ethical business leader and to do the right thing. Living in the community in which your actions are judged / assessed means that you are consider the impacts into the community before taking action.
- The expansion provided jobs for locals. It was estimated that 60 new jobs would be created locally for locals. This is important, since Huntly does not have significant industry to employ people. Thus the creation of 60 new positions makes a massive difference in the township in terms of employment levels. Also the positions were in the trades, Huntly is a working class town thus there is alignment between the new positions and locals ability to fill them.
- The industry was non polluting. The building industry is not a 'dirty industry' in terms of residuals or pollution moving off site. It was raised in the hearing by the board, if memories serves correctly, about the long term impact of treated timber being used on site. NZ uses the heavy metals of copper, chromium and arsenic to create such a toxic environment that fungi will not grow. Thus working this timber on site, and having the sawdust flow into the holding ponds and eventually into the awa. Even this small level of contamination has been minimized. Firstly the work is done undercover, and thus sawdust shouldn't be washed via rainfall into storm water. It should be swept up regularly and thus not move off site. However even if it migrates to where rain can wash it into the storm water, it it should be trapped in the sediment / water retaining system. This system was over engineered for the site, and thus was able to cope with far more than modelled / expected. And this sedimentation in decades to come could be appropriately disposed off. So even this small amount of pollution had been thought through and minimized.

Given the cost- benefit equation this development provided far more benefits than costs to the community, thus we were happy to support it. We also support the Sleepyhead development, although due to the fast tracked nature of this development submissions have not open to the HCB.

However this managed fill proposal brings significant and impacts to the community with little to no benefit. Therefore the board strongly opposes the proposal. Each area of concern is addressed below.

## 2) Issues of trust

The consenting system works on trust. It is well known that neither council has the ability to proactively monitor the consents issued. Sure a visit might occur yearly, but that leaves 364 other days of the year that consent conditions can be ignored. We also have very serious concerns that the WDC staff member assigned to inspect G & C operation is competent and impartial.

Explained below is why we do not trust G & C nor WDC to keep to or enforce the consent conditions.

### a) WDC inspector / monitoring concerns

Puke Coal managed fill. Nearby in Pukemore is Puke Coal. This has been a managed waste site for a number of years (does anyone know the date of operation). It was clear from very early on that waste was being dumped at this site which was not in the consent ie rubbish was being dumped. Locals attempted to engage WDC inspector to uncover the issues. However due to notice being given by WDC before entering onsite, the rubbish was hidden by the owner. It was observed that all the WDC inspector did was go into the office, get into the owners car and be driven about before leaving. Thus proper inspection did not happen. Most people in Huntly have a story about how they saw plastic waste going into the fill with their own eyes or know someone with did. The situation was so bad that locals started up a rumour that the inspector was taking 'brown paper bags' from the office and 'cash payments'. HCB does not support the propagation of rumour and heresy, so only repeats this as an example of how frustrated locals were with the system and lack of progress that they resorted to assuming that the system was corrupt.

The only reason that it is now accepted that rubbish went into the site, is the complete debarkle of the fire event which took place in 2020 (?)<sup>1</sup> which proved to both councils that the site was being used illegally as a dump. We are very pleased WRC has brought charges against the company and owner about this.

Therefore locals can conclude that if the company who operates a managed fill site wants to flaunt regulations, ignore conditions as long as they are 'smart' about it, they can.

Similar experiences have occurred with the G & C site. The same inspector as Puke Coal, who failed the public there, has failed the public at G & C. It should be pointed out that citizens of Huntly have struggled to engage with WDC, due to the town being a working class town and the council having exacting procedures to follow. For example the best way to raise a service request is via email. Raising via phone or face to face in library results in not obtaining a service request number, and a very high chance that the request will be lost in the system and also lacking ability to follow up. So email is the only way to securely raise issues. Huntly has a high level of internet poverty (ie lack of access to internet) and a very high illiteracy rate. "Māori are also more likely than non Māori to gain lower qualifications than their parents and already 49% of Māori do not have a parent that has completed at least NCEA level 2 or an equivalent qualification"<sup>2</sup> Thus 50% of Maori are effectively cut off from the service request system.

Therefore many of these examples lack a trackable service request history due to the inability of locals to create the paper trail.

Examples of this are the following

- 
- 1 Please google this event, for further information, it was well covered in papers. Or either council can be contacted for their files regarding this.
  - 2 Cochrane, W., Erwin, C., Furness, J., Hedges, M., Masters-Awatere, B., Meehan, L., Ofe-Grant, B., Piercy-Cameron, G., Rua, M. (2020). *Adult literacy and numeracy in Aotearoa New Zealand: Context, conceptual issues and existing evidence*. NZ Work Research Institute. Auckland, NZ Pg 36



- WDC inability to supply what time trucks are allowed to enter the quarry. Residents regularly complain about the very early times trucks start to operate, and the ‘weird’ times that they ‘randomly’ appear. HCB has attempted on multiple occasions to find out from WDC what G & C are consented for. The latest request ([#39C57D] on May, resulted in no response from WDC / the inspector, even after being chased up by the WDC senior staff member allocated to the HCB to help the board. Previous attempts to find this information have been met with ‘its complicated / its to hard’.
- Being told by WDC inspector that filth on the road was normal for a quarry. At this time mud trails on the road were up to 8km from the quarry. And at the quarry entrance sludge on the road was cm’s high and completely covered the road service. HCB takes note that other quarries such as the J Swap quarry at Karapiro has no dust / filth on the road at all, nor does the Stevenson quarry at Ngaruawahia. Thus other quarries are able to undertake operations without causing the hazards that the inspector think is ‘normal’.
- The word on the street is that there is no point at all raising any issue regarding G & C as the inspector doesn’t care and is grumpy and abusive towards the public. Telling them things like ‘stop complaining’ and ‘nothing will change’ so unsurprisingly the general public do not raise issues with the council. Also since folks are not aware of which council is responsible for what, this adds to the confusion and lack of results when people raise issues.
- Inspectors abusive, bullying and intimidating behaviour at a meeting. The HCB chair attends the Huntly Power Station: Annual Consultative Group Meeting. G & C are the contractors who truck in the coal from Auckland port. In 2021 the chair asked for the illegal storing of coal at the G & C site to be discussed as part of this meeting (more information on this further below). This request was made well in advance of the meeting so that an informed discussion could occur. As part of this WDC inspector was also invited to attend. When this topic came up the inspector got very animated, very loud and started off by saying ‘you have not right to ask that question’ and used as much verbal and physical presence to attempt to shut down the conversation. This totally unprofessional behaviour that attempted to use verbal force (aka bullying) to make sure this issue was not discussed was adhorent, and the chair formally raised this with WDC which undertook an investigation. The outcome of this being an employment matter is of course no known. The fact that an inspector thinks that bullying is an acceptable way to deal with complaints, and thinks that shutting down a conversation is an appropriate way of dealing with an illegal activity is of very serious concern.
- WRC was invited to HCB meeting to discuss what issues feed into the regional council vs the local council. Since locals often get bounced between the organisations or complain to the wrong one. As part of this meeting the inspector was present. When it topic of dust from G & C came up, the WDC inspector thought that G & C had two dust monitoring sites. Turns out that G & C have none<sup>3</sup>. This is on one hand is an understandable error, but at the same time taken in context that this inspector has visited this site for years, dealt with dust complaints for significant length of time, seems to be in line with the general incompetence.
- When rumours of illegal earthworks was formally raised though the service request process, the WDC inspector visited the site. The day of the visit was heavily foggy, as the photo below shows. The inspector stated “At this stage I am satisfied from a monitoring perspective that there is nothing untoward taking place”<sup>4</sup>. Given that the WRC since formally invested these illegal earthworks and found G & C guilty, shows the standard of inspection. These illegal earthworks including draining and wetland and diverting a water course are discussed below.

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3 Email: REQ186566 - Gleeson's Quarry - Riverview Road (Dust Concerns) Sent: Wed, May 18, 1:46 PM

4 Email from WDC titled FW: Emailing: 008, 009 Recent Complaints Gleeson Cox dated Jun 11, 2020, 7:35 AM



*Photograph supplied of inspection, with fog impeding the ability to see*

Thus we can conclude that WDC inspector is incompetent, and the current inspector and system is unable to detect illegal activity let alone done anything about it.

#### b) G & C past behaviour

The question is – has G & C shown any behaviour that would indicate that they act in an unscrupulous way, ignoring regulation. The answer to this is yes. And in both times it took members of the public to ‘snoop’ about to uncover the truth. Therefore it is highly likely there are other undiscovered issues that we are not aware of.

**Diverting a watercourse, draining a wetland all without sediment controls.** All of this is highly illegal and totally unethical. They altered a water course changing its watershed, diverting it from flowing into lake puketirini and changed it so it flowed into the Waikato awa. They attempted to drain the wetland through this drain, presumably so that they could claim it was not a wet land. They did all this work without sediment control, which is a basic precaution one takes when doing earthworks. We are assuming that other submitters will unpack this further, with photos etc. So will not dwell on it here. Suffice to say that this was only uncovered because of concerned citizens poking their nose about, and contacting the WRC. But an examples or these earthwork is shown. Where a new ditch have been created in a wetland, and no sediment control implemented.



*Illegal ditch created to drain a wetland*

WRC carried out an investigation on this issue, and G & C made to repair the damage they had done.

**Storage of coal on site without consents.** Genesis energy uses G & C to transport coal from Auckland to the power station in Huntly. For whatever reason G & C decided to store imported coal at their quarry site without the correct consents or paperwork. And deliberately deceived Genesis by stating they had the consents when they did not. See Appendix one for more information.

Again this was not uncovered by proactive council inspectors but by astute locals who noticed the coal entering the site. And raising this with WRC. Coal has significant environmental risks the most obvious being dust and storm water pollution. So any outside storage requires the appropriate consents and mitigation plans to deal with these environmental hazards. Non of which G & C had.

**Possible dumping on site.** Please see Appendix two. This material has not been documented and cannot be fully explored due to ill health. However this is a placeholder so that if documented evidence comes to light before the oral submissions it may be discussed.

**Disregard for basic traffic management.** It is accepted across the industry that to do any work on a road, requires traffic management plans and appropriate hazard minimization. G & C after years of inaction suddenly decided to clean up / keep clean the roading area outside their premises. Appearing to start regularly cleaning the week of 25<sup>th</sup> of July 2022 occurring to local residents who use the road. This is a good thing, what is not is the complete lack of traffic management, or any signage about slow vehicles on the road / blocking the road. This shows a systemic issue of not obeying the rules, and ignoring regulation when it suits the company. An example of this activity without traffic management is shown below. The sweeper and water tanker are at one point completely blocking the road to traffic, without any signage etc. Fortunate the vehicle which appeared seconds later was able to avoid the hazards, but if they had been travelling the speed limit (70km/hr) and not been vigilant, this could have easily resulted in an accident. It was also sated on local facebook page “yea my bro nearly hit them while coming thru” with regard to the lack of warning. And another person stated “Coming back that way from Ngaruawahia yesterday and come around the bend coming into Huntly and these guys where on both sides of the road coming towards the on coming traffic.. Freaked out didn't know where to go and No Road Signage or markers to indicate road works happening.” So clearly a dangerous situation for many a folk.



*Road sweeper occupying the northern lane, water tanker the southern lane. Thus blocking the road.  
Approximatel y 12pm Tuesday 2<sup>nd</sup> August 2022*



*Seconds later, (had continuous capture mode on) a vehicle travelling northward is captured caught in this slow traffic.*

They obvious also had no silt control measures in place. A brief inspection showed that the water was pooling against a bank between the pull off area and the river. Later reviewing of the photograph taken, indicates that the water was then flowing along the bank and then down directly into the river at the low point where the bank was non existent. This makes sense as the area the water was flowing across is often used for truck parking, and thus would have some type of direct drain to the river, so that it did not pond. Of course this means any time it rains the silt will directly also flow into the river. Indicating that the care off the awa is only in lips service.



*Photograph showing water laden with silt flowing directly into the awa*

### **Storm water management, or lack thereof**

Unsurprisingly for a company that allows water full of sediment to run directly into the river, the current storm water management on site is completely inadequate. Multiple townsfolk have brought up how this winter, and presumably every winter that has significant rainfall events, how water was running out of the quarry, across the road and direct into the river laden with silt and other quarry detritus. The comments from the townsfolk indicate that this was a significant level of water, being ankle deep or deeper. So something an environmental conscious organisation would have been proactive about managing.

Now turning attention from the actions of the company, to the actions of individuals within the company. Since personal especially at senior levels create the ethics, or lack of, that flow through the company.

**Mr Gleeson behaviour.** A companies owner attitude and philosophy will impact how that business grows and develops. It is insightful how Mr Gleeson operates. The HCB chair was invited to a hui at Waahi Whanui about the proposal by a local kaumātua, which the chair was honoured to attend. After this meeting concluded Mr Gleeson walking past the chair laid into the chair. Demanding in a bullying and intimidating way he not approach the council about anything and that he must talk directly with his staff first. And accused the chair of setting up his staff for a kangaroo court at a HCB meeting. This was the first ever personal interaction between Mr Gleeson and the chair and one has to wonder what the motive was to remove the council from the discussions.

**Senior staff behaviour.** This is fully discussed and unpacked further under the title community consultation. In brief a senior staff member stood up in a very well attended Huntly Community Board meeting (over 100 public in attendance), and spent considerable length of time saying ‘our word is our worth’ and ‘we do the right thing’. Then when the mayor suggested that G & C come down again to do a Q & A / discuss things with locals the senior manger agreed. Recorded in the minutes as “Gleeson & Cox would meet with the Huntly community to answer questions on the project. And A community liaison group would be formed to enable the Huntly community to

have access to Gleeson & Cox”<sup>5</sup>

However G & C reneged on this commitment. They did not meet with the community to answer question, did not create a community liaison group and never appeared in the community again. Thus showing what they say and what they do are two separate things.

**Staff behaviour.** During a level 4 lockdown the quarry was in operation. We are not sure why a quarry was an essential service. G & C were transporting coal from the Auckland port to the Huntly power station, to generate electricity. How though this resulted in congregation of trucks, drivers and activity at the quarry we are not sure. The point being that staff did not wear Covid Personal Protection Equipment (PPE), nor maintain social distancing while outside the quarry on public display. It was difficult to obtain footage of this, because all residents were under level 4 movement restrictions and unable to go out. Hence why this is the best photograph available. Showing drivers mingling, without PPE or social distancing. This was not only illegal but highly unethical given the Covid level 4 lockdown and the impact this could have on electricity generation, and older whanau



*While NZ was in lvl 4 Covid lockdown, staff at G & C were not social distancing nor wearing PPE*

So we can conclude that G & C has disregard for the law and doing the right thing. They will do things that are expedient for their business and increase the profitability of the operation. Therefore HCB does not trust that they will do the right thing, nor follow consents.

So the combination of WDC incompetence in holding the pre-existing managed fill, and existing quarry operations coupled with a company that shows scant regard for the law and doing things the right way, we would conclude that consents for a managed fill site should be declined.

Therefore we request that the consents for clean fill and managed fill be denied.

### **Mitigation**

If the commissars do see fit to grant consent for clean and managed fill, against HCB wishes, we would request the following:

- Staff changes at WDC, so someone who has shown they are competent to thoroughly inspect and hold companies to account for breaches of the consent. Faith has been lost in the current inspector.
- A more proactive visitation and inspection schedule for both WRC and WDC. Word of mouth indicates that a yearly inspection is all that is typical for an operation this size. We would request quarterly inspections by both councils. And inspections when ever the public raise issues.
- Ability to inspect without announcement. If notice is give, people and companies have the time to go around and hide things, and ‘clean up their act’. This is human nature. Therefore

<sup>5</sup> MINUTES of a meeting of the Huntly Community Board held in the Huntly College Hall, Bridge Street, Huntly on TUESDAY, 23 JUNE 2020 commencing at 6.00pm

the inspections need to be random, announced and at any time. Thus the inspector can see what is really happening, and not just what management want to present to the world.

- 
- Regular information is promoted on how to report issues that the public see. Currently the public are confused as to who to contact when an issue is noticed.
- All information regarding inspections is placed into the public space for easy access. That is online so anyone at any time can access the full information.
- That a yearly presentation on the consents and data produced by the environmental monitoring be made to the HCB as well as the local tangata whenua group(s).

### 3) Specific Issues

#### a) Consultation

The documents provided imply that G & C have consulted with the community. This is not how the community sees this.

