

Notice is given that a Resource Consent Hearing will be held on:

Date	Monday 21 November 2022 Tuesday 22 November 2022 Thursday 24 November 2022 (reserve day – 25 November 2022)
Time	9.30 am (day one)
Venue	Richmond Exact venue to be confirmed Remote participation available via Zoom Venue and zoom details available on application webpage from 7 November 2022

Commissioner (Resource Consent) Hearing

AGENDA



Commissioner **Craig Welsh**

Council staff **Susanne B Solly , Consultant Planner, WSP**
Mirka Langford, Senior Resource Scientist – Land
Ari Fon, Consultant Traffic Engineer
Dr Helen Rutter, Consultant Hydrogeologist
Daniel Winters, Team Leader – Environmental Health
Leif Pigott, Team Leader – Natural Resource Consents
Alastair Jewell, Principal Planner (Hearing Facilitator)

Phone:
+64 3 543 8422

Email:
alastair.jewell@tasman.govt.nz

Website:
www.tasman.govt.nz

Note: The reports contained within this agenda are for consideration and should not be construed as the decision of the Council.

[this page blank]

AGENDA

1 Opening, welcome

2 Reports

- 2.1** CJ Industries Limited’s land use consent applications at 134 Peach Island Road, Motueka with vehicle access via a right of way over 493 Motueka River West Bank Road, Crown land and unformed legal road. ADDENDUM to the report released -
Council reference RM200488 and RM200489 **5**
- 2.2** CJ Industries Limited’s discharge permit application at 134 Peach Island Road, Motueka. The application seeks to discharge contaminants to land from backfill material associated with the proposed gravel extraction from the berm of the Motueka River and on the landward side of the stopbank at Peach Island -
Council reference RM220578 105

[this page blank]

ITEM 2.1

CJ Industries Limited’s resource consent applications at 134 Peach Island Road, Motueka for gravel extraction with vehicle access via a right of way over 493 Motueka River West Bank Road, Crown land and unformed legal road - Council reference RM200488 and ors

DECISION REQUIRED

Report to	Commissioner (Resource Consent) Hearing
Meeting date	21 November 2022, 22 November 2022, 24 November 2022 (& 25 November 2022 reserve day)
Report author	Alastair Jewell, Principal Planner - Resource Consents
Report number	REPC22-11-21A
Attachments:	<ol style="list-style-type: none"> 1. Section 42A report and recommendation (Addendum) by reporting planner 2. Recommended draft conditions RM200488, RM200489, RM220578 3. Supplementary technical review – noise assessment – Daniel Winter 4. Supplementary technical review – dust assessment – Leif Pigott 5. Supplementary technical review – traffic effects assessment – Ari Fon 6. Supplementary technical review – land production values – Mirka Langford

Report and recommendation.

The Addendum to the existing Section 42A report and recommendation on the resource consent application (Attachment 1) has been prepared by Susanne B Solly as the Council’s consultant reporting planner.

This item is read alongside the existing land use consents s 42A report and recommendation. It addresses new evidence provided by the applicant.

Supplementary expert technical comments have been provided on:

- traffic effects by Ari Fon (consultant traffic engineer engaged by the Council – see Attachment 5);
- land productivity / versatility by Mirka Langford (Senior Scientist - Land – see Attachment 6.)
- dust effects by Leif Pigott (Team Leader – Natural Resources Consents – see Attachment 4)
- noise effects by Daniel Winter (Team Leader – Environmental Health – see Attachment 3)

This section 42A report addendum and attachments was compiled for release and the Item description completed by Alastair Jewell, Principal Planner.

Resource consents applied for

Land use consent RM200488

Land use consent to disturb land and rehabilitate for the purpose of gravel extraction within the Rural 1 Zone.

Land use consent RM200489

Land use consent to erect signage and establish access via an unformed legal road.

Background

The Council and the applicant had previously provided their evidence in respect of these applications.

The applicant also sought to apply for a further resource consent required for the proposal – specifically a discharge permit.

Craig Welsh was the independent hearing commissioner appointed and delegated the powers and functions (under section 34A(1) of the RMA) to conduct the hearing and decide these resource consent applications.

The Commissioner directed (in Minute no 2) that they wished to hear evidence and decide on all applications together as a bundle of consents sought for the proposed activity. The discharge permit was applied for, notified, and submissions received. Item 2.2. of this agenda contains the Section 42A report and recommendation on that discharge permit application (RM220578).

Also, a new national policy statement was approved and considered relevant in assessing these resource consent applications. The Commissioner directed (in Minute no 3) that the Council and the applicant provide supplementary evidence on the National Policy Statement for Highly Productive Land 2022.

The previous Section 42A report and Minutes are available on the Council webpage, and also referenced (with links) in the Addendum ie Attachment 1 to this agenda item.

Purpose of report

This report is not the decision on the application.

It contains advice and recommendations from professional planners and other experts.

It has yet to be considered by the Hearings Commissioners delegated by Tasman District Council to decide this resource consent application.

The decision will be made after the Commissioner has considered the application, this report, and heard all evidence from the applicant and the submitters.

Ö:|æ { Á^} |æ^ { ^} ö^!•q } Á^ã•~^aÁ ã@Á^} |æ^ { ^} ö^ æ^•ÁFÁ ÁÍ Éæ } aÁ ã@æ^•ÁUÁ Á G
ã^|c^aÉ
V@ Á Á^ Á Á Á |{ æq * Á|| | Á ã@Á cÁ^} ^æq * Áãá Áæ q { æ^á&| •Á^!^} &ÁÁ|áÉ
Ü^} |æ^áÁ æ^•Á@ Á æ^Á~ { à!•Á Á [fYYb

ADDENDUM TO REPORT UNDER SECTION 42A OF THE RESOURCE MANAGEMENT ACT 1991

Resource application by	CJ Industries Limited
Application number	RM200488 and RM200489
Site address	134 Peach Island Road, Motueka
Legal description	Lot 2 DP 2357 (RT NL77/73) and Lot 2 DP 432236 (RT 524970)
Report and recommendation prepared by:	Susanne Bernsdorf Solly, Senior Consultant Planner

Note: This is not a decision.

This report sets out the advice and recommendations of the reporting planner.

The independent commissioners delegated by Tasman District Council to decide this resource consent application have not considered this report yet.

The independent hearing commissioners will only make a decision after they have considered the application and heard all evidence from the applicant, submitters and council officers.

1 Introduction

Background

1.1 The applicant seeks the following resource consents:

RM200488 Land use consent to disturb land and rehabilitate for the purpose of gravel extraction within the Rural 1 Zone.

RM200489 Land use consent to erect signage and establish access via an unformed legal road.

1.2 These applications were lodged on 15 June 2020 and are referred to as the "land use consents."

- 1.3 The applicant later identified that a consent was also needed for the discharge of contaminants to land from the material proposed as backfill. This discharge permit application (RM220578) was lodged on 15 Jul 2022.
- 1.4 The Commissioner (in Minute No 2) deferred the processing of the land use consents (RM200488 and RM200489) until the processing of the discharge permit application (RM220578) 'catches up' to the current process, so that the Commissioner can hear evidence on the whole bundle of resource consents needed for the proposal.
- 1.5 A report was prepared under section 42A of the Resource Management Act 1991 (RMA) to assist the hearing of the application for land use consents made by CJ Industries Limited (the 42A report). That report was circulated on 4 March 2022.
- 1.6 The applicant supplied their evidence in support of the land use consents on 15 July 2022. This evidence included some changes to the application, including new information and mitigation measures. These are detailed in the applicant's evidence of Mr Taylor (the planning evidence). In order to avoid duplication, I have not repeated them here, but refer to section 3.3(a) to (n) of the planning evidence.
- 1.7 This addendum covers matters relating to the new information and mitigation measures provided by the applicant on 15 July 2022, including inputs from the relevant Council Officers and technical experts on the applicant's evidence. Comment on the specific mitigation measures is provided under the respective key issue section of this addendum.
- 1.8 A separate report has been prepared (under Section 42A of the RMA) for the discharge permit (the discharge permit 42A report). There is clearly some overlap between considerations relevant to the discharge permit and the land use consents. In order to avoid duplication, I have covered the key issues relating to effects on ground water quality, including the associated assessment against the National Policy Statement for Freshwater Management (NPS FM) and TRMP objectives and policies, in the discharge permit 42A report (refer Item 2.2 Attachment 1).
- 1.9 Section 42A of the RMA allows consent authorities to require the preparation of such a report on an application for resource consents and allows the consent authority to consider the report at any hearing.
- 1.10 The purpose of this addendum is to assist the Panel in making a decision on the applications RM200488 and RM200489.

Expert witness code of conduct

- 1.11 I acknowledge that this is a consent authority hearing. I have read and agree to comply with the Code of Conduct for expert witnesses as set out in the [Environment Court Consolidated Practice Note 2014](#). I have also read and am familiar with the Resource Management Law Association / New Zealand Planning Institute "[Role of Expert Planning Witnesses](#)" paper. I confirm that the evidence on planning matters that I present is based on my qualifications and experience, and within my area of expertise. I am not aware of any material facts which might alter or detract from the

opinions I express. I express my own view within this report and note where I have relied on information provided by others.

2 Summary of evidence provided

- 2.1 The evidence lodged by the applicant on 15 July 2022 in support of the land use consents consists of 14 statements of evidence, namely:
- a. Evidence of Tim Corrie Johnstone – corporate and operations
 - b. Evidence of Liz Gavin – landscape, natural character, and amenity
 - c. Evidence of Evidence of Tony Payne – terrestrial ecology
 - d. Evidence of David Averill – geotechnical
 - e. Evidence of Simon Aitken – flooding
 - f. Evidence of Calum MacNeill – surface water
 - g. Evidence of Ryan Nicol – ground water
 - h. Evidence of Rhys Hegley – noise
 - i. Evidence of Gary Clark – traffic
 - j. Evidence of Jeffrey Bluett – air quality and dust
 - k. Evidence of Reece Hill – soil management and land productivity
 - l. Evidence of Michael Nelson – land productivity for horticulture
 - m. Evidence of Bill Kaye Blake – economics
 - n. Evidence of Hayden Taylor – planning
- 2.2 I respond to any matters relating to new evidence, including mitigation measures. The sequence of this addendum follows the order of the key issues identified in the 42A report, with the exception of ground water quality – the respective evidence of Mr Nicol.
- 2.3 Nevertheless, a full set of recommended conditions is contained as Attachment 2 of this agenda item 2.1. While some of these conditions may more appropriately sit in the discharge permit, they are included here so the full set can be read in one place. Helpfully, the applicant has identified the discharge permit conditions through being ‘greyed out’ in the volunteered conditions provided as Appendix B of Mr Taylor’s planning evidence and I have annotated these as required.

3 Statutory considerations and documents

- 3.1 Under section 104(1)(b) of the RMA the Council must have regard to any relevant provisions of statutory documents, including national environmental standards, other regulations, national policy statements, the New Zealand coastal policy statement, regional policy statement, and plan or proposed plans. The specific relevant statutory documents were identified and discussed in the 42A report circulated on 4 March 2022.
- 3.2 Since the circulation of that report the [National Policy Statement for Highly Productive Land 2022](#) (NPS-HPL) was approved 12 September 2022 and came into force on 17 October 2022. I consider it is relevant to this application.

National policy statements (NPS)

- 3.3 The purpose of national policy statements is to state objectives and policies for matters of national significance that are relevant to achieving the purpose of the Act.
- 3.4 The NPS HPL seeks to improve the way highly productive land is managed to ensure the availability of New Zealand's most favourable soils for food and fibre production, now and for future generations.
- 3.5 While the applications were lodged before the NPS HPL, when considering an application for a resource consent and any submissions received a consent authority must have regard to relevant statutory documents as at the time of the substantive assessment under section 104(1)(b). This includes the NPS HPL as a relevant national policy statement under subsection (b)(iii).
- 3.6 On 30 September 2022, the Counsel for the applicant submitted a memorandum. This set out the applicant's position on the application of the NPS HPL and requested leave to file evidence addressing the NPS HPL in more detail when the applicant's evidence for the discharge permit is due. The Commissioner (in Minute No 3) directed that the applicant's evidence is to be provided by 4 November 2022. I anticipate that this will include supplementary evidence on the NPS
- 3.7 The objectives and policies relevant to the proposed activity are included in the assessment in the Key Issues section of this addendum, with the relevant NPS HPL definitions and provisions included in Key Issue section 7 – Loss of productive land.

4 Key issues

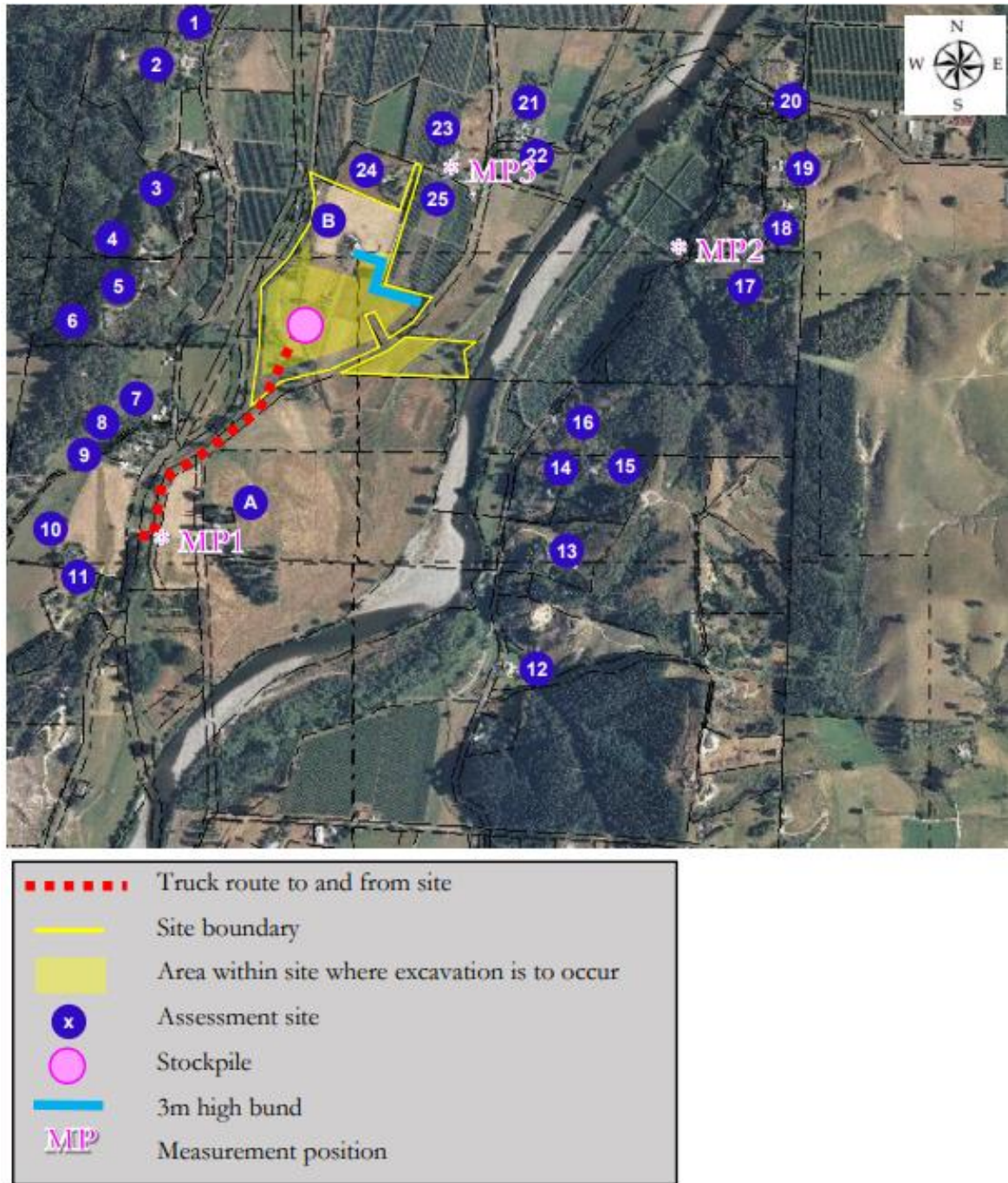
- 4.1 The structure of this addendum follows the key issues discussed in the s 42A report. The key issues are:
- Section 5: Key issue - potential amenity effects (noise, dust, visual effects)
 - Section 6: Key issue - Traffic effects
 - Section 7: Key issue – Loss of productive land
 - Section 8: Key issue – Effects on the flood plain and stopbank
 - Section 9: Key issue – Effects on water quality (surface water only)
 - Section 10: Key issue – Cultural effects
 - Section 11: Key issue - Duration of consent
 - Section 12: Key issue – Precedent
- 4.2 In addition to the key issues identified above, the applicant provided, in response to the submissions received, evidence on terrestrial ecology (evidence of Tony Payne) and on economics (evidence of Bill Kaye-Blake). These are addressed subsequently. I have also included a section on the planning evidence provided to identify the remaining matters of disagreement.
- 4.3 As noted earlier, the effects on groundwater are covered in the discharge permit s 42A report.

5 Key issue - potential amenity effects (noise, dust, visual effects)

Noise

- 5.1 With regards to noise, the s 42A report identified the following information gaps to be addressed:
- The dwelling at 131 Peach Island Road has been omitted from the noise report (Hegley, 2019) provided with the application.
 - The 2019 Hegley report was based on a different haul road location.
 - No ambient or background noise level measurements were provided.
- 5.2 This information has been provided, i.e., evidence of Mr Hegley, dated 15 July 2022 (the acoustic evidence). The acoustic evidence has been reviewed by Council's Team Leader, Environmental Health, Daniel Winter. Mr Winter's memorandum is attached to this addendum (refer to Attachment 3 to this agenda item 2.1).
- 5.3 In addition to the mitigation measures detailed in the 2021 Hegley Noise Management Plan, it is now proposed to construct a 3 m high bund in the location shown on Figure 1 to acoustically screen 131 Peach Island Road. Mr Winter agrees with the proposed mitigation. I support this position.

Figure 1: Location of proposed noise bund (blue line) screening 131 Peach Island Road



Correction: insert "...between 7.00 am and 7.30 am..."

5.4 The proposed operating hours are limited to 7.00 am to 5.00 pm Monday to Friday. In response to the submissions received, the applicant now proposes to not use heavy machinery on those days as an additional mitigation. This is supported. No operations will occur on Saturdays, Sundays, public holidays and between the Christmas holiday period (20 December – 10 January the following year).

Error corrected 02 Nov 2022 by Alastair Jewell, Principal Planner - changes per email from report author, S B Solly

5.5 I maintain that the “permitted baseline” should not be applied with regards to noise, for the reasons detailed in Sections 6.5 to 6.10 of the s 42A report. This has been confirmed by Mr Winter who agrees stating:

“the proposed activity itself is neither permitted nor anticipated in the Rural 1 Zone. I consider that the noises associated with a gravel extraction would be different in character, intensity and duration from ‘typical rural noises.’”

5.6 Given this, the noise limit that is imposed for the gravel extraction operation does not necessarily default to the TRMP noise limit for the zone. Instead, the imposed noise limit needs to ensure that noise associated with the proposed activity is not unreasonable and maintains an appropriate level of amenity.

5.7 I therefore adopt Mr Winter’s recommended conditions, including an operational noise limit of “an uncorrected noise level of 51 dB LAeq when measured at the notional boundary of any dwelling.”

5.8 A full set of recommended conditions is contained in Attachment 2. For ease of use I have annotated the applicant’s volunteered conditions, provided as Appendix B of the applicant’s planning evidence, and highlighted any changes I deem necessary as a result of Mr Winter’s assessment.

Noise effects conclusion

5.9 Mr Winter states:

“I agree that the proposed gravel extraction operation should not result in unreasonable noise effects. My assessment is based on the following key factors:

- *The proposed operating hours of the gravel extraction will be limited to 7:00 am and 5:00 pm Monday to Friday. No heavy machinery shall be operated on site earlier than 7.30am.*
- *A noise limit of 51 dB LAeq (unadjusted) or 50 dB LAeq (adjusted) shall be complied with at the notional boundary of any dwelling.*
- *No site activities will occur at any time on a Sunday or Public Holiday.*
- *The number of truck movements shall be limited to no more than 30 truck movements per day with speed limited to 15 km/h.*
- *A 3m high earth bund shall be constructed to provide an acoustic barrier to 131 Peach Island Road. The acoustic barrier forms part of the best practicable option (BPO) to minimise noise effects.*
- *Tonal reversing alarms will be replaced with broadband reversing alarms.*
- *The trays of trucks will be lined with a plastic liner to reduce impact noise as loads are added.*

- *The access road to the stockpile will be sealed to reduce body rattle.*"

5.10 I adopt Mr Winter's assessment. However, I note that this is subject to conditions, some of which have not yet been finalised. For ease of use, the section below outlines those matters that still need to be clarified and / or are in contention. I have included a similar section / heading for each key issue, where required.

Outstanding matters or matters of contention - Noise

- 5.11 Mr Hegley, in his acoustic evidence, suggests that the use of broadband warning alarms only applies to plant owned / managed by the *"applicant on the basis that the applicant will have limited control on plant visiting the site, such as trucks from independent contractors. In such instances, reversing could be negated by site layout."* I agree and note that the volunteered condition does not necessarily address this. I invite the applicant to confirm that reversing of (visiting) mobile plant, including trucks, will be avoided by the proposed site layout.
- 5.12 Part of the proposed haul road access traverses crown land managed by the Department of Conservation (DoC), which is subject to the provisions of marginal strips.¹ Use and sealing of this 'marginal strip' is subject to DoC approval. I note that a concession application has been lodged with DoC for the temporary use of the marginal strip. I am reassured that Mr Hegley's analysis *"has adopted the conservative assumption of an unsealed access road as this will result in higher truck noise levels due to body rattle. If the access road is sealed, the effects will be reduced."*
- 5.13 I recommend that the uncorrected daytime limit of 51 dB LAeq proposed by Mr Winter (as opposed to the volunteered limit of 55 dB LAeq) should be imposed as a condition of consent, for the reasons detailed above and in Mr Winter's assessment. The 51 dB LAeq limit is based on Mr Hegley's highest predicted noise levels (assuming an unsealed access) and is therefore considered achievable. Mr Winter advised that *"sealing the road would be [the] best practical option and result in slightly less noise than the levels predicted by Mr Hegley."* I have, however, removed the marginal strip portion from the sealing requirement, so as not to impose what I consider is an unlawful condition. I do still recommend that the applicant approach DoC to seek agreement to seal the marginal strip portion as an additional volunteered action.

Relevant TRMP objectives and policies - Noise

- 5.14 Subject to the above matters being addressed, I consider that the proposal is consistent with the TRMP objective and policies relevant with regards to noise, i.e., Objective 5.1.2, Policy 5.1.3.9 and Policy 5.2.3.8.

¹ Conservation Act 1987, [section 24\(3\)](#)

Dust

- 5.15 The s 42A report highlighted concerns regarding dust given the close proximity to very sensitive receiving receptors such as the adjacent apple orchard. I also recommended in the s 42A report that wind speed limits for operations on site are specified and adopted to mitigate dust effects during windy conditions.
- 5.16 In response, the applicant provided evidence from Mr Bluett, dated 15 July 2022 (the air quality evidence), including an assessment of air quality effects and a Dust Management and Monitoring Plan (DMMP) prepared by Pattle Delamore Partners Ltd (PDP).
- 5.17 This information has reviewed by Council's Team Leader - Natural Resources Consents, Leif Pigott. Mr Pigott's memorandum is attached to my addendum (refer to Attachment 4).
- 5.18 The additional mitigation measures outlined in the above documents and associated volunteered conditions of consent are:
- No works will be carried out during periods of high wind (> 7.5m/s).
 - No quarrying activities will take place within 100 m of horticultural activities on neighbouring properties between the months of January² and May (inclusive).
 - The 3 m high earth bund proposed to acoustically screen 131 Peach Island Road, along with retaining the existing row of mature trees, will also provide a dust screen.
- 5.19 Additionally, the mitigation measures in the DMMP include dust suppression via spraying water, and the removal of stockpiles in the Stage 2 area within 100 m of the apple orchard boundary over the drier months of November to April. In the interest of consistency, I recommend changing this timeframe to 'January to May' (inclusive) to align with the measures in section 5.17.
- 5.20 With regards to the proposed use of water, I note that the applicant has obtained a variation to their existing water permit (RM171337V1, granted 21 July 2022). The varied consent authorises the take and use of groundwater for irrigation and dust suppression, with a maximum dust suppression rate of 0.89 litres per second. For the avoidance of doubt, water used for dust suppression is not additional, but included within the existing allocated limit (2625 cubic metres per week).
- 5.21 The dust suppression rate authorised under RM171337V1 (equivalent to 3,204 litres per hour) is sufficient to cover the application rate recommended in the [Ministry for the Environment's \(MfE\) Good Practice Guide on Assessing and Managing Dust](#) (1 litre per m² per hour). Mr Bluett's notes that using this rate over 3,000m² requires 3,000 litres per hour, but he considers it unlikely that dust suppression would be required over a full day. This is accepted.

² As per Memorandum of Counsel for Applicant, dated 3 August 2022

- 5.22 Mr Pigott agrees with the additional mitigation measures, including the use of water to keep the surface damp. He states that the DMMP provided is in line with MfE's good practice guideline and best practical options. I adopt this assessment.
- 5.23 Mr Pigott advises that the management plan needs to be backed up with specific conditions of consent. My recommended conditions, which are based on Mr Pigott's advice are included and marked up in Attachment 2.

Dust effects conclusion

- 5.24 Mr Bluett notes that the receiving environment, while generally of moderate sensitivity, includes ten highly sensitive receptors (residential or horticultural) within 250 m of the site. He concludes:

"When combining the influences of the scale of the activity, the sensitivity of the receiving environment, the proposed mitigation measures and dust travel distance, I consider the potential effects of dust discharged from the proposed activity are less than minor."

- 5.25 Mr Pigott agrees that, subject to the (revised) conditions of consent, the activity can be adequately managed *"so the dust generated will result in amenity and health impacts that are less than minor."*
- 5.26 Apart from some minor discrepancies (namely Mr Pigott argues that not only PM10, but also total suspended particulate (TSP) can cause health effects, and that potential effects on crops are economic rather than amenity effects – I agree), the applicant's and the Council's technical experts are in agreement. I adopt their advice.

Relevant TRMP objectives and policies - Dust

- 5.27 Given the above, I agree with Mr Bluett that the proposal is consistent with the relevant policy direction on the impacts on management of dust.
- 5.28 Subject to the inclusion of, and compliance with, the revised conditions of consent, I consider that the proposal is consistent with the TRMP policies relevant with regards to dust, namely, Policy 5.1.3.1 and Policy 7.4.3.4

Visual effects

- 5.29 With regards to visual effects, in the s 42A report I considered the adverse visual effects as minor and consistent with Policies 5.2.3.1 and 5.2.3.4.
- 5.30 The applicant provided evidence from Ms Gavin (the landscape evidence), including a detailed assessment of the relevant TRMP objectives and policies (Appendix 2 of the landscape evidence), an updated Landscape Mitigation Plan (Figure 4 of the graphic attachment) and a Stage 1 River Terraces Restoration Plan (Figure 5 of the graphic attachment).

- 5.31 The new information (including mitigation measures) provided with the evidence include updated / revised mitigation planting as well as restoration planting.
- 5.32 The mitigation planting largely consists of shelterbelt planting along the proposed access (on the western, Motueka River West Bank Road side of the access) and planting around the periphery of the Stage 1 area. This planting is proposed to be undertaken in the first planting season following the granting of consents and has been designed to avoid increasing the flood hazard. Effects on the flood plain and stopbank are discussed in Section 8 of this report.
- 5.33 As additional mitigation, the applicant now proposes to excavate Stages 2 and 3 first and delay works within the Stage 1 area by approximately six years. This is to allow the proposed mitigation planting to grow and provide sufficient screening of the Stage 1 area and the stockpile area to the east from Motueka River West Bank Road.
- 5.34 The restoration planting within the Stage 1 area is proposed to be undertaken following excavation of this area. It is proposed to plant an area of 1.35 ha along the eastern and western boundary of the Stage 1 area with native plant species. This is supported.
- 5.35 Ms Gavin concludes that *“there will be adverse visual effects that will be more noticeable from elevated properties that look down on to the site”*. Ms Gavin considers that, with the proposed mitigation, adverse visual and amenity landscape effects are low-moderate, which equates to a minor effect in RMA language. In my opinion, this level of effect is acceptable.
- 5.36 While I disagree that the permitted baseline should be applied (for the reasons detailed in Section 6.7 of the s 42A report), I concur with Ms Gavin’s conclusion on effects and adopt her assessment of the relevant TRMP objectives and policies. I support the proposed Mitigation and Restoration Planting.

Matters for clarification – visual effects

- 5.37 I note Ms Gavin’s assessment of Objective 8.1.2 (maintenance and enhancement of public access) states: *“Peach Island Road within the site would be formed, creating enhanced public access from MRWB Road.”* However, according to the original application (as lodged) *“access via the ROW will be limited to the applicant and any existing users. Access along the Peach Island paper road will be gated but will be maintained in accordance with the Walking Access Act 2008 as necessary, whilst ensuring public and worker safety. It is not anticipated that public access along the paper road will be requested because there are much easier access points to the Motueka River nearby.”*
- 5.38 The applicant needs to clarify the proposed public access provisions during excavation as this has implications on traffic effects, which are discussed in the following Key Effects section.

Amenity effects conclusion

- 5.39 Summing up, subject to compliance with the recommended conditions of consents, I consider that the noise associated with the proposal will be noticeable, but not unreasonable. With regards to

dust, the proposed mitigation measures will ensure that dust can be adequately managed. The adverse visual amenity effects are considered acceptable with the proposed mitigation in place.

6 Key issue - Traffic effects

- 6.1 The Council's Consultant Traffic Engineer, Ari Fon, reviewed the Access Report provided with the original application and recommended conditions, which were included in the s 42A report.
- 6.2 With regards to traffic effects, my original report identified that no traffic impact assessment was provided. A detailed traffic impact assessment has subsequently been provided by Mr Clark (the transport evidence) and reviewed by Mr Fon. Mr Fon's review of the transport evidence and traffic effects is attached in Attachment 5.
- 6.3 In his evidence, Mr Clark has also provided comment on, and suggested changes to, the conditions originally recommended in my s 42A report. Mr Clark's conditions are incorporated into the applicant's volunteered conditions, provided as Appendix B of the applicant's planning evidence.
- 6.4 As additional mitigation, Mr Clark recommends a condition that limits the speed of trucks using Motueka River West Bank Road to 60 kilometres / hour. This condition has been volunteered by the applicant and is supported by Mr Fon. Further detail is provided in sections 6.24 and 6.25 below.
- 6.5 A full set of recommended conditions is contained in Attachment 2. For ease of use I have annotated the applicant's volunteered conditions and highlighted any changes I deem necessary as a result of Mr Fon's review.

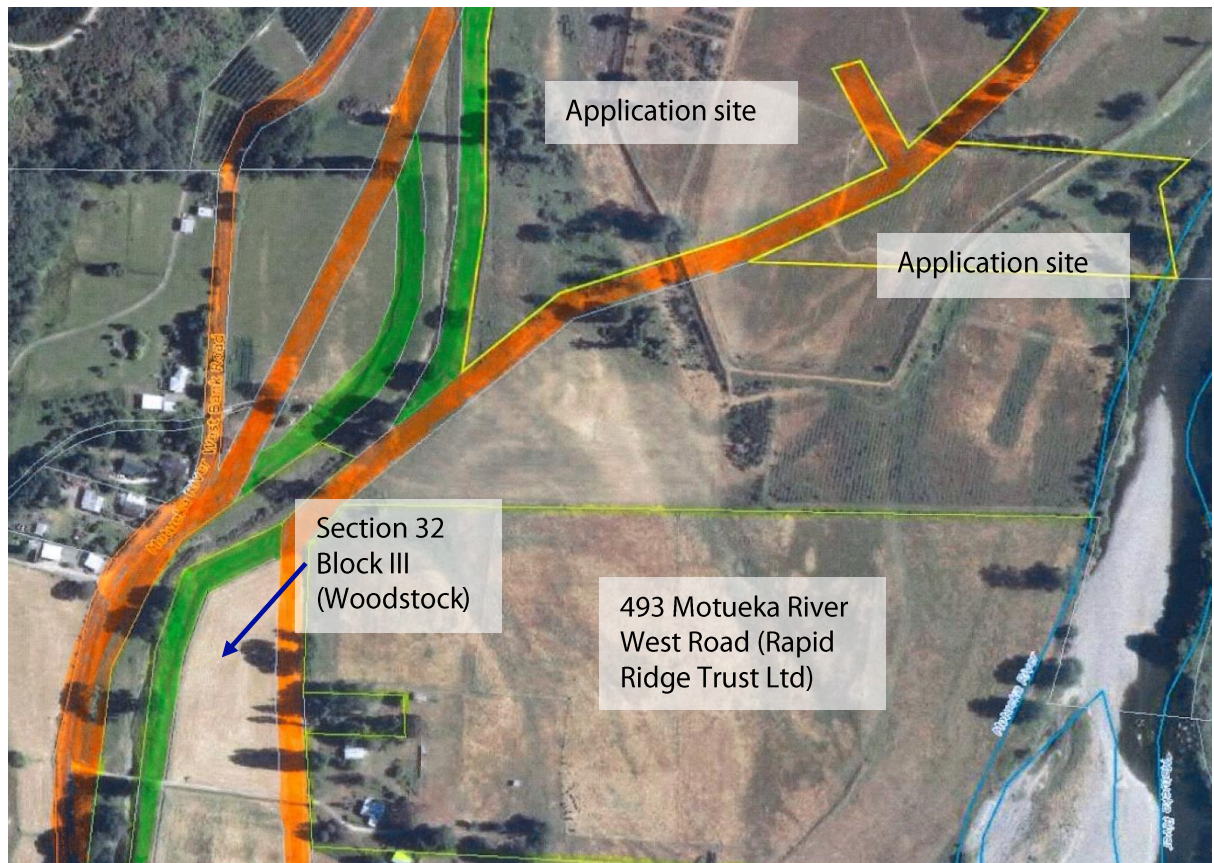
Access and haul road

- 6.6 There is agreement regarding the need for signage to be installed to provide warning to oncoming vehicles of the potential presence of trucks, and regarding the improvements required to improve access visibility (i.e., removal and trimming of vegetation).
- 6.7 With regards to the upgrade of the vehicle entrance and site access, Mr Fon recommended to upgrade / form the crossing to the Diagram 2 layout of the [Nelson Tasman Land Development Manual](#) (NTLDM). Mr Clark sought to reword the originally recommended condition to provide for more flexibility and allow modifications. This has been considered and suggested changes to the wording of the condition are included in Attachment 2.
- 6.8 For reasons outlined in Mr Fon's previous assessment (attached to the s 42A report), it is considered appropriate that the initial section of access, from the existing seal edge to the western end of the bridge (a length of approximately 35 m) is sufficiently wide to allow for two trucks, or other vehicles, to pass by each other to avoid any undesirable queuing on West Bank Road. A condition to this effect was included in the s 42A report.
- 6.9 Mr Clark advised:

“The management of the haul road and trucks accessing the site will hold vehicles until the route is clear. There will not be the need to provide for two vehicles passing at this location on the access or any part of the haul road.”

