
Compliance Inspection Report: September 2017

RM File No:	RM150184
Description of Activity:	Extraction of gravel, removal of indigenous vegetation and associated earthworks
Consent Holder:	GBC Winstone Aggregates
Inspection Dates:	<u>Site inspections;</u> 12/07/17 30/08/17

Compliance Summary

2 site visits (12th July and 30th August) since the last CLG.

Points of Discussion

- 3 concerns were noted that went directly to GBC Winstones for the period covering 23 June to 07 September 2017. The issues covered by the concerns included:
 - Stockpiling of material
 - Dust potential
 - Pest Control
- Progress was made on the removal of vegetation associated with the creation of the Stage 1B Bund. From the information provided through the consent process it was apparent that the bund and the trees could not both exist in the same space and that the overlay of information on maps meant that this conflict was inevitable. Council has accepted this position but has required that replacement trees be planted to the northwest of the new bund.
- During the last site visit the remnant bund material located to the northeast of the paper road was being removed and I should have an update at the meeting in regards to its removal from the area.



- As a result of the bund creation and the moving of the excess material, the condition of the paper road was noted and is due to be remediated and an update should be able to be provided at the meeting.
- As noted previously, GBCWinstone has asked Council to allow them to undertake excavation in the area of Stage 1B to the southwest of the paper road even though there is a gap in the bund at the location of the paper road. Attached is a record of emails and reports over the matter. In summary, information has been provided to and peer reviewed by Councils acoustic consultant that demonstrates that they are able to comply with noise requirements of the consent. While it is noted that they are close to the compliance limits when working in the area closest to the paper road, it is my proposal that KCDC undertakes some compliance noise monitoring at the start of the excavation and when they start approaching the area of excavation closest to the paper road [i.e. when the noise should be at its worst]. As indicated at the previous meeting, KCDC is prepared to allow flexibility on this matter; however we would like to discuss the matter first with the CLG and I will talk to this on the night.
- Slumping on bund was witnessed and still remains vegetated. Noting rushes growing in numerous locations and rainfall levels and groundwater level in the district are extremely high. Rainfall gauges showing 50-80% higher rainfall in last 12 months than long term averages.



- Bunding at the northern end of Stage 1B stops short of the horse arena at the request of the leases. This has no issue on compliance with noise levels as demonstrated by GBCWinstone and no works are being proposed to the northeast of the paper road.



Signed

Paul Busing
Development Control Team Leader
Date: 07 September 2017

Paul Busing

From: Nigel Lloyd <nigel@acousafe.co.nz>
Sent: Friday, August 18, 2017 11:47 AM
To: Paul Busing
Subject: RE: Updated Summary Management Plan

Hi Paul

That is an excellent idea. Obviously any issues will most likely arise when they are quarrying close to the paper road. Remember you can measure to the side of the dwelling as long as you are within 20 metres of the house. That may represent the worst case scenario.

Regards
Nigel Lloyd

Acousafe Consulting & Engineering Ltd
Ph: +64 274480282

From: Paul Busing [mailto:Paul.Busing@kapiticoast.govt.nz]
Sent: Friday, 18 August 2017 11:03 AM
To: Nigel Lloyd <nigel@acousafe.co.nz>
Subject: RE: Updated Summary Management Plan

Thanks for that Nigel,

I might just pop out for a couple of monitoring visits and undertake some noise monitoring and Andreas house when they start excavation just to confirm that it is working as predicted.

Cheers
Paul

From: Nigel Lloyd [mailto:nigel@acousafe.co.nz]
Sent: Thursday, August 17, 2017 2:44 PM
To: Paul Busing
Subject: RE: Updated Summary Management Plan

Hi Paul

I have considered the further information supplied by Marshall Day Acoustics reference Mm 03 r01 2015015W dated 31 July 2017.

I consider that this further information now clarifies the concerns expressed in Acousafe's email dated 24 July 2017. The reasoning and the predictions set out in the memorandum support the conclusions that are reached. The predictions are that the quarrying can take place to the west of, and up to, the paper road as long as the bund is constructed as assumed in Figure 1 of the report i.e. with the gap where the paper road exists.

