

BEFORE THE HUTT CITY COUNCIL

Proposed District Plan Hearings Panel – Stream 4 – Other Zones

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of the Proposed Lower Hutt District Plan

STATEMENT OF REBUTTAL EVIDENCE OF SEAN BELLAMY

ON BEHALF OF HUTT CITY COUNCIL

Hearing Stream 4 – Quarry Zone and Other Zones

15 July 2026

1.0 Introduction

1.1 My name is Sean Bellamy and I am an Intermediate Policy Planner at Hutt City Council.

1.2 I have reviewed the evidence of:

- Winstone Aggregates
 - Submitter Evidence - Philip Heffernan - Winstone Aggregates - PDP444 - Corporate
 - Submitter Evidence - David Compton-Moen - Winstone Aggregates - PDP444 - Landscape
 - Submitter Evidence - Jamie Exeter - Winstone Aggregates - PDP444 – Acoustics
 - Submitter Evidence - Colin Hopkins - Winstone Aggregates - PDP444 - Planning
- Kelson Heights Ltd
 - Submitter Evidence - Cameron de Leijer - on behalf of Kelson Heights Ltd - PDP373 - Planning

1.3 This rebuttal evidence responds only to the pre-circulated written evidence received from submitters prior to the hearing, listed above.

1.4 Other submitters may also present oral evidence or further details at the hearing. These may raise additional matters that could influence or alter the recommendations made in this rebuttal evidence.

1.5 I only cover points raised by submitters in the evidence above where those relate to the specific matters addressed in the Quarry Zone Section 42A Report and the Other Zones Section 42A Report. The matters are the rezoning of Natural Open Space zoned land located at 64 Waipounamu Drive Kelson and amendments to the

provisions in the Quarry Zone to be more enabling of quarrying and cleanfills.

1.6 Except as expressly identified in this statement, all findings and recommendations contained in my original Section 42A reports remain unchanged. For the sake of brevity, I will not comment on submitter evidence where:

- the original Section 42A reports recommended accepting the submitter's originally requested relief, or
- the evidence concurs with the recommendation in the Section 42A report, or
- the evidence repeats reasoning and evidence already presented in the original submission

2.0 Qualifications, experience, and Code of Conduct

2.1 My qualifications and experience are set out in section 2.3 of my Section 42A Report on the Quarry Zone. I repeat the confirmation given in that report that I have read and agree to comply with the Code of Conduct for Expert Witnesses.

3.0 Supporting evidence

3.1 I attach as Appendix 2 supporting evidence from:

- Expert review evidence - Rose Armstrong - Landscape and Visual Effects - 13 July 2026
- Expert review evidence - Malcolm Hunt - Review of Submission 444 - Noise & Vibration Matters - 10 July 2026

4.0 Responses to submitter evidence and statements

- 4.1 Paragraphs 4.3 to 4.67 below respond to submitter evidence in relation to the provisions for the Quarry Zone. Paragraphs 4.68 and 4.69 respond to the potential rezoning of part of 64 Waipounamu Drive, Kelson.
- 4.2 Appendix 1 of my evidence sets out the revised and updated recommended amendments in response to submitter evidence, including those recommended amendments contained within this rebuttal evidence. My Section 42A report recommended amendments are shown in red underlined or ~~strike through~~ and further amendments recommended in this rebuttal evidence are shown in blue underline or ~~strike through~~.

QUARRY ZONE

- 4.3 I have reviewed the evidence of Colin Hopkins filed on behalf of Winstone Aggregates Ltd (444). Collectively, the evidence from Winstone Aggregates Ltd seeks to:
- Amend the rules in Quarry Zone Protection Overlay within the General Rural Zone and the Rural Lifestyle Zone to
 - Require public notification, or specific notification to the quarry operator, and
 - Change the activity status for dwellings that do not meet a noise insulation standard to non-complying.
 - Remove reference to conservation activities in QUARZ-P1 and the associated Rule QUARZ-R4, which would permit conservation activities,
 - Remove Area 3 from the Quarry Amenity Protection Overlay and delete Standard QUARZ-S5,
 - Delete the vibration standards:
 - QUARZ-S3.5,

- QUARZ-S3.12, and
 - Amend vibration standard QUARZ-S3.2(b).
- 4.4 I have sought advice on the acoustic and landscape matters raised in the evidence of Mr Exeter and Mr Compton-Moen respectively. Statements of rebuttal evidence have been prepared by Ms Rose Armstrong (Landscape) and Malcolm Hunt (Acoustics) to support my planning evidence in this rebuttal statement.

Quarry Zone Protection Overlay

Requiring notification of the quarry operator for resource consents within the QZPO

- 4.5 Winstone Aggregates Ltd sought amendments to the QZPO provisions so that the quarry operator could be specifically notified or always considered as an affected party for any resource consent applications for sensitive activities within the QZPO. I did not support this change in my section 42A report.
- 4.6 While Mr Hopkins agrees with the approach of the QZPO generally to manage reverse sensitivity effects, he also states that the PDP would be more effective in managing reverse sensitivity effects on the quarry by including specific direction within the notification provisions. Mr Hopkins suggests two options:
- i. The plan could prescribe a rule requiring public notification for sensitive activities within the QZPO where written approval from the quarry operator is not provided.
 - ii. Alternatively, require explicit consideration of the quarry operator as an affected person at the time of a consent application. Mr Hopkins has suggested this could be achieved through a clause within the notification provisions requiring the specific consideration of the quarry operator for sensitive activities within the QZPO. For example:

“When deciding who is an affected person in relation to any application for Residential Activities or Visitor Accommodation within the Quarry Zone Protection Overlay, for the purposes of section 95E of the Resource Management Act 1991, the council will give specific consideration to the quarry operator.”

- 4.7 Having considered Mr Hopkins' suggested approaches, I remain of the opinion that the existing RMA process for determining who is an affected person in the context of a specific consent application is appropriate. My position on this matter is set out in the Section 42A Report at paragraphs 203 and 204.

Non-complying activity status for sensitive activities in the QZPO

- 4.8 Winstone Aggregates Ltd sought a non-complying activity status for new sensitive activities seeking to establish in the QZPO. The PDP currently provides for these activities as a restricted discretionary activity. In my Section 42A report I recommended rejecting this relief on the basis a non-complying activity status is too restrictive and the matters of discretion provide sufficient scope for assessment. Mr Hopkins disagrees and considers a non-complying activity to be reasonable activity status given the importance of managing the impact on activities enabled in the Quarry Zone. In addition, he also considers it appropriate to specifically consider the quarry operator. Mr Hopkins relies on the National Policy Statement for Infrastructure (NPS-I) which enables quarrying activities, along with the recognition of quarrying provided in the National Policy Statement on Indigenous Biodiversity (NPS-IB) and National Environmental Standards for Freshwater (NES-F) for his position.
- 4.9 I disagree with Mr Hopkins' assessment of the framework of provided by the NPS-I¹. I consider that the rules as notified align with the enabling directive of the NPS-I. I agree that quarrying in the Belmont Quarry falls within the definition of an infrastructure supporting activity in the NPS-I, however the NPS-I is more limited in how it enables infrastructure supporting activities than for infrastructure activities. In my opinion the NPS-I (as well as the

¹ Paragraph 11.17

NPS-IB and NES-F) still requires consideration of the adverse effects of quarrying on the environment.

4.10 I have not altered my position and consider the activity status within the overlay is appropriate. The NPS-I, while directive in how infrastructure supporting activities such as quarrying should be provided for, does not necessitate the level of regulation over sensitive activities that Mr Hopkins is seeking. The matters in NPS-I Policy 5 are provided for through the PDP restricted discretionary approach to sensitive activities. This ensures that reverse sensitivity is considered as part of any resource consent process.

4.11 I recommend amending the matters of discretion to include:

Matters of discretion are restricted to:

1. *Reverse sensitivity effects on quarrying activities in the Quarry Zone, including, but not limited to, the impact of the:*
 - a) *visibility of the quarry from the sensitive activity*
 - b) *noise and vibration from quarrying activities at the site, and*
 - c) *dust generated by quarrying activities.*

4.12 The proposed modification provides clarity for the plan users on the adverse effects that can result in reverse sensitivity. It aligns with the typical effects of infrastructure activities that can be managed but not completely avoided in Policy 11a of the NPS-I.

Provisions for conservation activities

4.13 In paragraph 10.5 of his evidence, Mr Hopkins makes the case for removing the reference to enabling conservation activities within the Quarry Zone. Relatedly, in paragraph 10.9, Mr Hopkins makes the case for removing the permitted activity rule for conservation activities.