- 6.10 I disagree with Mr Clark for the following reasons.
- 6.11 As pointed out in Mr Hegley’s evidence, trucks from independent contractors may access the site. The evidence of Mr Corrie-Johnston also states that (approved) third parties will be allowed to deposit clean fill on site.
- 6.12 Furthermore, the first section of the access / ROW, up to and including the bridge, also provides access to 493 Motueka River West Road (owned by Rapid Ridge Trust Limited whose director, Des Corrie Johnston, is also one of the directors of CJ Industries Limited) and possibly to Section 32 Block III Motueka Survey District (owned by A E & D L Woodcock, submitter #46).
- 6.13 This was detailed in the s 42A report; however, the parcel labels (A, B, C) appear to have been omitted. I have therefore included Figure 2 again. For sake of clarity, parcel “A” is part of 493 Motueka River West Road; the parcels labelled “B” are owned by A E & D L Woodcock; and the parcels labelled “C” are owned by C G, C M and G H Le Frantz (submitter #37).
- 6.14 Given that the proposed access includes other / existing ROW users and third party contractors, and potentially public access (refer to Sections 5.37 and 5.38), I concur with Mr Fon that this initial section of the access up to the bridge needs to be formed to a width of 6 m to allow trucks to pass each other. I have recommended a condition to this effect to ensure there will be no impediment to trucks turning off Motueka River West Bank Road into the access.

Figure 2: Ownership of land adjacent to the haul road



6.15 It is noted in the initial consent application and volunteered conditions (Annexure F of the application) proposed a carriageway width of 4.5 m and Figure 1 in the evidence on terrestrial ecology shows a 4.0 m wide road. In the transport evidence, this has subsequently been revised to a sealed width of 3.5 m with localised widening on corners. Mr Fon advised that a width of 3.5 m (with 0.5 m shoulders and provision for drainage in the form of side drains and / or a feathered edge on both sides) is acceptable. This is notwithstanding his additional comments regarding the requirement for passing opportunities.

6.16 For reasons outlined in Mr Fon’s previous assessment (attached to the s 42A report), it is considered appropriate that some passing opportunities be provided along the haul road access, where it is practicable to do so and a condition to this effect was included in the s 42A report. Mr Clark’s evidence states that this is not required. I concur with Mr Fon that passing bays are needed, especially given the length of the haul road, reduced sealed width of 3.5 m, the potential for visitors to the site and possible inability to restrict public access (e.g., along crown land and on “paper road.”).

6.17 As summarised by Mr Fon:

“The haul road access will be over 500 m in length and, should two vehicles meet along that section without adequate opportunities to pass by each other, the level of inconvenience will be high.”

- 6.18 Mr Fon also notes that the conditions volunteered by the applicant only include a speed limit for vehicle movements on unsealed surfaces (in particular for dust mitigation purposes), but not for the sealed haul road. I note that section 13.1 of the air quality evidence states: *“The speed limit on the sealed access road will be 60 km/hr.”* Mr Fon recommends a 30 km/h speed limit for the sealed haul road, which has been included as a recommended condition.

Bridge

- 6.19 It is agreed that the appropriateness of the bridge needs to be assessed prior to it being used for the proposed activity, to ensure it is able to carry Class 1 loads. Mr Fon previously recommended a bridge width of 4.5 m, in line with the previously proposed access width (the bridge is currently about 3 m wide).
- 6.20 The sealed access width has now been reduced to 3.5 m and Mr Fon confirmed that the bridge width can be reduced accordingly, based on his recommendation to provide 6 m width over the initial access section up to the bridge (refer to Section 6.14).

Road network and capacity

- 6.21 Mr Clark’s evidence states that *“the road design is capable of accommodating the existing truck movements and the small increase from the application”*. It is noted that the proposed transport route along Motueka River West Bank Road and Motueka Valley Highway is a designated High Productivity Motor Vehicle (HPMV) route and currently used by truck and trailers. Mr Clark states *“traffic volumes on Motueka Valley Westbank Road are low and well below the anticipated flows of its listed road hierarchy designations.”*
- 6.22 Mr Fon considers that the proposed increase in truck movements will be noticeable:

“The additional truck traffic generated by the proposed gravel extraction operation will produce a noticeable increase in truck movements, particularly on the lower volume section of Motueka River Westbank Road between 493 Motueka River Westbank Road and the Alexander Bluff Bridge.”

I agree with this statement.

Traffic safety

- 6.23 As part of the traffic impact assessment provided in the transport evidence, Mr Clark reviewed the crash history along the proposed transport route and concluded: *“with the small increase in traffic movements that this application represents, the potential increase in crashes [...] is too small to measure”*. Mr Fon agrees with this finding.
- 6.24 As a precautionary approach, Mr Clark suggested that all trucks shall have a speed limit of 60 km/h when travelling along Motueka River West Bank Road. This is supported. I note that a respective speed limit condition has been volunteered by the applicant. Mr Clark advised that: *“the trucks*

used by the applicant have E-Tags which allows management to monitor their location, speed and some other information.”

- 6.25 According to Mr Clark’s evidence, the measures (85th percentile) speed along Motueka River West Bank Road is approximately 76 km/h, with trucks travelling much slower and closer to 65 km/h. Given this, the proposed speed limitation is considered suitable, and I note that Mr Fon has not raised any concerns. He states: *“It is agreed that the use of this speed management system will reduce the potential risk to cyclists on the road and that it should be adopted as a condition of consent.”*
- 6.26 The applicant also advised that they are working with the Cycle Trust to develop an off-road route from 493 Motueka River West Bank Road to Alexander Bridge. As noted in the s 42A report, I consider that the construction of an off-road cycle track along this section of Motueka River West Bank Road, prior to extraction commencing, would mitigate any adverse effect on cyclist and pedestrians. However, I understand that the development of an off-road route is subject to support from adjacent landowners and separate from this consent process. I agree with Mr Taylor that *“the timeframes for this and certainty of such an outcome are largely outside of the control of the applicant.”*

Outstanding matters or matters of contention - Traffic

- 6.27 As detailed earlier in this report, the matters that still need to be clarified and / or are in contention are limited to:
- a. The need to widening the access from Motueka River West Bank Road up to the bridge to 6m to allow for two vehicles to pass.
 - b. The recommended bridge width (3.5 m).
 - c. The need for passing bays along the haul road.
 - d. The proposed speed limit on the sealed haul road (as opposed to unsealed surfaces on site).
 - e. Clarification whether public access is possible on the haul road or whether the public will be excluded. As noted by Mr Fon:

“If there is the likelihood of any public access on the paper road, then measures will be required to ensure safety of members of the public while trucks are using the section of the access road that is formed on the paper road.”

- 6.28 My recommended conditions, which are based on Mr Fon’s advice are included and marked up in Attachment 2.

Traffic effects conclusion

- 6.29 Mr Fon concludes that, subject to adoption of the recommended conditions of consent, the “traffic effects of the activity on the safety and efficiency of the existing road environment will be no more than minor.” I adopt this assessment.

Relevant TRMP objectives and policies - Traffic

- 6.30 In summary, while the proposed increase in truck movements will be noticeable, the traffic effects of the proposed activity, including access, vehicle entrance and bridge across the overflow channel can be appropriately managed by Mr. Fon’s recommended conditions of consent (i.e., subject to resolving the outstanding matters). This is consistent with Policies 11.1.3.2(b), 11.1.3.3 and 11.1.3.6.

7 Key issue – Effects on land productivity

Relevant NPS-HPL objectives, policies and provisions

- 7.1 Given the new policy direction provided by the NPS-HPL, I have detailed the most relevant objectives, policies and provisions at the start of this key issue section, as they provide an important context to the application in general and land productivity in particular. The relevant NPS-HPL provisions have been incorporated into the assessment below.
- 7.2 The objective of the NPS-HPL is “Highly productive land is protected for use in land-based primary production, both now and for future generations.”
- 7.3 The policies of particular relevance to the proposal are:
- Policy 1:** Highly productive land is recognised as a resource with finite characteristics and long-term values for land-based primary production.*
- Policy 4:** The use of highly productive land for land-based primary production is prioritised and supported.*
- Policy 8:** Highly productive land is protected from inappropriate use and development.*
- Policy 9:** Reverse sensitivity effects are managed so as not to constrain land-based primary production activities on highly productive land.*
- 7.4 Under section 104(1)(b)(iii) the consent authority must have to have regard to the NPS-HPL. The weighting that is given to the NPS-HPL needs to be determined. The NPS-HPL mirrors the relevant policy 7.1.2.1 of the TRMP, avoiding the loss of productive value. Thus, the new NPS-HPL is consistent with the current policy environment and significant weighting should be given to the relevant policies contained within it.
- 7.5 The provisions below are as detailed in the memorandum submitted by the applicant’s Counsel on 30 September 2022. I consider them relevant and also provide an assessment on them.

7.6 Clause 1.3 Interpretation

Highly productive land means land that has been mapped in accordance with clause 3.4 and is included in an operative regional policy statement as required by clause 3.5 (but see clause 3.5(7) for what is treated as highly productive land before the maps are included in an operative regional policy statement.

7.7 Clause 3.5 (7) says:

Until a regional policy statement containing maps of highly productive land in the region is operative, each [...] authority must apply this NPS as if references to highly productive land were references to land that at the commencement date:

- (a) is (i) zoned general rural or rural production; and
- (ii) LUC 1, 2, or 3 land

7.8 According to clause 3.4 (5)(a)

Mapping based on the New Zealand Land Resource Inventory is conclusive of LUC status, unless a regional council accepts any more detailed mapping that uses the Land Use Capability classification in the New Zealand Land Resource Inventory.

Comment

7.9 With regards to this clause, Council's soil scientist, Ms Langford, advised:

"Peach Island as a unit is mapped as LUC 3 on the New Zealand Land Resource Inventory. Council would have to accept the more detailed mapping that was undertaken by the applicant to accept that only parts of the site are classed as highly productive. Whilst I do not dispute the detailed mapping that has been undertaken, without the guidance document I am not able to accept the mapping as an interpretation of the land unit as a whole."

7.10 I agree with this and therefore conclude that the entire application site is defined as highly productive land under the NPS-HPL.

7.11 Clauses 3.9 (1) and (2) state (emphasis added):

- (1) Territorial authorities must avoid the inappropriate use or development of highly productive land that is not land-based primary production.
- (2) A use or development of highly productive land is inappropriate except where at least one of the following applies to the use or development, and the measures in subclause (3) are applied: ...
 - (j) it is associated with one of the following, and there is a functional or operational need for the use or development to be on the highly productive land ...

- (iv) aggregate extraction that provides significant national or regional public benefit that could not otherwise be achieved using resources within New Zealand.

7.12 Subclause (3) states:

Territorial authorities must take measures to ensure that any use or development on highly productive land:

- (a) *minimises or mitigates any actual loss or potential cumulative loss of the availability and productive capacity of highly productive land in their district; and*
- (b) *avoids if possible, or otherwise mitigates, any actual or potential reverse sensitivity effects on land-based primary production activities from the use or development.*

- 7.13 The memorandum submitted by the applicant’s Counsel states that the activity is provided for under clause 3.9(2)(j)(iv) and can meet the requirements of clause 3.9(3), however, insufficient evidence has been provided to substantiate this asserted conclusion. I anticipate that this will be provided prior to the hearing.
- 7.14 I note that ‘functional or operational need’ have not been defined in the NPS-HPL or RMA, however, there is a definition of functional need the NPS-FM and the National Planning Standards that was included in the s 42A report³.
- 7.15 As recognised by the Environment Court in *Te Rūnanga o Ngāti Awa v Bay of Plenty Regional Council*⁴ (*Te Rūnanga o Ngāti Awa v Bay of Plenty Regional Council* [2019] NZEnvC 196), while a functional need is often obvious for infrastructure, it can be complex when dealing with other activities where there is a less sharply defined functional versus operational requirement. In practice, whether there is a functional or operational need for an activity will depend on the specifics of the proposal, including why the project is being undertaken at that location. In this case gravel or rock can come from a different location so I do not consider that the functional need test has been met by the activity.
- 7.16 I have stated in the s 42A that I do not consider that the proposal has a functional need to locate at this particular river environment/location: *“Whilst the proposed extraction is bound by the availability of the gravel resource, this does not mean that the proposed activity can only occur on the application site.”*

³ Functional need is defined in the NPS-FM (and the National Planning Standards 2019) as *“the need for a proposal or activity to traverse, locate or operate in a particular environment, because the activity can only occur in that environment.”*

⁴ Link to case on the Environment Court website [2019-NZEnvC-196-Te-Runanga-O-Ngati-Awa-v-Bay-of-Plenty-Regional-Council.pdf \(environmentcourt.govt.nz\)](https://www.environmentcourt.govt.nz/2019-NZEnvC-196-Te-Runanga-O-Ngati-Awa-v-Bay-of-Plenty-Regional-Council.pdf)

- 7.17 The applicant argues that the proposed quarry has a ‘functional need’ in this location. Namely, Mr Corrie-Johnston states: “I confirm that the extraction of river run aggregate for concrete and sealing chip production can only occur in former or current riverbeds.” This is mirrored by Mr Taylor (refer to section 3.95 of the planning evidence).
- 7.18 Mr Taylor (in section 3.22 of his evidence) states: “There are a number of factors that feed into the functional need to locate where quarries or gravel extraction businesses do. It is not just about the location of the physical resource (as addressed earlier), but also accessibility to quarry that resource in terms of land ownership and vehicle access to and from the site, and proximity to the end use or the market for the resources as detailed in the evidence of Mr Corrie-Johnston.”
- 7.19 I consider that the matters listed by Mr Taylor relate more to operational rather than functional needs. While the quarrying of in-situ rock (as opposed to river aggregate) may have a functional need because a specific rock or mineral resource may only exist in a particular environment, river aggregate can be sourced from current or former riverbeds, i.e., from different locations.
- 7.20 I accept that restrictions apply to extracting aggregate from current riverbeds and that the activity has an operational need to be on the highly productive land, which is sufficient to meet clause 3.9(2)(j) (functional or operational need). However, I believe the bar for ‘functional need’ (in terms of the NPS-FM definition and the caselaw referred to in section 7.15 above) is higher and I disagree that the proposal can only operate in this particular environment, as opposed to another current or former riverbed.
- 7.21 The applicant has provided evidence from Mr Kaye-Blake (the economic evidence) which outlines the economic benefit of the proposal. However, this does not demonstrate that there is ‘significant national or regional benefit that could not otherwise be achieved using resources in the district’, let alone within New Zealand. The applicant may wish to provide further evidence regarding this.
- 7.22 The memorandum submitted by the applicant’s Counsel states that the activity would also meet clause 3.9 (2)(g):
- (g) it is small-scale or temporary land use activity that has no impact on the productive capacity of the land.
- 7.23 Again ‘small scale’ and ‘temporary’ have not been defined in the NPS-HPL, however, I note that the definition of productive capacity in the NPS-HPL is “*based on the assessment of: (c) the size and shape of existing and proposed land parcels.*”
- 7.24 The application site has a size of about 13.5 ha, of which approximately 7.4 ha are proposed to be quarried. This equates to approximately 55% of the site area. Mr Corrie-Johnston’s evidence states that the amount of aggregate to be extracted over 15 years is between 181,000 and 250,000 m³. In comparison, the TRMP permits quarrying in the Rural 1 Zone of up to 50 m³, which could be considered small-scale. In my opinion, the proposal is not a small-scale or temporary land use activity.

- 7.25 Ms Langford notes: “Whilst evidence from Dr. Hill describes an improvement of the productive capacity, this is reliant upon the successful implementation of the Soil Management Plan. This has not been shown as possible elsewhere in the district. In addition, there is agreement that the proposed activity will certainly have short-term effects.”
- 7.26 While ‘productive capacity’ is defined in the NPS-HPL as: *“in relation to land, means the ability of the land to support land-based primary production over the long term,”* I do not consider that sufficient evidence has been provided to confirm that the activity has *“no impact.”* Regardless, I maintain that this clause is not applicable to the proposal, as I consider it is not a small scale or temporary land use activity.
- 7.27 The applicant’s counsel further submitted that land outside of the stop bank falls within the exemptions listed under clause 3.10, because it is subject to permanent or long-term constraints in terms of clause 3.10.1(a) and the activity will achieve the effects management requirements of clause 3.10.1(b). These are:
- (i) avoids any significant loss (either individually or cumulatively) of productive capacity of highly productive land in the district; and
 - (ii) avoids the fragmentation of large and geographically cohesive areas of highly productive land; and
 - (iii) avoids if possible, or otherwise mitigates, any potential reverse sensitivity effects on surrounding land-based primary production from the subdivision, use, or development.
- 7.28 There is agreement that Stage 1 is subject to flooding risk and thus, clause 3.10.1(a) is met. However, there is disagreement regarding the practical implementation of the proposed Soil Management Plan and consequently, regarding the actual loss of productive value. This is discussed further in the following sections.

Land productivity conclusion

- 7.29 The effects of the proposed activity related to soil compaction, loss of soil structure and degradation of soil aggregate during removal, transport, storage and/ or placement. These, in turn, can result in impeded soil drainage, reduced water storage capacity and reduced biological activity and thus, a loss or reduction of land productivity.
- 7.30 As noted above and in the s 42A report, there is agreement that the productivity values of the land outside of the stopbank (Stage 1) are limited and thus, the effects of the proposed gravel extraction on Stage 1, in terms of loss of productivity, are considered acceptable.
- 7.31 The s 42A report highlighted concerns regarding the draft Soil Management Plan (SMP). The draft SMP has since been updated and the applicant has submitted a revised SMP with the evidence provided by Dr Hill (the soil management and land productivity evidence) and Mr Nelson (the land productivity – horticulture evidence). Dr Hill and Mr Nelson consider that the site is not classed as

land of high productive value as it fails to meet the requirements in the last sentence of the TRMP definition (i.e., *“the land is capable of producing crops at a high rate or across a wide range”*).

- 7.32 This information has been reviewed by Council’s Team Leader - Soils & Land Use, Ms Langford. Ms Langford’s addendum is attached to my report (refer to Attachment 6).
- 7.33 Ms Langford welcomes the changes made to the draft SMP, in particular:
- The use of more directive and stronger language.
 - The provision for planning, training and supervision to be undertaken by a soil scientist throughout the soil excavation, storage and reinstatement process.
- 7.34 I concur with this and that there is the potential for the land to be of higher productive value if the soil management plan is implemented successfully (my emphasis).
- 7.35 However, I share Ms Langford’s concerns regarding the practical implementation of the SMP, including potential conflict with the DMMP (the SMP requires soil to be handled in dry conditions while the irrigation of soil for dust mitigation as per the DMMP could impact soil moisture), and potential for degradation of soil aggregated during transport (e.g., when importing topsoil).
- 7.36 I note that the SMP uses language such as *“extreme care must be taken to avoid shearing and compressive force on the soil”* and that operator performance in the lifting and placement phase is *“crucial.”* While the SMP states that *“the consent holder must consult a Soil Scientist or Restoration Manager for the initial training of relevant staff,”* there is always potential for human error, staff changes over time, or less experienced operators filling in for key staff. This, combined with the importance of operator performance and absence of previous successful reinstatements in the Tasman District, reduces confidence that the land’s productive value and capacity can be maintained. I do however, acknowledge, that successful reinstatements have occurred elsewhere in New Zealand.
- 7.37 I note that the applicant has volunteered a condition to move temporary⁵ topsoil stockpiles for Stage 1 inside the stopbank if heavy rain is forecast for flood risk mitigation (refer to section 8.4). I have considered how this relates to the requirements in the SMP for soil handling. Given that the effects on Stage 1 land (in terms of loss of productivity) are considered acceptable, this is unlikely to pose an issue. However, care would need to be taken that this topsoil (if compromised by moisture and/ or additional handling) would not be utilised for Stage 2/3 restoration. Again, this highlights the practical challenges for successful implementation of the SMP.
- 7.38 Furthermore, Ms Langford notes that the volunteered conditions allow for a degradation in productive capability (refer to Attachment 6). I have incorporated Ms Langford’s comments regarding the conditions into my recommended conditions (Attachment 2).

⁵ used for backfilling on the same day

Outstanding matters or matters of contention - Land Productivity

- 7.39 The matters that are still in contention are limited to:
- a. the interpretation of the definition of highly productive land.
 - Ms Langford maintains that the land unit of 134 Peach Island is classed as highly productive when applying the TRMP, PLC 1994, PLC 2021 and NPS-HPL criteria.
 - I agree with Ms Langford that a property scale soil map should not be used to dissect the land unit into parts of lesser or more productive areas and that the land unit as a whole needs to be assessed.
 - b. Whether the practical implementation of the SMP can successfully achieve the outcomes sought and prevent a loss of productive value due to compaction and drainage issues.
 - c. Whether the conditions (as volunteered by the applicant) will lead to a degradation in productive capacity.

Relevant objectives and policies - Land productivity

- 7.40 I note that regardless of the TRMP definition, Peach Island as a unit is mapped as LUC 3 on the New Zealand Land Resource Inventory and thus, classed as highly productive under the NPS-HPL.
- 7.41 Mr Taylor takes a different view and states that the activities do not impact on land of 'high productive value', as Mr Nelson has stated that the subject site does not contain such land.
- 7.42 If the Commissioner prefers the applicant's evidence that land is not highly productive and/or the SMP can be implemented successfully, then the proposal may be considered consistent with the relevant provisions in Chapter 7 (rural environment effects) and 12 of the TRMP (land disturbance effects). However, even if the Council accepts the more detailed mapping undertaken (in terms of clause 3.4(5)(a) of the NPS-HPL and hence, that only parts of the site are classed as LUC 3⁶), the proposed aggregate extraction must still provide *significant national or regional public benefit that could not otherwise be achieved using resources within New Zealand* (and meet clause 3.9.(3) so as not to be considered as 'inappropriate development' under the NPS-HPL.
- 7.43 If the Commissioner prefers the evidence of the Council Officers, then the following objectives and policy are considered relevant: Objectives 7.1.2.1 and 7.1.2.2, which seek to avoid the loss of potential productive value to meet the needs of future generations, particularly land of high productive value (emphasis added), and associated Policies 7.1.3.2, 7.1.3.3 and Policy 12.1.3.4

⁶ According to Dr Hill's evidence, about 2.0 ha of land inside the stopbank are classified as LUC class 3

- 7.44 These objectives and policies provide strong direction, as does the NPS-HPL (particularly Policies 4 and 8).
- 7.45 Given the concerns regarding the practical and successful implementation of the SMP, and that only limited evidence for meeting clause 3.9(2)(j)(iv) of the NPS-HPL has been provided to date, I consider that the proposal is not consistent with the relevant objectives and policies of the TRMP and NPS-HPL.

8 Key issue – Effects on the flood plain and stopbank

- 8.1 With regards to flood hazard and stopbank integrity, the s 42A report identified the following information gaps to be addressed:
- a. The effects from repeated truck crossings on stopbank stability / integrity.
 - b. Effects of the proposed planting on flood risk.
 - c. Effects of stockpiles and noise bunds on flood flows.
- 8.2 The applicant subsequently provided evidence from Mr Averill (the geotechnical evidence) and Mr Aiken (the flooding evidence). The evidence provides further assessment of the stability of the existing stopbank and recommends the following mitigation measures, which have been volunteered as conditions of consent:
- a. Confirmation that excavations will be set back 20m from the toe of the stopbank (emphasis added) and the location of the toe of the stopbank will be marked on site.
 - b. Revised maximum slope angles/ batters for excavations adjacent to property boundaries or adjacent to the 20 m setback from the toe of stopbanks.
 - c. Placement of a 200 mm sacrificial gravel layer on top of the stopbank crest, which shall be maintained throughout works and removed upon completion of the quarrying activity.
 - d. Pre- and post-works condition survey of the stopbank crossing point.
 - e. Stormwater controls during construction to divert concentrated stormwater flows away from temporary cut slopes.
 - f. Inspection of excavation areas by a Geo-professional to verify ground conditions and appropriate batter angles.
- 8.3 All of the above mitigation measures are supported and will ensure that the stability / integrity of the existing stopbank is not compromised.
- 8.4 In addition, Mr Aiken confirmed that there will be *“no permanent or fixed earthen structures on the flood plain”*. Only temporary topsoil awaiting reinstatement placement on that day will be stored outside of the stopbank. This will be moved inside the stopbank if heavy rain is forecast and

a condition to this effect has been volunteered. Alternatively, it may be more practicable to not stockpile topsoil outside of the stockbank if heavy rain is forecast.

8.5 The proposed noise bund will be located within the area protected by the stopbank. Mr Aiken concludes: *“the proposed activity has been shown to not fundamentally change the performance of the floodplain, increase the risk of overtopping or failure of the stopbanks.”*

8.6 As part of his evidence, Mr Aiken also assessed the proposed Mitigation Planting and confirmed that

“it will not further increase the flood risk, provided planting occurs parallel to flood flows and that the final plant selection maximises smaller flaxes and sedges that can ‘fold away’ during large flood flows.”

8.7 The Council’s River and Coastal Engineer, Giles Griffith, has reviewed the geotechnical evidence, the flooding evidence and the proposed Mitigation and Restoration Planting Plans. Mr Giles advised that he is comfortable with the reports and information provided. He notes that there are now gaps in the poplar shelterbelts so that water can flow through the Stage 1 area better. Mr Giles advised that this is acceptable, provided any plantings are set back at least 5 m from the toe of the stopbank to minimise the tree roots affecting the stopbank. I have added a condition to this effect in my recommended conditions.

Effects on the flood plain and stop bank conclusion

8.8 I am satisfied that the effects of the proposal on the flood plain and stop bank can be appropriately mitigated by the conditions discussed above. The applicant’s and the Council’s technical experts agree that the proposed activity will not worsen existing flood risk and is unlikely to result in damage to flood control structures. I adopt their advice.

Relevant TRMP objectives and policies

8.9 Given the above, I consider that the proposal is consistent with the relevant objectives and policies detailed in Attachment 2 to the original land use consents s 42A report (refer to Section 11: Key issues – Effects on flood plain and stop bank), in particular Objective 13.1.2.1 and associated Policies 13.1.3.9 and 13.1.3.14.

9 Key issue – Effects on water quality (surface water only)

Surface water quality

9.1 I have reviewed the evidence of Dr MacNeil (the surface water quality and ecology evidence). He concludes that the presence of stopbanks and separation distance from stopbanks and water bodies will protect the water quality of the Motueka River. I agree with this assessment.

9.2 I also agree that the proposal is consistent with the requirements of the Motueka River Water Conservation Order (WCO) as outlined in section 3.99 of Mr Taylor’s evidence.

9.3 Dr MacNeil also believes that

“there will be less than minor effects on an unnamed stream in the Peach Island overflow channel from both excavation activities on site and use of the haul road. During extreme flood events, in my opinion there would be no discernible effects on river values in the Motueka River, directly attributable to the works detailed in the proposal.”

9.4 The mitigation measures recommended by Dr MacNeil, such as dust and sediment control measures, already form part of the volunteered conditions and management plans provided.

9.5 No new or additional mitigation measures have been identified and as a result of the surface water quality and ecology evidence provided, there has been no additional information that would change my conclusions in the s 42A report with regards to surface water quality.

9.6 In summary, I am satisfied that the proposal will have no direct effects on the surface water quality of the Motueka River or the unnamed stream in the overflow channel. I consider that the effects of dust, sediment and erosion can be appropriately managed with conditions of consent so as not to adversely affect surface water quality. I agree with Dr MacNeil that during large flood events that could inundate the site, any effects resulting from the proposal would not be discernible.

10 Key issue – Cultural effects

10.1 The s 42A report raised concerns regarding the limited consultation undertaken with iwi and cultural effects were raised in a number of submissions.

10.2 Mr Taylor’s planning evidence contains a summary of the applicant’s engagement with Wakatū, Te Ātiawa and Ngāti Rārua and I acknowledge that the applicant has actively pursued engagement with iwi and the preparation of a Cultural Impact Assessment (CIA).

10.3 No CIA has been submitted at the time of writing this report, however, I understand that the applicant is continuing to pursue the preparation of a CIA.

10.4 The additional mitigation measures proposed by the applicant are:

- a. An iwi cultural monitor will be invited to be present for any topsoil and subsoil removal. This invitation will be extended to all five iwi that have Statutory Acknowledgement over the area.
- b. Accidental discovery protocols will be adhered to.
- c. Involvement of a Matakite for a site walkover prior to works commencing (as recommended by Wakatū). Any recommendations made by the Matakite will be adhered to, provided they do not frustrate the exercise of the consent.

10.5 I support these measures and associated volunteered conditions.

- 10.6 The planning evidence (in section 3.108) also addresses the key issues raised in the submissions from Wakatū, Te Ātiawa, Ngāti Rārua and provides a review of the relevant iwi management plans. I concur that the relevant iwi management plans and provisions have been identified.
- 10.7 I share Mr Taylor's position in that I am not able to form a conclusion regarding the effects on cultural values without a CIA, as only iwi can gauge the cultural importance of the area and determine the level of cultural effects.
- 10.8 I do however acknowledge that the applicant has endeavoured to identify and provide for Māori freshwater values in accordance with Policy 2 of the NPS-FM, and Objective 10.2.2 and Policy 10.2.3.2 of the TRMP.

11 Key issue - Duration of consent

- 11.1 The applicant applied for a 15-year term for the consent. In my s 42A report I asked the applicant to provide confirmation of the estimated extraction volumes and associated timeframes.
- 11.2 This information has been provided by Mr Corrie-Johnston (the corporate and operations evidence). Mr Corrie-Johnston notes that *"a 15-year consent time is longer than the time required to extract that amount of aggregate from Peach Island but enables CJ Industries to use the region's finite aggregate resources more efficiently."*
- 11.3 With a 15-year term, Mr Corrie-Johnston anticipates that extraction activities would occur around one week per month *on average*. I also note that it is now proposed to delay quarrying in the Stage 1 area until the Landscape Mitigation Planting has been established for a period of at least six years. The applicant will not quarry within 100 m of horticultural activities between January and May. In addition, high ground water levels may impede extraction. Collectively, these mitigation measures will result in a longer duration. I understand a 15-year term is still reasonable.
- 11.4 Given the above, and based on the information provided, I am therefore satisfied that a 15-year term allows for an efficient use of resources and is an appropriate duration if the Commissioner is minded to grant consent.

12 Key issue - Precedent

- 12.1 No new information has been provided with regards to precedent. I note that Mr Taylor and I agree that no issue of precedent arises.

13 Terrestrial ecology

- 13.1 In response to the submissions received, the applicant provided evidence from Mr Payne on terrestrial ecology. The conclusions of Mr Payne are summarised in sections 5.1 to 5.5 of his evidence and in section 3.128 of the planning evidence.
- 13.2 I accept Mr Payne's evidence that any adverse effects on terrestrial ecological values will be low.

14 Positive effects

- 14.1 I adopt Mr Payne’s evidence that the proposal to plant 1.35 ha of indigenous vegetation (i.e., the restoration planting of part of the Stage 1 area) *“will greatly outweigh any terrestrial ecological effects associated with the development such that the overall net terrestrial ecological effect of the proposed application will be positive in the long-term.”*
- 14.2 In addition to the ecological betterment, Mr Corrie-Johnston and Mr Kaye-Blake have provided evidence on the positive economic effects of the proposal, including effects to the wider economy. This is accepted. I agree that the local sourcing of aggregate results in a reduction of greenhouse gas emissions, compared to sourcing aggregate from further away.
- 14.3 I also note that the submissions in support, in particular the late submission (submitter #59) from the Aggregate and Quarry Association of New Zealand, refer to the positive effects of the proposal.

15 Planning evidence

- 15.1 The purpose and scope of Mr Taylor’s evidence is detailed in section 1.12 of his report and includes a description of the changes made to the application and proposed mitigation measures. I consider that Mr Taylor’s evidence generally encompasses the relevant statutory documents and relevant other matters in terms of s 104(1)(c) of the RMA.
- 15.2 For ease of use, the section below outlines only those matters where I disagree with Mr Taylor. This has been done in order to narrow down further the issues of contention to help the Commissioner in achieving an efficient hearing process. Recommended changes to the volunteered conditions are highlighted in Attachment 2 and effects associated with the discharge permit are covered in the discharge permit s 42A report. Specific technical matters of contention are noted in the relevant key issue sections.

