



**HEGLEY
ACOUSTIC
CONSULTANTS**

1/355 Manukau Road
Epsom, Auckland 1023
PO Box 26283
Epsom, Auckland 1344

T: 09 638 8414
E: hegley@acoustics.co.nz

PROPOSED MANAGED FILL

300 RIVERVIEW ROAD, HUNTLY

ASSESSMENT OF NOISE EFFECTS

Report No 19069/2

Prepared for:

*Paua Planning Ltd
Auckland
10 September 2019*

Prepared by:

Nevil Hegley

CONTENTS

1.	INTRODUCTION	3
2.	DESIGN CRITERIA	4
3.	EXISTING NOISE ENVIRONMENT	7
4.	THE PROPOSAL	8
5.	PREDICTED NOISE LEVELS	10
6.	TRAFFIC NOISE.....	16
7.	CONCLUSIONS	16

1. INTRODUCTION

Gleeson and Cox Ltd own and operate the Huntly Quarry located at 300 Riverview Road, Huntly as shown on Figure 1. Initially there were 5 areas identified for the fill activity, however fill site 1 was discarded. Areas 3 and 5 are to be filled concurrently as area 5 is restricted to the disposal of overburden only and once these sites are filled areas 2 then area 4 will commence operation



Figure 1. Proposed Managed Fill, 300 Riverview Road

The hours of operation of the managed fill will be 5am - 8pm Monday – Friday plus 5am – 3pm on Saturday from 1 October - 30 April and 5am - 6pm Monday – Friday plus 5am - 3pm Saturday from 1 May – 30 September. There is no work proposed on Sundays and public holidays.

This report assesses the noise on a busy day from the managed fill operating at 300,000m³ of fill per annum.

2. DESIGN CRITERIA

As shown on Figure 2 the site is located in a Rural Zone in the Operative Waikato District Plan with an Aggregate Extraction Policy Area overlay for the southern part of the Fill 2 and all of the Fill 3 area as shown on Figure 2.

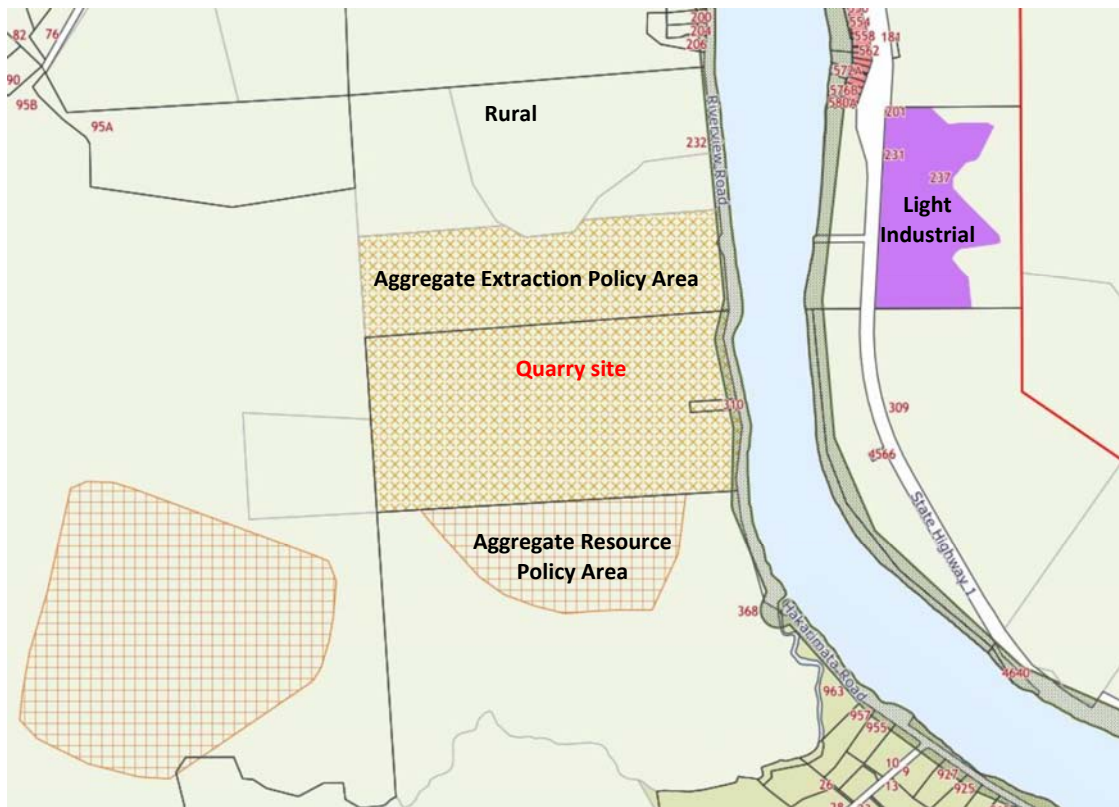


Figure 2. Managed Fill Zoning, Operative District Plan

The Aggregate Extraction Policy Area relates to an operating extractive industry and while the overburden aspect of the proposed fill relates to the operating extractive industry the imported fill does not so the rural zone noise rules would apply to the site.

Rule 25.17 of the Operative District Plan sets the following noise limits for a permitted activity in a rural zone.

Any activity is a permitted activity if it is designed and conducted so that noise from the activity measured at any other site does not exceed:

- (a) 50dBA (L_{10}), 7am to 7 pm any day, and
- (b) 45dBA (L_{10}), 7pm to 10pm any day, and
- (c) 40dBA (L_{10}), and 65dBA (L_{max}) at all other times.

Noise is defined in the Operative District Plan as:

Means noise levels as measured in accordance with NZS6801:1999 Acoustics Measurement of Environmental Sound and assessed in accordance with NZS6802:1991 Assessment of Environmental Sound. Noise from vehicles being operated on a road shall not be controlled using rules in this plan, except where specifically provided for.

In the Proposed Waikato District Plan the site is similarly located in a Rural Zone with the southern part of the Fill 2 and all of the Fill 3 within the Aggregate Extraction Area Overlay Area as shown on Figure 3.

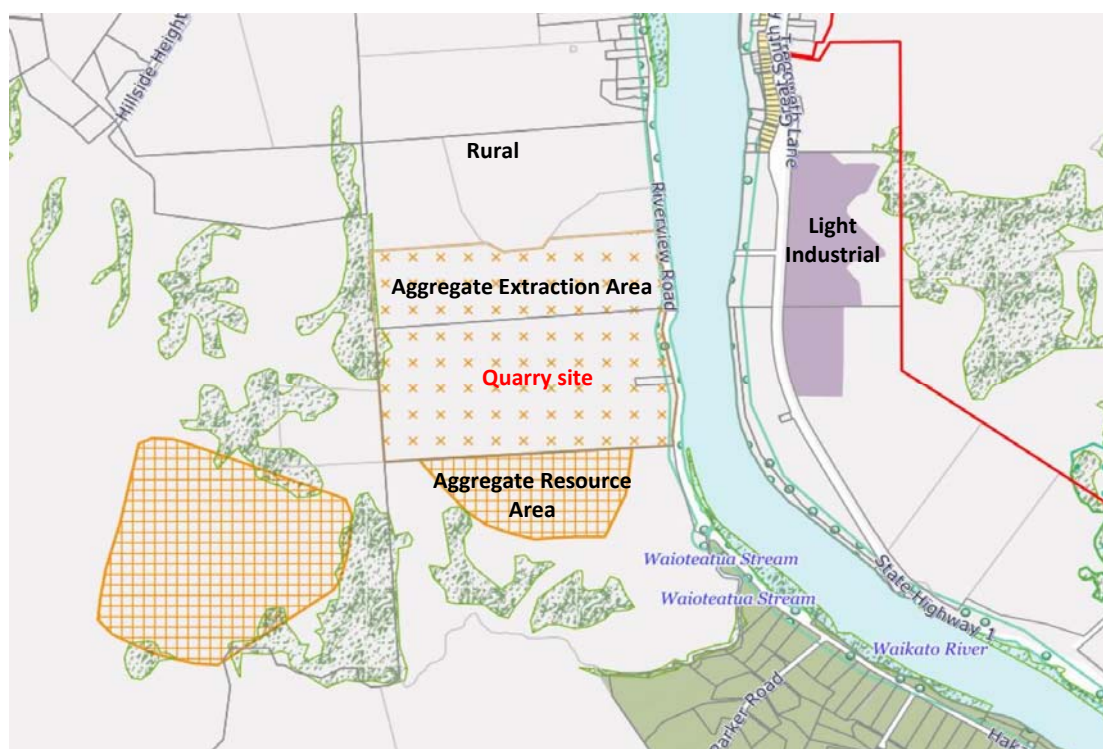


Figure 3. Managed Fill Zoning, Proposed District Plan

The noise limits for an extractive industry have been omitted from the Proposed District Plan at this point, although this is subject to a submission, so the noise limits default to the requirements for the rural zone, which are set out in Rule 22.2.1.1 at:

- P2 (a) *Noise measured at the notional boundary on any other site in the Rural Zone must not exceed:*
- (i) *50dB (L_{Aeq}), 7am to 7pm every day;*
 - (ii) *45dB (L_{Aeq}), 7pm to 10pm every day;*
 - (iii) *40dB (L_{Aeq}) and 65dB (L_{Amax}), 10pm to 7am the following day.*
- P3 (a) *Noise measured within any site in any zone, other than the Rural Zone, must meet the permitted noise levels for that zone.*
- P4 (a) *Noise levels must be measured in accordance with the requirements of New Zealand Standard NZS 6801:2008 Acoustics - Measurement of Environmental Sound.*
- (b) *Noise levels must be assessed in accordance with the requirements of New Zealand Standard NZS 6802:2008 Acoustic - Environmental noise.*

The Proposed District Plan is subject to appeal so carries less weight at this point although the limits specified in the rural zone are the same except the L_{10} has been changed to L_{Aeq} and the 1991 Standards are to be updated to the 2008 version of the Standards. However, it is proposed to adopt the noise requirements of the Operative District Plan for this noise assessment

3. EXISTING NOISE ENVIRONMENT

The existing noise environment has been measured from Tuesday 30 July – Saturday 3 August 2019 at two sites that represent the locations where the maximum noise exposure to the proposed managed fill will occur for any residents. The first site was in Hillside Heights Road and the second in Riverview Road as shown on Figure 1. The weather during the monitoring period was fine and calm initially with gusty conditions later in the week with passing showers.

Figure 4 shows the noise level as measured opposite 70 Hillside Heights Road (Measurement 1 on Figure 1)

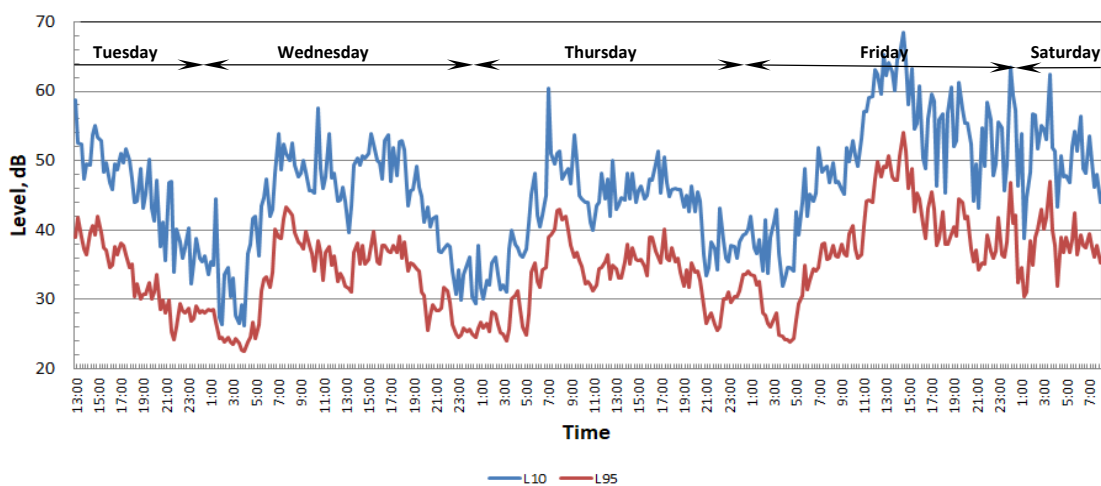


Figure 4. Measured noise opposite 70 Hillside Heights Road

Figure 5 shows the noise level as measured opposite 206 Riverview Road (Measurement 2 on Figure 1)

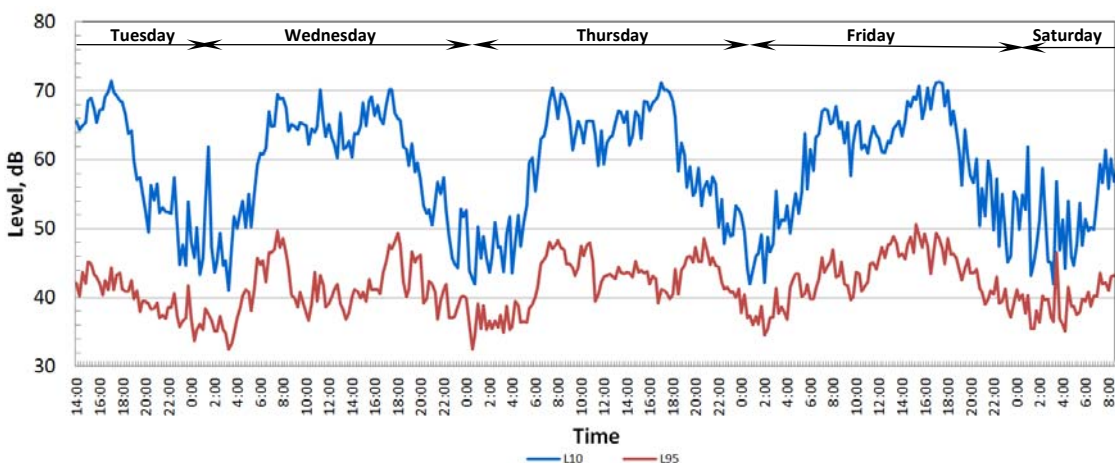


Figure 5. Measured noise opposite 206 Riverview Road

4. THE PROPOSAL

It is proposed to develop four separate managed fill areas as shown on Figure 1 to take both the quarry overburden (only to fill area 5) and imported fill material from other sites. The hours of operation of the managed fill (subject to complying with the relevant noise limits) will be 5am - 8pm Monday – Friday plus 5am – 3pm on Saturday from 1 October - 30 April and 5am - 6pm Monday – Friday plus 5am - 3pm Saturday from 1 May – 30 September. There is no work proposed on Sundays and public holidays.

This report assesses the noise on a busy day from the managed fill operating at 300,000m³ of fill per annum. The traffic engineer predicts 80% of the trucks carrying cleanfill will be owned by Gleeson & Cox with the remaining 20% owned by other contractors. The trucks would normally arrive empty to the site and as advised by the traffic engineer there will be a predicted 12 trucks (12 arrivals and 12 departures) a day made by other contractors. That is, there will be an increase of 12 trucks a day to the number of trucks on the road.

The assessment has been undertaken assuming the current quarry activities continue with the change being that the plant will operate for the total daytime period to produce the aggregate and the truck numbers will increase from the current maximum of 233 trucks (233 arrivals and 233 departures) by 12 trucks (12 arrivals and 12 departures) per day to a total of 245 trucks a day.

The fill material will be managed on site with plant such as

- Komatsu D65 Bulldozer;
- Caterpillar 20 Ton excavator;
- Caterpillar 16G grader;
- 10,000 litre Watercart;
- Compactor to be used when overburden material is used in the managed fill area as bunds and the lining, and
- Trucks delivering the fill material

The noise from this equipment has been based on measurements undertaken of the machinery operating in the field with the measured sound power level (L_{WA}) of:

- Komatsu D65 Bulldozer, 114dB
- Caterpillar 20 Ton excavator, 106dB
- Caterpillar 16G grader, 102dB
- 10,000 litre Watercart, 102dB
- Compactor, 107dB and
- Trucks delivering the fill material, 105dB

Although not all plant will necessarily be used at the same time the assessment has assumed all plant will operate with the maximum expected number of trucks delivering the fill material. In addition, it has been assumed the quarry will be operating at capacity and has progressed to the north of its current position so represents the noise expected in the future rather than the current noise levels.

The noisiest stage of any fill activity is when the fill is at its maximum height and hence there will be the minimum screening by the current ground contours to the neighbours. The assessment has been undertaken with plant at the maximum height of each of the fill areas.

The noise received to the south of the quarry is controlled by the noise from activities at the quarry, not the managed fill work. The effect of quarry noise is addressed in a separate report.