4.14 Mr Hopkins argues that:

- It is not required to manage effects relating to quarry activities;
- It is not aligned with the NPS-I direction to enable quarrying as an infrastructure-supporting activity and does not accord with

the direction in the NPS-IB and NPS-FW to support essential quarry activities and their operational requirements. Conflicts with the fundamental nature of quarrying as a land-disturbing, extractive activity;

- Duplicates the existing PDP mechanisms (e.g., Special Amenity Overlay); and
- Risks elevating conservation activities and outcomes beyond what is necessary or appropriate in a quarrying context or PDP planning framework.

- 4.15 I consider that QUARZ-P1 as notified provides for conservation activities within the Quarry Zone to the extent that they may be needed for mitigation provisions, such as buffer areas and setbacks. I do not consider that they raise the importance of indigenous biodiversity.
- 4.16 I see the maintenance of buffer areas and setbacks as being substantially different from rehabilitation. The purpose of mitigation measures being to mitigate the effects of ongoing activities and effects on adjacent sites zones, whilst rehabilitation is post-activity.
- 4.17 However, I consider that policy support for mitigation measures can be achieved through QUARZ-P7, which specifically relates to the retention of indigenous vegetation.
- 4.18 As a result, I recommend accepting the request of Winstone Aggregates Ltd to amend QUARZ-P1 to remove the explicit reference to conservation activities.

QUARZ-R4: Conservation Activities

- 4.19 In paragraph 10.9 of his evidence, Mr Hopkins makes the case for removing reference to conservation activities from QUARZ-R4 and replacing the term with rehabilitation activities.
- 4.20 The proposed change is:

QUARZ-R4: ~~Conservation~~ Rehabilitation Activities

- 4.21 Mr Hopkins argues that a rule specifically on conservation activities is unnecessary for a zone intended for extractive use, management of routine vegetation management is unnecessary as conservation activities are permitted or managed under the wider PDP framework and should refer to rehabilitation activities associated with quarry operations.
- 4.22 I agree with Mr Hopkins that conservation activities are not an extractive activity. The issue is the need to provide for buffer zones or setbacks should the extent or intensity of quarry activities change and whether that would require a resource consent if it were not for this rule. I accept Mr Hopkins evidence that a resource consent would be unlikely to be required.
- 4.23 My assessment of the proposed amendment to replace conservation activities with rehabilitation activities remains the same as my Section 42A Report. I consider that rehabilitation activities are already covered as they fall within the definition of quarry activities and are managed under QUARZ-R5.
- 4.24 I therefore consider that the rule is superfluous and that Rule QUARZ-R4 should be deleted.
- 4.25 I recommend rejecting the relief sought by Winstone Aggregates (444), but that Rule QUARZ-R4 be deleted.

Retention of indigenous vegetation (QUARZ-P7)

- 4.26 In paragraph 10.8 of his evidence, Mr Hopkins makes the case for removing the QUARZ-P7.
- 4.27 Mr Hopkins argues that QUARZ-P7:
- Elevates importance of retaining indigenous vegetation within the Quarry Zone in a manner that is inconsistent with the extractive and land-disturbing nature of quarrying activities,
 - Introduces an inappropriate level of constraint on what can be achieved on the site,

- Creates internal tension with the enabled activities of the zone by implying a level of vegetation protection that is not compatible with quarry operations, and
- Would require amendment, if retained, to clarify that vegetation retention for visual amenity is managed through the Special Amenity Area Overlay rather than through a general policy within the Quarry Zone.

- 4.28 I have considered Mr Hopkins evidence and the submission on QUARZ-P7. I do not agree with his assessment. In my opinion QUARZ-P7 provides for the mitigation of the effects on sensitive activities in adjacent zones. This in turn minimises reverse sensitivity to the quarry.
- 4.29 I recommend rejecting the submission by Winstone Aggregates Ltd.

Visual effects of Quarrying activities

- 4.30 This section assesses the submission points relating to the visual and landscape effects of quarrying. In particular it considers amendments requested to:
- QUARZ-S1 (Height), and
 - QUARZ-S5 (Quarry Amenity Protection Overlay).

QUARZ-S1 (Height)

- 4.31 Mr Hopkins has requested² the exclusion of radio towers, cell towers, support structures and cement silos from the standard QUARZ-S1 that sets a maximum height for buildings in the Quarry Zone.
- 4.32 My assessment in the Section 42A Report is:

² Paragraph 10.12

- The provision of bulk and location standards to manage the effects of buildings and structures is a standard approach to planning, and
- The standards associated with the Quarry Zone are very permissive, height being the only restriction.

4.33 Mr Hopkins argues that greater weight should be given to the functional need for these buildings and structures to be located within the active quarry. The argument being that the effects of any structure are minimised due to their size and location within the quarry. Mr Hopkins relies on the landscape evidence of Mr Compton-Moen in reaching his conclusions on this issue.

4.34 Mr Compton-Moen advises that that a targeted exemption from QUARZ-S1 is appropriate from a visual effects perspective, provided it is limited to quarry operational structures that are:

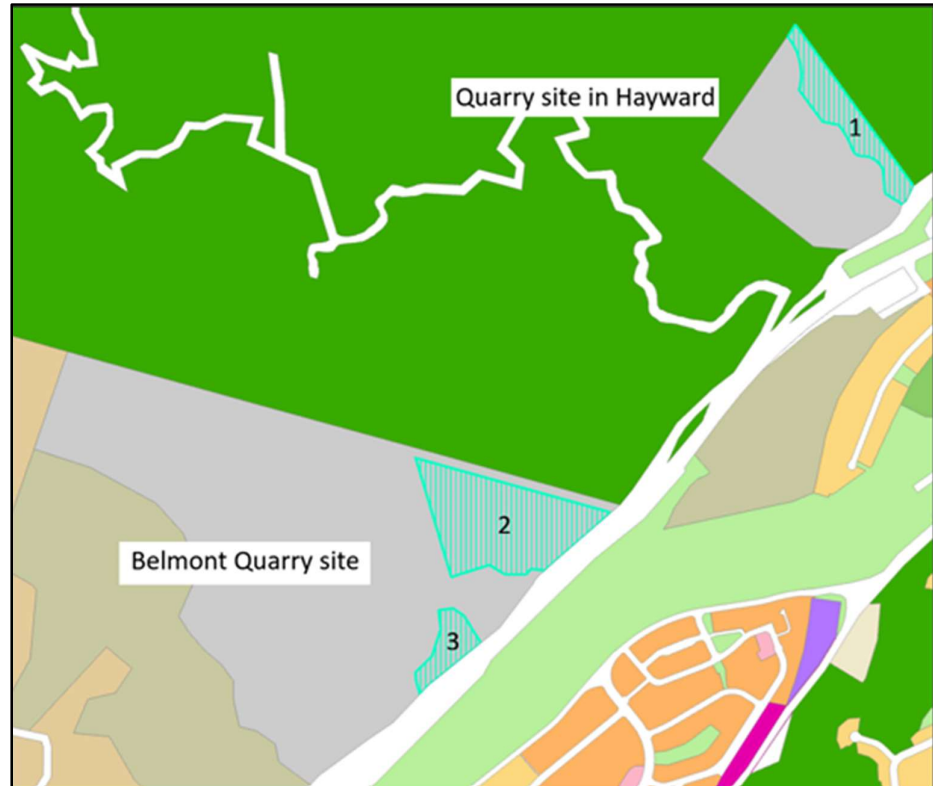
1. Ancillary to quarrying activities or quarry processing;
2. Located within the existing quarry floor, processing area, stockpile area, or yard;
3. Not located on ridgelines or external faces where they would be read as prominent skyline elements from outside the Quarry Zone; and
4. Designed and finished in a recessive or utilitarian manner consistent with quarry plant and structures.

4.35 Ms Armstrong has reviewed Mr Compton-Moen's evidence, and recommends the retention of QUARZ-S1 on the basis that there is potential for structures to compromise visual and landscape values associated with the skyline.

4.36 I agree with Ms Armstrong's assessment and consider that the standard QUARZ-S1 provides an appropriate consenting pathway for structures in the Quarry Zone. The matters of discretion also provide for consideration of the functional need or operational need for the structures, while considering visual effects. Accordingly, I do not recommend any amendments to QUARZ-S1.

QUARZ-S5 (Quarry Amenity Protection Overlay)

- 4.37 In their submission, Winstone Aggregates Ltd opposes the Quarry Amenity Protection Overlay. In his evidence Mr Hopkins states that retaining Areas 1 and 2 of the Overlay (shown in Figure 1, paragraph 168 of my Section 42A Report – repeated here) is not challenged, but does challenge Area 3 of the Overlay.



- 4.38 Mr Compton-Moen has provided additional evidence of the visual and landscape effects of the removal of Area 3.
- 4.39 Mr Compton Moen's assessment is that the removal of Area 3 of the Quarry Amenity Protection Overlay will have:
- Minor to negligible visual effects on the specific views experienced by residents in living nearby.
 - Variable visual effects on the specific views experienced by road and trail users.