Matters of contention

- 15.3 I disagree that there is a ‘functional need’ (as defined in the NPS-FM) for the activity to be located within this particular river environment (refer to sections 7.14 to 7.19 of this addendum).
- 15.4 I maintain that the permitted baseline is not applicable for the reasons outlined in sections 6.5 to 6.10 of the s 42A report. While I agree with Mr Taylor that the proposed effects *“could result in effects similar to those that would result from the proposed activities in relation to visual effects, noise effects, dust effects, erosion and sediment movement”* (my emphasis), permitted activities would not give rise to similar effects on productive land and groundwater, for example.

- 15.5 Mr Taylor states that quarrying is an ‘anticipated’ activity in the Rural 1 Zone as it is provided for as a discretionary activity⁷. In my view, activities anticipated by the Plan are typically controlled activities, but may also be discretionary activities if aligned with policy direction. Mr Taylor also refers to a history of consented quarrying activities, including RM080129 (130 Peach Island Road). The Council advised that this consent was never given effect to.
- 15.6 Mr Taylor notes in section 3.72 of his evidence “that the reporting planner puts significant emphasis on the use of the word ‘avoid’ in objectives 7.1.2.134 and 7.1.2.235 in relation to the loss of value of productive rural land.” I put forward that this emphasis and attention merely reflects the Supreme Court’s *King Salmon* decision⁸ and the required focus on the wording of policies and rules in plans. According to *King Salmon*, “avoid” has the plain and ordinary meaning of “not allow” or “prevent the occurrence of.” I note that there is also disagreement between the soil scientists whether the proposed mitigation measures, including volunteered conditions, can prevent a loss of productive value and degradation. If they cannot, then I maintain that the word ‘avoid’ as used in the above objectives should be interpreted in the above *King Salmon* sense.

16 RMA Part 2

- 16.1 I have updated the brief assessment against Part 2 contained in the s 42A report in response to the new information and mitigation measures provided by the applicant on 15 July 2022.
- 16.2 Section 17.11 of the s 42A report noted potential inconsistencies relating to:
- a. The maintenance and enhancement of amenity values, in particular the effects of noise and dust on amenity values.
 - b. The efficient use and finite characteristics of natural and physical resources with regards to the effects on land productivity.
 - c. The maintenance and enhancement of the quality of the environment, in particular with regards to groundwater quality.
 - d. Consideration of Māori freshwater values, Te Māna o te Wai and effective consultation with iwi (sections 6(e), 7(a) and 8 of the RMA).
- 16.3 Subject to my comments relating to specific conditions for noise mitigation, I am satisfied that 16.2a has been addressed and that the proposal is consistent with section 7(c) *the maintenance*

⁷ Section 3.21 of the planning evidence contains an excerpt from the TRMP, Chapter 17.5 Rural 1 Zone Rules, Principal Reasons for Rules: “*Quarry activities have a range of potential adverse effects. In the context of the zone, the effects of new quarries and quarry expansion activities need to be evaluated on a case-by-case basis as a discretionary activity.*”

⁸ *Environmental Defence Society v The New Zealand King Salmon Co Ltd* [2014] 1 NZLR 593 (*King Salmon*)
Link to case on the Ngā Kōti o Aotearoa Courts of New Zealand website -
[sc-82-2013-eds-v-king-salmon-civil-appeal.pdf \(courtsofnz.govt.nz\)](https://www.courtsofnz.govt.nz/sc-82-2013-eds-v-king-salmon-civil-appeal.pdf)

and enhancement of amenity values. I consider that the effects of noise and dust can be adequately managed with conditions of consent and concur with Ms Gavin that the proposed restoration planting of the Stage 1 area will have (minor) positive effects on amenity values.

- 16.4 As detailed in Section 7 of the report, I am still concerned with the effects of the proposal on land productivity and note that the volunteered conditions allow for a degradation in productive capability. Thus, there are remaining inconsistencies regarding 16.2b the efficient use and finite characteristics of natural and physical resources, in terms of the productive land resource.
- 16.5 The effects on groundwater quality are discussed in the discharge permit s 42A report.
- 16.6 As noted earlier in this report, I acknowledge that the applicant has pursued consultation with iwi and endeavoured to identify and provide for Māori freshwater values. Without a cultural impact assessment I am unable to reach a definite conclusion regarding 16.2d above, Te Māna o te Wai, and sections 6(e), 7(a) and 8 of the RMA. However, I am satisfied that the applicant made substantial efforts to consider cultural values.

17 Summary of key issues and recommendations

- 17.1 The application for land use consent is a discretionary activity under the TRMP so the consent authority must consider the application in accordance with sections 104 and 104B of the Resource Management Act 1991.

Stage 1

- 17.2 I consider that in principle it is open to the Commissioners, after hearing the evidence from all parties, to grant resource consent for **Stage 1** subject to appropriate conditions of consent. This opinion is based on the information provided to date and in particular the following reasons:
- a. There is agreement that this part of the land has limited productive use due to flooding risk.
 - b. The applicant now proposes to delay works within the Stage 1 area by approximately six years. This is to allow the proposed mitigation planting to grow and provide sufficient screening of the Stage 1 area and the stockpile area to the east from Motueka River West Bank Road.
 - c. There is agreement that the proposed activity will not worsen existing flood risk and is unlikely to result in damage to flood control structures.
 - d. I note that in my discharge permit s 42A report I have concluded that I am unable to recommend that the discharger permit for the entire site is granted. Whilst the concerns raised in the discharge permit s 42A report relate to all stages, I note that Stage 1 has 70 m to 180 m more separation distance to the nearest downgradient bores used for drinking water supply than Stage 2, with two downgradient monitoring bores between the quarry and drinking water bores. Subject to adequate trigger levels being agreed upon, I would therefore be able to recommend that consent for Stage 1 is granted.

Stages 2 & 3

- 17.3 At this point in time, I am unable to recommend that consent for Stages 2 and 3 is granted. This opinion is based on the information provided to date, and I retain an open mind to subsequent evidence. My particular concerns relate to the following matters.
- a. Council Officers consider that land in the Stage 2 and 3 area has high production potential, and it is unclear whether the practical implementation of the SMP can successfully achieve the outcomes sought and prevent a loss of productive value due to compaction and drainage issues (refer to key issue section 7).
 - b. Uncertainty that the proposal will maintain existing ground water quality, and concerns regarding the inadequacy of trigger levels, monitoring and the applicant's proposed response to potential exceedances (refer to discharge permit s 42A report).
- 17.4 In addition, I note the relevance of the NPS-FM and NPS-HPL, which provide strong policy direction. Consent should only be granted if the Commissioner is satisfied that the proposal is consistent with the provisions of the NPS-FM, and NPS-HPL (in particular, Objective 1, Policy 8 and associated clause 3.9(2)(j)(iv)).
- 17.5 In my opinion (as detailed in the discharge permit s 42A report), the applicant has, to date, not clearly demonstrated that the works can be managed in a way that gives effect to Te Māna o te Wai (NPS-FM Policy 1) and ensures that people's drinking water supplies are not adversely affected (NPS-FM Objective 1).
- 17.6 Notwithstanding the above, draft recommended conditions for the proposed land use consents and discharge permit are contained in Attachment 2 should the Commissioner be minded to grant consent and should the above matters be addressed to their satisfaction. For the avoidance of doubt, the conditions apply to all three extraction stage area.

NEXT PAGE IS PAGE 53

Pages 39 to 58 deleted
due to repeated text
from formatting error

Resource consents sought for:

- RM200488 Land use consent to disturb land and rehabilitate for the purpose of gravel extraction within the Rural 1 Zone.
- RM200489 Land use consent to erect signage and establish access via an unformed legal road.

Recommended conditions

General

1. The consent holder shall ensure that all works are carried out in general accordance with:
 - (a) the application documents received by the Council on 15 June 2020;
 - (b) the further information received on 8 and 10 June 2021;
 - (c) **the evidence received on 15 July 2022;**
 - (d) Plan **XX**;

Where there is any apparent conflict between the application and consent conditions, the consent conditions shall prevail.

2. The consent holder shall ensure all persons undertaking activities authorised by this resource consent are made aware of the conditions of the consent and ensure compliance with those conditions. A copy of the consent documents shall be kept available on site and shall be produced without unreasonable delay upon request from a servant or agent of the the Council.
3. Quarrying in the Stage 1 area shall not commence until the Landscape Mitigation Planting required by condition 44 below has been established for a period of at least 6 years. Quarrying activities in the Stage 2 and 3 areas may take place in any order provided that all other conditions of this consent are met.

Review

4. For the purposes of, and pursuant to section 128 of the Resource Management Act 1991 ('the Act'), the Council reserves the right to review this consent annually commencing 12 months from the date this consent is granted, for the purposes of:
 - (a) dealing with any adverse effect on the environment which may arise from the exercise of this consent that were not foreseen at the time of granting of the consent, and which it is therefore more appropriate to deal with at a later stage; and/or

- (b) requiring the consent holder to adopt the best practical option to remove or reduce any adverse effects on the environment resulting from the exercise of this consent; and/or
- (c) requiring compliance with operative rules in the Tasman Resource Management Plan or its successor; or
- (d) requiring consistency with any relevant regional plan, district plan, national environmental standard or Act of Parliament.

Lapse and expiry

- 5. Pursuant to section 125 of the Act, this consent shall lapse 5 years after the date of issue of the consent unless either the consent is given effect to, or the Council has granted extensions pursuant to section 125(1A)(b) of the Act.
- 6. This consent shall expire 15 years after the date it commences.

Bond

- 7. Prior to starting work the consent holder shall enter into a performance bond with the Council. The performance bond shall be for \$40,000.

The sum secured by the bond shall be increased by the annual increase in the consumer price index for each year that the bond required by this condition remains in force, commencing with the first anniversary of the date of issue of the consent and confirmed on each subsequent anniversary. The movements in the consumer price index shall be taken from the published increases available on 31 December following the issue of the consent and on 31 December in each subsequent year.

- 8. The performance bond is to be prepared by the consent holder's Bank or Solicitor and submitted to the Council's Team Leader - Monitoring & Enforcement for approval.
- 9. The purpose of the performance bond required by condition 7 shall be to conduct remedial, repair, or rehabilitation works to the site, stopbank and/or access road, in the event that the consent holder fails to comply with conditions of this consent to the satisfaction of the Council's Team Leader - Monitoring & Enforcement.

Advice notes

The Council will make reasonable attempts (if practicable in the circumstances) to contact the person identified in condition 12(b) (i) who is the Council's principal contact person in regard to this consent, to give the consent holder the opportunity to remedy the matter prior to the Council taking any action.

The consent holder remains liable under the Act for any breach of the conditions of this consent and for any adverse effect on the environment which becomes apparent during or after the expiry of this consent.

Prior to the work

10. At least five working days prior to earthworks commencing, the consent holder shall contact Ngāti Toa Rangatira, Ngāti Rārua, Te Ātiawa o Te Waka-a-Māui, Ngāti Kuia and Ngāti Tama ki Te Tau Ihu and advise them of the commencement date of the earthworks to provide an opportunity for an iwi monitor to be present when earthworks are started in each area.

Advice note

The discovery of any pre-1900 archaeological site (Māori or non-Māori) which is subject to the provisions of the Heritage New Zealand Pouhere Taonga Act 2014 needs an application to the Heritage New Zealand for an authority to damage, destroy or modify the site.

11. The Consent Holder shall engage a Matakite (someone who can visualise and feel the mauri of early occupants of the site and locate kōiwi). No excavation shall be undertaken until the Matakite has walked the site, and the Consent Holder shall follow all recommendations made by the Matakite as a result of what is found on site, provided that such recommendations are able to be implemented and do not frustrate this resource consent.

Advice note

This condition has been volunteered by the applicant in response to iwi consultation.

12. The Council's Team Leader - Monitoring & Enforcement shall be notified in writing:
- (a) A minimum of 10 working days prior to commencement of work for each Stage; and
 - (b) Prior to the recommencement of work where works have been discontinued for more than one month.

Notification shall include:

- (a) The proposed start date for the period of work; and
- (b) The name and contact details of the following persons:
 - (i) A representative nominated by the consent holder who shall be the Council's principal contact person in regard to matters relating to this resource consent; and
 - (ii) The Site Manager (if not the consent holder's representative).

Should either of the above persons change during the term of this resource consent, the consent holder shall provide the new name and contact details, in writing, to the Council's Team Leader - Monitoring & Compliance within five working days.

Submission of plans

13. The consent holder shall, at least 10 working days prior to the commencement of works, prepare and submit the following plans and management plans to the Council's Team Leader - Monitoring & Enforcement for certification. No works shall be undertaken until these plans/

management plans have been certified by the Council's Team Leader - Monitoring & Enforcement, unless condition 14 is invoked.

- (a) existing and proposed Contour Plans prepared in accordance with condition 15;
- (b) a Noise Management Plan prepared in accordance with condition 16;
- (c) a Soil Management Plan (SMP) prepared in accordance with condition 17;
- (d) a Dust Management and Monitoring Plan (DMMP) prepared in accordance with condition 18;
- (e) a Groundwater and Clean Fill Management Plan (GMP) prepared in accordance with condition 19.
- (f) a Landscape Mitigation Plan, a Stage 1 River Terrace Restoration Plan and a Maintenance and Establishment Plan prepared in accordance with Condition 21.

Advice note

Certification of the management plans above is in the nature of certifying that adoption of the management plans will result in compliance with the conditions of this consent.

14. The following shall apply in respect of condition 13:
- (a) the consent holder may commence the activities in accordance with the submitted plans 15 working days after their submission, unless the Council advises the consent holder in writing that it refuses to certify them on the grounds that it fails to meet the requirements of the condition and gives reasons for its decision; and
 - (b) should the Council refuse to certify the plan, the consent holder shall submit a revised plan to the Council for certification. Clause (a) shall apply to any resubmitted plan.
 - (c) **Any consequential amendments to the plans required by condition 13 must be certified by the Council's Team Leader - Monitoring & Enforcement, prior to being implemented.**
15. The Contour Plans required by condition 13(a) are required to ensure that finished ground levels across the site are generally consistent with existing ground contours. The plans shall include as a minimum:
- (a) A topographic survey to New Zealand Vertical Datum 2016 (NZVD 2016) of the existing site, with contour intervals at 0.2 metres;
 - (b) A plan, referenced to NZVD 2016, of the proposed finished levels on site after excavation and recontouring has occurred, with intervals at 0.2 metres.
 - (c) **A site plan showing the location of property boundaries, surface water bodies, stopbanks, legal roads, survey benchmarks, and other details as appropriate.**

Advice note: LiDAR survey may be used to prepare this plan.

16. The Noise Management Plan (NMP) required by condition 13(b) shall detail the best practicable option for ensuring the noise standards specified at conditions 53 and 54 of this consent are complied with. The NMP shall be in **general** accordance with the draft NMP prepared by Hegley Acoustic Consultants dated May 2021, and shall address, as a minimum:
- (a) Mitigation measures proposed. These shall include:
 - (i) All trucks exporting material from the site shall be fitted with a sound deadening, plastic deck liner.
 - (ii) Tonal warning/ reversing alarms on plant on site shall be replaced with broad band alarms.
 - ~~(iii) An earth bund of at least 3m height as shown in the Canopy Landscape Mitigation Plan. This shall be constructed prior to the commencement of quarrying activities on site.~~
 - (b) Training of staff
 - (c) Equipment Maintenance
 - (d) Neighbour Liaison
 - (e) Complaints
 - (f) Contingency Plan
 - (g) Key Personnel and their Responsibilities
17. The SMP required by condition 13(c) shall demonstrate the best practicable option to ensure that the restored soils achieve the standards specified in condition 52 and that condition 50 is complied with in respect of the control of erosion and sediment. The SMP shall be in general accordance with the draft SMP prepared by LandSystems Ltd dated 15 May 2022 and shall address, as a minimum:
- (a) Procedures to mitigate the potential effects on soil properties including for:
 - (i) soil removal;
 - (ii) soil storage;
 - (iii) soil placement (including the sequence of soil placement);
 - (iv) transport;
 - (v) the preparation of the receiving surface;
 - (vi) fill (overburden), subsoil and topsoil properties; and
 - (vii) post soil placement management.
 - (b) Procedures to minimise the risk of soil loss from overland flow including:
 - (i) during soil removal;
 - (ii) for soil storage; and
 - (iii) during vegetation establishment.
 - (c) Soil monitoring required including

- (i) Sampling and analysis of the original soil prior to extraction to provide a base line;
- (ii) Soil properties (soil indicator) to be monitored following vegetation establishment;
- (iii) Monitoring frequency; and
- (iv) Recommended measures should monitoring show a decline in soil quality.

(d) **requirements for soil management training for staff and for supervision.**

18. The DMMP required by condition 13(d) shall demonstrate the best practicable option to ensure that dust is managed on site to minimise the adverse impacts of potential dust discharges on the receiving environment and to achieve the standard specified in condition 49. The DMMP shall be in **general** accordance with the draft DMMP prepared by Pattle Delamore Partners dated **14 July** 2022 and shall address, as a minimum:
- (a) Consent Compliance and Key Performance Indicator
 - (b) Sources of Dust
 - (c) Management and Mitigation Measures
 - (d) Roles and Responsibilities
 - (e) Implementation and Operation of DMMP
 - (f) Environmental Monitoring Programme
 - (g) DMMP Review
 - (h) Complaints
 - (i) Emergency Contacts
 - (j) Annual Reporting
19. The GMP required by condition 13(e) shall demonstrate the best practicable option to ensure that discharge of cleanfill to land is managed to avoid adverse effects on groundwater, to:
- Ensure that excavations do not expose groundwater in excavations (condition 89), **with the exception of small scale temporary test pits that are back filled within 30 minutes**
 - Ensure that all backfill material is strictly managed to ensure it meets the definition of 'clean fill' under WasteMINZ guidelines (conditions 94 - 96).
 - Ensure that under no circumstances that the land use and discharge activities associated with quarry activities result in groundwater quality exceeding **50% of** the acceptable values in the Drinking Water Standards for New Zealand.
20. The GMP shall be in general accordance with the draft GMP prepared by Pattle Delamore Partners dated **July September** 2022 and shall address, as a minimum:
- (a) Acceptable clean fill materials
 - (b) Proposed clean fill management system
 - (c) Groundwater level monitoring and excavation controls

- (d) Response and mitigation to a spill
 - (e) Groundwater quality monitoring
 - (f) Results of background water quality monitoring required by condition 48
 - (g) Response to issues arising from groundwater quality monitoring
 - (h) Complaints
 - (i) Reporting requirements
21. The Landscape Mitigation Plan, Stage 1 River Terrace Restoration Plan, and Maintenance and Establishment Plan required by condition 13(f) shall be prepared in general accordance with the draft plans prepared by Canopy, dated March ~~July~~ 2022. The landscape Management **Maintenance and Establishment Plan** shall be prepared to ensure that the proposed landscape mitigation and restoration plantings successfully establish and shall include, as a minimum:
- Timing of plantings
 - Preparation
 - Setout and spacings
 - Mulching
 - Pest management
 - Staking
 - Maintenance
 - Replacement plantings
22. **The consent holder shall, prior to work on the vehicle entrance commencing, prepare and submit engineering drawings for the vehicle entrance upgrade to the Council's Team Leader - Monitoring & Enforcement for approval.**

Earth bund (acoustic barrier and dust screen)

23. An earth bund of at least 3m height, as shown in the Canopy Landscape Mitigation Plan, shall be constructed prior to the commencement of quarrying activities on site **to provide an acoustic barrier to 131 Peach Island Road. The earth bund must be maintained to be acoustically effective for as long as the consent is given effect to.**
24. **The existing row of mature trees along the northern boundary of Stage 2 with 131 Peach Island Road shall be retained for as long as the consent is given effect to**

Site meeting

25. The consent holder shall arrange for a site meeting between the consent holder's representative and the Council's assigned monitoring officer, which shall be held on site prior

to any works commencing. No works shall commence until the Council's assigned monitoring officer has completed the site meeting.

Signage

26. Signage shall be installed on Motueka River West Bank Road to provide warning to oncoming vehicles of the potential presence of trucks. As a minimum, permanent warning signs (PW-50) "Trucks Crossing" signs shall be installed on West Bank Road either side of the site entrance, at a position to be confirmed with the Council's assigned monitoring officer.

Upgrade of vehicle entrance and site access

27. The consent holder shall remove the willow trees north and south of the entrance to the site and undertake trimming on the bank on the eastern side of Motueka River West Bank Road, as identified in the Traffic Concepts report submitted with the application, to improve site access visibility.
28. The consent holder shall undertake ongoing trimming of vegetation to ensure that visibility is not impaired and shall ensure that the sight distances at the intersection with Motueka River West Bank Road meet the minimum requirements set out in Table 4-14 of the Nelson Tasman Land Development Manual 2020 (NTLDM).
29. The existing vehicle crossing at 493 Motueka River West Bank Road shall be upgraded/ formed generally to the standard shown in Diagram 2 of Drawing SD409 in the of NTLDM, except where modifications **as approved by Council** are necessary to ensure vehicle tracking and its connection to the new bridge are fit for purpose.
30. **The vehicle access shall be formed to a minimum sealed carriageway width of 6m from the existing seal edge of Motueka Valley Westbank Road up to the western end of the bridge (approximately 35m from the edge of the existing seal) to allow for two trucks to pass by each other.**
31. The proposed access, **beyond the bridge and except for the crown land section subject to the provisions of Marginal strips**, shall be formed to a sealed carriage width of generally no less than 3.5 with 0.5m gravel shoulders and side drains to drain to existing drain paths and/or soakpits. Localised widening on corners shall be provided to accommodate vehicle tracking. The access shall be maintained for the duration of this consent by the Consent Holder.

Advice note

This consent does not grant access to the excavation area. Site access and management of the tracks should be arranged with the landowner.

32. **The consent holder shall make provision for the formation of at least two localised widened areas along the access, formed to NTLDM passing bay standard, to allow for two vehicles to pass by each other.**

33. The proposed access shall not connect to the southern end of Peach Island Road, unless requested to by the Council.

Bridge

34. **Prior to it being used under this consent**, the appropriateness of the existing bridge across the overflow channel (located on Section 1 SO 15112) shall be assessed by a suitably qualified engineer to demonstrate compliance with condition 35.
35. The bridge shall be able to carry Class 1 loads (or higher loads if the applicant proposes to use HPMV trucks for the operation), and any necessary upgrade or replacement to achieve this shall be carried out by the consent holder prior to the bridge being used under this consent.
36. **The bridge shall be widened to 3.5m to match the proposed 3.5m access width.**

Survey

37. The consent holder shall survey the boundaries of the unformed legal road and shall clearly identify the boundaries of the legal road on site.
38. **The consent holder shall survey the stopbank crossing point prior to works commencing and upon completion of the works. The consent holder shall repair / reinstate any damage caused to the stopbank crossing at the consent holder's cost.**

Stopbank

39. The location of the toe of the stopbank adjacent to the proposed excavation sites shall be clearly identified and marked on site by a suitably qualified and experienced geotechnical professional or river engineer.
40. The 20m setback from the toe of the stopbank on both sides of the stopbank shall be clearly marked **and maintained (e.g., by a fence)** to ensure that works do not encroach into the setback, except for the stopbank crossing (required by condition 42)
41. The construction of any fence within bermland (i.e., on the outer side of the stopbank), shall be of a post and wire construction only and, if required by the Council, shall be removed on completion of the works.
42. The consent holder shall form and maintain a ramp over the stopbank to provide vehicle access. This shall include a 200mm sacrificial gravel layer on top of the stopbank crest, which shall be removed upon completion of the quarrying activity. The crest of the ramp shall be maintained so as to be no lower than the adjacent stopbank crest immediately up- and downstream of the ramp, to the satisfaction of the Council's Asset Engineer - Rivers.
43. The consent holder shall not block the stopbank, and shall ensure that it is available to the Council's Rivers Engineers at all times for flood monitoring.

Landscape mitigation and restoration planting

44. Within the first planting season following the granting of consent, landscape mitigation planting shall be carried out in accordance with the certified Landscape Mitigation Plan and Maintenance and Establishment Plan required by Condition 21.
45. **All plantings shall be set back at least 5 m from the toe of the stopbank to minimise tree roots affecting the stopbank.**
46. Within the first planting season following the completion of the Stage 1 quarrying activities (including soil rehabilitation), restoration planting of the Stage 1 area shall be undertaken in accordance with the certified Stage 1 River Terrace Restoration Plan and Maintenance and Establishment Plan required by Condition 21.

Groundwater monitoring to establish background levels

47. The consent holder shall establish one dedicated bore upstream and two downstream of the works for groundwater quality monitoring purposes. These shall be installed in accordance with the recommendation contained in the GMP.

Advice note

The appropriate bore locations shall be confirmed by the Council's Senior Resource Scientist – Water to account for groundwater flow direction in the area.

48. A minimum of ~~two~~ **three** groundwater samples, at least ~~3~~ **2** months apart, shall be taken prior to commencement of any works to establish background levels. The samples shall be analysed by a suitably qualified and experienced person for:

• Measurements of depth to water (where possible) prior to purging.		
• pH (field and laboratory measurement).		
• Electrical Conductivity (field and laboratory measurement).		
• Water temperature (field measurement).	• Calcium.	• Magnesium.
• Hardness.	• Alkalinity.	• <i>E. coli</i> .
• Ammoniacal-N	• Nitrate-N	• Dissolved Boron
• Dissolved Aluminium.	• Dissolved Arsenic.	• Dissolved Cadmium.
• Dissolved Chromium.	• Dissolved Copper.	• Dissolved Lead.
• Dissolved Nickel.	• Dissolved Manganese.	• Dissolved Iron.
• Sodium.	• Sulphate.	• Chloride.
• BTEX compounds.	• Total Petroleum Hydrocarbons.	

All testing equipment must be calibrated and verified as accurate prior to testing by a suitably qualified and experienced person. All testing shall be at the full expense of the

consent holder. Sampling results shall be submitted to Council's Team Leader - Monitoring & Enforcement prior to the commencement of any works.

Environmental standards

Dust

49. There shall be no noxious, dangerous, objectionable or offensive dust beyond the boundary of the site.

Water quality

50. Land disturbance shall not result in runoff of sedimentation that results, after reasonable mixing, in any of the following effects in the receiving waters:
- (a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - (b) any conspicuous change in the colour or visual clarity;
 - (c) any emission of objectionable odour;
 - (d) the rendering of fresh water unsuitable for consumption by farm animals;
 - (e) any significant adverse effects on aquatic life.
51. Quarrying activities, including the discharge of cleanfill to land and any accidental spills on the site shall not result in any existing water supply bore within a 1 km buffer zone downgradient of the quarry to breach **50 % of** the maximum acceptable values or guideline values in the Drinking Water Standards for New Zealand 2005 (revised 2018).

Soil

52. Following completion of soil restoration and rehabilitation activities, restored soils shall achieve the following:
- (a) A minimum of 800 mm of plant growth medium with little or no limitations to root penetration. As a guide, soil penetration resistance should not exceed approximately 2300 kPa.
 - (b) Soil strength to be such that there is no serious limitation to cultivation and movement of machinery, i.e. no visually obvious contrasting compacted layers within the restored soil profile, especially between the subsoil and the topsoil, and no visually obvious compaction within the upper 300–400 mm of topsoil.
 - (c) Be at least ~~imperfectly drained, preferably moderately well~~ or well drained where the inherent soil drainage characteristics of the land allow.

Noise

53. Noise associated with construction activities on site (such as construction of the noise bund and haul roads) shall not exceed 70dB LAeq and 85dB LAFmax when measured 1m from the most exposed façade of any dwelling located beyond the subject site.
54. The consent holder shall ensure that all other activities on site, ~~including quarrying activities~~ **except construction work**, are designed and conducted, and all equipment used on site is maintained, so that noise generated by activities on site does not exceed an uncorrected noise level of ~~55~~ **51** dBA Leq (day) and ~~40~~ dBA Leq and ~~70~~ dBA Lmax (night) **when** measured at the notional boundary of any dwelling.

All noise shall be measured and assessed in accordance with the provisions of **NZS6801 – Acoustics – Measurement of environmental sound and** NZS 6802:2008 - Acoustics - Environmental Noise, **except that no adjustments shall be made to the measured noise level.**

Advice note

Construction work relates to activities defined as construction under NZS6803:1999. This includes the construction of the earth bund and the haul road, but not the gravel extraction operation or truck movements on site.

During work

55. There shall be no extraction of gravel from the unformed legal road **shown on the plans required by condition 37 above.**

Hours of work

56. Work shall only be carried out between 7:00 am and 5:00 pm Monday to Friday. No heavy machinery shall be operated on site earlier than 7.30am. No operations shall occur on Saturdays, Sundays, public holidays, or between 20 December and 10 January the following year (Christmas holiday period).

Access and vehicle entrance

57. Access to the site by vehicles associated with quarrying activities shall only be via the upgraded vehicle crossing at 493 Motueka River West Bank Road.

Advice note

This consent does not grant access to the excavation area. Site access and management of the tracks should be arranged with the landowner.

Traffic movements

58. There shall be no more than 30 truck movements per day to and from the site (a return trip being two truck movements). A truck may include a trailer.

59. All vehicles shall observe a speed limit of 15 kilometres per hour when travelling on any unsealed surfaces on site **and a speed limit of 30 kilometres per hour when travelling on any sealed surfaces on site.** It is the consent holder's responsibility to inform drivers of this speed limit.
60. All trucks shall observe a speed limit of 60 kilometres per hour when travelling along Motueka River West Bank Road.
61. All trucks shall be fitted with GPS based speed logging and records shall be supplied to the Council's Team Leader - Monitoring & Enforcement on request. The GPS system shall be set up to provide alerts to the quarry manager if the speed limits specified in the conditions above are exceeded.
62. No processing, washing, crushing or screening of gravel shall be carried out on the site.

Site management

63. Works shall be undertaken in accordance with the certified NMP, DMMP, GMP and SMP.
64. Specific dust control measure described **in the application** and DMMP shall be implemented. **These dust control measures shall be undertaken in accordance with the best practical option.**
65. No works shall be carried out **material shall be disturbed** during periods of high wind (>7.5m/s) ~~and where there are sensitive receptors within 250m in a downwind direction.~~ No excavations shall be undertaken if heavy rain or high wind is forecast in the period before measures can be implemented to secure the excavated area and any stockpiles from the effects of overland flows and dust generation.
66. No quarrying activities shall take place within 100m of horticultural activities on neighbouring properties between the months of **January** and May (inclusive).
67. **Stockpiles in the Stage 2 area within 100m of the apple orchard boundary shall be removed over the drier months of January to May (inclusive).**
68. **The Consent Holder may use polymer or chemical stabilization to limit the dust generation. Waste Oil or Reprocessed Oil shall not be used to control dust.**
69. The consent holder shall undertake meteorological monitoring (i.e., wind direction, wind speed, **temperature and relative humidity**) on site and store this data electronically and it shall be made available to the Council's Team Leader - Monitoring & Enforcement on request.
70. Machinery movement over stockpiled soil is prohibited, other than in the construction of the proposed noise bund on the northern boundary.
71. No backfill or any other material shall be stored or stockpiled on the river side (outside) of the stopbank, ~~unless~~ **except for topsoil** awaiting reinstatement placement on that day. In the event that there is temporarily stockpiled material on the river side of the stopbanks and

heavy rain is forecast, the stockpiled material shall be relocated to the landward side of the stopbank.

72. Stockpiled materials, other than those to be used for backfilling on the same day, shall be located in the area identified on the Landscape Mitigation Plan as 'Stockpile and Service Area'. This area shall be excavated to a level 1m below existing ground level. **Gravel** stockpiles in this area shall be managed so as to be no greater than 4m in height above the lowered ground level (3m above surrounding ground level). **Soil stockpiles shall be no greater than 3m in height (2m above surrounding ground level).**
73. The consent holder shall maintain the site in a clean and tidy manner. Redundant machinery and equipment not required for the operation of the quarry shall be removed from site.
74. **If heavy rain is forecast, heavy machinery shall be moved inside the stopbank.**
75. All practicable measures shall be undertaken to prevent:
 - (a) erosion of the Motueka River berm; and
 - (b) the discharge of sediment to the Motueka River;as a result of the works.

Advice note

This consent does not authorise the discharge of any sediment to water. Relevant TRMP and / or national environmental standards permitted rules must be met or consent applied for accordingly.

Refuelling and spill management

76. All machinery shall be maintained and operated in such a manner minimising, so far as practicable, any spillage of fuel, oil and similar contaminants to water or land, particularly during machinery refuelling.
77. No refuelling or machinery maintenance shall be undertaken within 20 metres of surface water (**including exposed groundwater.**)
78. **No heavy vehicle maintenance apart from servicing (e.g., an oil change by trained personnel) shall occur on site.**

Advice note

An example of heavy vehicle maintenance is engineering maintenance, such as work on a digger bucket.

79. All spills shall be immediately contained and controlled by an approved product and shall be removed from the site for appropriate disposal. Any spills greater than 20 litres shall be immediately reported to the Council's Team Leader - Monitoring & Enforcement.
80. Fuel shall be stored securely or removed from site overnight.

Excavation

81. Topsoil and subsoil shall be stripped and stockpiled separately for the purpose of reuse on site. All soil stockpiles shall be:
 - (a) no more than 3 metres in height;
 - (a) stored on site for no more than 6 months before use.
82. Topsoil sand subsoil shall only be excavated in dry soil conditions, as defined in the SMP.
83. Any excavation in berm land shall occur in strips aligned parallel to the general direction of flood flow across the berm land. No individual strip shall be wider than 20 m.
84. The excavation shall be progressively backfilled so that the maximum size of excavation open at any one time shall not exceed 1600m² (generally 20 m in width and 80 m in length).
85. The number of excavations open at any one time shall not exceed one, except when the excavation of one strip has been completed and the excavation of a new strip is commencing, in which case two open excavations are permitted.
86. Excavations adjacent to property boundaries or adjacent to the 20m setback from the toe of stopbanks shall not exceed (be steeper than) the following batter angles:
 - (a) Lower Gravels to be battered at 1H:1.3V max;
 - (b) Upper mantle to be battered at 1H:1.7V max.