Firstly G & C were not proactive in connecting with the community. The Chair of HCB initiated contact with them in 2020<sup>6</sup>, inviting them to attend a HCB meeting. This was the first time that local residents (who had not had information dropped on in letter boxes) heard about a managed fill proposal.

The HCB invited the public to heard directly from the horses mouth at the 30<sup>th</sup> March board meeting. This is because as you are aware rumour and hearsay abound where there is an information vacuum. And HCB prides itself on being objective and informed. On the 30<sup>th</sup> of March a large number of locals attended, with estimates of over 100 folk. Those interested in staying informed wrote down their email addresses and 43 were collected.

Community Board operating procedures are set down by central government. One of these procedures is that once the board goes into the meeting that public / non board members are unable to speak to the meeting. Hence it is a meeting in a public space, rather than a public meeting. This makes consultation difficult. Since the company invited to engage can only speak at the audience watching the meeting. Hence the board wanted to maximize the chance that the public would obtain the information that they required to make an informed decision. Hence they asked on Huntly facebook groups for questions folks wanted answered. These were compiled into a nice A5 sheet which was sent to G & C in advance<sup>7</sup>, and also circulated in the meeting. This list is shown below:

Concerns from residents about proposed Clean / Managed fill

#### **Short and long term environmental impacts**

Leaching of sediment / heavy metals / contaminates into storm water and water ways / Puketirini / Waikato awa

Asbestos migrating into air, ground or surface water

Removal of trees / vegetation / native regrowth

Bats and other native species that reside in the gully

Monitoring, both of run off, but also of material arriving to fill location. How will this be done and how can residents raise issues. Will data be public,

Smell from marine sediments and acid sulphide soils

Visual impact on landscape

Impact on property values along truck route, next to fill and along line of site

Noise from operation early especially outside typical working hours and earlier / later than gates open

Dust from operation

#### **Additional truck movements (48 full and 12 extra)**

Damage to road fixed by ratepayers as trucks more damaging than cars. Including damage in areas such as roundabouts and rail crossings

Dust / debris dropping off trucks

Route through Huntly that the trucks will take and north / south split

Noise and vibration caused by full trucks

#### **Current concerns about trucks / quarry, which will increase**

Speed of trucks / not sticking to speed limit

Distracted driving

<sup>6</sup> Email titled: Huntly Community Board meeting invite - 18th Feb sent Fri, Jan 31, 2020, 1:13 PM

<sup>7</sup> Email titled: Summary of community concerns sent: Wed, Jun 17, 2020, 7:24 PM



Harris street especially around school times  
 Light blindness for drives at night  
 Level of dust / gunge / filth on road  
 Current earthworks on site unrelated to quarry operation  
 Traffic hazard of trucks crossing in/out of quarry in front of cars

Also what Iwi were consulted, what benefits does it bring to the town

In the public forum, questions were additionally asked: “The following questions were raised at the public forum on the Gleeson & Cox Proposed Huntly Clean & Managed Fill application:

- How will Gleeson & Cox protect the essence of Lake Puketirini?
- Can a site visit be held so that the community knows what is happening?
- Cleanliness of the road and quarry operations.
- Dust coming from the quarry – what measures are in place to mitigate this?
- Can the size of the trucks used, be increased?
- Visibility of the site to the residents and public.
- River Road corner, at the bottom of the hill – will Gleeson & Cox be carrying out work on this corner to ensure the safety of the residents?
- What is the basis of the need for the dump?”<sup>8</sup>

Therefore G & C and their consultants had a full list of the concerns of locals. They were allocated 10 minutes to talk, and after 20 minutes they were asked to stop. A small number of concerns were addressed. A significant amount of this time however was spent talking about how G & C do the right thing, keep their word, their word is their worth and other such management speak.

Therefore after the 20 minutes there was much frustration among locals that their questions had not been addressed and they were visibly annoyed by this. Especially when it was reiterated that they could not ask questions. Therefore “His Worship the Mayor suggested that Gleeson & Cox hold a separate question and answer workshop with the community”<sup>9</sup>. This was a very wise suggestion and when the G & C Chief Financial Officer who was presenting on behalf of G & C agreed to this it was an appropriate and helpful outcome.

The minutes went on to record “Gleeson & Cox would meet with the Huntly community to answer questions on the project. And A community liaison group would be formed to enable the Huntly community to have access to Gleeson & Cox”<sup>10</sup>

However G & C reneged on this. They did not meet to answer questions, nor did they set up a community liaison group. They answered the questions via email (these are the documents submitted online). Apart from the lack of integrity shown by saying one thing and doing another, is the demographics of Huntly. Sure the consultants and senior management of G & C have high literacy rates, and can easily engage with written material. However Huntly as already mentioned is a low socio-economic area. Thus sitting down to read material (in a small font no less) is problematic. Therefore to send written documents that are hard to read, and calling this consultation shows a complete lack of understanding of the community.

The minutes recorded that at the start of the HCB meeting that “No consultation had occurred to date.” and we would argue that nothing has changed. Still no meaningful consultation has occurred. Therefore we ask the commissioners to decline this application.

If the commissioners see fit, we would suggest that this process is paused until G & C undertake appropriate consultation with the community with a similar event to the sleepyhead information

<sup>8</sup> MINUTES of a meeting of the Huntly Community Board held in the Huntly College Hall, Bridge Street, Huntly on TUESDAY, 23 JUNE 2020 commencing at 6.00pm

<sup>9</sup> ibid

<sup>10</sup> ibid

event. This is where sleepyhead hired a local hall and installed a number of posters relating to a relevant area / topic. Each topic had its own expert, which was typically a consultant. These folks could discuss with the public what things mean and how it impacts them. Thus the public could understand what is going on.

And once this consultation occurred and the public was fully informed then the public would be able to make wiser and more appropriate input into the process. And the process re-start.

### **Mitigation**

We cannot see how this obvious lack of consultation can be mitigated against. However we are open to discussing this further in the verbal submission.

### b) Dust

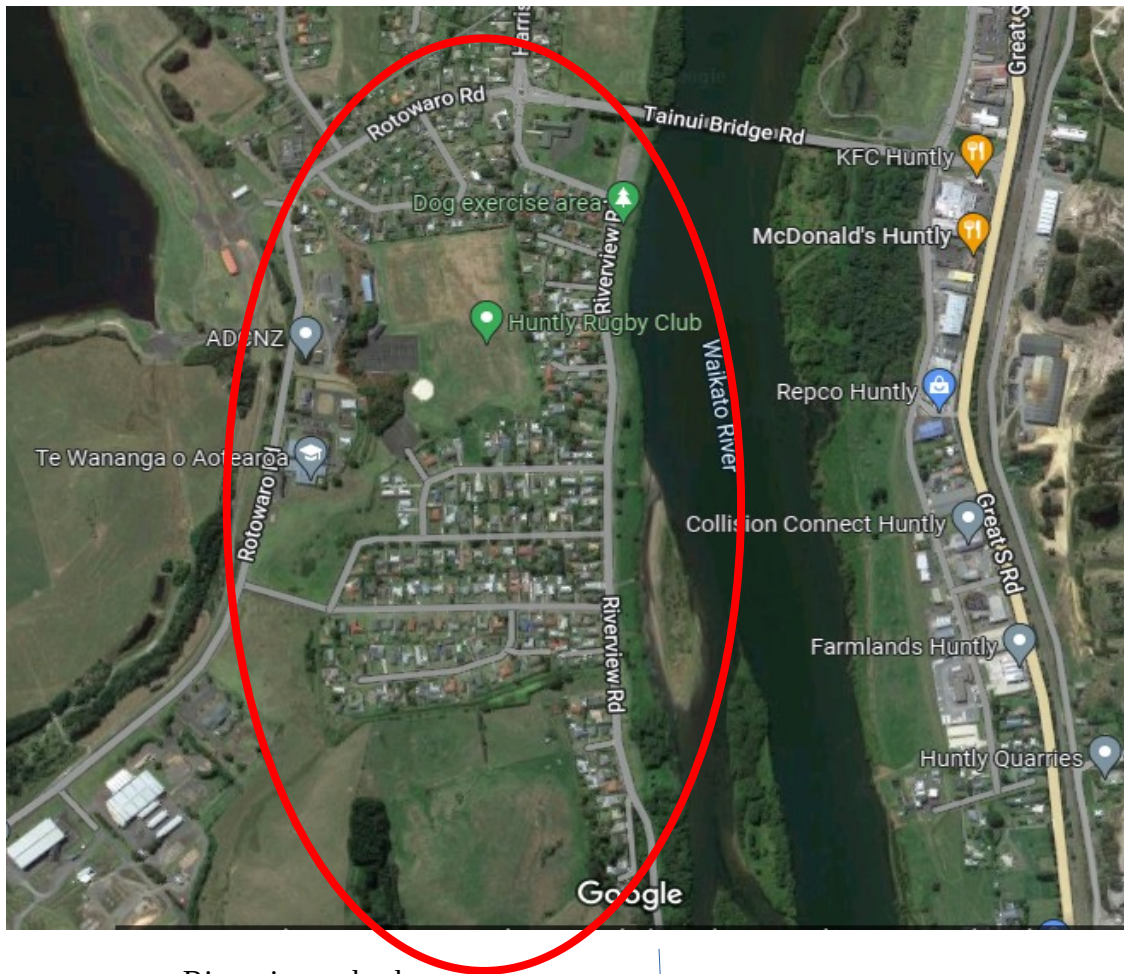


*Photograph taken 21<sup>st</sup> December 2021 by local resident from Hakarimata road looking towards quarry and Riverview road. Huntly residents are just to the right out of frame. Clouds of dust can be seen leaving the quarry site.*

There are currently significant issue with dust from the current operation. These have been formally raised in October 2020 and in May 2022. These reports are attached as Appendix three and four. Please take the time to read these reports, as in the interest of efficiency the information there will not be repeated.

They show how dust has been an ongoing problem for some time. It has taken until May 2022 for HCB to understand that WRC deals with dust complaints. Therefore dust issues have been going to the wrong council. And given that residents were told to suck it up, it is hardly surprising that formal complaints have not been forthcoming.

There is a section of Huntly which will be called Riverview suburb or Riverview area. This is the area of town that impacted most by the dust. This is shown in the map below and is a sizeable chunk of Huntly. Furthermore more development is occurring and has occurred since this photo was taken, with both infill housing and greenfield development.



Riverview suburb  
Most impacted by dust

↓ To quarry

The dust has two sources. One is the quarry operations themselves within the G & C site and the other is the material trafficked onto and up the road. These are discussed separately below

### **Roadway dust source**

The volume of material that leaves the migrates up the road system is massive. Some examples of current dust issues are shown over the page. These photos were taken on 2<sup>nd</sup> of August after a significant length of consistent and heavy rainfall. Thus the road has been 'washed' by the heavy rain and should be clean.



*Example of dust and debris build up on Riverview ~1.5 km north of quarry. The dust trail was clearly visible until the roundabout 2.8?km away.*



*Both sides of the same section of road ~ 2.4km north of the quarry. These gutters have been recently cleaned on regularly cyclical cleaning routine. The gutter on the north bound section is already dirty with build up of dust and debris, which the southbound lane is much cleaner.*



*Example of dust and crud build up. This is either side of a road marker ~ 0.9km North of quarry  
One side completely non longer functioning as a marker!*

A resident stated of the hazard this dust in the road and markers causes “They need to clean the road side markers and the council should put the cats eyes back on the road as I was driving down there last night at about 8pm and a car coming towards me with there lights on as it's dark and I could not see the road lines or the dirty road side markers they should have to clean the road markers every day so people know where the side of the road is”.

It watching the heavy vehicle movements on this day, there were clear plumes of dust rising behind them as they travelled north. Unfortunately photographing a dust cloud is really challenging and clear images of these dust plumes were unable to be captured. Therefore it is just as important to consider the dust produced from the roading activities and the transport to and from the quarry site as it is from the managed fill activities. G & C mention nothing about these dust risks in their assessment of dust hazards and dust mitigation.

## Quarry dust source



*The sun being low in the sky enables the dust being produced by quarry operations to be seen*



*A different day, the dust is clearly visible from the old SH1 (Great South Road)*

This source of dust impacting the township is harder to travel out and document / see with ones own eyes. This is because it depends on a combination of three factors, the weather, the operations inside the quarry being positions in the right spot to see the dust. Since it is hard to observe unless the sun is shining from behind or through the dust cloud, which then reflects the light. Thus it is not going to be easy to document these dust issues. However it has been captured by locals as shown above.

Residents in the area talk about how when the wind blows from a Southerly through to a Westerly direction, that they regularly see the dust coming up and over from the quarry. They have also mentioned that the dust seems to have increased in recent times. Which would be associated with increased quarry activity. A simplest assumption would be that the quarry sunk into the hills side thus appear as a deep amphitheatre would prevent the generated dust from migrating out of the quarry.

However this would be an incorrect assumption. This is because as air flows over an amphitheatre it sucks out the air that is in the enclosed space. Thus creating a vacuum and lifting up the air and entrapped particles. This is driven by the venturi effect, and is the reason that roofs blow off in storms, winged air planes can fly so has a real impact on design of industrial systems.

Another reason could be due to the increased dust producing areas outside the quarry operation, these operational areas would be associated with the managed fill site.

This could be due to the clearing of ridges lines to build haul roads, and other pinus radiata harvesting operations. A quick check of google maps with their 'satellite' imagery, shows a number of exposed dust producing areas, located up on the plateau and out of the quarry pit. It should be noted that google does not publish the dates for there google map imagery. Going off other known information in the map, the photographs are a number of years old, thus further dust / topsoil disturbance may well have taken place since these were taken. It it easy to see these areas on google maps as being a major source of dust for the residents north of this location, let alone a further expansion of the vegetation free areas.



*Tracks and other vegetation free areas on the northern side of the property outside of the quarry pit*



*Major earthworks on the south-western side of the property. Showing very large areas of soil exposed to the effects of wind. Note structure in bottom left whose face is denuded of vegetation*

Also wind flows do ‘funny things’. That is eddies, turbulence and non laminar air flow over a pit, can be directed to pick up dust and bring it out of a pit structure.

G & C have at least some of the equipment required to suppress dust. For example a water tanker with spray attachments, as shown below. Given this is not resulting in effective dust suppression, the conclusion is either the equipment is not being used enough or appropriately (ie it is a ‘dead cost’ to the company to have an employee suppressing dust and not being ‘productive’). Or that the equipment is not the correct type, or there isn’t enough ie more capital investment is required.





*Water being applied as dust suppressant in Oct 2020*

Either way, the end result is that locals suffer from the dust.

### **Wind rose analysis**

The desktop analysis of wind done by Pattle Delamore Partners shows the dominate wind in Whatawhata / Ruakura being West with a Southerly Component (pg 12). This what is expected as weather systems move from the West to the East in NZ. However we are all aware that significant local effects occur due to topography and local terrain.

Is there any significant features in the landscape that may alter the predominate wind pattern? And do these create a noticeable effect. Locals living in and around the quarry say that there is often wind blowing in a from a more southerly direction. Thus the air moves up through the quarry area and up into the township. And that the road dust as it is thrown up by the trucks travels a similar path.

Is there anything in the landscape that would create this localised effect? The simple answer is yes range of tall hills (short mountains? We are not aware of what a definition of what makes a mountain range). A snapshot taken from the NZ topography maps is shown below. The quarry and proposed fill is highlighted with a red arrow. Directly West of this site over the awa is the Taupiri Range, highlighted in red oval. This range is significantly higher by 100-200 meters than the height of the proposed fill site. Thus it would be logical that the wind from the desktop study would be modified by the local landscape. Thus instead of being West with a Southerly component it is going to be South-West or even South, with a Westerly component.

Thus by not taking into account local topography in the desktop study there is a significant error introduced in the underlying assumptions. This is highly concerning as what other assumptions and errors are in the document which a person not educated in this area would not notice.



*Quarry site and local topography showing Taupiri Range which has a significant impact on local metrological conditions.*

Another basic assumption is that wind speed is not impacted by elevation. Anyone who has done any bush walking, tramping or outdoors activities knows that elevation has a massive impact on wind speed. The more the elevational the higher the wind speed. Also the impact of being on an exposed area, also massively increases the wind speed.