5. PREDICTED NOISE LEVELS

Based on the above levels the noise from the managed fill has been predicted using the Brüel & Kjær Predictor programme v2019.02. This is a powerful environmental noise calculation software package that uses a digital terrain model with the ground conditions modelled and each of the noise sources modelled at their various locations on the ground. An existing ground contour interval of 1m has been used. Calculations are undertaken in accordance with the requirements of ISO 9613-1/2 Acoustics – Attenuation of Sound during Propagation Outdoors. For this project a grid varying between 25m – 75m has been adopted to calculate the noise contours. The noise from the quarry operating is calculated at each grid point and the noise contours have been drawn based on these levels. In addition, the noise at the notional boundaries of the closest neighbours' houses has been calculated so a more accurate level can be given than interpolating from the noise contours, which are a smoothing of the noise level calculated at each of the grid positions. All calculations have been undertaken assuming a slightly positive meteorological effect at the receiver position as required by NZS 6802:2008 Acoustics - Environmental Noise, ground absorption of 0.7 and a receiver height of 1.5m.

Each of the proposed four managed fill areas has been assessed with the activity at the maximum fill height.

Figure 6 shows the noise contours for Fill Area 2 with the fill at its maximum height.

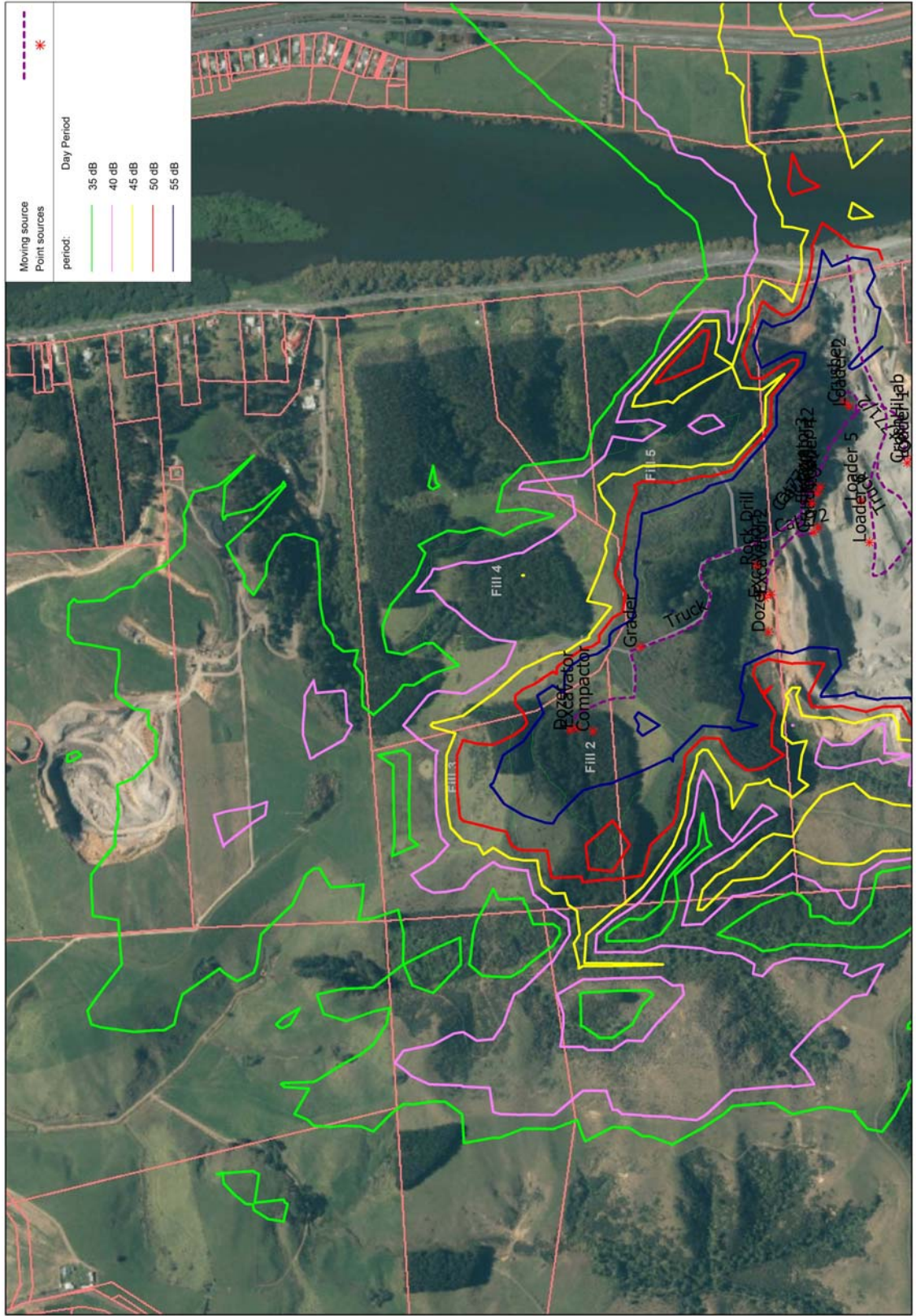


Figure 6. Fill Area 2 with fill at maximum height, dBA L₁₀

Figure 7 shows the noise contours for Fill Area 3 with the fill at its maximum height.

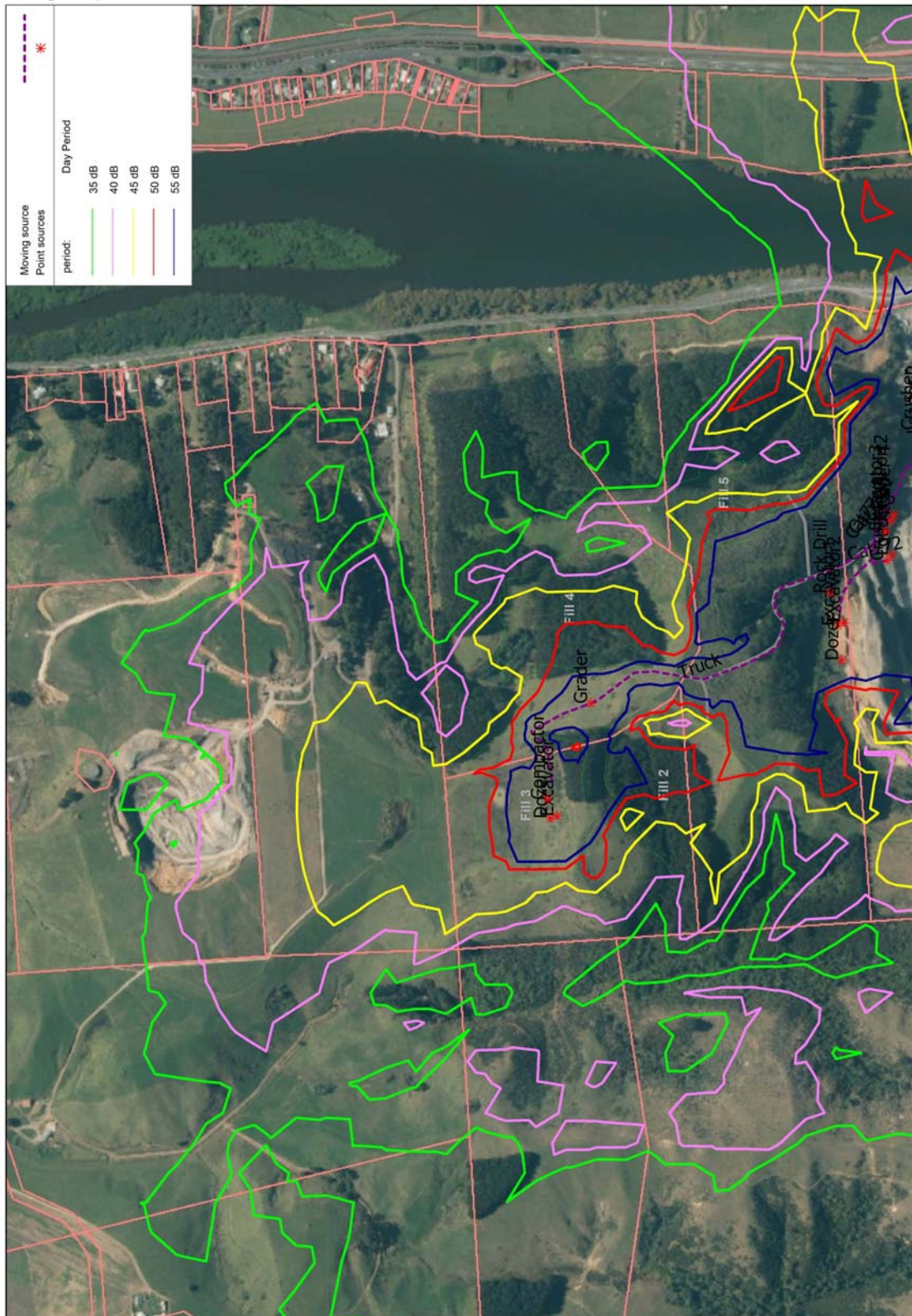


Figure 7. Fill Area 3 with fill at maximum height, dBA L₁₀

Figure 8 shows the noise contours for Fill area 4 with the fill at its maximum height.