~~These batter angles may only be exceeded adjacent to property boundaries where the adjacent landowner agrees to a proposal such that CJ's the applicant is to repair/reinstate any damaged land caused by shallow surficial landslips during the gravel extraction pit works.~~
87. At the commencement of each stage of excavation, the initial excavation shall be inspected by a Geo-professional so that they can verify that the above batter angles are appropriate given actual exposed ground conditions. The Geo-professional shall at the same time undertake test-pitting across the remainder of the stage area and advise on the depths of upper mantle/lower gravel materials. If, during excavations over the remainder of the stage the Consent Holder identifies any unforeseen ground conditions during the gravel pit extraction works (i.e. deep layer of topsoil than anticipated test-pitting) then a Geo-professional shall inspect and advise what further steps (if any) are required to ensure ongoing land stability for the remaining duration of the stage.
88. Appropriate stormwater controls shall be put in place to avoid concentrated stormwater flows discharging onto temporary cut slopes.
89. All excavation shall be undertaken in accordance with the GMP to ensure that excavations do not occur below a level 0.3m above actual ground water level at the time of excavation. Where excavations are undertaken below a level 1.0m above groundwater level, they shall only be undertaken in **dry stable** weather conditions (**as defined in the GMP**), and shall be backfilled to a level not less than 1.0m above groundwater level by the end of the same working day.

90. There shall be no excavation, removal of gravel or other disturbance of land within 20m of the toe of the stopbank. For the avoidance of doubt, this applies on both sides of the stopbank.

Backfilling

91. During the course of excavations, backfilling shall be undertaken as soon as practicable. Any excavated area in a particular location shall not remain open for longer than 6 months.
92. Backfilling shall be undertaken in accordance with the certified SMP and GMP. This includes a requirement to monitor the level of the excavation pit floor relative to changing ground levels to ensure that the freeboard requirements at condition 89 are complied with at all times.
93. Backfilling shall be to the finished levels on site as specified in the Contour Plan required by condition 15.
94. Only material that meets the definition of cleanfill under the WasteMINZ document 'Technical Guidelines for Disposal to Land (2018)' shall be imported to the site for backfill. There shall be no disposal of **concrete**, sawdust, large trees, stumps, refuse, cans, bottles, plastics, timber, household rubbish, or liquid waste. Fill material shall only be imported to the site if total soil contaminant concentrations are below regional soil background concentration limits, as specified in "Background concentrations of trace elements and options for the managing of soil quality in the Tasman and Nelson Districts" - Landcare Research (2015).
95. Organic material imported to the site shall not exceed 2% by volume per load and is limited to incidental organic matter associated with the excavation of inert natural materials. For the avoidance of doubt this does not apply to topsoil retained on site for reinstatement.
96. Any backfill material sourced from offsite shall only be brought to the site by the Consent Holder and/or its contractors, and shall be pre-screened for compliance with these cleanfill requirements before being brought to site. A record shall be kept of all cleanfill used as backfill. The record shall be in accordance with the requirements specified in the GMP. This record shall be kept available on site, and shall be produced without unreasonable delay upon request from a servant or agent of the Council.

Reinstatement and rehabilitation

97. Subsoil and topsoil shall be reinstated, and ongoing management shall be undertaken, in accordance with the methodology specified in the certified SMP.
98. Topsoil and subsoil shall only be reinstated in dry soil conditions, as defined in the SMP.
99. **Following the placement of the new soil profile, the consent holder shall engage a suitably qualified agronomist to advise on fertiliser application and other soil treatments to encourage effective revegetation.**
100. **Fertiliser shall be applied following the recommendations of the agronomist to facilitate pasture establishment, increase fertility and promote and maintain even revegetation.**

101. Revegetation of reinstated areas shall occur within a month of reinstatement of the soil and be actively management following revegetation (as detailed in the SMP) to ensure full vegetative cover is achieved and maintained.
102. **The consent holder's responsibility with regard to revegetation shall not be considered to be met until a complete, healthy, predominantly rye grass/white clover sward has been achieved over the worked areas.**

Groundwater monitoring

103. The monitoring bores required by condition 47 shall be sampled every three months following the commencement of any works, in accordance with the GMP. The samples shall be analysed by a suitably qualified and experienced person for all of parameters detailed at condition 48.

All testing equipment must be calibrated and verified as accurate prior to testing by a suitably qualified and experienced person. All testing shall be at the full expense of the consent holder. Sampling results shall be submitted to the Council's Team Leader - Monitoring & Enforcement within 10 working days of the results being obtained.

Sampling and reporting shall continue for two years following the cessation of quarrying and backfilling/ rehabilitation activities on the site.

Procedures to respond to any issues arising from the groundwater monitoring shall be in accordance with the requirements detailed in the GMP, **except as detailed below:**
104. **If the monitoring of parameters detailed at condition 48, with the exception of E.coli, shows changes >20% compared to the background levels established under Condition 48, all works shall cease, and investigations shall be undertaken to ascertain the cause of these changes.**
105. **If the monitoring parameter E.coli shows changes by one order of magnitude compared to the background levels established under condition 48, all works shall cease, and investigations shall be undertaken to ascertain the cause of these changes.**
106. **If the monitoring shows an increase in E.coli resulting in the water being unsafe to drink, all works shall cease, and investigations shall be undertaken to ascertain the cause of these changes.**
107. **If the monitoring required by condition 103 shows that Drinking Water Standards New Zealand (DWSNZ) are exceeded, the Consent hold shall supply drinking water to affected residences.**
108. **Works shall only recommence once the Consent Holder has established, to the satisfaction of Council's Team Leader - Monitoring & Enforcement, that the activity is not causing the changes/ decrease in water quality.**

Accidental Discovery Protocol (ADP)

109. In the event of Māori archaeological sites (e.g. shell midden, hangi or ovens, garden soils, pit depressions, occupation evidence, burials, taonga) or koiwi (human remains) being uncovered, activities in the vicinity of the discovery shall cease. The consent holder shall notify a representative of Ngāti Rārua and Te Ātiawa and Heritage New Zealand Pouhere Taonga Central Regional Office (phone 04 494 8320), and shall not recommence works in the area of the discovery until the relevant approvals to damage, destroy or modify such sites have been obtained.

Reporting & monitoring

110. Monitoring and reporting in relation to dust management, and soil reinstatement and rehabilitation shall be undertaken in accordance with the requirements of the certified DMMP and SMP.
111. The consent holder shall maintain a complaint's register, which shall detail the following as a minimum:
- (a) The person responsible for the complaints register and appointment of a nominee who can be contacted in case of concerns/ complaints arising;
 - (b) The location, date and time of the complaint;
 - (c) The nature of the complaint (e.g., noise, dust, vehicle speeds etc.);
 - (d) A description of weather conditions at the time of complaint (notably wind speed and direction as per the meteorological monitoring required by condition 58);
 - (e) Any identified cause of the complaint;
 - (f) The action(s) taken to investigate and if appropriate remedy the issue.
112. The consent holder shall inform the Council's Team Leader Monitoring and Enforcement within one working day of any complaint being received.
113. The complaints register shall be forwarded to the Council's Team Leader - Monitoring & Enforcement on request.
114. A contact number of the nominee detailed in the complaint's register shall be provided to all adjoining property owners and occupiers.
115. The consent holder shall, no more than 20 working days following the completion of each stage of work, notify the Council's Team Leader - Monitoring & Enforcement. Notification shall be in writing and include a visual representation (such as photo or video) of the completed stage of work.
116. The consent holder shall keep a daily record of the weight of gravel extracted, which shall be submitted on a monthly basis to the Council's Team Leader - Monitoring & Enforcement.

Advice Note:

Returns are to be submitted in "solid measure". A multiplier of 0.80 should be used to convert "truck measure" to "solid measure".

117. Within 3 months of the completion of all recontouring work on site the consent holder shall forward to the Council's Team Leader - Monitoring & Enforcement a topographic survey to NZVD 2016 of the final levels on site, with intervals at 0.2 metres, as required by condition 13(a).

Unformed legal road

118. Following completion of the works, the consent holder shall confirm with the Council's Transportation Manager whether:
- (a) the section of unformed legal road ("paper road") used to access the application site shall either be returned to pasture at the consent holder's cost; or
 - (b) retained in its current form.

ADVICE NOTES

1. *Officers of the Council may carry out site visits to monitor compliance with resource consent conditions. The consent holder is liable to the Council for actual and reasonable inspection and monitoring costs associated with this consent.*
2. *An Approval to Work Permit is required from Council's Transport team to form the unformed legal road (paper road).*
3. **A Corridor Access Request (CAR) is required from Council's Transport team to upgrade the vehicle access.**
4. *The consent holder should meet the requirements of the Council with regard to all building, safety, and health bylaws, regulations and Acts.*
5. *Access by the Council or its officers or agents to the property is reserved pursuant to section 332 of the Resource Management Act.*
6. *All reporting required by this consent should be made in the first instance to the Council's Team Leader - Monitoring & Enforcement.*
7. *This resource consent only authorises the activity described above. Any matters or activities not referred to in this consent or covered by the conditions must either:*
 - (a) *comply with all the criteria of a relevant permitted activity rule in the Tasman Resource Management Plan (TRMP);*
 - (b) *be allowed by the Resource Management Act; or*
 - (c) *be authorised by a separate resource consent.*
8. *The Council draws your attention to the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. In the event of discovering an archaeological find during the earthworks (e.g., shell, midden, hangi or ovens, garden soils, pit depressions, occupation evidence, burials, taonga, etc.) you are required under the Heritage New Zealand Pouhere Taonga Act 2014 to cease the works immediately until, or unless, authority is obtained from Heritage New Zealand under section 48 of the Heritage New Zealand Pouhere Taonga Act 2014.*
9. *The consent holder must meet the requirements of the Tasman-Nelson Regional Pest Management Plan (2019-2029) when dealing with any pest plants or animals within the subject site.*

10. *Copies of the Council Standards and documents referred to in this consent are available for viewing at the Richmond office of the Council.*

Draft recommended

MEMORANDUM

TO: Susi Bernsdorf Solly, Senior Planner
FROM: Daniel Winter, Team Leader Environmental Health
DATE: 11 October 2022
SUBJECT: **Review of noise effects from gravel extraction**
RM200488 CJ Industries, 134 Peach Island Road, Motueka.

1.0 Introduction

This memo provides my comments in respect to the potential noise effects from resource consent application RM200488 CJ Industries, 134 Peach Island Road, Motueka.

I have reviewed the following documents:

1. Evidence of Mr. Hayden Taylor dated 15 July 2022 (the draft conditions).
2. Evidence of Mr. Rhys Hegley dated 15 July 2022 (the acoustic evidence).
3. The Hegley Noise Management Plan dated May 2021 (the NMP)
4. The Hegley acoustic report dated December 2019 (the acoustic report).

The Applicant seeks resource consent for gravel extraction and vehicle access.

The proposed operating hours are limited to 7.00am to 5.00pm Monday to Friday. No site activities will occur at any time on a Sunday or Public Holiday.

The applicant proposes an additional limitation whereby heavy machinery must not be used before 7.30am on those days. I agree with the proposed additional limitation. The hours and limitations should form a condition of consent.

The application is for full compliance with the TRMP noise limits.

2.0 Assessment criteria

The application site is within the Rural 1 Zone and the receivers are in Rural 1 and Rural 2 Zones. The application correctly identifies the applicable assessment criteria.

The applicable TRMP noise limits are set out in Table 1 overleaf:

Table 1: TRMP Rural Zone noise limits

Monday to Friday 7.00am to 9.00pm Saturday 7.00am – 6.00pm	55 dB LAeq
At all other times	40 dB LAeq 70 dB LAMAX

TRMP noise rules are for permitted activities and this consent is for a discretionary activity. In determining a reasonable noise level, we must consider a number of factors such as:

- The zone of the activity and the zone of the receivers (Rural 1 and Rural 2)
- The activities that are anticipated by the zone
- The frequency and duration of the noise
- The level of the noise
- The existing noise environment

The noise limit that is imposed for the gravel extraction operation does not necessarily default to the TRMP noise limit for the zone.

This is confirmed in your s42A report, part 6.8, where you conclude that:

The proposed activity itself is neither permitted nor anticipated in the Rural 1 Zone. I consider that the noises associated with a gravel extraction would be different in character, intensity and duration from 'typical rural noises'

I agree with the above statement. This is discussed further in review of conditions section.

3.0 Proposed mitigation

Mr. Hegley recommends the following noise mitigation options:

1. Construction of a 3m high bund to acoustically screen 131 Peach Island Road.
2. Replace tonal reversing alarms with broadband reversing alarms.
3. Line the trays of trucks with a plastic liner to reduce impact noise as loads are added.
4. Seal the access road to the stockpile to reduce body rattle.

I agree with the proposed mitigation.

4.0 Predicted noise levels and assessment of the noise effects

I agree with the methodology used in the Hegley report to predict the noise levels and the data used for the noise modelling.

The highest predicted noise levels are 51 dB L_{Aeq} at 470 and 472 Motueka River West Bank Road when all plant is operating at the most exposed location. This is 4 dB below the TRMP noise limit.

In section 3.25 of Mr Hegley's evidence he states that

Over the daytime period when the proposal will operate, the TRMP considers 55dBA L_{eq} to provide a reasonable level of amenity to residential activities.

It is my understanding that the TRMP noise limits apply to permitted activities anticipated in the zone, which this is not.

Mr Hegley has undertaken ambient noise measurements of the existing noise environment on 28 February 2022 and 1 March 2022. The purpose of these measurements is to demonstrate how the noise from the proposal will compare to the current environment. Mr Hegley reports that the noise sources were distant traffic, livestock and passing vehicles. I am surprised that insect noise, such as cicadas and crickets, were not a dominant noise source at this time of these measurements.

The measured L_{eq} levels near 470 and 472 Motueka River West Bank Road have been measured in *the mid 40 to low 50dBA range*. The highest predicted noise level for these receivers is 51 dB L_{Aeq} . Mr Hegley concludes that:

During these periods, the noise from the proposal can be likened to the current ambient sound as the steady noise from the excavation is well within the current background sound range.

Whilst I agree that Mr Hegley's assessment shows that the noise from excavation alone will be mostly within the measured ambient noise, there will be occasions when the excavation noise will above the existing ambient noise.

Mr Hegley confirms that the measured noise describes a *relatively quiet environment* at 131 Peach Island Road and that the noise from excavation and backfilling will *quite noticeable*.

Mr Hegley concludes, that with the proposed mitigation in place, the predicted range of 42 – 47dB L_{Aeq} is significantly below the 55 dB L_{Aeq} noise limit in the TRMP and considers that:

The predicted levels can be described as reasonable and appropriate which leads to the overall conclusion that the adverse effects on Site 25 [131 Peach Island Road] would be minor, will be mitigated, and will maintain an appropriate level of amenity.

This conclusion further supports the draft condition requiring that noise does not exceed 51 dB L_{Aeq} (unadjusted) which is discussed in the next section.

In respect to the additional 30 truck movements on the public road network spread across the whole day, I tend to agree with Mr Hegley that the resulting overall additional noise effects will not be unreasonable, although individual truck noise will be noticeable.

An exception would be if the 30 truck movements were concentrated in a very short period of time. This could be mitigated by consideration of an hourly limit of truck movements in addition to daily.

5.0 Review of the draft conditions

In the planning evidence of Mr Taylor, the recommended noise limit condition is set out as follows:

45. The consent holder shall ensure that all other activities on site, including quarrying activities) are designed and conducted, and all equipment used on site is maintained, so that noise generated by activities on site does not exceed an uncorrected noise level of 55 dBA Leq (day) and 40dBA Leq and 70 dBA Lmax (night) measured at the notional boundary of any dwelling. Noise shall be measured and assessed in accordance with the provisions of NZS 6802:2008 - Acoustics - Environmental Noise

The noise limit is recommended as *uncorrected*. The noise from gravel extraction is unlikely to result in any adjustment for special audible character, residual noise or façade corrections. The most likely adjustment to the measured noise level that would be incurred would be minus 1 – 5 dB for duration. Therefore, fixing the noise limit at 55 dB L_{Aeq} *unadjusted* means that the limit is actually up to 5dB less if the strict provisions of NZS6802:2008 were applied. I recommend that if this approach is considered then the time of the L_{Aeq} measurement of 15 minutes should be included.

Mt Hegley discusses this point at 3.30 of his evidence:

A likely difference between the description of the permitted activities and the proposal is the duration. It is generally accepted that a noise that is not present over the entire day is considered to have less effect than a continuous noise. The TRMP addresses this through its adoption of NZS 6802, which accounts for the duration of an activity by allowing periods of noise to be averaged with other parts of the day with no noise, by up to 5dB. In this manner, a measured level of, for example, 60dBA Leq from a permitted and intermittent activity would be reported as 55dBA Leq. In section 4.2 of my ANE I note that I have not averaged quarry noise at all. It is my view that the TRMP provides a mechanism to fairly compare noise effects of different durations.

In the conditions attached to your s42A report you have recommended the following condition 49:

49. The consent holder shall ensure that all activities are designed and conducted, and all equipment used on site is maintained, so that noise generated by activities on site does not exceed an uncorrected noise level of 55 dBA L10 (day) and 70 dBA Lmax (night) measured at the notional boundary of any dwelling over a measurement period of 15 minutes during the authorised hours of operation.

Advice note: Noise shall be measured and assessed in accordance with the provisions of NZS 6802:2008 - Acoustics - Environmental Noise

I have a number of concerns within this draft condition, as set out below:

1. The descriptor L10 must not be used with the 2008 standards. The TRMP noise limits all use Leq descriptor, as do the 2008 standards.
2. The reference to night-time noise should be removed. There are no permitted nighttime activities.
3. A noise limit of 55 dB is being applied for but the highest predicted noise level in the Hegley acoustic assessment is 51 dB L_{Aeq} (unadjusted) and the vast majority of the receivers are under 50 dB L_{Aeq} (unadjusted)

I have no objection to applying an uncorrected noise limit. From an enforcement point of view, unadjusted measurements are easier for the compliance officer to measure and assess. An unadjusted noise level of 55 dB L_{Aeq} for this activity effectively means 1 – 5dB less noise after any adjustments are made under NZS6802:2008. Applying adjustments to the TRMP noise limit of 55 dB L_{Aeq} could result in individual 15-minute measured levels up to 60 dB L_{Aeq} , although the adjustment is most likely to be 1 – 2 dB.

I recommended the following noise limit condition:

The consent holder shall ensure that all activities on site, except construction work, do not exceed an uncorrected noise level of 51 dB L_{Aeq} when measured at the notional boundary of any dwelling.

All noise shall be measured and assessed in accordance with the provisions of NZS 6801 - Acoustics - Measurement of environmental sound and 6802:2008 - Acoustics - Environmental Noise, except that no adjustments shall be made to the measured noise level.

Advice note: construction work relates to activities defined as construction under NZS6803:1999. This includes the construction on the earth bund and the road, but not to the gravel extraction operation or truck movements on site.

The reference to night-time noise is removed. There are no permitted night-time activities and the hours of operation are controlled through separate conditions.

An alternative noise limit condition that requires full adherence to NZS6802:2008 (including adjustments) is set out below:

The consent holder shall ensure that all activities on site, except construction work, do not exceed a noise level of 50 dB L_{Aeq} when measured at the notional boundary of any dwelling.

All noise shall be measured and assessed in accordance with the provisions of NZS 6801 - Acoustics - Measurement of environmental sound and 6802:2008 - Acoustics - Environmental Noise.

Advice note: construction work relates to activities defined as construction under NZS6803:1999. This includes the construction on the earth bund and the road, but not to the gravel extraction operation or truck movements on site

6.0 Recommended conditions

If the application is granted, I recommend that the following conditions are added to the consent and complied with:

1. **Noise Management Plan:** as per draft condition 16 of the Mr Taylor's evidence, except that part 16(3)(a) (construction of bund) should form a standalone condition.
2. **Construction noise limits:** as per draft condition 44 of the Mr Taylor's evidence.
3. **Operational noise limits:** the consent holder shall ensure that all activities on site, except construction work, do not exceed an uncorrected noise level of 51 dB L_{Aeq} when measured at the notional boundary of any dwelling. All noise shall be measured and assessed in accordance with the provisions of NZS 6801 - Acoustics - Measurement of environmental sound and 6802:2008 - Acoustics - Environmental Noise, except that no adjustments shall be made to the measured noise level.

Advice note: construction work relates to activities defined as construction under NZS6803:1999. This includes the construction on the earth bund and the road, but not to the gravel extraction operation or truck movements on site.

4. **Hours of work:** as per draft condition 47 of the Mr Taylor's evidence.
5. **Truck movements:** as per draft conditions 49 – 52 of Mr Taylor's evidence.
6. **Operations:** no processing, washing, crushing, or screening of gravel shall be carried out on the site.
7. **Earth bund (acoustic barrier):** an earth bund of at least 3m height as shown in the Canopy Landscape Mitigation Plan. This shall be constructed prior to the commencement of quarrying activities on site. The earth bund must be maintained to be acoustically effective for as long as this consent is given effect to.

7.0 Conclusion

I have reviewed the potential noise effects from the application for gravel extraction at 134 Peach Island Road, Motueka.

With the proposed mitigation in place and compliance with the recommended conditions of consent, I agree that the proposed gravel extraction operation should not result in unreasonable noise effects. My assessment is based on the following key factors:

- The proposed operating hours of the gravel extraction will be limited to 7:00 am and 5:00 pm Monday to Friday. No heavy machinery shall be operated on site earlier than 7.30am
- A noise limit of 51 dB L_{Aeq} (unadjusted) or 50 dB L_{Aeq} (adjusted) shall be complied with at the notional boundary of any dwelling
- No site activities will occur at any time on a Sunday or Public Holiday
- The number of truck movements shall be limited to no more than 30 truck movements per day limited with speed limited to 15 kilometres per hour
- A 3m high earth bund shall be constructed to provide an acoustic barrier to 131 Peach Island Road. The acoustic barrier forms part of the best practicable option (BPO) to minimise noise effects.
- Tonal reversing alarms will be replaced with broadband reversing alarms
- The trays of trucks will be lined with a plastic liner to reduce impact noise as loads are added
- The access road to the stockpile will be sealed to reduce body rattle

Please do not hesitate to contact me if you have any questions or clarification of the above.

Yours sincerely



Daniel Winter
Team Leader Environmental Health

[this page blank]

Memo

To Susi Solly

From Leif Pigott

Re CJ Dust management plan

The following is a short analysis of the information provide by the applicant related to dust management.

Qualifications and Experience

I am the Team Leader Natural Resource Consents at Tasman District Council (TDC). I have been employed by the Council since 2007.

I hold the qualification of a Master of Science degree from Auckland University, and I am a full member of the NZPI. I have over 24 years work experience for Regional and Unitary Councils in NZ, including domestic and industrial wastewater treatment, land application of wastewater, air quality, and other resource consent application processing.

I was employed as a scientist at Environment Waikato specializing in air quality for seven years.

I have processed numerous gravel extraction and earthworks consents and I am aware of the challenges the Nelson climate creates with hot dry and often windy conditions. I have visited Peach Island and the general area over the years processing consents. I have not made a specific site visit for this memo.

I have read the evidence provided by Jeff Bluett (received 15 July 2022), Applicants evidence, Assessment of effects and the Draft Dust Management Plan.

Comments

Section 2.2 of Mr Bluett's evidence states that total suspended particulate (TSP) generates adverse amenity impacts, and inhalable particulate matter (PM10) causes adverse human health impacts. This is somewhat simplistic and health effects can also be the result of TSP.

The evidence states that the lower wind speeds are during the winter period, and I agree with this. The district has significant sea breezes during the summer and these result in higher wind speeds during the warmer and dryer part of the year.

The wind direction in the windrose from Riwaka are likely to be approximate, the air flow will be affected by the valley topography at Peach Island, the direction should be viewed as indicative only. Additionally, there is likely to specific Katabatic drainage flows at night and morning as the cool air moves down the valley. This is unlikely to be a problem unless large volumes of dust are generated early in the morning, given the usual damp conditions this is considered unlikely.

I agree with the sources of dust (section 5 of Mr Bluett's evidence). In section 6 of the evidence Mr Bluett states TSP has the potential to cause nuisance beyond the boundary and impact on amenity values. I argue that TSP has the ability to cause health effects in a similar manner to odour (mental health etc).

The effects on crops as described in section 6.3 “nuisance dust settlement” are a potential economic effect rather than amenity effect. I note that the MFE *Good Practice Guide for Assessing and Managing Dust* specifically addresses the effects on crops under *Effects on ecosystems*. Mitigation is subsequently provided for the apple orchards in the dust management plan, limiting the extraction within 100m of horticultural activities from June till September.

I agree with the recommendation to avoid remedy or mitigate effects. Minimizing the dust generation potential and then using water to keep the surface damp.

The applicant has provided a management plan “*Appendix B: Draft Dust management and Monitoring Plan- Peach Island Quarry*”. The approach is in line with the MFE good practice guideline and best practical option.

I do not consider it necessary to monitor PM10 specifically from this activity. Controlling the dust generally will result in the fine particulate levels the are well below the standard of 50mg/m³.

The management plan needs to be backed up with specific conditions of consent. Revised conditions of consent are included below for inclusion to conditions of consent.

Subject to conditions of consent (below) I consider that the applicant can adequately manage the activity so the dust generated will result in amenity and health impacts that are less than minor.

Revised condition of consent

Conditions of consent in the initial 42A report contain Environmental Bottom Lines. See underlined and crossed out changes/ additions to these conditions, **yellow highted** conditions are volunteered (condition numbering as per the applicant’s planning evidence submitted 15/07/2022).

40 *There shall be no noxious, dangerous, objectionable or offensive dust to the extent that it causes an adverse effect at or beyond the boundary of the site.*

40A *The applicant shall provide a Dust Management and Monitoring Plan based on Appendix B of the application. This plan shall be provided to Councils Team Leader Monitoring and Enforcement for certification prior to commencing works.*

It is noted that the applicant has volunteered the submission of the following management plans, including DMMP (see snips below).

Submission of plans

13. The consent holder shall, at least 10 working days prior to the commencement of works, prepare and submit the following plans and management plans to the Council's Team Leader - Monitoring & Enforcement for certification. No works shall be undertaken until these plans/management plans have been certified by the Council's Team Leader - Monitoring & Enforcement, unless **condition 14** is invoked.

- (a) existing and proposed Contour Plans prepared in accordance with **condition 15**;
- (b) a Noise Management Plan prepared in accordance with **condition 16**;
- (c) a Soil Management Plan (SMP) prepared in accordance with **condition 17**;
- (d) **Dust Management and Monitoring Plan (DMMP)** prepared in accordance with **condition 18**;
- (e) a Groundwater and Clean Fill Management Plan (GMP) prepared in accordance with **condition 19**;
- (f) a Landscape Mitigation Plan, Stage 1 River Terrace Restoration Plan and Maintenance and Establishment Plan prepared in accordance with **Condition 20**.

Advice note

Certification of the management plans above is in the nature of certifying that adoption of the management plans will result in compliance with the conditions of this consent.

18. The DMMP required by **condition 13(d)** shall demonstrate the best practicable option to ensure that dust is managed on site to minimise the adverse impacts of potential dust discharges on the receiving environment and to achieve the standard specified in **condition 41**. The DMMP shall be in general accordance with the draft DMMP prepared by Pattle Delamore Partners dated 2022 and shall address, as a minimum:

- (a) Consent Compliance and Key Performance Indicator
- (b) Sources of Dust
- (c) Management and Mitigation Measures
- (d) Roles and Responsibilities
- (e) Implementation and Operation of DMMP
- (f) Environmental Monitoring Programme
- (g) DMMP Review
- (h) Complaints
- (i) Emergency Contacts
- (j) Annual Reporting

The applicant has volunteered the following conditions (in yellow)

55 **Specific dust control measures described in the DMMP shall be implemented.** (Applicant's planning evidence)

Change to:

Specific dust control measure described in the application and DMMP shall be implemented. These dust control measures shall be undertaken in accordance with the best practical option.

56 No works shall be carried out during periods of high wind (>7.5m/s) and where there are sensitive receptors within 250m in a downwind direction. No excavations shall be undertaken if heavy rain or high wind is forecast in the period before measures can be implemented to secure the excavated area and any stockpiles from the effects of overland flows and dust generation.

Change to:

No ~~works~~ material shall be disturbed ~~shall be carried out~~ during periods of high winds (>30km/hr (7.5m/s). No excavations shall be undertaken if heavy rain or high wind is forecast in the period before measures can be implemented to secure the excavation area and any stockpiles from the effects of overland flow and dust generation.

57 No quarrying activities shall take place within 100m of horticultural activities on neighbouring properties between the months of October and May (inclusive).

Agreed, plus insert the following additions:

47A Stockpiles in the Stage 2 area within 100m of the apple orchard boundary shall be removed over the drier months of November to April.

40C The Consent Holder may use polymer or chemical stabilization to limit the dust generation. Waste Oil or Reprocessed Oil shall not be used to control dust.

58 The Consent Holders shall undertake meteorological monitoring (i.e., wind direction and wind speed) on site and store this data electronically and it shall be made available to the Council's Team Leader Monitoring and Enforcement on request.

Agreed (as per condition previously recommended in s42A report)

The Consent Holder shall maintain a Complaints Register. If any complaint is received Councils Team leader Monitoring and Enforcement officer shall be advised of the complaint within 1 day of any complaint being received

This is covered in their volunteered conditions below:

91. The consent holder shall maintain a complaint's register, which shall detail the following as a minimum:

- (a) The person responsible for the complaints register and appointment of a nominee who can be contacted in case of concerns/ complaints arising;
- (b) The location, date and time of the complaint;
- (c) The nature of the complaint (e.g., noise, dust, vehicle speeds etc.);
- (d) A description of weather conditions at the time of complaint (notably wind speed and direction as per the meteorological monitoring required by condition58);
- (e) Any identified cause of the complaint;
- (f) The action(s) taken to investigate and if appropriate remedy the issue.

92. The consent holder shall inform the Council's Team Leader Monitoring and Enforcement within one working day of any complaint being received.

Consent Application RM200488, C J Industries Ltd

Review of Traffic Effects

14/10/2022

Affirm NZ Ltd has been engaged by Tasman District Council to carry out a review of the traffic matters of a resource consent application by C J Industries to establish a gravel extraction operation at Brooklyn off Motueka River West Bank Road. This review is intended to provide an independent expert appraisal of the proposal for the Council Planners Report on the consent application.

1. Statement of Qualifications and Experience

My name is Ari Joseph Albert Fon. I am a Director of Affirm NZ Ltd, a private engineering consultancy. I hold a Bachelor's Degree in Civil Engineering with honours from Canterbury University. I am a Chartered Member of Engineering New Zealand (CMEng) and a member of the Transportation Group of Engineering New Zealand.

I established Affirm NZ approximately five years ago, following a long period of employment with Aurecon NZ Ltd, a multi-disciplinary engineering consultancy. For the previous 15-year period I was manager of the Aurecon Nelson office, with specific responsibility for land development and transportation projects.

I am experienced in traffic and transportation engineering and have worked in these disciplines throughout the Nelson, Tasman and Marlborough regions and New Zealand. I have also completed many traffic and access assessments for developments adjacent to both local roads and state highways throughout the Tasman region over the past 15 years. I am an experienced road safety auditor and have completed numerous Safety Audits for Waka Kotahi NZ Transport Agency as well as for Tasman District Council on local road projects.

2. Documents Reviewed

For the purpose of this review, I have considered the following documents:

1. Resource Consent Application and AEE of 15 June 2020 prepared by Planscapes Ltd, (the Application).
2. The Access Assessment Report of 7 June 2020 prepared by Traffic Concepts Ltd (the Access Report).
3. Summary of the 146 submissions prepared by Susi Bernsdorf Solly of WSP.
4. Applicant's written response to further information request, dated 8 June 2021.
5. Applicant Evidence – Traffic, prepared by Gary Clark of Traffic Concepts Ltd, 15 July 2022
6. Applicant Evidence – Planning, prepared by Hayden Taylor of Planscapes, 15 July 2022.

In addition, I have visited the site of the proposed vehicle entrance at 493 Motueka River Westbank Road and have driven the proposed transport route as described on page 11 of the Application and shown in Figure 18 of the AEE.

3. Submissions

A total of 148 submissions have been received, of which 112 are in opposition. Of the submissions in opposition, a large number raise traffic matters as a reason for opposition.

A review of the submissions in opposition has been completed to categorise the specific issues raised in relation to traffic matters. The main issues raised were traffic safety, increase in truck traffic, cycle safety including the Great Taste Trail, and the potential for increased damage to the roading infrastructure.

4. Review of Traffic Matters

4.1 Access Report Scope

Traffic Concepts Ltd has prepared a report, *“Proposed Gravel Extraction 493 Motueka River West Road, Motueka - Access Assessment Report”*, 7 June 2020 that is appended as Annexure D to the Application. This Access Report provides an assessment of the access requirements for the gravel extraction operation. It covers the proposed vehicle crossing at 493 Motueka River Westbank Road as well as the internal access road requirements.

The Access Report was limited to these matters only and did not include a detailed traffic assessment on the potential effects on road safety and efficiency of the generated truck traffic on Motueka River West Bank Road and Motueka Valley Highway.

Traffic Concepts Ltd has subsequently carried out a traffic assessment to cover the potential effects on the wider roading network from the generated truck traffic, and this assessment is included as part of the Applicant Evidence – Traffic.