- 4.40 Mr Compton has identified a 10m wide strip along the State Highway 2/Western Hutt Road and Hutt River corridor side of the site as a potential alternative to the Area 3, should the Panel form a view that a mapped visual amenity protection area of vegetation is required.
- 4.41 Ms Armstrong has reviewed the evidence of Mr Compton-Moen. I accept Ms Armstrong's assessment that the removal of Area 3 of the Quarry Amenity Protection Overlay would have wide-spread adverse landscape effects.
- 4.42 Ms Armstrong advises that should the Panel form the view that Area 3 should be removed from the Quarry Amenity Protection Overlay the following amendments should be made:
- Amend QUARZ-R3 (Construction of new buildings and structures and alterations to existing buildings and structures) and add a new standard to require use of recessive colours on new structures;
 - Amend the Quarry Amenity Protection Overlay to the suggested 10m retained vegetation strip adjacent to SH2. Subject to additional visual simulations and an assessment of effects.
- 4.43 I accept Mr Hopkins evidence that the NPS-I is relevant. In this instance there is an additional economic benefit and social benefit resulting from infrastructure produced from additional quarried aggregate as opposed to cost of the visual amenity to the community due to the loss of screening. Whilst I acknowledge that quarrying changes the amenity of the area, the NPS-I clearly provides for mitigation of adverse effects.
- 4.44 I therefore recommend that Area 3 of the Quarry Amenity Protection Overlay is retained as I consider the resource consent process as the most effective process to manage the potential adverse effects and the functional and operational need of the quarry.

4.45 I would consider recommending a change to the Quarry Amenity Protection Overlay subject to:

- An additional assessment of the effect of the proposed 10m wide strip, as proposed by Ms Armstrong, and
- Drafting of an appropriate rule to manage the visual effects of new buildings.

Vibration provisions

QUARZ-P6 (Vibration)

4.46 In his evidence, Mr Hopkins proposes an alternative relief for QUARZ-P6, on vibration. The proposed alternative is:

Enable the generation of vibration from quarrying activities within the Quarry Zone, subject to compliance with the applicable standards to ensure effects do not compromise people's health.

4.47 Mr Hopkins argues that this ensures the policy is correctly focused on enabling quarrying activity while managing external environmental effects. It also avoids conflating internal workplace safety with the District Plan's role in managing effects, or unnecessarily seeking to control ancillary activities that would otherwise be considered discretionary or non-complying under Rules QUARZ-R6 and QUARZ-R8. I concur with Mr Hopkins reasoning.

4.48 I recommend a further amendment to QUARZ-P6 as proposed by Mr Hopkins.

QUARZ-S3 Vibration associated with blasting

4.49 This section responds to requests to amend:

- QUARZ-s3.2b;
- QUARZ-S3.5; and

- QUARZ-S3.12.

QUARZ-S3.2 b (Blast noise)

4.50 In my section 42A report, I recommended amendments to QUARZ-S3.2 specifying the maximum blast noise created by the use of explosives and the location it should be measured. The amendments were based on expert advice provided by Mr Hunt.

4.51 Winstone Aggregates Ltd seeks to amend my recommended QUARZ-S3.2b as follows:

b. 133 dB L_{Zpeak} on the façade of any building on another site ~~when measured not less than 4 metres from unoccupied buildings building, in the direction of the blasting.~~

4.52 Mr Hunt has reviewed this amendment and agrees assessing blast noise under with QUARZ-S3.2b at “the façade of any building on another site” is a suitable amendment providing the words ‘free field’ (in brackets) are inserted as follows:

b. 133 dB L_{Zpeak} (free field) on the façade of any building on another site.

4.53 I concur with the recommendation of Mr Hunt as the proposed amendment clearly signals to users any measurements taken in the free field would not need to be adjusted for reflected sound when assessing compliance with the L_{Zpeak} limit, whilst those taken on the façade will need to be adjusted (downwards) in order to determine compliance with the ‘free field’ limits.

4.54 As such, I recommend a further amendment to QUARZ-S3.2b as proposed by Winstone Aggregates Ltd (PDP 444) as follows:

b. 133 dB L_{Zpeak} (free field) on the façade of any building on another site, ~~when measured not less than 4 metres from unoccupied buildings building, in the direction of the blasting.~~

Section 32AA Assessment

- 4.55 The proposed change does not result in any additional costs as this is minor technical change to the standard.

QUARZ-S3.5 (Prior notification of neighbours)

- 4.56 Mr Hopkins has requested the deletion of standard QUARZ-S3.5 (relating to prior notification to neighbours of impending quarry blast events) on behalf of Winstone Aggregates Ltd. Mr Exeter has provided expert evidence to support this requested relief. In Mr Exeter's opinion, QUARZ-S3.5 should be deleted because it is unclear and it would be difficult to determine compliance with the standard. Mr Exeter prefers an approach where the Quarry Management Plan includes the procedures for notifying and communicating with neighbours, which would be required by QUARZ-S7.3.vii (as recommended in my section 42A report).
- 4.57 Mt Hunt has reviewed Mr Exeter's evidence on this matter and agrees with that notification of potentially affected neighbours can be managed through the Quarry Management Plan. In response to the concerns raised in the s42A report he considers QUARZ-S3.5 should be removed because:
- a. The term 'irregular blasting' is too imprecise and is an inexact standard.
 - b. Prior notification to neighbours as little as one hour prior to blasting may be seen by many to be insufficient warning under some circumstances.
 - c. The proposed changes to standard QUARZ-S7 provide for notification of the neighbours.
- 4.58 I agree with Mr Hunt and recommend deleting QUARZ-S3.5 as proposed by Winstone Aggregates Ltd.

Section 32AA Assessment

- 4.59 The proposed amendment does not result in any additional environmental or social cost as notification of neighbours is adequately provided for under the Quarry Management Plan. I consider the amendment is more effective in giving effect to District Plan as it removes a standard that could not be complied with. It is

also more efficient as a mechanism for notifying neighbours is retained through the Quarry Management Plan.

QUARZ-S3.12: Vibration associated with blasting

- 4.60 Mr Hopkins on behalf of Winstone Aggregates Ltd seeks the removal of Standard QUARZ-S3.12 and relying on the DIN 4150-3:2016 Standard which is referenced in QUARZ-S3.11.
- 4.61 In my Section 42A Report, I recommend an amendment to QUARZ-S3.12 to specify the use of PPV vibration limits of Appendix J, Table J4.5(A) of Australian Standard AS 2187-2:2006 Explosives – Storage and use, Part 2: Use of explosives. The recommendation was based on expert advice provided by Mr Hunt.
- 4.62 Mr Exeter is concerned that it would be challenging to determine compliance with the permitted standards until all blasts for the year have been completed and that there is no vibration limit for the top 5% of blasts each year.
- 4.63 Mr Hunt agrees with Mr Exeter that compliance with the DIN 4150-3:2016 limits will ensure that vibration effects on amenity for building occupants will be reasonable and that QUARZ-S3.12 can be deleted. Blasting vibration will only be required to comply with standard QUARZ-S3.11 which requires compliance with the vibration limit values of DIN 4150-3:2016 in all buildings, unoccupied or otherwise.
- 4.64 In addition, Mr Hunt recommends retaining and amending the s.42A version of QUARZ-S3.11 to recognise that this standard is not applied simply to protect the building structure from vibration damage but also provides suitable protection to building occupants experiencing vibration due to quarry blasting.
- 4.65 The proposed change is:

11. In order to avoid damage to buildings and to protect building occupants from undue annoyance, blasting shall not exceed

*PPV vibration limits of the German Standard DIN 4150-3:2016
Structural Vibration – Part 3: Effects of Vibration on Structures
when measured at the foundation for single storey buildings or
in the plane of the highest floor of multi storey buildings.*

- 4.66 I agree with Mr Hunt's opinion and recommend accepting the requested relief to delete QUARZ-S3.12 and to amend QUARZ-S3.11 as recommended by Mr Hunt.

Section 32AA Assessment

- 4.67 The proposed amendment does not result in any additional environmental or social cost as it the measurement of vibration is adequately provided for under the remaining provisions of QUARZ-S3. I consider the amendment is more effective than the notified provision in giving effect to objectives and policies of the PDP as it ensures that occupants of buildings are protected from undue annoyance from blasting.

NATURAL OPEN SPACE ZONE

- 4.68 Kelson Heights Limited (373) sought the rezoning of a portion of the site at 64 Waipounamu Drive, Kelson from Medium Density Residential to Natural Open Space. Planning evidence has been submitted Mr de Leiger which I have reviewed.
- 4.69 Having reviewed Mr de Leiger's evidence, I remain of the opinion that the rezoning request would not achieve the aims submitted by the applicant given the more permissive nature of the earthworks provisions for the Natural Open Space Zone relative to the Medium Density Residential Zone.