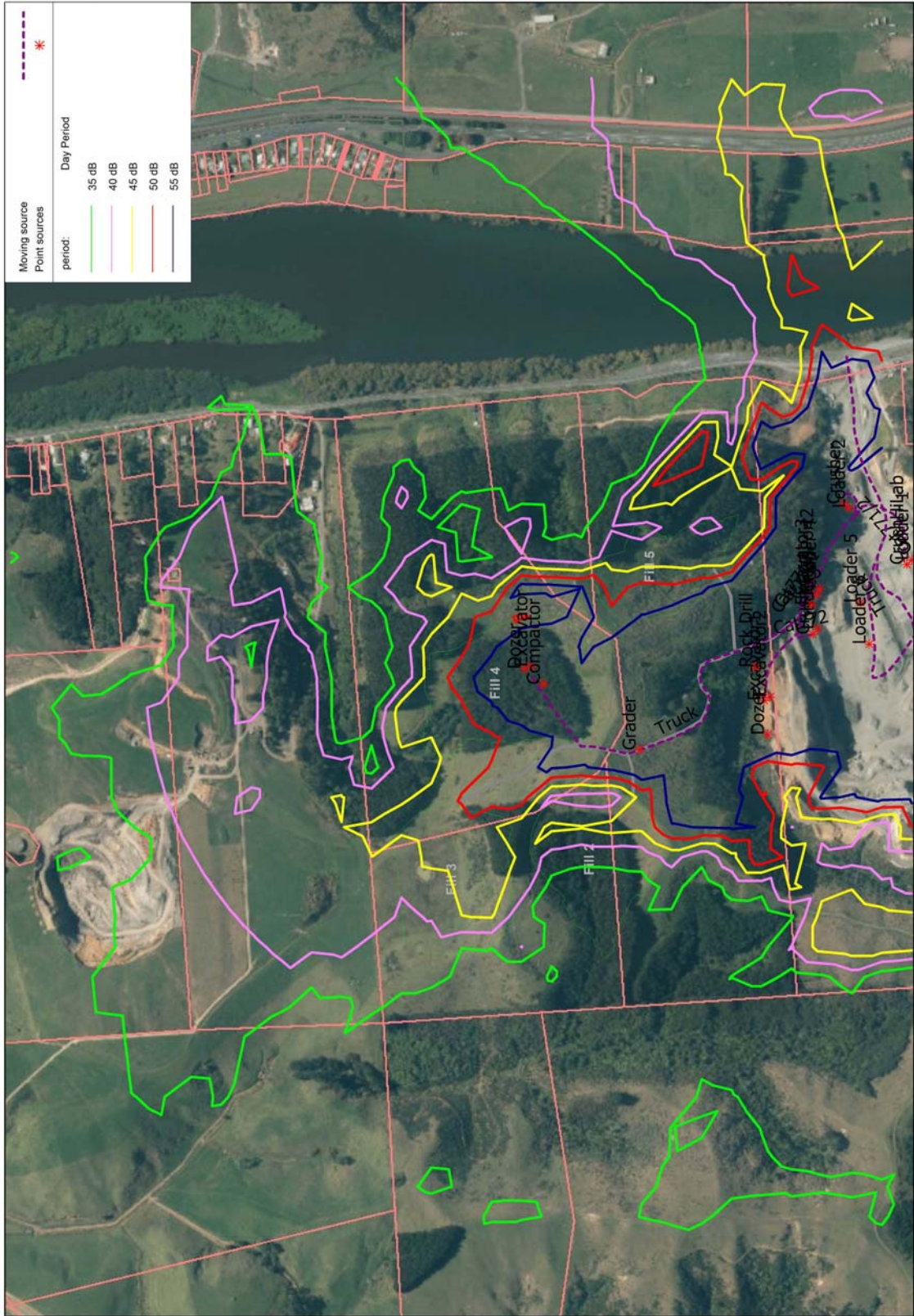


Figure 8. Fill Area 4 with fill at maximum height, dBA L₁₀

Figure 9 shows the noise contours for Fill area 5 with the fill at its maximum height.

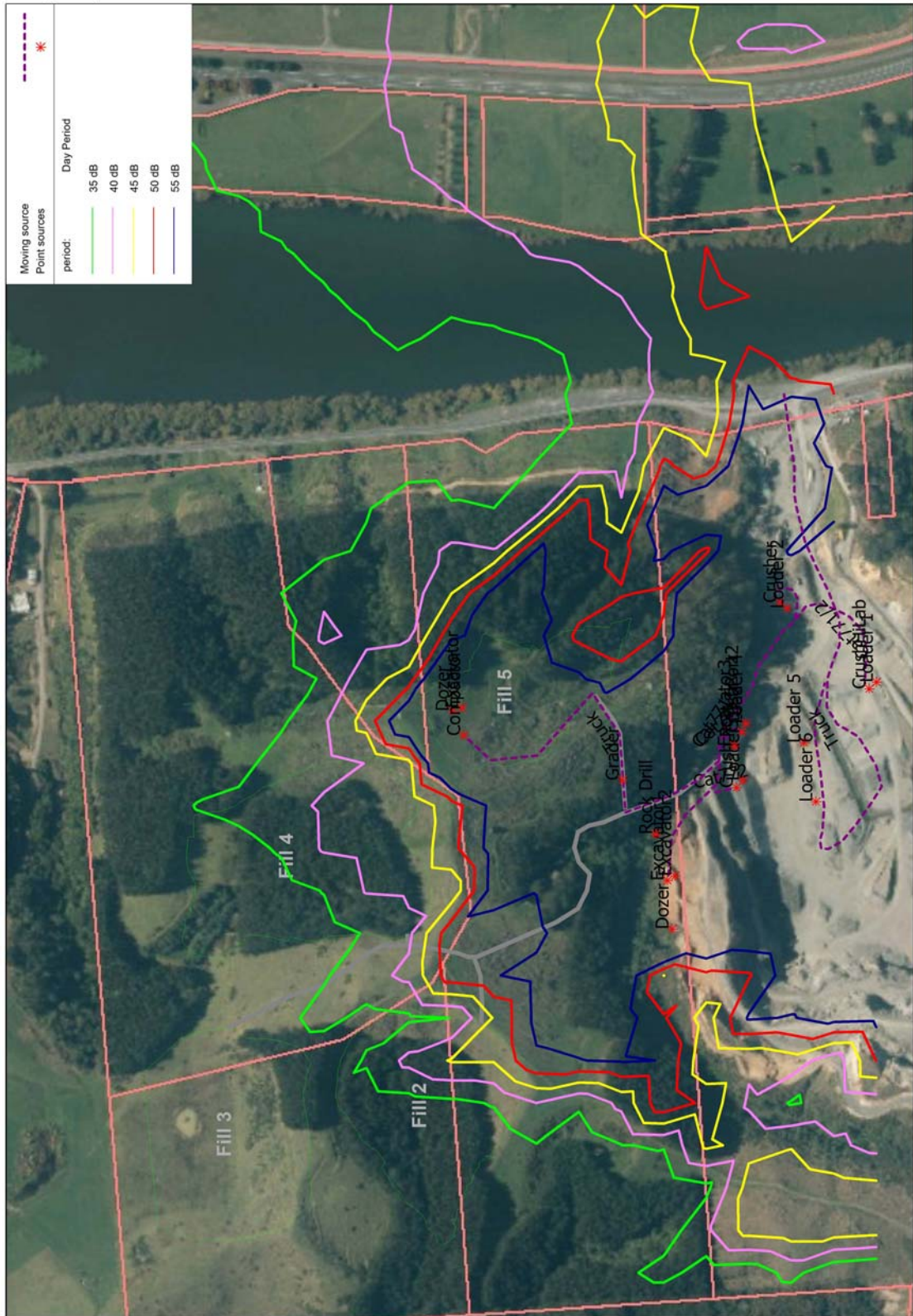


Figure 9. Fill Area 5 with fill at maximum height, dBA L-10

In addition to the contouring the noise has been calculated at the notional boundary of each of the closer dwellings shown on Figure 10. The levels for each fill are set out in Table 1.