4.2 Proposed Truck Route

The proposed truck route utilising Motueka River Westbank Road, the Alexander Bluff Bridge and the Motueka Valley Highway avoids the townships of Brooklyn and Motueka as well as the narrow Motueka River Bridge on State Highway 60. However, this route includes the relatively low-trafficked section of the Motueka Valley Westbank Road between the entrance to 493 Motueka River Westbank Road and the Alexander Bluff Bridge. According to Council traffic counts from 2019 and 2021, this section of road has daily traffic volumes of approximately 300 vehicles per day.

The Application states that the generated 30 truck movements will be *“1.4 - 4% of the total expected volume of vehicles on this road each day. The proposal’s trip generation will have less than minor effect on the road network as a result.”* However, the actual proportion of generated truck movements will be much higher, at 10% or more of the total traffic. Based on the current proportion of trucks on the road at 9% of total traffic, (from Council traffic count data), the proposed 30 truck movements per day would result in an approximate doubling of truck traffic on the road.

4.3 Truck Mix

The Application and the supporting Access Report did not make it entirely clear on the type of trucks that will service the gravel extraction operation, and particularly the split between truck-only units and truck and trailers. The

Application refers to “*dump-truck (truck and/or truck and trailer units)*” while the Access Report refers only to “*trucks*”.

Truck and trailer units are longer and heavier than truck-only units and have a wider swept path when manoeuvring. As a result, they take a longer time to complete turning movements than a truck-only unit. The layout of the vehicle crossing onto Motueka River Westbank Road and the alignment of the access onto the bridge will need to cater for the largest vehicle expected to service the operation, namely a truck and trailer.

Following the consent application, it is understood that the Applicant subsequently advised that all trucks serving the operation will be truck and trailer units. The Applicant Evidence – Traffic further emphasises this in stating that heavy vehicles will be “*mostly truck and trailer*”.

For this review, it has been taken that all trucks servicing the operation will be truck and trailer units.

4.4 Speed Environment

For vehicle speeds on Motueka River Westbank Road the Access Report states that “*the operating speed has been measured at 68km/h*” and notes that there is a variance in speeds, with the “*fastest recorded speed being 90km/h and the lowest being 41 km/h*”.

The Access Report doesn’t state how this vehicle speed data was obtained, however the Applicant Evidence – Traffic states that “*speeds were measured by speed gun in accordance with Austroads*” and “*the traffic count included speed data information*”.

The Applicant Evidence – Traffic explains while there is some slight difference in the speeds measured by each method, that this will make no material difference to the conclusions made regarding the safe operation of the access. I concur with this finding.

4.5 Sight Distance at Vehicle Crossing

The appropriate Sight Distance requirement from the NTLDM for a private access is set out in Table 4-14 *Minimum Sight Distance from Private Vehicle Access Points*. This is the same standard used in the Access Report, based on the Austroads guidelines. In short, for an 80km/h approach speed the sight distance requirement is 114m and for the 68km/h operating speed as assessed in the Access Report the sight distance requirement is less than this.

Given the slow manoeuvring speeds of turning trucks using the vehicle crossing, it is agreed that maximising the sight distance available at the crossing is essential.

As outlined in the Access Report, the willow trees on either side of the access partially obstruct the sight distance for vehicles exiting from the crossing. The proposed removal of the willow trees on either side of the access along with trimming of the bank to the south of the access are appropriate measures to maximise the available sight distance for vehicles turning onto Motueka River Westbank Road. The resulting available sight distance will be in the order of that indicated in the Access Report and exceed the required values from Table 4-14 for the operating speeds.

It is noted that the extent of trimming of the bank to the south, and therefore improvement in the available sight distance, will be limited by the location of the road reserve boundary and the access and fences.

The willow tree removal and bank trimming to provide sight distance at the vehicle crossing meeting the requirements of Table 4-14 of the NTLDM should be made a Condition of consent.

4.6 Vehicle Crossing Standard

There is limited discussion in the Application and the Access Report of the level of physical upgrade required to the existing vehicle crossing to the property at 493 Motueka River Westbank Road, to make it suitable for the truck traffic that will be generated by the proposed activity.

The Application states that the *“site’s access and vehicle crossing will be upgraded to meet the requirements of the NTLDM (for 2-6 users in the Rural zones).”* As the access is intended to be used by up to 15 trucks each day making a return trip, the upgrade needs to specifically cater for truck turning movements.

The recommended layout for truck and trailer unit use is to the Diagram 2 standard of Drawing SD409 in the NTLDM, including seal widening and sealing of the access to a distance of 10m from the edge of seal within the property and tapering to 6m width.

As the truck and trailer units will have a wide swept path, it is recommended that the 6m sealed width is continued up to the bridge. This would allow for two vehicles, including truck and trailer units, to pass by each other within the access if necessary and avoid any undesirable queuing on West Bank Road.

The vehicle crossing upgrade works should be made a Condition of consent.

4.7 Access Formation

The Application indicated that the haul road access along the paper road would be formed to a width of 4.5m. In the Applicant Evidence – Planning and Applicant Evidence – Traffic, this has subsequently been revised to a proposed width of 3.5m with localised widening on corners.

The inclusion of 0.5m shoulders and provision for drainage in the form of side drains and/or a feathered formation edge will also be necessary on both sides. This standard is considered acceptable for the proposed activity-generated truck traffic.

The formation width isn’t sufficient to allow for two vehicles to pass by each other. While truck movements will be relatively low throughout the course of a typical day, there may be occasions where trucks and or other vehicles servicing the operation are using the access and need to pass by each other.

It is therefore recommended that the Applicant allows for the formation of some localised widened areas along the haul road, to Council passing bay standard, to allow for two vehicles to pass by each other.

4.8 Tasman Great Taste Trail

The Tasman Great Taste Trail route runs as an on-road section along the Motueka River Westbank Road. There is no off-road alternative route for any cyclists using this section of the Trail, so the generated truck traffic from the gravel extraction operation would increase the number and frequency of trucks passing by any cyclists that were using the approximately 4.3 km length of the trail between 493 Motueka River Westbank Road and the Alexander Bluff Bridge.

The Applicant Evidence – Traffic mentions that the truck drivers will be regular users of the route and explains that the elevated driver position provides increased visibility of the road ahead, including cyclists.

The Applicant has offered a condition of an imposed speed limit of 60km/h on the trucks while they travel on West Bank Road. This will be monitored electronically by company management, with this information made available on request to Council.

It is agreed that the use of this speed management system will reduce the potential risk to cyclists on the road and that it should be adopted as a condition of consent.

The Applicant Evidence – Planning states that *“the Applicant has agreed to work with the Trust to help facilitate the addition of further off-road sections of the trail, but do not anticipate this being a condition of consent.”* These discussions should be encouraged, but it is agreed that any outcome from them should be separate from this consent process.

4.9 Potential Public Access

The possibility of public access on the paper road is mentioned in the Application, which states that *“Access along the Peach Island paper road will be gated but will be maintained in accordance with the Walking Access Act 2008 as necessary...”*. There is no mention of public access in either the Applicant Evidence – Planning or Applicant Evidence – Traffic.

However, the evidence from the Landscape Architect (page 28) mentions that public access will be possible on the haul road, stating that *“public would need to share the road with heavy vehicles”*. If there is the likelihood of any public access on the paper road, then measures will be required to ensure safety of members of the public while trucks are using the section of the access road that is formed on the paper road.

At present, it is not entirely clear from the Applicant evidence whether public access is possible on the haul road or whether the public will be excluded. This matter will need clarification by the Applicant, preferably prior to the hearing.

4.10 Existing Bridge

Access to the gravel extraction operation is proposed via an existing vehicle bridge over the Peach Island overflow channel. The Application states the *“appropriateness of this bridge will be assessed by a suitably qualified engineer and any necessary upgrades will be undertaken prior to access establishment or use”*.

The bridge will need to carry minimum Class 1 loads and potentially higher loads if High Productivity Motor Vehicles (HPMV) trucks are intended to be used for the activity. It is understood from Council information, obtained when the bridge was assessed for suitability of carrying trucks for river protection works, that it is unlikely to have been designed for Class 1 loads.

Should the bridge require replacement then the preference is for the bridge width to match that proposed for the main haul road access, namely 3.5m.

4.11 Signage

As well as any required Health and Safety and Hazard signage required for the operation, signage should also be installed on Motueka River Westbank Road to provide warning to oncoming vehicles of the potential presence of trucks. As a minimum, permanent warning signs (PW-50) *“Trucks Crossing”* signs are recommended on Westbank Road either side of the vehicle entrance, at positions to be confirmed with Council. Signage should be included as a Condition of consent.

5. Applicant Evidence - Traffic

The Applicant Evidence – Traffic has been prepared by Gary Clark of Traffic Concepts Ltd. This evidence covers an assessment of the wider road network, covering the local roads that the trucks servicing the operation will use, namely Motueka River West Bank Road and Motueka Valley Highway.

Mr Clark states that he has “*driven the roads that the trucks will use on several occasions*” and from Figure 7 and Section 7.17 of the Applicant Evidence-Traffic, at least one of those trips was made in a truck.

This Applicant Evidence – Traffic includes a detailed review of road safety on the route to be used by the trucks associated with the activity. As part of this work the reported crash history on the truck route over the most recent five-year period has been assessed.

The main findings from this crash analysis were that there are few reported crashes involving more than one vehicle and that the crash severity (nature of any resulting injuries) was low with most crashes being minor-injury or non-injury.

Mr Clark also considered whether accident prediction models could be applied to the route to “*better understand the change in crashes as a result of an increase in traffic flows on these roads*” and concluded that “*the potential increases in crashes (based on these prediction models) is too small to measure*”. I agree with this finding.

Mr Clark has carried out an assessment of the available sight distance at the intersection of Alexander Bluff Road with the Motueka Valley Highway at the Alexander Bluff Bridge. He concludes that “*vehicles are able to use this intersection safely with the available sight distances easily meeting the best practice guidance provided in Austroads.*”

I have reviewed his assessment of sight distance at the intersection and concur with his findings. I also acknowledge, as he has, that sight lines are typically better for truck drivers due to their elevated driver eye height.

Mr Clark has also provided comment on the draft Conditions of Consent. All conditions relevant to traffic matters are covered in Section 9 of this review. However, there are two areas where the comments and/or proposed conditions from Mr Clark vary from my own and these are discussed in further detail below.

[Access Road Passing Opportunities](#)

Mr Clark states that a condition requiring inclusion of passing opportunities along the haul route is not required. This is based on the Applicant’s trucks being fitted with electronic monitoring and radios for management purposes. As Mr Clark points out, this is similar to how forestry roads operate.

However, this approach does not account for any visitors to the site, such as service or maintenance vehicles, not fitted with electronic monitoring equipment or radios. It also doesn’t allow for human behaviour, where there may be occasions when a radio call isn’t made by entering or exiting trucks. The haul road access will be over 500m in length and, should two vehicles meet along that section without adequate opportunities to pass by each other, the level of inconvenience will be high.

[Access Road Widening](#)

Mr Clark also states that widening of the access over the section between Motueka West Bank Road and the bridge is not required.

The vehicle entrance and initial length of the access will have shared access with the adjoining property and vehicle movements to and from that property will be outside of the control of the gravel extraction operation. As such, exiting vehicle movements could coincide with trucks entering from the road, even if on an infrequent basis only.

As discussed previously, there should be no impediment to trucks turning off the road and into the access. Sufficient carriageway width should therefore be provided over this initial section of the access road to allow entering and exiting vehicles to pass by each other. On this basis, a condition requiring widening of the access over the section immediately east of the vehicle entrance with Motueka Westbank Road is considered appropriate.

6. Assessment Criteria in Rule 16.2.2.6 (Transport)

From page 18 on, the Application discusses to the matters over which Council has restricted its discretion under Rule 16.2.2.6. The response provided in the Application for Access and Vehicle Crossings (Items 1 to 5), Parking Areas (Items 6 to 10), Roads (Items 11 to 15), and Traffic Effects (Items 16 to 22), has been reviewed and comment on specific items is provided below.

- 6.1 (1) The location and design of on-site access and vehicle crossings, including dimensions, gradient, surface standard and any effect on the safety and efficiency of traffic on the adjoining road

The Application states that “*the access and vehicle crossing should be upgraded and formed to meet the requirements of the Nelson Tasman Land Development Manual (NTLDM) or the TRMP, whichever is preferred by Council.*”

As discussed previously, it is recommended that the vehicle crossing is formed generally to the Diagram 2 standard of Drawing SD409 in the NTLDM, including widening and sealing of the access to a distance of 10m from the edge of seal within the property and tapering to 6m width. Further, it is recommended that 6m width should continue up to the bridge.

- 6.2 (16) The effects of the design of the road and its traffic flows and types on the adjoining activity

For this Item the Application states, ‘*The road’s classification as a collector road indicates that the road is likely to carry traffic volumes in the 1,000 to 3,000 vehicles per day range. For this reason, it is considered that the road is able to cater for the increased traffic and type of vehicles associated with the proposal.*’

It is understood that the above statement is specific to Motueka Valley Westbank Road, which is classified as a Collector Road. However, this road currently carries traffic volumes significantly less than 1,000 to 3,000 vehicles per day, particularly over the section that will be used for trucks travelling to and from the site. On this section of the road, the most recent Council traffic counts from 2019 and 2021 show daily traffic volumes of approximately 300 vehicles per day.

The TRMP classification of Motueka Valley Westbank Road does not in itself indicate the suitability of the road to cater for the increase in daily truck movements as a result of the gravel extraction operation.

This aspect has been adequately addressed as part of the Applicant Evidence – Traffic, which states “*traffic volumes on Motueka Valley Westbank Road are low and well below the anticipated flows of its listed road hierarchy designations.*”

6.3 (18) The potential effect of the activity on the safety and efficiency of the road network.

The Application states that *“Forestry harvesting traffic is similar in scale to this proposal and log trucks have been able to enter/exit this road network safely and effectively in multiple locations along the Motueka Valley, including recent harvesting only 650m south of the proposal’s access.”*

Forestry harvesting operations occur only very infrequently for a particular block of land. In addition, due to their limited duration, harvesting operations often utilise temporary traffic management with signage and temporary speed limits. As such, these operations aren’t directly applicable to the daily generation of truck movements that will result from the gravel extraction operation.

The crash analysis provided in the Applicant Evidence – Traffic found that there are few reported crashes involving more than one vehicle and that the crash severity (nature of any resulting injuries) was low with most crashes being minor-injury or non-injury.

Mr Clark has considered whether accident prediction models could be applied to the route to *“better understand the change in crashes as a result of an increase in traffic flows on these roads”* and concluded that *“the potential increases in crashes (based on these prediction models) is too small to measure”*. I agree with this finding.

6.4 (19) The effects of trip generation.

The Applicant states that the overall estimated vehicle movements associated with the extraction operation will amount to *“only 1.4 - 4% of the total expected volume of vehicles on this road each day. The proposal’s trip generation will have less than minor effect on the road network as a result.”*

However, as the current volumes on Motueka River Westbank Road south of the site are in the order of only 300 vehicles per day, the proportion of generated vehicle movements will be much higher, at 10% or more of the total traffic. Based on the current proportion of trucks on the road at 9% of total traffic, (from Council traffic count data), the proposed 30 truck movements per day would result in an approximate doubling of truck traffic on the road.

The Applicant Evidence - Traffic states that *“care must be taken when using general traffic volumes and percentages when assessing effects”* and that *“doubling the heavy vehicle movement does not necessary (sic) translate to the doubling of the effect especially when traffic flows are very low”*.

While this position is acknowledged, for most road users a small increase in truck movements would be more noticeable than a similar increase in private vehicle movements, particularly for this activity where the trucks are truck and trailer units.

6.5 (20) Traffic effects beyond the site, including effects on carriageway width, alignment and intersections.

The Application states that *“The proposal will have less than minor traffic effects beyond the site.”* This is based on the fact that logging trucks have been *“safely using this stretch of road in the past, without the need to widen or straighten the road to improve safety”*. As discussed above, logging trucks do not provide a direct comparison with truck movements resulting from the gravel extraction operation as the two activities differ.

While there was no supporting information provided in the Application or Access Report regarding the safety of the section of road intended to be used for the truck route, a comprehensive review of the crash history on the proposed truck route and discussion on road safety has been provided as part of the Applicant Evidence – Traffic. Comment has been provided on this aspect previously.

The Application response to Item (20) refers to Figure 16.2C standard proposed for the upgrading of the vehicle crossing. However, as this standard has now been superseded, it is recommended that the vehicle crossing be upgraded to generally meet the Diagram 2 standard of Drawing SD409 in the NTLDM.

7. Summary and Recommendations

7.1 Summary

The Traffic Concepts Ltd Access Report appended as Annexure D to the Application, provides an assessment of the proposed vehicle crossing at 493 Motueka River Westbank Road as well as the internal access road requirements. The recommendations of the Access Report for improvements to the vehicle crossing and access works are generally accepted.

The additional truck traffic generated by the proposed gravel extraction operation will produce a noticeable increase in truck movements, particularly on the lower volume section of Motueka River Westbank Road between 493 Motueka River Westbank Road and the Alexander Bluff Bridge.

The assessment of the potential effects on road safety and efficiency of the generated truck traffic on the roading network has been carried out and is provided in the Applicant Evidence – Traffic. This assessment includes a detailed review and discussion on road safety on the route to be used by the trucks associated with the activity. It also includes a review of the available sight distance for turning movements at the intersection of the Alexander Bluff Bridge intersection on the Motueka Valley Highway.

A condition proposing an imposed speed limit of 60km/h on trucks travelling on West Bank Road has been proposed by the Applicant. Other conditions around the standards and use of the haul road access and entrance upgrading, while not proposed by the Applicant, are recommended to avoid, remedy or mitigate potential traffic effects.

Based on the assessment provided in the Applicant Evidence – Traffic, and subject to adoption of the conditions proposed in Section 8 of this review, it is concluded that the resulting traffic effects of the activity on the safety and efficiency of the existing road environment will be no more than minor.

7.2 Recommendations

Vehicle Crossing to the property at 493 Motueka River Westbank Road

The vehicle crossing should be upgraded to the Diagram 2 standard of Drawing SD409 in the NTLDM, including seal widening and sealing of the access to a distance of 10m from the edge of seal within the property and tapering to 6m width. In addition, the 6m width should be continued up to the bridge to allow for two trucks, or other vehicles, to pass by each other on this section of the access.

The willow tree removal and bank trimming to improve sight distance, as outlined in the Access Report, should be implemented.

Access Road

The haul road access should be formed to a 3.5m sealed width with localised widening on corners, along with 0.5m shoulders and provision for drainage in the form of side drains and/or a feathered edge on both sides.

Provision should also be made for the formation of localised widened areas, to Council passing bay standard, to allow for two vehicles to pass by each other.

Bridge

The bridge to be assessed by a suitably qualified engineer for its suitability to carry Class 1 loads or potentially higher loads if HPMV trucks are intended to be used. Any necessary upgrade or replacement structure should be constructed prior to access establishment. Should the bridge require replacement then the preference is for the bridge width to match the 3.5m width proposed for the haul road access.

8. Conditions

The Applicant has volunteered draft conditions, which are included in Appendix B of the Applicant Evidence – Planning. Those relevant to traffic matters are included below in full in *italic text*. These draft conditions have been reviewed, with responses provided in plain text where required. Where additional or amended wording or new conditions are recommended, these have been provided in underlined **bold text**.

8.1 Signage

22. Signage shall be installed on Motueka River West Bank Road to provide warning to oncoming vehicles of the potential presence of trucks. As a minimum, permanent warning signs (PW-50) “Trucks Crossing” signs shall be installed on West Bank Road either side of the site entrance, at a position to be confirmed with the Council’s assigned monitoring officer.

This condition is appropriate.

8.2 Upgrade of vehicle entrance and site access

23. The consent holder shall remove the willow trees north and south of the entrance to the site and undertake trimming on the bank on the eastern side of Motueka River West Bank Road, as identified in the Traffic Concepts report submitted with the application, to improve site access visibility.

This condition is appropriate.

24. The consent holder shall undertake ongoing trimming of vegetation to ensure that visibility is not impaired and shall ensure that the sight distances at the intersection with Motueka River West Bank Road meet the minimum requirements set out in Table 4-14 of the Nelson Tasman Land Development Manual 2020 (NTLDM).

This condition is appropriate.

25. The existing vehicle crossing at 493 Motueka River West Bank Road shall be upgraded/ formed generally to the standard shown in Diagram 2 of Drawing SD409 in the of NTLDM, except where modifications are necessary to ensure vehicle tracking and its connection to the new bridge are fit for purpose.

It should be expected that the required vehicle entrance upgrading will be to the Diagram 2 layout of the NTLDM apart from only minor modifications. This will give assurance to both Council and the Applicant around the expected level of vehicle entrance upgrading necessary. It is recommended that the words “**as approved by Council**” be inserted in the draft condition immediately after the word *modifications*.

In addition, this condition should also include the requirement that: **A set of engineering drawings for the vehicle entrance upgrading are to be submitted to Council for approval, prior to any works commencing on the vehicle entrance.**

With these changes, the recommended wording of Condition 25 would be:

25. The existing vehicle crossing at 493 Motueka River West Bank Road shall be upgraded/ formed generally to the standard shown in Diagram 2 of Drawing SD409 in the of NTLDM, except where modifications as approved by Council are necessary to ensure vehicle tracking and its connection to the new bridge are fit for purpose. A set of engineering drawings for the vehicle entrance upgrading are to be submitted to Council for approval, prior to any works commencing on the vehicle entrance.

Recommended New Condition

For reasons outlined previously, it is appropriate that the initial section of access is sufficiently wide to allow for two trucks, or other vehicles, to pass by each other within the access if necessary and to avoid any undesirable queuing on West Bank Road. The following condition is recommended:

The vehicle access shall be formed to a minimum sealed carriageway width of 6m from the existing seal edge of Motueka Valley Westbank Road up to the western end of the bridge (approximately 35m from the edge of the existing seal) to allow for two trucks to pass by each other.

Recommended as an Advice Note

A Corridor Access Request (CAR) will be required for the upgraded access, and it is appropriate that this is included as an Advice Note to the condition regarding the standard of the access.

Prior to any works commencing on the vehicle entrance the Applicant shall apply to Council for a Corridor Access Request (CAR).

26. The proposed access shall be formed to a sealed carriage width of generally no less than 3.5 with 0.5m gravel shoulders and side drains to drain to existing drain paths and/or soakpits. Localised widening on corners shall be provided to accommodate vehicle tracking. The access shall be maintained for the duration of this consent by the Consent Holder.

Advice note This consent does not grant access to the excavation area. Site access and management of the tracks should be arranged with the landowner.

It is noted in the initial consent application and the draft conditions from Annexure E of the Application proposed a sealed carriageway width of 4.5m. However, it is accepted that a width of 3.5m plus 0.5m shoulders is an appropriate width, notwithstanding additional comments below regarding the provision of passing opportunities on the access.

Recommended New Condition

For reasons outlined previously, it is appropriate that some passing opportunities be provided along the haul road access, where it is practicable to do so. It is recommended that the following condition be included:

The consent holder shall make provision for the formation of at least two localised widened areas along the access, formed to NTLDM passing bay standard, to allow for two vehicles to pass by each other.

27. The proposed access shall not connect to the southern end of Peach Island Road, unless requested to by the Council.

This condition is appropriate.

8.3 Bridge

28. The appropriateness of the existing bridge across the overflow channel (located on Section 1 SO 15112) shall be assessed by a suitably qualified engineer to demonstrate compliance with condition 29.

It is recommended that the words, “**Prior to it being used under this consent**,” should be added to the beginning of Condition 28 to make the timing of the bridge assessment clear. With this amendment, Condition 28 would then read:

28. Prior to it being used under this consent the appropriateness of the existing bridge across the overflow channel (located on Section 1 SO 15112) shall be assessed by a suitably qualified engineer to demonstrate compliance with condition 29.

29. The bridge shall be able to carry Class 1 loads (or higher loads if the applicant proposes to use HPMV trucks for the operation), and any necessary upgrade or replacement to achieve this shall be carried out by the consent holder prior to the bridge being used under this consent.

This condition is appropriate.

8.4 Access and vehicle entrance

48. Access to the site by vehicles associated with quarrying activities shall only be via the upgraded vehicle crossing at 493 Motueka River West Bank Road. Advice note This consent does not grant access to the excavation area. Site access and management of the tracks should be arranged with the landowner.

This condition is appropriate.

8.5 Traffic movements

49. There shall be no more than 30 truck movements per day to and from the site (a return trip being two truck movements). A truck may include a trailer.

This condition is appropriate.

50. All vehicles shall observe a speed limit of 15 kilometres per hour when travelling on any unsealed surfaces on site. It is the consent holder’s responsibility to inform drivers of this speed limit.

This wording sets an appropriate speed for vehicle movements on unsealed surfaces, however it doesn’t include a speed limit specific to vehicle movements on sealed surfaces, including the haul road access. Annexure E of the Application proposed a volunteered condition of a 30km/h speed limit for all vehicles when on site. While this is not now included as one of the volunteered conditions of the Applicant Evidence – Traffic, it is recommended that this condition is amended to include a 30km/h speed limit to the sealed haul road access.

With this recommended change, Condition 50 would then read:

50. All vehicles shall observe a speed limit of 15km/h when travelling on any unsealed surfaces on site and a speed limit of 30km/h when travelling on any sealed surfaces on site. It is the consent holder’s responsibility to inform drivers of this speed limit.

Affirm NZ Ltd

PO Box 3365
Richmond 7050

51. All trucks shall observe a speed limit of 60 km/h when travelling along Motueka River West Bank Road.

This condition is appropriate.

52. All trucks shall be fitted with GPS based speed logging and records shall be supplied to the Council's Team Leader - Monitoring & Enforcement on request. The GPS system shall be set up to provide alerts to the quarry manager if the speed limits specified in the conditions above are exceeded.

This condition is appropriate.

53. No processing, washing, crushing or screening of gravel shall be carried out on the site.

This condition is appropriate.

[this page blank]

Memo

From Mirka Langford

To Susi B Solly

CJ Industries Limited – RM2000488 etc
Land productivity review - Addendum October 2022:

1. Introduction:

This memo provides comments in respect to the productive land classification of 134 Peach Island for the resource consent application RM200488 CJ Industries, Motueka.

It builds on the comments I had previously submitted on 02 March 2022 due to the additional documents submitted by the applicant:

These documents are:

- Evidence of Reece Hill – soil management and land productivity
- Evidence of Michael Nelson – land productivity for horticulture
- Evidence of Hayden Taylor – planning
- Evidence of Jeffrey Bluett – air quality and dust, including PDP Dust Management and Monitoring Plan – Peach Island Quarry
- Memorandum of counsel for applicant 30 September 2022 (NPS HPL)

2. Evidence of Reece Hill

(a) Land productivity

I agree with the following conclusions in Reece Hills evidence:

4.1 The property scale soil and LUC assessment undertaken by LandVision (2021) provides the best soil and LUC map information for the Peach Island Site.

4.2 The Peach Island Site land outside the stop bank is not suitable for agricultural land development due to the flood risk.

I disagree with his conclusion:

4.4: applying the TRMP definition of high productive value for land, the Peach Island site is not classed as land of high productive value as it fails to meet the requirements in the last sentence of the definition.

I maintain that the land at 134 Peach Island meets 5 out of the 6 criteria. The sixth criteria – rooting depth - varies across the site but is not a limiting factor across the whole site. The combination of these factors show that the land is capable of producing at a high rate and/or across a wide range.

Contradictory to concluding that the site is not classed as land of high productive value, Reece Hill classifies the land as PLC B1 (2021) when applying the criteria he helped develop for TDC in classifying HPL (section 3.49 of his evidence).

(b) Soil Management Plan (15 July 2022)

I welcome the changes that Dr. Hill has made in his Soil Management Plan as they address my concerns raised in my original comments. These are:

- The use of more directive and stronger language.
- The provision for planning, training and supervision to be undertaken by a soil scientist throughout the soil excavation, storage and reinstatement process.

I do agree that there is the potential for the land to be of higher productive value if the soil management plan is implemented successfully.

Previously I had concerns that the Dust Management Plan was in contradiction to the Soil Management Plan. This is because in the Soil Management Plan, soil is only to be handled in dry condition, whilst in the Dust Management Plan soil was only to be handled when wet.

I have read the new PDP Dust Management Plan and remark that whilst it does not state that soil needs to be wet to be handled, it does list irrigating the soil would mitigate the creation of dust. I am unsure how this would impact on soil moisture overall.

I maintain concerns about the practical implementation of the Soil Management Plan. I am particularly concerned that working may continue during marginal weather days – such as drizzly conditions or at the start of a rain event as well as the careless use of heavy machinery.

Another example of concern is the transportation of topsoil. The soil management plan limits the speed for the transportation of topsoil to 15km/h to mitigate compaction of the soil. At the same time the soil management plan suggests bringing in topsoil from elsewhere in the region to achieve a consistent topsoil layer of 300-400mm across the site. I understand that enquiries have been made to council to import such topsoil from the Appleby area. Will this 44km journey need to be made at the 15km/h to avoid degradation of soil aggregates?

My understanding is that so far, any attempt of reinstating land post gravel extraction in the Tasman Region has led to a degradation of productive capabilities due to compaction and impeded drainage issues.

3. Evidence of Jeffrey Bluett – Dust Management Plan

Addressed above.

4. Evidence of Michael Nelson – land productivity

I disagree with Michael Nelsons interpretation of the TRMP. Like Reece Hill, Michael Nelson focuses solely on the final sentence of the definition and his evidence highlights how this condition has historically not been met on 134 Peach Island.

I maintain that at least 5 of the 6 criteria used to determine whether land is productive or not are met at this site, which should classify it as highly productive.

Furthermore, I would like to strengthen my argument by adding the land unit of 134 Peach Island is classified as:

- LUC3 in the NZ Land Resource Inventory;
- PLC Class A in the TDC PLC 1994 classification; and
- PLC B1 in the TDC PLC 2021 classification.

5. Evidence of Haydon Taylor - volunteered conditions

I would like to comment on the following volunteered conditions:

17. (a) Procedures to mitigate the potential effects on soil properties including: (i) to (vii)

Staff training and supervision should be added.

Soil

43. Following completion of soil restoration and rehabilitation activities, restored soils shall achieve the following:

(c) Be at least imperfectly drained, preferably moderately well or well drained where the inherent soil drainage characteristics of the land allow.

Only the area classified as LUC5 has a drainage classification of H, whereas LUC 3s1m 4s1 and 6s1 are all classified A for drainage.

Accepting that the land will be left “at least imperfectly drained” will lead to a degradation in productive capability. (c) should therefore state: be at least “well drained”

6. Memorandum of counsel for applicant 30 September 2022 - NPS HPL

NPS HPL

The NPS HPL has recently become operative, however the guidance document is still being developed.

In the memorandum of counsel for applicant 30th September 2022 it is being stated that:

NPS HPL 3.5 (7) says:

Until a regional policy statement containing maps of highly productive land in the region is operative, each ... authority must apply this NPS as if references to highly productive land were references to land that at the commencement date:

- (a) Is zoned general rural or rural production; and*
- (b) LUC 1, 2, or 3 land*

It goes on to say that 3.4 (5)

For the purpose of identifying land referred to in subclause (1):

- (a) *Mapping based on the NZ Land Resource Inventory is conclusive of LUC status, unless a regional council accepts any more detailed mapping that uses the Land Use Capability classification in the NZ Land Resource Inventory*

The applicant has identified that, according to their mapping, the site contains areas of land that are classified as LUC3 (highly productive).

I would like to refer to 3.4 (5) (a). Peach Island as a unit is mapped as LUC 3 on the New Zealand Land Resource Inventory. Council would have to accept the more detailed mapping that was undertaken by the applicant to accept that only parts of the site are classed as highly productive.

Whilst I do not dispute the detailed mapping that has been undertaken, without the guidance document I am not able to accept the mapping as an interpretation of the land unit as a whole.

Secondly the applicant goes on to interpret (11.) that the proposed activity:

- a. Is provided for under clause 3.9 (2) (j) (iv) and
- b. Can meet the requirements of clause 3.9 (3)

Clause 3.9 (2) (j) (iv) states:

Aggregate extraction that provides significant national or regional public benefit that could not otherwise be achieved using resources within NZ

No evidence has been provided to support this claim.

Thirdly, the applicant states that the activity meets clause 3.9 (2) (g):

(g) it is small-scale or temporary land use activity that has no impact on the productive capacity of the land

Without the guidance document scale and time has not been further defined.

Whilst evidence from Dr Hill describes an improvement of the productive capacity, this is reliant upon the successful implementation of the Soil Management Plan. This has not been shown as possible elsewhere in the district. In addition, there is agreement that the proposed activity will certainly have short-term effects on the productive capacity of the land.

7. Conclusion

I maintain that the land unit of 134 Peach Island are classed as highly productive when applying the criteria of

- TRMP
- PLC 1994
- PLC 2021
- NPS HPL

(a) Areas of agreement

I agree with the detailed mapping of the soils at property scale.

I agree that if the land is reinstated successfully and in accordance with the Soil Management Plan it is possible that it may be more productive long term.

(b) Areas of disagreement

I disagree with the interpretation of the TRMP definition of HPL by Reece Hill and Michael Nelson.

I disagree that a property scale soil map should be used to dissect the land unit into parts of lesser or more productive areas and maintain that the land unit as a whole needs to be assessed.

Whilst I agree with the measures proposed in the Soil Management Plan, I am concerned with the practical implementation and that this can be done successfully? Previous attempts in the Tasman District to reinstate the land after gravel extraction have all resulted in a loss of productive value due to compaction and as such drainage issues.