5.0 CONCLUSION

- 5.1 Having reviewed the evidence filed by submitters, I generally continue to support the recommendations contained in the Section 42A Reports for the Quarry Zone and the Other Zones (insofar as that report relates to the Natural Open Space Zone). However, for the reasons set out in this rebuttal evidence, I recommend some

refinements to the notified provisions and to the recommendations contained in the Section 42A Report. Namely, I now support the deletion on QUARZ-S3.5 and QUARZ-S3.12 as well as the amendment of QUARZ-S3.2(b) and QIUARZ-S3.1.

- 5.2 Recommended changes are set out in Appendix 1 of this evidence.
- 5.3 The recommendations in this evidence are intended to assist the Hearing Panel in determining the submissions on the Quarry Zone and Other Zones topics and, in my opinion, provide the most appropriate way to achieve the purpose of the Resource Management Act 1991.

SEAN BELLAMY

Intermediate Policy Planner

For Hutt City Council

15 July 2026

APPENDIX 1: RECOMMENDED AMENDMENTS TO PROVISIONS

QUARZ – Quarry Zone

Policies

QUARZ-P1 Enabled activities
Enable the operation and development of quarrying activities and conservation activities within the Quarry Zone.
QUARZ-P6 Vibration
Enable the generation of vibration in the Quarry Zone where it: 1. Is for quarrying activities or ancillary activities, and 2. Does not compromise people's health. Enable the generation of vibration from quarrying activities within the Quarry Zone, subject to compliance with the applicable standards to ensure effects do not compromise people's health.

Rules

QUARZ-R4 Conservation Activities
1. Activity Status: Permitted

Standards

QUARZ-S3	Vibration associated with blasting
1) Blasting shall be carried out in accordance with the operating practice described in <i>Appendix J. Section J5 of AS 2187 2 — 2006 Explosives — storage, transport and use. Part 2 Use of explosives.</i> 2) Blast noise (airblast) created by the use of explosives shall not exceed: a) 126 dB L_{Zpeak} when measured at the notational boundary 20 metres from occupied dwellings, shall not exceed a peak overall sound pressure of 120 dBC (126 dBL).	

- b) 133 dB L_{zpeak} (free field) on the facade of any building on another site when measured not less than 4 metres from unoccupied buildings building, in the direction of the blasting.
- 3) All blasting shall be restricted to between 10:00am and 4:00pm, Monday to Saturday (excluding public holidays) except where blasting is necessary for safety reasons.
- 4) Blasting shall be confined to two occasions per day except where necessary for safety reasons.
- ~~5) Where blasting is irregular and the occupiers of neighbouring sites could be alarmed, they shall be advised of impending blasts at least one hour before any such blast.~~
- ~~6) Monitoring to obtain records and data representative of the effects of blasting on the Quarry Management Area (shown on the District Plan maps) shall be carried out at such frequency to ensure there is sufficient data (at least 10 blasts) to ensure continued compliance with clauses 11 and 12 (below) and shall be maintained on an ongoing basis at a frequency of at least 1 in 20 blasts.~~
- 7) Every blast shall be recorded, including:
- a) The date and time of the blast,
 - b) Location of blast, and
 - c) Blast size and charge mass per delay, and
 - d) Blast records shall be made available to the Council on request.
- ~~8) Where vibration monitoring is carried out in accordance with 6 above, blasts shall be recorded with particular attention to details of:~~
- ~~a) Location of monitoring points,~~
 - ~~b) Distance from the blast to the monitoring points,~~
 - ~~c) Type and serial numbers of the monitoring instruments and transducers,~~
 - ~~d) Peak noise level (air blast), and~~
 - ~~e) Vibration velocity time history and absolute maximum vibration velocity for each of the three components.~~
- ~~9) The blast records and monitoring results shall be made available to the Council on request.~~
- ~~10) Vibration from blasting shall be measured at appropriate monitoring points established between the closest dwelling and its nearest boundary in accordance with Appendix J4 2.2 of AS2187.2 2006.~~
- 14) In order to avoid damage to buildings and to protect building occupants from undue annoyance blasting shall not exceed PPV vibration limits of the German Standard DIN 4150-3:2016 Structural Vibration – Part 3: Effects of Vibration on Structures when measured at the foundation for single storey buildings or in the plane of the highest floor of multi storey buildings. When blasting, the maximum absolute value of the vector sum of three time synchronised velocity components shall not exceed the guideline values for evaluating the effect of short term vibration in AS2187.2 – 2006, Table J1.

- 12) ~~Evaluation of the effect of vibration on building occupants shall be also carried out in accordance with NZS/ISO2631: 1997(E) Mechanical vibration and shock Evaluation of human exposure to whole body vibration; Part 1: General requirements and Part 2: Continuous and shock induced vibration in buildings (1 to 80 Hz). The multiplying factor of the base curves to be used in evaluating satisfactory magnitudes will be 60, as defined in Table 2 of Annex A in ISO 26 31: Part 2. In order to protect occupants of buildings blasting shall not exceed PPV vibration limits of Appendix J, Table J4.5(A) of Australian Standard AS 2187-2:2006 Explosives – Storage and use, Part 2: Use of explosives.~~

Matters of discretion if the standard is breached:

- 1) The effects of vibration on adjacent sites and residential units in adjacent zones.
- 2) Any relevant DIN vibration standard or Australian/New Zealand vibration standard for quarries.
- 3) Any practicable measures taken to manage the vibration effects.

Rules – Quarry Zone Protection Overlay

GRUZ/RLZ-QZPO-Rx

1 Activity Status: Restricted discretionary

Matters of discretion are restricted to:

1. Reverse sensitivity effects on quarrying activities in the Quarry Zone, including, but not limited to, the impact of the:
 - a) Visibility of the quarry from the sensitive activity
 - b) Noise and vibration from quarrying activities at the site, and
 - c) Dust generated by quarrying activities.

APPENDIX 2: Expert Evidence

Appendix 2.1 Statement of Evidence – Rose Armstrong on Submission 444 - Landscape and Visual Effects - 13 July 2026

**Appendix 2.2 Statement of Evidence- Malcolm Hunt - Review of
Submission 444 - Noise & Vibration Matters - 10 July 2026**

BEFORE THE HUTT CITY COUNCIL
Independent Hearing Panel – Stream 4 – Other Zones

IN THE MATTER of the Resource Management Act
1991 (the Act)

AND

IN THE MATTER of the Proposed Hutt District Plan

**STATEMENT OF EVIDENCE OF ROSE ARMSTRONG FOR THE HUTT
CITY COUNCIL**

LANDSCAPE AND VISUAL EFFECTS

14 July 2026

Introduction

1. My full name is Rosemary Alwyn Armstrong. I am Landscape Architect and Registered member of Tuia Pito Ora, the New Zealand Institute of Landscape Architects (NZILA).
2. I have worked as a Landscape Architect in Aotearoa New Zealand for 25 years and have specialised in landscape assessment work for the last (approximately) 12 years. I have worked in a range of organisations, most recently at Isthmus Group, where I was employed for 8 years undertaking landscape assessment work. I left Isthmus at the end of 2025 and have recently started work as a sole practitioner.
3. I have undertaken assessment of effects for a wide range of development proposals including infrastructure, residential (including masterplans, subdivisions and medium density developments), shared pathways, solar farms, mussel farms, and others. I have also been involved in District Plan review work, including plan changes and the identification of Outstanding Natural Features and Landscapes (ONFL) and Special Amenity Landscapes (SAL).
4. Relating to quarries, I have completed an assessment of effects for inclusion of an asphalt plant at Horokiwi Quarry.¹ More recently, I completed a peer review² of the draft Assessment of Landscape Effects for the proposed Overburden Disposal Area (OBDA) at Belmont Quarry, currently being considered through the Fast Track process.

¹ Completed in 2024.

² Completed June 2026.

Code of Conduct

5. I confirm that I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2023. I have complied with the Code of Conduct in preparing this evidence statement and will comply with it when I give any oral evidence.

Involvement & Background

6. I was engaged by Hutt City Council (HCC) in early July 2026 to undertake a peer review of the Statement of Landscape Evidence for Winstone Aggregates, (“the DCM Evidence”), lodged in support of the Winstone Aggregate (“Winstone”) submission on Hutt City’s Proposed District Plan (“PDP”), in relation to Belmont Quarry and the proposed Special Purpose Quarry Zone (“QUARZ”).
7. My brief was to provide an evidence statement setting out my agreement or otherwise with the DCM Evidence, (including the Visual Amenity Assessment (“the Visual Assessment”) contained therein³), with reasons.
8. To prepare this evidence statement I have reviewed the following:
- Statement of Landscape Evidence of David Compton-Moen on behalf of Winstone Aggregates; 3 July 2026;⁴
 - Provisions of the proposed QUARZ (targeted review – relevant objectives, policies and provisions as referenced in the DCM Evidence);

³ Attached to the DCM Evidence Statement as Appendix 1.