The proposed fill area is at ~100m elevation. Thus is going to have higher wind speeds than the low elevation records of Ruakura and Whatawhata. The photos we have seen of the fill area two where G & C have already built t they build their turning bay, and other infrastructure for the dumping face indicate to me that they are dumping in a very exposed location. We might point out that they using this area to dump wet dusty materials already. So not sure if any of this construction and use is consented, but we digress.

Thus the number of times / days with high wind speeds is going to be significantly higher than what is expected / estimated.

Given that the basic underlying assumptions of the desktop report are not correct. It is difficult to have faith that the rest of the report is of high quality.

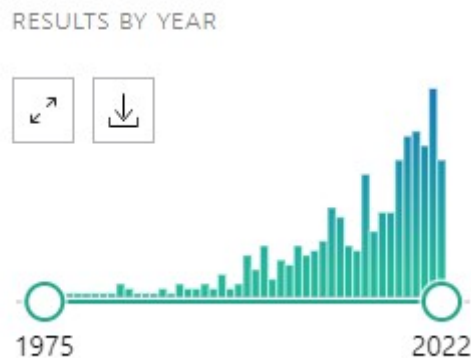
### Impacts on locals

“The extraction of minerals from surface mines and quarries can produce significant fugitive dust emissions as a result of site activities such as blasting, road haulage, loading, crushing and stockpiling. If uncontrolled, these emissions can present serious environmental, health, safety and operational issues impacting both site personnel and the wider community.<sup>11</sup>” So we would expect to see issues in the community from this dust. The following stories have been discussed before this consent application was open for comment:

- Public health nurse mentioned in public meeting that her clients in the Riverview suburb all became significantly healthier over lockdown when quarry operations stopped and truck traffic massively reduced. Then after lockdown ended and operations began her clients regressed back to their sicker selves. This is significant evidence that the dust from the quarry operations is having a massive effect into the community. Since there is clear cause and effect that remove the dust, health problems go. Reintroduce the dust, the health problems re-appear.
- Councillor has mentioned in a HCB meeting that the dust is so bad in his home in the suburb that within a few days of washing his car and storing it undercover, that dust is easily visible when running a finger over the surface of the vehicle. Thus showing how quickly the dust builds up.
- Families with young kids who have moved into the area from other parts of Huntly have reported that their children now have constant respiratory problems. They were healthy and ‘normal’ when they moved into the suburb. Yet even though they go to the school, and everything else is similar, the children have constant respiratory issues.

### Science of dust and health

The role of dust inhalation in negative health outcomes is becoming more understood, with the medical research website, pubmed, showing that studies on the topic ‘impact dust inhalation’ increasing exponentially.



*Number of medical articles about dust inhalation is increasing exponentially over time.*

The purpose of this submission is not to prove that dust is a health hazard. That is a given that this is a well accepted fact that occupational dust exposure causes a range of health effects. For example this Site Safe NZ states “You might not realise it, but workers in the construction sector are 20 times more likely to die of exposure to harmful airborne substances than from a workplace accident.”<sup>12</sup>

However even though occupational exposure to dust is a known health hazard, it is a bit like smoking. Smoking was known to be a health issue decades before anything was done to protect non smokers from second hand smoke. This appears to be the same situation. Dust is a known health

<sup>11</sup> S.A. Silvester, I.S. Lowndes, D.M. Hargreaves, A computational study of particulate emissions from an open pit quarry under neutral atmospheric conditions, Atmospheric Environment, Volume 43, Issue 40, 2009,

<sup>12</sup> Dust downloaded from <https://www.sitesafe.org.nz/guides--resources/practical-safety-advice/dust/> on 1<sup>st</sup> of August 2022

hazard, yet adequate steps are not being taken right now to prevent Huntly residents from being exposed to it.

Particulate Matter (PM) is the scientific jargon for dust. There are two particle sizes PM 10 which is “inhalable particles, with diameters that are generally 10 micrometers and smaller” and PM2.5 which is “fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller”.<sup>13</sup> Hence PM10 and PM2.5 are important terms to be aware of in the discussion of dust. The reason that PM10 and PM2.5 is used is because the finer the dust the higher the risk. This is because the dust travels further into the lung system as the hairs and biological filters in place to filter out particles don’t capture the small dust as effectively or efficiently. This is a concern as transport dust has been shown to be high in PM2.5 materials. “re-suspension of roadside dust from movement of vehicles resulted in generation of relatively higher fraction of finer dust (PM2.5)” and concluded that “population residing downwind of the mining area is particularly vulnerable to the pulmonary effects due to inhalation of dust.”<sup>14</sup>

Living near dust activities reduces life expectancy, with a population study using estimates of pollution exposure finding that the long term average of various pollutants including PM2.5 was related to mortality<sup>15</sup> – that is the higher the PM2.5 the higher the death rates.

Living next to quarries also results in ill effects. Given that Western quarrying operations should not produce dust, the data for Western nations is difficult to find. However the data is plentiful for countries where adequate and appropriate dust suppression is not undertaken. For example “People who live in close proximity to the quarry sites reported exposure to dust at home (98%)... plant leaves covered with dust (97%)... The exposed group reported significantly higher eye and nasal allergy (22% vs. 3%), eye soreness (18% vs. 1%), and dryness (17% vs. 3%), chest tightness (9% vs. 1%), and chronic cough (11% vs. 0%) compared to the control group. Lung function parameters were significantly lower among the exposed group compared to the control group; mean forced vital capacity was 3.35 L vs. 3.71 L, mean forced expiratory volume in the first second was 2.78 L vs. 3.17 L. Higher levels of airway restriction were found among the exposed group. Among the exposed group, lung function parameters worsened with the increasing closeness of home to the quarry site.”<sup>16</sup>

Other studies have shown non lung issues associated with dust, just as smoking data shows more than just the breathing system is impacted. For example a study recently conclusively concluded that one off dust exposure from a dust storm, resulted in a significant increase in risk of heart attack, “meta-analysis that has demonstrated that exposure to desert dust results in a 2% increase (for every 10µg/m<sup>3</sup> of PM10-dust) in cardiovascular mortality risk as assessed on the same day of exposure.”<sup>17</sup> Dust storms are not occupationally related dust exposure and are one off events.

13 Particulate Matter (PM) Basics United States Environmental Protection Agency. Updated July 18<sup>th</sup> 2022.

14 Ambastha SK, Haritash AK. Emission of respirable dust from stone quarrying, potential health effects, and its management. *Environ Sci Pollut Res Int.* 2022 Jan;29(5):6670-6677. doi: 10.1007/s11356-021-16079-4. Epub 2021 Aug 28. PMID: 34453257.

15 Brunekreef B, Beelen R, Hoek G, Schouten L, Bausch-Goldbohm S, Fischer P, Armstrong B, Hughes E, Jerrett M, van den Brandt P. Effects of long-term exposure to traffic-related air pollution on respiratory and cardiovascular mortality in the Netherlands: the NLCS-AIR study. *Res Rep Health Eff Inst.* 2009 Mar;(139):5-71; discussion 73-89. PMID: 19554969.

16 Nemer M, Giacaman R, Husseini A. Lung Function and Respiratory Health of Populations Living Close to Quarry Sites in Palestine: A Cross-Sectional Study. *Int J Environ Res Public Health.* 2020 Aug 20;17(17):6068. doi: 10.3390/ijerph17176068. PMID: 32825513; PMCID: PMC7504702.

17 Domínguez-Rodríguez A, Báez-Ferrer N, Abreu-González P, Rodríguez S, Díaz R, Avanzas P, Hernández-Vaquero D. Impact of Desert Dust Events on the Cardiovascular Disease: A Systematic Review and Meta-Analysis. *J Clin Med.* 2021 Feb 12;10(4):727. doi: 10.3390/jcm10040727. PMID: 33673156; PMCID: PMC7918944.

### **Asbestos, Erionite and Tremolite**

The risks of asbestos are well known, and HCB does not see the point in discussing this at length. It is obviously significant concern for the community given the current lax approach to dust management on site and in the road network.

In addition to this is the newly discovered health impacts of other asbestos like materials, for example erionite. Please see appendix five for a paper that should be read to understand this hazard. In summary, erionite is a long fibre that can become airborne like asbestos and has similar health hazards. It is present in much of Auckland's Geology. And the population is exposed via development. To quote "Most of these excavations are into Waitemata Group rock [which contains erionite], and the material is usually loaded onto trucks, transported by road and dumped as fill or in former quarries.... , there is the potential for significant exposure of some of Auckland's [Huntly's] population to erionite-bearing rock dust if appropriate dust management strategies are not carefully implemented."<sup>18</sup> This is exactly the situation which is proposed, to take material from Auckland to Huntly and it is highly likely this material will contain erionite which has the same risks as asbestos but does not have the same controls around it.

Another lesser known example is Tremolite. This is in the same family as asbestos, yet is far more dangerous. With one health and safety laboratory stating "Tremolite thus proved to be the most dangerous mineral that we have studied"<sup>19</sup>. So for a laboratory that specializes in nasty substances this is a massive statement. Unsurprisingly they also state "The greatest care should be exercised by industry in handling tremolite or materials contaminated with it."

Asbestos fibres to clear from the lungs via cleaning up using specialized white blood cells called macrophages. This process takes a long time, and can be easily overwhelmed. However it does occur albeit in a slow way. Whereas it would appear that tremolite fibers take much longer to clear or never clear at all. "The long tremolite fibers, once deposited in the lung, remain over the rat's lifetime with essentially an infinite half-time. Even the shorter fibers, following early clearance, also remain with no dissolution or further removal".<sup>20</sup> And unsurprisingly for this information to be included in the report the presence of tremolite has been confirmed in Auckland<sup>21</sup>.

### **Managed fill impacts**

Will the managed fill give rise to more dust, or less dust? The answer is obviously more dust. More earth will be bare, more dirt will be moved about, new sources of dust like trucks dumping materials will be introduced, more trucks will be travelling on internal roads, more trucks will be traveling on external roads etc. etc. etc. Furthermore this dust will have an even greater effect on residents, since instead of being 'only' silica / rock dust, it will also have heavy metals, asbestos, asbestos like fibres, and who knows what else.

What we have shown is dust is produced in significant quantities by the current operations. Both from the property itself and by the movement of dust and debris up the road into the residential areas. G & C are not taking the appropriate steps to mitigate this hazard for the community. HCB strongly believes that G & C current blasé attitude with respect to dust shows a lack of good character and concern for the community and their workers. And since past performance is an excellent indicator of future behaviour, we can conclude that the managed fill operations will also

18 Brook MS, Black PM, Salmond J, Dirks KN, Berry TA, Steinhorn G. Erionite in Auckland bedrock and malignant mesothelioma: an emerging public and occupational health hazard? *N Z Med J.* 2020 Jul 17;133(1518):73-78. PMID: 32683434.

19 Davis JM, Addison J, Bolton RE, Donaldson K, Jones AD, Miller BG. Inhalation studies on the effects of tremolite and brucite dust in rats. *Carcinogenesis.* 1985 May;6(5):667-74. doi: 10.1093/carcin/6.5.667. PMID: 2988806.

20 Bernstein DM, Chevalier J, Smith P. Comparison of Calidria chrysotile asbestos to pure tremolite: final results of the inhalation biopersistence and histopathology examination following short-term exposure. *Inhal Toxicol.* 2005 Aug;17(9):427-49. doi: 10.1080/08958370591002012. PMID: 16020039.

21 E. J. Searle (1959) Schistose rocks from St. Heliers Bay, Auckland, *New Zealand Journal of Geology and Geophysics*, 2:2, 368-379, DOI: 10.1080/00288306.1959.10417655 tremolite mentioned at the bottom pg 274

have exceptionally poor dust management. And as such the commissioners should reject their application.

**Mitigation** If the commissioners unfortunately see fit to grant G & C managed fill site, we would request the following mitigation be undertaken to eliminate the hazard of dust from the community:

- Install a road to take trucks away from residential roads. This is further discussed under traffic.
- Highly regularly spraying of the dump site and associated internal roads. That this been done proactively and not reactively. So is sprayed before the ground dries out and dust occurs. This cannot be left up to G & C to determine. We are not roadway experts, and thus the schedule would have to be determined by interdependent experts in the area. It would also have to be based upon objective instrumental measurement, not subjective human assessments. The subjective human assessments are not working, thus it needs to move to surface moisture metering, sunlight measures or whatever combination of information is required to get the job done properly.
- Proper cleaning of trucks. The current wheel wash, does clean the wheels. But material clearly remains in other parts of the truck, likely including the underside. An example of of how the wheel wash allows dirty trucks back onto the road is shown below. A truck wash that removes material from the underside of the truck along with sides and back would result in clean trucks leaving the site.



*Truck post wheel wash. The triangle of grey on the cab side, is build up of dust / crud over purple paint*

- Spraying down of the road so that dust is suppressed from road usage. Northbound this would occur through to the start of Riverview Riverview road (giving the tanker the ability to turn around at the gravelled parking area). Southbound this would have to go through to Kauri Lane. The majority of trucks head north from the quarry hence the shorter distance required southbound. Again this should be done proactively and before dust becomes a problem.
- Sweeping of roadsides and gutters. The volume of material that comes off the trucks and ends on the roadside is significant. The gutters are cleaned on a 6 monthly cycle in Huntly. It only takes weeks since the last sweep for the roadside gutters to fill up with mud, sand, gravel etc. From the truck movements. This detritus accumulates all the way down Riverview road, around the Tainui Bridge round about, across the bridge and through to the round about on the East side of the river. Therefore monthly removal of this material, including all around the round about islands, should occur to remove this source of dust pollution.
- Cleaning of road signage on a monthly basis
- Monitoring of dust to include both volume of dust produced and particulate size, so measuring PM2.5 and PM10 particulate matter. Measuring (1) at the boundary (exactly

locations and number TBD), (2) at the Riverview road boundary at the start of housing (in the vicinity of 160-200 Riverview road) to capture dust from the truck movements and (3) north of the quarry in the new subdivision and/or Blundel Place which is the closest part of town to the quarry.

- Do not allow the managed fill which contains the asbestos and asbestos like material to be disposed of on site.
- If asbestos and erionite is allowed then to monitor for asbestos fibres and erionite at the above locations of boundary, river view road and blundel place.
- Measure the erionite levels in the material coming into the fill. Erionite should be treated the same as asbestos, and as such should have the same cut off levels, and same monitoring for soil levels.
- Measuring of tremolite in the managed fill streams. With a cut off that is less than that of asbestos.
- Long term monitoring of dust around the township via bio-monitoring. The impact of dust into ecosystems can be monitored using biological systems such as lichen. This makes sure that the systems in place to measure dust are working. If a more suitable bio-monitoring organism is known, eg a specific insect then that would also be acceptable.
- That loads must be covered for all trucks, for all entering and exiting the site. This would seem 'common sense' and should already be happening. But local who observe trucks travelling out of Huntly from the quarry report seeing uncovered loads.

### c) Vibration

This is a major area of concern that has been completely ignored in the consent documents. This situation is summed up by this quote "Compared to noise, vibration is often overlooked. However, due to an increase in public sensitivity and the success of noise mitigation measures, vibration is becoming an increasingly important issue.<sup>22</sup> We note that the U.S. Department of Transportation has a 258 page document on the subject<sup>23</sup> so it is not like vibration and its effects have not be studied or quantified.

Vibration is important because it impacts quality of life. For example impact on sleep. High quality sleep is essential for quality mental health. For example a NZ study stated "Population prevalence estimates indicate that self-reported insomnia symptoms and sleeping problems are higher among Maori than non-Maori. Multiple logistic regression analyses showed that self-reported insomnia symptoms and/or sleeping problems are significantly associated with reporting poor or fair health and quality of life outcomes. Approximately one-quarter of adults in New Zealand may suffer from a chronic sleep problem, highlighting insomnia as a major public health issue in New Zealand."<sup>24</sup>

Vibration has a bit impact on sleep, as the table below<sup>25</sup> summaries the effects

22 David Waddington, James Woodcock, Michael G Smith, Sabine Janssen & Kerstin Persson Waye (2015) CargoVibes: human response to vibration due to freight rail traffic, International Journal of Rail Transportation, 3:4, 233-248, DOI: 10.1080/23248378.2015.1076623

23 Transit Noise and Vibration Impact Assessment Manual SEPTEMBER 2018 FTA Report No. 0123

24 Paine SJ, Gander PH, Harris RB, Reid P. Prevalence and consequences of insomnia in New Zealand: disparities between Maori and non-Maori. Aust N Z J Public Health. 2005 Feb;29(1):22-8. doi: 10.1111/j.1467-842x.2005.tb00743.x. PMID: 15782867.