[this page blank]

ITEM 2.2

CJ Industries Limited’s discharge permit application at 134 Peach Island Road, Motueka. The application seeks to discharge contaminants to land from backfill material associated with the proposed gravel extraction from the berm of the Motueka River and on the landward side of the stopbank at Peach Island

DECISION REQUIRED

Report to	Commissioner (Resource Consent) Hearing
Meeting date	21 November 2022, 22 November 2022, 24 November 2022 (& 25 November 2022 reserve day)
Report author	Alastair Jewell, Principal Planner - Resource Consents
Report number	REPC22-11-21B
Attachments:	<ol style="list-style-type: none"> 1. Section 42A report and recommendation by reporting planner 2. Summary of submissions received 3. Technical review – groundwater hydrology – Dr Helen Rutter

Report and recommendation.

The Section 42A report and recommendation on the resource consent application (Attachment 1) has been prepared by Susanne B Solly as the Council’s consultant reporting planner.

This item is read in conjunction with the existing RM200478 and RM200479 land use consents section 42A report and recommendations, including the Addendum – which is item 2.1 to this Agenda.

This report and recommendation addresses the application for a discharge permit that the applicant made at the same time as they provided a copy of their written evidence for the above land use consents.

The expert technical comment on groundwater hydrology was provided by Dr Helen Rutter, consultant groundwater hydrologist (Aqualinc Limited):

This section 42A report addendum and attachments was compiled for release and the Item description completed by Alastair Jewell, Principal Planner.

Resource consent applied for

Discharge permit RM250578

To discharge contaminants to land, specifically from backfill material associated with the proposed gravel extraction (duration sought 17 years).

Background

The application was lodged on 18 July 2022 and was publicly notified on 12 August 2022. A total of 58 submissions were received, and 21 asked to be heard at the hearing.

This resource consent is one of three sought by CJ Industries Limited for the proposed gravel extraction activity. All the resource consents are 'bundled' so they can be assessed and decided on together.

Craig Welsh is the independent hearing commissioner appointed with the delegated powers and functions (under section 34A(1) of the RMA) to conduct the hearing and decide these resource consent applications.

Purpose of report

This report is not the decision on the application.

It contains advice and recommendations from professional planners and other experts.

It has yet to be considered by the Hearings Commissioner delegated by Tasman District Council to decide this resource consent application.

The decision will be made after the Commissioner has considered the application, this report, and heard all evidence from the applicant and the submitters.

REPORT UNDER SECTION 42A OF THE RESOURCE MANAGEMENT ACT 1991

Resource application by	CJ Industries Limited
Application number	RM220578
Site address	134 Peach Island Road, Motueka
Legal description	Lot 2 DP 2357 (RT NL77/73) and Lot 2 DP 432236 (RT 524970)
Report and recommendation prepared by	Susanne Bernsdorf Solly, Senior Consultant Planner

Note: This is not a decision.

This report sets out the advice and recommendations of the reporting planner.

The independent commissioners delegated by Tasman District Council to decide this resource consent application have not considered this report yet.

The independent hearing commissioner will only make a decision after they have considered the application and heard all evidence from the applicant, submitters and council officers.

This report is to be read in conjunction with the Section 42A report and associated addendum for RM200488 and RM200489 (refer Attachment 1 to agenda item 2.1).

1 Introduction

- 1.1 The application seeks resource consent to discharge contaminants (from backfill material associated with gravel extraction) to land (RM220578).
- 1.2 This application was lodged on 15 July 2022 when the applicant identified that a discharge permit was also needed in association with the land use consents that had been applied for on 15 June 2020, i.e.,
 - RM200488 Land use consent to disturb land and rehabilitate for the purpose of gravel extraction within the Rural 1 Zone.
 - RM200489 Land use consent to erect signage and establish access via an unformed legal road.

- 1.3 The Commissioner (in Minute No 2) deferred the processing of the land use consents (RM200488 and RM200489) until the processing of the discharge permit application (RM220578) 'catches up' to the current process, so that the Commissioner can hear evidence on the whole bundle of resource consents needed for the proposal.
- 1.4 This report has been prepared under [section 42A of the Resource Management Act 1991](#) (RMA) to assist the hearing of the application for resource consent made by CJ Industries Limited (the discharge permit s 42A report). It should be read in conjunction with the s 42A prepared for the land use consents (the s 42A report) circulated on 4 March 2022 and subsequent addendum.¹
- [04A RM200488 and ors - CJ Industries Limited - Council Agenda - s42A report recommendation - attachment 1 - 2022-03-04.pdf \(pdf 11 MB\)](#)
 - [04B RM200488 and ors - CJ Industries Limited - Council Agenda - attachments 2 to 6 - 2022-03-04.pdf \(pdf 8.3 MB\)](#)
 - For subsequent s42A addendum refer Attachment 1 to agenda item 2.1.
- 1.5 The application is considered under the RMA provisions as at the date the application was made.
- 1.6 Section 42A of the RMA allows consent authorities to require the preparation of such a report on an application for resource consents and allows the consent authority to consider the report at any hearing.
- 1.7 The purpose of the report is to assist the Panel in making a decision on the application RM220578 as part of a bundle of consents for CJ Industries Limited's proposed gravel extraction..
- 1.8 The relevant version of the RMA is the version under which the application RM220578 was made. The application was lodged on 15 July 2022, and accordingly the RMA version is:

[Resource Management Act 1991 No 69 \(as at 12 April 2022\), Public Act Contents – New Zealand Legislation](#)

Qualifications and experience

- 1.9 My name is Susanne Bernsdorf Solly, and I am employed by WSP in the role of Senior Planner. This is a position I have held for four years. Prior to this I worked for Nelson City Council for 10 years (five years as a Planner and five years as a Senior Planner), processing resource consent applications. My experience also includes 18 months of policy planning at Kaipara District Council.

¹ Links to documents held on the Council's notified applications webpage:

- [04A RM200488 and ors - CJ Industries Limited - Council Agenda - s42A report recommendation - attachment 1 - 2022-03-04.pdf \(pdf 11 MB\)](#)
- [04B RM200488 and ors - CJ Industries Limited - Council Agenda - attachments 2 to 6 - 2022-03-04.pdf \(pdf 8.3 MB\):](#)

- 1.10 I have a Diploma (five-year German degree, equivalent to a Master of Science) in Geography (Major) and Town, Regional & Traffic Planning (Minors) from the University of Technology, Dresden, Germany.
- 1.11 I have completed the Making Good Decisions course with Commissioner Certification (2012) and Chair Certification (2014, 2019). I am a Full Member of the New Zealand Planning Institute.
- 1.12 For the past 14 years my work has been in the Nelson, Tasman and Marlborough Regions and involved the processing and preparation of a large variety of resource consent application, with a focus on regional consents. I have also participated in Environment Court Mediation proceedings.
- 1.13 I have visited the site and the environs on 7 February 2022.

Expert witness code of conduct

- 1.14 I acknowledge that this is a consent authority hearing. I have read and agree to comply with the Code of Conduct for expert witnesses as set out in the [Environment Court Consolidated Practice Note 2014](#). I have also read and am familiar with the Resource Management Law Association / New Zealand Planning Institute “[Role of Expert Planning Witnesses](#)” paper. I confirm that the evidence on planning matters that I present is based on my qualifications and experience, and within my area of expertise. I am not aware of any material facts which might alter or detract from the opinions I express. I express my own view within this report and note where I have relied on information provided by others.

2 Summary of proposed activity

- 2.1 A detailed description of the proposed activity, including volunteered conditions of consent (from page 21), is contained in the resource consent application² lodged on 15 July 2022 and the further information response³ submitted on 2 September 2022, including an updated Draft Groundwater and Clean Fill Management Plan (GMP).
- 2.2 The associated activities requiring land use consents are described in RM200488 and RM200489 and the land use consents section 42A report. The activities for which land use consent was sought

² Available on the Council website, keyword search “CJ discharge”

[01A RM220578 - CJ Industries Ltd - discharge permit application and AEE - 2022-07-15.pdf \(pdf 2.6 MB\)](#)

(volunteered conditions from page xx)

[01B RM220578 - CJ Industries Ltd - discharge permit application - Annexure C Hydrogeology report 2022-07-15.pdf \(pdf 6.5 MB\)](#)

³ Available on the Council website, keyword search “CJ discharge”, or following link to the document on Council’s

webfolder: <https://tdc-nz.sharefile.com/d-se16cf91e54da43788a4000472e5623c7>

(Draft Groundwater and Clean Fill Management Plan from page 19).

include backfilling of the excavation pits. No new or additional activities are proposed; however, an additional type of consent (namely a discharge permit) is required to carry out the backfill activity.

- 2.3 The application describes the backfill as cleanfill materials that are pre-screened offsite, then brought to the site for placement into areas that have been quarried for aggregates, prior to reinstatement of subsoil and topsoil to return the land to a similar state to that which existed prior to quarrying.
- 2.4 The proposed backfill will be restricted to cleanfill material as defined under the most recent WasteMINZ guidelines⁴. The acceptable materials are listed in Table 1 of the GMP. In summary, acceptable materials are:
 - a. Uncontaminated soil, clay, rock and gravel and other inert natural materials;
 - b. Quarry overburden comprising sand, clay and other soils (but specifically excluding peats, loams, topsoils and other soils with high organic content); and
 - c. Other inert natural materials arising from quarry operations provided that the volume of biodegradable/ incidental organic matter shall not exceed 2% (I note that this is a decrease from the 10% organic material originally proposed in the land use consent applications).
- 2.5 For the avoidance of doubt, man-made materials such as concrete, asphalt, bricks etc. are excluded, as are any materials sourced from any site listed on the Tasman District Council Hazardous Activities and Industries List (HAIL) register.
- 2.6 The application states that the quality of this fill will meet “the requirements of a Class 5 Landfill under the WasteMINZ Guidelines, being the only class of landfill that the guidelines allow to be sited over aquifers used for drinking-water purposes, as is the case for this site.”
- 2.7 The applicant seeks a 17-year duration of consents to allow for:
 - a. A discharge to land to occur over 15 years (i.e., the same term as sought for the land use consents);
 - b. An additional two years of continued groundwater quality monitoring following the cessation of backfill activities.

3 Site description

- 3.1 A detailed site description is contained in the land use consents section 42A report circulated on 4 March 2022.

⁴ Waste Management Institute New Zealand (WasteMINZ) (2018): Technical Guidelines for Disposal to Land. <https://www.wasteminz.org.nz/files/Disposal%20to%20Land/Technical%20Guidelines%20for%20Disposal%20to%20Land%20Appendices%20-%2009Aug18%20-%20FINAL.pdf>

4 Status of application

4.1 The application was lodged with the Tasman District Council on 15 July 2022.

4.2 The Tasman Resource Management Plan (TRMP) zoning and overlay areas are:

TRMP Zoning: Rural 1 Zone

TRMP Areas: Land Disturbance Area 1

Other notations: Flood Hazard

4.3 The relevant TRMP rules and the resulting activity status are listed in the table below.

Activity	Applicable rules	Status
Discharge of contaminants (cleanfill) to land	The discharge of contaminants (cleanfill) is not covered under TRMP Rules 36.1.2 (permitted activities), 36.1.3 (controlled activities), 36.1.4 (restricted discretionary activities) or 36.1.6 non-complying activities. It is therefore considered under TRMP rule 36.1.5.2 Discharges to Land (Other): <i>“any discharge to land that does not comply with the conditions of rules 36.1.2.1 to 36.1.2.11 or rule 36.1.3.1 is a discretionary activity.”</i>	Discretionary under rule 36.1.5.2

4.4 There are no Plan Changes that are relevant to the proposal.

Overall activity status

4.5 The resource consents necessary for the proposed activity include land use consents RM200488 and RM200489. To consider all the relevant effects of the proposal in accordance with the principle of integrated resource management at the hearing, the application is bundled, and the most restrictive activity status is applied. The application is considered overall as a discretionary activity.

Permitted activities

4.6 A description of the relevant permitted activities is contained in the land use consents section 42A report circulated on 4 March 2022.

Existing resource consents

4.7 A number of consents to take groundwater for irrigation have been granted for the site (e.g., in 1994, 2000, 2004, 2017 and 2018). The applicant has obtained a variation to their existing water permit (RM171337V1). The variation was granted on 21 July 2022 and authorises the take and use of groundwater for irrigation and dust suppression, with a maximum dust suppression rate of 0.89

litres per second. For the avoidance of doubt, water used for dust suppression is not additional, but included within the existing allocated limit (2625 cubic metres per week).

Relevant definitions

- 4.8 Most of the relevant TRMP definitions are contained in the land use consents section 42A report circulated on 4 March 2022.
- 4.9 In addition, the following TRMP definition is relevant to this discharge permit:

Contaminant – includes any substance (including gases, liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat:

- (a) when discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or
- (b) when discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged.

- 4.10 The proposed cleanfill is considered a contaminant as it changes the physical, chemical or biological condition of the land onto which it is discharged. The applicant acknowledges that the cleanfill material has different geologic and chemical features to the material extracted. Specifically, the applicant’s hydrogeologist, Mr Nicol, states in his evidence that the proposal

“... will result in a change to the physical structure of the aquifer (i.e. changes in hydraulic conductivity) and there may be changes to the chemical and biological condition of the Peach Island aquifer at some level.”

5 Notifications and submissions

- 5.1 The following is a summary of key steps in the timeline for the discharge permit application:

Date	Process detail
15 July 2022	Application lodged
12 August 2022	Further information requested
12 August 2022	Application publicly notified
2 September 2022	Further information received
9 September 2022	Submission period closed
21 November 2022	Hearing starts

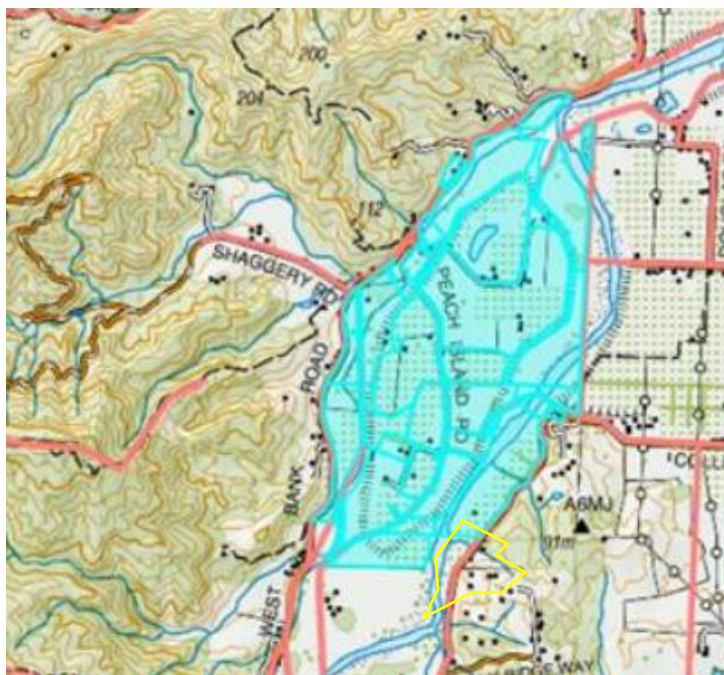
Written approvals

- 5.2 No written approvals were provided.

Notification

- 5.3 The applicant requested public notification. Notice was served on the following parties and persons:
- all of the persons who have made submissions on applications RM200488 and / or RM200489;
 - any person on the list of persons to be served notice for RM200488 and RM200489 who did not make a submission; and
 - any owner of land on Peach Island who is not already included in the above lists (the Peach Island area is shown on the map in Figure 1 below). The approximate location of the proposed quarry area is indicated in yellow.

Figure 1: Peach Island land owners that were served notice of the application



Submissions

- 5.4 A total of 57 submissions were received when the submission period closed, 3 support the application and 54 oppose the application.
- 5.5 Two additional submissions (one in opposition and one in support) were received following the close of submissions, on 13 September 2022 and 14 September respectively, bringing the total to 59 submissions, with 55 in opposition. The late submissions have been accepted by the Council under s 37 after taking into account matters of s 37A (interests of parties, interests of community in adequate assessment of proposal, and duty to avoid unreasonable delay).
- 5.6 I note that about two thirds of the submitters previously lodged a submission on RM200488 and RM200489, with 22 new submitters who submitted on this discharge permit only.

- 5.7 A summary of submissions is attached to this report (Attachment 2 to agenda item 2.2).

Comments on submissions

- 5.8 The submissions have raised the following issues specific to the discharge permit:
- a. Effects on groundwater quality
 - b. Effects on drinking water quality
 - c. Risk of contaminating Motueka River/ Motueka River Water Conservation Order (WCO)
 - d. Monitoring and compliance issues
 - e. Cultural effects
 - f. Climate change and flooding
 - g. Duration of consent
 - h. Positive effects
- 5.9 Other issues raised include noise, dust, visual and traffic effects, however, I consider that these effects relate primarily to the land use consents sought.
- 5.10 There is clearly some overlap between considerations relevant to the discharge permit and the land use consents. In order to avoid duplication, I have covered the key issues relating to effects on ground water quality, including the associated assessment against the National Policy Statement for Freshwater Management (NPS-FM) and TRMP objectives and policies, in this report.
- 5.11 The land use section 42A report circulated on 4 March 2022 and subsequent addendum addresses the following key issues:
- a. Amenity effects (noise, dust, visual effects)
 - b. Traffic Effects
 - c. Loss of productive land
 - d. Effects on flood plain and stopbank
 - e. Effects on surface water quality, Motueka River, WCO
 - f. Effects on cultural values
 - g. Duration of consent
 - h. Precedent

6 Statutory considerations - the Resource Management Act 1991

Section 104

- 6.1 A decision on these applications must be made under Sections [104](#) and [104B](#). When considering an application and any submissions received, the matters a consent authority must have regard to under Section 104 are subject to Part 2 (purpose and principles) of the RMA.

Effects – section 104(1)(a)

- 6.2 The consent authority must have regard to any actual and potential effects of the environment of allowing the activity⁵. In considering any actual and potential effects:
- a. any adverse effects that may arise from permitted activities in a national environmental standard (NES) or a plan may be disregarded⁶ (the “permitted baseline”),
 - b. any effect on a person who has given written approval to the application must be disregarded⁷.
- 6.3 The proposed activity does not include any measures to offset or compensate for any adverse effects on the environment for the purpose of ensuring positive effects on the environment (subsection (1)(ab)). While the addendum to the land use consents section 42A report identifies positive effects such as the proposed restoration planting, the applicant advised (section 4.1 of Mr Taylor’s evidence (the planning evidence) submitted on 15 July 2022) that *“these positive effects are not an offset or compensation for any specific adverse effects for the purposes of section 104(1)(ab).”*
- 6.4 “Effect” is defined under [section 3 of the RMA](#).

Permitted baseline

- 6.5 A discussion of the permitted baseline is contained in the land use consents section 42A report (sections 6.5 to 6.10) and section 15.3 of the addendum. It is my opinion, that the permitted baseline does not form a realistic comparison, because the proposal is of a scale that well exceeds the permitted extraction volumes, and other activities permitted in the Rural 1 Zone would not give rise to similar effects.

Statutory documents – Section 104(1)(b)

- 6.6 Under section 104(1)(b) of the RMA the Council must have regard to any relevant provisions of statutory documents, including national environmental standards, other regulations, national policy statements, the New Zealand coastal policy statement, regional policy statement, and plan or proposed plans. The specific relevant statutory documents are identified below.

National environmental standards

- 6.7 The following national environmental standard has been considered:

⁵ Section 104(1)(a) RMA

⁶ Section 104(2) RMA

⁷ Section 104(3) RMA, noting that there are no issues of potential trade competition effects engaged in respect of this application

(a) National Environmental Standard for Sources of Human Drinking Water 2007⁸

[Resource Management \(National Environmental Standards for Sources of Human Drinking Water\) Regulations 2007](#) ('the NES-DW')

- 6.8 The purpose of the National Environmental Standard for Sources of Human Drinking Water (NES-DW) is to reduce the risk of human drinking water sources becoming contaminated. It came into effect on 20 June 2008.
- 6.9 For the purpose of this national environmental standard, a human drinking water source is a natural water body such as a lake, river or groundwater, used to supply a community with drinking water. The standard applies to source water before it is treated and only sources used to supply human drinking water (i.e., not stock or other animals).
- 6.10 The NES-DW provisions only apply to an activity that has the potential to affect a registered drinking water supply that provides no fewer than 25 people with drinking water for not less than 60 days each calendar year (emphasis added). The drinking-water register for New Zealand was prepared annually by ESR for the Ministry of Health until 1 November 2021. It is now maintained and published by [Taumata Arowai](#).⁹ The NES-DW is currently under view by the Ministry for the Environment as a result of the Havelock North Drinking Water Enquiry because it is not seen as fit for purpose and is not really consistent with the NPS-Freshwater 2020.
- 6.11 A number of submitters have groundwater takes in proximity to the application site, however, it appears that there are no registered drinking water supplies published by Taumata Arowai in the vicinity of the site and thus, the NES-DW is not applicable. The nearest community drinking water supplies (Kaiteriteri, Parker Street, Motueka and Motueka Recreation Centre are more than 4 km from the site).
- 6.12 However, the NES-DW incorporates the following by reference: [Drinking-water Standards for New Zealand 2005 \(Revised 2018\)](#) ('the DWSNZ'). The Groundwater and Clean Fill Management Plan (GMP) submitted with the application and volunteered conditions seek to ensure that the proposed activities will not result in groundwater quality exceeding the acceptable values in the DWSNZ.

National policy statements (NPS)

- 6.13 The relevant national policy statements have been detailed in the in the land use consents section 42A report that was circulated on 4 March 2022, and subsequent addendum. The [National Policy Statement for Freshwater Management 2020](#) ('the NPS-FM') applies to all freshwater, including

⁸ Link to [Resource Management \(National Environmental Standards for Sources of Human Drinking Water\) Regulations 2007 \(SR 2007/396\) \(as at 15 November 2021\) Contents – New Zealand Legislation](#)

⁹ Link to the document (MS Word version) on the website:
<https://www.taumataarowai.govt.nz/assets/dwsnz-2005-revised-mar2019.docx>

groundwater, and is therefore particularly relevant to the discharge permit. The relevant NPS-FM provisions were detailed in the land use consents section 42A report. Further discussion of the relevant NPS-FM provisions is contained in sections 7.44 to 7.57 below.

Tasman Regional Policy Statement

- 6.14 The objectives and policies in the Tasman Regional Policy Statement (TRPS) relevant to the proposed activity are reflected in the provisions of the Tasman Resource Management Plan (TRMP).

Tasman Resource Management Plan

- 6.15 The Tasman Resource Management Plan is a unitary plan and is the relevant operative plan.
- 6.16 The plan provisions relevant to the proposed activity are included in the assessment sections.
- 6.17 None of the currently proposed TRMP plan changes are relevant to the proposal.

Other matters – section 104(1)(c)

- 6.18 The consent authority may consider any other matter the consent authority considers relevant and reasonably necessary to determine the application.

Statutory Acknowledgement Areas

- 6.19 Statutory Acknowledgement Areas have been established by the Te Tau Ihu Claims Settlement Acts.¹⁰ These acknowledgements recognise the special associations or particular relationships that the eight iwi making up Te Tau Ihu have with areas and resources, including with the coastal marine area or freshwater bodies in the region. The acknowledgement came into effect from 1 February 2015.
- 6.20 In this instance the application site is within the Motueka River Statutory Acknowledgement. The statutory acknowledgement recognises the particular relationship that Ngāti Toa Rangatira, Ngāti Rārua, Te Atiawa o Te Waka-a-Māui, Ngāti Kuia and Ngāti Tama ki Te Tau Ihu have with the Motueka River.

¹⁰ Links to the three Acts:

- [Ngāti Kōata, Ngāti Rārua, Ngāti Tama ki Te Tau Ihu, and Te Ātiawa o Te Waka-a-Māui Claims Settlement Act 2014 No 20 \(as at 12 April 2022\), Public Act Contents – New Zealand Legislation](#)
- [Ngāti Apa ki te Rā Tō, Ngāti Kuia, and Rangitāne o Wairau Claims Settlement Act 2014 No 19 \(as at 12 April 2022\), Public Act Contents – New Zealand Legislation](#)
- [Ngāti Toa Rangatira Claims Settlement Act 2014 No 17 \(as at 01 July 2022\), Public Act Contents – New Zealand Legislation](#)

Iwi Management Plans

- 6.21 Iwi management plans are lodged by Iwi authorities and received by the Council under the Resource Management Act 1991. Once lodged with the Council, they are planning documents that the Council is required to take into account, under section 104(1)(c) of the RMA. The following [Iwi management plans](#) have been lodged with the Council:
- a. Ngāti Kōata Trust Iwi Management Plan 2002
 - b. Ngāti Rārua Environmental Plan 2021
 - c. Ngāti Tama Environmental Management Plan 2018
 - d. Pakohe Management Plan 2015 Ngāti Kuia
 - e. Te Ātiawa Iwi Environmental Management Plan 2014

Other considerations under section 104

- 6.22 In regard to other considerations under other subsections, the proposed activity does not engage the section 104 considerations under the [Marine and Coastal Area \(Takatu Moana\) Act 2011](#).
- 6.23 [Section 104G](#) of the RMA (consideration of activities affecting drinking water supply source water) was inserted into the RMA on 15 November 2021. As noted under Section 6.11 of this report, there are no registered drinking water supplies in the vicinity of the site, however, effects on groundwater and drinking water quality are assessed in this report.

Section 105 - Matters relevant to certain applications

- 6.24 As this application is for a discharge permit,¹¹ under [section 105](#) of the RMA, the consent authority must, in addition to the matters in section 104(1), have regard to—
- (a) *the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and*
 - (b) *the applicant's reasons for the proposed choice; and*
 - (c) *any possible alternative methods of discharge, including discharge into any other receiving environment.*

Section 107 – Restrictions on certain discharges

- 6.25 The proposed activity involves a permit to do something that would otherwise contravene section 15 or section 15A, and in this case allowing the discharge of a contaminant or water into water¹² / onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water.

¹¹ Specifically, "to do something that would contravene [section 15](#) or [section 15B](#)"

¹² [Section 107\(1\)\(a\) RMA](#)

6.26 Unless the discharge of contaminants falls under specific exceptions, a consent authority must not grant the resource consent under the following circumstances:

if, after reasonable mixing, the contaminant or water discharged (either by itself or in combination with the same, similar, or other contaminants or water), is likely to give rise to all or any of the following effects in the receiving waters:

- (c) *the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;*
- (d) *any conspicuous change in the colour or visual clarity;*
- (e) *any emission of objectionable odour;*
- (f) *the rendering of fresh water unsuitable for consumption by farm animals;*
- (g) *any significant adverse effects on aquatic life.*

6.27 A consent authority may include conditions requiring the holder of the permit to undertake such works in such stages throughout the term of the permit as will ensure that upon the expiry of the permit the holder can meet the requirements of section 107(1) above, and of any relevant regional rules

6.28 I am satisfied that the proposal will not result in the effects identified under s107(1)(c) to (g) with regards to surface water as detailed in the respective section in the s42A report and addendum.

6.29 In terms of groundwater, the applicant (in their discharge permit application) states: *“there is no suggestion in the advice of Mr Nicol that the effects identified in section 107 may occur.”* As detailed earlier in this report, I consider that there is a low likelihood of (accidental) contamination occurring. Subject to appropriate conditions of consent (including strict compliance with the GMP) and adequate trigger levels being agreed upon to ensure that the existing ground water quality is maintained, I consider that they are unlikely to give rise to the matter in s 107(1)(c)-(g).

6.30 The application is not applying to discharge contaminants to water, only to land, and they are unlikely to give rise to any of the matters in s 107(1)(c)-(g).

7 Assessment of effects

7.1 I have structured my assessment starting with an effects overview, issues raised by the submitters, and outline of the mitigation measures and further information received since preparing the land use consents section 42A report. The following sections assess effects on downgradient waterways and groundwater users and identify the issues that are still in contention.

Effects overview

7.2 Potential adverse effects on ground water quality associated with the proposal could arise from accidental spills, potentially contaminated backfill material, and excavations below ground water level.

- 7.3 The applicant’s hydrogeologist, Mr Nicol confirmed that the two key areas of concern with regards to groundwater quality are:
- Exposure of groundwater within open aggregate excavation pits.
 - Groundwater inundation of fill material in backfilled pits, mobilising contaminants.
- 7.4 In addition to the above, the Council’s Consultant Groundwater Hydrologist, Dr Helen Rutter, who reviewed the discharge permit application and associated documents, identified the following potential issues in her preliminary technical review (attached in Attachment 3 to this agenda item 2.2):
- Leaching of contamination from any fill, not just inundated material.
 - Risks of accepting non-cleanfill material at the site.
 - Risks from fuel spills/hydraulic hose breaks.
- 7.5 The potentially affected receiving environment consists of downgradient groundwater users and downgradient waterways (i.e., Motueka River, Shaggery Stream) through groundwater-surface water interaction. These are assessed in more detail below.

Submissions

- 7.6 The submission on the land use consents (RM200488 and RM200489), which raised concerns regarding ground water quality, are referred to in Sections 12.14 to 12.20 of the land use consents section 42A report. A summary of submissions and issues raised is attached to that report.
- 7.7 The submissions received in response to the notification of the discharge permit are available on the Council’s website¹³ and a summary of the submissions attached as Attachment 2 to this agenda item 2.2. I note that the submissions raise similar issues to those previously received and no new issues have been identified. Common submission themes are noted in section 5.8 and Attachment 2.

Mitigation measures and further information received

- 7.8 Since the land use consents section 42A report was circulated on 4 March 2022, the following information has been provided by the applicant:
- 7.9 Evidence of Mr Nicol (the groundwater evidence), 15 July 2022
- 7.10 Application for a resource consent to discharge contaminants to land, lodged 15 July 2022, accompanied by:

¹³ See www.tasman.govt.nz, keyword search “CJ discharge”, or available via the Council’s webfolder: <https://tdc-nz.sharefile.com/d-s3baf515647c9400884205c060fd5762d>
[link valid six months, anyone can use]

- 7.11 Hydrogeology report prepared by Mr Nicol
- 7.12 Draft Groundwater and Cleanfill Management Plan (GMP), July 2022
- 7.13 Further information response, received 2 September 2022, including:
- updated Draft GMP, September 2022
- 7.14 The key mitigation measure proposed by the applicant are the implementation of a GMP, which seeks to ensure that excavations do not expose groundwater by maintaining a vertical separation between the quarry floor and groundwater; and contains fill quality controls for backfill material to ensure it meets the definition of cleanfill as per the WasteMINZ guidelines. The GMP also details groundwater level monitoring controls, responses and mitigation to a spill, groundwater quality monitoring and reporting.
- 7.15 Mr Nicol also recommends that quarrying should commence at locations at the greatest upgradient distance from any water supply bores, as far as can be practically achieved. I note that the area with the greatest upstream distance is Stage 1, however, the applicant now proposes to excavate Stages 2 and 3 first to allow the proposed mitigation planting to provide sufficient screening of the Stage 1 area (refer to s 42A report addendum).

Groundwater levels

- 7.16 In summary, as per the methodology proposed in the GMP the applicant seeks to avoid exposure of groundwater by maintaining the following vertical separations (as detailed in Table 2 of the latest GMP). All excavations to depths between 1 m and 0.3 m above groundwater level will be undertaken during 'stable' weather conditions¹⁴.

¹⁴ A definition of 'stable weather conditions' is included in the applicant's further information response received 2 September 2022.

Table 2: Summary of fill placement / excavation methodology				
Depth range	Type of fill	Time constraint	Other constraints	Groundwater occurrence check ²
Ground surface to 1 m above groundwater level ¹	Clean fill material ³	No constraint as long as groundwater level is at least 1 m below working depth ⁴	Area of excavation controlled by volume of available fill material to back fill to at least 1 m above groundwater level	Temporary test pit/excavation below base of working depth that does not encounter groundwater within 1 m of working depth.
1 m to 0.3 m above groundwater level	Clean fill material ³	Backfilled on same day as extraction of material	Area of excavation controlled by volume of fill material available to back fill to at least 1 m above groundwater level	Temporary, test pit/excavation that encounters groundwater within 1 m of working depth.
0.3 m above groundwater level to groundwater level	Material removed from this depth range	Backfilled within 30 minutes	Small scale temporary, test pit	
<p>Notes:</p> <ol style="list-style-type: none"> ¹Taking into account site restoration requirements. ²Physical groundwater checks within an excavation to be undertaken in addition to assessment from groundwater level data/groundwater contours from onsite piezometers. ³Natural clean fill material defined in Table 2. ⁴Working depth defined as the elevation of the base of an excavation on that particular day. 				

7.17 To achieve the above separation distances, groundwater levels will be monitored via a telemetry system using monitoring bores on the periphery of the area. The Council’s Consultant Groundwater Hydrologist queried the feasibility of this approach and raised concerns that *“interpolating between these bores will not allow for any variability across the site.”* In their further information response, the applicant therefore added an operational check by proposing to excavate a small scale, temporary test pit to 1 m below the intended excavation depth each day to determine the groundwater level. Dr Rutter notes in her review of the applicant’s further information response (attached in Attachment 3 to this agenda item 2.2) that *“this appears to be a practical way to assess depth to groundwater at a specific location.”*

7.18 However, Dr Rutter questions *“how much cleanfill would be required to backfill to at least 1m above groundwater level on a daily basis, and whether this is realistic operationally,”* in particular if groundwater levels continue to rise over a prolonged period of time. She states: *“it may be better*

to have a base level to quarry to, which is a much more standard approach compared to other quarrying/filling operations.”