⁴ Including Appendix 1, Visual Amenity Assessment (14 December 2023).

- HCC online mapping for the proposed QUARZ;
 - HCC s32 and s42 reports (targeted review – parts referenced in the DCM Evidence);
 - Winstone Aggregates Submission (targeted review, to assist further with understanding the quarry site and relief sought and addressed in the DCM Evidence).
9. Additionally, I have visited the Belmont Quarry’s surrounding context (on 10 July 2026) to the east, to understand the surrounding landscape character and visual catchment. This included a visit to each of the viewpoints used in the DCM Visual Assessment (as well as to additional areas).
10. The methodology used for my review has been consistent with Te Tangi a te Manu (TTatM), the NZILA Landscape Assessment Guidelines (2002). A brief methodology statement is attached as Appendix 1.⁵

Scope

11. My evidence focuses on my review of the DCM Evidence relating to landscape and visual effects arising from the relief sought by Winstone Aggregates in the QUARZ.
12. In summary, the relief sought in the QUARZ includes:
- Removal of the proposed Quarry Amenity Protection Overlay (“the Amenity Overlay”), at the frontage of the Quarry (at an area referred to as “Area 3”); and removal of related provision QUARZ-S5;

⁵ This includes definitions from TTatM and a graphic illustrating the relationship between the NZILA recommended 7-point ratings scale and RMA terminology.

- Removal of the proposed height restriction (QUARZ-S1) in relation to certain, specified structures.

13. My evidence sets out:

- Gaps which I consider have occurred in the assessment informing the DCM Evidence, which (in my opinion) will be relevant to overall findings on landscape-related effects; and preliminary opinions formed relating to these during my review;
- Main areas of agreement and disagreement with the DCM Evidence;
- Comments on methods proposed in the DCM Evidence for mitigation / management of adverse landscape and visual amenity effects from the relief sought; and
- Conclusions and recommendations relating to landscape-related effects arising from the relief sought by Winstone.

14. Where I have provided additional assessment to that included in the DCM Evidence, this is to a high level, as needed to explain the opinions I have formed during my review.

15. The conclusions section of my statement⁶ provides a summary of my key review findings.

Existing Environment Evaluation / Assessment Gaps

16. In reviewing the DCM Evidence and its Visual Assessment, I consider there have been gaps in the evaluation of key characteristics and values in the existing environment, and in

⁶ Refer to paragraph 59.

identifying the full visual catchment, and this is of relevance to findings on the overall levels of adverse landscape effects.

17. Given this, the following briefly sets out what I consider to be key characteristics and values of the existing environment, and the areas I consider have been missed in identifying the visual catchment.

Natural character

18. In my opinion natural character matters will be relevant to the assessment. Te Awa Kairangi / Hutt River is an important river in the district, and the preservation of the natural character of rivers and their margins is a matter of national importance under RMA s6.⁷ In the vicinity of the quarry the western escarpment is (in my opinion) a clear contributor to the natural character of the river, and Area 3 forms part of this.
19. I consider that Area 3 preserves natural character in this area by screening views of the quarry, and contributes natural character from the unmodified landform and vegetation at its eastern face, close to and enclosing the river to the west.
20. As an initial opinion, I consider that areas south of Area 3 (east of the river) have a **Low-Moderate** level of perceptual natural character⁸ (due largely to the visual influence of the quarry); and areas adjacent to / below Area 3 and to the north-east, have a **Moderate-High** level of perceptual natural character

⁷ RMA s6 requires development, as a matter of national importance, to provide for the preservation of the natural character of rivers and their margins, and the protection of them from inappropriate subdivision, use, and development. The RMA does not define “margins”. TTatM (at 9.59) sets out that when considering natural character, the central feature is the water body, but the land framing the water body is integral. Further, defining “margins” will be influenced by topography (ref 9.20).

⁸ Natural character includes both natural science and perceptual aspects. I have not undertaken a full assessment as part of this review and do not have information relating to natural science values. The comments provided focus on perceptual aspects.

(where the quarry and other development is largely screened or more distant).

21. In front of Area 3 and to the north-east (towards Pomare Bridge), escarpment vegetation is largely seen cohesively from the river waters to the escarpment skyline, and Area 3 appears as part of a natural pattern of highly elevated vegetated spurs descending steeply to the edge of the river corridor.

Landscape

22. Considered more broadly, (away from areas where natural character matters apply), Area 3 contributes to the western escarpment which is a key landscape feature of the district at the western edge of the city. The elevated vegetated escarpment backdrop contributes to the landscape character and visual amenity of surrounding areas, including at Taita.
23. Area 3 is located closely to the northern end of Taita and is large-scale enough to influence the suburb's character in this area. It can be seen from some internal parts of the context (back from Taita Drive).
24. Te Awa Kairangi / Hutt River is used extensively for recreation. The Hutt River Trail passes through this area and is one of the pre-eminent recreation trails in the district. It includes a recreation node in the vicinity of Area 3 which includes river beaches and a seating area (opposite Area 3). The quarry is largely concealed from this node by the elevated landform of Area 3.

Visual Catchment

- 25.** Additional parts of the visual catchment are recommended for inclusion in the assessment. These are as follows:
- Elevated parts of Stokes Valley (such as from Lord Street, Castle Crescent, and Aldersgate Grove);⁹
 - North-end parts of the residential context at Taita, including internal parts (east of Taita Drive), where there are a number of 2-storey residential complexes and open grassed areas (such as along Farmer Crescent) which enable views out to the Area 3 escarpment;
 - Manor Park;¹⁰ and
 - Parts of Eastern Hutt Road (north of Pomare Bridge).¹¹

Assessment of Effects

- 26.** Relating to the afore-mentioned gaps in the evaluation of the existing environment, there are (in my opinion) related gaps in the DCM assessment.
- 27.** There has been no assessment or ratings provided for adverse effects on natural character of Te Awa Kairangi / Hutt River; and no ratings or commentary for landscape effects beyond visual amenity effects.¹²

⁹ The Visual Assessment has included a viewpoint at 17 Whitechapel Grove, Stokes Valley. However, views out from this street are not possible due to enclosing vegetation. Views over the valley towards Area 3 (and the quarry) are possible from other streets in Stokes Valley, as indicated.

¹⁰ Manor Park is mentioned as a relevant area in the s32 / s42 reporting but effects for the area have not been assessed by DCM. It was not clear from my site visit whether some dwellings could gain views of Area 3.

¹¹ Effects in views from the road differ from effects at viewpoint 6 in the Visual Assessment, which has been used to consider effects for road users. Area 3 forms part of the view on approaching Taita from the north along Eastern Hutt Road.

¹² Landscape effects extend beyond visual amenity matters.

28. Additionally, because the visual catchment has not been fully identified, the assessment of effects is not sufficiently complete (in my opinion) to fully understand potential visual amenity effects across the context.

Potential cumulative effects

29. As a further point, if the proposed Belmont Quarry OBDA (currently located within Belmont Regional Park) is approved through the Fast-Track process, there will likely be a need (in my opinion) to consider potential cumulative effects if there are to be concurrent operations at the OBDA and Area 3.

Main Areas of Agreement

Visual Amenity Effect

30. I agree that adverse visual amenity effects from removal of the Amenity Overlay will be generally lowered, in views from the western berm (represented by Viewpoint 1). I would rate the adverse effect in views from the western berm as **Low-Moderate** at worst, which would still be considered minor in RMA terminology.¹³

Main Areas of Disagreement

31. The DCM Evidence / Assessment does not assess or rate character effects. In my opinion there will be adverse landscape and natural character effects from the proposed removal of the Overlay.

¹³ On the western berm the track is lower in elevation than the quarry frontage, which enhances the screening provided by vegetation above the track to the west. Area 3 has a modified character from viewpoint 1, with its western face quarried and benched, and seen in profile. Additionally, removal of the Area 3 landform would expose only a relatively small additional part of the quarry, in some views from this side of the river.

- 32.** The following assessment is provided to a high level only, as needed to explain this opinion.