25 David Waddington, James Woodcock, Michael G Smith, Sabine Janssen & Kerstin Persson Waye (2015) CargoVibes: human response to vibration due to freight rail traffic, International Journal of Rail Transportation, 3:4, 233-248, DOI: 10.1080/23248378.2015.1076623

Table 4. Effects of vibration on sleep.

	Effect	Significant findings <sup>1</sup>
Biological changes	Change in cardiovascular activity	Increase in heart rate <sup>2</sup>
	Change in sleep structure	Reduction in REM sleep Greater number of sleep stage shifts <sup>3</sup> Greater probability of sleep stage shifts <sup>2</sup> Shorter period between falling asleep and first awakening Shorter maximum length of uninterrupted time spent in slow wave sleep
	EEG awakening	Increase in probability of EEG awakening <sup>2</sup>
Sleep quality	Waking in the night/too early	Increase of reported awakenings/waking too early
	Difficulty in getting back to sleep	Greater difficulty in getting back to sleep once awoken for higher amplitudes of vibration
	Self-reported sleep disturbance from vibration	Increase in proportion of people reporting sleep disturbance Self-reported sleep disturbance related to vibration amplitude
	Self-reported sleep disturbance from noise	Decrease in self-reported sleep quality Vibration related to increase in proportion of people reporting sleep disturbance from noise
	Decreased restoration	Decrease in self-reported restoration

Notes: <sup>1</sup>The effects presented in this column are those for which a statistically significant result has been observed relating the effect to vibration exposure. However, it should be noted that these effects do not occur irrespective of vibration level.

<sup>2</sup>This response relates to individual vibration events.

<sup>3</sup>This response relates to the sleep macrostructure.

The US Department of Transportation recommends that for frequent events that homes were the public sleep should be exposed to no more than 0.10 mm/s, rms of ground borne vibration impacts<sup>26</sup>. G & C have not shown that the River view road and suburb will not be only exposed to levels below this level for the managed fill.

The propagation of vibration is dependant upon soil type. And wet soils, peat and clays allow the vibrations to propagate much further than other types of soils. Thus vibration may travel 100's of meters through these types of soils and still be above the 0.1 mm/s, rms threshold.

Vibration is increased with poor quality of roads. Both in terms of surface finish, pot holes and any other things that increase the force that the tires are hitting the road. The Riverview road is a poster child for a poor road. These issues are inherent in the soil conditions the road is build upon. The road is right next to the river, and is highly likely to be built on unconsolidated sediments. Ie soft ground, like peat or river sand. This material moves about has heavy vehicles cross it. So hence the road has sudden changes in elevation ie is a wavy road. It is regularly potholed due to the heavy traffic, and does not have a smooth surface. So if a road was designed to maximize vibration it would look very similar to Riverview road.

26 Hajek, Blaney & Hein Mitigation of Highway Traffic-Induced Vibration. Quiet Pavements: Reducing Noise and Vibration 2006 Annual Conference of the Transportation Association of Canada Charlottetown, Prince Edward Island



Lastly to add the complexity, the impact of vibration is increased due to psychological factors. These factors are listed in the table below<sup>27</sup> and many of these are present for River road suburb residents.

Table 5. Summary of the effects of non-exposure factors on annoyance.

	Factor	Significant findings
Time of day	Evening	Annoyance greater during the evening than during the day at the same level of vibration exposure
	Night	Annoyance greater during the night than during the evening at the same level of vibration exposure
Situational	Visibility of source	Annoyance greater if the source is visible
	Time spent at home	Annoyance greater for people who spend fewer than 10 hours per day at home
	Type of area	Annoyance greater for people living in rural areas
Attitudinal	Concern of damage	Annoyance greater for those concerned that vibration is damaging their property or belongings
	Expectation regarding future vibration	Annoyance greater for those expecting vibration to get worse in the future
	Necessity of source	Annoyance greater for those considering the source unnecessary <sup>1</sup>
	Noise sensitivity	Annoyance from vibration greater for those considering themselves as noise sensitive
Socio-demographic	Age	Annoyance greater for those in the middle age group

Unsurprisingly residents have complained about vibration to the HCB. This includes the rattling of nicknack's / photographs / items on display, cracking in newly plastered renovations, and of course sleep disturbances. Thus indicating that they are experiencing in excess of 0.10 mm/s rms of vibration. Which is over the US DoT standards.

### Managed fill

The great the weight of the vehicle, along with increasing speed is the two variables that increase vibration. And “The increase in the volume of heavy trucks increases the probability of the occurrence of particularly heavy trucks and trucks with malfunctioning suspension and exhaust systems”<sup>28</sup> The managed fill is going to significantly increase the number of truck movements that contain a load, thus are vibration producing loads. Since the trucks that are currently empty will be returning fill.

Given that G & C have not considered the impact of vibration on the community HCB would request that the consent process be paused until this work is done.

**Mitigation.** Obviously an intelligent discussion around vibration can't occur until we know what exactly is occurring, and that requires G & C to gather data and report back. They need to measure

27 David Waddington, James Woodcock, Michael G Smith, Sabine Janssen & Kerstin Persson Waye (2015) CargoVibes: human response to vibration due to freight rail traffic, International Journal of Rail Transportation, 3:4, 233-248, DOI: 10.1080/23248378.2015.1076623

28 Hajek, Blaney & Hein Mitigation of Highway Traffic-Induced Vibration. Quiet Pavements: Reducing Noise and Vibration 2006 Annual Conference of the Transportation Association of Canada Charlottetown, Prince Edward Island

the actual vibration caused by the full trucks both at road edge and a range of residents. And that they formulate a plan to mitigate any vibration to the US standard of 0.1mm/s rms. Suggestions of mitigation options could include:

- Installation of haul road to bypass riverview road and most of the suburb. This is discussed under transportation
- Reduce speed limit for trucks to 50km/hr all along river view road. This reduction in speed limit would result in less vibration, but can't speculate if it would meet the standard.
- Limit in hours of operation. The current hours requested hours of operation will have significant impacts for the population. For early morning truck movements it will impacting quality of sleep, and for evening movements it will be a double whammy of increasing annoyance (see table above) as well as the vibration. Thus causing stress, which is correlated with negative health outcomes. Therefore the hours of operation with fill truck movements should not start till 7am in the morning, and 8am on Saturday. And should end at 5pm weekdays and 12pm Saturdays.

#### d) Water

##### **EAP level**

HCB is concerned about the 3% EAP level. We can't trace where this figure comes from, but assume it must come from WRC data around rainfall events. Our concern stems from local knowledge of how the Taupiri - Hakarimata range attract and hold onto rain. Thus creating a micro climate of higher rainfall and no doubt higher EAP. It is very common for Huntly to be in sunshine while the clouds and the rain hold onto nearby hills and munga. The G & C quarry is close enough to this hills, and the managed fill sits of higher elevation (100+meters).

Therefore to take an average figure produced by a model, would underestimate the local effects. Obviously with this underestimation the risk of systems not being able to handle what they should increases dramatically.

An example of this is the fill site #2 earthworks that were created. These earthworks were created to allow truck and trailer units to turn around and dump over the edge into the gully. There was a berm created on the tip edge. One assumes this was to stop trucks going over the edge. In rains over this winter the berm pooled water, and then the water storage got so high that it overtopped the edge, that then eroded an incision into the berm which moved a large volume of clay, which changed the stream color of the stream that followed into lake Puketirini. We will present photos of this event at the verbal submission.

One would assume that this dumping and berm system was designed to the same specification and EAP level as what is proposed for the water management. Which is clearly inaccurate.

##### **Long term impacts**

Key concern is that after a few years the managed fill site will be fill. However contaminants in the fill will be present for ever. Thus in 100 years time when all of us have died and our grandchildren are playing with their children in the lakes and rivers, we don't want them exposed to the leachate from the contaminants. We are all aware of the mistakes made decades and decades ago that come back to bite as folks then underestimated the risks of waste disposal.

Furthermore if for whatever reason higher than allowed waste is deposited on site it is going to take time for the leachate to appear with elevated levels. And G & C blatant disregard for doing the right thing the odds of this occurring has to be high. The migration of toxins through fill is slow and steady. Given the number of variables involved (soil types, rainfall, contamination level, soil pH etc) a figure of the toxin movement appears to be impossible to estimate. Therefore long term monitoring is essential to know exactly what leachate is occurring. Monitoring should be required

until there is no possibility that an increase in contaminants in the leachate is going to occur. We don't know how long this time frame is, but should be decades, and we would suggest 50 years.

### **Lake Puketirini**

The argument used for the managed fill is that the leachate will flow into the Waikato awa and using the rule of thumb 'the solution to pollution is dilution' the heavy metals and other toxins will be diluted due to the large volume of flow.

However this argument isn't applicable for lake Puketirini. Since this lake has a very small / narrow outlet and low water turn over. There is no discussion of existing lake heavy metal / contaminant levels, like there was in the awa. Therefore there is no evidence presented that the lake will not be significantly impacted by the leachate run off from the contaminated material at till site #2.

### **Waikato awa**

"The Waikato River Authority is an independent statutory body under the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010" with a central government mandate stating "Section 22 of the Act states that the purpose of the Waikato River Authority is to:

- set the primary direction through the vision and strategy to achieve the restoration and protection of the health and wellbeing of the Waikato River for future generations:
- promote an integrated, holistic, and co-ordinated approach to the implementation of the vision and strategy and the management of the Waikato River:
- fund rehabilitation initiatives for the Waikato River in its role as trustee for the Waikato River Clean-up Trust."<sup>29</sup>

Being an independent statutory body, and G & C undertaking a proposal that could negatively impact the health and wellbeing of the awa for future generations, it would be essential that the Waikato River Authority has input into this application.

However HCB could not find any evidence of consultation with the River Authority. This is a massive oversight and as such indicates that G & C have not done due diligence when it comes to the river contamination.

### **Mitigation.**

EAP level. The obvious mitigation would be to measure the rainfall for the next period of time (years) and once the difference is known then calculate the appropriate EAP. There must also be a theoretical way of calculating a more appropriate EAP. We are not hydrology experts, so are not aware of the best level to recommend. However logically there has to be the next step or steps down in the EAP levels for standard design so a 2% EAP or 1% EAP.

Long term impact. We request long term monitoring of the leachate from the system. By long term we are talking 50+ years post closure of the managed fill site.

Lake Puketirini. Removal of the fill area #2 that flows into lake Puketirini

Waikato awa. Since there has been no consultation with the Waikato River Authority we would request that the sites that flow into the awa be declined (sites

Given the complete and utter mistrust of the community that the right thing will be done, independent verification is essential. Therefore online web cams that record continuously, so public can check any time / date for sediment wash out to make sure that the sampling is done / the system is working as it should. As already mentioned multiple times the track record of the company is not one on honesty, ethics and doing the right thing. And the councils are unable to

<sup>29</sup> Office of the Auditor-General <https://oag.parliament.nz/2016/co-governance/appendix1.htm>

monitor in real time / enough to make sure things are done correctly. So having full publicly available information will enable residents to check and know if things are not being done as they should.

#### e) Levels of contaminants in managed fill

The levels of proposed contaminants (2020 data) were compared by HCB to other managed fill sites in Auckland-Waikato region. A number of concerning things were noted, in that the levels requested for the managed fill site of a number of highly toxic heavy metals and petrochemicals were much higher than the industry standard. These are shown in the table below. The other sites data were combed from publicly available information (websites and consent documents).

The lead limit is 4 – 6 times larger than other managed fill sites. Mercury limits are double and Zinc levels almost double. The petrochemical limits are orders of magnitude larger than any other site.

	Huntly Proposed	Drury (Stevensons)	Winstone Hunua	Winstone Aggregates 3 Kings	Twilight Rd (Auckland)	Greenvision (Auckland)
Lead	1000	250	250	250	160	210
Mercury	1.5	0.75	0.75	0.75	0.75	1
Zinc	2000	1160	1160	1160	1160	1160
Benzene	0.2	0.004	0.004	1		0.0054
C10-C14	1400			300	450	
C20-C36	20000			5600	1000	

*Table comparing G & C levels to other managed fill sites*

We note that EHS Support New Zealand Ltd, G & C consultants state in their notes from Table 5, proposed limits “Concentrations of boron above 45 mg/kg, lead above 250 mg/kg, nickel concentrations above 65 mg/kg and zinc above 400 mg/kg in infill materials will require Synthetic Precipitation Leaching Procedure (SPLP) testing to be carried out on the fill materials before acceptance, to demonstrate that elevated concentrations of these elements will not mobilise under conditions likely to be present in the fill area.”

Thus it would appear that G & C are wanting a higher toxic load, but using the argument that the toxins are immobile. However it overlooks the obvious fact that “conditions likely to be present in the fill area” is very nebulous and also underestimates the complexities of the impact of dumping a wide range of materials into one location. The application has a large range of materials that could be dumped on any given day, from marine sediments and muds through to the more common contaminated soils. Given that this will result in marine sediments being right next to a very different soil types, the interactions between the two could have a significant leaching effects that would not be known for years and decades.

The much higher petrochemical levels are a concern. There is argument that the very long chain carbon molecules are stable in the soil. However benzene and C10-C14 are not in that class. Benzene is the complete opposite of a very long chain petrochemical. It has a low boiling temperature of 80°C, has some solubility in water even at 0°C<sup>30</sup>. So is a mobile petrochemical that is also “finds limited use in consumer items because of its toxicity”<sup>31</sup>. Hence the limit for the managed fill should be 0.004.

<sup>30</sup> Wikipedia, Benzene. <https://en.wikipedia.org/wiki/Benzene>

<sup>31</sup> Ibid

The C10-C14 carbon chains are also mobile. For example the chemical datasheet for C10-C12 indicates these carbon chains are “slightly soluble in water”<sup>32</sup>. Thus they will be mobile in the soil. And a quick google indicates that these substances can be liquid at room temperature (this depends on exact structure, number of of double bonds etc) and used as lubricants and fuels, so applications that depend on being fluids. Again indicating the high mobility of these chemicals.

We also note that there doesn’t appear to be a consultants report

**Mitigation.** HCB suggests that the optimal mitigation measure is to only have a clean fill site at the Huntly quarry.

If having only cleaning fill is not possible we request that the limits of heavy metals and petrochemicals be lowered to the minimum industrial standards of

- 60 for lead
- 0.75 for mercury
- 1160 for zinc.
- Benzene limit of 0.004
- Carbon chains 10-14 limit of 300
- Long chains of 20-36 limit of 1000.

Remove sites #2 from the plan. This flows into Lake Puketirini. The consultants report reads like they only consideration is the Waikato river, with quotes such as “A higher waste acceptance criterion for zinc is proposed for this site than either Ridge Road Quarry or Holcim Bombay Quarry. Environmental modelling (see Section 3.1) indicated that the Waikato River has significant dilution capability for zinc.”<sup>33</sup> (pg8) This completely ignores the reality that the managed fill sites include area #2 which leachate flows into lake Puketirini. Lake Puketirini is in section 2.6.3 (pg 6) of the report and states that “Limited water quality data has been collected over the summer months from November 2021 to February 2022 (See Table C-1 in Appendix C). One additional water sample was collected in June 2020. However, the water quality dataset is not extensive and is unlikely to represent the seasonal variability of all water quality parameters.” We were unable to find any appendix C in the document, nor in the associated documentation online. There was an appendix C in Fill site #3 analysis but this does not related to lake Puketirini. Thus we cannot conclude that the impact on the lake will be less than significant.

Have data online as to what has arrived at the managed fill site each day. Thus allowing public to verify the validity of the information ie that stated truck flow is reality. And that this information includes the source of the fill material and its classification eg Auckland tunnel and marine sediments. Relevant laboratory information (eg tests showing it is acceptable for contaminated fill) and lastly it includes the metallic contamination levels as measured upon entry. Thus allowing for transparency in the process.

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32 Chemical Datasheet. C10-C12, UNSATURATED HYDROCARBONS (COMBUSTIBLE LIQUID, N.O.S.), <https://cameochemicals.noaa.gov/chemical/21506>

33 Assessment of Environmental Effects and Waste Acceptance Criteria Huntly Site 300 Riverview Road Huntly, NZ Prepared for: Gleeson Managed Fill Limited Prepared by: EHS Support July 2022

## f) Traffic effects

Staggered that in both the 2019 report and in the 2022 report (pg 12 for both) includes an assumption that the traffic would be split 50:50 north and south. All locals are aware that there is far more northern traffic than southern traffic. And senior management at G & C would have to be aware of this also. The only reason that a more accurate north-south split was not used is it either saved G & C money in the report, or make the end result more palatable for the council consents.