Fill quality

7.19 The potential adverse effects resulting from groundwater inundation of fill material, which can mobilise contaminants, and potential leaching from any fill, are proposed to be addressed by implementing the fill quality controls detailed in the GMP. Dr Rutter highlights that fill quality poses *“the highest risk to groundwater quality from the proposed activities.”*

7.20 With regards to fill quality, Dr Rutter notes that:

“the proposed activities could increase the risk to groundwater resources by bringing quarrying activities closer to standing groundwater, placing backfill material within groundwater, and exposing groundwater to other contaminant sources. The applicant recognises the importance of this and states that control over the quality of this fill will enable the proposed activity to meet the requirements of a Class 5 Landfill under the WasteMINZ Guidelines, being the only class of landfill that the guidelines allow to be sited over aquifers used for drinking-water purposes. As a result, I consider that proposed conditions must include stringent requirements regarding the quality of fill and testing required.”

7.21 Conditions regarding acceptable fill material are included in the recommended conditions of consent attached to my s 42A report addendum. It is acknowledged that the applicant proposes to undertake random chemical testing of imported cleanfill compliant with WasteMINZ guidelines (i.e., 1 per 500 m³) and random yearly testing of deposited material. Provided that the fill acceptance criteria listed in Table 1 of the GMP are complied with, Dr Rutter concludes that *“there should be limited effect on groundwater.”*

Risk from accidental spills

7.22 In terms of risks from accidental spills, the applicant clarified that no machinery will be operating within open excavations. The volunteered conditions regarding refuelling and spill management (including recommended amendments/ additions as per my s 42A report addendum) are considered appropriate to mitigate the risk of groundwater contamination from any accidental spills

Effects on downgradient waterways

7.23 Mr Nicol acknowledges a strong relationship between shallow groundwater and the Motueka River:

“Therefore, the Motueka River is considered to be a receptor of any groundwater effects associated with the proposed quarry activity, mostly as a result of groundwater chemistry changes. However, any water quality effects associated with the proposed quarry on water

quality in the Motueka River via groundwater are expected to be minimal due to significant dilution effects from much higher flows in the river compared to the shallow aquifer."

7.24 Similarly, effects on Shaggery Stream as a potential receptor have been assessed. Dr Rutter states:

"Based on the information provided, any contamination, should it occur and reach the Motueka River, would be diluted by the flow in the river. It appears that Shaggery Stream is elevated above groundwater levels at the location of the site and would be losing rather than gaining in this area: therefore, it would be unlikely to be affected by activities at this site."

7.25 I accept and adopt these assessments and am therefore satisfied that any effects on surface waterways through groundwater-surface water interaction are less than minor.

Effects on downgradient groundwater users

7.26 Mr Nicol's evidence states that, based on information from the Council, there are 20 bores in the Peach Island area, 16 of which are located downgradient from the application site. These bores are shown on Figure 7 of Mr Nicol's evidence. I note that there may be other old or permitted bores for which THE COUNCIL has no record. Because of this, it was assumed (for notification purposes) that everyone on Peach Island uses a bore and thus, notice was served on all Peach Island landowners (refer to section 5.3 and Figure 1 above). The closest bore used for drinking water that is not owned by the applicant is located about 88m downgradient on 131 Peach Island Road (bore #24135).

7.27 With regards to effects on downgradient groundwater users, Mr Nicol states in his evidence:

"provided that the requirements of the GMP are met, the level of change in the aquifer will not be expected to cause adverse effects on groundwater resources at Peach Island. Any change would most likely be subtle differences in the concentrations of common cations and anions that would not be noticeable to people who use the aquifer for drinking-water supply purposes."

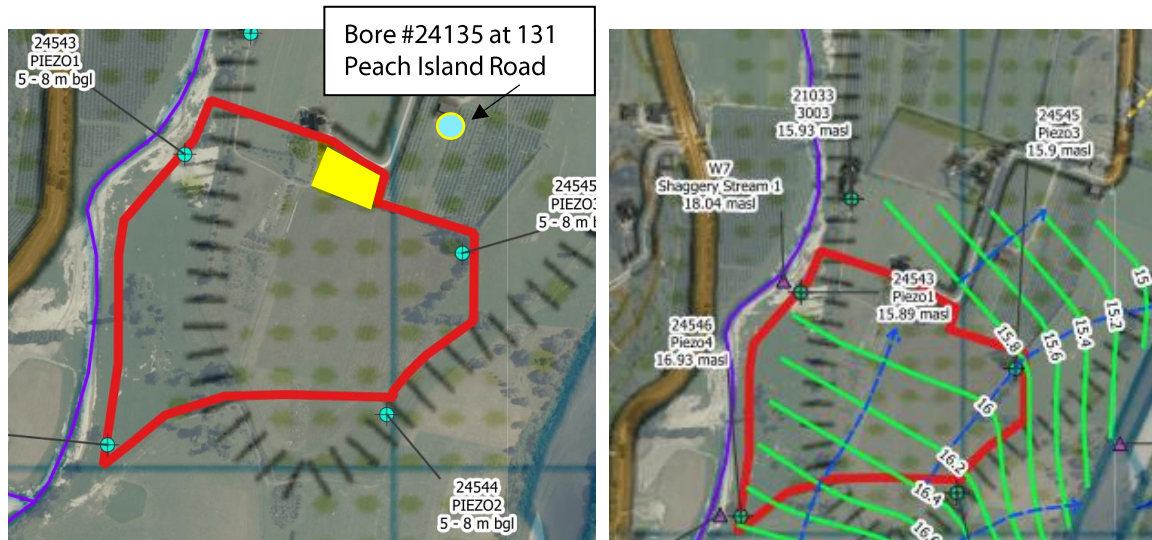
7.28 In addition to the groundwater level monitoring, fill quality and spill controls described earlier, the applicant proposes to undertake groundwater quality monitoring *"to assess any changes in groundwater quality as a result of the proposed quarry activities."* The proposed monitoring regime is summarised and assessed in the following section.

Monitoring

7.29 In order to establish background water quality, the applicant proposes to take two samples (from one upstream and two downstream dedicated monitoring bores), 3 months apart, prior to works commencing. The location of the dedicated monitoring bores is shown in Figure 1 of the GMP. Dr Rutter states: *"I do not consider two samples to be sufficient to characterise background quality."* The Council's Senior Resource Scientist, Joseph Thomas, previously advised that a minimum of three samples (at least two weeks apart) need to be taken prior to commencement of any works to establish background levels.

7.30 The three onsite dedicated monitoring bores will be sampled 3-monthly for the duration of the consent and sampling will continue until two years after quarrying and backfill activities cease. The applicant’s further information response received 2 September 2022 states that the two downgradient monitoring bores are located closer to the quarry boundary than downgradient bores used for drinking water supply. However, given the indicative ground water flow direction, it appears that when quarrying the northernmost area of Stage 2 (shaded yellow below), the closest downgradient bore would be at 131 Peach Island Road.

Figure 2: Downstream bores and ground water flow direction



Downstream monitoring bores (excerpt from Figure 4 of Mr Nicol’s evidence)

Indicative groundwater flow direction (excerpt from Figure 3 of Mr Nicol’s evidence)

7.31 The three-monthly samples will be analysed for the parameters listed in Table 3 of the GMP. Table 3 also includes proposed trigger levels, which are based on 50 % of the maximum acceptable values (MAVs) in the DWSNZ. Dr Rutter notes:

“There is a question as to whether these should be lower as they could allow degradation of water quality before a trigger was reached. The applicant has said that this is not the case, but that the values are a bottom line against which water quality can be measured.”

7.32 According to the GMP, an exceedance of the trigger level is deemed to have occurred if:

- (a) The concentration of a contaminant in at least one of the downgradient bores exceeds the trigger levels in Table 3 and the concentration of the same contaminant in the upgradient bore is below the Table 3 trigger levels; or
- (b) The concentration of a contaminant in the upgradient bore exceeds the trigger levels in Table 3 and the concentration of the same contaminant in at least one of the downgradient bores is greater than concentration in the upgradient bore and is greater than 20% of the Table 3 trigger levels.

7.33 Dr Rutter comments:

"This could result in upgradient bores exceeding the trigger level by a small amount but downgradient bores being significantly over the trigger. It could also end up with the situation that there is an obvious impact from filling activities, but the determinants all fall below the trigger levels."

7.34 If there is an exceedance of trigger levels as determined by section 7.32 (a) or (b) above, the applicant proposes to:

- a. Obtain and analyse a second sample from the bore(s) with exceedance(s).
- b. Obtain and analyse a sample of groundwater from the upgradient bore.
- c. If the second sample(s) do not exceed trigger levels, continue 3-monthly sampling.
- d. If the second sample(s) exceed trigger levels, *"and can be linked to quarrying activities following an investigation to determine the source of the change in concentration(s)"*:
 - Notify the Council.
 - Investigate potential cause(s) of the exceedance.
 - Implement measures, such as cessation of activities that may have caused the exceedance, removal of the contaminant source(s).

7.35 The GMP also states that groundwater samples shall be collected from up to three downgradient water supply bores within 500 m of the quarry, subject to approval of the bore / landowner. However, this is considered unlawful as it requires a third-party approval. This is a voluntary measure that the applicant may pursue but should not be relied on as part of the monitoring regime.

7.36 The applicant's further information response states:

"if the results of samples collected from downgradient water supply bores show an exceedance of the trigger levels in Table 3 of the GMP and the adverse change is proven to be from quarrying activities, then the Quarry Operator will provide an alternative drinking water source."

7.37 As noted in my s 42A report, monitoring is a 'backstop' that would capture changes/ effects after they arise, and Mr Nicol agrees with this. Dr Rutter concurs: *"monitoring will not prevent contamination but will just identify that it has happened. Once contamination has occurred, it will not be simple to remediate it."*

7.38 With regards to the proposed trigger level regime, Dr Rutter notes the following:

- *If an adverse change is detected, I would suggest resampling of all the monitoring bores, not just the one where the change was detected and the upgradient bore.*
- *In terms of actions if any adverse changes are identified in a down-gradient monitoring bore, it should be assumed to be due to quarrying/filling activities [...] It is not acceptable to wait until an investigation determines that the change was due to quarrying activities to put in place the proposed actions. [...] it cannot be expected that*

property owners would have to deal with contaminated drinking water whilst the quarry operator investigates what might have caused it.

- *While it is accepted that such adverse event is not anticipated, it is also very much accepted that contaminated material does make its way into cleanfill operations, and this is an outcome that could realistically occur.*
- *Monitoring and the response to monitoring results should be sufficiently robust to remediate any adverse impacts should they occur.*

Ground water quality effects conclusion

7.39 As noted above, there is agreement regarding acceptable fill material (including random chemical testing of imported cleanfill) and compliance with WasteMINZ guidelines. The risk from accidental spills can be appropriately managed with conditions of consent and any effects on downgradient surface waterways are expected to be minimal. There is also agreement that monitoring should continue for two years following completion.

7.40 Dr Rutter summarises:

“the proposed activities would allow excavation and placement of fill in the zone of water table fluctuation. This would increase the risk of potential contaminants leaching from any placed fill. Assuming there were no contamination issues caused by spills, and there was strict adherence to waste acceptance criteria and no mistakes in terms of fill quality accepted, there should be limited effect on groundwater. However, if there were to be an adverse effect on groundwater, it is not possible to say exactly how far impacts might propagate and there needs to be adequate protection of down-gradient users, and mitigation provided, in the case that there was an incident.”

7.41 I concur with this and share Dr Rutter’s concerns regarding trigger levels, monitoring and the proposed response to potential exceedances. Whilst I consider that the proposed cleanfill management system detailed in Section 4 of the GMP is robust, it cannot be assumed that it completely prevents contaminated material making its way into the site by accident and I note that contaminated material has been found at cleanfill sites before.

7.42 In my opinion, there remains a realistic remnant risk of contamination issues arising. This can be reduced by more robust testing and monitoring, but not completely eliminated. Provided appropriate trigger levels, controls and responses can be put in place, then the decision comes down to the acceptable level of risk. The concept of risk is defined as a combination of the consequences of an event and the associated likelihood of occurrence. In this instance, the likelihood of occurrence is considered low, given the measures detailed in the GMP. However, the consequences are considered very high, because once contamination of the aquifer has occurred, it could have widespread and long-lasting impacts that are not easily remediated.

Outstanding matters or matters of contention

7.43 The matters that are still outstanding or in contention are limited to the following:

- a. It is not clear how the applicant will manage the site to prevent inundation of the quarry floor during more prolonged periods of groundwater level rise.
- b. There are still concerns about the water quality trigger levels proposed as they could result in significant deterioration of water quality before a trigger is reached.
- c. 50 % of MAV is not adequate as a trigger.
- d. The proposed trigger levels are based on drinking water standards but are not necessarily consistent with the NPS-FM and Te Mana o te Wai (refer to NPS-FM assessment below).
- e. There is insufficient information on the current state of groundwater quality/ background levels, and it is therefore unclear if the proposed trigger levels would maintain or degrade the current state.
- f. If contamination is observed through sampling, then the response to this needs to be more robust.

Relevant TRMP and NPS-FM objectives and policies

- 7.44 The TRMP needs to give effect to the NPS-FM and the relevant TRMP objectives and policies are summarised in Appendix B of the s 42A report circulated on 4 March 2022. Specific mandatory NPS-FM requirements for immediate insertion have already been incorporated into the TRMP (refer to policy 27.1.3.1A).
- 7.45 As noted in section 6.13, the relevant NPS-FM provisions were detailed in the land use consents section 42A report and are not repeated here. With regards to Policy 7 and clause 3.24 of the NPS-FM, relating to the loss of river extent and values, Mr Taylor notes in section 3.96 of his planning evidence that this was intended to apply to riverbeds only and that respective amendments to the NPS-FM are proposed. This is acknowledged.
- 7.46 As detailed in the surface water effects section of the s 42A addendum, the proposal will not have direct effects on surface water quality and the effects of dust, sediment and erosion can be appropriately managed with conditions of consent so as not to adversely affect surface water quality.
- 7.47 In terms of indirect effect on surface water via groundwater, any adverse water quality effects on downgradient surface water ways, including the Motueka River, are considered to be negligible due to significant dilution effects (as detailed in sections 7.23 to 7.25 above). I am therefore satisfied that the proposal is consistent with Policies 7 and 8 of the NPS-FM and the relevant TRMP objectives and policies regarding surface water quality.
- 7.48 Consideration of Māori freshwater values is provided in the cultural effects section of the s 42A addendum. While I am not able to reach a conclusion without a cultural impact assessment, I acknowledge that the applicant has endeavoured to identify and provide for Māori freshwater values in accordance with Policy 2 of the NPS-FM.
- 7.49 As noted earlier in this report, Dr Rutter advised that the suggested trigger levels are based on the DWSNZ and not consistent with the NPS-FM, e.g., the NPS-FM bottom line for nitrate-N is 2.3 mg/l, while the proposed trigger level in Table 3 of the GMP is 5.3 mg/l.

7.50 Dr Rutter also provides the following example in her review of the applicant’s further information response (refer to Attachment 3 to this agenda item 2.2):

“if upgradient nitrate is 1 mg/l but downgradient nitrate is 5 mg/l: this would not trigger any response, but could be detrimental to achieving the required environmental outcomes of the NPS-FM.”

7.51 Furthermore, given the insufficient information regarding the current state of groundwater quality/ background levels, it is unclear if the proposed trigger levels would maintain - as opposed to degrade - the current state as required by the NPS-FM. Similarly, TRMP Objective 33.1.2.1 seeks to maintain existing water quality.

7.52 Whilst Mr Nicol states that any effects on drinking water supplies would not be noticeable, Dr Rutter raised concerns that the proposed trigger levels could result in significant deterioration of water quality before a trigger is reached and states that adequate protection of down-gradient users and a more robust response is required in case of an incident/ trigger level exceedance.

7.53 Given the assessment above, I consider that the applicant has not clearly demonstrated that the proposed works give effect to Te Mana o te Wai (Policy 1, NPS-FM). The concept of Te Mana o te Wai refers to the fundamental importance of water and the hierarchy of obligations that priorities the health of the water and ecosystem first, then the health of the people (e.g., taking groundwater for drinking water purposes), and then people’s cultural, social and economic wellbeing, as provided for in the Objective of the NPS-FM.

7.54 Council is currently on a journey with iwi and the community to determine the details and implementation of Te Mana o te Wai. We are having to make consent decisions without this input, however the TRMP has examined some of the uses and values for specific water bodies within schedule 30A. Section 14 of schedule 30A refers to the Motueka River and catchment (see Figure 3 below).

Figure 3: Motueka River and catchment uses and values (excerpt from [TRMP Chapter 30](#))

(14) Motueka River and its tributaries including the Wangapeka, Motupiko, Baton and Pearse rivers	Instream Uses and Values	
	<ul style="list-style-type: none"> • Refer to Water Conservation (Motueka River) Order 2004) • Trout fishery of national significance in the Wangapeka and Motueka Rivers below its confluence with the Wangapeka River. • Native fisheries including eel habitat and aquatic ecosystem, including, regionally significant trout spawning habitat in the east bank tributaries of the Motueka River, and regionally significant native fish habitat in Motupiko River. • Whitebait spawning habitat in coastal streams. • Braided river habitat for threatened banded dotterel in the Motueka River. • Contact and non-contact recreation, including kayaking. • Cultural, spiritual and landscape values. • Internationally significant karst values in the Baton River. • Threatened black-fronted tern nesting sites in Motueka River from Tapawera (about E2495080 N5978700) to its confluence with the Wangapeka River. 	<ul style="list-style-type: none"> • Protection of instream values particularly trout and native fisheries values. • Protection of cultural, spiritual and landscape values. • Maintenance of water flows consistent with the Water Conservation (Motueka River) Order 2004.

WATER BODY USES AND VALUES		
Water Body	Values/Uses Adversely Affected by Reduced Flows or Levels	Water Management Objectives for Water Quantity
	<ul style="list-style-type: none"> Threatened black-billed gull nesting sites between the Wangapeka confluence and Kohatu. Wildlife habitat, including for threatened blue ducks in the Upper Motueka, Baton, Upper Wangapeka and Rolling rivers and tributaries of the Rolling River upstream of E2474980 N5973525. 	
	Other Uses and Values	
	<ul style="list-style-type: none"> Human consumption. Irrigation including for food production. Community water supply. Stock and farm water supply. Industrial supply. Small scale hydroelectric power generation Alluvial gold resources in parts of the Baton, Ellis, Wangapeka, Sherry and Tadmor Rivers. 	<ul style="list-style-type: none"> Maintenance and improvement of users' security of supply to acceptable levels. Maintenance of minimum flows for stock and domestic water supplies.

- 7.55 This is also informed by the aforementioned Statutory Acknowledgement (section 6.19) and the iwi management plans.
- 7.56 I note that implementing the principles of Te Mana o te Wai covers a wider scope than simply the management of potential contaminants “up to” a standard, guideline, or environmental bottom line (e.g., compliance with the DWSNZ) and that, as a minimum, the current state of groundwater quality needs to be maintained. It is not clear that the current proposed conditions of consent maintain the existing water quality.
- 7.57 In conclusion, the proposal could only be considered consistent with the NPS-FW if the applicant can clearly demonstrate that the works can be managed in a way that maintains existing water quality (TRMP Objective33.1.2.1), gives effect to Te Mana o te Wai (NPS-FM Policy 1) and ensures that people’s drinking water supplies are not adversely affected (NPS-FM Objective 1 and TMRP Policy 5.1.3.9). This is for the applicant to address.

8 Part 2 Resource Management Act 1991

- 8.1 An updated brief assessment against Part 2 is contained in the s 42A addendum (Attachment 1 to agenda item 2.1). This covers potential inconsistencies with Part 2 matters that I had previously identified in the land use consents section 42A report, except for:

The maintenance and enhancement of the quality of the environment, in particular with regards to groundwater quality (refer to section 16.1(c) of the s 42A addendum).

- 8.2 As noted earlier in this report, the proposed trigger levels exceed the NPS-FM bottom line for nitrate-N and it is uncertain if the trigger levels would maintain or degrade the existing quality of the environment in terms of ground water quality. Based on this, I consider that the proposal is not consistent with section 7(f) of the RMA *maintenance and enhancement of the quality of the environment*.

9 Summary of key issues and recommendations

- 9.1 The application for a discharge permit is a discretionary activity under the TRMP so the consent authority must consider the application in accordance with sections 104 and 104B of the Resource Management Act 1991.
- 9.2 This assessment and conclusion is based on an assessment of the application material, submission received, and technical comment received from Council officers. I retain an open mind to the further evidence yet to be received during this process
- 9.3 At this point in time, I am unable to recommend that consent for the entire site is granted. This opinion is based on the information provided to date, and I retain an open mind to subsequent evidence. My particular concerns relate to the uncertainty that the proposal will maintain existing ground water quality, the inadequacy of trigger levels, monitoring and the applicant's proposed response to potential exceedances
- 9.4 In my opinion, the applicant has not clearly demonstrated to date that the works can be managed in a way that gives effect to Te Mana o te Wai (NPS-FM Policy 1) and ensures that people's drinking water supplies are not adversely affected (NPS-FM Objective 1).
- 9.5 I note that in my s 42A report and associated addendum I concluded in principle that it is open to the Commissioner, after hearing the evidence from all parties, to grant the land use consents for Stage 1 subject to appropriate conditions of consent. Whilst the concerns raised in this report relate to all stages, I note that Stage 1 has 70 m to 180 m more separation distance to the nearest downgradient bores used for drinking water supply than Stage 2, with two downgradient monitoring bores between the quarry and drinking water bores. Subject to adequate trigger levels being agreed upon, I would therefore be able to recommend that consent for Stage 1 is granted.
- 9.6 Notwithstanding the above, draft recommended conditions for the proposed land use consents and discharge permit are attached to the RM200488 and its land use consents s 42A report addendum. These are a starting point to help the Commissioner consider the form of conditions appropriate to any resource consent, if they are minded to grant consent, on the basis of subsequent evidence addressing the above concerns to their satisfaction. For the avoidance of doubt, the conditions apply to all three extraction stages.

[this page blank]

Peach Island – Review of submissions on discharge application

Submission number	Name and address	Position	Issues	Wish to be heard
1	Vicki and Justin Walker 130 Peach Island Rd	Oppose Refuse	Effects on groundwater cannot be mitigated – detrimental to surrounding bore owners Inconsistencies re backfill No independent third-party monitoring requirement No way to remediate contaminated drinking water Allows for change in drinking water standards - unacceptable	No
2	Helen Forsey 24 Mickell Road, Motueka	Oppose Refuse	Restoration of Lower Motueka Catchment is a significant community focus. Consenting contaminated discharge goes against community goals CJs history of discharging contaminated items Contaminated backfill will affect whole township via river and groundwater Precedent for other CJs-owned sites nearby	Yes
3	C and G LeFrantz	Oppose Refuse	Bore is 150 m from sites 2 and 3. Contaminants will impact quality of water and health Impossible to remediate	Yes
4	Manuka Farm Ltd	Oppose Refuse	Backfilling – decision should not permit backfilling unless proposed fill has been properly biologically tested and is certified to be nontoxic.	No
5	Ross Huff and Ingrid Losch	Oppose Refuse	Backfill may result in contaminant discharge affecting Motueka River quality. Contaminants may continue to discharge for many years. Effects on water quality/ drinking water.	No
6	Frances Forsey 68 Trewavas St, Motueka	Oppose Refuse	Gravel extraction and backfilling will affect water quality, river is valued for recreation. Climate change will result in more extreme weather events = more contaminants being swept into river	No
7	Trevor Howie 133 Motueka Valley Highway	Oppose Refuse	Disturbance of natural filtration of underground water from Motueka Valley to huge aquifer that town and food producers rely on Dumping contaminated foreign material in a flood prone area – in West Coast flood contaminated landfill was strewn from its source all the way to the sea	Yes
8	Helen Mayhew 78 Tudor St Motueka	Oppose Refuse	Contaminants entering river What are the contaminants?	No
9	Darien Beckett PO Box 25 Motueka	Oppose Refuse	Ensure region’s water asset is protected for future generations Risk of contaminating Motueka River water from introduced fill Monitoring by TDC needs to be robust - Self monitoring not acceptable, independent monitoring needed Motueka River – WCO, aquifer supply for Motueka Who will monitor minimum gravel depth and groundwater levels?	No

10	Ashley Hodder 380 Motueka River West Bank Road	Oppose Refuse	<p>Rural 1 land – should not have any other type of use Adding contaminants to a fragile soil structure and volatile water table level. Flooding means extraction not viable for long periods after heavy rain Permeable soils, climate change = leaching into groundwater No mention of polluting dust from proposed quarry. Stop banks are not sufficient, are failing</p> <p>If granted - require that backfill is pre-screened. - do not allow wet fill onsite - conditions would allow storage of untested backfill on quarry site Visual or olfactory evidence of contamination should mean rejection not testing/allowed on site</p> <p>Concerned about how CJs will monitor speed limits on access road and main highway and environmental tests If well contaminated how will CJs remediate? Need a bond in the 100s of thousands</p>	No
11	Paul Dixon Didier 3 Wilkinson St Motueka	Oppose Refuse	<p>Risk of groundwater and surface water contamination from organic and inorganic fill, inability of applicant to control, harm to environment, drinking water, irrigation water Risk of site wide contamination from general industrial operations (heavy machinery, hydrocarbons, engine coolant leakage) Self-monitoring ineffective/ compliance issues Monitoring 1 in 50 truckloads not adequate Effectiveness of approach to extraction between 1 m and 0.3 m from groundwater uncertain due to climate change, complex aquifer structure, quality testing limited to downgradient bores, site operations dependent on availability of heavy machinery and suitably qualified and inducted people who may not be available. River is a taonga / WCO</p>	Not stated
12	Patricia M Harris-Virgin Motueka	Oppose Refuse	<p>We have a well servicing 5 families at Woodman Corner Accidents are inevitable when river floods, inexperienced operators at the site, no independent person monitoring the fill Effects on groundwater</p>	Yes

			If granted, independent person to check fill, no truck and trailer before 7 am, independent person to be responsible for noise and dust complaints.	
13	Diane Harris 34 Naumai St Motueka	Oppose Refuse	Has a house in Motueka Valley looking down on quarry Contamination – relies on Motueka River for drinking water from well at Woodman’s Corner WCO could be affected Potential for non-compliance, poor track record	No
14	Joanne Taylor 73A Greenwood St, Motueka	Oppose Refuse	No to contaminants entering our water	No
15	Ian Taylor 3 Kuini St, Motueka	Oppose Refuse	No to contaminants entering our water	No
16	Lesley Hadley	Oppose	Quality and quantity of backfill Compliance Monitoring and enforcement Large areas of gravel extraction demand large quantities of backfill, degrading the river flats, river and environment. Term of consent too long	No
17	Zara Anne Mae	Oppose Refuse	Depth of extraction – unusual to extract to 0.3m above water table. Groundwater levels are variable and uncertain. High risk of contamination of drinking water. Effective surveillance to ensure 24/7 compliance? Quality of cleanfill – how do they separate good from bad with confidence? Compliance record	No
18	Josephine Tucker	Oppose Refuse	Farm at 411 Motueka Valley Highway and 749 West Bank Road – 40 ha Long term Plan for Tasman Reinstatement of subsoil – subsoil development process is unique, linked to past geological processes etc. Difficult to reinstate same. Infill creates less stable land. In floods, infill instability means damage, sedimentation. Could affect coast and major state highway bridge Photo in application of 1 in 50-year flooding event does not show a similar state in terms of infill or weather. Term is too long Climate change	Yes

19	Maxwell Clark and Lynette Rombouts 300 Motueka River West Bank Road	Oppose Refuse	Section 42A report says backfill quality crucial – no confidence that site manager will examine and approve every truck load. No control over backfill delivered by contractors Contractors will take shortest route to the site, not controlled by resource consents, may go through Brooklyn, dangerous for cyclists and local residents.	Yes
20	Kent Chamberlain 51 Stony Ridge Way Motueka	Oppose Refuse	Non-compliance, Douglas Rd Noise, visual, traffic effects, effects on use of river If consent granted, needs independent monitoring, no work before 9 am or after 5 pm, no quarrying in flood zone	No
21	Mark Hewetson	Support Grant	Proposal is an essential part of the other applications Initiative is an essential service for sustainable infrastructure development in the region including civil, business, residential	No
22	Jean-Luc Aziz 51 Stony Ridge Way Motueka	Oppose Refuse	Zone does not allow industrial activities Poor compliance record – toxic waste from Mapua FCC disappeared from Douglas Rd site Climate change means more flooding, contaminants washed into environment Erosion of riverbank Sedimentation of river mouth Climate change accelerating causing more flooding in region—allowing industrial quarry on riverbank nonsensical, should move heavy industries away from waterways for safety and conservation of environment If granted, regular and independent monitoring by government agency Closure of site if contaminants over the allowed limit Donation to native bush projects Land to be returned to better state	No
23	Arthur Woodcock, Derek Woodcock, Shaggery Holdings Ltd	Oppose Refuse	Application site is subject to flooding Vehicle speeds Conditions will not be complied with – compliance history	Yes
24	Ian Barnes, Margie Swaison	Oppose Refuse	Contaminants will enter river system and Tasman Bay – will cause decline of fishery Stockpiles will mean sediment entering Tasman Bay	No

	113 Peach Island Rd		Household water supply is downstream from extraction site. CJs will not comply For long periods in winter water table is very high, extracting gravel and backfilling deep holes is problematic	
25	Alvin and Jean Williams	Oppose Refuse	Do not quarry here, use river gravel it needs it.	No
26	Eric and Amanda Taylor 475 Westbank Rd	Oppose Refuse	Contamination of water table Backfilling, monitoring If granted, impose controls on scope of work, and making available to public, backfilling in daylight hours, trucking times outside school hours, regular independent monitoring, all records available to public	Not stated
27	Sally Austin	Oppose Refuse	Water quality including Tasman Bay Degradation of area beside river No confidence in applicant	No
28	RJ Frater	Oppose Refuse	Flooding: "July 2021 saw the proposed site completely flooded (fence post level and above)" Significant risk of mobilisation of contaminants, high risk of excavation pits and fill material becoming inundated by floodwater and rising groundwater levels. Effects on drinking water NPSFM Inappropriate location for gravel extraction	No
29	Paula Williamson	Oppose Refuse	Health of Motueka River Tasman Bay Condition of roads, safety Impacts on residents, including those who suffer the effects of industrial operations at Hau Road and Douglas Rd	No
30	Stuart Kere Motueka	Oppose Refuse	No to contaminants entering our water	No
31	Valley RAGE	Oppose Refuse	Members live in Motueka with many living on or near Peach Island River is a sacred taonga / Te Mana o Te Wai TRMP issues re stopbanks and retention of secondary flowpath, contamination of groundwater from urban land uses. Policies in 6.9.3 encourage growth away from areas of productive land, require adverse effects of activities on groundwater resource to be avoided (6.9.3.9)	Yes

			<p>Activities should only occur in quarry zones NPSFM objective needs to be upheld Mitigation measures – based on Douglas Road, no confidence that effects on groundwater can be avoided, remedied or mitigated. Fill material at Douglas road resulted in noxious weeds spreading Oil drums and other unsuitable material in the backfill. Groundwater levels were breached This site is a far more sensitive location. Relevant to s 105. Quotes PDP re potential effects Site is flood prone – risk of mobilisation of contaminants. GMP – level of protection is inadequate:</p> <ul style="list-style-type: none"> - is only submitted 10 days before work commences and Council Staff certify so it is not available for public input. - only has to demonstrate the “best practicable option” to avoid adverse effects - risk mitigation relies on self-reporting or certification – cannot be relied on (refers Douglas Road and Hau Road) and Council monitoring response is inadequate - Despite condition at Douglas Rd requiring testing and reporting every 3 months, Council has only received one test sampling analysis - Inconsistencies between GMP and other management plans eg for mitigation of landscape effects and dust effects. - Other documents refer to testing 1 in 50 loads for quality, but not in planning conditions. <p>Concerns about the moving pit and requirement for backfill not to be stored on site. A moving pit will require replacement of extracted material at the same rate to comply with conditions. Extraction rate will be limited by sourcing of high quality fill – will need 7,000–8,000 tonnes Potential risk to drinking water – only limited reporting is not adequate – conditions need more certainty about sampling frequency during and flowing the activity not just before the activity starts Augier condition is included in an inconsistent way Douglas Road issues – pictures of flooding at Douglas Road in July 2022 Cumulative effects</p>	
32	Janette van den Bosch	Oppose Refuse	<p>CJs want to dump waste products If consented, prohibit lead-based wood, asbestos, treated wood being dumped</p>	no
33	Prade Danoso	Oppose Refuse	<p>Disposal of polluting substance by river</p>	no
34	Hannah Mae	Oppose Refuse	<p>Replacing gravel with variable and patchy unknown and unsettled fill material will contribute to loss of productive land and ecosystem risks</p>	Yes

			<p>Effects on waterways Disturbance to filtration layers and surface water – aquifer depends on percolation Depth of extraction is lower than has previously been granted Duration of consent appears to be based on sourcing suitable back fill. How will suitable volumes be sourced when use rate of gravel will deplete gravel available and at the same time the moving pit will not exceed the max size of 1600 m2. Cumulative effects of various different minor effects Management plans are inconsistent Non-compliance at Douglas Rd</p>	
35	Darin Sundbye	Oppose Refuse	<p>Contamination of drinking water and aquifer Disruption of soil structure</p>	yes
36	Andrew Claringbold	Says oppose but should be support	<p>Initiative is an essential service for sustainable infrastructure development in the region Effects on drinking water (submitter's bore within 100m of extraction site). Significant risk of mobilisation of contaminants and risk of excavation pits and fill material becoming inundated by floodwater/ rising groundwater. Poor track record (at applicant's Douglas Road and Hau Road site). No confidence that applicant will comply with consent requirements.</p>	yes
	<p>Error corrected 02 Nov 2022 by Alastair Jewell, Principal Planner - changes per email from report author, S B Solly</p>			
37	Helen Webster 132 Peach Island Rd	Oppose Refuse	<p>Groundwater and cleanfill management plan – quality, monitoring receipt, inspection, and testing Depths of excavation, monitoring groundwater levels, effect on aquifer Council resources for monitoring and enforcement Effects on surrounding ecosystems Poor track record Fluctuating groundwater Health of Motueka River</p>	Yes
38	Graham Peacock	Oppose Refuse	<p>Risk of contamination of groundwater and River Flood prone site – risk of inundation of pits Lack of confidence in applicant monitoring Lack of confidence in Council</p>	No
39	Ian Williamson	Support Grant	<p>Regular testing will occur if granted Operations need to continue to support local economy – cost is passed on to users, cost and carbon increase if sourced from elsewhere. Cost is greater to end user CJs is a valuable employer</p>	Yes