Natural character

- 33.** I consider that removal of the Amenity Overlay will result in adverse effects on perceptions of natural character from within the river corridor, east of the quarry.
- 34.** South-west of Area 3 there will be extensive opening-up on the quarry frontage, providing new views of cut faces through to the skyline. Area 3 provides the only meaningful remaining landform “naturalness” along the quarry frontage and this will be removed. While vegetation will remain at the base of Area 3, this will be more aligned in form with State Highway 2, rather than being seen across elevated natural landform.
- 35.** Further to the north-east, in front of Area 3 and towards Pomare Bridge, there will be a reduction in natural character from new views of the quarry (where existing views are currently very limited due to screening by Area 3).
- 36.** The eastern face of Area 3 is close to the river edge and the Hutt River Trail¹⁴ and near-by beach areas (used for recreation). The adverse effect would likely be higher during operations at and to the north-east of Area 3 - with potential new, close views of trucks and other machinery on the face.¹⁵
- 37.** Viewpoints 3 and 4 in the DCM Visual Assessment provide an indication of the perceptual effect (although in my opinion the

¹⁴ Approximately 180m distance horizontally, as indicated in the DCM Evidence (refer to the table at paragraph 3.3).

¹⁵ No explanation of the proposed quarry staging or methodology has been provided in the DCM assessment, and so this is an assumption on my part.

viewpoints do not accurately convey the existing natural character experience closer to the river in this area).

38. As a preliminary rating, I consider the effect would be **Moderate – High adverse** at best, and likely higher in localised areas during operational phases to remove the Area 3 landform.

Landscape¹⁶

39. Removal of Area 3 will result in the quarry becoming a more dominating landscape component at the north end of Taita. While the quarry currently has a strong influence on landscape character in this area, the extent of its influence is reduced by the presence of Area 3, which currently screens the quarry from parts of north Taita (and partially screens it for other parts).
40. Additionally, Area 3 is large-scale and elevated enough to contribute in a meaningful way as part of the western escarpment backdrop to Taita. It is closely located to northern parts of the suburb and contributes both character and visual amenity. Its removal will result in the loss of this positive character contribution.
41. Additionally, and considered more broadly, in my opinion removal of the Area 3 landform will make it more difficult to integrate the quarry site back into the surrounding natural context, at the end of the quarry life. There will be a less natural overall shaping to the quarry, more extensive views of highly elevated and steep cut rock faces until these are

¹⁶ In the context of river corridor, landscape and natural character values are related and landscape effects will largely correlate to natural character effects.

rehabilitated, and with these generally being more difficult to fully rehabilitate with consistent and high-quality vegetation.

42. Given the above points, and as a preliminary estimate, I would rate the local landscape effect as **Moderate-High adverse** at best.¹⁷

Visual amenity

43. I generally disagree with the ratings provided for effects in views from the eastern context.
44. I disagree that the adverse effect in Viewpoints 2, 3 and 4 will be equivalent or similar to the level of effect in Viewpoint 1.
45. In my opinion the adverse effect at Viewpoints 2, 3 and 4 will more likely be **Moderate-High adverse**, at best. In these viewpoints there are new views of quarry faces, with these being extensive in some views, and with loss of the visual amenity currently contributed by Area 3 from its elevated natural landform and vegetation.
46. Further, I consider that adverse visual effects will be more widely spread than indicated, including at elevated parts of Stokes Valley, and in internal parts of Taita, and with views from some roads in the area not accounted for.
47. I generally disagree with the seeming rationale in the DCM Evidence / Assessment that because a view includes the quarry, it will follow that a more extensive view of the quarry will be a Low/minor adverse effect.

¹⁷ That is, this is a conservative estimation, in my opinion.

Height of Structures

- 48.** The DCM Evidence considers that the removal of the height restriction will be appropriate for specified structures including radio towers, cell towers, support structures, and cement silos, where these are located to avoid forming prominent skyline elements.
- 49.** I agree that the adverse effects of structures would be exacerbated by breach of the surrounding landform skyline. Determining the extent to which any skyline breach would be “prominent” is likely to be more difficult. In that regard, it seems to me that removal of the height restriction would provide less surety for council on outcomes. For that reason I consider that it would more safely protect skyline values, to retain the height restriction.
- 50.** As an additional point, if the Amenity Overlay is removed, quarry structures may become generally more visible from the context to the east. I note that existing quarry structures are pale in colour and stand out against the back-dropping quarry faces. In my opinion a requirement for the use of recessive colours would assist to reduce potential adverse landscape and visual amenity effect from new structures, and this is recommended if the Amenity Overlay is removed.

Mitigation/Management of Quarry Effects

- 51.** The DCM Evidence considers that adverse landscape and visual amenity effects from removal of Area 3 can be effectively managed by staging, progressive rehabilitation and landscape treatment, and through the Quarry Management Plan¹⁸ (and so the Amenity Overlay is not needed).

¹⁸ Refer to paragraph 4.6 of the DCM Evidence.

52. It is not clear to me how staging would manage adverse effects from removal of the Amenity Overlay, and there is no explanation provided on this.
53. Similarly, there is no information provided in the assessment on the Quarry Management Plan.
54. It is not clear to me if progressive rehabilitation applies more to overburden areas than to the cut faces which would become more exposed with removal of Area 3. There are existing cut faces at the quarry which do not appear currently to be subject to progressive rehabilitation, and no information is provided on the timeframe or proposed methods for rehabilitating cut faces.
55. I note that removal of Area 3 will provide more extensive views of cut faces, and steep cut/rock faces are generally more difficult to rehabilitate fully with vegetation, than for example, quarry overburden areas (which include deposited material allowing for easier revegetation).
56. With removal of Area 3 the overall shaping of the final quarry will, in my opinion, be less natural and provide less fit with the western escarpment, and it seems unlikely that this could be addressed by staging or the Management Plan.

Suggested Reduced Overlay / 10m Vegetation Strip¹⁹

57. The suggested retention of a 10m strip of vegetation along the frontage at Area 3 and adjacent to SH2 would likely assist to some degree in reducing adverse landscape-related effects, although the additional elevation this would provide for

¹⁹ Refer to section 5.0 of the DCM Evidence.

vegetation, and the corresponding mitigating effect, is not easily understood from the assessment.

- 58.** Additional simulations could assist in this regard. This is noting, however, that the potential extent of screening from the strip becomes further unclear due to the quarry requirement for flexibility in defining the strip, and an allowance for alternative screening or landscape treatment if needed. It is not clear where these alternatives could / would be located, or how they would reduce adverse effects from the removal of Area 3. For example, new planting inside the Quarry Zone Protection Overlay (which lies to the south-west of the quarry working areas), would not (in my opinion) reduce adverse landscape-related effects from the removal of Area 3.

Conclusions

- 59.** In my opinion there have been gaps in the DCM evaluation of the characteristics and values of the existing environment, and corresponding gaps in the assessment of effects, and this has influenced the findings and landscape evidence.
- 60.** I consider that natural character matters are relevant in the context of Te Awa Kairangi / Hutt River, given that the river is important in the district, natural character is a matter of national importance under s 6 of the RMA, and Area 3 (in my opinion) preserves and contributes in a meaningful way to existing natural character values at the river.
- 61.** The DCM evidence has not provided commentary or ratings for landscape effects, separate from visual amenity effects. Visual amenity contributes to landscape values. However, best practice under TTatM calls for assessment of both broader landscape effects and effects on visual amenity.

62. The following summarises my preliminary opinions on effects, formed during my review (and given the gaps in the DCM assessment).

Natural character

63. I consider there will be a **Moderate-High adverse** effect (at best) on the natural character of the Hutt River, in the vicinity of the quarry. The effect may be higher in localised areas during operations. This is because removal of Area 3 will result in:

- New and substantially more extensive views of the quarry from the river corridor, including where views are currently predominantly screened by Area 3;
- Likely higher levels of adverse effect during operational phases to remove Area 3, due to its proximity to and elevation above the river edge;
- A loss of natural landform and vegetation at Area 3, with this currently contributing natural character (and visual amenity) to the river corridor.

Landscape

64. Away from the river corridor (and away from areas where natural character matters apply), there will be a **Moderate-High adverse** effect on local landscape values from removal of the Amenity Overlay and Area 3. This takes the following into account:
- The scale and elevation of the Area 3 landform, and its proximity to the northern end of Taita, mean that it currently forms part of the character of this area. It currently contributes

character (and visual amenity) as a cohesive part of the western escarpment, seen from both western-edge and internal parts of the suburb.

- The influence of the quarry on the landscape character of Taita will become larger, due to new and more extensive views of the quarry.
- Considered more broadly, it will be more difficult to integrate the quarry site into the surrounding landscape context, at the end of the quarry life. This is mainly because the overall shaping of the quarry will be less natural.

Visual Amenity

65. I generally disagree with the DCM ratings on visual amenity effects and consider that these will be more adverse and widespread than indicated.
- For key viewpoints gaining new / expanded views of the quarry, I would rate the effect at **Moderate-high adverse** at best, rather than the Low / Minor ratings given. I disagree that the adverse effect in views from the east (Viewpoints 2, 3 and 4) will be at a similar level to the effect in views from the west side of the river (Viewpoint 1).
 - In my opinion there are additional parts of the visual catchment which should be assessed, including elevated parts of Stokes Valley.