Therefore it appears to be deliberate dishonesty or obfuscation by G & C.

A few simple checks shows how erroneous this 50:50 assumption is.

- Monitoring the road cleaning crew. Miraculously after years of issues and unable to see the road markings outside the quarry due to the thick layer of filth, the road as of <date> is being swept and washed. The sweeper was monitored over 1/5 hours, and at no time did the road sweeper go south of the gates. It was always north. Thus indicating that the overwhelming amount of traffic is northern.
- Length of dust tracks on the road. A simple measure of how much vehicle traffic was north or south bound from the quarry would be to measure the level of dust on the road. Travelling south at approximately 800m south, the debris on the road were not longer a major feature of the road surface (the dust layer was still present, but was faint). Northern bound there was clear debris all the way up to the Tainui bridge – Rotowaro – Harris round about where the town traffic then interfered with any meaningful way of assessing the debris on the road. Since the additional traffic tracks it away and who is to say that trucks coming from other places are adding to the material. This length was 2.9 km. So ratio of 0.8:2.9 which is 1:3.6 which is approximately 30% south bound and 70% north bound. This is the upper limit as to which south bound is used. Since the northern bound end of significant debris couldn't be determined.
- Measuring of truck direction. A random 1.5 hour timeslot from 11:30am-1pm on Tuesday 2<sup>nd</sup> of August truck movements out of the site were monitored. A truck and trailer unit was counted as a 1, and a truck without trailer or cement mixer was counted as a 0.5. There were 36.5 movements to or from north and only 7.5 to or from the south. This comes out at approximately 1:5 south to north. So 20% south and 80% north.

All three ways of measuring if the 50:50 assumption is correct have shown this assumption to be totally incorrect. A more valid assumption would have been to state 100% northern bound and 0% southern bound!

Therefore we request that the commissioners reject the traffic assessment as invalid as it is based upon incorrect assumptions.

“The proposed hours of operation related to truck movements to and from the site entrance are from 5:00am Monday – Friday (except from 1 May to 30 September when the day will finish at 6:00pm) plus 6am – 3pm on Saturdays.”<sup>34</sup> (pg3).

This statement lacks the end time of the noise creation. This is a significant over site and yet again shows a lack of care and attention to detail in the report. It does later clarify by saying

“This proposal also seeks to increase the operating hours to the following:

Between 1 October and the 30 April;

Monday to Friday 5.00am to 8.00pm.

Saturday 6.00am to 3.00pm

Between 1 May and the 30 September;

Monday to Friday 5.00am to 6.00pm.

<sup>34</sup> Hegley Acoustics Consultants. PROPOSED MANAGED FILL 300 RIVERVIEW ROAD, HUNTLY ASSESSMENT OF NOISE EFFECTS Report No 19069/2 2022

Saturday 6.00am to 3.00pm<sup>35</sup> (pg8)

### Mitigation.

The ideal solution for these traffic issues, and associated ill effects, would be a separate bridge be built across the river for use by G & C. The current bridge in Huntly is old and as such is having issues handling the heavy vehicle traffic for example sudden failure of the roller bearings only a few years after a major renovation. Given that G & C is said to own the land opposite their quarry, it is logistically possible to build a bridge across the awa connecting the quarry directly to the old SH1 corridor.



*Map showing how close the quarry is to the old SH1*

The board appreciates that this is an economically costly option. However a less expensive option that has many of the benefits (although still puts pressure on the old bridge) is having G & C build a high quality sealed haul road to Rotowaro road, and allowing the heavy vehicles to bypass using river road. This would solve a lot of the issues around usage of a narrow road built on soft / moving riverside materials. Solve the lack of adequate pedestrian access

The road could run from the northern boundary of G & C. Through the land that was once an open cast coal mine. So is already heavily modified, and may have heavy vehicle tracks through it. Then coming out through the heavy industry area on Rotowaro road.

35 ESTABLISHMENT AND OPERATION OF A MANAGED FILL ACTIVITY RIVERVIEW DRIVE, HUNTLY TRAFFIC IMPACT ASSESSMENT 27 May 2022 Reference 221204 TRAFFIC ENGINEERING & MANAGEMENT LTD



Existing land zoned heavy industry with well form roadway access

Ex- coal mine lane

G & C northern boundary



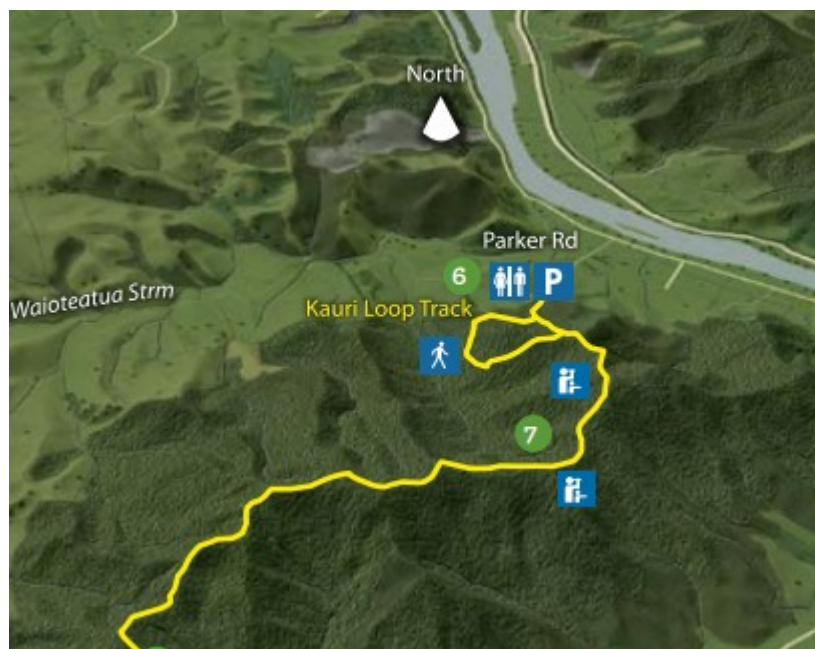
Close up of the access road through the heavy industrial zone.



### g) Traffic effects – pedestrian impact

One of the important things about modern design is the inclusion of pedestrian accessibility. In 2021 HCB produced a footpath and walks strategy to guide short timer and long term investment into making Huntly and surrounds more pedestrian friendly. As part of this a number of shorter term and longer term issues were discussed:

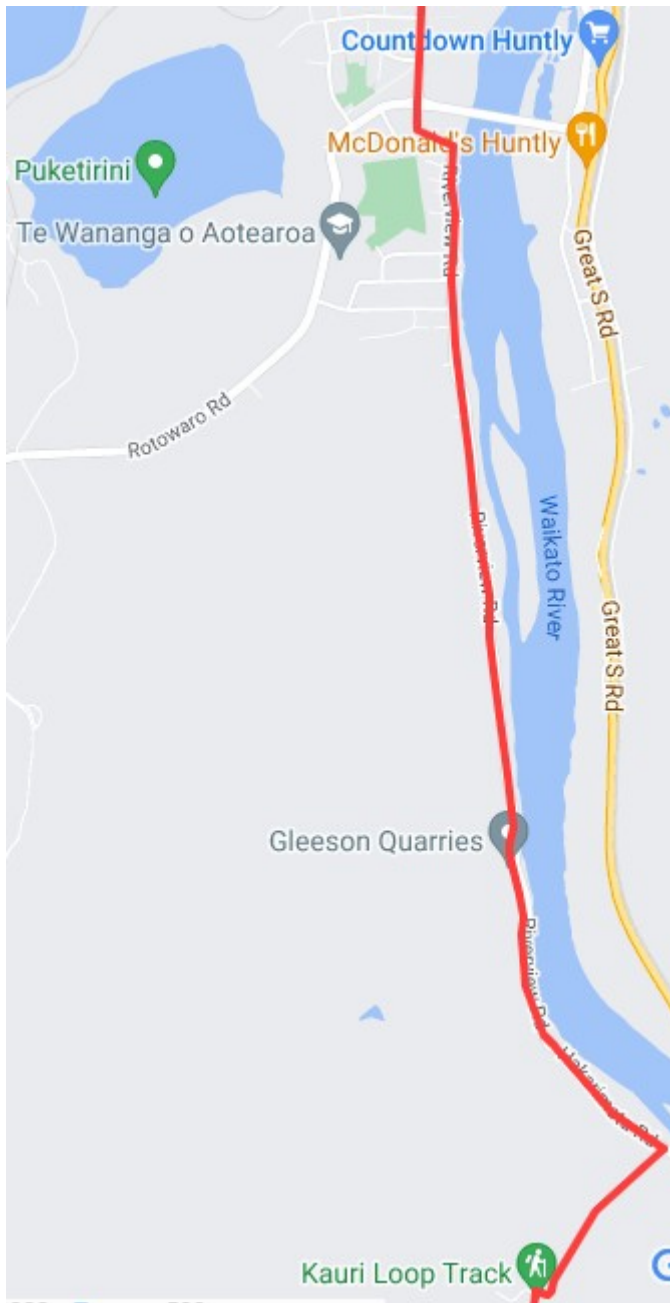
- Short term, The poor state of the footpath along Riverview road, with sections of the existing footpath being soft gravel that is difficult to traverse.
- The lack of footpath servicing the southern part of Riverside road, with no footpath from #160
- The lack of pedestrian access for locals through to Hakarimata walkway of Kauri lane.
- The lack of pedestrian access for the users of Te Araroa walkway. To quote the report “Walkers who travel this section put their lives in danger by the extremely narrow shoulder and significant volumes of quickly moving heavy vehicle movements. There is also an issue of a one way bridge, with no space for walkers”<sup>36</sup>



Screen shot from Department of Conservation brochure on Hakarimata tracks. Showing the Hakarimata track, northern entrance is just south of the G & C quarry operations.<sup>37</sup>

<sup>36</sup> Footpaths in Huntly – A roadmap forward presented at Huntly Community Board Tuesday, 8 December 2020

<sup>37</sup> Hakarimata tracks Department of Conservation <https://www.doc.govt.nz/globalassets/documents/parks-and-recreation/tracks-and-walks/waikato/hakarimata-scenic-reserve-tracks-brochure.pdf>



*Left – Google maps showing the route of the Te Araroa trail through Huntly, down Riverview Rd past G & C quarry and through to the Hakarimata walkway.*

Even though the Hakarimata trail is heavily used track and recreation area by locals the only safe way to access this is via car. It would be exceptionally dangerous to attempt to bike or walk there because the road is narrow wedged between the river and steep bank. This narrow road has high volume of quarry truck movements along it, often in 70km/hr zone. This section is also on The official Te Araroa website lists the hazards of this section being “Vehicles on road or track - take care on the one lane bridge”<sup>38</sup>

The managed fill truck movements is going to exasperate these issues. Especially as fully laden trucks have massively more momentum than empty trucks and thus pose a higher risk for pedestrians.

**Mitigation.** There are options of mitigation. One is for G & C to build a footpath along Riverview road allowing walker and bikers access through to Parker road which has a wide verge and little traffic as it is a dead end road. The bottleneck of the bridge would require a footbridge for cycle and foot traffic.

As already discussed another option would be to create a haul road and shut down the river view road entrance. This would remove the heavy

vehicle traffic from the road creating a safer walking / biking environment.

## h) Economic benefits

There are very little economic benefits to the town. One paper it might seem like a lot, with 160 trucks on the road (as of early 2022) owned by G & C and the quarry servicing other trucking firms. However there are no truck stops in Huntly to harvest any cash from these drivers. The trucks logically cannot enter the CBD area, and thus congregate around the toilet on the old SH1, in metalled area in the residential area off Riverview road (causing large potholes) as well as around the quarry entrance. It would appear there is no space for parking the quarry itself. So all of these areas being public land, show yet another drain on the local economy with rate payers having to pay for the upkeep of these parking areas, but we digress.

Thus there are no cafe or food places benefiting from the truck traffic. So no economic benefit.

Watching the quarry operations it becomes clear that the contractors who provide services are not local businesses so again no flow on positive effects for the community.

<sup>38</sup> Waikato Trail Notes, Te Araroa New Zealand Trail <https://www.teararoa.org.nz/the-trail/waikato/waikato-trail-notes/>

There are very few G & C truck drivers who lives in Huntly, we would estimate between 2-3%. So only a small number of jobs. There are some jobs at the quarry, and at least one person being a local. So there is a small economic benefit of the quarry.

The managed fill will not significant increase staff levels at the site. Given that is is a dump and run operation. There could be one or two full time equivalents added for say a compactor or related operations. There is no guarantee that these FTE's will be locals or provide any local benefit.

Thus there is no economic payoff for Huntly to accept a reduction in the quality of life associated with increased hazards and risk associated with increased truck traffic and the managed fill site.

## I) Smell

Again an area that has been completed neglected by G & C and is of concern to the residents. This is because offensive aromas can have a massive impact on quality of life. To quote a paper “In recent decades, scientific consideration of the health consequences of malodors has increased in the context of residential exposures to malodors from municipal solid waste landfills; waste-water treatment; land application of treated sewage sludge; industrialized animal operations; and the production, storage, and transport of industrial chemicals. Environmental malodors may prompt reports of annoyance, worry, and physical symptoms.”<sup>39</sup>. and “Odor annoyance negatively impacts residents of communities adjacent to persistent nuisance industries. These residents, often with a high percentage of minority or otherwise marginalized residents, experience subjective and objective impacts on health and well-being”<sup>40</sup>

The odds of getting any action taken once the consent has been granted about odours is slim to non. That is because it is very hard to nail down what is causing the odour and what remedial action is to be taken. It is common sense to anyone who has been close to marine sediments that they stink. Yet how would you quantify this aroma, and how far it could travel? This coupled with how G & C and WDC have acted in the past, the odds of anything being done about any stink is slim and none.

## Mitigation

- Remove the managed fill part of the fill, leaving only a clean fill site.
- Remove the sections that have high probability of causing odour, which HCB understanding is acid sulphide soils, marine sediments however HCB is well aware we are not experts in the field and if other materials proposed to be dumped here could have potential odour issues we ask these also be removed from dumping.

## J) Noise

In reading the documents in January 2020 the chair noticed a simple error in the Hegley Acoustics Consultants report. This was that two graphs were copy and pasted from each other, increase of being the actual real data. An understandable error, but one that indicates that precision and making sure the finer details are correct is not a priority. At the time the chair raised this directly with Paua<sup>41</sup> since at the time he was open to the concept of the managed fill. However in the time since this, he now regrets this action, as it allowed the error to be corrected before being publicly available.

## District plan

The report states (pg5), the district plan regulations are:

39 Wing S, Horton RA, Marshall SW, Thu K, Tajik M, Schinasi L, Schiffman SS. Air pollution and odor in communities near industrial swine operations. *Environ Health Perspect*. 2008 Oct;116(10):1362-8. doi: 10.1289/ehp.11250. Epub 2008 Jun 5. PMID: 18941579; PMCID: PMC2569096.

40 Kitson J, Leiva M, Christman Z, Dalton P. Evaluating Urban Odor with Field Olfactometry in Camden, NJ. *Urban Science*. 2019; 3(3):93. <https://doi.org/10.3390/urbansci3030093>

41 Email to Bianca Schoeman <biance@pauaplanning.co.nz> titled Re: Missing tables from the Huntly Gleeson Managed Fill proposal dated: Jan 20, 2020, 9:55 PM

Noise measured at the notional boundary on any other site in the GRUZ – General Rural Zone must not exceed:

- (i) 50dB LAeq, 7am to 7pm every day;
- (ii) 45dB LAeq, 7pm to 10pm every day;
- (iii) 40dB LAeq and 65dB LMax, 10pm to 7am the following day.

And the report also states the quarry seeks to start operations at “The proposed hours of operation of the managed fill will be 6am - 7pm Monday – Friday plus 6am – 2pm on Saturdays.”<sup>42</sup> (pg 3)



Looking at the noise contour maps of fill areas (fig 8 - 11), all show that > 40dB (pink line) at rural properties over the river opposite the quarry. And all but one (Fig 11) show > 40dB at the northern boundary. Therefore the fill operations cannot start until 7am and keep within the district plan. This fact seems to have been ignored by the report.