Figure 10. Noise assessment points

Site ¹	Level, dBA			
	Fill 2 ²	Fill 3 ³	Fill 4 ⁴	Fill 5 ⁵
1	31	32	29	27
2	28	30	27	21
3	32	34	31	27
4	23	26	27	25
5	31	33	37	29
6	28	34	34	27
7	29	30	31	30
8	29	30	32	31
9	29	30	32	33
10	29	31	34	34

1 Site location is shown on Figure 10

2 Figure 6

3 Figure 7

4 Figure 8

5 Figure 9

Table 1. Predicted Noise – dBA L₁₀

6. TRAFFIC NOISE

As set out above, the only change to the truck numbers as a result of the proposed managed fill is an increase of 12 trucks a day to the number of trucks on the road. This is insignificant and will not have any noticeable effect on the traffic noise that will be experienced by residents along Riverview Road.

7. CONCLUSIONS

It is proposed to develop four separate managed fill areas to take both the quarry overburden and imported fill material from other sites on the northern side of the existing Huntly Quarry located at 300 Riverview Road, Huntly.

It is proposed to adopt the noise limits for the site for a Rural Zone as set out in the Operative District Plan.

The cumulative noise effects of the existing quarry expanded to the north plus the noise from each of the proposed four fill areas as shown on Figure 1 has been assessed. Both the noise contours and spot levels at the notional boundary of the closer houses has been predicted and this shows the noise will not exceed 37dBA L₁₀ at the most exposed notional boundary on Riverview Road and 34dBA L₁₀ on Hillside Heights Road. This is below the existing measured background (L_{A95}) noise environment for the proposed hours of work as shown on Figures 4 and 5 so there will not be any adverse noise effects for the residents around the site.

Noise from the 12 additional trucks on Riverview Road will have an insignificant effect on the existing noise environment.

From the assessment the noise effects of the proposed managed fill will not noticeably change the existing noise levels for the neighbours and will be less than minor in terms of the requirements of the Resource Management Act.



WDC S92 REQUEST & CLARIFICATIONS–

Gleeson Managed Fill Limited Resource Consent Application (LUC0233/20)

Council:	Waikato District Council	Application	Gleeson Managed Fill Limited LUC0233/20
Request	S 92 Request for Further Information & Clarifications	Date Received	22 December 2019
Information submitted to WRC: 30 January 2020 & 15 June 2020			

Attachment A: Gleeson Managed Fill – Request for Further Noise Information, Hegley Acoustic Consultants, 23 December 2019

Attachment B: GMF Questions and Responses Email 9 June 2020

Reference	Request for information & Clarification	Response	Close Out (Y/N) Comment
Noise (WDC REVIEWER: Siri Wilkening – Marshall Day Acoustics) <i>Information provided by Hegley Acoustic Consultants (Nevil Hegley)</i>			
Item (12) S92 Letter	<p>Reasons for the early start to fill activities:</p> <p><i>“The existing noise environment is generally somewhat elevated from traffic on SH1 and local roads, with low night-time noise levels.</i></p> <p><i>As the noise levels at 5am are low at both Hillside Heights Road and Riverview Road (25 dB LA95 and lower), we question why it would be necessary to undertake fill activities in the three areas before 7am, when the daytime noise limit commences considering the following:</i></p> <p><i>a) The activity is separate to the quarry operation;</i></p>	<p>It is agreed the proposed managed fill is separate to the quarry operation. However, to take into account the potential cumulative noise effects of the quarry operating on the neighbours the noise prediction for the managed fill includes the quarry operating for a busy period with the extension to the north of the current quarry site included. The quarry extension is as proposed in the noise assessment undertaken for the quarry.</p> <p>The requirements of Section 16 of the Resource Management Act have been taken into account. The selection of the plant to be used is to minimise the noise at source, locating access roads within the site rather than use public road to minimise truck noise to the neighbours and limiting the size of the fill areas to minimise noise to the neighbours satisfies the requirements of Section 16. The results of these effects are shown in Table 1 of the original noise assessment where the noise is controlled to well within the limits as set out in the District Plan rather than simply working to those limits.</p> <p>Checking Figure 10 (the location of the proposed fill sites) in the original noise assessment against Figure 2 (the Operative District Plan Zoning map) shows the southern part of the</p>	Closed out



WDC S92 REQUEST & CLARIFICATIONS–

Gleeson Managed Fill Limited Resource Consent Application (LUC0233/20)

	<p><i>b) The activity will be located closer to neighbouring dwellings.</i></p> <p><i>c) Section 16 requires the best practicable option of noise management to be applied.</i></p> <p><i>d) The fill areas are located within the Rural Zone and not the Aggregate Extraction Policy Area.</i></p> <p><i>There are concerns relating adverse cumulative effects of additional activities commencing prior to 7am."</i></p>	<p>Fill 2 area and Fill 5 area are located within the Aggregate Extraction Policy Area. It is agreed the northern area of Fill 2, Fill 3 and Fill 5 areas are in the Rural Zone.</p>	
<p>Item (13) S92 Letter</p>	<p>Existing Noise Environment "Predicted noise levels at the closest houses on the western side of the Waikato River (i.e. away from SH1) are around 35 dB LA10, which is similar to existing noise levels for 70 Hillside Road. Please provide the LAeq measurement in the same graph (i.e. LAeq and LA90 or 95) in section 3 of the Acoustic Report."</p>	<p>Please see the graphs in Letter from Hegley Acoustics Consultants dated 23 December 2019</p>	<p>Closed out</p>
<p>Email – 12 Feb 2020</p>	<p>Concerns about the northern most fill areas being used before 7 am as these fill areas are closer to the residential receivers at Hillside Heights Road and Riverview Road that the quarry activities (and quarry</p>	<p>During the operations at Fill 2 and Fill 3, noise levels at 70 Hillside Road (Site 2) are predicted to be 28 to 30 dBA L10 as illustrated in Table 1. This is a bit lower than the levels noted in your email below.</p> <p>We are in agreement that the anticipated noise levels are within the permitted limits for a rural zone and activities anticipated in such a zone should operations start at <u>5am or</u></p>	<p>Closed out</p>



WDC S92 REQUEST & CLARIFICATIONS–

Gleeson Managed Fill Limited Resource Consent Application (LUC0233/20)

	<p>zone). The residents at these locations would not normally expect quarry like noise from 5 am.</p>	<p><u>7am</u> as outlined in <i>Operative WDP Rule 25.17</i> “ Any activity is a permitted activity if it is designed and conducted so that noise from the activity measured at any other site does not exceed:</p> <ul style="list-style-type: none"> (a) 50dBA (L10), 7am – 7pm any day, and (b) 45dBA (L10), 7pm – 10pm any day, and (c) 40dBA (L10), and 65dBA (LMax) at all other times. <p>We would also like to emphasise that only one managed fill site will be operating at any stage and hence Fill Area 2 & 3 will not be operated at the same time. Further, the noise assessment (and hence predicted noise levels) has been undertaken with plant at the maximum height. The noisiest stage of any fill activity is when the fill is at its maximum height and hence there will be minimum screening by the current ground contours to the neighbours.</p> <p><i>We have however been able to discuss and agree the following onsite operating times with the Client relating the managed fill site activities (acceptance, disposal, compaction and moving of managed fill on site):</i></p> <p><i>7am – 7pm Monday to Friday</i> <i>7am - 2pm on Saturday</i></p>	
<p>Email – 9 Jun 2020</p>	<p>WDC requested to confirm the wording of the following conditions:</p> <ul style="list-style-type: none"> • Hours of Operation • Noise 	<p>Attachment B – GMF Questions and Responses Email</p> <p>The wording as stated below is confirmed as Nevil Hegley (Hegley Acoustic) confirmed that Nevil stating that he anticipates no erect in regard to fill activities operating before 7am.</p> <p><u>Hours of Operation</u> <i>The hours of operation for managed fill site activities (including truck movements solely relating to the managed fill activity, acceptance, disposal, compaction and moving of</i></p>	<p>Closed out</p>



WDC S92 REQUEST & CLARIFICATIONS–

Gleeson Managed Fill Limited Resource Consent Application (LUC0233/20)

		<p><i>managed fill on site) within the site shall be limited to:</i></p> <p><i>Monday to Friday (inclusive) 7am to 7pm</i> <i>Saturday 7am to 2pm</i></p> <p><i>No truck movements on Sundays or public holidays other than special events or emergency works.</i></p> <p><u>Noise.</u> <i>Any activity within Fill Areas 2, 3 and 4 shall be designed and conducted so that noise from the activity measured at any other site does not exceed:</i></p> <ul style="list-style-type: none"><i>a. 50 dB LA10 7am to 7pm any day</i><i>b. 45 dB LA10 7pm to 10pm any day</i><i>c. 40 dB LA10 and 65 dB LAFmax at all other times</i> <p><i>Noise levels shall be measured and assessed in accordance with NZS6802:1999 “Acoustics – Measurement of Environmental Sound” and NZS6802:1991 “Assessment of Environmental Sound”.</i></p>	
--	--	---	--