Height of Structures (QUARZ-S1)

66. Removal of the height restriction has been sought for specified quarry structures, on the basis that these will not cause “prominent” skyline breaches. Determining the extent to which

any breach is “prominent” is likely to be subjective. To ensure that skyline values are not significantly compromised, I recommend retention of the height restriction.

- 67.** If the Amenity Overlay is removed quarry structures may generally become more widely visible from the context. In that case I recommend including a new QUARZ provision to require use of recessive colours for new structures, to reduce their visual prominence and lower potential adverse landscape and visual amenity effects.

Potential cumulative effects

- 68.** If the Belmont Quarry proposed land swap and Overburden Disposal Area (OBDA - currently located within Belmont Regional Park) are approved through the Fast Track process, there may be a need to consider cumulative effects, if operations at the OBDA and at Area 3 occur concurrently.

Mitigation / Possible 10m retained vegetation strip

- 69.** It is not clear to me how staging, progressive rehabilitation and the Quarry Management Plan will reduce effects from the relief sought (as suggested in the DCM Evidence), and no explanation has been provided in this regard.
- 70.** There is a lack of clarity on the extent to which the suggested 10m strip would reduce adverse effects from the removal of Area 3. Additional simulations could assist in this, however, the flexibility required by the quarry in defining the strip, including allowance for alternatives, may reduce its effectiveness.

Summary - Value of the Quarry Amenity Protect Overlay

71. Given the above points, in my opinion the Amenity Overlay contributes to the landscape context in a significant way, and in this I agree with the s32 / s42 reporting.
72. In my opinion removal of the Overlay at Area 3 would have wide-spread adverse landscape effects, including natural character effects, and these would be consistently more than minor. In this my opinion differs from the DCM Evidence.

Recommendations

73. Based on the points set out in my conclusions, my recommendations are as follows:
- Retain the Quarry Amenity Protection Overlay in its notified form;
 - Retain the height restriction in the QUARZ, as notified;
 - Add a new QUARZ provision to require use of recessive colours on new structures, if the Amenity Overlay at Area 3 is removed;
 - Seek additional visual simulations and assessment of effects relating to the suggested 10m retained vegetation strip adjacent to SH2; and clarification as to how the Quarry Management Plan will reduce adverse effects from the relief sought, if further consideration of the removal of Area 3 is considered needed by the Hearing Panel.

Rose Armstrong (B.A., B.L.A (Hons))

Landscape Architect (Registered NZILA)

Appendix 1 Methodology and Te Tangi a te Manu

Peer review methodology

In line with best practice methodology as set out in TTatM, the peer review has considered whether the landscape and visual assessment:

- follows a sound assessment methodology and method for the purpose; and does not have gaps that are germane to findings;
- accurately describes, interprets, and evaluates the relevant landscape character and values;
- analyses the effects on landscape values in a balanced and reasoned way and reaches credible findings supported by reasons;
- makes appropriate recommendations with respect to findings.

Definitions from TTatM

Natural character: *“Natural character is a type of character. It is an area’s distinctive combination of natural characteristics and qualities, including degree of naturalness.”*

Landscape: *“Landscape embodies the relationship between people and place It is the character of an area, how the area is experienced and perceived, and the meanings associated with it.”*

NZILA 7-point ratings scale and RMA terminology

SIGNIFICANT						
LESS THAN MINOR		MINOR	MORE THAN MINOR			
VERY LOW	LOW	LOW-MOD	MODERATE	MOD-HIGH	HIGH	VERY HIGH

**Appendix 2.2 Statement of Evidence- Malcolm Hunt - Review of
Submission 444 - Noise & Vibration Matters - 10 July 2026**

MALCOLM HUNT CONSULTING

PO Box 11-294, Wellington 04 472 5689 mha@noise.co.nz

Date of Issue:	10 July 2026
Client:	Hutt City Council c/- Sean Bellamy Intermediate Policy Planner Hutt City Council
Project:	Further Review of Winstone Aggregates Submission 444 - Noise & Vibration Matters QUARZ-S3 - Vibration associated with blasting
Document version:	Rev.2
Document Status	Final

On Behalf of Hutt City Council:

Proposed District Plan – Review of Submission 444 - Noise & Vibration Matters

Introduction

As you are aware, Malcolm Hunt Consulting provided advice to the Proposed District Plan (PDP) s.42A reporting officer¹ regarding noise and vibration matters raised within submission no.444 by Winstone Aggregates. The advice specifically considered noise and vibration submitter points raised in relation to QUARZ-S3 “Vibration associated with blasting”.

The submitter has recently lodged its response to the s.42A officer report which includes a statement of evidence by Jamie Exeter, noise and vibration expert from Styles Group Acoustics on behalf of the submitter who has responded to QUARZ-S3 matters I summarise as follows:

- 1) QUARZ-S3.2.b (blasting overpressure measurement),
- 2) QUARZ-S3.5 (communication with neighbours prior to blasting),
- 3) QUARZ-S3.12 (blasting vibration effects on people inside buildings).

I have given consideration to the points raised and set out below further amendments to the relevant sections of QUARZ-S3 developed in response to technical noise/vibration matters raised in Mr Exter’s evidence.

QUARZ-S3.2.b (Measurement of blasting overpressure)

Mr Exeter and I are in general agreement that a suitable (measurable) blasting overpressure limit can be quantified using LZpeak in accordance with Appendix J of AS 2187.2:2006 *Explosives—Storage and use, Part 2: Use of explosives*. Although Appendix J sets out how and where measurements of blast overpressure should be undertaken, Mr Exter prefers LZpeak limits of QUARZ-S3.2.b to be assessed at the façade of at the relevant unoccupied building.

I agree with Mr Exter that standard QUARZ-S3.2.b is intended to limit the potential effect of damage to the building, with assessing blast noise at the building façade appearing quite logical however it is known that significant levels of reflected blast sound pressure will be present at

¹ MH Review of Winstone Aggregates Submission 444 - QUARZ-S3 Noise & Vibration Matters, Malcolm Hunt Consulting, June 2026.

this location. My earlier recommendations were aimed at assessing blast noise at a location near the building free from the influence of any reflected sound.

The magnitude of reflected outdoor sound pressure within proximal distance to buildings is described within the recommendations of International standard ISO 1996 – Part 2 “*Description and measurement of environmental noise. Part 2: Acquisition of data pertinent to land use*”² which I summarise as follows:

- a) Microphone placed directly on the façade surface: +6 dB increase.
- b) Microphone located between 0.5 and 2 metres in front of the façade: +3 dB increase.
- c) Microphone located greater than 4 metres or more from the façade. At this position the measurement is unaffected by the presence of a façade: 0 dB no increase (this is the reference condition).

As above, the proposal to measure blast overpressure at the facade could in fact result in up to a +6 dB measurement result at the façade due to what is commonly referred to as ‘pressure doubling’ at the air/wall interface. Such measurements including a contribution from reflected pressure could potentially produce an apparent exceedance even though the free-field airblast level may comply with the limit.

Mr Exter notes it would be practical to measure blast noise away from the building as a basis for estimating blast overpressure level incident on the actual building which I agree is a useful method for avoiding unwanted façade reflection effects on measurement results. I note however Mr Exter does not propose a method to deal with reflected sound should blast overpressure be attempted to be measured at the actual façade.

While I have accepted Mr Exter’s proposed amendment, I recommend further amending the wording of QUARZ-S3.2.b to clarify compliance that the LZpeak limit is to be assessed under ‘free field’ conditions (no adjustment necessary to account for reflected sound). This would clearly signal to users any measurements taken in the free field would not need to be adjusted for reflected sound when assessing compliance with the LZpeak limit set out within QUARZ-S3.2.b. The converse is also true – if measurements are taken at the façade, these will need to be adjusted (downwards) in order to determine compliance with the ‘free field’ limits of QUARZ-3.2.b.

In summary, I agree assessing blast noise under with QUARZ-S3.2.b at “the façade of any building on another site” is a suitable amendment providing the words “free field” (in brackets) are inserted as follows;

QUARZ-S3.2

b. 133 dB LZpeak (**free field**) incident on the façade of any building on another site.

QUARZ-S3.5 (prior notification to neighbours of impending quarry blast events)

Due to the wording of QUARZ-3.5, my earlier review recommended replacing the ‘prior notification’ blasting provisions of QUAR-S3.5 with a site-specific approach by requiring prior

² ISO 1996 – Part 2. International Organization for Standardization 1987.

blasting notification details to be included within each 'Quarry Management Plan' (QMP), a document each quarry is required to submit to Council under permitted activity standard QUARZ- S7.