Also the 45dB boundary (yellow line) also crossed into others rural properties, again the majority of the figures show this. Thus once again showing the operational hours don't met the district plan, and once again showing that the report has ignored this.

Also the model doesn't actually trace the contours East and South of the area. We can't see from the images how far the 40dB sound travels in an Easterly or Southerly direction. Therefore we cannot conclude if what boundaries are impacted.

*Snapshot of figure 6 of the report (right). Showing > 40dB at multiple boundaries and incomplete modelling so it is not known how far this noise travels in an Easterly or Southerly direction.*

#### **Ignoring of close residents**

One of the closest homes of the operation is not even mentioned in the report. This is shown in the figure below – highlighted with a yellow arrow. This is completely ignored in the report. It home is at a significant elevation. Thus companding lovely views over the awa and onto the quarry and proposed managed fill sites. Given their elevation they could have clear and direct noise transmission. Thus they could be hitting 50dB noise level. But since the report didn't consider this home it cannot be said.

Furthermore we don't know why this home wasn't

included. Was in incompetence or will-fill deception.

42 Hegley Acoustics Consultants. PROPOSED MANAGED FILL 300 RIVERVIEW ROAD, HUNTLY ASSESSMENT OF NOISE EFFECTS Report No 19069/2 2022



*One of the closest homes to the operation ignored by the report.*

What has to be will full deception is the ignoring of the homes most likely to be impacted by the noise. You will note that the above figure, and all the figured in the report, careful cut off just before the residents highlighted by the yellow arrows in the figure below. These are basically opposite the quarry and proposed managed fill site. It is said that employees of the company live in one (both?) of these homes. This will be the excuse that G & C will no doubt use to explain away this deception. However we of course don't know the impact on these homes, and what the future plans of the company is for these (ie sell after getting consents). So they should be included in the analysis. It is highly concerning that the closest residents were carefully removed from any of the noise analysis.



*The two closest homes to the operation are carefully excluded from the analysis.*

### **Model validation**

It is all very fine and dandy to have a model that predicts a particular noise outcome. However the lack of verification of the model is highly concerning. That is a standard noise at known dB at the fill sites, and then to measuring the noise at particular points on the boundary to verify the model

validity is a basic step to check if the model is producing accurate information. This has not been done.

What the model predicts at the dwellings sites 1, 2 & 3 that the noise generated by the operation would be approx 30 dB. (pg 15). The internet informs us that 30dB is equivalent to a quiet country area. Thus should disappear into the background noise of these areas. However in 2020 a local who lives around the general area contacted one of Huntly's councillors to complain that the heavy machinery that was operating at the proposed fill site(s?) was waking them up in the morning. Given that these folks are inside their homes thus protected by a large barrier from the noise. This indicates that the model is fundamentally wrong. Since real life experience indicates that what occurred is very different from what is predicted. Therefore the model cannot be trusted.

### **Mitigation**

Given the large number of critical errors and deficiencies in the report, we cannot see how it can be trusted or gives trustworthy information. Therefore we conclude that accurate noise assessment has not been undertaken. And as such the application for consent be declined.

It is impossible to request serious mitigation measures given we don't accurately know what exactly the noise issues are going to be and who they will impact. Therefore we cannot conclude anything about the noise.

If work is done to address the severe deficiencies then a mitigation discussion could occur, and at that time HCB would create a list of mitigation efforts required. However we can conclude at this time that

- To keep with the district plan the hours of operation should only be allowed to start at 7am
- To keep with the district plan the hours of operation have to cease by 7pm

### **k) Geotech**

Although Huntly is no longer a mining community, with no coal mining done under or around the township (one remaining mine is located ~15 mins West of the township), there is still a lot of knowledge about what exactly was done with regard to mining in the township as people who saw or undertook the work still present in the community.

As stated in G & C documents, that fill site # 3 is the overburden material from lake Puketirini, then called Weaves open cast. This was back in the 'bad old days' when there was little regulation or oversight as to what was dumped and where it was placed. It should really be called mine tailings as it is closer to tui mine and its tailings rather than a well engineered overburden storage of Waihi Opencast.

Any good review would start with a desk top analysis. Seeking information on file from locations such as the Waikato Coalfields Museum (in Huntly), The University of Waikato Library, Waikato District Council Libraries and other sources such as archives in Wellington. These would hopefully indicate what was actually put into the this 'overburden' material and information such as compacting or other relevant engineering factors. This desk top analysis does not appear to have been done, as the report states (dated 2019, labelled A) "No as-built records, completion or design reports are available to confirm the position and pedigree of the historic fill present." this is surprising and we strongly suspect the local resources were not explored (ie if it wasn't online it was deemed not to exist).

Furthermore a wise consultant would then talk to folk who were there and saw with their own eyes what actually went on. Since we all are aware what the paperwork says and what actually happens are two separate things.

Locals who were involved in the operation will tell you that the ‘overburden’ was in essence part of lake Waahi. And everything went into the overburden site. This included organic matter such as all the vegetation that was across the top of the site. Being on the edge of lake Waahi this was trees such as willow trees, ferns, sledges, reeds, and everything else that is found in a swamp. It is also said that duck nests, eggs and duck(s?) ended up in the ‘overburden’ as well !! Obviously once the top layer of the swamp was gone, the muddy slushy sediments were also carted to this site, and then working their way down through the geological column. It is also said that no compaction of this material occurred until very late in the operation. Thus the sediments and materials at the base were not compacted.

It was good to see that the bore test drills went through this layer into the basement sediments. However the number of bore holes concern us. Only three, and all the reports were based upon the conclusions drawn from these three bores and some surface pits only ~2m deep. Given the large area of fill that is to be placed upon of this mine tailings it seems very presumptions to think that 3 bore holes captured the extent of the materials dumped in this location. It is nowhere enough to gain an accurate picture of the reality of what is there.

The report (dated 2019, labelled A) states “No as-built records, completion or design reports are available to confirm the position and pedigree of the historic fill present. As such, sufficient sensitivity checks of the proposed fill to historic fill variability will be undertaken. Also, deep drainage and construction deformation monitoring will be undertaken to mitigate potential poor performance of the underlying fill.” (pg 13)

This is both (a) very important and (b) remarkably vague. Important because locals stated “The material was absolute crap, very plastic in nature, marine tertiary sediments. The operators at the time called it “slop.” They capped it with topsoil looking material, containing rocks, coal and clays. Due to the poor drainage of the material and the gradient of the “fill,” after settling over decades and pugging from stock it was swamp over winter and dried out rock hard over summer.”<sup>43</sup>

And vague given that there isn’t any substance or detail as to what exactly will be done. And given G & C very loose playing with rules and regulations, raises serious questions about what exactly will occur.

Lastly we are very concerned that no geotech has been undertaken across the whole overburden area. This is because applying a load to one area of the large overburden site has the impact to create stress that will propagate through the tailing causing movement or instability of the remaining tailings area.

We would request that the fill area #3 be removed from the planned managed fill site since there is not enough detail in the reports to conclude that it is a safe and well planned site.

### **Mitigation**

If fill site #3 is to be part of the managed fill area. A full and thorough geotechnical analysis has to be undertaken before consent is issued. This has to be done by independent consultants who are prepared to make the information public, and not bend the information to the purposes of the managed fill operators.

This analysis needs to extend into the area that is not going to be covered by fill, far enough out to cover the forces that will be transmitted through the fill by the additional load and the impact of these through the rest of the mine tailings.

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43 Personal communication from neighbour

And concrete plans need to be drawn up regarding exactly what management and mitigation measures will be undertaken so that it is clear what should be occurring.



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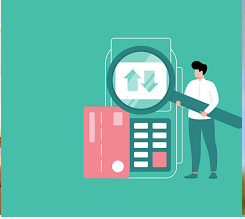
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# Company at centre of Huntly dump battle broke rules over stockpiled coal

Ellen O'Dwyer · 14:39, Feb 25 2021



SUPPLIED

A company at the centre of a community fight against its proposed landfill has come under fire again, this time for illegally stockpiling coal.

And that's riled a local community leader, who says it's risky environmental practice, yet the company faces no consequences.

Between 1500-2000 cubic metres of coal was found at Gleeson & Cox Huntly Quarry in December 2020, after a member of the public alerted the Waikato Regional Council.

Gleeson & Cox do not have a resource consent to stockpile the coal at the quarry.

According to Genesis Energy emails *Stuff* has seen, about 3000 tonnes of coal was due for Huntly Power Station but transport logistics between Auckland ports and the station meant it was stored at the quarry for two weeks.

Gleeson & Cox had informed Genesis they were allowed to temporarily store coal at the quarry, the email said.

#### **READ MORE:**

- \* [The Last Lake: 'The food baskets of the region have been degraded'](#)
- \* [The Last Lake: Huntly man fights to save the lake he helped build](#)
- \* [The Last Lake: 'Huntly won't be dumped on anymore'](#)

But the regional council confirmed to *Stuff* stockpiling the coal was an illegal, unauthorised activity.

Council land development team leader Jorge Rodriguez said stockpiling coal requires a specific resource consent because coal comes with adverse environmental risks that needs to be managed.

It contains a highly mobile contaminant, boron, which can run-off and pollute nearby waterways if there's a heavy rain.

“If this occurs in high concentrations, boron can be toxic to aquatic life.”



CHRISTEL YARDLEY/STUFF

Illegally stockpiled coal was found at Gleeson & Cox Huntly Quarry at a date in December. It was removed after a complaint by a member of the public.

The council became aware of the coal on December 14, and it was removed three days later.

Rodriguez said Gleeson & Cox did not get a formal warning or fine, because the coal was promptly removed and dry weather meant environmental effects were unlikely.

Because there was no discharge to water from the coal, there was no breach of the Resource Management Act as coal is allowed to be placed on dry land, he said.

Instead, they advised the quarry of the risks of the activity, he said.

But community board representative Red Wootton said that wasn't good enough.

"They shouldn't be able to get away with this type of thing.

"It seems like there's one rule for these guys and another rule for us all.

"If I have to do anything, or you have to do anything, there's a consent process for us, but there doesn't seem to be for outfits like Gleeson & Cox."

Wootton said he did not trust the company's environmental management of a proposed managed fill site, given their track record.

It's the second time in a year the company has been caught in an unconsented activity.

It was issued with a formal warning after conducting illegal earthworks for a proposed managed fill site at the quarry – which some residents are fighting against.

The company was found to have drained a wetland in the process.



CHRISTEL YARDLEY/STUFF

Huntly resident of 47 years and community board member Red Wootton said he did not trust Gleeson & Cox's environmental management, after illegal earthworks and now unauthorised stockpiling of coal.

When approached by *Stuff*, Gleeson & Cox chief financial officer Mark Pelan declined to comment.

Genesis Energy did not provide an interview with *Stuff* either.

A spokesperson said Gleeson and Cox advised them it was storing some coal there temporarily.

MORE FROM

**ELLEN O'DWYER - WELLINGTON REPORTER**

ellen.odwyer@stuff.co.nz

sediments at the site.

Residents have [fought for their last clean lake](#), Puketirini, which they say could be in danger from the site.

Rodriguez said no resource consent decisions had been made for the managed fill proposal, and the process is on hold.



CHRISTEL YARDLEY/STUFF

Red Wootton is concerned the landfill site will contaminate the waterways in surrounding areas.

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## Appendix Two: Possible illegal dumping at the G & C site

This is included as an appendix as of yet documentation has not been provided to elevate this above the realm of spoken word. Ie no documented proof. Hence HCB is reluctant to proclaim this as reality. Yet there is enough circumstantial evidence to indicate something untoward occurred. If documentation can be found, as the person who has this material has had ill health, with multi operations and treatments, then it will be further presented at the verbal hearing.

A member of the public Huntly noticed a change in behaviour of G & C trucks / company in 2020 when opposition to the managed fill ramped up, and it consents were not forthcoming. Multiple trucks would park up at the public loos on old SH1 very early in the morning. And a ute would then come and they would all travel in convey to the quarry site, and let them all in. This was highly unusual and the trucks were also covered which up to this point was not practice.

The member of the public then followed truck(s?) back to Auckland from Huntly tacking some to the tunnelling site where G & C have the contract to remove waste from Auckland\*. He observed the trucks being filled at the tunnelling site, and travelling back to the Huntly site and entering the site while fill. Presumably dumping the material somewhere on site. Again these trucks were covered which at the time was not standard practise.

This is collaborated by other members of the public who work at business around the lights on the old SH1 where there is a red arrow so truck stop to turn onto Tainui Bridge Road. These folks mentioned that the trucks were suddenly appearing to be loaded while returning to the quarry. This is because they noticed (a) they were low in their suspension and (b) slow to accelerate from stopping (compared to the normal speed that empty truck units accelerate at).

This activity did stop towards the end of 2020 (maybe going into 2021, it is hard to determine) so it not current being undertaken.

At this stage no photographs or video evidence is available. But as mentioned above if it surfaces before the verbal hearing it will be presented as solid evidence instead of personal observations.

\* This contact can be confirmed by contacting Link Alliance – Maungawhau Station (Mt Eden).

Dust created by Gleeson and Cox trucks using council land as part of their business.  
David Whyte, Chair of Huntly Community Board 29<sup>th</sup> October 2020

Dust has been a significant issue for residents of Riverview road, Hakarimata road and the suburb behind Riverview Road. For example previously in summer I have recorded evidence of visible quarry dust on the road surface up to 7-8km south of the quarry on Hakarimata road.

The dust problem obviously peak in late summer when there has been extensive period of time without rain to wash the dust from the road surface. Therefore this report is about being proactive and taking action before the dust trail is extended North and South of the quarry and causing issues for local residents. Since right now the dust is limited to the rural areas.

The word on the street is that the dust is caused by trucks using the road side gravel areas outside of the quarry operational area. These are highlighted in the figure below.



Therefore I spent half an hour observing truck entrance movements from a high up public location and similar length of time observing truck movements from the roadside. Observing dust creation and management in the quarry and surrounding areas.

What I observed was a systemic use of these gravel areas as part of the quarry operation, and they were treated as though they were owned by the quarry. And the locals were correct, these were sources of significant dust movement.

The use of these areas can be grouped into two categories. One being empty trucks heading to the quarry stopping to remove covers, and the other being full trucks parking up to undertake other activities.

Given that almost all truck traffic on the day of observation was from the north, and heading back north, one would assume that if contracts resulted in southern movements that the same issues would occur with the gravel areas south of the entrance.

### **Empty trucks heading to the quarry.**

On the day of observation, trucks south bound back to the quarry were observed to be grouped into the following three categories.

- Trucks that had either no covers, or covers were already drawn back into storage. These trucks entered the quarry intimately.
- The second group were trucks that had their covers extended over the truck and trailer units. Most of these trucks pulled off into the northern gravel bay. Got out of their trucks and removed the covers, then re-entered the road and entered the quarry. In undertaking this, significant dust clouds were created when the trucks both exited the road, and then started to move again and re-entered the road.
- The third category was a minority which was trucks with extended covers directly entering the quarry without removal of the covers.

This screen shot shows the south bound gravel area where the trucks were pulling off.





An example of a truck pulled off the road, onto the gravel area to remove its cover is shown below. Also note another truck parked up on gravel on the other side of the road. This will be discussed later. Also obvious is the change in colour of the road surface due to dust. The quarry traffic has transported enough dust to cause a major colour difference



Another example is shown over the page. In this case there are four trucks parked up on the southern direction pull off area. Also there are two trucks in the northern direction pull off area.

**Four truck pulled onto gravel to remove covers**



**Two full truck parked up on gravel area**

Of the observed 19 truck entries from the northern direction approximately 50% entered the quarry with covers off. 30% stopped in the gravel to remove their covers and 15% entered the quarry with covers still extended. (note the reason these only sum to 95% is due to rounding).

Given that approximately 233 trucks enter the quarry daily<sup>1</sup> if the above numbers are representative of all truck movements this is appropriately 70 trucks a day creating dust clouds by using this gravel pull off area.

Now I attempted to obtain photos of the dust being created, and due to poor photographic technique and not willing to risk life and limb by standing in the middle of the road where the best shots were likely to be obtained, the photographs did not compare to what was visible with the naked eye. Thus no photos of dust clouds are included. However visiting the sight it quickly becomes obvious the volume of dust being created by these truck movements. And the volume being tracked up onto the road where other road users will transport it further afield.