Regards
Nigel Lloyd

Acousafe Consulting & Engineering Ltd
Ph: +64 274480282

From: Paul Busing [<mailto:Paul.Busing@kapiticoast.govt.nz>]
Sent: Tuesday, 1 August 2017 9:54 AM
To: nigel@acousafe.co.nz
Subject: FW: Updated Summary Management Plan

Hello Nigel,

Please see attached and comment.

Regards
Paul

Paul Busing
Development Control Team Leader

Kāpiti Coast District Council
Tel 04 296 4745

www.kapiticoast.govt.nz

From: Dan McGregor (GBC Winstone) [<mailto:Dan.McGregor@gbcwinstone.co.nz>]
Sent: Tuesday, August 01, 2017 9:32 AM
To: Paul Busing
Cc: Nicholas Weekes (GBC Winstone)
Subject: RE: Updated Summary Management Plan

Hi Paul,

Following on from our discussion below I've attached Marshall Day's response to Nigel's queries. Happy to discuss.

Thanks
Dan



DAN MCGREGOR
Projects & Policy Advisor

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From: Dan McGregor (GBC Winstone)
Sent: Tuesday, 25 July 2017 10:08
To: Paul Busing <Paul.Busing@kapiticoast.govt.nz>
Cc: Nicholas Weekes (GBC Winstone) <Nicholas.Weekes@gbcwinstone.co.nz>
Subject: RE: Updated Summary Management Plan

Paul Busing

From: Dan McGregor (GBC Winstone) <Dan.McGregor@gbcwinstone.co.nz>
Sent: Tuesday, August 01, 2017 9:32 AM
To: Paul Busing
Cc: Nicholas Weekes (GBC Winstone)
Subject: RE: Updated Summary Management Plan
Attachments: Mm 04 2015015W SA (Bund Amendments - Noise Effects).pdf

Hi Paul,

Following on from our discussion below I've attached Marshall Day's response to Nigel's queries. Happy to discuss.

Thanks
Dan



DAN MCGREGOR
Projects & Policy Advisor

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From: Dan McGregor (GBC Winstone)
Sent: Tuesday, 25 July 2017 10:08
To: Paul Busing <Paul.Busing@kapiticoast.govt.nz>
Cc: Nicholas Weekes (GBC Winstone) <Nicholas.Weekes@gbcwinstone.co.nz>
Subject: RE: Updated Summary Management Plan

Thanks Paul – I'll get Marshall Day's response on this.

Dan



DAN MCGREGOR
Projects & Policy Advisor

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From: Paul Busing [<mailto:Paul.Busing@kapiticoast.govt.nz>]
Sent: Monday, 24 July 2017 16:54
To: Dan McGregor (GBC Winstone) <Dan.McGregor@gbcwinstone.co.nz>
Cc: Nicholas Weekes (GBC Winstone) <Nicholas.Weekes@gbcwinstone.co.nz>
Subject: FW: Updated Summary Management Plan

Hello Dan,

Please see below.

I am happy to discuss if required.

Regards
Paul

Paul Busing
Development Control Team Leader

Kāpiti Coast District Council
Tel 04 296 4745

www.kapiticoast.govt.nz

From: Nigel Lloyd [<mailto:nigel@acousafe.co.nz>]
Sent: Monday, July 24, 2017 2:54 PM
To: Paul Busing
Subject: RE: Updated Summary Management Plan

Thanks Paul

I would comment as follows:

1. There should be no quarrying to the east of the paper road until the bund is built.
2. The noise condition is included in resource consent condition 28.
3. This condition applies the noise limit of 50dB LAeq between the hours of 7am to 6pm.
4. The noise limit applies at the *notional boundary* which is repeated in the Condition 28.

The notional boundary is as defined in NZS6801:2008 namely:

The notional boundary is a line 20 metres from any side of a dwelling or the legal boundary where this is closer to the dwelling.

The Marshall Day Acoustics (MDA) memo dated 30 June 2017 does not show:

1. Where the source of the quarrying is assumed to be,
2. Where the receiver is assumed to be, and
3. The extent of the bund and the slope at the edge.