WDC S92 REQUEST & CLARIFICATIONS–

Gleeson Managed Fill Limited Resource Consent Application (LUC0233/20)

<p>Email – 15 Jun 2020</p>	<p>Attachment H – GMF Questions and Responses Email</p> <p>WDC requested Marshall Day to clarify a few matters relating to the change of the State Highway location:</p> <table border="1" data-bbox="347 438 1883 858"> <thead> <tr> <th data-bbox="347 438 846 470">WDC questions</th> <th data-bbox="846 438 1883 470">Marshall Day responses</th> </tr> </thead> <tbody> <tr> <td data-bbox="347 470 846 560">1. Does the noise information / report need to be updated due to the relocation of the State Highway?</td> <td data-bbox="846 470 1883 560">1. No, I don't think an update to the noise report is required</td> </tr> <tr> <td data-bbox="347 560 846 649">2. Can the conclusions of the report still be relied upon to say that no persons are affected along Riverview Road?</td> <td data-bbox="846 560 1883 649">2. Yes, the conclusions are still valid in my opinion</td> </tr> <tr> <td data-bbox="347 649 846 858">3. Can you please describe if there is a difference in vibration of trucks if they are full or empty?</td> <td data-bbox="846 649 1883 858">3. Vibration: there is a potential for vibration levels to differ depending on full or empty trucks. As preface, vibration is generally caused when the road surface is not well maintained and smooth. So any pot holes, rutting or other unevenness causes vibration when trucks drive over them. Where there are such faults with the road surface, a full truck will cause more vibration as it has a greater mass impacting on the fault. Speed is also a factor, the faster the truck, the higher the comparable vibration on the same road fault. – Overall, if the road is well maintained (which is the road controlling authority's responsibility), then vibration should be minor.</td> </tr> </tbody> </table> <p>WDC Planner indicated that there are no changes in effects on neighbours along Riverview Road.</p>	WDC questions	Marshall Day responses	1. Does the noise information / report need to be updated due to the relocation of the State Highway?	1. No, I don't think an update to the noise report is required	2. Can the conclusions of the report still be relied upon to say that no persons are affected along Riverview Road?	2. Yes, the conclusions are still valid in my opinion	3. Can you please describe if there is a difference in vibration of trucks if they are full or empty?	3. Vibration: there is a potential for vibration levels to differ depending on full or empty trucks. As preface, vibration is generally caused when the road surface is not well maintained and smooth. So any pot holes, rutting or other unevenness causes vibration when trucks drive over them. Where there are such faults with the road surface, a full truck will cause more vibration as it has a greater mass impacting on the fault. Speed is also a factor, the faster the truck, the higher the comparable vibration on the same road fault. – Overall, if the road is well maintained (which is the road controlling authority's responsibility), then vibration should be minor.	<p>Closed out</p>
WDC questions	Marshall Day responses									
1. Does the noise information / report need to be updated due to the relocation of the State Highway?	1. No, I don't think an update to the noise report is required									
2. Can the conclusions of the report still be relied upon to say that no persons are affected along Riverview Road?	2. Yes, the conclusions are still valid in my opinion									
3. Can you please describe if there is a difference in vibration of trucks if they are full or empty?	3. Vibration: there is a potential for vibration levels to differ depending on full or empty trucks. As preface, vibration is generally caused when the road surface is not well maintained and smooth. So any pot holes, rutting or other unevenness causes vibration when trucks drive over them. Where there are such faults with the road surface, a full truck will cause more vibration as it has a greater mass impacting on the fault. Speed is also a factor, the faster the truck, the higher the comparable vibration on the same road fault. – Overall, if the road is well maintained (which is the road controlling authority's responsibility), then vibration should be minor.									

ATTACHMENT A

23 December 2019

Kate Madsen
Paua Planning
178 Bawden Road
RD 2
Albany
Auckland 0792

Dear Kate

GLEESON MANAGED FILL – REQUEST FOR FURTHER INFORMATION

A request for further information on the noise from the proposed Gleeson Managed Fill has been made by Waikato District Council. The following sets out the request followed by our response.

As the noise levels at 5am are low at both Hillside Heights Road and Riverview Road (25dB L_{A95} and lower), we question why it would be necessary to undertake fill activities in the three areas before 7am, when the daytime noise limit commences considering the following:

- a) The activity is separate to the quarry operation;*
- b) The activity will be located closer to neighbouring dwellings.*
- c) Section 16 requires the best practicable option of noise management to be applied.*
- d) The fill areas are located within the Rural Zone and not the Aggregate Extraction Policy Area*

There are concerns relating adverse cumulative effects of additional activities commencing prior to 7am.”

It is agreed the proposed managed fill is separate to the quarry operation. However, to take into account the potential cumulative noise effects of the quarry operating on the neighbours the noise prediction for the managed fill includes the quarry operating for a busy period with the extension to the north of the current quarry site included. The quarry extension is as proposed in the noise assessment undertaken for the quarry.

The requirements of Section 16 of the Resource Management Act have been taken into account. The selection of the plant to be used is to minimise the noise at source, locating access roads within the site rather than use public road to minimise truck noise to the neighbours and limiting the size of the fill areas to minimise noise to the neighbours satisfies the requirements of Section 16. The results of these effects are shown in Table 1 of the original noise assessment where the noise is controlled to well within the limits as set out in the District Plan rather than simply working to those limits.

Checking Figure 10 (the location of the proposed fill sites) in the original noise assessment against Figure 2 (the Operative District Plan Zoning map) shows the southern part of the Fill 2 area and Fill 5 area are located within the Aggregate Extraction Policy Area. It is agreed the northern area of Fill 2, Fill 3 and Fill 5 areas are in the Rural Zone.

Predicted noise levels at the closest houses on the western side of the Waikato River (i.e. away from SH1) are around 35dB LA10, which is similar to existing noise levels for 70 Hillside Road. Please provide the LAeq measurement in the same graph (i.e. LAeq and LA90 or L95) in section 3 of the Acoustic Report

Figures 1 and 2 show the noise levels for L10, LAeq and L95 opposite 70 Hillside Heights Road and 206 Riverview Road respectively. The LA90 was initially plotted as well but there was no distinguishable difference to the L95 so in not included on the graphs.