<sup>1</sup> PROPOSED MANAGED FILL 300 RIVERVIEW ROAD, HUNTLY ASSESSMENT OF NOISE EFFECTS Report No 19069/2. Hegley Acoustics 2019.

### Full trucks exiting the quarry

Of the 11 trucks observed exiting the quarry over an approximate half hour period, 64% stopped into the gravel area outside the quarry gate, and only 36% went directly onto the sealed surface.

The unsealed gravel area outside the quarry gates is shown in the screen shot below.



It was observed that truckers used the area outside the gate as time to do various tasks. Such as filling in paperwork, making photo calls, cleaning rocks and loading debris from the canvas or other truck parts, talking to one another and walking back into the quarry compound.

Thus it appears that there is no parking on the quarry site where these important functions can be undertaken. An example of the trucks lined up in this area is shown below. This photo shows three trucks parked up, a fourth was also present at this time but is not in the photograph.



It was noted that a water truck was spraying water over the quarry roadways during time spent observing the quarry entrance. A photo of this is shown below. It was noted that the truck came up from the back of the quarry, through the front road ways before heading back into the quarry. Thus clearly the water truck does not come out of the quarry and apply water to the pull off areas next to the road that are being used as part of the quarry operation



So it can be **concluded that:**

- a) Pull of bays outside the quarry boundaries are being used for quarry activities
- b) These activities create significant volumes of dust
- c) That no dust minimization takes place at these locations outside the quarry

Thus the two obvious solutions are:

- a) That the quarry stop using land outside their ownership for quarry operations or
- b) Dust minimization activities (aka water tanker used) take place at these locations outside of the quarry.

Now in principle a business should pay for the services they receive, and as such using community (aka council) owned land to undertake a business, especially one that has negative effects on the community, shouldn't be occurring. Thus the preference has to be that Gleeson and Cox stop using councils lands for their business operations. Thus moving all business operations into the quarry and using the dust minimization measures required inside the quarry boundary to reduce dust.

However it is also acknowledged that in the daily practicalities that sometimes the ideal, principled option isn't always the most appropriate. Thus we would leave it up to the council to decide which of these two steps is the most appropriate in this situation. And would request that the outcome be communicated back to the community board so the public can be made aware of this outcome.

## Memo

**To: Waikato Regional Council**

**Re: Dust associated with Gleeson and Cox (G & C) quarry and trucking**

From: David Whyte, Chairperson Huntly Community Board

Date: 12<sup>th</sup> May 2022

Hi compliance team

There is a problem with dust generation that is impacting residents in Huntly along Riverview Road.



Photograph taken 21<sup>st</sup> December 2021 by local resident from Hakarimata road looking towards quarry and Riverview road. Huntly residents are just to the right out of frame. The quarry is located out of site, over the ridge with yellow arrow.

The dust issue is ongoing and the following stories illustrate the problem is significant and impacting peoples health.

- Local public health nurse stood up at a public meeting to tell her experience after the first lock down in 2020. She said her clients in the Riverview road area all have significant health improvements over lockdown, whereas clients in other parts of town did not. And when lockdown ended her Riverview road area clients health then deteriorated back to ‘normal’ again. The only conclusion she could come to was that the dust generated by the operation was causing worsening of the clients health
- In 2022 the WDC councillor who lives in this area, their spouse was showing covid symptoms. Upon calling to the doctor and finding their address, was told that it was unlikely to be covid as folks in that area regular have these symptoms and it is not covid. Again pointing to health impacts from the dust.
- Huntly Community Board members younger / school aged grandchildren moved into Riverview Road . Since then they have had consistent respiratory and health problems that they didn’t have previously.

- Multiple verbal complaints made to many board members about the volume of dust being produced, causing build up inside homes, on vehicles etc.

Gleeson and Cox (G & C) run a quarry operation on Riverview road. This quarry operation supports a significant number of G & C daily truck movements. At the time of writing the G & C fleet is ~120 truck and trailer units which are based in Auckland and use the Huntly quarry as a source of aggregate for their contracts. The quarry is also open for other contracting companies which make good use of the available resource.

The dust could be coming directly from the quarry operations. There are some in town who believe this is the case since the earthworks at the quarry have altered the airflows. Thus increasing the velocity of the wind around the operation, and thus increasing the dust the wind picks up. Apparently when the wind is blowing from a more southerly direction one can see it pick up dust as it goes over the quarry operation. This definitely requires investigation.

The other source of dust is the roadway. From personal observation, and from photographs like the one at the start of this memo it would be my suggestion as the source of the dust and dust generation into the air is from the road surface and truck movements themselves. I would point to the following as evidence of this:

- *Dust generated when trucks park on entering and exiting the quarry.* Direct observation of quarry operations on 29<sup>th</sup> October 2020 showed the dust was being generated when G & C trucks parked on the gravel pull of areas next to the road. The large gravel areas were in constant use with trucks parking both before entering and after exiting the quarry. These areas had not dust mitigation measured and generated a plume of dust with every truck movement. One of these areas has since been sealed, but due to the volume of truck movements transporting material out of the quarry onto the sealed area the impact of the sealing on the overall dust generation is now minimal.
- *Tracking of dust down the road.* When one travels down Riverview road, depending on how long since the last heavy rain that has moved material off the road, there is clear dust / dirt on the road for km's in either direction of the quarry. Every time a heavy vehicle moved over this material, if the material is dry then a dust cloud forms behind the truck. Before the new truck wash was installed these could be seen 8km from the quarry! I have not measured the length of visible trails since the new truck wash has gone in. It is clearly less, but is still km's long. Hence showing significant volumes of material are being tracked out of the quarry and into the local road network.
- *Number of heavy vehicle movements.* The number of truck movements in early 2020 were ~ 230<sup>1</sup> truck entrances a day. Thus truck movements in and out of the quarry was ~450 per day. Plus whatever other heavy vehicles may use this road eg farm traffic. I am unaware of the current bias between southbound and northbound traffic, but the overwhelming number of truck movements are north. A truck and trailer unit generates a large amount of air movement as it passes through the air. Observation shows that the trucks moving down the road generate a plume of dust behind them from the dust on the road. So hence truck and trailer units can generate dust km's from the quarry operation.
- *Other indicators.* Once rains, the volume of 'slush' appearing on road cones and next to road. When it rains after a period of dry the dust and material on the road goes to slush. This is then sprayed up and covers whatever is next to the road. When the road was recently lined with traffic cones these were quickly turned grey with slush after wet weather. Indicating that significant volumes of dust material was being transported down Riverview road.

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1 PROPOSED MANAGED FILL 300 RIVERVIEW ROAD, HUNTLY ASSESSMENT OF NOISE EFFECTS Report No 19069/2. Hegley Acoustics 2019.

Would acknowledge that G & C have worked to address dust issues. For example upgrading of truck wash system, which has reduced the flow of material out onto the roadway. Also they have worked with WDC to seal and area of gravel outside of their gate where truck regularly park. Thus reducing dust generation from this source (but not eliminating it). I am sure they would implement dust mitigation methods if instructed eg washing down public road / keeping road damp or whatever else their consultants suggest.

What I am requesting is:

- A review of the on sight dust monitoring stations.
  1. Making sure that the data they are producing is accurate (ie system calibrated correctly).
  2. Data they have produced is within the limits set in the consents.
  3. The physical locations of these be reviewed to make sure they are in the right positions to capture the dust migrating off the quarry operations onto the township. Eg that the are between the residents of Riverview road and the major sources of dust.
- Measurement of dust roadside.
  1. That an accurate measurement of dust levels generated by quarry traffic is obtained.
  2. Preferable at multiple points along Riverview Road.
  3. And if these are found to be unacceptably high that a mitigation plan is put in place by G & C. And that monitoring of roadside dust is ongoing to make sure mitigation is working.

Please communicate back to me the results of the above investigations so that the board can have confidence that proper diligence is being undertaken.

Sincerely

David Whyte



# Erionite in Auckland bedrock and malignant mesothelioma: an emerging public and occupational health hazard?

Martin S Brook, Philippa M Black, Jennifer Salmond, Kim N Dirks, Terri-Ann Berry, Gregor Steinhorn

## ABSTRACT

Overseas, emerging research has shown that where erionite is present in bedrock as a zeolite, and then subsequently disturbed and blown into the atmosphere, resulting exposure is associated with health effects similar to those caused by asbestos, including malignant mesothelioma (MM). Erionite-induced MM is thought to be particularly prevalent in the construction and quarrying industries, in regions where rock containing erionite is disturbed. In 2015, the then Government Chief Scientist, Sir Peter Gluckman, reported that erionite was a more potent carcinogen than asbestos, and more recent studies have established its presence in the Auckland Region. However, globally at present, there are no established occupational exposure limits for erionite, standard sampling and analytical methods or exposure mitigation guidelines. Given the many major construction projects being carried out in Auckland at the present time, which involve the removal of large quantities of bedrock containing erionite, an assessment of the health risks such activities pose to the public is needed.

Asbestos-induced malignant mesothelioma (MM) is of worldwide concern but particularly in New Zealand.<sup>1,2</sup> The highest mesothelioma incidence is in the construction and building trades.<sup>2</sup> In addition, non-occupational asbestos induced MM for both men and women is of increasing concern.<sup>1</sup> Studies<sup>1</sup> report that New Zealand is one of a number of high-income countries with elevated incidence of MM (2.6 per 100,000), and that this is a direct result of exposure to airborne asbestos fibres in occupational settings. Indeed, recent reports have highlighted some tragic outcomes of the asbestos disease epidemic here.<sup>3</sup> These include cases of how MM was apparently a consequence of exposure to asbestos in the home, following transfer of the asbestos fibres from the workplace. This was thought to have occurred on the hair and clothes of occupationally-exposed family members.<sup>3</sup>

## Erionite and malignant mesothelioma (MM)

Erionite is a naturally occurring fibrous zeolite mineral, first described by Eakle.<sup>4</sup> Erionite is produced in silica-rich volcanic eruptions, and is then later dissolved by water and recrystallized as zeolites, often in sedimentary rocks.<sup>5</sup> When aerosolised and inhaled, erionite fibres have been associated with health effects similar to those typically seen with exposure to asbestos, such as malignant mesothelioma (MM).<sup>6</sup> Several studies have reported how erionite was found to be the causative agent for the mesothelioma epidemic in the Cappadocia region of Turkey, where there is an extremely high level of mortality (800 cases/100,000 population) from exposure to erionite in rock used to build houses.<sup>2</sup> Most of the affected population had been exposed to erionite

by inhalation since childhood, resulting in up to 50% of all deaths in three villages.<sup>7,8</sup> Many of the affected people later migrated to Germany and Sweden, and cases of MM caused by erionite were also identified in those Turkish immigrants.<sup>8</sup> Genetic susceptibility was also thought to be a possible factor in determining the susceptibility of the population to MM, specifically the pathogenic role of BAP1 mutations resulting in mesothelioma, and in other cancers globally, as well as in Cappadocia specifically.<sup>9</sup> The prevalence of the BAP1 gene in the global population and its more recent link to other cancers globally, along with studies linking MM to erionite exposure in countries other than Turkey (including the US and Mexico), suggest that the results from Cappadocia may not be accounted for entirely by local conditions or be atypical at global scales.<sup>9</sup>

In the US, the carcinogenic properties of erionite have recently sparked interest in erionite as an occupational and public health hazard, particularly in areas where erionite is found in regional bedrock or sediments. However, data concerning health outcomes there are equivocal. A study of North Dakota quarry and road workers reported only a few cases of pleural changes.<sup>10</sup> Notwithstanding that study, although the long-term health impacts remain uncertain, there is concern about inhalation of airborne dust and particulates containing erionite fibres from gravel pits, quarries, roads, building and construction sites.<sup>10</sup> Thus, erionite is now classified by the International Agency for Research on Cancer (IARC) as a Group 1 carcinogen (ie, carcinogenic to humans).<sup>11</sup> The potency of erionite as a human carcinogen appears to be higher than that of asbestos, particularly for the development of MM.<sup>2</sup> However, in contrast to asbestos, erionite mineral fibres do not have established occupational exposure limits (OELs).<sup>6</sup>

Despite the establishment of OELs for asbestos, controversy remains as to whether short intense exposure to asbestos is particularly harmful since it is complicated by non-linear dose concentration-duration-risk relationships.<sup>12</sup> There is also uncertainty as to how asbestos dose-response may relate to erionite dose-response for a number of reasons.<sup>13</sup> Epidemiological data alone typically lack accurate fibre counts (for erionite or asbestos exposure) and are

inconclusive about risks at specific concentrations.<sup>12</sup> Fibres also vary in toxicity due to morphology and chemical characteristics (composition, surface reactivity, biopersistance etc).<sup>14</sup> There even exists considerable heterogeneity in the responses of cells within the same local volume of tissue,<sup>12</sup> and in vitro techniques do not provide accurate estimates of biologically-effective doses (eg, the numbers of fibres accumulated in mesothelial tissue over time).<sup>12</sup> Nevertheless, exposure concentration does appear to part-control the latency interval between first exposure to asbestos or erionite and the development of MM. Indeed, workers in trades with higher levels of exposure (eg, naval personnel removing asbestos from warships; builders; extractive industry workers), may experience shorter latencies compared to those exposed to lower amounts of asbestos.<sup>13</sup> Age at first exposure also appears to be important.<sup>9</sup> Indeed, once a sufficient amount of asbestos or erionite has been inhaled, such as by a six-year-old child growing up in a village or suburb contaminated with erionite, they will develop MM, which suggests that additional exposure(s) may not significantly increase the risk.<sup>13</sup> However, the threshold above which asbestos and erionite will cause MM, varies among individuals due to genetics, exposure to co-factors, the exact characteristics of the mineral fibre inhaled, etc.<sup>13,14</sup>

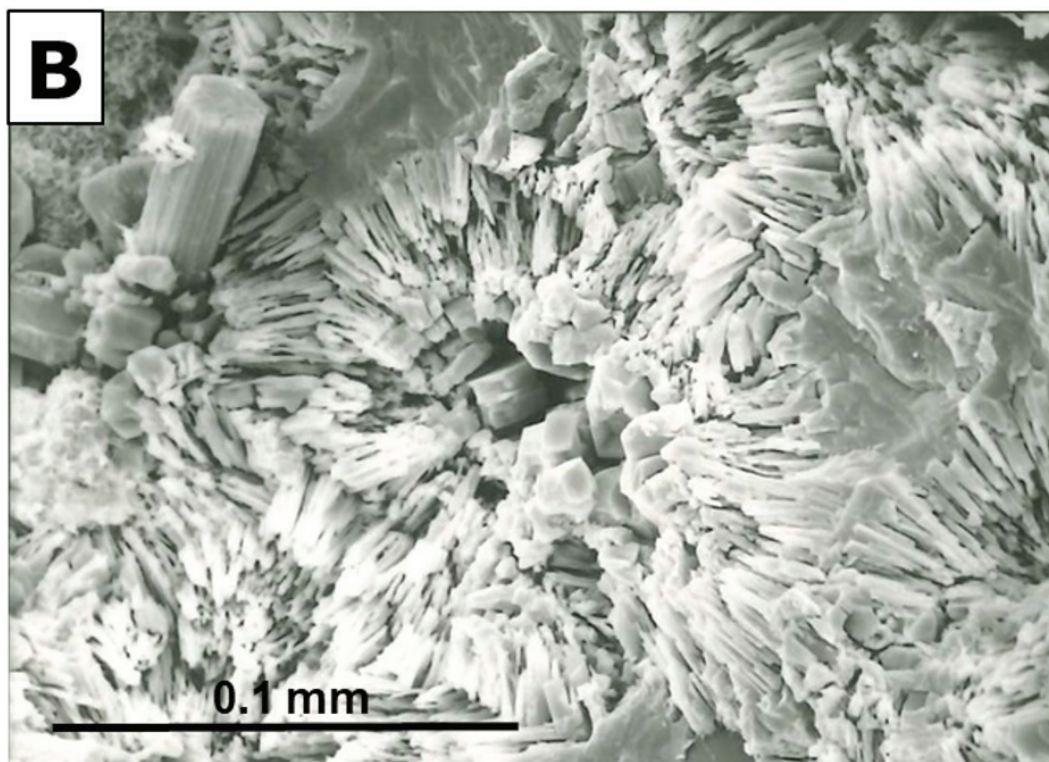
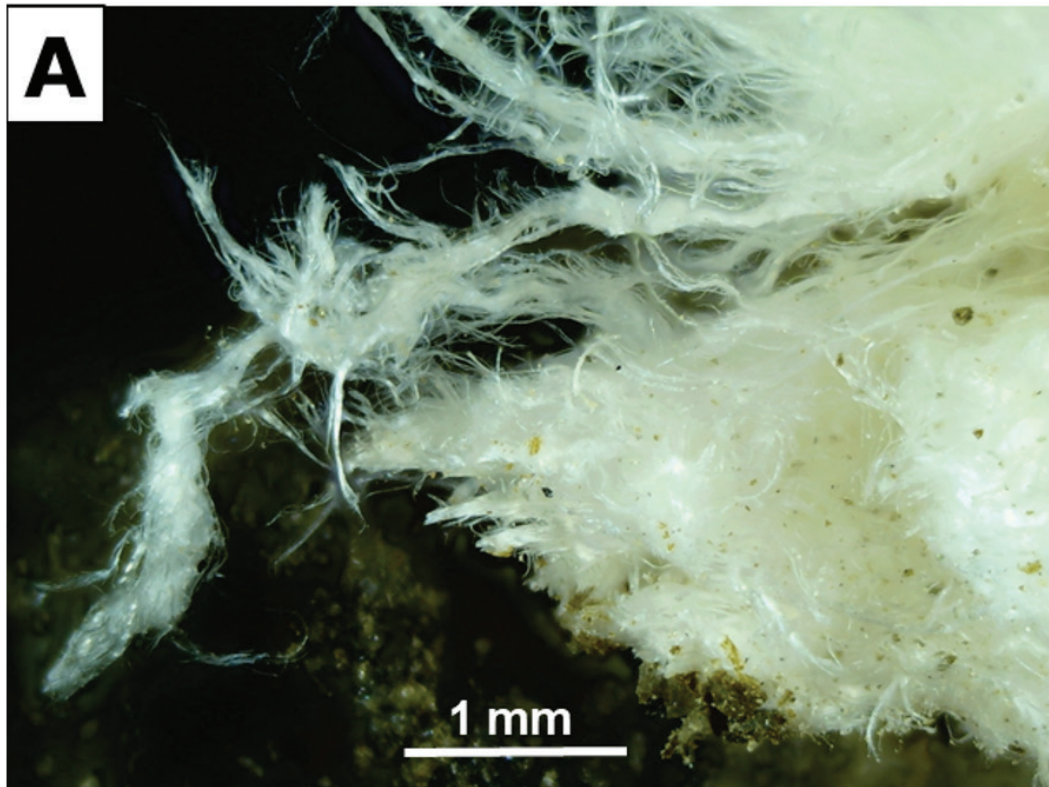
### Erionite in Auckland