Figure 1 in the Memo does not show the dwelling at 72 Te Roto Road nor the extent of the notional boundary around the dwelling. The notional boundary also extends to the side of the dwelling for a distance of 20 metres. From what we can see this means that the notional boundary would overlap the eastern/northern boundary of the site at the closest point to the dwelling.

The noise level originally predicted by MDA (August 2015) for 72 Te Roto Road was 49 dB LAeq with the acoustic bund so there is not much leeway available for any operation where the bund is not fully effective.

There is considerable uncertainty from the Memo as to how close to the paper road the quarrying can take place and still comply with 50dB LAeq.

We recommend that MDA provides clarification of their claim that the quarrying operation can take place right up to the western edge of the paper road or whether a no-go area needs to be identified west of the paper road to allow greater confidence that the noise limit can be met.

Regards
Nigel Lloyd

Acousafe Consulting & Engineering Ltd
Ph: +64 274480282

MEMO

Project:	Otaki Quarry Extension	Document No.:	Mm 04		
To:	GBC Winstone	Date:	31 July 2017		
Attention:	Dan McGregor	Cross Reference:	Mm 02 r01 2015015W Mm 03 r01 2015015W		
Delivery:	Email	Project No.:	2015015W		
From:	Steve Arden	No. Pages:	4	Attachments:	No
Subject	Bund Amendments - Noise Effects				

INTRODUCTION

GBC Winstone (Winstone) was granted consent in 2016 to extract gravels at a site (Ashford Park) adjacent to their existing quarry operation at Otaki.

Since consent has been granted, amendments to the bund on the northern part of the site have been proposed. This is to avoid the paper road and to avoid an equestrian area.

Marshall Day Acoustics has provided information regarding the potential noise effects of these amendments. This information is included within the documents *Mm 02 r01 2015015W* and *Mm 03 r01 2015015W*. This memo should be read in conjunction with those documents which includes full details of the acoustical effects of the proposed bund amendments.

The Council has request additional information with regard to our assessment. Those requests and our responses are detailed within this memo.

Paper Road (Mm 02 r01 2015015W) – Split Berm

With regard to the split berm, the Council requests and our responses are as follows. Figure 1 appended to this document provides a noise contour showing a visual clarification of our responses.

Council Request 1: *Where the source of the quarrying is assumed to be:*

Our Response 1: We have assumed that noise sources are as close to the paper road as reasonably practicable. For the purposes of our assessment we have assumed that two excavators are operating, as well as a loader traversing the immediate area and trucks removing gravel for processing.

Council Request 2: *Where the receiver is assumed to be:*

Our Response 2: The assessment location is anywhere within the notional boundary of any dwellings. In this case, the closest dwelling (and potentially exposed to highest noise levels) is 72 Te Roto Road. Noise levels were predicted for the western, southern and eastern notional boundaries of 72 Te Roto Road. To ensure these positions were representative of the notional boundary, a noise contour was produced to ensure that noise levels did not exceed the limit anywhere within the notional boundary of 72 Te Roto Road. This is shown in Figure 1.

Council Request 3: *The extent of the bund and the slope at the edge:*

Our Response 3: We have been advised that the slope at the edge of the bund is a ratio of 1:2. Noise levels were predicted using the noise modelling programme SoundPLAN. This does not have a facility to model the edge of the bund. To provide a conservative prediction, the edges of these bunds were not included in our modelling. Instead, the gap between the bunds has been modelled as 36 metres (20 metres paper road plus 16 metres to allow for two bund slopes with a ratio of 1:2). We consider this a conservative approach as it does to not into account any acoustical screening that may be provided by the slopes.

Council Request 4: *Figure 1 in the Memo (Mm 02 r01 2015015W) does not show the dwelling at 72 Te Roto Road nor the extent of the notional boundary around the dwelling.*

Our Response 4: This is shown in Figure 1 overleaf, complete with noise contours.

Council Request 5: *There is considerable uncertainty from the Memo as to how close to the paper road the quarrying can take place and still comply with 50dB LAeq:*

Council Request 6: *We recommend that MDA provides clarification of their claim that the quarrying operation can take place right up to the western edge of the paper road or whether a no-go area needs to be identified west of the paper road to allow greater confidence that the noise limit can be met:*

Our Response 5 and 6: The modelling shows that quarrying up to the western edge of the paper road can occur, and noise levels are predicted to remain within the relevant limit. This can be seen in Figure 1. As stated in *Mm 02 r01 2015015W*, no quarrying should occur east of the paper road until the bund is complete or additional mitigation measures are included.