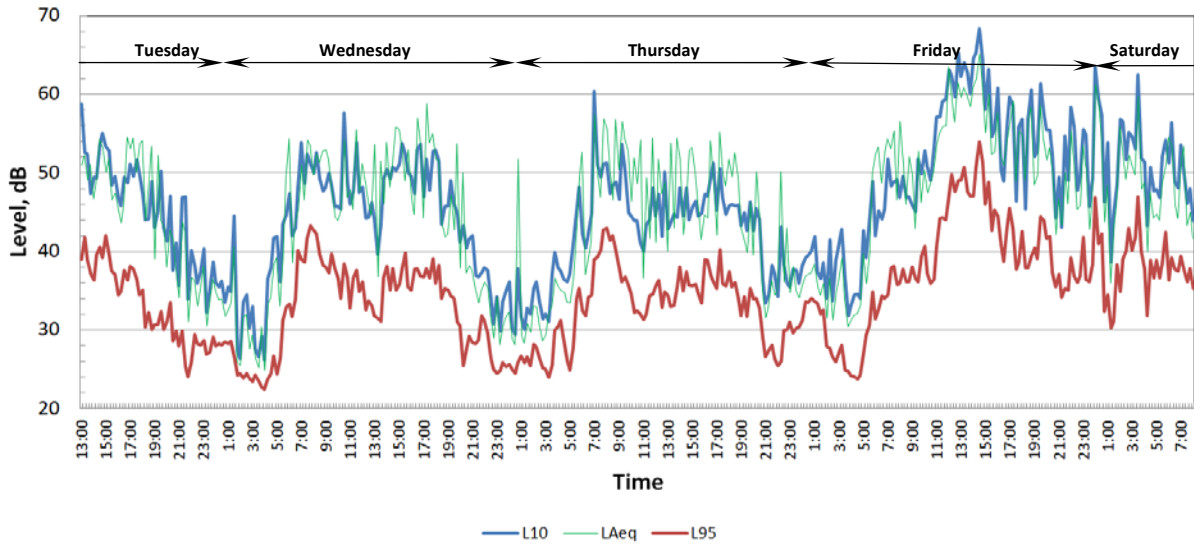


Figure 1. Measured noise opposite 70 Hillside Heights Road

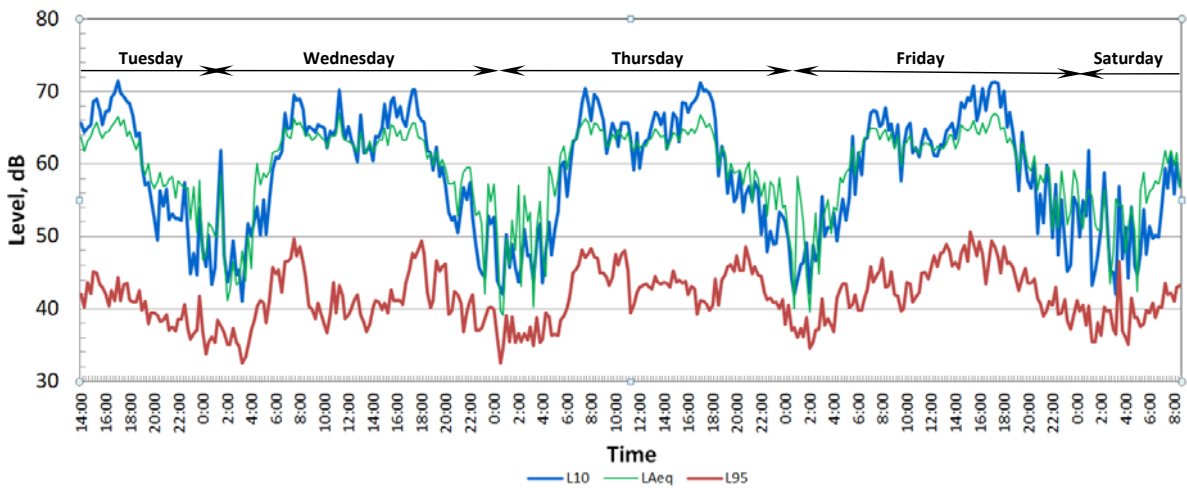


Figure 2. Measured noise opposite 206 Riverview Road

Yours sincerely
Hegley Acoustic Consultants

Nevil Hegley

ATTACHMENT B

From: [Nicola Laurenson](#)
To: [Kate Madsen](#)
Subject: RE: Managed Fill Questions
Date: Monday, 15 June 2020 8:23:47 AM
Attachments: [image001.png](#)
[image002.png](#)

Hi Kate

I asked the following questions to MDA about the change in the location of the State Highway and below are the answers from them.

Questions:

1. Does the noise information / report need to be updated due to the relocation of the State Highway?
2. Can the conclusions of the report still be relied upon to say that no persons are affected along Riverview Road?
3. Can you please describe if there is a difference in vibration of trucks if they are full or empty?

Answers:

1. No, I don't think an update to the noise report is required
2. Yes, the conclusions are still valid in my opinion
3. Vibration: there is a potential for vibration levels to differ depending on full or empty trucks. As preface, vibration is generally caused when the road surface is not well maintained and smooth. So any pot holes, rutting or other unevenness causes vibration when trucks drive over them. Where there are such faults with the road surface, a full truck will cause more vibration as it has a greater mass impacting on the fault. Speed is also a factor, the faster the truck, the higher the comparable vibration on the same road fault. – Overall, if the road is well maintained (which is the road controlling authority's responsibility), then vibration should be minor.

I am happy with the answers received that there are no changes in effects on neighbours along Riverview Road. This obviously will have to be accepted by Wade as the Delegated Authority as well.

Kind regards,
Nicola

From: Kate Madsen <kate@pauaplanning.co.nz>
Sent: Wednesday, June 10, 2020 4:45 PM
To: Nicola Laurenson <nicola@laurensonplanning.co.nz>
Cc: 'Biance Schoeman' <biance@pauaplanning.co.nz>; 'Mark Pelan' <mark.pelan@gleesoncox.co.nz>
Subject: RE: Managed Fill Questions

Hi Nicola,

Perfect. Accepted as per your/Biance's email – great to have it so clearly in writing so thanks I will make sure these hours are correct in the Fill Management Plan also.

Kind Regards,
Kate Madsen
Director – Paua Planning



Environmental & Social Impact Assessments - Resource Consents - Planning Advice and Action

Phone: [+64 9 4422959](tel:+6494422959)

Mobile: [+64 21 944583](tel:+6421944583)

Email: kate@pauaplanning.co.nz

178 Bawden Road R.D 2 Dairy Flat Albany Auckland 0792 New Zealand

DISCLAIMER:

This e-mail message and accompanying data may contain information that is confidential and subject to privilege.

If you are not the intended recipient, you are notified that any use, dissemination, distribution or copying of this message or data is prohibited.

If you have received this e-mail in error please notify the sender at pauaplanning@pauaplanning.co.nz immediately and delete all material pertaining to this e-mail.

From: Nicola Laurenson <nicola@laurensonplanning.co.nz>
Sent: Wednesday, 10 June 2020 4:25 PM
To: Kate Madsen <kate@pauaplanning.co.nz>
Cc: 'Biance Schoeman' <biance@pauaplanning.co.nz>; 'Mark Pelan' <mark.pelan@gleesoncox.co.nz>
Subject: RE: Managed Fill Questions

Thanks Kate,

The truck information you have provided below is exactly what I thought it was. You just threw me with the 90% comment.

I've attached an email re noise that Bianca and I shared on 12 Feb.

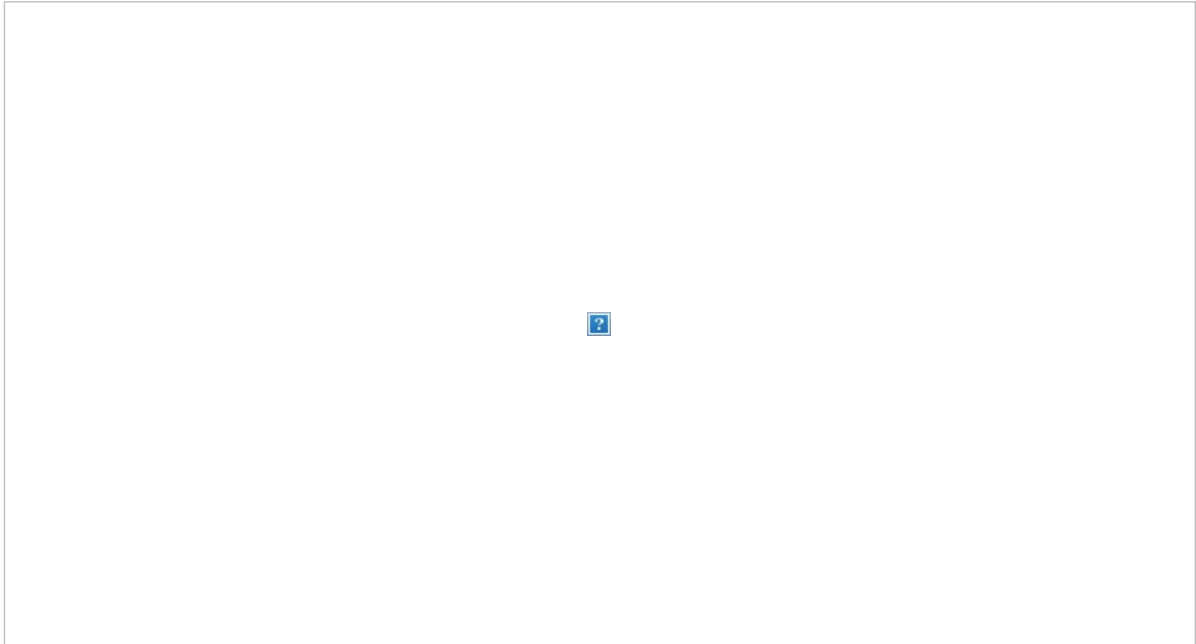
Kind regards
Nicola

From: Kate Madsen <kate@pauaplanning.co.nz>
Sent: Wednesday, June 10, 2020 3:31 PM
To: Nicola Laurenson <nicola@laurensonplanning.co.nz>
Cc: 'Bianca Schoeman' <bianca@pauaplanning.co.nz>; 'Mark Pelan' <mark.pelan@gleesoncox.co.nz>
Subject: RE: Managed Fill Questions

Hi Nicola,

That obviously got lost somewhere in translation I think – see attached email from Nevil stating that he anticipates no erect in regard to fill activities operating before 7am.