Despite this emerging body of work overseas on causative links between erionite exposure and MM, any effects of erionite on MM in New Zealand have hitherto not been established.<sup>2</sup> This is despite erionite being present, for example, in the Waitemata Group sedimentary rocks and the Waitakere Group volcanic rocks that are present throughout much of the Auckland region (Figure 1).<sup>15</sup> In a report on asbestos exposure in New Zealand by the Chief Science Advisor<sup>2</sup> in 2015, it was mentioned (on page 11) that while most cases of MM are associated with asbestos exposure, erionite is also a risk factor. They then accurately stated that erionite is present in some volcanic ash deposits in New Zealand, but, since the report focused on asbestos, did not further note that erionite is also present in sedimentary rocks such as those underlying

New Zealand's most populous, and fastest-growing region, Auckland. Indeed in the Auckland region, the presence of erionite has been reported by geologists in several studies over the last five decades.<sup>15,16</sup> It is present within the Early Miocene Waitemata Group sediments in association with highly

altered andesitic clastic material.<sup>15</sup> These are the sedimentary rock formations, for example, that outcrop as sea cliffs along Auckland's North Shore, the eastern bays, and along Tamaki Drive. Thus, erionite is present and exposed in many locations across the Auckland region.

**Figure 1:** (A) Example of "woolly" erionite in Waitakere Group rock from Te Henga Road Quarry, Waitakere Ranges (Rod Martin); (B) Scanning Electron Microscopy (SEM) image of crystalline erionite (hexagonal crystal and acicular habit) from the Waitemata Group, Hobsonville (sample AU42046).



Over the last decade, Auckland's population growth has led to large transport infrastructure projects such as the Waterview Tunnel and the City Rail Link (CRL), as well as excavations in the city for high-rise building foundations. Most of these excavations are into Waitemata Group rock, and the material is usually loaded onto trucks, transported by road and dumped as fill or in former quarries.<sup>17,18</sup> For example, the Waterview Tunnel project saw two twin tunnels driven mainly through weathered and unweathered Waitemata Group sedimentary rock. The approx. 800,000m<sup>3</sup> of spoil (enough to fill 320 Olympic-sized swimming pools) that was excavated from the tunnels was transferred via a conveyor belt to the on-site storage facility. From there, the spoil was trucked to, and filled, the disused Wiri Quarry in Manukau, south Auckland.<sup>20</sup> The current CRL project in Auckland CBD involves tunnelling mainly through Waitemata Group sandstones and siltstone, and the removal of two million tonnes of spoil. Given the scale of these,<sup>21</sup> and other earthworks in the Auckland region and the current uncertainty regarding the precise location and quantity of erionite in the rocks and soils, there is the potential for significant exposure of some of Auckland's population to erionite-bearing rock dust if appropriate dust management strategies are not carefully implemented. The extent of this risk needs urgently quantifying as there are likely to be significant differences in exposure risks between ground engineering workers in Auckland, and areas of Turkey where houses were constructed with erionite-bearing sandstone blocks, as demonstrated by studies in the US.<sup>10</sup>

## Concluding remarks

A recent report<sup>1</sup> claimed that the elevated incidence of malignant mesothelioma in New Zealand is a direct result of exposure to airborne asbestos fibres in occupational settings. There is usually a long latency period (20–40 years) for MM between exposure and diagnosis.<sup>22</sup> Importation and use of crude (raw) asbestos in New Zealand peaked in 1974,<sup>1</sup> yet cases of MM have increased almost exponentially since 1974 and remain high.<sup>2</sup> Some MM cases have been attributed not to direct occupational exposure to asbestos, but from the transfer of asbestos from the workplace to the home. Notwithstanding this, the potential effects of exposure through handling, use and disposal of erionite-bearing rock in both occupational and non-occupational settings in New Zealand remain unknown. The Auckland region is growing rapidly, including excavations for residential, infrastructure and transport works. The corollary is that the effects of airborne erionite need to be established. Indeed, further research on the source occurrence, and airborne transport of erionite would be advantageous, as well as epidemiological research to improve understanding of the extent of exposure to erionite in the population and who is most at risk. This could include developing testing regimes and occupational exposure limits, and then appropriate management of erionite exposure within a hierarchy of controls. Finally, if prediction of future peak MM incidence is based primarily on asbestos exposure and ignores exposure to erionite, then this could be painting an inaccurate picture of the likely future MM trends in the community.

**Competing interests:**

Nil.

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[www.nzma.org.nz/journal-articles/erionite-in-auckland-bedrock-and-malignant-mesothelioma-an-emerging-public-and-occupational-health-hazard](http://www.nzma.org.nz/journal-articles/erionite-in-auckland-bedrock-and-malignant-mesothelioma-an-emerging-public-and-occupational-health-hazard)

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<b>To</b>	<b>Huntly Community Board</b>
<b>Report title</b>	<b>Chairperson’s Report</b>
Date:	Wednesday, 31 August 2022
Report Author:	David Whyte, Huntly Community Board

### **1. Purpose of the report** **Te Take moo te puurongo**

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The Chairperson’s report is attached for the Board’s information.

### **2. Staff recommendations** **Tuutohu-aa-kaimahi**

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**THAT the Chairperson’s report be received.**

### **3. Attachments** **Ngaa taapirihanga**

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Attachment 1 – Chairperson’s Report

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## HCB chair report August 2022

By David Whyte

Thanks to all board members over the last 3 years. Although at times it feels like we have exerted a lot of energy for not huge outcome, Huntly is a better place than it was three years ago. Specifically would like to thank in no particular order:

- Eden for taking ownership of the town signs and having high community engagement. They look brilliant and bring a smile to my face every time I drive past and notice. Also for organising the daffodil planting and the ones at the lake look fantastic
- Greg for working on street lights both bulbs broken and systems broken. Seems to be 'whack a mole' with one area sorted only to have another fail. Great to have someone take charge of a regularly community complains
- Kim for working on waste, it has taken many meetings and reports and it seems these have paid off with full waste recovery centre starting to take shape. Well done on working with extreme waste and the council staff on this
- Red, for being the 'bad cop'. For saying it like it is, and expressing the communities frustrations with the councils lack of service. The forthright nature of the communication has been insightful
- Cr Lynch. Big thank you for all the reading you do, the meetings you attend and the informed reports you give to the board. Your wisdom and guidance both personally and to the group has been helpful and worthwhile. Thank you for your efforts to make sure the recycling operation was located in an appropriate place will have great benefit to the community!

Things achieved this month:

- G & C report as attached in the agenda. Thanks for all who gave feedback, encouragement and help along the way. Also thanks to those who attended the workshop on making effective submissions, we had approx 32 people which filled up all the seats except for 1.
- General stuff of following up service requests, raising service requests, and removing tagging
- Letters of support written, as attached, for local organisations
- Worked with folk who get flooded when the river level rises, flows back up into lake Hakanoa and up the stormwater system into their front yard in Rayner Rd. The video of the backflow is very impressive and is high volume. Hopeful for a positive outcome as initial response although timely was there wasn't a problem.....
- Verbal submission to WRC transport plan, correcting error in wording of submission.
- Worked on mural for the Huntly Islamic Centre in Bridge Street. I did write and get funding for paint costs etc. and had an artist lined up. But due to changes in their situation they were unable to do a mural. So working with Huntly Arts came up with ideas, created a stencil and worked to transform this area. It looks really good and will be coated with anti-tagging coating by WDC (TBC). The star is an Islamic Star made by two squares, and has religious significance. The colors were chosen as they reflect the traditional colors used in Islamic art. Public and members of the centres response has been positive. Like to thank Creative Waikato for funding, Huntly Arts / Evelyn for encouragement and Tiffany Whyte for lots of work put in!





- Cleaning of the great south road gutters. This was a massive safety issue as every time it rained large puddle was created and forced drivers to go in the left turning lane. WDC stated they would sort out once the puddle dried up. After multiple periods of dry weather still not sorted. So with major rain forecast and large puddle already present decided that the H & S personal risk to myself was less than the risk to the community. So I found grates, cleaned and cleaned out some of the gutter. Thus solving the problem. Google maps – street view allowed pin pointing of the grates which was essential to solving the issue.



Submission made to burials pre-consultation as per discussion held last meeting:

#### Eco burials

We support the concept of eco burials, where there are less toxic materials used, and faster decomposition. However we are concerned about the tree planting concept. This is because trees require ongoing maintenance, if planted to close together like would occur at one per grave they would be spindly and unhealthy as they wouldn't have the required space and lastly and most importantly they tend to blow over in wind. This would result in the bones of folk being pulled up out of the ground as the tree removed the soil with its roots. So eco burials without trees definitely.

#### Dogs in cemeteries

This is a balance between the needs of the one vs the needs of the many. We understand that recently deceased folk who owned a dog, that relatives may want to take to visit the grave. And that those with loved ones in the cemetery may also want to take their dog to visit the grave sites. So hence on one hand dogs in cemeteries may be desired.

However on the other hand the wider impacts need to be considered. Firstly the reality that dogs allowed on lead means that some dogs will be not on lead. This is the reality across Huntly in areas were dogs are allowed on lead. This results in things like seen recently at the Huntly Lawn Cemetery dog chasing digging up a rabbit hole next to a grave. Thus potentially damaging the gravesite. Another important issue is that more elderly visit cemeteries. This is logical as we age more of our loved ones end up passing away. Elderly need to feel safe and protected in cemeteries. Elderly are also less physically able, so dogs which can be at times aggressive, jumpy, move quickly, be large and have significant momentum etc. are high risk for elderly folk. Therefore dog would be a risk both physically and physiologically to the folk who are most likely to visit. Lastly there is the issue about 'feral dogs'. The reason that dogs are banned from the mainstreet in Huntly is not because of the well behaved and looked after dogs, but because of the unfortunate reality that there would also be anti-social dogs. So to allow the good dogs, would also allow the anti-social ones.

Therefore on the balance of the great good dogs should not be allowed in cemeteries.



**To:** Huntly Museum  
**From:** Huntly Community Board  
**Date:** 10<sup>th</sup> August 2022  
**Re:** Letter of support for funding

The Huntly Community Board is very pleased to support the Huntly Museum in its request for the Better Off Fund. Knowing where we come from is really important in laying a foundation for going forward in the future. And it is said that a disconnect from our past results in many of the social ills that Huntly struggles with.

It is our understanding that this funding is for the 'fit out' of the museum. This is very exciting as Huntly has been without a museum space for a significant length of time. And the new space is in an ideal location in the centre of town, and placed next to the rail yards which is a fantastic in context location as the history of Huntly wouldn't have been possible without the rail system since coal and rail and inextricably linked.

However our history is more than just coal. For example Huntly brick was a long standing important industry operation. However as new folk move into town driven by economic reasons out of the larger cities, they lack the local knowledge of what used to be considered 'common knowledge'. So being able to communicate these stories to the new generate and new residents is really important to keep our understanding of our town in good health.

The passing of our heritage onto our children and grandchild is a delicate dance. Since kids are absorbed in the new, exciting and technologically engaging online spaces. Therefore any museum also needs to be looking good and have a modern feel to it. We are really pleased that this fit out will enable the museum to be attracting to the next generation and impart our history to them.

Since museums store precious irreplaceable taonga, it is really important that it is displayed appropriately. That is safely and securely so folks can engage and at the same time the item doesn't degrade. Anyone who has had a loved piece of art, furniture or other item fad due to sunlight damage will understand how this degradation can occur slowly over time. Hence the appropriate lighting, display cases etc is both a fundamental necessity which is also costly.

So in conclusion we hope that Huntly Museum is successful in their application and look forward to our past guiding our way as Huntly moves on from an industrial past to a new future.

Sincerely

David Whyte  
Huntly Community Board Chair  
027 558 4448



**To:** Friendship house  
**From:** Huntly Community Board  
**Date:** 10<sup>th</sup> August 2022  
**Re:** Letter of support for having a 'home' for arts

Art is a highly beneficial activity. For example just in the mental health space undertaking art has highly therapeutic value. Reducing stress level, releasing pleasure hormones, increasing brain placidity and encourages problem solving. Therefore in towns like Huntly which have a multitude of problems encouraging art creating is a very wise and worthwhile activity.

It is very exciting to hear that Huntly Art's has the possibility of having their own space and home. This will be a big benefit to the art's in Huntly and is like the difference between renting and owning ones home. At the moment the folks involved in the art space are doing an amazing job of running courses without anywhere to call home, and as a result stashing gear and equipment where ever they can find it, including some very strange and unusual locations.

Hence having their own space will have a number of benefits, not the least is the ability to have everything in one place, easily accessible and clearly organised. Anyone who has worked out of a car, or temporary desk / location knows what a relief it is when one gets a dedicated space where things can be modified to suit the requirements, and things can be sorted and stored in an optimal way.

The old Scout hall is an excellent location. There are many things going for it, including the setting. Set in a reserve, close to the lake, old trees, birds etc. This peaceful landscape connecting with nature is going to be a blessing as it gives people the ability to switch off and out of busy mode, and into creative mode.

It is also a large space which is required for art activities, has things like a non carpet floor, storage facilities etc. So benches can be set out, and students have space to do there thing. Also a non carpet floor make clean up so much easier and allows for activities that in carpeted areas cannot be done. Having rooms where things can be organised and stored allows for far more efficient running of workshops etc. And more importantly allows others to see where things are, and have ownership of them. Thus this raises up leaders who can help and creates a team that can support the arts in Huntly.

Lastly I am not aware of any other well organised, highly beneficial organisations with high community engagement and impacting a large diverse number of Huntly folk, that that could effectively utilize this space. Therefore we would strongly encourage the council to lease Huntly Art's this old scout hall as it seems the ideal location for Huntly Art's and will have a positive flow on effect into the community.

Sincerely

David Whyte  
Chair of Huntly Community Board  
027 558 4448