Bund Shortening (Mm 03 r01 2015015W)

Although not requested by the Council, to provide greater certainty with regard to the predictions of noise levels due to shortening of the bund, we have included a noise contour showing the results of our prediction.

In this instance, residents on Te Roto Road will be exposed to most noise during Stage 3 extraction (when compared with other stages).

Note that although activities during Stage 4 extraction are closer to assessment locations on Te Roto Road, the bund would be complete at this stage and noise level predictions would be as per our original noise assessment (*Rp 001 r04 2015015W*).

As per our original assessment, we have assumed that during Stage 3 extraction, preparation for Stage 4 extraction and Stage 2 remediation could occur simultaneously and as such, are included as activities in our noise model.

The noise predictions are shown as a noise contour included as Figure 2.

SUMMARY

Following the Council request for additional information, we have provided additional information with regard to the extent of quarrying when leaving a gap in the bund for the paper road, as well as providing additional information with regard to shortening of the bund (although not requested by the Council).

In summary,

- Noise levels are predicted to comply with noise limits as stated within the conditions of consent when quarrying Stage 1B up to the western edge of the paper road.
- Quarrying within Stage 1B should not occur east of the paper road until additional mitigation is implemented (i.e. completion of the bund).
- Noise levels are predicted to comply with the noise limits as stated within the conditions of consent with a shortened bund (up to Stage 3).
- The bund should be completed as designed prior to quarrying of Stage 4. However, site preparation for Stage 4 is allowable.