40	David and Susan Kellogg 398 West Bank Motueka River Road	Oppose Refuse	Impossible to backfill with totally uncontaminated material. Site at extreme flood risk – could influence contamination of aquifer Natural composition of riverbed is best filter to preserve water quality. Traffic from backfilling – road not suitable Noise from unloading and loading	Yes
41	Christopher Petzold Motueka River Valley 750 West Bank Road	Oppose Refuse	Flooding events – not prudent Water deserves protection - Extent of mitigation speaks to the risks Quarrying should be excluded from land adjacent to rivers altogether Non-compliance Staff shortages at TDC mean will not be monitored Quality of backfill, contamination of water supply	Yes
42	Charles de Garis Martin	Oppose Refuse	River is a taonga Quality of fill – will contaminate groundwater - independent monitoring needed Effect on aquifer from disrupting natural soil structure and filtering Effects on ecosystems, flora and fauna Consent holder will not be able to follow consent conditions and GMP Council not sufficiently resourced to monitor compliance Wrong activity in the wrong place	No
43	Tony Shuttleworth and Jennifer Shay	Oppose Refuse	2 years monitoring after quarrying is not adequate – does not allow for medium-to-long term effects to be detected Conflict of interest in CJs monitoring backfill and water sampling and groundwater levels “some backfill will come from offsite” – doesn’t give percentages If 1,000,000 tonnes of gravel are extracted and up to 2% is allowed to be backfilled with contaminants this could be 20,000 tonnes of contaminants. No amount of testing will stop leaching Collector road not suitable – will require extra maintenance Term should be only 2 years All backfill should be independently monitored Speed limit should be 40 km Motueka water quality is already fragile as per LAWA site – adverse effects are adding to already compromised river. Swimming sites downstream of quarry Inundation of backfill is a risk Stop bank insufficient, site is vulnerable to flooding	Yes

			<p>Air pollution is a concern – silica dust</p> <p>Road noise and safety</p> <p>Impact on humans</p> <p>Drinking water standards</p> <p>Specific comments on proposed management plan relating to lack of independent monitoring</p> <p>Road needs to be widened and improved</p> <p>Cover truck and trailers to reduce dust</p> <p>Assess the carbon footprint and offset with tree planting</p> <p>Clearer timeframe for remedy of breaches</p> <p>Stricter penalties</p>	
44	Anne Webber	Oppose Refuse	<p>Lack of safeguards/testing requirements for potential impact on groundwater, freshwater, lack of testing of backfill quality/composition of backfill.</p> <p>Drinking water standard triggers – DWS triggers are MAVs and allow deterioration. Condition 32 would allow deterioration without any action - unacceptable</p> <p>Should be testing for nitrates</p> <p>Responsibility and costs of proof of contamination should be on applicant, not bore owner, and an environmental bond should be sought in the case of insolvency or liquidation of the company. There appears to be no reference as to how this will be stored or for how long and who is responsible for it—necessary to avoid situation where polluted material has sat as ownership contests and no one takes responsibility for it (has happened before).</p> <p>Working depth of 1m above highest groundwater and to within 0.3m of groundwater level not achieve or sustainable—poses risk of contamination to groundwater (monitoring groundwater level changes insufficient given recent weather events show levels change quickly).</p> <p>Sediment management not been well documented, must be more robustly addressed given current weather (already a problem for Tasman Bay, should not risk increasing sediment load).</p> <p>If granted should be for initial 2 years so impacts can be assessed (nitrate levels, sediment, levels, groundwater contamination). Then for a period of 5 years. A 17-year term does not address potential impacts of climate change.</p> <p>Environmental bond required</p>	no
45	Christopher Hinkley	Oppose Refuse	<p>Discharging contaminants adjacent to a river not acceptable. Effects on water quality</p> <p>Motueka River is a fine recreational and trout fishing river, subject to frequent large flood events.</p>	No
46	Wendy Wallator	Oppose Refuse	<p>Contamination of land and river</p> <p>No confidence in Council – conditions at Hau Rd not adhered to.</p>	No

47	Wakatu Inc	Oppose Refuse	<p>Groundwater and clean fill management plan is in draft only – Wakatu objects to documentation being in draft form</p> <p>Confusion with documentation – application reference to “acceptable materials” in Table 2. Table 2 refers to water quality parameters and trigger concentrations</p> <p>Duration of consent – objection to 17 years consistent with objection to land use consent</p> <p>Cultural effects – mauri of land and mauri of water. Inappropriate to comment that expert evidence relating to physical, biological and chemical properties can be compared to cultural values. Only a formal CIA can assess cultural effects. Matakite – findings of matakite assist iwi with forming a picture of cultural matters. Needs to be iwi-led. Object to condition reference to what happens if matakite recommendations frustrate the grant of consent.</p> <p>References to GCFMP – what is this?</p> <p>GMP section 4.1 Receipt refers to record keeping – refers to CJ staff member delivering material.</p> <p>Condition 20 refers to consent holder or it’s contractor - inconsistent</p> <p>Compliance record – independent tests on backfill and discharge should be undertaken at Douglas Road</p>	Yes
48	May Teo	Oppose Refuse	<p>Applicant to pay an independent monitoring person</p> <p>Council to do regular spot checks</p> <p>Noncompliance to be handled seriously</p> <p>River is taonga, must be protected from further environmental degradation—gravel extraction cause irreparable damage</p> <p>Concerned about: (i) quality of backfill; (ii) effect on Motueka River Aquifer if natural soil structure and filtering ability disrupted; (iii) backfill will contaminate groundwater which is water source for many locals; (iv) extraction operation will affect ecosystem/ flora and fauna; (v) consent holder not able to follow consent conditions in GMP (excavation depths above ground water and sizes of excavation pits) based on past performance; (vi) council not sufficiently staffed to ensure compliance</p>	No
49	Te Atiawa Manawhenua Ki Te Tau Ihu Trust	Oppose Refuse	<p>Acknowledge the Applicant has agreed to commission a CIA but until it is completed and the issues identified have been responded to, the application fails to adequately identify cultural effects on Te Atiawa or meet expectations of Te Atiawa as kaitiaki of the Awa and wider rohe</p> <p>17 years is too long</p> <p>Oppose on the basis potential adverse effects are more than minor, potential adverse cultural and spiritual issues, potentially compromises Te Atiawa role as kaitiaki, mana of Te Atiawa, term too long.</p>	Yes

50	Ruth Buchanan	Oppose Refuse	Would like more information on what the backfill is made of and what possible contaminants it has. Risks of discharging close to Motueka River . Who and how will this be monitored?	No
51	Paula Finch	Oppose Refuse	Contaminants will enter Motueka Rier	No
52	Anthea Garmey 394 Motueka River Westbank Road	Oppose Refuse	The bore for her house and 4 other households is within 100 m of the site. Site is flood prone. Risk of mobilisation of contaminants. High risk of pits being inundated by floodwater and rising groundwater. Compliance issues at Douglas Rd Hau Rd site regularly breaches its noise control limits Douglas Rd site did not submit required sampling of groundwater. Issues at Douglas Rd site include poor monitoring, breaches, groundwater contamination, dust coasting properties, constant loud, vibrating noise.	Yes
53	Davis Sundbye	Oppose Refuse	GMP – quality, monitoring, inspection and testing of backfill Health of the river Compliance	No
54	Oliver Langridge	Oppose Refuse	TRMP policies encourage growth away from areas of versatile and productive land and require adverse effects of industrial and commercial activities on the Riwaka. Motueka groundwater resource to be avoided. Aquifer in jeopardy. Area is flood prone. Groundwater pollution. Douglas Rd compliance record	No
55	Nataliya Langridge	Oppose Refuse	TRMP policies encourage growth away from areas of versatile and productive land and require adverse effects of industrial and commercial activities on the Riwaka. Motueka groundwater resource to be avoided. So why is this application being considered?	No
56	Peter Taia	Oppose Refuse	Lack of adequate conditions of consent Inadequate council monitoring of past and current consents Potential risks of contamination of Motueka water supply Potential risks of contamination of the Motueka River which is subject to a WCO Quality and volume of suitable backfill. Dust – residents near Douglas Rd have complained of dust from heavy machinery Email (2021) regarding CJ seeking to continue to remediate the site past the expiry date because struggling to source suitable cleanfill – availability has long been a problem.	Yes

			<p>Disposal of Mapua aquarium material. Email 9/9/22 from a neighbour at Douglas Rd stating CJs still excavating despite having to stop on 3 September. If granted, key conditions needed for:</p> <ul style="list-style-type: none"> - Monitoring pit size - Moving pit remediation requires backfill volume to equal extracted gravel volume - Accurate real time monitoring of measurable conditions necessary - Deterrent scale financial penalties - Substantial bond 	
57	Cymen Crick	Oppose Refuse	Consent for open mining close to areas where a residential subdivision has recently been allowed, should not be granted. The area has recently opened up to semi-residential housing. Fill quality/ quantity	No
58	Ngāti Rarua	Oppose Refuse	<p>Relevant provisions of Poipoi Te Ao Tūroa Inadequate assessment of cultural effects Matakite should not have been volunteered</p>	Yes
59	Aggregate and Quarry Association of NZ (AQA); Wayne Scott (CEO)	Support Grant	<p>Aggregate is essential resource for housing, roads and other transport infrastructure Aggregate also important for increasing resilience and adapting to extreme weather events/ climate change Aggregate in short supply in many parts of NZ (inc Tasman) due to unprecedented levels of construction and infrastructure activity Aggregate is unique as resource because cannot import to NZ, and thus fixed resource endowment within NZ we must work within. Few practical substitutes Nelson/ Tasman region is higher (per person) user of aggregate than other parties of country because population growth, extensive roading network, length coastal area—but anticipated growth (as reflected in Draft Nelson Tasman Future Development Strategy) suggests this needs to increase, will need to produce aggregate locally or import at much higher cost to meet demand Important to determine an optimal distance for residential areas from potential quarry areas—too far away = significant expense of transporting quarry materials + CO2 emissions (cost of aggregate doubles when transported 30 kms from its source), but too close = noise, vibration, dust etc Development areas should ideally be as close as reasonable to identified areas of aggregate CJ Industries operation at Motueka will provide continued supply of high-quality aggregate for Tasman construction market + employment onsite and in associated construction industry Quarries (particularly alluvial extraction sites) in proximity to groundwater are not uncommon and effects can be managed effectively—suggests this can be done in way that results in valuable new habitats/ net gain in biodiversity</p>	No

			Proposed activity consistent with Part 2 of RMA	
--	--	--	---	--

[this page blank]



Memorandum

To: Susie Bernsdorf Solly..... **Of:** WSP.....
From: Helen Rutter..... **Date:** 10/8/2022.....
Reviewed by: Andrew Dark..... **Job no:**
Subject: Preliminary Technical Review of RM220578 - Peach Island Proposed Quarry : Hydrogeology & Groundwater and Clean Fill Management Plan.....

Tasman District Council (TDC) has engaged Aqualinc Research Ltd (Aqualinc) to review the report issued by PDP regarding the hydrogeological implications of the proposed quarry at Peach Island.

The scope of this memo is to identify questions requiring further information and also identify changes which could potentially be addressed with conditions. The opinions expressed are preliminary, based on the application material, and the author retains an open mind to subsequent information, including submissions and further relevant assessments or evidence.

PDP have presented a hydrogeological assessment¹ for the Peach Island site. Their assessment states that there are two key areas of concern with regard to groundwater quality:

- Exposure of groundwater within an open pit
- Inundation of contaminated fill material in backfilled pits, mobilising contaminants within the aquifer. (I assume this means mobilising contaminants within the fill, not within the aquifer)

In this memo, all references to figures, tables, section numbers and appendices refer to the corresponding items in the PDP report.

I consider that the above are valid potential issues, but there are other, potentially more serious ones:

- Leaching of contamination from any fill, not just inundated material
- Risks of accepting non-cleanfill material at the site
- Risks from fuel spills/hydraulic hose breaks

The biggest uncertainty with any intended filling activity is in the quality of the fill that is accepted at the site. Random testing may pick up potentially contaminated material but may also miss it. There should be strict rules/procedures regarding where imported fill is sourced, assessment of the sites in terms of any potential contamination (e.g.PSI or DSI) and potentially testing of material prior to imparting to the Peach Island site. This is not sufficiently detailed currently.

My main comments and areas of concern are outlined below.

Vertical separation of quarry floor and groundwater

The proposal is to maintain 1 m of vertical separation between the quarry floor and groundwater levels, to avoid exposing groundwater. If backfilling can occur within the day of excavation, then excavation will be deeper, to within 0.3 m of groundwater. The practicality of this is unknown – as far as I am aware, this approach to gravel extraction has not been achieved previously, and previous attempts to obtain consent to excavate to within 1m of the water table have not been successful. Part of the issue is in understanding exactly where the water table is. The applicant proposed having three water level monitoring bores, and being able to predict, at any point across the site, depth to

¹ Peach island Proposed Quarry: Hydrogeology, PDP Report Prepared for CJ Industries, 15 July 2022
 Page 1 of 5

groundwater. This will not be feasible with any degree of accuracy. The PDP report mentions a paleo-channel in the vicinity of Shaggery Stream which may be more permeable and may cause some groundwater flow in this direction on the western side of the site. The implications of this paleo-channel on groundwater levels within this site are unknown. Figure 3 shows some very detailed piezometric contours with 0.2m intervals: these are based on six piezometers, none of which are within the proposed site. There is no assessment of how the contours may vary seasonally, in terms of level or direction.

The contours that have been derived (Figure 3) are at odds with the data presented in Table 2. For example, bore 24545 has a groundwater level (GWL) elevation of 15.9 m asl (above sea level). but the highest GWL in Table 2 is 17.5 m asl. I note that the key to the figure states that the GWL elevation was for July 7 2022, but it is not clear why this date was used. (There is also a comment that it was not possible to determine depth to water or water table elevation from bore 21948, although this then appears to be used to derive the contours in Figure 3).

With regard to temporal variations, I note that the area is between the Shaggery Stream and Motueka River, and groundwater levels respond rapidly to river stage. The hydrographs show a change in GWL of 2 to 2.5 m over quite short time periods. It would be really useful to know the likely maximum rate of change in GWLs to assess whether any proposed intention to excavate to within 0.3m of the water table could actually be achieved. Given the variations shown in Figure 5 over a period of only a month (of up to close to 2.5m), the question must be raised as to how the filling operations will be carried out. If excavation is to within 0.3m of the water table at times when groundwater levels are low, this could then require filling of up to 2.5m thickness of fill within a period of a month. This does not take into account any longer-term variability in groundwater level – the 2.5m variation from May to June 2022 is almost certain not to contain the full range of variability, and we have no information at all regarding that. I would question the practicality of this.

Furthermore, the intent to excavate to within 0.3m of the water table relies on a good understanding of where groundwater is. Whilst monitoring at piezometers on the edge of the site can provide real-time feedback as to where groundwater levels are at those points, the interpolated contours from this data across the site will not be accurate, and the actual depth to groundwater within the site will be highly uncertain.

Item (16) of Appendix D states that excavations will be maintained at a working depth of 1 m above the highest GWLs measured in the monitoring piezometers at the site. It is not clear what timeframe this refers to. The current monitoring is only for a period of a month and will not include all of the variability that can be expected. Does this condition mean that the depth that can be excavated will change possibly on a daily basis, as more GWL data is collected and more understanding developed about the depth to water? This needs to be clarified in terms of the precise meaning of the highest groundwater level. Item (20) suggests that inundation with groundwater will be allowed: this needs to be clarified again.

Under Section 3.2 the PDP report states that excavation to between 0.3 and 1 m above the groundwater level will be undertaken during dry weather conditions. "Dry weather" conditions need to be defined. Similarly, the applicant needs to define what river flows/predicted rainfall would cause quarrying to stop and backfilling to start, If they wait until groundwater levels are already rising, it could well be too late to prevent inundation.

Section 2.2.3 of the report acknowledges that groundwater level monitoring is recommended to confirm seasonality and the full range of groundwater fluctuations at the site. I agree with this and having this data available up front would enable a much better assessment of likely effects. Any further data should be made available and, if monitoring is not in place, then it should be started promptly.

The report notes that the piezometer elevations were derived from LiDAR data with a resolution of 1 m. Can it be clarified that this is horizontal not vertical resolution?. The change in piezometric elevation across the site is only around 1 m, and the potential lack of accuracy in elevation data is concerning.

Aquifer parameters

The PDP report states that there are no aquifer properties data for the site, but that previous modelling (Weir and Thomas, 2018) collected aquifer properties data from the wider area, and this was used to interpolate the expected range of aquifer parameters across the northern area of Peach Island.

I note that the site is on the very edge of the previous model, and a long way from the nearest calibration target, and that any aquifer properties derived from the model will come with a very high degree of uncertainty. To understand the aquifer properties more soundly, the applicant should carry out aquifer testing.

Fill quality

The report states that all imported fill material sourced off site will be graded at another facility. What will this grading entail?

Under Section 3.3 it is stated that there will be random testing of any imported fill from one truck in every 50 truckloads. The expected volume per truckload is not stated. WasteMINZ advises verification testing of one in every 500 m³ from incoming loads, and also annual samples from across the waste deposited at the site. I consider that it would be best to comply with these guidelines.

Appendix D Section 4.2 covers inspection and testing of imported cleanfill. With regards to this, I have the following comments:

- (1) refers to Section 3.0 with regards to testing of imported cleanfill. I can't find anything in Section 3.0 about this.
- (3) talks about setting aside manmade hardfill, visible stained material, etc. for chemical testing. The proposal up to this point has discussed virgin excavated natural material, and hardfill has not been included in the assessment of possible effects. Possible effects from hardfill, such as concrete, include a change in pH and hardness.
- (5) should be 1 per 500 m³ to be compliant with WasteMINZ guidelines and should also include yearly testing of deposited material.

Spillage of hydrocarbons

Spillage of hydrocarbons is a real risk, especially where there is limited depth to groundwater and hence limited ability to deal with the spill and avoid it entering the groundwater system.

Item (22) of Appendix D deals with what won't be allowed in any excavation pit - no machinery should be refueled in the pit, no machinery should be parked in the pit, etc. It would be useful to know where these activities are expected to take place.

Item (25) should include rupture of hydraulic hoses. Item (26) should be more robust, and include monitoring of down-gradient wells, provision of alternative supplies if drinking water is affected, etc.

Groundwater quality

The report focuses on groundwater quality from the perspective of drinking water quality, including quoting a section of TDC (2020) recommending that TDC considers a reticulated water supply as the Motueka-Riwaka shallow groundwater system does not meet the DWSNZ. I note that this sampling work did not include the Peach Island area and the conclusions probably should not be applied to this area.

Consideration of the effects on groundwater quality should include:

- Exposure of groundwater within an open pit,
- Inundation of contaminated fill material in backfilled pits, mobilising contaminants within the fill,
- Leaching of contamination from any fill, not just inundated material,
- Risks of accepting non-cleanfill material at the site,
- Risks from fuel spills/hydraulic hose breaks.

Under Section 3.1 the PDP report states that “Any adverse changes [...] are proposed to be managed by the management and operational procedures discussed in the preceding sections of this report”. I am unclear how adverse changes are going to be managed. How is an adverse change defined (presumably a sample exceeds the DWS triggers suggested in Appendix D) and what will actually happen if an adverse change is detected?

Groundwater sampling is only proposed to be carried out on to occasions prior to starting quarrying, to establish pre-quarry groundwater quality. I do not consider two samples to be sufficient to characterise background quality.

The trigger levels proposed are DWS maximum acceptable values (MAVs) and would allow significant deterioration in groundwater quality before any action would be required. This is not acceptable in terms of the National Policy Statement for Freshwater Management (NPS-FM) and complying with the objectives of Te Mana o te Wai. Item (32) of Appendix D would allow drinking water standards to be exceeded without triggering any action, as it allows the down-gradient wells to have concentrations of up to 20% greater than MAV concentrations. In my opinion trigger levels should be set that acknowledge current groundwater quality and do not allow an activity to exceed DWSs.

Surface water quality

The report acknowledges that the Motueka River is a primary source of recharge to the shallow aquifer system but stated that it is expected that the groundwater system also discharges back into the river and is therefore a potential receptor of any groundwater chemistry changes. However, any effects on surface water quality would be expected to be minimal due to significant dilution. This needs to be backed up by an assessment of potential changes.

There is an assumption of losses from Shaggery Stream to groundwater, although it is also stated that, under certain groundwater level conditions, it is possible that Shaggery Stream gains from groundwater. It would be good to have simultaneous flow gauging data at different times of the year to confirm gains/losses.

Request for further information/clarification

My opinion is that the following inconsistencies in relation to spatial distribution of groundwater levels need to be clarified:

- Why the contours are based on July 2022,
- How bore 21948 was used in the contouring.
- How the paleo-channel has been accounted for
- The level of confidence they can have on water levels across the middle of the site needs to be assessed if they are intending to quarry to very close to the water table. This may need to be dealt with through consent conditions requiring additional observation bores within the site.

My opinion is that the following further detail / clarification is required in relation to temporal variations in groundwater levels:

- Maximum rate of change of groundwater levels.
- Analysis of longer-term groundwater level variability (range and rates of change).
- Further detail of how backfilling will be managed with rapidly-rising groundwater levels.
- Highest groundwater level needs to be clarified in terms of the precise meaning of the this and whether it will vary as more data are collected.
- Whether or not inundation with groundwater will be allowed (as suggested in Item 20 of

Appendix D needs to be clarified.

- “Dry weather” conditions need to be defined. Similarly, the applicant needs to define what river flows/predicted rainfall would cause quarrying to stop and backfilling to start.
- Further groundwater level data should be collected as soon as possible to enable a better assessment of likely effects.
- Can the resolution of the LiDAR data be clarified?

In terms of the fill quality, can the intended “grading” be clarified?

In terms of hydrocarbon spillage, It would be useful to know where refuelling, parking of machinery, etc will occur/are expected to take place.

In terms of surface water and groundwater quality:

- How is an adverse change defined (presumably a sample exceeds DWS) and what will actually happen if an adverse change is detected?
- I consider we need to understand more about the gaining/losing reaches of the surface water bodies and how these vary with time. This would be needed to carry out a more robust assessment of potential effects on groundwater and surface water quality.

Recommended changes through conditions

There should be strict rules/procedures regarding where imported fill is sourced, assessment of the sites in terms of any potential contamination (e.g.PSI or DSI) and potentially testing of material prior to imparting to the Peach Island site. This is not sufficiently detailed currently.

WasteMINZ guidelines should be complied with in terms of testing of fill material.

Item (26) of Appendix D should be more robust, and include monitoring of down-gradient wells, provision of alternative supplies if drinking water is affected, etc.

In my opinion trigger levels should be set that acknowledge current groundwater quality and certainly do not allow an activity to exceed DWSs.

The way in which the quarrying/filling is operated will need to be achievable.

There is likely to need to be further groundwater level monitoring to be confident about not exceeding the 0.3m limit if this is accepted.



Memorandum

To: Susi Bernsdorf Solly
From: Helen Rutter
Reviewed by: Andrew Dark
Of: WSP
Date: 10/10/2022
Job no: WL23006
Subject: Technical Review of RM220578 - Peach Island Proposed Quarry : Hydrogeology & Groundwater and Clean Fill Management Plan

1 Introduction

PDP have responded to the S92 request for further information. This is an assessment of their response.

2 Groundwater levels

2.1 Query 1

The response clarifies my query.

2.2 Query 2

Thanks for the explanation. The response has been updated with some more recent groundwater levels, the majority of which show a lower groundwater level with the addition of an extra month's data (July 2022). The ranges provided in the updated table are not correct for all bores, and for completeness should be checked.

The data plotted up by PDP suggests that, although the data ended in July 2022, it was probably very early July and the effects of the extreme rainfall were missed. It would be good to see any new monitoring from after the July 2022 rainfall event, which would show how groundwater levels responded to such an event.

2.3 Query 3

The use of Bore 21948 is explained, but the explanation doesn't make much sense, as there does not appear to be an elevation for the bore, but it is used to derive contours as metres above mean sea level.

2.4 Query 4

It is acknowledged in the response that there will be natural variability across the site, and that this will be accounted for operationally, by measures outlined in the GMP. On a day-to-day basis this appears to be a reasonable approach to understanding the depth to groundwater over a limited area.

2.5 Query 5/6

The point I made was that there will be uncertainties across the site, as all of the monitoring bores are on the periphery of the area. Interpolating between these bores will not allow for any variability across the site. The explanation states that continuously monitored groundwater levels across the site will be used to create a continuously-interpolated surface across the site to enable the operators to determine groundwater levels at each new location on a daily basis. It is not clear how this will be achieved as this would be a non-trivial task. However, it appears that the operational checks on groundwater level will be through excavating a pit to 1m below the intended excavation depth each day to determine groundwater level: this appears to be a practical way to assess depth to groundwater at a specific location.

However, I question how much cleanfill would be required to backfill to at least 1m above groundwater level on a daily basis, and whether this is realistic operationally. If groundwater levels can vary by over a metre a day (Table 3) and by around 2m over relatively short time periods (as indicated by Figure 1), how will operation of the site prevent inundation with groundwater over areas that had been backfilled to a metre above groundwater on a particular day, but would be inundated as groundwater levels continued to rise over a longer time period? On an operational level, I am unclear as to whether there will be a single attempt at each location to extract gravel, or whether there will be repeated attempts to quarry an area if, for example, weather conditions mean that attempts to excavate to a certain depth at a certain location prevent this and the area has to be backfilled.

PDP present examples of other quarries where excavation has resulted in permanent exposure of groundwater. I note that these did not involve any clean filling activities. The newer consent that is referred to identified that the most significant risk to groundwater in that case was the machinery used on site.

2.6 Query 7

It is still unclear how backfilling activities will be managed across the wider site with rapidly rising groundwater levels. Again, I am unsure how the applicant will deal with longer-term increases in groundwater level and whether they would result in inundation of the quarry floor.

2.7 Query 8

I am still unclear as to how excavations will be maintained at 1 m above the highest groundwater level measured in the onsite bores, given the fact that excavation will not be at the location of the bores. However, the applicant has proposed to use pits dug at the site of the proposed daily excavation as a practical check on groundwater levels. I am unclear if they would be using any data from the pits to validate the interpolated surface and/or relate it back to the monitoring bores.

2.8 Query 9

I am not convinced that it will be possible to avoid inundation at times. Cessation of excavation and removal of all machinery from the quarry floor would be prudent at such times.

2.9 Query 10

It seems sensible to change definition to stable weather and put in place the conditions noted. However, I am unclear about the second set of conditions, particularly what weather warnings might be expected to cause a rise in groundwater levels at the site. How will the weather warnings be interpreted to know that there is likely to be a rise in groundwater levels? I recommend carrying out an analysis of rainfall/river stage/groundwater level responses to understand what sort of events are likely to cause an issue in terms of rapidly rising groundwater.

3 Fill Quality

3.1 Query 12

It should be noted that the proposed activities could increase the risk to groundwater resources by bringing quarrying activities closer to standing groundwater, placing backfill material within groundwater, and exposing groundwater to other contaminant sources. The applicant recognises the importance of this and states that control over the quality of this fill will enable the proposed activity to meet the requirements of a Class 5 Landfill under the WasteMINZ Guidelines, being the only class of landfill that the guidelines allow to be sited over aquifers used for drinking-water purposes. As a result, I consider that proposed conditions must include stringent requirements regarding the quality of fill and testing required.

It is acknowledged that the applicant now proposes to be consistent with WasteMINZ guidelines, but I would like to highlight that fill quality is the highest risk to groundwater quality from the proposed activities, and these should be taken as the minimum expectation. I note that material will not be accepted from HAIL sites.

3.2 Query 13

The is addressed adequately.

3.3 Query 14

The applicant clarified that no machinery will be operating within open excavations. They state that fuel will be stored securely or removed from site overnight, and that fuel and machinery stored overnight will be on the landward side of stop-banks. I am unclear exactly where they mean by "landward side of stop banks", and would like to be reassured this is not within the quarry area.

I would also question whether it is sensible to carry out any maintenance on vehicles at the site.

3.4 Query 15/16

The proposed trigger values are generally half the maximum acceptable value (MAV) or guideline value (GV) of the drinking water standards. There is a question as to whether these should be lower as they could allow degradation of water quality before a trigger was reached. The applicant has said that this is not the case, but that the values are a bottom line against which water quality can be measured.

This is an issue for the planners to discuss in terms of te Mana o te Wai. But I consider there are a couple of issues with what has been proposed:

- The trigger levels are based on drinking water standards: there are some determinants that may have a lower environmental "bottom line" e.g. nitrate-N which has a bottom line (in the NPS-FW) of 2.4 mg/l.
- The proposed approach to determining whether there is an adverse effect only allows for the situation where the trigger level is exceeded in one or more of the down-gradient bores but that determinant is less than the trigger level in the up-gradient bore. This could result in upgradient bores exceeding the trigger level by a small amount but downgradient bores being significantly over the trigger. It could also end up with the situation that there is an obvious impact from filling activities, but the determinants all fall below the trigger levels. This relates to the first point. An example would be if upgradient nitrate is 1 mg/l but downgradient nitrate is 5 mg/l: this would not trigger any response, but could be detrimental to achieving the required environmental outcomes of the NPS-FW. It may be better if the trigger is simply that the downgradient determinants exceed 20% above the upgradient concentrations.

If an adverse change is detected, I would suggest resampling of all the monitoring bores, not just the one where the change was detected and the upgradient bore.

In terms of actions if any adverse changes are identified in a down-gradient monitoring bore, it should be assumed to be due to quarrying/filling activities until it is proved otherwise, and the Tasman District Council

should be notified. The next step should be to attempt to identify which loads have caused the contamination, and remove the contaminated material. It is not acceptable to wait until an investigation determines that the change was due to quarrying activities to put in place the proposed actions.

Again, the measures proposed if there is evidence of contamination of supply bores are inadequate, relying on proving the source is the quarry before doing anything about it. If there is significant derogation of drinking water quality, the first step should be provision of an alternative supply: it cannot be expected that property owners would have to deal with contaminated drinking water whilst the quarry operator investigates what might have caused it. While it is accepted that such adverse event is not anticipated, it is also very much accepted that contaminated material does make its way into cleanfill operations, and this is an outcome that could realistically occur.

The response to Query 16 goes on to talk about monitoring and concludes that the quarry will not cause adverse effects on water supply bores. It should be noted that monitoring will not prevent contamination but will just identify that it has happened. Once contamination has occurred, it will not be simple to remediate it.

Regarding the response to the concerns about the NPSFM and te Mana o te Wai, it is stated that the DWS triggers simply provide a bottom line that must be achieved. I note that the NPS-FM bottom line for nitrate-N is 2.3 mg/l, not the 5.3 mg/l set in the application. Whilst the filling activities are quite likely to not cause significant degradation of groundwater and surface water quality, contaminated fill has been found in cleanfill quarries before, and the assumption cannot be made that this will never happen. Monitoring and the response to monitoring results should be sufficiently robust to remediate any adverse impacts should they occur.

3.5 Query 17

Based on the information provided, any contamination, should it occur and reach the Motueka River, would be diluted by the flow in the river. It appears that Shaggy Stream is elevated above groundwater levels at the location of the site, and would be losing rather than gaining in this area: therefore it would be unlikely to be affected by activities at this site.

4 Summary

In summary, the applicant has addressed most of the queries satisfactorily. The areas where I continue to have concerns are:

- It is not clear how the applicant will manage the site to prevent inundation of the quarry floor during more prolonged periods of groundwater level rise. I am not sure how they can achieve their aim of chasing the water level – it appears to be difficult to do and monitor. It may be better to have a base level to quarry to, which is a much more standard approach compared to other quarrying/filling operations.
- I think it would be useful to assess what weather conditions/forecast would cause a cessation in activities due to anticipated groundwater level rise. Without some analysis of this, it is unknown what weather conditions would provide a trigger to stop quarrying/start filling.
- I would consider that servicing machinery should be carried out away from the site, and that any storage of fuel is not within the quarry/fill area
- There are still concerns about the water quality trigger levels proposed and whether they are consistent with the NPS-FW and te Mana o te Wai. I consider that, in terms of water quality trigger levels, what has been proposed is not consistent with the idea of maintaining current state to comply with the NPS-FM. 50% of MAV is not adequate as a trigger as it could cause significant deterioration. However, as there has been no indication of current state, it is not possible to know how much deterioration half MAV would represent.
- If contamination is observed through sampling, then the response to this needs to be more robust. In particular, it should be assumed that the filling activities are the cause until proven otherwise, and domestic bore users should be provided with an alternative supply.

In summary the proposed activities would allow excavation and placement of fill in the zone of water table fluctuation. This would increase the risk of potential contaminants leaching from any placed fill. Assuming there were no contamination issues caused by spills, and there was strict adherence to waste acceptance criteria and no mistakes in terms of fill quality accepted, there should be limited effect on groundwater. However, if there were to be an adverse effect on groundwater, it is not possible to say exactly how far impacts might propagate and there needs to be adequate protection of down-gradient users, and mitigation provided, in the case that there was an incident.

The conditions predate the s92 response and hence would need to be updated accordingly and the volunteered conditions predate the RFI response and still need to be updated by the applicant.

[this page blank]