QUARZ-R5 permits the operation of quarrying activities in the zone only if conducted in accordance with the QMP. This provides confidence that the PDP contains a suitable and enforceable permitted activity provision covering 'prior notification' of blasting. As each quarry would need to prepare and submit its own 'prior notification' procedure within its QMP, notifications can include longer term advice on seasonal blast regimes specific to the actual quarrying activities carried out. A further advantage is that the actual prior notification details would be able to be tailored to the sensitivity of the receiving environment surrounding each quarry.

I agree with the rationale of the submitter that compliance with QUARZ- S3.5 as currently worded would be too difficult to prove given the lack of measurable standards.

While Mr Exter is in agreement with my recommendation, I note the s.42A reporting officer prefers to retain 'prior notification' requirements as set out within QUARZ-3.5, in addition to my recommendation that this information be included in the QMP. My view is that QUARZ-S3.5 should be removed because;

- a) The term 'irregular blasting' is too imprecise and is an inexact standard.
- b) Prior notification to neighbours as little as one hour prior to blasting may be seen by many to be insufficient warning under some circumstances.

I see no advantage to managing the effects of quarry blasting by retaining QUARZ-S3.5 as currently worded, this is providing the appropriate amendments are put in place to require site specific 'prior notification' procedures be included in any QPM prepared under QUARZ-S3.7, as per my earlier recommendations.

QUARZ-S3.12 (blasting vibration effects on people inside buildings)

In order to limit blast vibration effects on building occupants my earlier review recommended QUARZ-S3.12 be amended so that compliance be achieved with vibration limits provided in Appendix J, Table J4.5(A) of the Australian Standard AS 2187- 2:2006 *Explosives – Storage and use, Part 2: Use of explosives* to protect occupants of buildings. My experience is that this is a Standard has been widely adopted within quarry consent conditions within New Zealand to manage vibration effects on building occupants.

Mr Exter considers there are a number of downsides to adopting Table J4.5(A) and seeks QUARZ-S3.12 be deleted due to perceived problems, mainly relating to Table J4.5(a) ground vibration limits (e.g. 5 mm/s) stipulating these limits are to be achieved for at least 95% of blasts per year. Mr Exter is concerned:

- a) It would not be possible for Winstones or Council to determine compliance with the permitted standards until all blasts for the year have been completed.
- b) There is no vibration limit for the top 5% of blasts each year

Mr Exter requests QUARZ-S3.12 be deleted in its entirety with quarry blasting vibration instead being required to comply with guideline values of German Standard DIN 4150-3:2016 *Structural Vibration – Part 3: Effects of Vibration on Structures* in all buildings, unoccupied or otherwise, which is exactly the standard applied under (amended) QUARZ-S3.11. This standard already

sets Peak Particle Velocity (PPV) blast vibration limits of DIN 4150-3:2016 at unoccupied single or multi storey buildings.

I have long held the view that the 95th percentile criterion in Table J5.4(a) of Appendix J is intended as a statistical performance objective that recognises the inherent variability in quarry blasting and should not be interpreted as permitting operators to disregard occasional exceedances, nor should it be interpreted as implying that any blast exceeding 5 mm/s necessarily causes unreasonable environmental effects. Rather, the intention of this criterion is to require ongoing monitoring and adaptive blast management so that exceedances remain infrequent and vibration levels continue to provide an appropriate margin below established cosmetic damage thresholds. However, Mr Exeter raises valid points which question the approach of Australian Standard AS 2187- 2:2006.

I have therefore looked more closely at the relevant vibration limits for residential buildings subjected to short-term vibration set out within DIN 4150-3 which recommends PPV limits summarised as:

- 5 mm/s at frequencies below 10 Hz,
- increasing to 15–20 mm/s at higher frequencies.

It is acknowledged these DIN 4150-3 limit values are intended to avoid cosmetic structural damage and are not intended as a control for occupant comfort which is the purpose of QUARZ-S3.12. However, it is notable that the 5 mm/s limit of DIN 4150-3 for blasting vibration received at frequencies below 10 Hz is essentially the same as the Appendix J recommendation to protect building occupants from adverse effects.

Under DIN 4150-3 it is possible that vibration from blasting could result in received vibration with dominant frequencies above 10 Hz, in which case the received PPV would need to comply with a higher PPV limit (above 5 mm/s) however an astute quarry operator would always need to design blasts to achieve compliance with the limit of 5 mm/s PPV as this is the more stringent requirement³. The 5 mm/s limit of acceptability for building occupants is considered reasonable when compared to published criteria on the range of human response to ground vibration which can be summarised as;

PPV (mm/s)	Typical occupant response (approximate)
0.15–0.3	Sensitive occupants may first perceive vibration.
0.3–1	Vibration is generally perceptible indoors.
1–2	Vibration is clearly noticeable to most occupants.
2–5	Vibration is strongly perceptible. Complaints become increasingly likely depending on vibration frequency, airblast, duration and community expectations.
5	Low frequency blast vibrations received at thresholds recognised as protecting buildings from cosmetic building damage but may nevertheless generate concern or complaint, particularly if repeated. Reference; Dowding, C.H. (1996). <i>Construction Vibrations</i> . Prentice Hall.

My review of the Standards indicates the 5 mm/s PPV vibration limit recommended in Table J5.4(a) and within DIN 4150-3 will adequately protect against both building damage as well as avoiding undue annoyance / disturbance if there are building occupants. While the DIN

³ This is because the vibration response of a building is determined by ground conditions and the structure itself and is not influenced by factors under control of those undertaking quarry blasting.

standard is not designed to define acceptable vibration exposure for people including building occupants, compliance with DIN 4150-3 (QUARZ-S3.11) is likely to result on a similar human response as would occur for blast vibration received up to PPV values compliant with Table J4.5(A) of AS 2187- 2:2006 (QUARZ-3.12).

On this basis, I agree with Mr Exeter that compliance with the DIN 4150–3:2016 limits will not only protect buildings from structural damage due to blast vibration but also ensure that the effects on amenity for building occupants will be reasonable. I support Mr Exeter’s proposal that QUARZ-S3.12 be deleted in its entirety with blasting vibration only being required to comply with the guideline values of DIN 4150–3:2016 in all buildings, unoccupied or otherwise which is a standard already imposed by proposed standard QUARZ-S3.11 (amended as proposed within the s.42A report). In order to clarify the purpose of QUARZ-3.11 under these revised circumstances I recommend adding to the wording of QUARZ-3.11 (s.42A report version) as follows;

11. In order to avoid damage to buildings and to protect building occupants from undue annoyance blasting shall not exceed PPV vibration limits of the German Standard DIN 4150-3:2016 *Structural Vibration – Part 3: Effects of Vibration on Structures* when measured at the foundation for single storey buildings or in the plane of the highest floor of multi storey buildings.

SUMMARY

I summarise my response to the THREE identified issues as follows.

In relation to QUARZ-S3.2.b (Measurement of blasting overpressure) I recommend blast overpressure limits of Table J5.4(B) of Appendix J of 2187- 2:2006 be applied as ‘free-field’ peak airblast overpressure limits which apply at unoccupied buildings in a manner that ensures any measured PPV values would free from any requirement to make adjustments to any measurement to account for sound reflected off the building structure. My recommended wording inserts the words ‘free field’ in QUARZ-S3.2.b to clarify this is the case.

In relation to QUARZ-S3.5 (prior notification to neighbours of impending quarry blast events), for the reasons set out above I recommend replacing the ‘prior notification’ blasting provisions of QUARZ-S3.5 with a site-specific approach by requiring prior notification details to be included within each ‘Quarry Management Plan’ (QMP), a plan required to be complied with under permitted activity standard QUARZ- S7. I have set out above the reasons why I consider QUARZ-S3.5 should be removed, which is contrary to the recommendation of the s.42A report which favours retaining QUARZ-S3.5 in addition to its inclusion in the QMP.

In relation to QUARZ-S3.12 (blasting vibration effects on people inside buildings), I agree with Mr Exeter that compliance with the DIN 4150–3:2016 limits will also ensure that vibration effects on amenity for building occupants will be reasonable. On this basis I support Mr Exeter’s proposal that QUARZ-S3.12 be deleted in its entirety such that blasting vibration be required only to comply with standard QUARZ-S3.11 which requires compliance with the vibration limit values of DIN 4150–3:2016 in all buildings, unoccupied or otherwise. Minor amendments to the s.42A version of QUARZ-S3.11 are recommended recognising this standard is not applied

simply to protect the building structure from vibration damage but would also provide suitable protection to building occupants experiencing vibration due to quarry blasting.

A handwritten signature in black ink, appearing to read 'M. Hunt'.

Malcolm Hunt

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