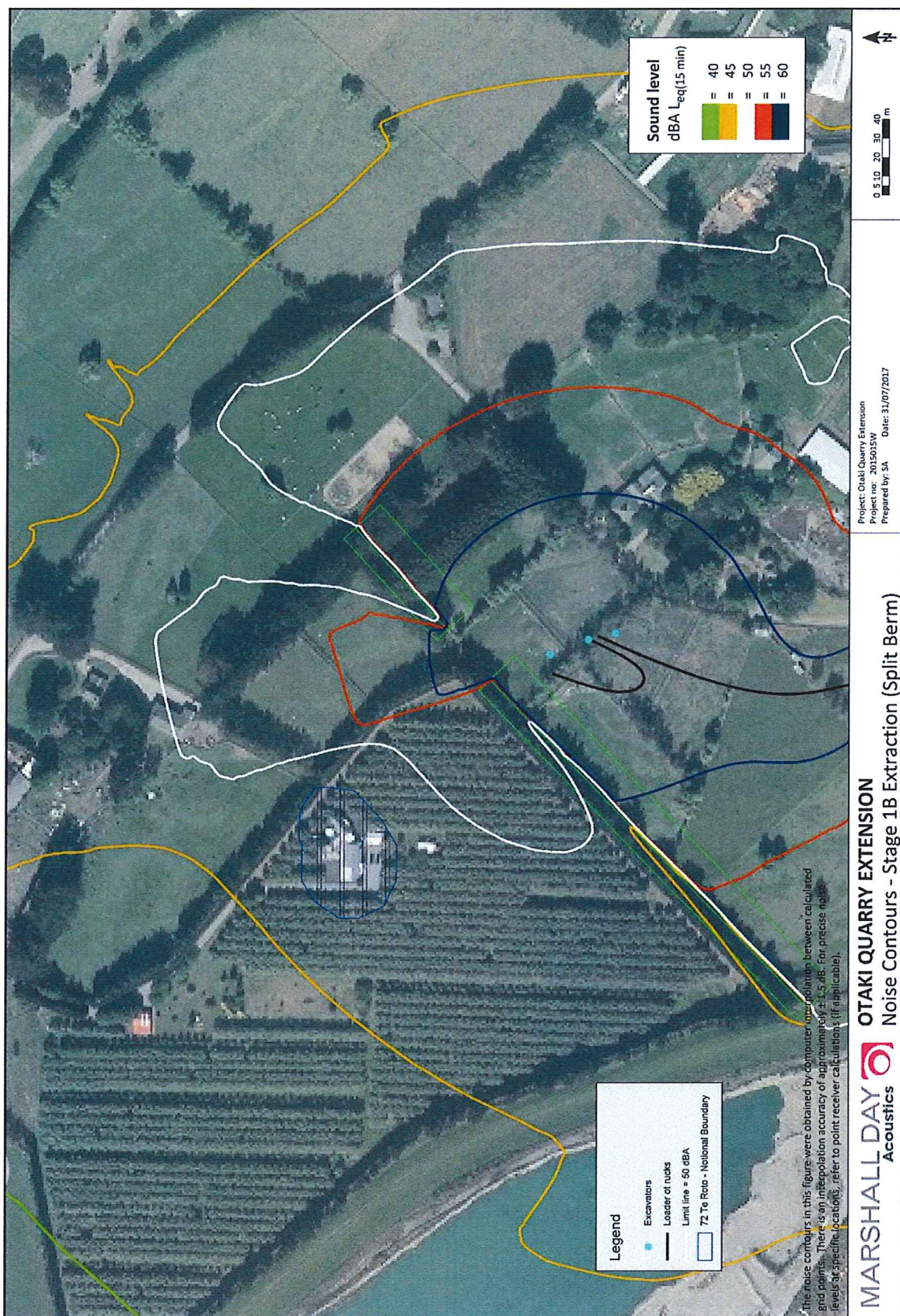


Figure 1: Noise Contours (Stage 1B) – Split Berm

Refer to *Mm 02 r01 2015015W* for location of paper road.