I must have missed the email update – do you have something? I think in the big scheme of things, Gleeson will accept 7am – however this would be more appropriate for FA3 and 4 than FA2, which is further away from neighbouring dwellings and contained within a gully system. (see map below). Let me check with Gleeson and confirm re 7am start – and let me know if you have any correspondence I can view to refresh my memory!



In terms of truck movements, the AEE stated:

Considering the average capacity of a truck and trailer (28 tonnes) and the proposed operational days (276 days per year), the anticipated volume of 300,000 m3 of imported fill equates to 60 trucks per day. It is anticipated that 80% of the trucks importing fill will be from the applicants own trucking business which at this stage is arriving empty on site to collect aggregate. This equates to 48 trucks per day which forms part of the already consented truck movements associated with the quarry and the extraction of aggregate. The remaining 20% is proposed to be imported by approved subcontractors which equates to 12 trucks (24 vehicle movements). The additional trips per day is likely to add in the order of two additional trips per hour onto the local road network and this is less than the hourly variations that currently occur along Riverview Road

Kind Regards,
Kate Madsen
Director – Paua Planning



Environmental & Social Impact Assessments - Resource Consents - Planning Advice and Action
Phone: [+64 9 4422959](tel:+6494422959)
Mobile: [+64 21 944583](tel:+6421944583)
Email: kate@pauaplanning.co.nz
178 Bawden Road R.D 2 Dairy Flat Albany Auckland 0792 New Zealand

DISCLAIMER:

This e-mail message and accompanying data may contain information that is confidential and subject to privilege.

*If you are not the intended recipient, you are notified that any use, dissemination, distribution or copying of this message or data is prohibited.
If you have received this e-mail in error please notify the sender at pauaplanning@pauaplanning.co.nz immediately and delete all material pertaining to this e-mail.*

From: Nicola Laurenson <nicola@laurensonplanning.co.nz>
Sent: Wednesday, 10 June 2020 2:21 PM
To: Kate Madsen <kate@pauaplanning.co.nz>
Cc: 'Biance Schoeman' <biance@pauaplanning.co.nz>; 'Mark Pelan' <mark.pelan@gleesoncox.co.nz>
Subject: RE: Managed Fill Questions

Hi Kate,

Thanks for this and this is precisely why I wanted to talk to you before going back to Marshall Day

Regarding the operation hours the Council's noise expert was confident that any activity in the fill areas prior to 7am would likely result in some type of notification. I understood that the fill operation hours were amended to start at 7am as a result of this discussion. The assessment of noise resulting from fill operations have been based on work starting at 7am.

If I need to revisit this with Siiri I'll need to know exactly what you want and if this is going back to the original application or something else? I'll let you have a think about it and come back to me.

Can you please also clarify the split of existing quarry trucks that will be coming into the site full - I didn't think it was as high as 90%. I thought it was 20%? Or are you meaning 90% prior to 7am?

Thanks,
Nicola

From: Kate Madsen <kate@pauaplanning.co.nz>
Sent: Wednesday, June 10, 2020 1:21 PM
To: Nicola Laurenson <nicola@laurensonplanning.co.nz>
Cc: 'Biance Schoeman' <biance@pauaplanning.co.nz>; 'Mark Pelan' <mark.pelan@gleesoncox.co.nz>
Subject: RE: Managed Fill Questions

Hi Nicola,

Thanks for this – please see my comments in red below, which I hope are constructive and helpful! :)

Kind Regards,
Kate Madsen
Director – Paua Planning



Environmental & Social Impact Assessments - Resource Consents - Planning Advice and Action

Phone: +64 9 4422959

Mobile: +64 21 944583

Email: kate@pauaplanning.co.nz

178 Bawden Road R.D 2 Dairy Flat Albany Auckland 0792 New Zealand

DISCLAIMER:

This e-mail message and accompanying data may contain information that is confidential and subject to privilege.

If you are not the intended recipient, you are notified that any use, dissemination, distribution or copying of this message or data is prohibited.

If you have received this e-mail in error please notify the sender at pauaplanning@pauaplanning.co.nz immediately and delete all material pertaining to this e-mail.

From: Nicola Laurenson <nicola@laurensonplanning.co.nz>
Sent: Tuesday, 9 June 2020 10:35 AM
To: Kate Madsen <kate@pauaplanning.co.nz>
Subject: RE: Managed Fill Questions

Thanks for that Kate,

I have added this information to the report.

As part of the peer review and my re-read of the report we have identified some potential changes in noise with the SH1 no longer being across the river. I need to understand if this changes the background noise levels and if the additional trucks will affect the land owners close to Riverview Road. I am going to follow this up with Marhsall Day today. **When you are looking at changes attributable to the SH**

relocation, please also consider the additional positive effects – such as truck driver’s and staff contribution to the Huntly economy etc. once you have something from Marshall Day, we would appreciate an opportunity for Nevil Hegley to review/comment also – thanks.

Before I do this and to avoid any misunderstanding between us I wanted to let you know where I am heading with noise conditions and hours of operation:

I will be asking MDA to address the effects of the additional 24 trucks associated solely with the managed fill operation (and these trucks will be on the road after 7am) and 48 existing quarry trucks arriving full instead of empty (and these trucks will be on the road after 7am). I will not be revisiting the noise associated with onsite filling activities.

You will be aware that there has been heightened interest in this application of late and I don’t want to invite scrutiny over the issue of the highway.

For my email to Sirii I will be sending her the proposed draft conditions as follows.

Hours of Operation We need to think about this – as the hours should be standardized with the quarry to a degree – as trucks can arrive from 6am for the quarry and the idea is that 90% are likely to arrive with fill and leave with rock. This condition could be interpreted as them having to wait until 7am to enter the site to drop off load of fill. If this restriction to 7am (rather than 6am as per quarry consent) only relates to trucks that are turning up and not taking metal away, then should be fine – but it needs to be clear. Having two different “operational” hours will make it very difficult to manage and operate.

2. The hours of operation for managed fill site activities (including truck movements solely relating to the managed fill activity, acceptance, disposal, compaction and moving of managed fill on site) within the site shall be limited to:
Monday to Friday (inclusive) 7am to 7pm (quarry hours are 12 truck movements (ie 6 trucks) only 5-6am and then general hours are 6am-8pm in summer and 6-6 in winter)
Saturday 7am to 2pm (quarry hours are 6am – 3pm)

No truck movements on Sundays or public holidays other than special events or emergency works.

Noise this condition is fine and as expected. The noise reports demonstrate levels at notional boundaries to be well within these levels – 37dB on Riverview Road and 34dB on Hillside Heights Road.

- 3 Any activity within Fill Areas 2, 3 and 4 shall be designed and conducted so that noise from the activity measured at any other site does not exceed:
 - a. 50 dB L_{A10} 7am to 7pm any day
 - b. 45 dB L_{A10} 7pm to 10pm any day
 - c. 40 dB L_{A10} and 65 dB L_{Amax} at all other times

Noise levels shall be measured and assessed in accordance with NZS6802:1999 “Acoustics – Measurement of Environmental Sound” and NZS6802:1991 “Assessment of Environmental Sound”.

Please let me know if you have any queries/ issues with the above and I will get on to this asap.

Kind regards,
Nicola

From: Kate Madsen <kate@pauaplanning.co.nz>
Sent: Sunday, June 7, 2020 4:46 PM
To: Nicola Laurenson <nicola@laurensonplanning.co.nz>
Subject: Re: Managed Fill Questions

Hi Nicola,

The regional managed fill consents have been agreed for a duration of 15 years. It is unlikely the operation will take longer than 10-12 years to complete maximum. (each fill site 2,3 & 4 each only 2-3 years to fill).

The quarry itself definitely has 50 years left in it. We have Fill Area 5 application for overburden only (subject to consent and wildlife permit) - and the quarry are hopeful they can export some overburden (again, subjective to consents if required)

Kate Madsen

On 7/06/2020, at 4:22 PM, Nicola Laurenson <nicola@laurensonplanning.co.nz> wrote:

Hi Kate,

I’m working through the remaining peer review items and I want to understand from you and a phone call may be more appropriate- I’m just trying to get a better understanding of how everything is timed.

My understanding is that the operation of the managed fill is proposed to operate alongside the quarry. The applicants seek a duration of 25 years on their consents and the quarry could operated for a further 50 years.

If the quarry comes to an end before the 25 years will the managed fill also wind up at the same time? Have you proposed any conditions to this effect?

Thanks,

Nicola

<image002.png>