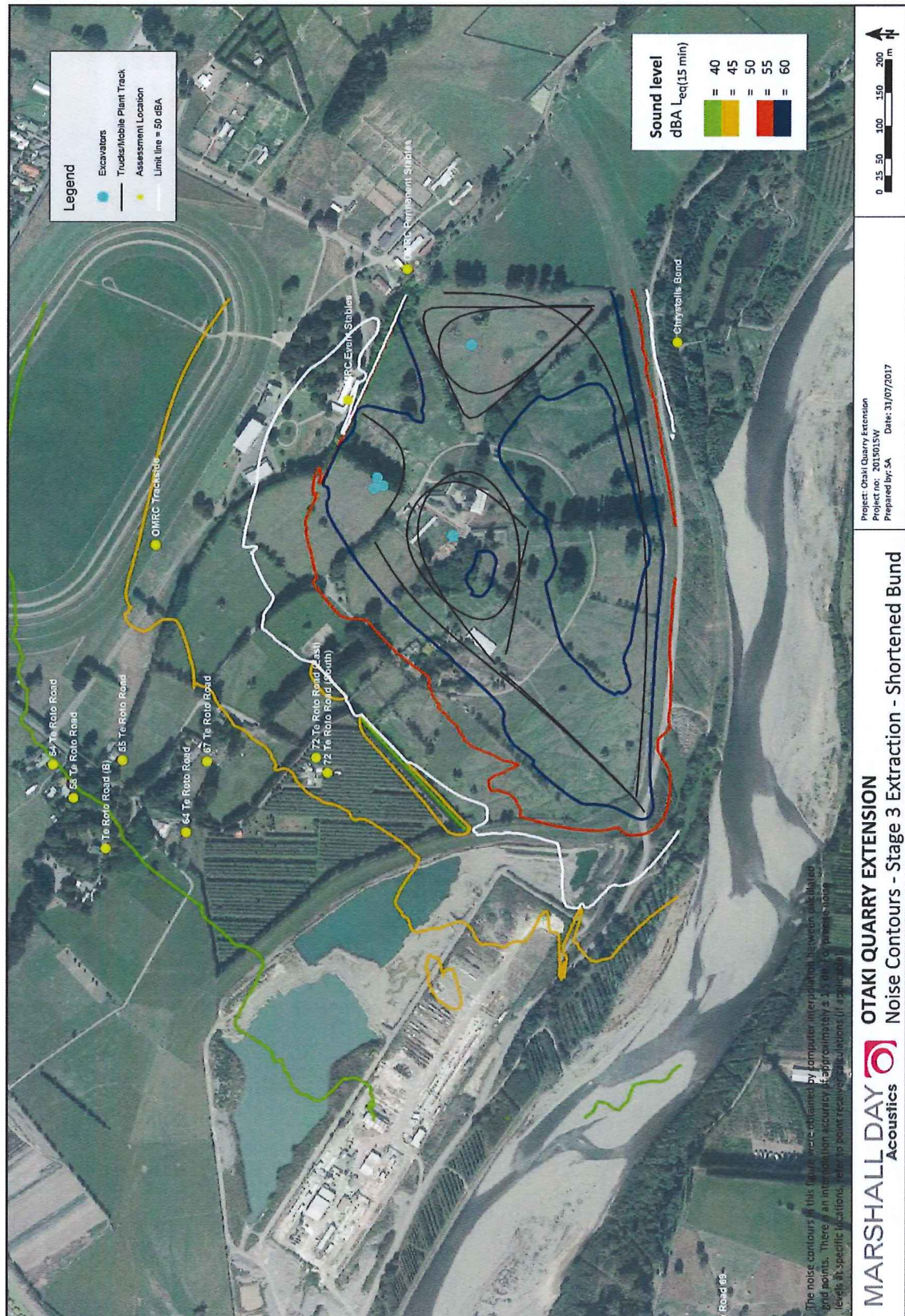


Figure 2: Noise Contours (Stage 3) – Shortened Bund

MEMO

Project:	Otaki Quarry Extension	Document No.:	Mm 02 r01		
To:	GBC Winstone	Date:	30 June 2017		
Attention:	Dan McGregor	Project No.:	2015015W		
From:	Steve Arden	No. Pages:	2	Attachments:	No
Subject	Acoustic Modelling - Paper Road Comments				

INTRODUCTION

GBC Winstone (Winstone) was granted consent in 2016 to extract gravels at a site (Ashford Park) adjacent to their existing quarry operation at Otaki.

As part of that proposal, a 4 metre high bund is being constructed along the northern part of the site. This bund crosses a paper road which the Council has advised must be left clear unless the paper road is officially closed. This means a gap of 20 metres in the bund is required during the initial stages of gravel extraction which could compromise the noise barrier effect of that bund.

Winstone has requested we consider the impact this will have on the noise levels received at assessment locations. The closest assessment location is 72 Te Roto Road and is the focus of this assessment. All other assessment locations are at a greater distance from the activity and noise levels from operational activities will be lower.

This document is based on the information provided by Winstone showing the area of bund to be left vacant. For completeness, this is included as Figure 1 below.

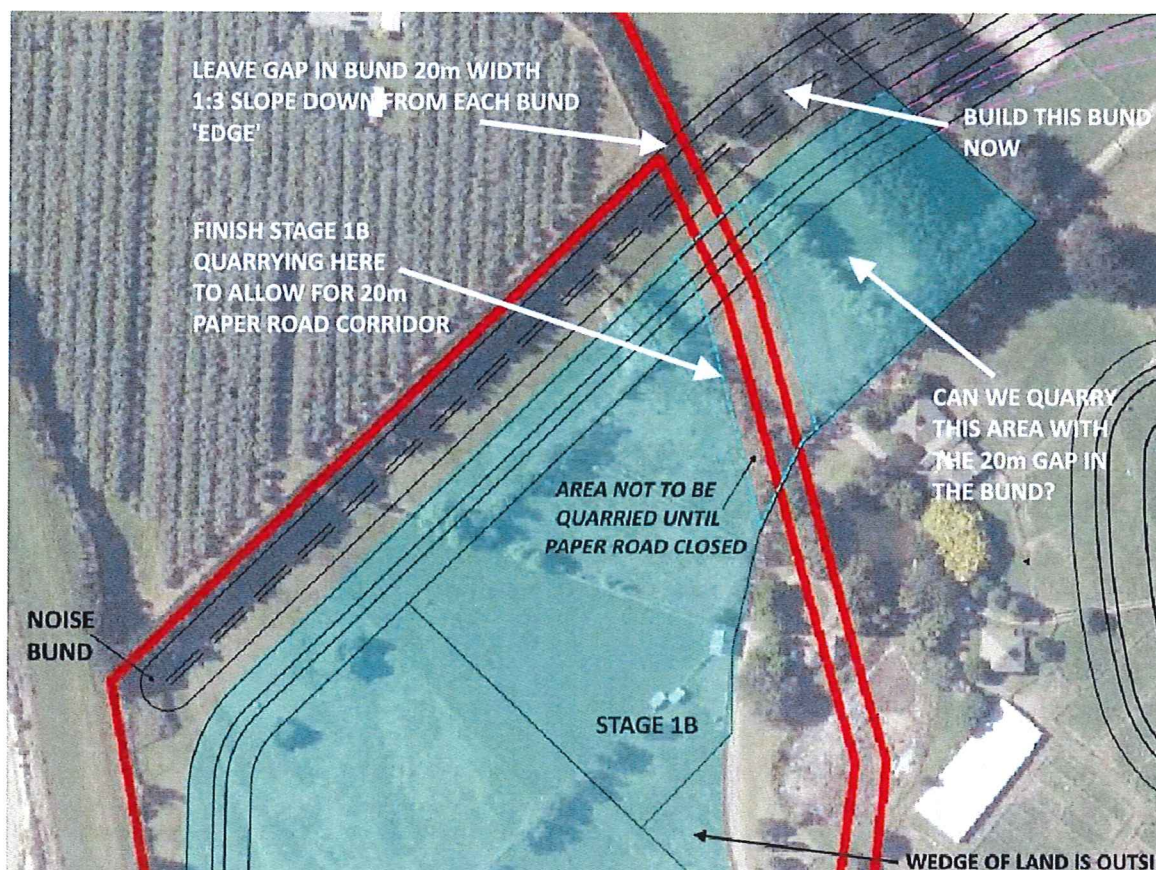


Figure 1: Aerial showing break in bund due to paper road. Paper road follows parallel red lines.

NOISE PERFORMANCE STANDARDS

We have predicted the noise levels and compared those against the Conditions of Consent previously issued for the proposal. The relevant condition is reproduced as follows:

28. *Noise associated with the extraction activity on the site shall not exceed the following limits measured at any point within the notional boundary (as defined in NZS 6801:2008) of any dwelling existing at the date of commencement of the consent:*
- a. 7am – 6pm 50 dB (L_{Aeq})
 - b. 6pm – 7am 45 dB (L_{Aeq})
 - c. *During all night-time hours (10pm – 7am) no noise event shall exceed L_{AFmax} 75 dB*
 - d. *All sound levels shall be measured in accordance with NZS 6801:2008 “Acoustics – Measurement of environmental sound” and be assessed in accordance New Zealand Standard NZS 6802:2008 “Acoustics - Environmental Noise”*

As extraction activities are only permitted between 7am and 6pm (as per condition 20 b), the relevant noise limit to compare operational noise levels is 50 dB L_{Aeq} .

NOISE PREDICTIONS

As part of the original consent, a noise model was constructed to predict the noise levels from the activity. This noise model has been modified to reflect the noise bund as shown in Figure 1. We have considered two scenarios as follows:

Scenario 1: Whether compliance can be achieved by quarrying up to the western edge of the paper road.

Scenario 2: Whether compliance can be achieved quarrying east of the paper road.

Scenario 1

Noise levels are predicted to be L_{Aeq} 48 dB at 72 Te Roto Road. This is compliant with the noise limit as set out in the Conditions of Consent.

Scenario 2

Noise levels are predicted to be L_{Aeq} 52 dB at 72 Te Roto Road. This exceeds the noise limit as set out in the Conditions of Consent by 2 dB.

SUMMARY

We have reviewed the proposal by Winstone to carry out quarrying with a gap in the bund where the paper road is currently located.

Based on an updated acoustic model, we are satisfied that the noise limit of L_{Aeq} 50 dB as set out in the Conditions of Consent can be met quarrying up to the western edge of the Paper Road.

The noise limit is predicted to be marginally exceeded when quarrying east of the paper road and further mitigation would be necessary for extraction activities to occur in this area.